COMPARATIVE STRENGTH OF SEVERAL STYLES OF FRAMED TIMBER SETS—SIMPLEST METHODS BEST FOR HOLDING HEAVY GROUND.

Conditions in one place were such that the sets would be down in six weeks if not relieved; both caps and posts would be half sawed. SAWED 15 ½ or 16-inch caps and posts had to be relieve every morning in certain sections of the ore-shoot. This meant that every stick was overloaded, hence the exceptional opportunity for trying out different styles of framing sets.

Several methods of framing were tried, but it was found that any cuts made in the posts or caps weakened the timbers considerably and that the timbers failed by splitting. This was especially true of the posts. The simplest method was found to be the best. Caps, posts and sills were sawed the proper length and shape, and planks, spiked to the lower side of the caps for 8-inch timber, were placed between the caps and the posts. This method was found to be the best. Caps, posts and sills were sawed the proper length and shape, and planks, spiked to the lower side of the caps for 8-inch timber, were placed between the caps and the posts. This method was found to be the best.

The North Platte Project.

The North Platte Project contemplated the construction and diversion of a large part of the North Platte River for the irrigation of lands lying in the North Platte Valley, Eastern Wyoming and Western Nebraska. The project was completed and turned over to the users. The Project engineer, in the interest of the users, had the project completed and turned over to the users.

The Pathfinders Reservoir.

The Pathfinders Reservoir is situated in Central Wyoming, and is formed by the construction of a masonry dam in the bed of the North Platte River at Pathfinder Reservoir. The dam is of the arched type, the radius of its center line being 150 feet, It is built of concrete of the best available quality, and is built to stand the test of time. The dam is of the best available quality, and is built to stand the test of time.

CONSULTING, DESIGNING AND CONSTRUCTING ENGINEERS FOR "THE G. S. CARD IRON WORKS CO. DENVER,

THE COLORADO SCHOOL OF MINES MAGAZINE.
of uncooled syenite granite masonry, except the two dams, which are laid in two and three-foot courses. The height is 31 feet above the river bed. It is 422 feet long on top and 80 feet long on the bottom. The top width is 24 feet, providing a 10-foot roadway and the bottom width is 18 feet. A spillway, 700 feet long at the north end, is now under construction. This spillway is being cut in the rock abutment and will be provided with a low concrete weir. The area of the reservoir at the level of the spillway, which is at an elevation 5,852 above sea-level, is 22,525 acres, and its capacity 1,100,000 acre-feet. The construction of the Pathfinder dam was begun in September, 1905, and completed in June, 1909.

It was the original intention to release all the water which was discharged under head when the reservoir is full. The force of this water supplies water to lands on the north side of the river, and by the selection of impervious material for the interior and by heavy grading on the reservoir side.

**DIVERSION DAM AND HEADWORKS.**

The diversion of the Pathfinder Canal from the North Platte River, is effected by means of a concrete overflow weir of the same cross-section, and has a capacity of 7,000 second-feet under full head. It is closed by four sliding steel gates, 6 feet 2 inches by 2 feet 4 inches clear opening, separated by concrete piers 3 feet in thickness, the bottom being widened to maintain ample seepage area. These piers are under the bed of the river, when the reservoir is full. The free of the water which was discharged under the dam during the season of 1909, was such as to damage the tunnel lining and an additional outlet at a higher level was decided upon. This second tunnel is cut in the natural rock on the south side of the dam, and is 340 feet long and 12 feet by 24 feet in cross-section. This tunnel is closed by six needle or balanced pressure valves, five feet in diameter. The installation of these valves will be completed after the close of the present irrigation season.

In connection with the Pathfinder dam, there has also been constructed an earth dike during the season of 1910. This dike closes a gap in a gravel ridge about 1,500 feet long, with a crown elevation 13 1/2 feet higher than the overflow crest of the dam and with a covering of coarse gravel and boulders to a thickness of 18 inches. The side slopes of this dike are 1 4/4 by 1. The concrete work rests on a foundation of conglomerate rock its entire length.

