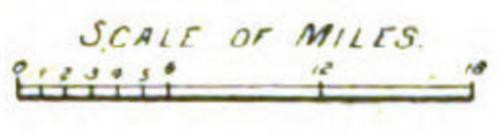


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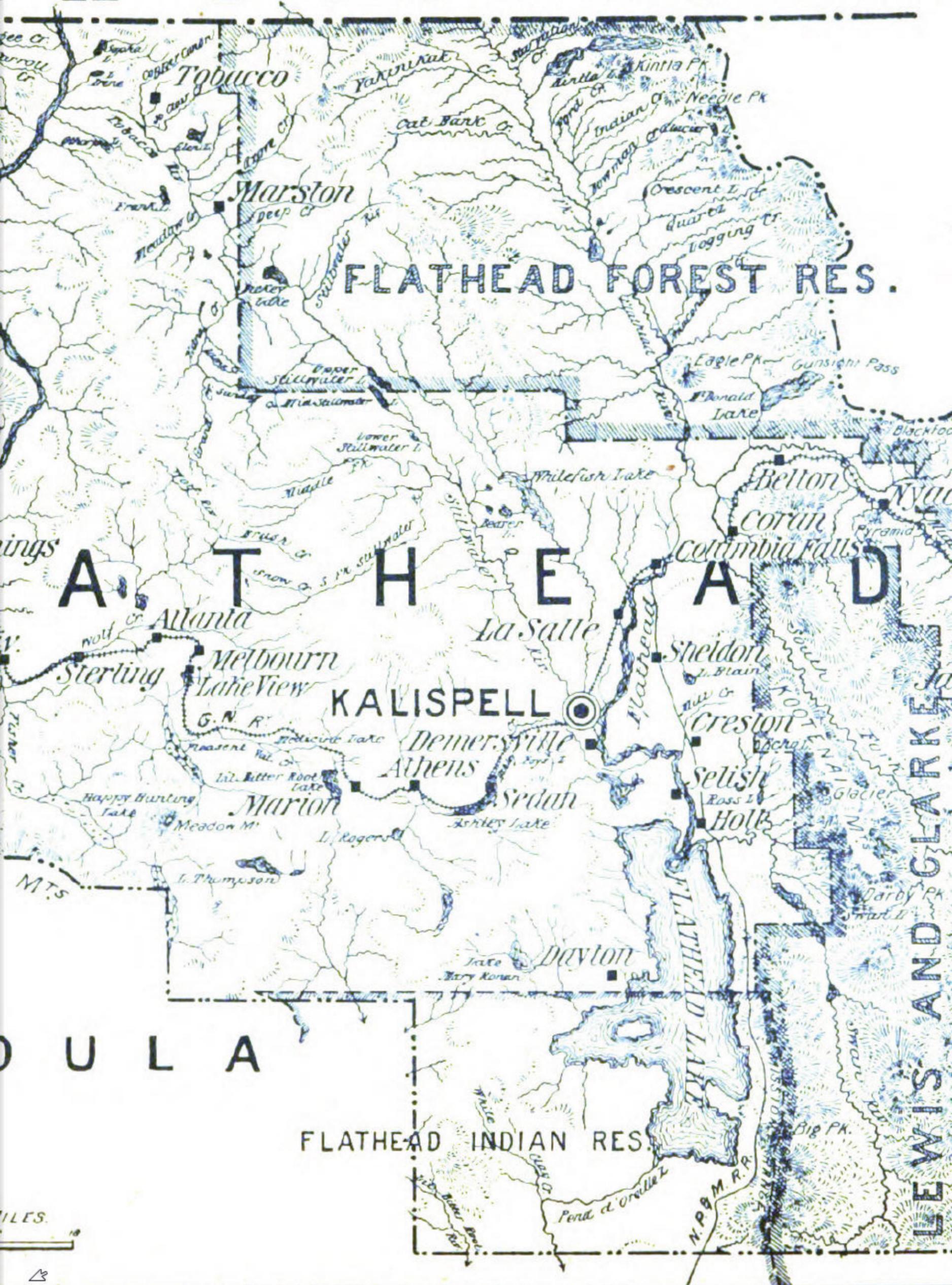
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FLATHEAD FOREST RES.

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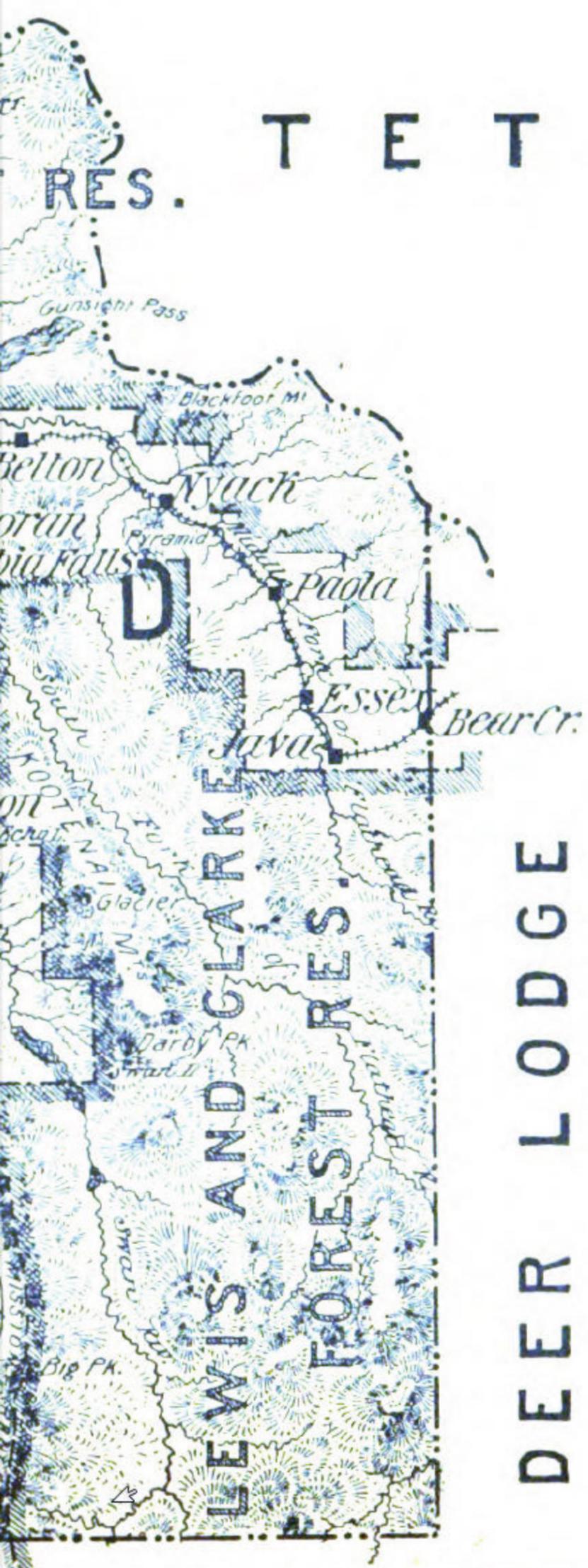
KALISPELL

FLATHEAD INDIAN RES.

LEWIS AND CLARKE

MILES

S I O N S



T E T O N

DEER LODGE

PRINCIPAL FEATURES.

