

# The Southwestern Monuments

## Monthly Report

for

February, 1934.

---

### Contents

Introduction-----	1.
Aztec-----	15-18
Dandelier-----	7 -8
Canyon de Chelly-----	13-14
Capulin-----	23
Casa Grande-----	34-37
Chaco Canyon-----	10-13
El Morro-----	26-31
Cran Quivira-----	6
Montezuma Castle-----	19-23
Natural Bridges-----	25-26
Havajo-----	9 20
Petrified Forest-----	39-44
Pipe Springs-----	24-25
Tumacacori-----	31-32
White Sands-----	32-34
Wupatki-----	2 -5
Wait Attwell-----	37

#### THE SUPPLEMENT.

The Tunnel is blocked-----	A
More about Altars-----	B
Museum Traffic-----	C
J.B.Hamilton's Report-----	D
Hosteen John's Supplement-----	E
Capulin Again-----	F

RECEIVED  
FEB 28 1934  
U.S. GEOLOGICAL SURVEY  
WASHINGTON, D.C.

1000

1000

1000

1000

1000

1000

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
OFFICE OF NATIONAL PARKS  
BUILDINGS AND RESERVATIONS  
SOUTHWESTERN MONUMENTS

Coolidge Arizona, March 1, 1934

The Director,  
Office of National Parks,  
Buildings, and Reservations;  
Washington, D. C.

Dear Mr. Director:

It seems that we finished the January report; dove back into the whirlpool of C.W.A. affairs, and here it is, time to report for the month of February! We thought we were acquainted with all the twists and turns a C.W.A. program could take, but we were not prepared for the complete cutting off of all "Other than labor" funds and being asked to operate fifteen jobs consisting of a dozen kinds of work and working six hundred men without even one thin dime to hire trucks, teams, equipment, buy a sack of cement, purchase first aid supplies, buy gasoline to operate cars to go after mail, buy coal for the blacksmith's use in sharpening tools; absolutely and unqualifiedly without operating funds of any kind; and we were hung up that way for ten days! I am free to tell you that it came near getting our goat. And then we had the episode of the diminishing program. We were ordered, in a 250 word telegram, among other things, to taper our projects ten per cent each week, closing out at the end of ten weeks, and to submit a complete list of the number of men in each class on each project for each week, but to be sure to hold together our research parties as long as we could. We put that order on the pan and worked on it all one afternoon and part of the next morning and finally got off a long wire and an air mail letter and heaved a big sigh of relief. Next day here come another wire telling us to do the whole thing over again on a basis of eleven per cent per week and break the party up in nine weeks. Can you imagine how happy we were when we were building all that up the second time?

To put it as mildly as possible, it has been a hectic month and one of suspension and depression and general tough luck and we are glad it did have only 28 days - half that many could have been entirely too long for the kind of breaks we were getting.

Anyway, we got through it and the boys have been sending in some surprisingly good reports considering the tough luck they have been having. Maybe this C.W.A. is like working for the Park Service; after the first twenty years it gets easier.

The desert gods have been with us through it all and have given us the very best winter weather all over the Southwest that we have had for the last thirty or forty years.

The regular monthly reports from the various Monuments follow:

WUPATKI NATIONAL MONUMENT. Dr. H. S. Colton, Flagstaff, Arizona.

Dr. Colton has the following to say: "C.N.A. Project No. 10 weathered the vicissitudes of the old program and now is fairly embarked on the new. Much was accomplished and when the fifteenth rolled around the boys had the place all cleaned up, paths laid out, - all raked and clean. It was a credit to any National Park Project. I am sorry no one of our superiors dropped in to see it.

I append the report drawn up by the entire staff at Wupatki.

Project 4 centered at the Citadel, which we have re-christened Teawalanki, a good old Hopi word meaning, "A Lookout Guard House."

I append, for Project 4, the reports of Dale S. King, Foreman and archaeologist, Robert S. Harris, engineer, and Charles Steen, Assistant Archaeologist.

Project 10. Report by J.F. Brewer, Jr., Foreman; Ten Broeck Williamson, Archaeologist; Richard Van Valkenberg, Archaeologist; and J.C. Fisher Motz, Architect.

Wupatki, located on the edge of the riotously colored Painted Desert region 35 miles north of Flagstaff, is still unique. Red Moencopi sandstone mesas, white Kaibab limestone canyon floors, black volcanic cinders, and green vegetation give it a variety of sharply defined colors. Sharply defined shapes, too, are there, the result of a canyon system which drains into the Little Colorado river, and of a great lava escarpment which borders the area on the south. At the base of this 250 foot lava wall a crumbled sandstone point projects into a small canyon and on this spot stands a prehistoric Indian pueblo. Nine years ago President Coolidge made this site a part of the Wupatki National Monument. Though it is the largest ruin in this area, Wupatki is but one of hundreds of sites, including Antelope House, Crack-in-rock, and Ahukoki, which, it is hoped, will some day be included in the Monument.

The weather torn walls of Wupatki are 700 or more years old, yet they still stand 14 feet high. To the visitor who approaches by the canyon road they appear to stand still higher, for so perfect is the color harmony between rim rock and walls that the two blend into a single mass. This illusion is particularly true of the more southerly of the two units. On the canyon floor, just north of the ruin, is a large elliptical depression. Another depression located on the eastern slope of the sandstone point proved, upon excavation, to be a circular-like enclosure, a thing unique in southwestern archaeology.

With a more intimate view of the site, several features are liable to give rise to perplexing questions. Most of the talus has been removed from the southern slope of the southern unit. Four rooms have been restored and many others outlined, indicating that there are between 75 and 100 rooms in the ruin. This work was done under the direction of the Museum of Northern Arizona. Beyond this restored and fairly regular portion, is a seemingly illogical jumble of walls; some completely down, some almost intact, slipped, bowed out of line, and each on a different level. Once, after original occupation, a shepherd used the

as a corral. Since there were gaps in the walls he had to fill them; and needing quarters for himself, he restored one room though not at all along original lines. The recent clearing of this room disclosed a San Francisco newspaper dated September 20, 1889, which dates rather accurately the sheepherder's occupation. Pot hunters from time to time have come to search for trinkets, digging holes and demolishing walls, thus adding to the confusion. The huge rocks upon which the pueblo was built have slipped and settled. All these things, sheepherder, pot hunters, and weathering have had their chaotic effect, but the most liberal contributor to the confusion was the builder himself. For generations he built, tore down, and rebuilt to suit changing needs, so that the result is comparable to a medieval castle with its terraced rooms and odd-angled corners.

"In that portion of Wupatki which archaeologists have excavated or restored, this confusion has been mitigated. The visitor may now build an accurate mental image of the pueblo at one stage of its occupation. At one stage only, however, for the superposition of generations, the many overlapping levels, could only be preserved in scientific notes and drawings.

"The architecture is a typical stone pueblo type, much like the Hopi towns of today - great communal dwellings with earthen floors and adobe roofs. However, there are certain interesting differences; the Wupatki windows and doors are fewer and much smaller, roof entrances are more common, walls are heavier, and a few loop holes exist. The most unique architectural features of Wupatki are the two large depressions already mentioned. The smaller of these, about fifty feet in diameter, and almost a perfect circle, was probably a ceremonial structure. There is a benquette with a seating capacity of a hundred persons; a cut to the northeast for an entrance, and as a roof, the heavens. The larger, an allipse of 60 by 80 feet, has not been excavated, and is hence the subject of much discussion. Due to its location with respect to drainage and its exterior appearance, some believe it to be a reservoir, while others maintain that it is but another and larger ceremonial area. Whether reservoir or arena, its excavation will be a matter of considerable importance to southwestern archaeology.

"Wupatki is unique not only for her outstanding architectural features, but also for the priceless treasure of perishable textiles and wooden objects. This condition was made favorable by the hanging walls of sandstone which support some of the rooms and partially cover others, thus making those protected impervious to the enemy of perishables, moisture. No other open site in the southwest has given to archaeology the bounteous supply of textiles and wood yielded by Wupatki.

"The first written record of the handiwork of the Wupatkiens was given by Dr. Ferkles after a visit to Ben Doney in 1900. Doney, a veteran prospector, made a notable collection from the ruin. Dr. Ferkles writes of it as follows: ..... 'One of the most instructive objects is a desiccated body of an infant wrapped in a coarse cotton cloth .... This

bundle was inclosed in three small cotton kilts which were later washed and found to be good as new. At the foot of the infant was a desiccated parrot (?), some of the brilliant plumage of which is still to be seen. This bird has a prayer stick tied to one leg, which makes reasonable the belief that it was a ceremonial object.

"Four parrot burials were found by the first Wupatki expedition of the Museum of Northern Arizona last summer. The skeletons of these birds were found articulated and as the bodies were wrapped in rush matting when buried, as shown by the prints in the soil, parrots must have had an important place in the Wupatki life. The report of a Hopi informant related that the site was the traditional stopping place of the Parrot Clan of the Zuni Indians on the way from the Grand Canyon to the Zuni Valley in New Mexico, adds interest to the archaeological discovery of the birds at Wupatki. Dr. Alexander Wetmore, of the United States National Museum, has examined the material from the recent excavation and states that three of the birds were the red, blue, and yellow Macaw (*Ara macao*) and that the fourth was a Thick-billed Parrot (*Rynchopsitta pachyrhynchos*). Both species occur in Mexico and the Thick-billed Parrot has been seen in Arizona. Burials of what are believed to have been dogs were also discovered by the Museum expedition.

"Dr. Farkes further relates: 'There are several fragments of beautiful cotton cloth and netting. Some of the specimens are embroidered, others are painted with circles and others with geometric designs. A heavy wooden club, several planting sticks, and other wooden objects, are to be seen in Mr. Doney's collection. There are also many cigarette cans, some with woven handles, as well as seeds of cotton, squash, gourd, and corn, and many objects of shell, as tinklers, ornaments, rings, and bracelets. There are also many turquoise ornaments, some an inch or an inch and a half square. The many metates are made of lava, and are deeply worn as if from long use. The copper bell from a grave is a remarkable specimen'.

"From the J. C. Clarke collection of the Museum of Northern Arizona can be seen many objects taken from Wupatki: yucca needles, a wooden dipper, a three-piece wooden cradle board, textiles, pottery, and ornaments of shell and turquoise, some of which are inlaid.

"Recent discoveries of particular interest are, fragments of a painted basket, a bird effigy bowl, and a complete section of fallen roof which includes beams, shakes, reeds, and grass. Three copper bells were taken from a grave. Though numerous burials have been encountered and worked out, it is probable that the main cemetery of Wupatki is still unlocated?

"It is interesting to draw from the ruin of their villages mental image of these earliest Wupatki. Loop holes indicate political unrest. The very obvious care used by the masons, which made the work durable in spite of the inferior methods, indicates some leisure and a solidness of character. The design of the homes and the traces of coursed ornament showing a stirring of architectural consciousness.

The building of walls across wide crevices and the manner of using double beams show engineering skill. Communal spirit is strongly implied by the apartment-like pueblo. Fine craftsmanship and a considerably advanced material culture are indicated by the artifacts. We picture the Wupatkians, as an interested and intelligent individual in the process of a rapid evolution. But where has his progress taken him, and where is he now? Is he in truth the ancestor of the modern Hopi?

Project No.4. Report by Dale S. Foreman and Archaeologist, on Nalakihu.