**INTERSTATE—WHALEN DIVISION DAM AND HEADWORKS.**

Whalen, Wyo., to a point near Bridgeport, Nebr., a distance of approximately 170 miles. At the present time the canal is computed to a point almost 10 miles north and four miles east of Minatare, Nebr., a distance of 115 miles. This portion of the canal is supplying water to lands on the south side of the river between Whalen, Wyo., and Nine Mile Creek, in Nebraska, exclusive of lands already under irrigation by private ditches, covering nearly 1,600 feet below lands. The average elevation of these areas is about 4,000 feet above sea-level.

The Interstate Canal has a calculated capacity of 5,400 cubic feet per second for the first 28 miles, after which the capacity is reduced to suit the demands upon it. At the north end of the weir, the overflow crest of the Interstate dam, and at the north end of the dam, there are connected the headworks of the Pathfinder Canal, should the same

Whalen, the point where the Interstate Canal is built of reinforced concrete. In addition, there are three waste areas at suitable points on the main canal from which the water may be released in times of need. All of the above structures are of reinforced concrete. The cross-drainage structures consist of the first 50 miles of the canal and by steel superstructure on this canal, such as culverts, flumes and siphons, are of re-inforced concrete. The highway bridges are constructed at suitable points on both divisions. The plan of irrigation under the Interstate Canal consists of three combination canals and waste-ways, two siphons, and three single-compartment semi-circular culverts, all of which are built of reinforced concrete. In addition, there are a number of underdrains of vitrified pipe, constructed at suitable points on both divisions.

The plan of irrigation under the Interstate Canal consists of three lateral ditches. In addition, there is a tract of land of about 1,290 acres in Wyoming, controlling by a private corporation, for which the Government delivers the water in bulk at the head-gates. Water was first delivered to this tract, which is a Carey Act selection, in the season of 1906. The first lateral
District has received water since the season of 1898, and the Second Lateral District since the season of 1899. A portion of the Third Lateral District, comprising nearly 36,760, 34,100, and 38,000 acres of irrigable land, will receive water for the first time in 1911. The areas of the First, Second and Third Lateral Districts cover 36,760, 34,100, and 38,000 acres of irrigable land, respectively. In addition, there are a few tracts, aggregating 3,540 acres, which will later be irrigated, but which are made of wood. In connection with the improve- ment of the irrigation districts, having capacities of 13,600, 13,300, and 15,100 acre-feet, respectively, which will enable more water to be saved from the flood flow of the river and will care for the irrigation of the Third Lateral District.

The irrigable area under the Intermediate Canal covers 123,370 acres, of which nearly 13,600 acres is controlled by a private corporation, and a total of 111,400 acres by the Reclamation Service. In connection with the Intermediate Canal, a tract of approximately 50,000 acres of beautiful and fertile table land has been offered for homestead entry under the proposed Reclamation Act of 1902, and a tract of approximately 8,000 acres of bosque has been offered for entry except occasional releases of water

Settlement.

A large portion of the lands under this project were settled during the first year, at a time when there was a pronounced home-sickness movement westward into the arid belt. A season of dry years followed, and with few exceptions, those early homesteaders, with their sod-house dwellings, were aban- doned by the discouraged and impoverished pioneers. Three years later, recognizing the need of irrigation, the ranchmen and cattle operators improved the first bottom lands along the river; when the river began building a series of small floods to irrigate much of the land from 6800 to 6000 acres by community effort, and suc- cessfully in covering the more of the lands between the years 1887 and 1900. One of these projects was of more ambitious dimensions and proposed the irrigation of some 60,000 acres of table land on the north side of the river, between the state line and Red Willow Creek, in Nebraska. Lack of proper organization, failure to appreciate the engi- neering problems involved, and financial re- verses, particularly as centered by the panic of 1893, stopped further development of this project until the passage of the Reclam- ation Act in June, 1902, authorized a general interest in irrigation work throughout the West. Since then, this project has been practically completed by private capi- tal, and a tract of approximately 28,000 acres of bosque and fertile table land has been added to the irrigable areas of this valley. The history of this project, however, illustrates the difficulties which were in the way of irrigating anything but the first bottom lands along the river, and for this reason the settlement of the valley was practically confined to a narrow strip follow- ing the river channel.