Total area—5,569,000 acres; assessed acreage, 325,626. Resources—Agricultural, horticultural, stock raising, dairying, lumbering, mining. Railway facilities—Gt. Northern. Kalispell—County seat, population 3,000.

FLATHEAD FOREST RES.

FLATHEAD

LEWIS AND CLARKE

FOREST RESERVATION

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LEWIS

Summit



BRITISH

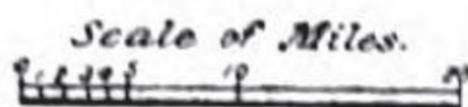
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FOREST RES.



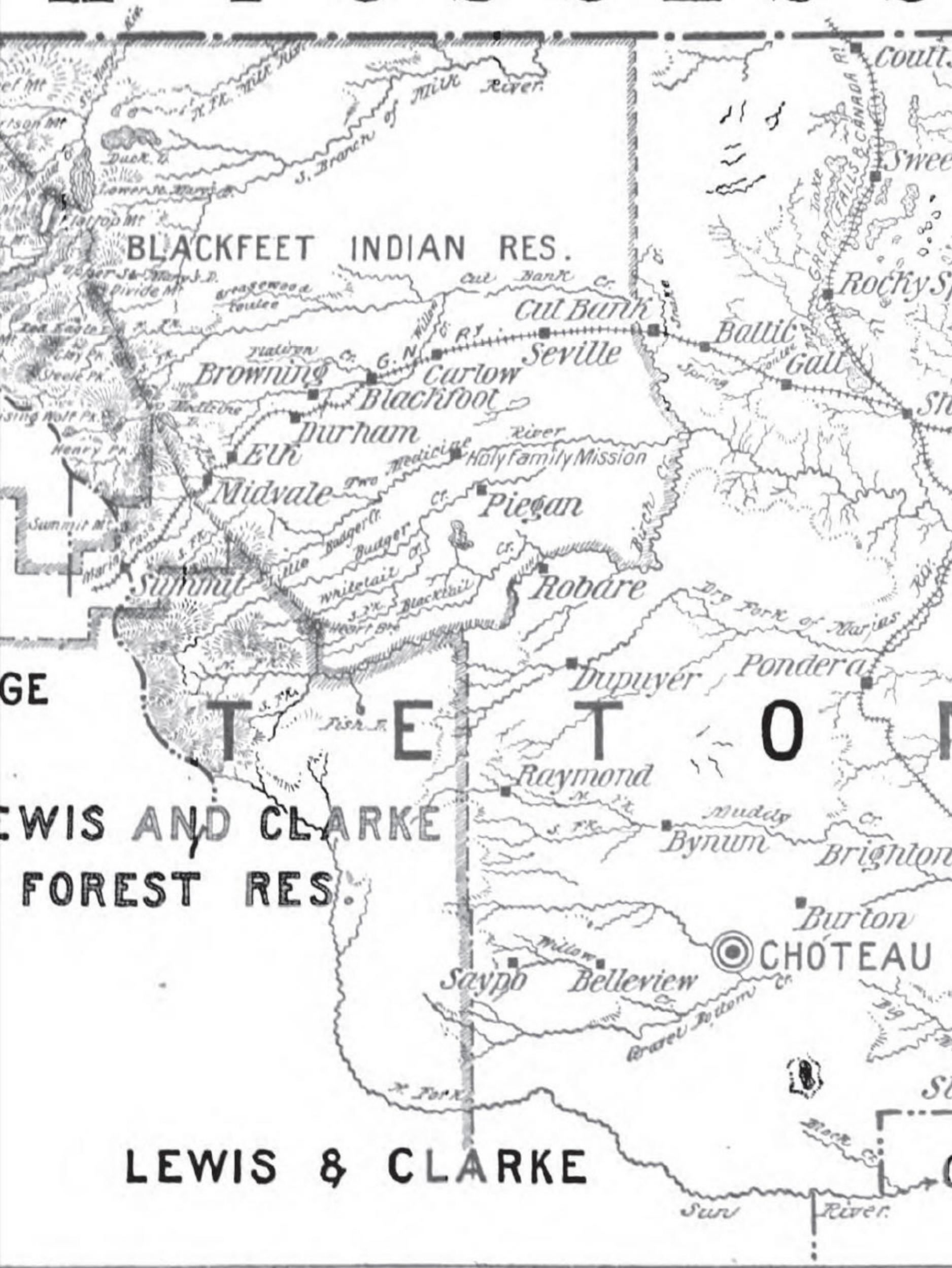
FLATHEAD

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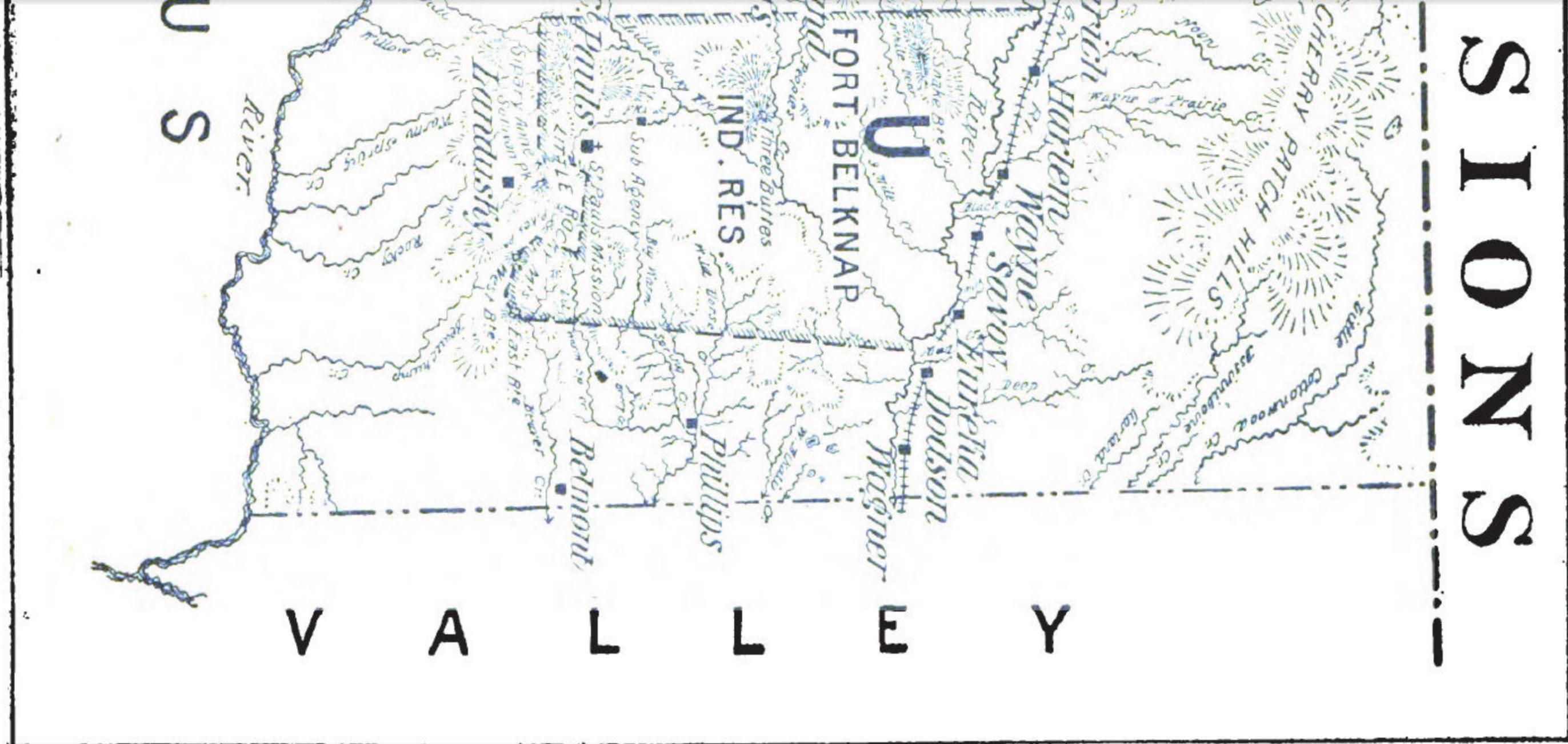