"This report deals with the activities of the Foreman and three men at a small ten room masonry pueblo ruin, named Nalakihu, (N.A.358) at the foot of the Citadel mesa. Here four rooms were excavated and a large room reconstructed to serve as a registration room. The other rooms were backfilled to serve as entranceways or porches. A parking place was leveled and 26 man hours were spent on the roads. Several broken pottery vessels were recovered as well as implements of bone and stone which were deposited in the Museum of Northern Arizona.

Project No.4. Topographic survey of the region about Teuwalanki, The Citadel. By Robert S. Harris, Engineer.

"The purpose of this survey was to furnish a topographic map to serve as the base for the location of all prehistoric sites in the Citadel portion of the Wupatki National Monument. The tract is located in Township 25 North, Range 9 East, of the Gila and Salt River Meridian in Arizona. Six quarter sections were surveyed and mapped. This was chosen because of the large number of sites found there and the presence of important geological features such as solution cracks, faults, and sinks in the Kaibab limestone. The bottom of the Citadel sink was found to be 160 feet below the cap rock, and 90 feet below the bottom of the valley. One of the solution cracks was sounded last summer to the depth of 180 feet. The scale used on the map was 500 feet to the inch with a contour interval of ten feet.

Project No.4. The archaeological survey, reported by Charles Steen.

"The archaeologist served as rod man to the engineer. He checked 33 sites that had been previously recorded and located 64 new sites on the six quarters studied. Twenty-six shard collections were made which were deposited in the shard library of the Museum of Northern Arizona."

From these reports you will see that business is looking up at Wupatki National Monument in the way of obtaining information and getting together the good foundation of a museum collection. We are to be congratulated on the way the Museum of Northern Arizona has worked with us on this research job and the amount of mutual good that has come out of it. After this C.W.A. is over, the next work for Wupatki is to get a nine months temporary ranger position allocated.

GRAN QUIVIRA NATIONAL MONUMENT. Gran Quivira, New Mexico.  
W.H. Smith, Custodian.

"For the month ending February 20, we have registered 300 visitors entering the Monument in 41 cars, trucks, horseback parties and otherwise. Again we are glad to report that we have stepped over our registration for the same period as last year by about 175 visitors. The above figures show the number of visitors we have actually registered, and it is probable that in the rush of our C.W.A. activities we let about one fourth of the people get by without registering them. Among those visiting our Monument this month were Mr. L.D. Cone, of the Landscape Division, who is stationed at White Sands National Monument, and Mr. Stewart and Williams, of the Engineering Division, who came by on the 17th on their way to Tumacacori National Monument.

"We are glad to report another month of fine weather for travel and also fine for the C.W.A. program. It seems that the weather has been suited to the favor of the ones who are working, for if the weather had been as severe as usual here it would have been impossible to have worked. Nor would we have been able to accomplish as much if the ground had frozen every night. With the warm weather we have proceeded with the work very nicely and have accomplished a great deal for the money expended. We have about 2,000 feet of the approach road finished to grade and about three fourths of this amount packed with caliche clay. We also have the road from the top of the hill southward toward the parking area under construction and about half finished. So all in all, it will not take much longer to finish the approach road. When this is completed with its graceful curves, and capped with white caliche in this natural brown soil, it is going to make a pleasing color scheme to the visitors as they drive over it. The south turn of the road, from the top of the hill to the parking area is laid out in a way to beautify the Monument and give a satisfactory entrance to the parking area.

"Taking the whole thing into consideration this C.W.A. has been a fine thing with the internal improvements it has brought about and the work it has provided for the needy in this community.

"On the 19th, while making a cut for the road, as we attained the top of the hill where the road turns southward towards the parking area, we unearthed a skeleton which was some 18 inches or two feet below the surface of the ground. The main reason for any extra interest in this burial over the common ones here, was that this body was not interred sitting up in a room as usual, but was laid on its left side with the head toward the north, facing the east. The dirt around this skeleton for some distance was adobe and the resting place was hollowed out of the adobe dirt in the form of an egg, with the head in the small end and the body flexed in the large end. The skeleton is slightly larger than the average found here. I should say it was fully six feet tall. This person was of the male sex, and long headed; with the anterior portion of the head sloping backward immediately above the eyes. Nothing was found with the burial, although near it we found a great many sherds, some red, some black on red, cooking pottery fragments, and some pieces of plain gray that indicated a large sized vessel."

BANDELIER NATIONAL MONUMENT. M.C. Evenstad, Acting Custodian, Santa Fe,  
New Mexico. Box 669.

Mr. Evenstad reports as follows:

"Dear Boss:

"Visitors for the month total 65. A good many of these were Courier parties, but a number of private cars came, especially on Sundays. The weather has been ideal with only two threatening days. A little rain fell one night, but this caused no cessation of the work.

"During the month our main activities were centered on the road leading into the Canyon. Landscaping, except road clean-up, is finished from Station 0.00 to Station 45, and grading is finished to Station 84. The work is continuing on widening the road from Station 84 to Station 105. The biggest part of this is through rock and therefore rather slow work. From Station 105 to Station 125 we have started work on several deep cuts and fills, and the bulldozers are working on this night and day. As this section takes in a good many deep washes we are using up a good deal of culvert pipe. We have rented five wheel-scrappers, and are getting sufficient horses to furnish power on these. A temporary corral was built for the horses.

"The pipe line is now completed, including the intake. The intake was the subject of considerable discussion and planning, as no permanent plan had been made for it. At first a reinforced concrete archway was decided upon for covering the reservoir. The principal change was in substituting a 36 inch culvert pipe 30 feet long for this archway. This pipe was chiseled open for its entire length and the bottom was spread about two feet wide and secured with rods. This was then placed between two concrete head walls and then caulked and concreted in and covered with dirt. A man hole was built in one end of the pipe for easy access and cleaning out. Through the upper headwall, and below the level of the creek, we laid a 10 inch sewer tile, back of which we laid about 50 feet of 6 inch sewer tile loosely. Seepage through the sand around the tile furnishes a flow of water considerably more than the capacity of the pipe line. Through the lower headwall, we started with a four inch steel water pipe, gradually reducing each length down to a 2 inch size of the pipe line. Gate valves have been placed at suitable places along the line to enable us to shut the line off if necessary if trouble should ever develop. I believe we now have a good dependable supply of water with sufficient pressure for ordinary use and for use in case of fire.

"The archaeological party completed the mapping of Tummy pueblo ruins, and then, owing to the uncertainty of the C. I. A. program, decided to wait until something definite could be planned. The party, now represented by the person of Paul Reiter only, is now back and as the first project has chosen the cleaning and protection of one of the prehistoric cliff-paintings. When this is done Mr. Reiter expects to go back to the original program of making a surface survey of various of the ruins in the Canyon, afterwards doing some of the ruins on the detached portion of the Monument. This part of the program can be extended as far as is possible in the time we have to work, and has the advantage of our being able to cut off at almost any time, and yet have a complete job as far

as we have gone. For this survey we expect to add one skilled and two unskilled men to the party for helpers.

"I am attaching a separate report submitted by Mr. Reiter of the Archaeological Reconnaissance.

M. O. Evenstad. "

Archaeological Report. By Mr. Paul Reiter.

"My dear Mr. Pinkley:

"The archaeological crew assigned to Bandelier National Monument spent the first two weeks of this month finishing the drafting of the detail map of the Community House ruin. This plan is finished in two different scales. Each of the several sections of the ruin is on a different sheet in half-inch scale, to better record the details. On another sheet, in one-eighth inch scale; these sections are united, giving a complete plan of the pueblo. The elevations were determined from an arbitrary point, and the highest of the several first floor levels in each room was recorded. Also noted were the character of each wall intersection.

"The third week of the month was lost. The men in the crew found other work and I waited in Santa Fe for a continuation before organizing another party.

"This last week I spent working on the painted wall a quarter of a mile above the Community House. This wall is recessed into the cliff and served as one of the rear walls of a talus house. It bears a design of red paint which later was covered over with the usual adobe plaster. For many years a portion of this stepped design has been visible in places where the outer plaster layer has chipped off, exposing about two thirds of the painted area. That the wall was noticed by tourists is evidenced by the multitude of carved initials.

"The work on this wall consists of removing the remainder of the latest plaster layer, and attempting to obliterate the many initials. This week nearly finishes the delicate work of separating the plaster layers, and next week I plan to cover the painting with plate glass.

Respectfully,  
Paul Reiter."

The measured drawings of the Community House will be a welcome addition to our archaeological knowledge of Bandelier and we hope, in his final report, Mr. Reiter will include the new information which undoubtedly developed while these drawings were being made. Such a close study of the walls cannot fail to give us additional information.

In the second C.T.A. program Mr. Reiter proposes to (1) make an intensive survey of the ruins in the Canyon and spot them on the topographical map now being made; (2) survey and map the ruins of the detached portion of the Monument, and; (3) make stratigraphical tests on one or more of the large ruins.

NAVAJO NATIONAL MONUMENT. John Wetherill, Custodian, Kayenta, Arizona.

Mr. Wetherill writes as follows:

"Dear Frank:

"It seems as if the ink is hardly dry on one report when it is time to send in another.

"The work on Keet Zeeh has progressed more rapidly than I expected, due in part to a day or two of snow storm. About nine inches of snow fell. This allowed me to put the men who had been working on the trail on the ruin work. The change in work seemed to put new pep into the men and they took hold in great shape and accomplished a great deal. The broken walls were built up as if by magic.

"While Mr. Hayden and Milton Wetherill were working over-time in the trash pile below the ruin, they uncovered the body of a child. It had two pieces of pottery buried with it of the Pueblo 2 type. This is quite a bit older than the culture of the ruin itself.

"We are finding the three types of Pueblo pottery and a great deal of what archaeologists call Basket-maker 3; they have more to learn about Basket-maker 3.

"We have found quite a lot of small artifacts, such as arrow points, bone awls, yucca cords, pieces of baskets, pieces of cotton and yucca cloth and quite a few good yucca sandals, besides many other specimens too numerous to mention.

"We are sending in a stump of a tree which we found in the bottom of the creek, 35 feet below the ground level. From all indications it grew to maturity at the time the elephant and camel roamed this country. The 35 feet of covering soil had washed away in the past twenty years."

"While I have been down this time one of the men brings the report that Hayden has found the skeleton of a parrot in the ruin. We will have the laugh on him if it proves to be that of an owl or a hawk.

"During the two days of the storm Mr. Hayden and Tom Bowen cleaned out a large Kiva in Turkey Cave which proved to be of especial interest, having an extra fire box and several loops of yucca rope in the floor. The loops were evidently to hold some kind of screen, behind which they made their magic.

"Twelve of my men left for home, but want to come back if the work continues long enough. They all seem to like the work and the country and I want to repeat that never before have I had the pleasure of working such a willing bunch of men.

"There are many interesting features turning up at Keet Zeeh, which will all be brought out when the final report is turned in.

"On the 11th there was a party of 25 visited Betatekin Ruin. They

were mostly all Indians from the erosion control school at Cameron: Navajos, Hopis, and Zunis. This is the first time since Betatakin was discovered that a pleasure party could get in at this time of year.

"The weather still holds wonderful, very mild during the day and not too cold during the night, but we would all like to see some wet weather.