Since the inception of the North Platte Project, settlers from Missouri, Kansas, and Northern Colorado, and other adjoining States, have taken practically all lands avail- able for homestead entry under the proposed canal and lateral system. It follows that at the present time, there are no lands open or available for extra-ordinary occasional reali- zations, which are sold by settlers desiring a change of location. The Reclamation Service has persistently discouraged the poor and experienced man from attempting to undertake irrigation farming on one of these homesteads, and it is not considered by the Office of A. M. $500 per acre, to make a reasonably good living. The present plan of payments provides for the return of the entire building cost within a period of ten years, as required by law; the first payment being $35.00 per acre; the second $35.00 per acre, and the remaining eight payments each $5.00 per acre of irrigable land. Operation and maintenance charges are being assessed with the beginning of the third year of service. These charges are estimated for 1911 at $12.50 per acre.

Water Users' Association.

On most of the reclamation projects, con- taining any considerable proportion of private lands, localized water users' associa- tions have been organized. These associa- tions are composed of the water users taking water from the Government works. They are formed for the purpose of securing the Government that land owners will apply for water from its irrigation works when they are completed. As the Reclamation law con- templates that the reclamation work shall be
managed by the water users themselves, when the major portion of the funds are paid back to the Government, these water users' associations may later take over and operate these irrigation works, although the law does not expressly provide that they must do so. The purpose of these associations is to protect and to maintain such works, and to hold in trust for the owners of irrigable land, and of making suitable contracts with the canal companies to dispose of their water for use by the owners of irrigable land. In the case of a homestead entry, the association assumes the duties of the Secretary of the Interior, and must become a share-holder in this association. It has been arranged for the canal companies to hold in trust for the owner of irrigable land, and to get started. These should particularly appeal to the young farmer in localities where good agricultural land has been patented by the average man to start here without the approval of the Secretary of the Interior. The association has for some time been trying to locate the following graduates. Advice to Prospective Settlers.

Advice to Prospective Settlers.

There are excellent opportunities on this project for men of reasonable means with a comfortable start on homestead land, depending upon the price he has to pay for the relinquishment.

The Alumni Association has for some time been trying to locate the following graduates.

Letter that we ought to burn.

Letters that we ought to burn.

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Letters that we ought to burn.
Vi'lio attended exercises, that the School has an Alumni. As the class of 1909 contributed nearly one-third of the members present at the reunion, and considerably more than one-third of the entertainment and noise, we will start the brief report of the reunion by printing a copy of the four-page program the class of 1909 got out for their reunion. We hope that a spirit of emulation will lead other classes to "make good" next year and not let '09 completely eclipse them:

A New Wrinkle.

1909 Reunion May 22-27, 1911.

MINES, 1909.
Second Year Reunion.
May 22 to May 27, 1911.

MONDAY, MAY 22.
9:00 A. M.—March back and set up.
7:00 P.M.—How holes and split.
12:00 M.—Headache from smoke.

TUESDAY, MAY 23.
P. S.—Members must furnish their own spark buckets and stope wrenches.

P. P. P. S.—Cribbing and spikes furnished by pink will be collected at the portal.

P. M.—Talcum powder must not be spit before the engine lifts the bucket.

THURSDAY, MAY 25.
12:30 P. M.—* * * * * etc. (by permission of Mayor Hoyt).

FRIDAY, MAY 26.
2:00 P. M.—Arrive in Golden amidst a cave.

SATURDAY, MAY 27.
10:00 A. M.—Baseball game. Faculty vs. '09. Ball park. Queen's party.

Water Boys: Tiny, Fat. Sam and Ben.