C A S C A D E

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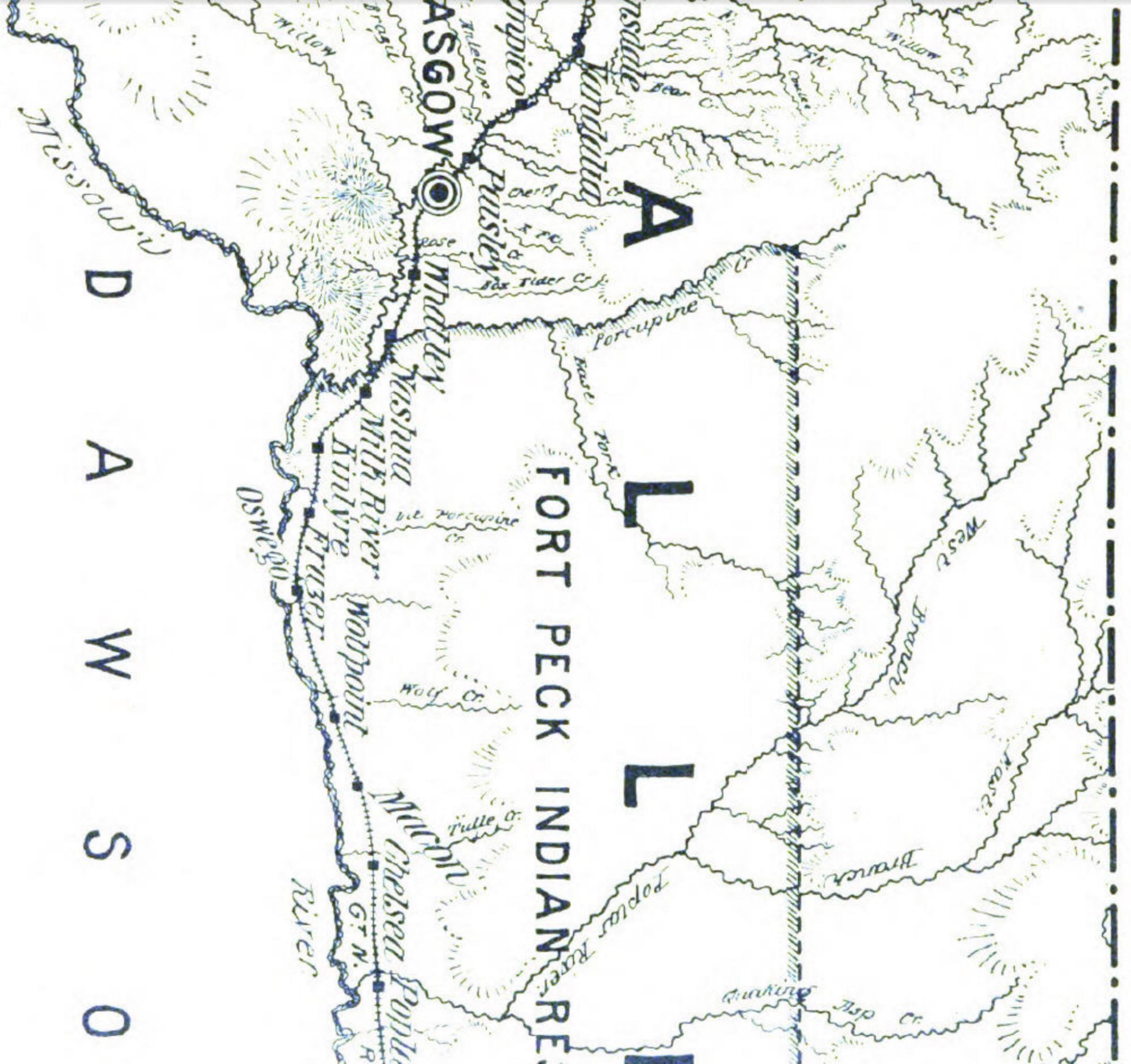
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PRINCIPAL FEATURES.

Total area, 10,300,000 acres; assessed, 104,173 acres. Resources—Stock raising, agriculture. Railway facilities—Great Northern. Fort Benton—County seat population 600

S H I P P O S S E S



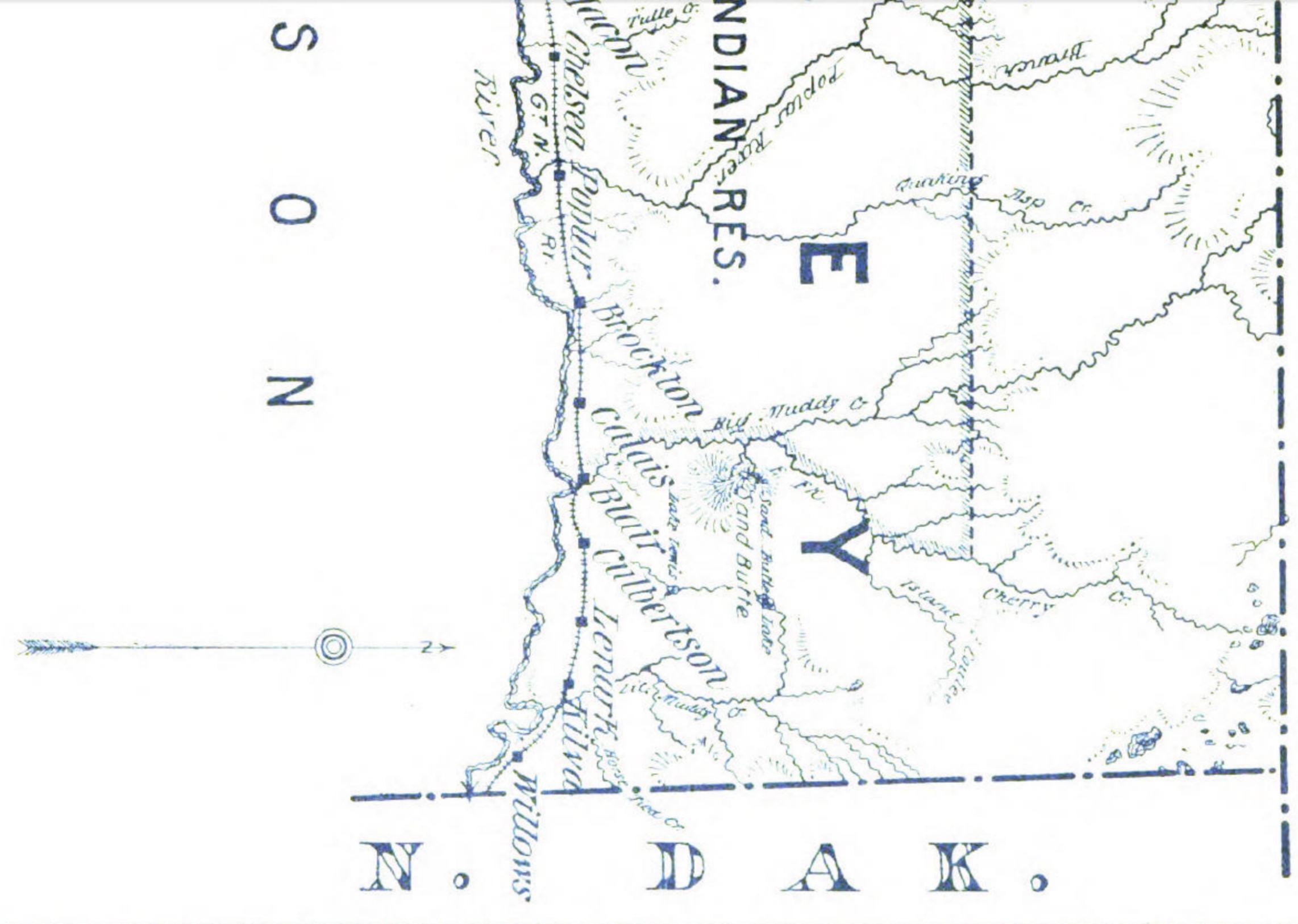
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SESSIONS