"Trusting that you can find time to get up and give us the once over before the work stops, and with best wishes, I am

Yours truly,  
John Wetherill."

From which it will be seen that things are going all right up in Hooten John's country, as usual. Here is another Monument where we need at least an eight month ranger and we need him badly on several counts. First of course is the vandalism which is bound to come with the increased diffusion of knowledge of this very interesting country and the consequent influx of visitors. Second is the chance to give information of some value to visitors and stop the wild stories of pygmies and so on that spring up like weeds among unattended visitors. Third, we need to have some studies made on the ground with these visitors to find out what they are thinking and how they are reacting to our ruins.

This will be a strictly pioneering job of ranger work, quite different from our other temporary jobs, and needs a man who can go out with a pack outfit and enjoy repairing trails, studying ruins, talking with the Indians, meeting the visitors, and turn in some ideas on the best way to handle that Monument in the days of increased visitors which lie just ahead of us.

CHACO CANYON NATIONAL MONUMENT. Hurst R. Julian, Custodian, Crownpoint, New Mexico.

Mr. Julian reports for the month as follows:

"Dear Boss:

The visitors to this monument for the month of February numbered 78, and are registered from four states and the District of Columbia.

"This will be only a summary of the work accomplished under the C.W.A. program, the full and final report will be sent in within a few weeks, or possibly at the end of the job. This final report will be in detail and will cover every possible activity and thing; naturally I would not leave out anything we had done, I would want to brag on it regardless of how poor the job was.

"Starting with the Archaeological Reconnaissance party, because they have been able to accomplish a great deal, we have done considerable work on cataloging the museum collection, a job that has long been waiting. The materials that were on exhibition were simply on exhibition, there was no record to show where they came from or the circumstances of their recovery. Since I had collected many of the artifacts, I was the only one who had this knowledge, and since the tenure of man is so uncertain, it is exceedingly important that complete records be kept of all research.

"With the idea in mind of systematizing future activities, and leaving the work in such shape that a perfect stranger could come in on the job and go ahead without hesitation with a complete knowledge of what had been done and exactly how it had been done. We laid out a base line for the complete length of the Canyon floor. This base line has been tied in at convenient section corners and the angle points were set permanently in cement. From the base we turned angles to the cliff every one hundred feet of distance on the base line. This of course divided the cliff walls into sections varying in length according to the irregularities of the cliff face. At these points we drilled small holes into the stone and put a short section of pipe into the hole. The advantages of this is apparent; with these sections numbered, everything from a petroglyph to a cliff cavity can be described as to location so accurately that they can be found by any stranger familiar with the system who may have occasion to check our work and investigate the matter further, within the next hundred years.

"Feeling that there had been entirely too much digging and entirely too little repair of walls uncovered in the Chaco, we hoped to set an example of perfect conservation in our work at Chetro Keti. We had removed considerable of the dirt from behind the back wall of Chetro Keti and in so doing exposed many holes and weak places in the walls. All of these holes have been repaired. Naturally I do not expect an archaeologist to follow this policy because it means that nine tenths of his crew will be on repair most of the time and that would leave such a small proportion of the crew to dig that no archaeologist would consider our system for a minute. The scientific practice has been to uncover these walls in order to let them fall down. Asking the pardon of all who may feel that in this statement I am unjustly criticizing them or their work. Gordon Vivian ably handled these activities.

"Mr. Owens, who has been doing the restoration and what have you, for Morris for the past decade or two, has been my right hand man in the repair and restoration at Pueblo Bonito and at Pueblo del Arroyo, and has accomplished wonders for the Great Kiva A at the former ruin, and is doing some experimental original ceiling protection work at del Arroyo. The Great Kiva was restored to the condition in which Judd left it at the conclusion of his work at Bonito, and the ceiling protection work consisted of restoring enough of the walls above the ceiling that a restored ceiling could be placed above the original.

"It should be noted that we are not attempting archaeological investigation or research. Our work at Pueblo Bonito was to protect the Great Kiva, our work at Pueblo del Arroyo was to protect original ceilings and to work out some method whereby a general policy might be formulated. The work at Chetro Keti was simply one of protection from the flood waters of the Arroyo which rushes down past the ruin. We put dykes and ditches on the cliff top above the ruin to direct the water down certain courses and then ditched these courses around the ruin.

"The engineers have done an excellent job of protecting del Arroyo from the main Chaco Wash. Our dirt and rock work is to me a work of art. It appeals to me particularly because it took the load of worry off my mind about the immediate probability of losing the re-

maining portion of the only triple walled tower or Kiva that has been found, to date, in the Chaco culture. This has been, perhaps, the largest undertaking of the entire program, but is not as detailed in its substance as some of the other jobs, so consequently there will be less written about it.

"With the remaining time and the P.W.A. money we hope to have the boundary survey completed and the lines marked so that they may be followed from one post to another completely around the Monument. It is considerable satisfaction to know where the Monument is, anyway. Too, this survey will become the basis for the only complete and permanent erosion control work that can possibly be done upon this or any other area; namely, grazing control. We could not do anything on this most necessary and important matter because we have never known where the boundaries were until this time. I consider this the beginning of perhaps the most important work that has ever been done in the Chaco, and in this statement I do not except the excavations, because what would it profit us to uncover a city if we let erosion, the great destroyer, take it away from us?

"Fifteen years ago Dr. Pearson was telling a skeptical world that all there was to erosion control was grazing control, and that nothing else mattered. All other efforts were but palliatives, simply the rubbing of soothing salve upon a cancer. I did not believe him as the majority of people doubt him today. However, one by one, the most advanced experimenters are coming into agreement with him. It took the world at least two centuries to admit that Galileo was correct, and in the early part of the seventeenth century, this greatest perhaps of all scientists, laid the foundation for the demonstrative principles of science, without which fact is not fact, but the matter of Aristotelian opinion. With these things in mind I do not hesitate to place the boundary survey and marking as the greatest of our achievements because it is the beginning of the end for the great god of destruction, the god of Erosion.

"When we found our equipment and supply money taken away from us we decided to improve the shining hours by working the roads, as this sort of work could be done with labor alone. Formerly it took but ten minutes of rain to block our roads from the south. We hauled and carried gravel for the bridge approaches and dug a system of drainage ditches to carry the water away from the bridge top and approaches. With high hopes and not too much exaggeration, it might be claimed that we will be able to negotiate this miserable stretch of road for some time in the future regardless of weather conditions.

"Every hard rain blocked the northern entrance. The flood waters poured down over the 'stair step hill' and made impassable what was under normal conditions an almost impossible passage. It has been necessary for me to keep a tow car in readiness at all times to assist visitors into and out of the Monument because of the condition of this hill. The lucky, the good drivers, and the well equipped, sometimes made the passage unaided, particularly at such times as the neighbors, by community effort, were working the hill. However, we hope that this is a thing of the past. We have widened and smoothed the road on the hill and have cut drainage ditches through solid rock to divert the floods.

"This road work was a necessity, because with one hundred or more people in the Canyon more or less permanently, and with our work going on, it was absolutely essential that these roads be kept open for emergencies and for the transportation of equipment and supplies.

"No account of activities would be complete without a prayer of thanksgiving to the god of New Mexico weather. Our bright sunshine, and, for the past few weeks unfrozen ground has made this entire project possible. We have undertaken this work during what is perhaps the only winter within the past twenty years when it would have been possible. I doubt if many of us will live long enough to see another winter which will permit such work. The unsheltered workmen have been more or less comfortable throughout the entire time.

"The conclusion of the program will see little new in the way of accomplishment. For the remaining time we will be concerned principally with cleaning up our messes, putting the finishing touches on the almost completed jobs, and adding refinements to the roughly finished bits of work. And, with the permission of the Superintendent, the completion of the boundary survey with the P.M.A. funds provided for that purpose.

"In the last few weeks of our program, when the most of the laborers have been discharged, we intend to run a few experiments on the business of capping walls. This experiment has been started and, from all indications, it seems that no capping at all will be the best capping. I think that we can demonstrate that here, as was done at Casa Grande; that all the forms of capping which have to date been used in the Chaco were either detrimental or of very little value. But this matter will wait for another report and the time when we have more evidence to support the statement.

Sincerely,  
Hurst."

You will have to admit there is one thing, Chief, between tunnels and wall capping, we always have something to talk about in the Southwestern Monuments. I have been monkeying with wall cappings for the last twenty-five years, or rather with wall protections of various kinds, so I'm perfectly free to admit that I don't know much about them; which, however, doesn't keep me from talking for and against most of the known methods. It does make one feel foolish to have his nice capping crack and peel and fall and the fool wall which was laid up by a dumb Indian 800 years ago, just goes right on standing there, in most cases in spite of our protecting measures. However, I am still of the opinion the engineers are smart enough to out-wit nature if you give them plenty of time and the landscapers can take the job down to where it won't look too awful bad, and that eventually we may get some protection on our ruin walls which will be effective and more or less artistic.

CANYON DE CHELLY NATIONAL MONUMENT. C.A. Weintz, Engineer in Charge,  
Chin Lee, Arizona.

Mr. Weintz summarizes conditions at de Chelly as follows:

"That this country needs is a good road; it can then hold its own with any of the show places of the Southwest. It has color,

archaeologic interest beyond measure, and a number of scenic attractions. Even after having done field work over much of the Rockies from Texas to Alberta and being familiar with mountain canyons, bad lands, and sage brush flats, I was unprepared to see so many interesting sights.

"North and west of the Canyon mouth, in a brilliant array of color, are the variegated shales of the Chin Lee formation known as the painted desert. In the lower part of this formation considerable red, yellow, brown, and white agatized wood is found.

"Fifteen miles to the west, Black Mesa, with its yellow capping of Mesa Verde Sandstone supported by black and green-white shales, presents an ever changing array of color and shade as the sun changes position throughout the day. In the late afternoon somber tints prevail, and the entire Mesa is a dusky purple.

"Migrating sand dunes with acres of live yellow sand lay a mile south of the Canyon mouth. The crescents are well formed and many of them are near one hundred feet in height.

"The Mesa Country, through which the Rio de Chelly and its tributaries have cut channels a thousand feet deep, is covered with pinyon and juniper in abundance. In the deep talus slopes below the Canyon rims large Douglas Firs are frequently found while in the higher country to the east Yellow Pine is predominant.

"The light color scheme of this country is farther brought out by sheer cliffs of the Chelly sandstone which are often seven hundred feet high without a break. Angular and tangential cross bedding in the sandstone with laminae of varying hardness have created spires, monuments, overhanging walls, and odd shapes of every description. It is this feature of the de Chelly that has made the Canyon such an ideal spot for the location of cliff dwellings. Large caves, high above the Canyon floor were ideal shelters and easily protected from attack.

"The floor of the Canyon is over two thousand feet wide in places, and numerous corn fields, peach orchards, and grazing patches are located on the higher stream terraces. Mud thatched hogans of juniper house the Navajos who live in the Canyon during the summer months.

"The routine of mapping is kept interesting by the varying character of the topography, the numerous cliff dweller ruins, and the climbing skill of the Navajo red men. These boys have become quite proficient in their work, and can surely cover the ground. The instrument men have their parties in anoth working order, and will soon start on the more isolated sections of the canyons.

"Approximately twenty square miles of canyon rim, floor and wall have been mapped on a four inch to the mile scale and contoured on a twenty foot interval. One hundred acres of the area near the mouth of the Canyon have been mapped on a one inch to forty foot scale and contoured on a two foot interval.

