Adjourned meeting of the Board as of August 11 met at 10 o'clock A.M. to consider report on heating plant. Present: Mrs. Hood, Judge Talbot and Chairman Pratt.

Report on heating plant had not arrived. There was no word from Mr. Duncan. It was the sense of the meeting that Regent Talbot and Superintendent Lynch install proper chains on posts at entrance to Campus.

The Board discussed the matter of putting in cement walk across the lawn from Morrill Hall to the bridge at the Lake Street entrance. Action was deferred until the regular meeting on August 30th.

Meeting adjourned until Thursday evening at 7 P.M., August 14, 1924.

Adjourned meeting convened at 7 P.M., August 14, 1924. Present: Chairman Pratt, Mrs. Hood, Judge Talbot, Comptroller Gorman, Drs. Frandsen and Schappelle.

Chairman Pratt inquired of Drs. Frandsen and Schappelle what they had been doing in the Lehman Cave country and if the Regents could help them in any way.

Dr. Schappelle said that in the Lehman Caves there were no petroglyphs but that there were very interesting picture caves along Baker Creek and Snake Creek. The Forest Ranger told him of the caves on Baker Creek where he found picture writings in good order, both in ochre and charcoal. The animals drawn were mountain goats. The main picture-writing cave has a barrier in front of it, the result of a succession of cloudbursts. Drawings are found in the more remote parts of the caves. There are 3 caves connected with the caves on Snake Creek by an old Indian trail. The Forest Ranger reported the trail as fairly well defined. Dr. Schappelle was of opinion that perhaps the greatest value of this discovery was that of popular interest, since the caves were of
very easy access. He was not prepared to say that further ex-
cavation would disclose anything of great scientific value. The 
Governor has had some $150 to $200 to expend and some excavating 
has already been done. This and further excavating would lay 
bare the walls so tourists can see primitive writings. Blasting 
five feet down had disclosed a primitive fireplace.

Comptroller Gorman said that he had met the Governor on the 
street today and that the Governor said that State funds had been 
about exhausted and that the Governor wishes the University to 
cooperatie in work of excavation if only to the extent of a 
small sum.

Dr. Schappelle said that the caves followed an old water course. 
One cave continued about 100 feet, where the roof had fallen 
down, but a boy was sent on in and he said the roof rose again 
to a height of six feet.

Dr. Frandsen said caves were clearly along old water course with 
caverns along course. The formation is limestone. They found 
one burial chamber with five human skulls, other human bones and 
the bones of some wild animals. The value of the findings could 
not be told until excavation is practically complete. They are 
not of scientific value so far as we can now see, but would add 
interest to a recreational park. Near the fireplace bones of 
mountain sheep and of the mountain lynx and shells very like 
those of the Lahontan beds were found.

Dr. Schappelle said there is a movement in a number of states 
to further archaeological organizations. It would be well to 
have just a little fund to carry on excavations. Anything dis-
covered of historical value would be turned over to the Nevada 
Historical Society, Paleontology to Dr. Frandsen and Archaelo-
ical to Mackay School of Mines Museum. There have been discovered 3 distinct prehistoric irrigation systems, one near Elko of 
which Judge Talbot has just told him. Another is 15 miles east 
of Tonopah. There the ranchers had picked up pottery which they 
had gladly turned over to him. It is rather far north for 
pottery.

Chairman Pratt said that it had been suggested at the meeting 
on the 11th that the University might help a little and Judge 
Talbot thought that the Historical Society might help a little.

Dr. Schappelle said that some of the writings show what might 
be called original forms of Aztec writing.

Mrs. Hood inquired if any other Regents had ever done anything
along this line. Comptroller Gorman says that the matter had never been brought up before. Dr. Schappelle first brought it to our attention.

Chairman Pratt suggested that if Dr. Schappelle and Frandsen outline a plan of organization and if the Historical Society, Governor and University then get together, a method of financing the excavation of the picture caves might be solved. Dr. Schappelle says that it is too much for the Historical Society to maintain, it is more than we should ask of them. It is educational largely and should be cared for as scientific station.

Dr. Frandsen said that the animals and plants discovered will be those that go with picture writing. He hopes some day to see a general museum on the Campus where natural history exhibits, industrial and all other exhibits may be brought together. For instance, there are many small private collections of various kinds which would be gladly donated to the University were there any place to house them. Dr. West has an exceedingly good though small well-labeled exhibit which he will be glad to give to the University at any time it is prepared to receive it. But the immediate question is one of funds for excavating, since excavations may disclose other things than picture writing which will be of cultural value.

Chairman Pratt said he thought a way of cooperating could be found if it seemed desirable.

Drs. Frandsen and Schappelle then withdrew.

Chairman Pratt said the report on the heating plant had come by air mail.

The summary of the report indicated that the present system was overloaded and for immediate relief Mr. Duncan had suggested installation of the separate boilers in Dining Hall and Mackay building. The boiler in the Dining Hall would care for the Dining Hall and Manzanita. That in the Mackay building would care for the Mackay building, Hospital, Lincoln Hall, Bureau of Mines and Training Quarters.

For the future evolution of the heating plant, Mr. Duncan recommended the following:

1. Change from hot water heating system to low pressure steam vacuum system, changing radiator connections and distributing mains in present buildings.
2. Put all domestic hot water service on steam system thereby making one steam connection to each building.

3. Change to Dairy building for location of central heating plant.

4. Pipe to be genuine wrought iron pipe for new system, covered with 85% magnesia asbestos covering to insure long service and minimum loss of radiation.

5. Electric radiators for night service in small offices of certain academic buildings.

6. Installation of temperature regulation for heating system thereby saving 30% of the fuel and safeguarding the health of students and faculty.