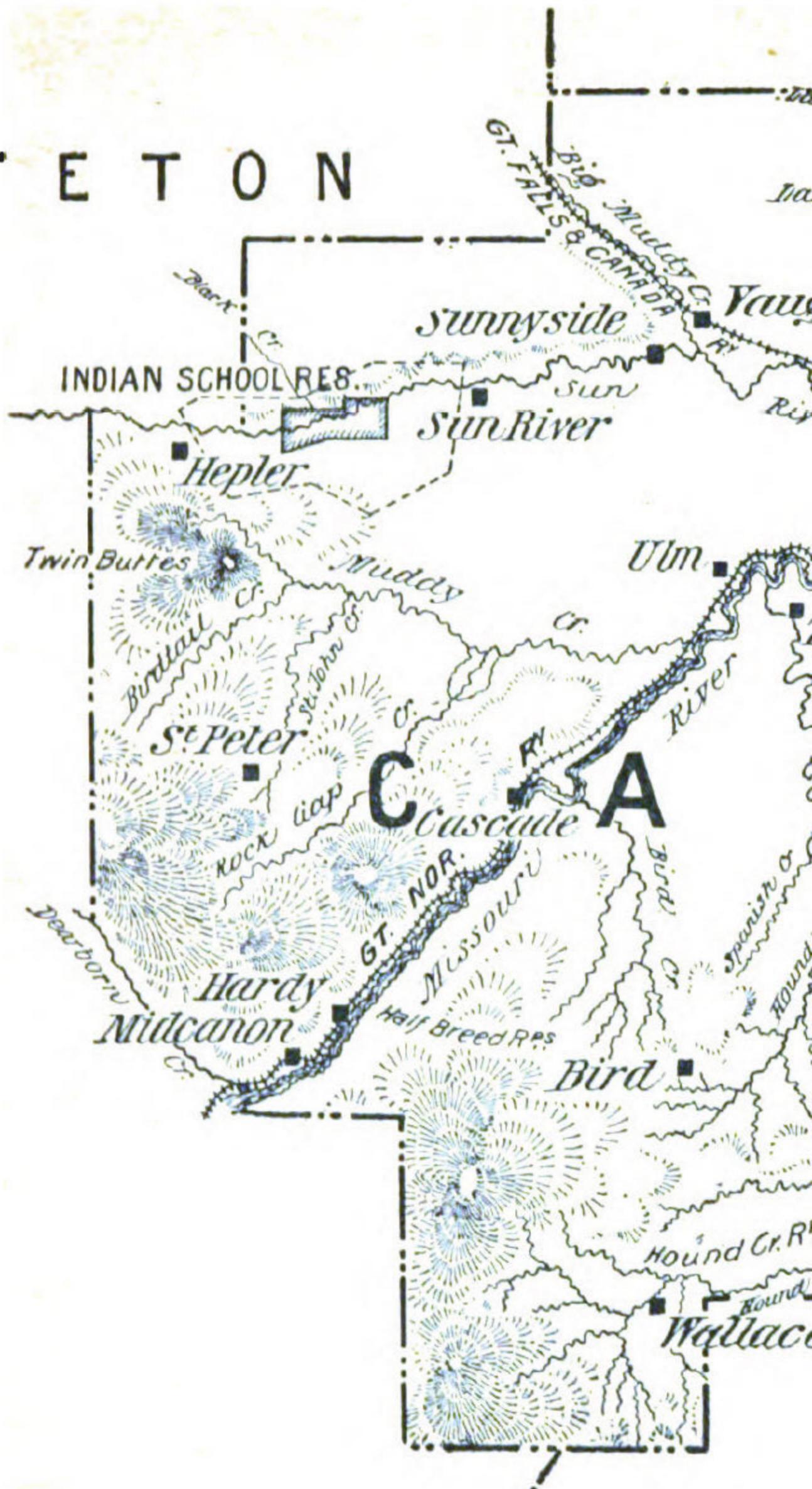


PRINCIPAL FEATURES.

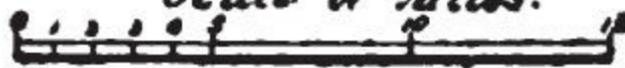
Total area—8,575,000 acres; assessed acreage, 1,089. Resources—Stock raising, wool growing and agriculture. Railway facilities—Great Northern. Glasgow—County