"From a historical, archaeological, and scenic viewpoint it seems to me that this region is outstanding, and I am sure that in the years to come many visitors will find it so.

Clement A. Weintz,  
Deputy Engineer."

I would call that a favorable decision from an expert and an outside expert at that; so not biased by the fact that he feels obligated to brag on Park Service stuff.

AZTEC RUINS NATIONAL MONUMENT. Johnwill Paris, Custodian, Aztec, New Mex.

Mr. Paris sends in the following good report:

"Dear Boss:

Visitors for the month total 374, which will undoubtedly surprise you when compared with the 61 of February last year. It may be explained by a series of fortunate features. The weather, with the exception of a couple of days, has been ideal, and the interest in the development and progress of our Civil Works has probably reached its peak during February, and the fact that the publicity secured from Civil Works projects has been more or less general throughout this entire basin might explain this raise in attendance.

"We certainly wish to express our appreciation for the attitude of the public at large and in expressing appreciation for the public it certainly behooves this office to publicly express appreciation for the loyalty and earnestness in which every employee undertook his or her part of the Civil Works program. It has been expressed by numbers of outsiders and the workmen themselves, that for many years they have been unable to witness the close cooperation and genuine appreciation of all employees that is evidenced in our personnel at the Aztec Ruins.

"February 15th, while considered more or less of a death knell for Civil Works projects, is at the same time considered by our remaining personnel as a challenge to even more concentration and effort for the continuance of our Civil Works program. The point has been reached where each individual has a more or less personal responsibility in the completion of our projects as outlined. Such a regard throughout makes my duties as Custodian a pleasure and limitations on what will be accomplished are only those that I possess personally.

"The only feature of our entire program that has been disappointing was that of our fence. As you know by the correspondence, shipment was delayed due to no fault of the contracting party and our fencing was not completed on February 15th. We suffered no inconvenience by this delay since our entire efforts were concentrated on the parking area and the time of each man can be accounted for with profit and worth to the National Park Service. We are taking this fence as one of our first duties on our continuance and are proud to say that we anticipated a fence paralleling any in the National Park Service of a nature similar to this of ours. Regarding this fence, I want to express appreciation for the attitude shown by the Santa Fe Builders in their willingness to assist and complete the contract to the mutual pleasure of all concerned. In this connection it might be only fair to say that we have yet to encounter a disagreeable contractor or firm in our Civil and Public Works projects.

"Project No.1, the removal of the barn, has been completed in every detail and we are very pleased to state that the Abrams are satisfied and pleased with the project. We have a complete record of distribution costs and labor on this particular project and it will be only a matter of a few days until we will supply your office with a complete breakdown of labor and costs on each project.

"Project No.2, fencing the Monument boundary, we have mentioned above in a passing way and I might add that this subject will probably enhance

our Monument as much as any one project could. We have a grade of fencing and a type of posts that would do credit to any park throughout our country and it will only be a matter of a few days until we have completed this project in every respect.

"Project No.3, our parking ground, is undoubtedly showing up better than any of our other projects. We will lack the plastering of our walls, the topping of our parking area and some of the minor features yet. We have received many compliments on the fact that our parking area is an improvement long hoped for and one needed many years. With our continuation of Civil Works, we will concentrate on the completion of this area, not only from the standpoint of efficiency but from the standpoint of beauty as well.

"I might mention a few figures in connection with our parking area. We have completed approximately 1,000 feet of curb, which includes our island in the center and our curb around the walks. The concrete walls so far constructed contain approximately 230 yards of concrete and are approximately 600 feet long, two feet thick and four feet above grade. We have in place about 250 yards of crushed stone and rock. This is of course distributed over approximately 21,000 square feet of parking area and walks.

"Our entrance gates are being forced at present and we are now working on the huge redwood timbers and getting our lettering completed so they can be installed in the form. This particular feature has been one of our worst problems. No one we could locate in this section of the country could do the work to our satisfaction unless the cost was so great that its consideration was prohibitive. Our Landscape Division has designed a type of lantern for each gateway that is most appealing and picturesque. These lamps are in the process of construction by a local firm in order that we can give them adequate supervision and we have every hope that when complete, our parking area will present a model to be envied by any Monument of Park in our vast Service.

"Our Archaeological Reconnaissance program is more or less at a stand still due to our not being able to hold personnel on a fifteen hour per week basis. Unless some definite program can be outlined whereby archaeological reconnaissance parties can be worked thirty hours per week, we will have to forego any plans for measurement of ruins and complete detailed map of our archaeological values. If such an arrangement cannot be made, Boss, will you lend your support to a very definite archaeological program with a set amount to be allowed on Public Works with a very definite program to follow? I do not want to be too discouraging on the archaeological work since actually, with conditions as they are, we have accomplished wonders.

"Our museum, with its artifacts, is completely indexed and one set of cards will be completed for inspection as soon as photographs can be returned and placed on the card. We have instigated, I think, the most perfect system of indexing to be found anywhere and it will be practically impossible to lose a piece, and should any piece be lost we will have a complete record for any investigation that may result. The credit for this thoroughness is due entirely to the foresight of Dr. Russell and Bob Rose.

"Miss Scranton is now working on the duplicate cards for your

office and at the same time is taking particular pains to check each list that we may be assured of not only a complete but accurate record. We have listed, so far, 1,373 artifacts in our museum collection. These are some short since we are missing a few pieces. This loss is not of a serious nature since in many cases it represents just fragments which were numbered and were of no consequences whatever.

"The pottery repair is progressing satisfactorily under the adequate supervision of Miss Adams and we would like to again express our appreciation in being able to secure her services for this work. Mr. Morris had several pieces most unique but almost beyond repair. Miss Adams has restored these jars and added to our collection some of our most valuable pieces.

"I would like very much to have your early attention to this archaeological handicap of fifteen hours and your reaction to this being carried under Public Works as a special project. It is one that I can whole heartedly recommend and also one of such nature that its completion will result in statistical information of untold worth to the archaeological world. We are carrying a few men right along on Public Works and under this we have laid approximately 325 feet of eight inch drain tile. We have about 650 feet in all. This ditch varies in depth from one inch to twenty feet. We have encountered some sub-water and sand which has hindered our work somewhat.

"In our Public Works drain ditch we encountered, several hundred feet southeast of our ruins, several burials, and these burials, while in a very dilapidated state and of no value whatever, connected with the body itself we found two of the most interesting bowls of our entire collection. One is of more or less vase type with handle attached and the base might represent a frog, or horned toad. I know of only one other of this type in this section of the country and you may have seen it while it was displayed at the Aztec Ruins. Do you recall the little deer with the head lying over on the side? These bowls were not broken to any extent and a wax patch here and there by Miss Adams made them perfect.

"It is our hope to further cooperate in our President's plan for reemployment and with his policy in Public Works taking up Civil Works personnel, by starting our Public Works force about the last of March or at least the 10th of April, at which time Earl Morris will have been here to give us, some of the details expected of our office in cooperation with him on ruins repair. I am unable to state at the present time how many we anticipate using. This will depend somewhat on whether or not we will be allowed to build our museum on force account. You recall my letter regarding this after I had given it such consideration with both Mr. Rieboy and Mr. Hamilton.

"We were somewhat disappointed in our museum plans not being in accordance with the desires of the Educational Division and still hope that we may cooperate with them to the mutual agreement and benefit of all concerned. We do not want to appear contrary or hard-headed on this museum idea, but after being complimented reportedly by hundreds of visitors on the attractiveness of our museum, principally because it was not like thousands of museums in the country, we cannot but cherish these comments and endeavor to incorporate them in our plans for a new one.

If we cannot profit by the suggestions and the pleasure of our visitors, on whom we depend for our existence, I doubt whether I would be fulfilling my duty as Custodian if I did not fight for the ideas they wish us to adhere to in our future development.

"I appreciate fully that we cannot allow the layman to dictate the policies we may follow; yet if our policies are too much in contrast to the layman's desire, what have we gained after all?

"We enjoyed February as well as we did January even though its trials and tribulations were many. We sincerely hope that having experienced these difficulties we can grasp the continuance with renewed vigor and hope. We have no doubt but that it will be much easier to continue, having experienced the period from January 19th to February 15.

"With every good wish to your force and congratulations to each of my colleagues in the Southwestern Monuments for the splendid work they are doing, I am

Cordially,  
Johnwill Faris,  
Custodian."

Johnwill, the Landscape Division and the Educational Division are in a more or less three cornered argument on the type of structure for his new museum building. As usual, each angle has some good points and each party will have to do some compromising. The present museum collection at Aztec is spread through eight or nine of the original rooms of the ruin. This method of displaying the stuff was forced upon us by circumstances over which we had no control several years ago and, as Johnwill says above, most of our visitors get quite a kick out of the arrangement and compliment us on its difference from the average plate glass and mahogany type of museum. Chuck Richey and his draftsmen have turned out some mighty nice sketches of some proposed interiors of a museum which is to be built on force account, wherein they use the pieces of the collection as decorative members of the museum interior. There is considerable danger about this, because some of the most important pieces in the average museum may not be decorative and the Landscaper might not be in favor of putting them on display at all. Another possible objection is that the artistic interior idea might call for placing certain bowls in certain niches, whereas, in conducting your visitors around the museum that particular bowl might not fit in with your talk when you had reached that part of the room. Also, if you build a room with certain niches and so on to fit your present collection and make an artistic interior your main theme, what are you going to do when a bone digger comes along and turns up a lot of new facts and new materials that don't fit in the collection as you have it arranged?

All this is on one side of the argument. On the other side we just naturally recoil from the glass-coffin type of museum where the attendant is so busy keeping the kids from putting their dirty noses on his lovely plate glass that he hasn't time to tell po and ma what it is all about. Some place in between these points is probably the ground we are looking for, and in the meantime it won't hurt the boys to air their opinions and we may possibly get them to strike out something on a new line.

MONTEZUMA CASTLE NATIONAL MONUMENT. Martin L. Jackson, Custodian, Camp Verde, Arizona.

Mr. Jackson sends along the following report:

"Dear Pink:

"By actual count we find the Castle had 1,065 visitors for the month. Our register book shows that the following states and foreign countries were represented: New York, Connecticut, Minnesota, North Dakota, Montana, Idaho, Oregon, Washington, Texas, California, Colorado, Michigan, Indiana, Ohio, North Carolina, Louisiana, Rhode Island, Maine, Pennsylvania, British Columbia, Canada, France, England and Mexico.

"To write you that we had 1,065 visitors from twenty states and five foreign countries would not make the headlines in any of the big dailies, and would mean but very little to anyone not familiar with what is required of a custodian or ranger on a National Monument. But to us in the Service it means nothing more or less than that these parties will come in groups of two or three, or quite often only one to a party, and that each and every party, regardless of the number, is entitled to, and gets, if desired, all the information that the archaeologists, ethnologists and anthropologists have been able to get together in the past hundred years, besides the results of our observations on this particular cliff dwelling. We then conduct the party through a museum and explain a hundred or so artifacts in detail, and, lastly, find out where the visitor is going and explain or show him on the map how he gets there. By that time, or even before, there is another party waiting to go through and you go into the same procedure again.