Judge Talbot moved adjournment until 2 o'clock Saturday afternoon, August 16th, if quorum not present, then adjourned until 2 o'clock Monday, August 18th. Vote:

Mrs. Hood            Aye
Mr. Pratt            Aye
Judge Talbot         Aye

Adjourned meeting convened at 2:30 Saturday afternoon, August 16th. Present: Chairman Pratt, Mrs. Hood, Judge Talbot, Controller Gorman and Mr. Duncan.

Mr. Duncan outlined for the Board the characteristics of several types of boilers.

1. Cast iron boiler is good for low pressure steam up to 30 lbs. Cast iron boiler is good for large loads but cannot be used for overload. It is at its maximum efficiency at its own load.

2. Fire tube boiler is constructed like a locomotive, with steel fire-box, can carry 75% to 100% overload, but efficiency drops. Its efficiency is maximum at its normal rating.

3. Sterling type vertical tube boilers have their efficiency increased with overload. These boilers have greatest safety factor and are very easily repaired.

Mr. Duncan recommended that two 25-horse power boilers should be installed in the Dairy building, since it is more satisfac-
tory to install them in pairs and that concrete tunnels lead therefrom to the Education building, heat in buildings north of this point to be cared for from the new unit, which would be part of the permanent plant. Pending word as to whether these boilers could be received by the first of December and the laid-down cost of boilers, the Board held its definite decision in abeyance.

The Board authorized Mr. Duncan from probably six eastern firms to secure prices and guaranteed delivery dates of two Sterling Type A tube boilers F. O. B. Reno, freight prepaid. Mr. Duncan is to advise the Board of such answers as he may receive prior to 10 o'clock, Wednesday morning, August 20th, at which time the adjourned meeting will be held, since President Clark will probably be present at that time. Installation of the new boilers in the Dairy building will necessitate new quarters for the Extension staff now housed on the second floor, since part of that floor will have to be removed.

Mr. Duncan estimated the probable cost of this new unit as follows:

<table>
<thead>
<tr>
<th>Description</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>2 boilers</td>
<td>$7,500</td>
</tr>
<tr>
<td>Foundation for same</td>
<td>2,000</td>
</tr>
<tr>
<td>4 oil burners</td>
<td>2,500</td>
</tr>
<tr>
<td>Remodeling Dairy building</td>
<td>3,000</td>
</tr>
<tr>
<td>400 ft. trenching 5' x 6 1/2' inside measure</td>
<td>5,000</td>
</tr>
<tr>
<td>Piping, 400' 14&quot; size and 6&quot; size</td>
<td>5,000</td>
</tr>
<tr>
<td>(Actual cost of pipe, $3500)</td>
<td></td>
</tr>
<tr>
<td>Covering</td>
<td>2,000</td>
</tr>
<tr>
<td>Hot water heaters</td>
<td>1,500</td>
</tr>
<tr>
<td>Temporary vacuum pump</td>
<td>1,000</td>
</tr>
<tr>
<td>Steel smoke stack</td>
<td>3,000</td>
</tr>
</tbody>
</table>

Total approximate cost $32,500

Adjourned to meet at 10 o'clock, Wednesday, August 20, 1924.

The adjourned meeting of the Board was held in the Office of President Clark at 10 o'clock A.M. Wednesday, August 20th. Present: Chairman Pratt, Mrs. Hood, Judge Talbot, President Clark and Comptroller Gorman.

Chairman Pratt outlined for President Clark the progress of heating plans thus far, and read bids submitted by Mr. Duncan for the battery of two Sterling Type water tube boilers.
A general discussion of the heating situation followed. It seemed, after careful analysis, that it would not be earlier than two years from this Fall and more likely it would be three years from this Fall, before a new building would need to be carried by our central heating plant. Inasmuch, therefore, as the present plant is functioning quite satisfactorily for all buildings, save the two Dormitories, in spite of its overload and lack of balance, and because he felt that before the Regents should expend $50,000 or $60,000 for the construction of a new central heating plant, it would be wise to secure the check-up of Mr. Duncan's findings by some eastern heating engineer who had had experience in colder climates than Mr. Duncan, Judge Talbot moved that we put in a temporary hot water plant in the basement of the Dining Hall, sufficient to heat the Dining Hall and Manzanita Hall and another temporary hot water plant in the basement of Lincoln Hall, sufficient to heat Lincoln Hall, and that these 3 buildings be cut off from the present heating plant; that Mr. Pratt and Mr. Gorman be authorized to see that these new plants, with expansion tanks and other necessary appliances, are properly installed. Also, when specifications for the installation of these plants are received from Mr. Duncan, that due notice will be given to dealers and plumbers of Reno. In making this change the present central plant will be cut off from its expansion tank. The motion of Judge Talbot included authorization of Mr. Pratt and Mr. Gorman to install an expansion plant for the present system in Stewart Hall or some other suitable place. Vote:

Mrs. Hood Aye
Mr. Pratt Aye
Judge Talbot Aye

President Clark brought up the subject of denying entrance to University grounds to motorists and suggested that perhaps as satisfactory results in abating nuisances connected with automobile traffic on the Campus might be obtained through conferences with staff members and students and through notices and signs as by direct rulings. The Regents expressed themselves as willing to allow the President to try out his method. Chairman Pratt moved that the Regents' rule denying motors the right to the Campus during certain hours be held in abeyance until the next meeting of the Board. Vote:

Mrs. Hood Aye
Mr. Pratt Aye
Judge Talbot Aye

Adjourned until 9 o'clock A.M. Saturday, August 30th.
Walter E. Pratt  
Chairman  

Carolyn M. Beckwith  
Secretary