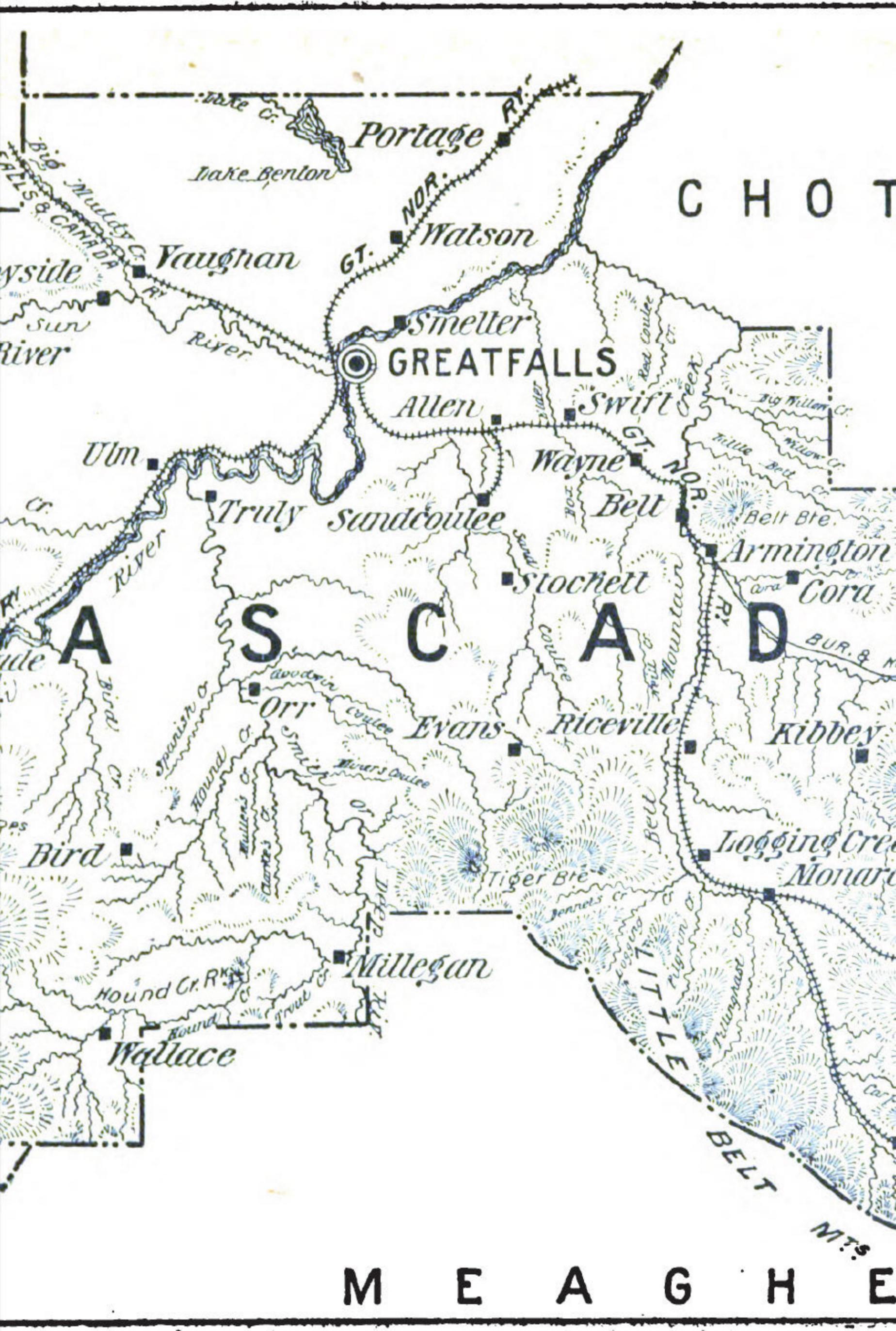
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L E W I S & C L A R K E

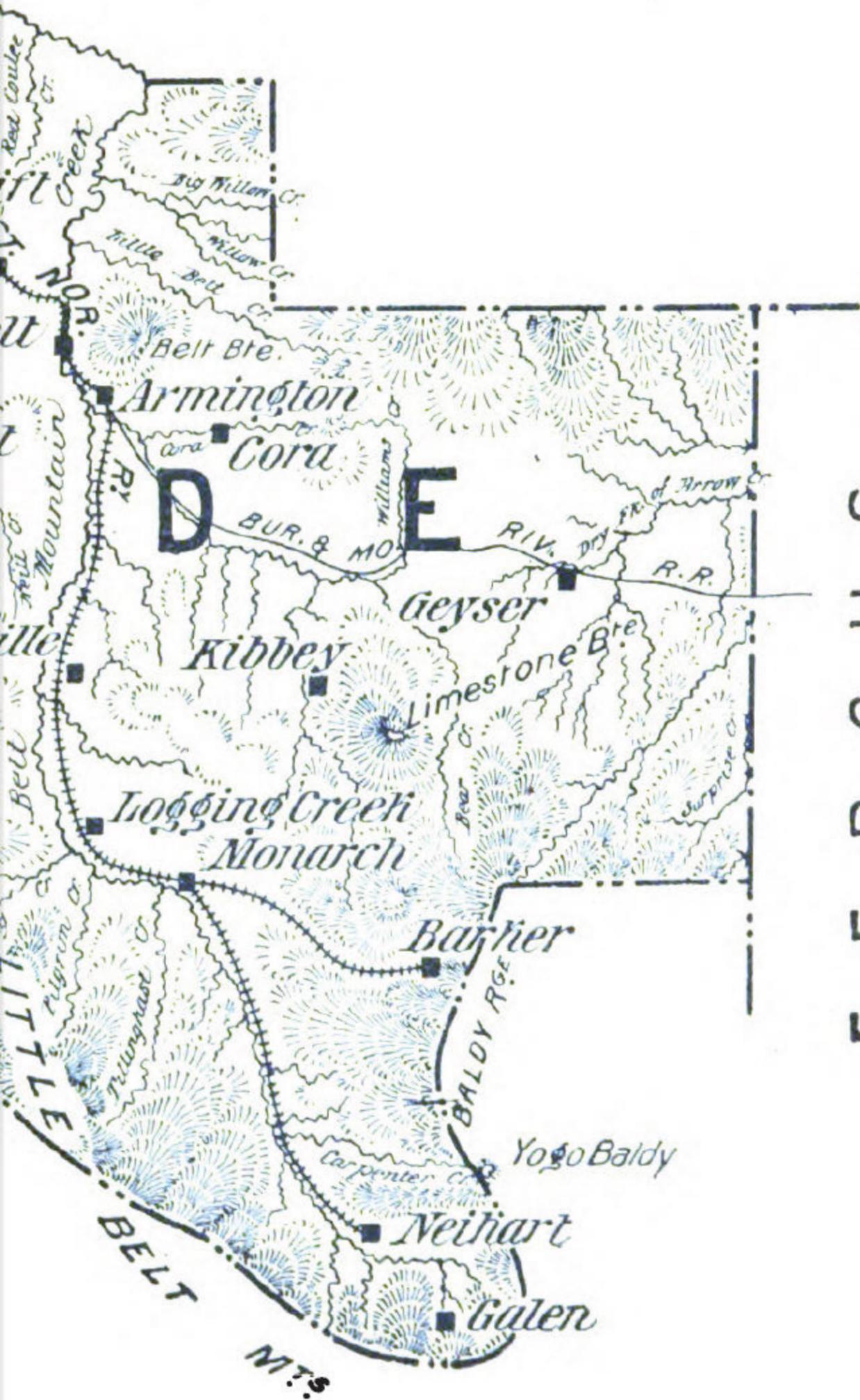


Scale of Miles.





C H O T E A U



F E R G U S

G H E R

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"THE TREASURE STATE."

MONTANA

AND ITS

Magnificent Resources.

Extra Edition of the Sixth Annual Report

OF THE

Form

BUREAU

OF

Agriculture, Labor and Industry

OF THE

STATE OF MONTANA,

1898.

Sept. 15, 1900

J. H. CALDERHEAD, Commissioner.

OLIVER M. HOLMES, Chief Clerk.

LOCK BOX 401.

HELENA, - - - MONTANA,



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INDEPENDENT PUBLISHING CO.,
State Printers and Binders.
1899.

heavy timber, this industry using immense quantities of timber every year. The coal measures of the state are the most extensive in the west, beds of an excellent quality of bituminous coal having been developed in nineteen of the twenty-four counties of the state; in several of the counties, notably Cascade, Carbon, Park and Gallatin, some very extensive mines have been developed, their present daily output aggregating many thousands of tons. As an indication of the magnitude of the coal beds, it is estimated that in the fields of Sand Coulee and Belt, in Cascade county, there are six million tons to the square mile, and as the coal area of the state embraces thousands upon thousands of square miles, it is apparent that Nature provided the state with fuel for all ages to come.