"We are not complaining and I'm sure that you know we are always glad to have visitors come in, and I still think the visitor is entitled to all he gets at any park or monument but what causes me most is the number of people who ask how you get these soft government jobs where one is sure to get his salary and not have a great deal to do. I still insist that we have a very fine class of visitor at this Monument, though occasionally we get a wise one who asks such questions as; 'Why did Montezuma build his Castle so far from town?' and 'Did Montezuma have a harem?' and 'Do you stay here all the year' and 'Don't you get awfully lonesome?'.

"Jesse yet, I have been told that I am out of date. I think so too for I am still a, old fashioned that I think visitors to this Monument are my guests while on the Monument. Anyway I naturally would be out of date because I live in a community that is quite behind the times. I know several men around here who still have only one wife, quite a lot of the people still think they should meet an obligation and I doubt if there is a pyjama in the community.

"If I am old fashioned, at least part of my early education in the Service is chargeable to yourself. I have before me a memorandum to Custodians that you sent out several years ago when Custodians were working for a dollar a year, although the better class were drawing down \$12 per year. No doubt most of the older fellows in the Service received a copy, but I still think it is good and might be of interest to some who have entered the Service in recent years, so I quote it in part:

"Some of you will think that this line of talk is not going to touch you because you are only a part time custodian, but

got that out of your mind. Whenever you step on your Monument, you are the host there on behalf of the United States Government, and that Government has a right to demand that you treat its guests with courtesy and respect when you are on duty and give them all the information and aid to the enjoyment of your Monument that you can. It is perfectly true that if you do this, you will be doing more than you are paid for, but the all time men are doing the same, so you are no exception to the rule. A clock-puncher who figures that he must be careful not to do more than a dollar's worth of work he is getting paid for is of no use to this Service, and the sooner he gets out, the better it will be all round.'

"Concerning the C.M.A. project going on here, while we have not made the progress we had hoped, due to the reduction in hours, and part of the time our 'Other than labor' funds cut off, we have done the best we could.

"I am going to close my part of this report and give the other members of the personnel a chance to be heard. The archaeological project here is being done under the supervision of Earl Jackson and he is ably assisted by Miss Sallie Pierce. Their work, being more or less technical, necessitates their own report. The ranger, the clerk, and the Sup't of construction, not being so technical will take a chance on riding along with me.

"Kittie Sottrum: (Clerk).

'When the Landscapeers are here they talk in the lingo of curves. The Engineers insist on the shortest on the shortest distance between two points; but when I figure on vouchers and tom-hire my mind runs in circles, which is the line of least resistance.

"Vernon Toques: (Road Foreman).

'We are about to accomplish our point, the finish, and the road around this Rock of Gibraltar is beginning to look like a path to paradise. The way these lads heave gravel and dodge falling rocks would make one think that Montezuma was after them with his pop gun. However we have a good place to dump rock, which is a very good thing, and this gang thinks in terms of bigger and better rocks as well as more and better roads. We appreciate the interest the men have shown in their work and we hope the public will be as proud of our road as we are.

"Everett Hare: (Acting Ranger).

'Quite a lot of interesting people this month. Our California friends wonder how it is possible for the Castle to remain as it is, for they still talk in terms of earthquakes.'

"Appended is the archaeological report.

Cordially,

Martin L. Jackson, Custodian."

The surprising thing, Chief, about that quotation Jack springs on me from the good old days, is that any Park Service man can file a thing and then go back and find it again. I'll bet it was an accident.

SECOND PRELIMINARY ARCHAEOLOGICAL REPORT FOR MONTEZUMA CASTLE C.W.A.  
by E. Jackson and S. Pierce.

"Archaeological excavations are as uncertain as a woman's whims; One day may result in discoveries of an abundant and astounding nature, while the next may reveal a diametric negativity as regards quantity, albeit an extended conformity to the astounding. Our work here at the Castle further attests these facts.

"Up to the 25th of January, despite shortage of time, labor, and tools, the excavations, being confined largely to the top of a great mass of fill against the limestone cliff, were yielding almost day by day more interesting features about the ruins of the great fallen cliff dwelling 100 yards west of Montezuma Castle. Since that time we have confined our work to the base of the fill, below and in front of the ruin, with the intention of doing 100% excavation of the building, and learning of any additional structure or burial area at the bottom.

"To date, on this same ruin, which is marked 'A' and 'C' on the control map, all rooms save two have been cleaned, the fill has been about three quarters removed and all building stones piled up, and only about a 40 foot frontage of the base ledge remains to be uncovered. The remaining fill consists of huge limestone boulders and fallen wall rocks and dirt is 10 to 12 feet high, filling the right angle between the level of the river terrace and the ledge face below the rooms.

"Practically nothing has been found in this fill. When only half a dozen sherds are found in a ten foot cut, stratigraphy is scarcely worth while, for much of the wall material in which they are found has fallen a distance of from two to six stories.

"After about three days I managed to find enough of the kind of timber suitable to use in the restoration of Room 5, which was outlined in last month's report. This restoration will be a shed roofed type, and will be done immediately upon removal of enough of the front fill to determine signs of a floor or fallen south wall in front of the room. In ten days at the latest we should be doing this restoration, and will have the ruin practically excavated.

"We have one man started at work on the pit house excavation on the slope directly in front of the Castle. The one pit-house so far found has been partially destroyed by weathering, as the course of an arroyo lies over the east end of it. About half the room has been uncovered, but the floor will not be cleaned until about six feet of debris has been removed from the entire enclosure. An interesting feature about the location of this pit-house is that thirty feet to the west, on the same level, are traces of a stone walled structure.

"In the past month Miss Pierce and I have been attempting to familiarize ourselves with the pottery classifications adopted by the Museum of Northern Arizona, as it covers types from the region which most vitally affected the central and upper Verde drainage culturally. In her laboratory work she has tried to check our sherds with as many sources of information as possible, and has presented the following tentative outline of wares found in our excavations.

"With the people who in prehistoric times lived next door to the Castle the making of pottery was more of an industry than an art, judging from the sherds and incomplete sections of ware we have so

far uncovered.

" As indicated in the preceding monthly report, practically all the sherds recovered are plain ware, showing no attempt at decoration or even at a very careful workmanship. This plain ware was probably made by the people themselves to answer their purely utilitarian needs. The paste is coarse, the sand tempering very noticeable, and the firing uneven. Nearly all of this type are blackened from use on or near the fire. The thickness of the sherds, the rims, and the very slight curvature shown in large sherds indicate that the two prevailing shapes were large ollas and large, slightly flaring bowls. One olla of this type was found nearly complete near the fireplace of Room 5a; the bottoms of three similar ollas were found in place in the same room.

" A small percentage of the plain ware has a polished red slip, sometimes showing the regular striations which give 'Onion Ware' its name; many of this type have studded interiors, rarely polished to a burnish. In this division of the plain ware the general workmanship is better and the paste is usually much finer; one semi-complete bowl was found, the sides of which are only an eighth of an inch thick. The usual shape seems to have been bowls; one small nearly complete olla was found in place in Room 5a and enough pieces of another olla were found to enable its shape to be determined. This last mentioned olla is about ten inches high with a mouth eight inches in diameter; and a deeply curved 'shoulder' beginning four inches from the rim; the diameter at the widest part of the shoulder is over thirteen inches; the shoulder curves in sharply where it joins the sloping base. Variants of this form seem to have been common in this red ware.

" In the true decorated ware, forming 4.1% of the total number of sherds yet found there are four other cultural areas represented by trade ware or by their direct influence on design and color: the Hopi or Tusayan area; the Flagstaff area; the Roosevelt area; and the Gila area. In the case of the Gila area the accuracy of this statement must be judged by only six sherds: one typically red on buff in color and design; five Gila Polychrome. A large part of the decorated sherds is typical Jeddite Black on Yellow; comparison of these with Jeddite Black on Yellow sherds from old Chinopevi shows the same type of paste and leads us to believe that these were true trade pieces. Black on White ware predominates in numbers over other decorated types and is varied in design; a few designs are of the 'negative' type of the Tusayan and Kayenta areas; a few are more like those found in Roosevelt and Tularece ware; and a few are typical of designs of the Flagstaff area.

" It is the very small amount of decorated ware, its lack of unity of design, pigment, and paste, and the substantial percentage of recognizable trade ware which leads us to believe that the people of this site confined their pottery making to the plain, usually coarser vessels and traded for their decorated ware. It has been suggested that the large salt deposit near Camp Verde, which was worked in prehistoric times, may have given them a valuable article of trade for such products of other areas, and thus lessened their interest

in pottery making.

"This is surmise; before we come to conclusions we hope to do some work on comparison of mineral contents of clays and the pastes of sherds from this site, with the hope of determining which wares could have been made in the vicinity and which must have been traded. Not enough work has been done in the Verde Valley to determine positively what is a typical Verde type or types, or exactly what influences from contacting cultures to expect; the excavation of another site in this immediate vicinity would, of course, greatly aid in the correct interpretation of our findings here."

Whether you know it or not, Chief, these two youngsters, not long out of school, have tackled a problem at Montezuma Castle which the older bone diggers of the Southwest seem to have pretty carefully avoided. The Verde Valley, in the vicinity of the Castle, seems to have been one of the cross-roads of the Southwest in the ancient days and we have a grand mixture of cultures to unravel. As one of the prominent archaeologists of the southwest once said of another site; the pottery was so very confusing that he could do nothing with it. This is one of the reasons we have never been able to get an expedition to spend any real money in research at the Castle.

CAPULIN MOUNTAIN NATIONAL MONUMENT, Honor J. Farr, Custodian, Capulin,  
New Mexico.

"Dear Mr. Pinkley:

Our genial weather man has not been so kind this month; although we have lost no time, we have had two fine snows this month and they in reality made the road dress fine. We have had no cold weather all this winter and even now, with the beautiful moisture, we do not have frozen ground to work in.

"Visitors were slightly over two hundred; from Oregon, New Jersey, New York, California, Idaho, Colorado, Kansas, Texas, and our own good sunshine state.

"We have hopes of completing the two trails and the road within the limit of time given us even if we are only permitted to work fifteen hours per week.

"We still have a very loyal crew and most all of them are good workers who understand and appreciate the situation and are willing to help out to the best of their ability.

Honor J. Farr,  
Custodian."

Mr. Farr writes me that he had just received word of the very serious illness of his sister and was making a very short report just before leaving to see her. He has the sympathy of the other members of the Service and we hope the next news from him will be good.

I might say here that we had to quiet some rumors last month by thoroughly investigating the Capulin job and I am happy to add that the rumors vanished into thin air and Honor and his job came through as clean as a hound's tooth.

PIPE SPRINGS NATIONAL MONUMENT. Leonard Heaton, Acting Custodian,  
Havasupai, Arizona.

"Dear Boss:

"I have been punching this old typewriter so long trying to keep up with the paper end of the C.T.A. that after I get through one letter it seems that there is always another to be written or some records to make. I am mighty glad that I don't have to sit in an office like some of you fellows down there do, for I don't get along very well with indoor work for very long periods of time. If I can come and go at will I can manage to get things done so they look like some sort of office work. I really do enjoy wrestling with the problems that come up here, though sometimes it seems that they almost get the best of me, but by using all my knowledge and skill I finally get a head lock on them.