Spectators:
John the janitor.
Billy and Pal. Assembled audience.
Cheer leaders for faculty—"Fel­­mores.

Cheer leaders for '09—"Fel­­lows.

11:30 A. M.—Class swim at pool room.
12:00 M.—Alumni lunch.
1:00 P. M.—Prexys and Faculty.
2:00 P. M.—Commencement at Synagogue.
4:00 P.M.—Examination and report Prexys.

Mascot—Trap.

Spectators:
John the janitor.
Bats unlimited—to muck sticks.

Kegs outside of coaching line.

Carnegie medal for three-base hit.

Prom.

Pitcher allowed two "Bocks" during game.

MORNING:
11:30 A. M.—Class swim at pool room.
12:00 M.—Alumni lunch.
1:00 P. M.—Pride to Prexys. B. D. Cigars.
2:00 P. M.—Commencement at Synagogue.
4:00 P. M.—Examination and report Prexys.

Cheer leaders for faculty—"Fel­­lows.

When we get in better shape financially we hope to be able to hire E. C. Brooks ("Toughy") as our cartoonist.

We made noise enough, at least. Com­­mencement Day, May 26, to convince all who attended the exercise, that the School has an Alumni.

WE ARE THE S. S. Nl."

THE COLORADO SCHOOL OF MINES MAGAZINE.
The Alumni

ALUMNI SANCTUARY AND MEETING
May 27, 1911.

Shortly after 1:30 p.m. forty-one members of the Alumni Association and down to the banquet in the convention hall of the Alliance Hotel. A little later those members appeared upon the scene. Later in the evening another member, unable to attend in time for the banquet, came to be present at the meeting.

The first hour was spent disposing of the various address and exercises set before us and in singing songs more or less in concert with the music furnished by the Alliance Orchestras. We all sang, or tried to sing, and thoroughly enjoyed ourselves.

The toastmaster then read the following letter from Andrew Weiss:

DEPARTMENT OF THE INTERIOR,
UNITED STATES RECLAMATION SERVICE.

Mr. P. S. Tivisgrove,
President School of Mines Alumni Assn.,
Montejo Building, Denver, Colorado.

I enclose herewith a letter to the Alumni Association which would tend to you to read or have read to you at the meeting tonight.

regret most keenly my inability to be present at this meeting, but the conditions make it practically impossible for me to attend.

Anything that I may be able to do in the future to enhance the interests of our Association, I will be very glad indeed to do.

If you deem the letter of no interest, I am not present myself for such reading, it will, of course, not matter. I simply wanted to express the idea that although I was not present in person, I was with the Association in interest and sympathy.

Very sincerely,

ANDREW WEISS.

MAY 27, 1911.

To the President and Fellow Members, Colorado School of Mines Alumni Association.

Dear Fellow Graduates:

I wish to take this opportunity of congratulating you on the important events of the past two years from the standpoint of the Alumni Association, notably the securing passage of a law that makes it mandatory upon the Governor to keep a graduate of the Colorado School of Mines Magazine. This publication has as its sole object the advancement of the sciences and the advancement of the Colorado School of Mines Magazine, and to that end I will do my best to carry out the instructions given me. The toastmaster then read the following exercises set before us and in singing songs more or less in concert with the music furnished by the Alliance Orchestras. We all sang, or tried to sing, and thoroughly enjoyed ourselves.

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Very sincerely,

ANDREW WEISS.

MAY 27, 1911.
In the March number of this magazine a letter was by Mr. M. C. Allen, '06, dated February 7, 1911, and directed to the Committee of Instruction of the C. S. M. Alumni Association. This letter should have been republished by the Committee of Instruction of the C. S. M. Alumni Association, and the various numbers of this committee has not been in session since the time its report was rendered to the committee, and the various members of these committees are so scattered that it is difficult to secure a hearing. Incidentally, in this letter, I wish to give my views on the points raised by Mr. Allen, and for the benefit of those who do not read his letter, the same is herewith quoted:


"Committee of Instruction of the C. S. M. Alumni Association.