Attention was first attracted to the minerals of Montana through the discovery of gold made in what is now Deer Lodge county, by a Red River half-breed named Finlay, in 1852. The creek upon which the precious metal was discovered was named Gold creek, and bears that name now. Six years later other gold discoveries were made in the same neighborhood by the Granville Stuart party. In 1862 the Stuart-Anderson party developed placer claims near the present location of the town of Pioneer. The rich returns of their mines was really the incentive to further prospecting, discovery and the development of the mines of Montana. Following the opening of the Pioneer placer claims, came the discovery of rich ground at Bannack, Alder, Ophir, Last Chance, now the location of the city of Helena, Confederate, Pilgrim Bar, Silver Bow, Bear, Elk, Cave, Lincoln, Cedar creek, and several hundred other places, all of which produced lavishly of the coveted metal, and in the course of a few years added hundreds of millions of dollars to the gold supply of the world.

During this period of placer mining, discoveries of the other metals that are abundant in the mineral districts were made, but there was little development of the deposits until the advent of transportation facilities. Allen & Arnold are credited with reducing the first gold quartz in Montana, in a mill erected at Bannack, Beaverhead county, in 1862-3. It was "home-made," the lumber and iron being obtained from dismantled wagons that had been brought "across the plains." It had six stamps, of 400 pounds each, and was successfully run by water on free ores from the Monitor lode. The first clean-up was made in October, 1864. The first steam quartz mill, 12 stamps, was built and operated at Summit, at the head of Alder gulch, Madison county, by the Idaho Mining Company, commencing operations December 28, 1865.

The first quartz mill was established at the present location of the town of Phillipsburg, in 1867, and the first successful silver smelter was erected at Argenta during the same year. There were too many obstacles to overcome, however, and the silver industry did not become of any importance until 1876, when the recorded output was \$1,132,976, and the annual production did not reach the two-million figure until 1879, but after that year there was a steady and rapid increase until the output in 1892 was \$22,432,323. Then the slump of July of the succeeding year came, closing a majority of the mines and proportionately reducing the product.

The first discovery of copper was made in 1864, by two prospectors who were in search of gold in the vicinity of the present "Greatest Copper Camp on

Earth"—Butte. The first practical development of a copper prospect was made in 1866, in the same locality, a shaft being sunk on what is now the Parrot mine, and during the fall of the same year, a furnace was established. The wealth of the copper deposits at Butte was first recognized officially by United States Commissioner of Mining and Statistics Raymond, in his report of 1870. From this date to the present time the development of the copper deposits has been rapid, and at this writing the state contains not only the richest copper mines of the world, but also the largest and most modern reduction plants, employing thousands of men and turning out millions of dollars' worth of refined copper annually.

In tracing the mineral development of the state, the product and values of the years covered have not been quoted, but these may be seen in the tabulated statements that appear in another department of this volume, and to which attention is especially called.

Montana presents an inviting field for everybody of whatever calling, who has the energy and the earnestness to successfully take advantage of the multiplicity of resources to which attention has been briefly called.

Montana was romantic in its past history; it is industrially great in its present, and yet her manifold resources have scarcely been touched.

This is the story of the "Treasure State."

There is, perhaps, no section of the world that offers such tempting opportunities to the tiller of the soil as does Montana. It offers many special inducements and advantages that are denied, by reason of natural causes, to the farmers of every other section of this continent. Its special advantages may be concisely stated as being a high-priced and permanent home market, direct shipping facilities with the western and foreign Asiatic market, the finest and most healthful climate, the most luxuriantly productive soil and unlimited free winter and summer range for the cattle, horses and sheep of every farmer—a combination of advantages that are not offered elsewhere to those who may be seeking to establish their homes under more favorable circumstances than they now enjoy.

The fact that the state has now and always will have a great preponderance of its population engaged in mining and smelting, other industrial and business occupations, assures the farmers who are so fortunate as to secure an advantageously located farm in this state, a permanent, abundant and high-priced market for every product of the farm. The per capita consumption of Montana is greater than that of any other state, and in the past, and as it will be in the future until our farm lands are settled and made to produce very much the larger part of the products of the soil that are consumed will have to be imported. But with the settlement of the arable lands of the state, this will be changed, and hundreds of thousands of dollars that are now annually sent outside of the state for the products of the farm will remain here, where they are made and earned, and will be paid to home farmers for the productions of Montana soil. But a very inconsiderable portion of the population of Montana is now engaged in agricultural pursuits, and the proportion will not be abated, as with the continued rapid development of the wonderful mineral resources of the state,

Year.	Cattle Inspected.	Strays Recovered	Amt. received for strays by Association.	No. of Arrests.	No. of Inspectors.
1885	79,089	\$ 1,035	\$ 1,119	19	8
1886	119,620	1,730	9,600	43	9
1887	82,134	3,160	15,825	13	8
1888	167,602	3,790	39,337	6	5
1889	123,880	3,424	38,411	20	5
1890	174,035	3,991	29,029	21	9
1891	250,000	13,746	181,832	14	10
1892	203,000	11,110	214,648	7	13
1893	279,158	17,565	148,776	13	14
1894	302,655	19,855	150,900	23	12
1895	306,460	24,245	179,721	29	16
1896	254,864	20,275	163,292	52	16
1897	252,162	19,104	225,373	81	15
1898	232,225	16,058	222,096	72	15

An effort was made by this bureau to collect reliable data relative to the losses caused by winter exposure, wild animals, poison and black-leg, but the returns were not sufficiently elaborate or universal to warrant a detailed or accurate report. The greatest loss was shown through winter perishing, the aggregate being apparently large, but the per cent of horses, cattle and sheep that winter on the range that perished from this cause is almost inconsiderable. Stockmen still report considerable losses from wolves and coyotes, and in some instances the individual losses were large, but in these cases they occurred through the carelessness of herders. Opinion is divided on the advisability of continuing the bounty on wolves and coyotes, but the majority of those who reported their position on the question favored a continuance. The replies received as to losses from black-leg show that in the aggregate they have been considerable, though the infection has appeared in but few places in the state. A considerable loss is also reported from poison, larkspur, aconite, loco and wild parsnip being named as the poisonous plants, while others confess entire ignorance of the cause of deaths that appear to be from poison. In the reports received from others, there appears a doubt as to poison, the inference being that the fatalities that are commonly ascribed to poisonous weeds are in fact the effect of over-eating dry foods, or are the result of turning hungry stock into abundant green pasture.

The Mineral, Mines and Mining.

While Montana is great in many other ways, having been endowed by nature with a multiplicity of resources, it is now and must for all time be greatest in its minerals, mines and mineral reduction, and when the greatness of the state is spoken of from this standpoint, the copper mines and the reduction and refining works of the Anaconda Copper company must be produced in illustration. The report of the company for 1898 gives the gross income of the concern at \$18,817,957, and after deducting nearly a million dollars for the installment of new machinery and construction, the customary 10 per cent dividend was declared and a large sum was added to the reserve. The report is interesting in that it gives an insight to the cost of operating such an institution, and it also shows what magnificent opportunities the state offers in this line, as there are many unappropriated copper propositions waiting for capital and enterprise to make them yield their wealth. The report of the Anaconda Company is as follows:

aires, as the copper districts of the state are simply in their initial stage of development and some well defined districts in which experts have the greatest faith, have scarcely been prospected. There are districts in the state where with but the slightest development large bodies of copper ore, giving high assays, have been exposed, and these only await the investment of capital and the application of labor to make them yield their owners millions of dollars of profit. The undeveloped copper mines of the state offer the most tempting inducements to capital that has an eye to the large profits that accrue to the mining and refining of copper.