"All in all we had some fun out of the last month debating whether the C.T.A. would go on or off, and your announcement of closing up the work here on March 22 came as a surprise. Nevertheless we are going to carry the work on to a finish that we have started IF WE CAN GET SOME OTHER THAN LABOR MONDS; if not, I am afraid that one or two projects will be incomplete when March 22 comes around.

"Mr. Ross Rozell spent three weeks here doing the surveying of the boundary lines and the making of the contour map. I think he did a very fine job and the only thing that is lacking to make the map complete is the elevation of the place. He assumed a 5,000 foot elevation on the doorstep of the lower house leading out on the south side of the Fort. On the 16th I met Mr. Harris of the U.S. Geological Survey, who is running a line of bench marks through this part of the country. He said they would be out to Pipe Springs about the 23rd or 24th and wanted to know if we wanted any of his markers here. He suggested that a bench mark be placed on the Fort which I thought would be all right but he should get the approval of Mr. Langley or the San Francisco Office. I mentioned this to Mr. Cowell and will again tomorrow and see what he thinks is the best place for these markers.

"Mr. Langley was here on the 31st of January and again on the 6th of February and changed things a bit from the plan I was working on but they will now be more in line with what he wants of the place. I sometimes wonder if Mr. Langley is not using the wrong yard-stick in planning the planting for Pipe Spring. I think we should not depart from the spirit of the Mormon Pioneers which they always made prominent about their settlements, that of removing all undesirable vegetation from around the home and planting it with more attractive trees and flowers. If I get Harry's idea, he wants sage brush, thistles, unsightly weeds, etc. growing all about the Fort with only small foot paths leading to and from it. I am strongly opposed to such a condition here immediately around the Fort, though I would like to encourage native growth on the other parts of the Monument.

"The work has been done up in good shape but we surely need a team or two to be able to finish up the projects as we want to; there is a lot of capping of roads and moving of rock to complete most of the projects now under construction. The way the new road is coming in from the east, one cannot get a view of the Fort on account of the

trees that surround the ponds. Mr. Langley wants some of these trees to come out so people can see the Fort.

"We have the south fence and half of the east fence up, and when the posts are cut off even it will make the place more attractive as all posts are peeled and set 10 feet apart and the fence has six wires eight inches apart. It makes a good solid fence.

"Since I have been taking down fences within the Monument I think it adds to the beauty of the place to have the fence down around the meadow, and with a good fence, cattle guard and a lane around the south and east sides I can't see why we need any fences within the boundary except the one around my barn and hen house which are on the south side of the Monument almost out of sight from the road.

"We are going to cover up the tunnel and fill up the upper meadow pool and pipe the water into the lower pool; this is because of the deepness of the tunnel.

"Well, I have almost forgotten to make a report of the travel for the past month, and by doing so have broken the rule that it should have come first. Instead of making the report of the cars by states as in the past, will say that Arizona, Utah, California and New Mexico are the only states represented with the total count of travellers, 436.

"On the 20th, we had our first rain this winter to speak of but not enough to stop the work, and it has been trying to storm a little every day since. I don't look for any heavy winter storms now; I think they will be gentle rains that will get a man wet if he is out in them for very long.

"Our spring has come as Meadow Larks, Blue Birds, Geese and Ducks have been seen on their way north. The weeds are starting to come through the ground and I have noticed several varieties of them in the fields.

Sincerely yours,  
Leonard Heaton,  
Acting Custodian."

I might say here that Mr. Heaton has misunderstood some of Harry Langley's instructions evidently in the matter of the planting as Harry in talking with me said we could plant practically anything we wanted to around the houses at Pipe and on the camp ground, and I have checked this up with him since getting Leonard's report so we will be able to work out a very pleasing planting arrangement.

We will be glad to have that contour map of Pipe Spring National Monument as it will allow us to lay out plans with certainty without having to go on the ground every time to see how the scheme we are talking about will fit the location.

NATURAL BREEDS NATIONAL MONUMENT. Mr. Zeko Johnson, Custodian.

There is nothing going on at Zeko's monument at this season but he sort of checks in this month with one of his welcome letters.

"Dear Frank:

Just to tell you that I am still on the job and longing for spring to come so I can go back to dear old San Juan County and the

many old haunts of mine. I am still hoping and praying that something can be arranged so I can have a little money to fix up the roads and trails so people can come and go in safety around the Natural Bridges.

"I have made many visits to the State Capitol and begged the State Highway Commission and the C.W.A. officials for some help and every time they have promised me that they would have men working on the road from Blanding to Cotton Wood Wash, a distance of 13 miles, but as yet nothing has been done, yet they still keep promising to do something, but I guess I am from Missouri. Sometimes I think I am a real hoodoo to the Monument but I am not going to lay down until I am thrown out and I am going to keep hammering away at those in charge until I get some roads, trails and a little cabin to live in. I am inclined to be blue when I see so many parks and monuments around me getting roads and trails and buildings and poor me with nothing so far. They say every dog has his day but I wonder if I did not have mine when I was a pup. I am like the old Danish brother who said he was 'thankful for all the things I have got and for the things I don't got, too!'

"Hoping this finds you and yours all well as it leaves me,  
Zeke."

-----

Zeke has been rather left out of the improvements this last year, and I wish you would consider this when you come to checking over the Public Works list we recently submitted to you. We put him in there for some roads and trails, a residence, and water supply. If we don't get these things this year there is no telling when we will get them and the visitors are going to be in there on us in numbers in the next year or two and we will have the usual situation when our newer monuments come into use undermanned with personnel and over run with visitors with the consequent impossibility of delivering good service. I wish we could build one Monument up a little ahead of the visitors instead of four or five years behind them.

-----

EL MORRO NATIONAL MONUMENT. E. Z. Vogt, Custodian, Ramah, New Mex.

Mr. Vogt's report is dated February 26th and runs as follows:

"Dear Frank:

"You know from previous reports how the open, mild winter has favored us in our C.W.A. program at El Morro, a Monument which is located far from stores or settlements, with Navajo Indians our closest neighbors and well over fifty miles back from the railway in what is still the hinterland of New Mexico.

"Our untrammelled progress has now been ended by three days of snow and storm so that we are completely tied up and unable to work. Roads are all but impassable; cars that try to travel go into the deep roadside ditches, others gum up with deep mud, unable to move while not a few tear out their differential or break axles in their unwise efforts to negotiate roads which are really only safely passable for horses or burros.

"The phone line operated by the Indian Service between Ramah and Zuni and Gallup is down under the weight of fallen trees weighted with

heavy wet snow. Families with full cellars and a quarter of beef hanging on the back porch are sitting pretty, but those that are not, and there are so many, even ranch people, who live like they were a block away from a Cash and Carry store are packing food at tremendous expense through the mud. Or, like the Navajoes working on a dam 15 miles southwest of us, come afoot and pack their needed supplies back to their camps on their backs. Those who have horses help some that are afoot but not to the point where the squaws and children have to walk.

"Temporarily we are unable to go ahead with the work in hand such as building our new fence, trail completion, and archaeological reconnaissance. We will lose Monday and Tuesday but if it doesn't snow more today we think we will be able to clear the snow off the fence line and shovel off the mesa slopes and go ahead with the chiselling of steps on the south and east exposures of El Morro by tomorrow. After the weather clears the run-off will be rapid and heavy.

"Everything has its advantages however, for we are going to be able to study the effect of rushing waters over the great fill of dirt we have made in the great arroyo. You will recall that the project of greatest magnitude which we undertook was the erasure of the great arroyo which washed a terrible gash in the terrain in front of the 'Rincon como una naranja' as General De Vargas called it in his diary when he visited El Morro and carved his remarkable inscription on the nearby cliff in 1692.

"This cove collects the water which rushes over the high cliff overhead after rains or snows and after the concrete dam will no longer hold the water it passes over the spillway and flows down the scale which was once the arroyo. During the last month we have blasted off the banks of the arroyo with blasting powder, making passageways for teams and scrapers, and gradually filled up this entire arroyo so that the scar has been removed. Some over 15,000 yards of dirt have been moved to make the fill in this deep gully which was 50 feet wide and 30 feet deep in places and over 200 yards long.

"Right here it is interesting to note that when Dr. F. W. Hodge first visited El Morro back in the 80's this arroyo had just started to cut and he says in a letter to me received in January: 'I could easily step across the gully at its widest place.'

"The present period of water flow will give us a chance to observe the effect of water on this fill, the efficiency of the check dams placed every 50 feet across the fill, as well as what will happen at the major check dam placed here and beyond the point just above the bridge.

"During the month past I have conducted an exchange of letters with Mr. Arno Leopold, of the University of Wisconsin, with the Forest Service, with Dr. Harry Kent and his experts at the Agricultural College of New Mexico, concerning the ways and means of getting the ground and natural grasses started to grow on this area where our men and teams have been working so strenuously. Both Mr. Richey and Mr. Hamilton have considered this problem with me and we hope soon to decide on a course to follow. One thing is certain, that in a country where 15 inches of rainfall is about normal, all the moisture that falls will be favorable to regressing the area and if enough moisture falls we

might even be able to direct the overflow from the cove so that irrigation could be accomplished.

"The building of the trail up the north face of the great 300 foot cliff to the north prehistoric Indian ruin has been finished. The trail along the sheer edge of the mesa which gives a fine view and the thrill of danger, though it is very safe, has been finished and the stairway cut into the rock leading to the top just over the 'Rincon como una Naranja' is about completed. From there going along the top to the largest or south ruin there is still some work to be done. Coming up from the base of the cliff on the east side we have had a crew of men chiselling the trail so as to meet those working from the other way.

"I may be overly enthusiastic about our trail, and my acquaintance with trails is limited, though I have climbed over those at Navajo Mountain and Rainbow Bridge and those at the Mesa Verde and Bandelier. It does seem to me that it is going to be an accomplishment which will be appreciated and favorably commented upon by all who visit our Monument for centuries to come. There are three spiral stair cases one of them containing a reverse spiral containing 14, six and eighteen steps enabling one to pleasantly and easily ascend the cliff. At one place Juan Chavito, who is Spanish crossed with Hégi blood, built a wide trail of natural hued rock, harmonizing with the cliff itself, over a run-off place which at times carries lots of water and under this trail he devised, with engineer D. B. Clark's guidance, an undershot to carry the water without damaging the trail or discommoding the visitor in his journey. The course of the trail was so planned, under Messrs. Richey and Hamilton's guidance as to give the best views, easiest ascent, with occasional levels to enable the ranger to re-group his party and point out the wonderful views of the enormous, unpeopled region of mountain and mesa country in every direction.

"We were fortunate in the hauling of our fence material which will be used to enclose our 240 acre area of the Monument. Though the entire weight of the 47 inch woven wire, the barbed wire, the iron posts, braces, etc., was over 26,000 pounds, our men rolled the material out in three days from Gallup, a distance of nearly 60 miles, over bad roads which fortunately were not snow soaked at the time.

"We commenced building the fence last week and will go right ahead with it as soon as the weather permits. The corners must be placed in concrete and we have to haul our sand with teams a distance of ten miles. Going up over the mesa slope the fence will be supported by the iron posts, holes for which have to be drilled out of the solid rock and the posts set in concrete. We hope when you come to see our work that you will be pleased to find a well built fence, strong and well stretched with no buckles in it. You know from experience how fortunate I am in my crew of resourceful ranchmen who know how to improvise and carry on and through and over all difficulties and who have all built plenty of fence, and some of it in rough country. Nearly all of them have stock raising homesteads which require four miles of fence to inclose their square mile of land.