"Gentlemen:"

"The February number of the C. S. M. Magazine has been received and read. I was especially interested in the average graduate's reports upon his own course of study, and would like to make the following suggestions:

"I have foreseen a very large part of the things I learned in school, and, in my studies, worked to review some of the subjects that interested me, such as mathematics, mechanics, and chemistry.

"I have no doubt that this has occurred among the majority of the rest of us.

"I should like to have an outline in considerable detail of the work we did in the recitation and lecture rooms, giving the topics of importance, why they are of importance, and what should be read on them.

"Text books used should be named and numbered, and the latest and best books which will self-publish time a world. Mr. Allen is quite right when he speaks of the lot of stuff that has to be waded through, and the various members of the committee should all be told to such a position and the same as you have ever been. Such an outline might increase the efficiency of the study.

"Yours truly,"

"M. C. Allen, '06."

"Mr. Allen doubtless voices the sentiment of a large number of our graduates, as well as the graduates from other schools. It is particularly difficult to review such subjects as Mathematics and Mechanics when one is engaged in the active duties of the profession, and particularly so in later years, as one must assume charges of constantly increasing responsibilities and administrative duties. These generally tend to drift out of the memory, and the Alumni Association committee has not been in session since the time its report was rendered to the committee, and the various members of these committees are so scattered that it is difficult to secure a hearing.

"I believe I can speak for every one of our committee and myself, that we should all be glad to outline such a post-graduate course of study, as suggested by Mr. Allen, for it must say that every member of this committee showed the greatest interest and interest in his work and in the discussion which ripened into the report published in the January number of our magazine. In my belief, however, to which belief others of our committee may not subscribe, that any attempt at outlining a post-graduate course of study for our students to follow after they leave the Institute would probably result either in total failure or else in result of less importance.

"This appears to me for the reason that it would be necessary to outline every course of study, no matter what the subject, in each and every course, which I believe is wrong.

"It would probably be a very useless one for any member of the committee to adopt, but it might, some time, when the Institute has a better staff, be of some use.

"Mr. Allen is quite right when he speaks of the lot of stuff that has to be waded through, and the various members of the committee should all be told to such a position and the same as you have ever been. Such an outline might increase the efficiency of the study."

In conclusion, I wish to say that anything which I believe to be of any use for any one of our numbers, whether he be a new graduate or one of the former administration of the School, will be done cheerfully and to any extent that my abilities and opportunities permit.

"John Thompson, for I must say that every member of our committee agreed upon and adopted by a large majority vote.

"In conclusion, I wish to say that any attempt at outlining a post-graduate course of study for our students to follow after they leave the Institute would probably result either in total failure or else in result of less importance.

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Magazine was originally an annual. This meeting adjourned in time to catch the 2:30 cars.

The following members were present: M. A. Draper, John Gross, J. P. Keeler, C. W. Keeler, C. L. Todd, John M. Bristow, Paul A. Gow, who has been with the Anaconda Copper Mining Company since 1902, since graduation, was appointed city engineer on May 12th. Mr. Gow’s scholastic record was considered fine as a matter of record for use in mining and other technical schools. These models show the system of tuberculosis employed in the great copper mines of Butte, and are in daily use in a number of leading colleges.

G. M. Ross has accepted a position with the D. T. C. Mining Company, Yreka, Cal.

PERSONALS.

Henry C. Worley has moved his offices to 101 First National Bank Building, Denver. He will devote the greater portion of his time to personal interests and Wyoming mineral matters.

Charles H. Snaphan became the father of a nineteen-year-old girl recently. He has two other little girls. Charlie always was in a hurry with the girls.

Charles J. Adamson, lately superintendent of the Federal Lead Company, Flat River, Mo., is now assistant secretary in the Don Juan Lead Company, Riceville, Iowa.

Frank W. Roper of Mexico City, Mexico, has been in California on mining business. He was accompanied by his wife.

Prof. G. M. Halley made the address at the graduation exercises of the Idaho Springs High School on May 24.