The Mineral Product.

Of all the reports, the one that best demonstrates the illimitable natural wealth of Montana is that of the assayer in charge of the government assay office at Helena, Mr. Eugene B. Braden, which shows the enormous aggregate of precious metals for the past 36 years to have been \$750,000,000, and that there was an increase of product for 1897 over 1896 of \$3,000,000. The report is replete with authentic information of the mineral resources of the state and is given in full. It will be found of interest to every reader and is of immeasurable value to the state. Mr. Braden says:

The precious metal output of Montana during 1897 was the largest in the history of the state and aggregated \$53,954,675.03. This is \$3,222,576.90 more than that of the preceding year. The total production was contained in the four metals, gold, silver, copper and lead. The quantities and values of each are shown for these two years in the table below.

Metals.	1896		1897	
	Quantity.	Value.	Quantity.	Value.
Gold, fine ounces	211,914.961	\$4,380,671.00	217,514.846	\$4,496,430.92
Silver, fine ounces ..	15,720,022.44	*20,324,877.49	16,307,346.00	*21,730,710.03
Copper, fine pounds.232,096,483		25,356,540.77	237,158,540	26,798,915.02
Lead, fine pounds....	22,521,340	670,009.87	25,794,974	928,619.06
Totals		\$50,732,099.13		\$53,954,675.03

*Coinage value.

The mountains and streams of Montana have yielded \$750,000,000 of precious metals to the wealth of the world since the advent of those pioneers whose arrival was almost coincident with the discovery of gold in 1862. The figures of this output as given in the following table are believed to be the most reliable that may be obtained at this date, since no reliable compilations were attempted prior to 1882.

PRODUCTION OF GOLD, SILVER, COPPER AND LEAD IN THE STATE OF MONTANA FROM THE YEAR 1862 TO 1897 (INCLUSIVE).

Years.	Gold.	Silver**	Copper.	Lead.	Totals.	Yearly Inc. %
1862 to 1881 (inc)	\$200,000,000	\$11,000,000	\$211,000,000	
1882	2,550,000	4,370,000	1,539,860	8,459,860	
1883	1,800,000	6,000,000	3,452,960	226,424	11,479,384	37½
1884	2,170,000	7,000,000	5,386,500	246,326	14,802,826	31
1885	3,400,000	11,500,000	6,779,800	274,350	21,954,150	50
1886	4,422,000	13,849,000	5,761,200	494,132	24,526,332	12
1887	5,978,536	17,817,548	8,853,750	607,662	33,257,496	35½
1888	4,200,253	15,790,736	15,103,946	569,160	35,664,095	7½

Production of Gold, Silver, Copper and Lead—Continued.

Years	Gold	Silver**	Copper	Lead	Totals	Yearly Inc. p ct
1889	3,500,000	19,393,939	13,334,970	456,975	36,685,884	3
1890	3,300,000	20,363,636	16,656,437	675,392	40,995,465	11½
1891	2,890,000	20,139,394	14,377,336	1,229,027	38,635,757	*5½
1892	2,891,386	22,432,323	19,105,464	99,035	45,419,208	18
1893	3,576,000	21,858,780	16,630,958	964,089	43,029,827	5
1894	3,651,410	16,575,458	17,233,718	730,551	38,191,137	*11
1895	4,327,040	22,886,992	21,114,869	754,360	49,083,261	28½
1896	4,380,671	20,324,877	25,356,541	670,010	50,732,099	3½
1897	4,496,431	21,730,710	26,798,915	928,619	53,954,675	6
Totals	\$257,533,727	\$273,033,393	\$217,487,224	\$9,817,112	\$757,871,456	

**Coinage value.

This table reveals a steady improvement of the mining industry in Montana. The fact that the increase of \$3,000,000 last year has been frequently duplicated, and even doubled during some of the past years, is an absolute guarantee of permanence and future growth. This table also ought to prove of great encouragement to those who have invested large amounts of capital in the mines of the state, as well

*Decrease.

as afford an incentive to those whose money must further improve the mineral resources and continue operations of increasing magnitude and importance.

The attention of the reader is directed to the statistical tables which follow this review and relate to the production of precious metals in Montana during the year. These show the origin, method of treatment and the final disposition in amounts and values of the gold, silver, copper and lead. They have been assembled from the records of the government assay offices and mints and from confidential replies made by individuals, mining companies, smelters and refineries to interrogatories and letters, aided by personal investigation and travel. Every care has been exercised to avoid duplications and the results are reliable and accurate.

The changes made in the geography of the state by the legislature which convened in January, 1897, affected the production of several counties. Broadwater county was created from adjoining portions of Jefferson and Meagher counties. Additional areas were also segregated from Meagher county to be annexed to Lewis and Clarke and Cascade counties. Thus what of late years had been the metal producing districts were taken from Meagher county. However, this county has not lost its prestige as a mining region. The recently constructed Montana railroad, connecting the lead carbonate camp of Castle in Meagher county with the Northern Pacific railroad, was put into operation during the year and encouraged that district to a new activity. Meagher county, therefore, became the largest lead producing county in the state.

The pursuit for gold has ever been attractive. Although pioneer and "tender-foot" alike have loved to live this life of allurements and uncertainty, the prospector for precious metals in Montana has now the same chance to "strike it rich" or "make a stake" as was ever held out here or elsewhere. But little of the hidden wealth stored up ages ago in these mountains has been discovered, and this work, which is the forerunner of and goes hand in hand with the increased production of precious metals and the development of the mining industry in every region, was actively prosecuted in the older and most accessible districts of Montana during 1897. While generally unknown, it is nevertheless a fact, that Montana has been prospected only in a superficial way. Whole districts, aggregating an enormous

Placer mining is followed in a small way among the Judith, Moccasin and Little Belt mountains. The yield of this gold in Fergus county during 1897 was about \$1,000. Rubies and sapphires are found along Yogo creek, in the southwestern part of the county. The quality of the gems is excellent and as the demand for them is a growing one, the yield will achieve greater importance.

FLATHEAD COUNTY.

Lying west of the Rocky Mountains and north of Flathead Lake and the Cabinet mountains is Flathead county. To the north and west are Canada and Idaho respectively. Although the placers of Libby creek are as old as the history of mining in Montana, the development of the resources of this county cannot be said to have been undertaken until after the building of the Pacific extension of the Great Northern railroad across the county in 1891, which afforded communication and railroad facilities to this region. The growth of its mineral and other resources has since been progressive and in 1897 was as marked as that of any section of the northwest. The discoveries under exploration at present, and the mines now worked, indicate that Flathead county will achieve an importance in mining in Montana rivaled only by Silver Bow county. Enough is known to warrant the statement that gold, silver, copper and lead are all in the list of future products and in sufficient quantities to secure the needed capital for development and operation.