"I am thankful for the second hand Model A coupe which you sent me after engineer Attwell received his new Ford sedan. The car runs well,

has a heater in it and has plenty of power and life to it. The car has a history, however, which I learned through Indian Prohibition Enforcement Officer M. K. Clark. He saw me drive the car in Gallup and asked me where I got it. I told him how it had come down through the Engineering Division of the Park Service. He enlightened me with the fact that it had been his car and that in it he had captured more bootleggers and stills than in any other car he ever drove. That was before Mr. Attwell got it. I am wondering now if someone will recognize the car and take a shot at me. At any rate, I have returned the rented car we had to carry on the C.W.A. work, thus cutting our expenses that much.

"Our archaeological party has been busy on its work under Mr. Ted Amsden. To date they have located and collected pottery samples from 72 prehistoric Indian ruins within five miles of El Morro. On El Morro itself they have located 23 ruins and have nicely mapped the one great south ruin which occupied more of their time than any other since all the corners of the rooms were located under the ground and had to be opened in order to take the measurements.

"This ruin is characterized by its unusual symmetry in shape, uniformity of room sizes, unusually late pottery, and the very large Kiva which measures 26 feet in diameter.

"Sherd collections have been made and will be divided among the following institutions: Gila Pueblo, Laboratory of Anthropology at Santa Fe, University of New Mexico. Beam material of sufficient size to enable them to work out a date of occupancy has also been found and will be divided as above.

"Since Mr. Amsden went through Globe en route to Los Angeles recently, he left quite a lot of the collections and a beam sample at the Gila Pueblo with Mr. H.S. Gladwin and Mr. E.W. Hamry. Our clerk, Lon Pat Fletcher, made a trip to Albuquerque over the week end and took in a box of material for the University of New Mexico.

"Five major ruins in the region have been examined and more are to be visited to the south and west. The Ice Cave region was visited where basket maker material was found. Few caves have been found though in one to the west and south a few miles some basket maker sherds were found. Most of the sherds show black on red with great quantities of black glaze on red and white; some have green glaze on white.

"We spent one day between El Morro and the Box X and Nutria Country, taking in the lava ruins at Cienega, the long ruin east of there on the Zuni Mountains, the Box S ruin down the creek a mile or so from the old Box S ranch house, the Figure 8 ruin in the Sobollita Canyon 3 miles above my ranch house at the mouth of Jose Pino Canyon. I hope to have time to take the car and Mr. Amsden down to other large ruins on the Crockett ranches and down on our ranches near Atarque where there are several major ruins, a few of which were once visited by Dr. Hara when he was out with me.

"We realize that we are working in a virgin country in a way, and Mr. Amsden is making careful records in the way of locating and collecting. He is ably assisted by Fred Glidden, who has also written some newspaper stories about our work at El Morro, and by Joe Bice, one of the few rancheros who has a real flair for the work. Most of the work

is still done on horseback trips occupying the day, the men packing lunches on their rides.

"We have noted a bunch of six deer near the Monument, three coyotes in a pack, and a happy family of birds and rabbits.

"During the latter part of January I was privileged to make a trip to Gila Pueblo, there I was deeply impressed, a visit to Casa Grande where I had the opportunity of hearing you tell the absorbing story of the unique ruin there, which I never had known anything about. We met Bob Rose, Hugh Miller, the rangers and office force, but missed seeing Mr. Palmer who was away on business.

"After noting the immense amount of work they have to do down there they won't find me standing on top of El Torro and yelling for supplies and information which I can get along without, especially when they are so pressed with work and for lack of time. We also have taken a check on our voucher and paper work and sincerely hope we will turn out paper work which will make the grade.

"Going down over the mountain near McNary, we had a little bad luck in running into a bunch of cows. I missed 16 of them but hit two which were asleep on the highway, it being night when we all should have been asleep. The two I hit effectively streamlined the front of my Ford sedan so that it approached the shape of a Chrysler Air Flow car. With bent fenders, demolished headlights and caved in and horn marked doors, we proceeded by benefit of moonlight to White River where we managed to get new globes for the lights so we could proceed down the mountain side with more safety.

"I caught Mr. Bounday on his day off at Turracora and will have to go down again to visit his monument with him.

"I am reading the copy of Bandalier's Report which you loaned me and am enjoying it very much.

"Our crew is working well and has now been notified of the gradual lay-off which will take place this spring. We did this through a good form letter which you sent to us, one copy for each man, upon which we dated the time of each worker's retirement from our job. We spent long hours considering the needs of every man for employment and tried hard to make decisions which were just.

"During the month our oldest employee, Waldo Harolson, our blacksmith, has been married. Two babies have been born to wives of members of our crew. There have been no deaths and very little sickness. Health conditions continue to improve and all are happy and thankful for the help they have had.

"While in Albuquerque I was fortunate enough to be invited on a courtesy ride with 15 city and state officials on the new Douglas plane of the T.W.A. air line. This plane is aptly called the Luxury Liner and is certainly a beautifully built and easy traveling cabin job. This is the line whose planes fly over our Monument every day on their transcontinental course.

"Generally the cow and sheep men and farmers are very thankful for the downpour of moisture which assures green grass for spring grazing and good farming conditions. The Navajos and Zunis are busy with their conservation work to the point where Navajo rugs are not coming in like they used to.

"Several hundred Navajos are still gathering pinyon nuts south-

east of El Morro some 100 miles and not far from Batib. Most of the nuts come from pack rats nests which they locate and rob. They are careful never to kill the rats. Nuts bring them about 15 cents per pound at the trading posts.

"Both Mr. Hamilton and Mr. Richey have been with me and I am looking forward to their visit with their wives the latter part of this week. Their wise guidance is always appreciated.

"We are having road signs made by our woman employee who will paint enough road signs to post all the main roads for about 60 miles from our Monument, thus directing people to our Monument and saving them from getting lost on the numerous roads.

"As this is typed we do not know just how we stand on Other Than Labor money, to proceed, but are expecting word from you at any time.

"Books of interest which have recently come out are Mrs. Ickes' 'Mesa Land', Kuipers' 'Navajo Snow', and Villagrans' 'History of New Mexico, 1610,' the latter published by the Quivira Society.

"With best regards to all, Sincerely,  
Evan Z. Vogt."

Speaking of Pinyon nuts reminds me to tell you, Chief, that Evan nearly wrecked our office routine by bringing down a little bag of those pinyon nuts when he came down in January. They are little things that you crack between your teeth and then extract a kernal about half as big as a coffee bean, sweet and good, but you could starve to death eating the things, and once you get started you can't hardly stop; it served E.Z. right if his pay rolls were late in producing checks with these pinyon eating girls in the office. One fellow who certainly gets a lot of fun out of the nuts is Darmit who is by way of being the office parrot and who thinks Park Service people were made by a kind Providence to crack nuts for him.

Also, E.Z. forgot to tell, in that trip to Tucson and our headquarters, that he brought the Honorary Custodian Without Pay with him to all our great pleasure; and she made many purchases in the metropolis among which was a ball gown, and how he dropped me a note one morning and said he had intended to get his monthly report out the night before but the H.C.W.P. discovered a dance and 'not having worn that Tucson dress yet, that dance involved my time, conversation, eyes and feet until 3 a.m., so I am not equal to anything in the way of a report, but the dress was pretty and if there were any prettier girls on the floor than she, I couldn't find them,' which I consider a mighty good excuse for not writing a monthly report, don't you?

TUMACACORI NATIONAL MONUMENT. George L. Boundey, Custodian, Box 2225,  
Tucson, Arizona.

"Dear Mr. Pinkley:

"We had 1,146 visitors for the month.

"We have had ideal weather throughout the month with only one rain of any consequence. The cottonwood trees are leafed out in many

localities and the old Padre peach trees are all in blossom here at the Mission.

"Although we have been working only fifteen hours per week with the C.W.A. program, we have the front adobe wall nearly completed and have made quite extensive repairs to the Mission buildings.

Mr. Attwell and his three engineers made us a short visit the past week and set the stakes for the back wall and assisted in establishing a grade in the front plaza, etc., Mr. Attwell also succeeded in getting a donation from the State Highway Department of 68 rails for cattle guards and enough pipe to finish the culverts under the front approaches.

"The Rodeo being held at Tucson has sent us many interested visitors. They are all enthusiastic about the C.W.A. work which is being done here.

George L. Boundey,  
Custodian."

Just as soon as the C.W.A. work ceases off on us here at headquarters we intend to let a small contract of about \$2,000 under Public Works covering the construction of a parking area wall and some entrance gates at Turkeceeri. That Monument is coming round into fine shape and we are beginning to get quite proud of its appearance as one approaches it on the paved State Highway.

WHITE SANDS NATIONAL MONUMENT. Tom Charles, Custodian, Alamogordo,  
New Mexico.

"Dear Boss:

Is a real for sure mirage worth exploiting? If you could drive out into the country twenty miles and show your eastern friends a mirage any hour of the day, any day of the year, would it be an attraction? I fear that I am affected by the local color and that my judgment is warped. You know these natives are about as much moved by seeing a mirage as by seeing a jack rabbit or a coyote. I begin to suspect that I have grown to be a native. As usual I am falling back on you for advice. Some one in the Park Service will have to decide before long whether or not these mirages on the old lake bed are worth while.

"Our surveying crew, in fixing the western boundary of the Sands have been working on the old lake bed for about a month. They have seen mirages of every imaginable form every day. One man reports a modern airplane carrier, another sees a farm home with corn and chickens and children playing in the yard, while a third sees only sky scrapers and modern city streets.

"The dry lake bed is some twenty miles long and ten miles wide, dotted with dunes of snow white sand, spotted with areas of coal black mud, here and there a salt cedar bush, a clump of yucca or hummocks of glistening rich brack the horizon. In the background rise the rugged San Andres Mountains, in the foreground the rolling hills of snowy sand. It is an ideal condition for the reflection and refraction of light. I, personally, when there, got visions of high board fences with strips of light and strips of dark colored wood, running up and down.

Mirrored lakes of water and irrigation ditches are in abundance, but we never find them. Moving objects appear like herds of cattle; gorgeous groves of palm trees seem to be everywhere about us.

"The present road to this mysterious area is around the southern end of the sands, 30 miles or more of almost impassable trails. A trail across the sands themselves is possible, however. From the 'Turnaround' at the end of the new road, it is about three miles into the lake bed. To make this trip by auto it would have to be a personally conducted tour and decidedly a matter of following the leader for it would be through the deepest valleys and over the highest hills. Is the mirage worth while?