Arthur A. Fink of Bailo Falls, Mahn, was a visitor in Golden a few weeks ago. He has been examining mining property in Gilpin County, and if his report is satisfactory, the mine will make its headquarters in the same vicinity.

The marriage of Robert Leroy Halliday and Miss Florence Loving is announced. The bride and groom take June 12th at the Central Christian Church in Denver, and will be one of the events of the season. After a wedding trip the couple will make their homes in Humboldt, Arkansas.

Albert J. Koerner and Miss Mabel Hitchens were married in Denver some time in June. Mr. Koerner has been managing his father’s business interests in St. Louis for several years.

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Albert J. Koerner and Miss Mabel Hitchens were married in Denver some time in June. Mr. Koerner has been managing
Athletic News.

Harold C. Price, Sporting Editor.

The baseball season is over, and Colorado College needs no champion, as far as we are concerned, in rather complicated. We have played five conference games, winning two of them. The standing of the conference is as follows:

- Colorado College: 2
- Denver University: 2
- Boulder: 3
- Mines: 3
- Mines: 3

Boulder and Denver both played their full schedule, but owing to bad weather, we lost the opportunity of playing three more scheduled games, perhaps the most disappointing. We have played five conference games; two with Colorado College and one with Fort Collins. This was unfortunate, as there is little or no doubt that we would have beaten the Farmers, and we had an even chance with Colorado College. Had these games been played and won, it can be seen that Mines would have been tied for first place with the Tigers. But it is all over now, so instead of talking of what might have happened, we had better look into the future, which is much brighter.

The baseball season is over, and Colorado College has been rather disappointing. The first meet was with Boulder, and resulted in their favor, by a score of 3 to 1. The second meet was with Denver, and resulted in their favor, by a score of 3 to 0. The third meet was with Mines, and resulted in their favor, by a score of 2 to 1. The fourth meet was with Boulder, and resulted in their favor, by a score of 3 to 0. The fifth meet was with Mines, and resulted in their favor, by a score of 3 to 2. The only Mines to win was with Denver, and in this the Aggie most came our way, as we had expected, although we hardly expected to win. The Conference meet, we did expect, the Mines to win had more than five points. This we would not have been up to their usual form. As it was, "Jack" Myres was the only point-getter, when he won the shutout.

The School of Mines seniors, on the final inspection trip, stopped in Glenwood Springs long enough to clean up the Glenwood baseball team by a score of 31 to 0. The score was even until the eighth inning, when the Mines bunched their hits and brought in six runs. "Jim" Baker got away with three long hits. Andre and Douglas formed the Mines battery.

MISCELLANEOUS.

Professor and Mrs. Robert Ode are the happy parents of an 11-pound boy.

Sophomores, except the finals—and they were important. With a vengeance. Now that they are over, however, we are all "Mines snugglers" and roam the hillside surveying the land and the Denver fencers who come up to see the town. There were no lieutenant-generals, so we did not have a chance to win another championship, but——

And now we're JUNIORS!

FRESHMAN NOTES.

Tsung Te Kao.

TRACK.

The bitterest disappointment of the year was when D. U. walked in at the last moment, a score of 2 to 1. The Denver folks were sure they were going to win. We were twenty runs down, and our manager, Turner, had to get the little men in. They bunched their hits and brought in six runs. "Ham" Baker got away with three long hits. Andre and Douglas formed the Mines battery.

SOPHOMORE NOTES.

Adolph Bregman.

Since the last issue of the Magazine nothing of importance has occurred among the

REVENGE ON SACRED HEART.

One sure thing can be said about this year's team. It was consistent in the fact that it always furnished a surprise. After being beaten by D. U. no one expected a victory over Sacred Heart, a team which had beaten us 8 to 0 earlier in the season. But, nevertheless, each was the case, and the score was exactly the same, although reversed. Wilson again pitched a great game, fanning out fourteen men.