The Snowshoe mine is situated in the Cabinet mountains, 18 miles south of Libby. It is owned by Spokane parties. The showing made is a flattering one. Tunnels of 750 feet and 230 feet have been driven on the vein and expose a large volume of ore. The ore is an iron pyrites and galena, carrying gold, silver and

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lead, and is concentrated at the mine. The product is then shipped to a lead smelter for treatment and reduction.

The Keystone mine is on the Yahk river at Sylvanite, in the extreme northwestern portion of the county and state. It is developed by a tunnel 200 feet in length. The ore, which carries gold, silver and lead, is treated in a 10-stamp combination mill operated by water power, about one and one-half miles from the mine.

The Goldfint mine is another property at Sylvanite. A tunnel of some 400 feet has been run to develop and work the mine. Gold, silver and lead are the values recovered from the ore. A 20-stamp combination mill will soon be completed.

The Silver Cable mine is a property in the Cabinet range about 25 miles south of Libby. Considerable development work has been done here and the quartz yields values in gold, silver and lead. A three-thousand foot tramway connects the mine with a 50-ton concentrator and transports the ore for treatment. Both tramway and concentrator were built in 1897.

To the east of the Kootenai river, and immediately south of the international boundary, is the Tobacco Plains country. The Independence mine, eight miles from the river, gives promise as a copper producer. The exploration at this mine aggregates 1,000 feet and shows a strong lead of chalcopyrites of copper. The present development will justify the erection of a concentrator at the mine.

The B. & B., the Big Eight, the Juliette, the Yankee Girl and other properties are receiving attention and promise much at the present development.

GRANITE COUNTY.

Granite county lies between Deer Lodge county on the east and Ravalli county on the west. The main line of the Northern Pacific crosses the county from east to west nearly parallel with the northern boundary. A branch line also extends from Drummond to Philipsburg, the county seat. The county is exceedingly moun-

bringing prosperity to the people of this country and furnishing a market for the products of the farmers.

Anaconda is the county seat and has a population of over 10,000. It is picturesquely situated on a plateau at the mouth of a canyon at the foot of the mountains. Public buildings are in course of erection. The general offices of the Butte, Anaconda & Pacific railway are located here. There is an iron foundry, brick yards and other attendant industries, which all add to the prosperity and insure the permanency and future greatness of the city. The enterprise of the people of Anaconda, based on the large pay roll of the great Anaconda Copper company and other industries, has built up one of the most progressive and prosperous cities on the American continent, with excellent railroad facilities, water works, electric lighting plant, a street railway and all modern city conveniences and facilities.

The city of Deer Lodge, with 1,500 inhabitants, one of the most beautiful cities in the state, is situated in the center of Deer Lodge valley and is noted as being a city of homes. The development of the mines near there will in time make it a prominent business center.

Flathead County.

Flathead county lies in the extreme northwestern corner of the state and comprises an area of more than 8,000 square miles; it was established from the north end of Missoula county in 1893, and now has an assessed acreage of 325,626. It derives its name from the Flathead Indians, a peaceful tribe whose boast is that they never shed white man's blood. This is an exceptionally favored county. Its valleys are large and fertile, its climate superb, and it is an exceptional county in the state from the fact that irrigation is not necessary to the cultivation of its lands. Crops can be raised without it, the rainfall being entirely adequate for all agricultural purposes. Beside the rich soil of its plateaus and valleys, it has lofty mountains, in which are rich deposits of mineral, exhaustless coal measures and building stone in great variety and abundance. Petroleum is found in the northern part of the county, and immense tracts of the finest timber in the Rocky Mountain region. The agricultural lands are of three classes; first, the bottom or meadow lands, possessing a rich, heavy, black loam and clay sub-soil, usually first settled upon; second, the bench lands, rising terrace-like to the foothills, being regarded as the most valuable for grain and vegetables because of less danger from frost; and third, the high bluff lands, used mostly for grazing and pasturage. In some instances, however, the best fruit and grain comes from this third class of lands. Dairying and hog raising are two of the most profitable industries in the county, and figure prominently in the income produced by every farm. There is always a good market for both these products, the supply rarely meeting the cash demand. The Flathead valley is estimated to contain 900 square miles, and is the garden spot of the county. There is yet a very considerable amount of unappropriated land that can be used for agricultural purposes. These government lands lie several miles from the towns and are being settled upon and are being rapidly made to add to the wealth of grain raised in the county. All grains and grasses do well in this county. In 1897 Flathead county raised 1,500,000 bushels of grain for market. Small fruits have been grown ever since the county was settled, and within

the last year or two the young orchards coming into bearing are giving evidence of great possibilities for fruit growing, fully determining that as fine apples, plums, peaches and cherries can be grown here as anywhere in the state. Flathead also contains a vast wealth of timber land. It is estimated that there are 2,000 square miles of fir, pine, tamarack, cedar, spruce, larch and birch growing in this county and already there are thirty-one sawmills busily converting the timber into marketable lumber. The mineral resources of the county are not yet fully developed, but are not second in the natural opportunities offered to that of farming. Gold, silver, copper, iron and lead are the minerals found in this county. At Libby the mines are giving employment to many men. Coal has been discovered in large quantities, that in the Tobacco Plains district being pronounced a very excellent quality.

The Great Northern Railway has 197 miles of track in this county, crossing it from east to west. Flathead Lake, the largest sheet of water in the state, thirty miles long and ten wide, and navigated by steamers, is in this county. There are numerous other lakes in the county, and the lakes and rivers are filled with fish that furnish splendid sport for those piscatorially inclined.

There is a large area of the Flathead Forest reservation in the northeastern corner of the county, and a part of the Lewis and Clarke Forest Reserve is in the southeastern part. These reserves are under the control of the United States government, and a careful watch is kept to prevent them from being destroyed by forest fires or denuded by timber cutters. These forests are being preserved on the accepted theory that they will perpetuate the seasonable precipitation of moisture.

Kalispell, the county seat of Flathead County, has a population of 3,000 and is beautifully located near the confluence of the White Fish, Stillwater and Flathead Rivers, and twelve miles north of Flathead Lake. It is headquarters of the Kalispell division of the Great Northern Railroad Company, thus making it an important railway point; has paved streets, electric lights, water works, a complete sewer system, both surface drainage and sanitary; telephone exchange with branch lines to various parts of the valley, nine church organizations, graded school, two national banks, two flour mills, four grain elevators, brewery and a malting plant, U. S. Land Office, U. S. Weather Bureau Station, fine stores, good hotels, two newspapers, fire department, and is the general supply point for an extensive agricultural, mining and lumber district, extending from 100 to 200 miles in every direction. There are yet excellent opportunities for farmers, miners and lumbermen in the surrounding country. Kalispell has no commercial rival. The other towns in the county are Columbia Falls, where the State Soldiers' Home, a new but popular institution, is located; Libby, a lively and most promising mining camp; Troy, Sylvanite, Dayton, Holt and Tobacco. All are thriving towns and are doing a prosperous business.

Fergus County.

In the very center of the Treasure State and equi-distant from the Northern Pacific and the Great Northern railways, lies a vast inland empire known as Fergus county. In outline it is nearly octagonal, except that there is a re-entrant angle in place of the southwest side. The northwestern boundary is formed by Arrow river, the northern and northeastern boundaries by the Missouri, the southern and eastern by the Musselshell. On the west the boundary is artificial, though it follows the ridge of the Belt mountains. The diameter of the county north and