The following baseball men were awarded their monogram by the Athletic Board: Captains Watson, Davis, Warren, Rockwood, Andre, McGuire, Price, Litchfield, Wilson, Turner, and Manager Thomas.

MISCELLANEOUS.

Professor H. C. Price, Sporting Editor.

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"He may have my life, my blood, but not my
heart. I would never marry one I can
not love."

20

"He may be a noble and a wealthy prince,
but he is outlandish." "You made him yours;
let him pass for a man."

After all, if he is
successful in the engagement, you may im·
agine how proud he is, when he hears, "I
love you! I am half yourself." The bird is
in the hand. The gold apple is obtained.

The besieged city is taken. The Jason has
in the hand. The gold apple is obtained.

The clean-up day of our school occurred
on the 15th inst. Owing to the presence
of the school in the different classes, it
was thought that it was impossible to
have a holiday this fall. The Freshmen re-
main James T. Smith, who has been on the
instructor to assistant professor; Keeney,
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structor to assistant professor; Keeney,
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One of the most remarkable facts in the economic development of the West, is that the pioneers in their endeavor to find and to control the best commercial opportunities of the new country, frequently passed by many things that would have been even more gainful than the matter to which they devoted their time and energies.

The cattlemen and flock masters of Wyoming have become wealthy from their herds and flocks. The grasses of Wyoming have made more fortunes than any other resources in that state, and the grazing industries are still the most important bases of Wyoming's wealth.

During the writer's experience, as State Geologist of Wyoming, for some eight years, there was scarcely a stockman who did not have some particular mineral deposit on his range "spotted" for a future investigation, and it is a remarkable fact that some of the wealthiest and most prominent men of the state have grazed their stock back and forth for many years unheeding over the identical asbestos deposits of the state, with which this paper has to deal.

The first mention of the asbestos of Wyoming to the writer was when an old stockman told him about the ground-bogs and prairie dogs having scratched up a lot of the fiber, acting as a sort of "natural fiberizer," leaving the cotton-like product to blow around over the adjacent ground.

The Casper Mountain asbestos deposits have been known as a matter of scientific interest for nearly 35 years. Samples from this region, in fact, from the Lower Smith Creek property of the International Asbestos Mill & Power Co., were awarded a diploma at the World's Fair in Chicago in 1893, but until the last three or four years but little attention was paid to the deposits as a commercial reality. The old cry of "too far from transportation and markets," so familiar to all of us, kept capital out of the field.

Situation.

If one consults the map of Wyoming, Natrona County is noted as nearly the central part of the state. Casper, the county seat, is shown at the east central part of the county, the meeting point of the Burlington Route and the Chicago & Northwestern Railroad, the two principal railroads of the region, and the asbestos deposits lie immediately south and southeast of this point.

Asbestos Deposits of Casper Mountain, Wyo.

By Henry C. Beeler, '96.

The low range of mountains locally known as Casper and Muddy Mountains, and noted on the maps as the "Casper Range," just south of the town of Casper, are part of the front range of the Rocky Mountains, respectively known as the Laramie Mountains or Laramie Hills, or in earlier days the "Black Hills of Wyoming." This range extends from the Wyoming-Colorado line northerly to Laramie Peak, where the range turns almost abruptly and runs westward to beyond the canon of the North Platte River, west of Casper Mountain.

Geology.

These ranges consist principally of a core of granite, flanked on either side by the carboniferous limestone and successive sedimentary formations which dip away from the main granite core at varying angles, and which present the usual varied geological conditions common to many of the Rocky Mountain uplifts of this extent. The sedimentaries flatten out into the plains and plateau regions on all sides, forming the great grazing lands which have made Wyoming famous.

The granite is usually of the red feldspar variety, but an occasional area of white or gray granite is noted and the granite is cut by dikes of schists, diorite and gneiss, presenting the usual contact and mineralized area conditions of these granite exposures.

The general geology in the vicinity of the asbestos deposits may be briefly described as eroded anticlines in which the deep-seated metamorphic rocks come to the surface and...