"In the past three months about 2,000 arrow points have been picked up at the prehistoric Indian villages within a few miles of the Great White Sands. Scarcely a Sunday passes but groups of recreationalists dot the open valleys of this section, 'hunting arrow points.' One afternoon recently a group of four picked up 65 perfect arrow points within a radius of two hundred feet. At the same time they found scores of broken points. One of these points was a spear head six inches long. Others varied from the rough, jagged, vicious looking points to delicate works of art no more than half an inch long. Among these findings there are at least five parts of Folsom points. We have not yet screwed our courage to the point that we are claiming 30,000 years of habitation in the Great White Sands, but we have one Folsom point that is a sure enough twin of the Folsom which Dr. Howard of the Pennsylvania Museum found just over the lower line of this county, in position with the bones of the Muskox, California Condor, Sloth and seven extinct horses and other such animals. All these recent Folsom points found have been in the vicinity of the White Sands. The pottery found in the Sand is similar to the pottery found in the prehistoric Indian pueblos of this valley. I am wondering if the exploration party should tie the Indian ruins surrounding the Sands, the petroglyphs and pictographs, the pottery and arrow points and artifacts which abound around the Monument, into the report on the Monument itself. We have already accumulated something like 100 pictures of the petroglyphs of this valley. They are an interesting lot. One picture shows two doves holding a staff between them, on top of the staff is a sort of stair step. Another dove is carrying a twig or branch. Squirrels, polecats, foxes, snakes, lizards and most of the larger animals come in for their share of the picture making. There is one picture of a dinosaur, except that this dinosaur has horns. Will all these ruins some day shed light upon or become a part of the study of the Indian ruins in the Sands themselves?

"Work was progressing nicely on the C.W.A. project until we had to shut down for want of other than labor funds. The greatest hardship came to the team crew where each man was camped out 25 miles from town trying to feed a team of four up and no funds.

"Yours very truly,  
Tom Charles, Custodian."

I think these mirages Tom talks about will probably account for the red lakes he has told us of having seen over there in that district.

I never saw a red lake in a mirage, but it will make a pretty reasonable explanation of the occurrence and I never did believe that explanation that they were just common lakes which were blushing with pride at the stories Tom was telling about them, for if that were the case the sand-hills would be red too.

I don't know about this dinosaur though. I am willing to believe the horns if you will believe the rest of him and maybe between us we can absorb the story, I'd like to help Tom out all I can, but a dinosaur and horns,---it would be sort of straining our official relations to swallow the whole thing.

The lack of other than labor funds for over a week on the start of the new C.W.A. program hit us hardest on our fifteen jobs at the White Sands for we are hauling plating for our new road and our hundred men were hung up because we didn't have the transportation money to keep the trucks and fresnos going and without the trucks and fresnos the men simply couldn't work. If we ever have any more programs like this, please remember that with from fifty to a hundred men you can putter around on an inefficient basis with a little money for other than labor, but with no money at all you are sunk; you must have some money to buy a sack of cement or replace a broken tool or buy coal for the blacksmith who sharpens the tools, and you can't lay a bunch of stock up on the shelf and not feed them for a week or ten days. You might think we could shut the jobs down for a week or ten days. It may surprise you to know that even that takes a little money, and it was hardly fair to men who, in some cases, were a hundred miles from home. Our men in the field certainly were under a strain for those ten days and it was hard on the general morale.

CASA GRANDE NATIONAL MONUMENT. Hilding F. Palmer, Custodian, Coolidge, Arizona.

"Dear Mr. Pinkloy:

"Once again we are happy to report a very decided increase in our visitors. In February, 1933, we had 2217 visitors and this February we had 2,571, an increase of 354 or 16%. This is the third successive month that has shown an increase; for the travel year thus far we have had 10,962 visitors as compared with 9,670 for last year to the same date, an increase of 1,292 or 13%. These increases are very gratifying to us.

"The 2,571 visitors this month came from every state in the Union except South Carolina and Delaware. Washington D. C., Mexico, Canada, Norway, France, The Bahamas, and Alaska were also represented.

"The visitors came in 753 cars.

"52% of our visitors were from out of the state, which is a higher average for out of state visitors than usual. The entire 2,571 were contacted and personally conducted through the ruins on 255 trips and 239 lectures were delivered in the museum. In addition to these 2,571 visitors who received service there were 233 who drove in and drove out without getting out of their cars, making the total number of entries to the Monument 2,804.

"The weather has been unusual; there were only 17 clear days,

6 partly cloudy and five cloudy days; this is an unusually low percentage of clear days for Arizona; however there was only one day of precipitation on the 24th when 1.81 inches of rain fell. The maximum temperature for the month was 84 degrees on the 13th, the minimum 30 degrees on the 10 and 12th; the mean maximum for the month was 75.7 degrees, the mean minimum was 38.3 degrees, and the mean for the month was 57 degrees. From that weather report you can readily see that it is a privilege to live in southern Arizona in the winter.

"There has been a little work on Public Works force accounts during the month and all four projects are completed. Approved working drawings for the new residence were received on February 15th and the bids were immediately gotten out and are to be opened on Saturday, March 3rd at two o'clock. Construction will start immediately after the contract is approved by the Secretary. When this residence is completed our Public Works Program under the present allotments will be finished.

"The Civil Works Program has gone along as well as could be expected with the limitations which have been placed upon it. We are accomplishing some very important things even with the disadvantages under which we are working. All work is being concentrated on the protection of ruins project. After considering the matter from all angles and, on recommendation of the Archaeologist in charge, work was discontinued on the archaeological reconnaissance. His written recommendation is attached and I think he is right. His letter follows:

'It would seem to me that further excavation of the sites I have been working at Casa Grande would add little, if anything, to scientific knowledge at present. The sites were not completely excavated but the present amount of excavation has revealed several specimens of each type and all the information that was anticipated after carefully studying the surface indication. Further excavation would undoubtedly reveal more of the same, but I should be greatly surprised if anything new or different should come to light. Also, the sites I was working were occupied more or less contemporaneously with Roosevelt 9:6, The Crew Site, Sacaton 9:1 and Sacaton 9:2, about all of which we have intimate knowledge. In one particular do the sites I excavated at Casa Grande differ from those mentioned above, that is in the lack of a compound wall in the late period and further here would not be expected to show the reason for this lack.

'It was a great pleasure to do this job and I want to express my appreciation for the cooperation which I received from you and the other members of the Park Service.

Very truly yours,  
Russell Hastings.'

"Mr. Hastings informs me that there is no question but what the site was occupied in Colonial times, which is the oldest period of the culture in this valley and it pleases me very much to know that we have one of these early sites on the Monument area.

"Workmen are now backfilling the site and putting it in its original condition. The work has been decidedly worth while and Mr. Hastings is to be complimented on his able handling of the job. It is sincerely hoped that there will be another opportunity for him to return to the Monument for further work at some future period.

"In all probability Mr. Hastings' final complete report, on which he is now working, will be published by the Gila Pueblo. In case they do not think the information valuable enough to warrant a separate published report we will mimeograph it and send it to all scientists who are interested.

"Since February 15th the ruins protection has gone on as planned. The 15 hour week handicaps us considerable. It seems we no more than get started when it is time to lay off until the following week, but we are getting some very necessary grading done and curtain walls placed. I am hoping that before the program ends I will be able to completely finish the grading of Compound A and get curtain walls on both sides of the south and west outside walls.

"The engineer has worked the entire month on checking the sewer and water lines and drawing a large scale map of them so that at any future period anyone can locate any pipe in a very few minutes. Mr. Wells, the engineer, is a victim of the 'taper' this week so the locating of the underground conduit lines will have to go over to some future time. "I am extremely sorry to lose Mr. Wells; he has done exceptionally good work, his engineering is accurate, his plans and drawings are neat and precise, and, although he has only been paid for 15 hours of work per week since January 18th, he has averaged about 40 hours every week. His report on his operations for the month ~~is~~ is here included:

"The end of February is at hand which signifies the period of another monthly report due, and it is with deep regret that I find this is to be my last. It has indeed been a great pleasure to have been associated with you and the rest of the staff at the Monument these last three months and I shall miss you when I leave.

"In closing the engineering work which has been carried on under the C.W.A. I wish to advise the work done the past month consisted of locating all service and water lines within the residential quadrangle and completing the survey work at the Archaeological site No.2.

"All maps and drawings have been completed. Maps completed during the month consisted of: one map, scale, 4' equals 1", of Excavation No.1, and one map, scale 5' equals 1", of Excavation No.2., one map showing both excavations, scale, 20' equals 1", and this being tied to the original survey from Stations No. E3, and No. OE4. The large Utility map has been completed and is now ready for the printer.

"Assuring you again of the regret I feel in leaving the Service, and thanking yourself and Mr. Pinkley for the many considerations and courtesies shown me while here, I wish you both the best of success and happiness.

Sincerely, C.F. Wells.

"In spite of the difficulties under which we have been working, we have accomplished much and hope to accomplish more before the end of the program.

"Assistant Architect Langley paid one of his welcome visits to the Monument of February 26th. He had no criticism to make, and of course had no compliments to pay.

"All clerical and accounting work is up to the minute.

Hilding F. Palmer, Custodian."

Here is a cross section of three or four days of the life of an engineer under field conditions and it gives a little different angle on some of the monuments whose reports I trust you have read above. It is Walt Attwell speaking, and, here he is:

"Dear Boss:

"We made Montezuma Castle on schedule time and it rained the whole trip. I slipped all over the road and arrived there shortly after noon. That afternoon we looked over the road which is under construction and I suggested that Jack complete only what he had opened up and place the culverts as none were in at this time.

"Saturday, Earl Jackson and I with Stewart's crew went to Clear Creek Ruin. We started the engineers out from a section corner for the ruins and while they were tying the ruins into the section corner Earl and I looked up the Forest Ranger and the Dam surveyors. That day I made a complete lay out showing all patented lands, drainage, highwater line of the proposed reservoir, and the ruins. It was raining hard and I feel that my pictures will not be very good.

"Sunday morning I spent with engineer Stewart and Mr. Jackson on their engineering problem, visiting the intake site with property owner Hare. That afternoon I inspected the prehistoric excavation at the Castle. While we were there Earl dug out the burial of a woman. Everything was in place except the lower jaw, which was wide open and detached,-- of course this was not how he identified the skeleton as being that of a woman.

"I was disappointed with the rodent control operators in this district. This expert with about ten assistants visited the Castle to put out poison. Custodian Jackson refused him permission to place poison on the Monument. Ranger Hare also refused permission to place it on his farm nearby. The men left to return a few days later when they were seen leaving the monument at breakfast time. Since then most of the Monument's pet quail have disappeared and Hare's cats have all died.

"Sunday night I drove to Flagstaff and met Dr. Colton of the Northern Arizona Museum and Custodian of Wupatki National Monument. Monday he drove me to Sunset Crater where I inspected the roads and trails, Ice caves, and the volcanic push-ups. The black coloring of the ash-dunes is a contrast to the white color of the White Sands. You can get the monuments down in black and white at these two places.

"We arrived at Wupatki about noon, ate with the boys and looked over their diggings. This represented a lot of good work with a small crew. The most pessimistic tax payer could not help feeling that it was money

well spent: Dr. Colton need not offer any apology for his efforts. The restoration has been carefully done but there is need for more in the immediate future or the ruin will suffer rapid deterioration. The original walls in many places bridged cracks in the rocks on pine poles. One span ten feet wide carries several stories on wood stringers probably 800 years old. These poles have served their time against the weather but cannot continue many years longer. The topographic party has tied hundreds of ruins on the map and have shown ten foot contours on six-quarter sections. This country is easy to contour, their worst difficulty being the wind.

"I took time enough to examine one seepage crack which was about three feet wide, 20 feet long, and the first floor down was 180 feet. This crack may be much deeper when one explores below the 180 foot floor. This 'bottomless' pit is only 100 yards from Ruin J. which has housed hundreds of people. It is very probable that valuable finds will be made when this hole is explored, especially as it is so near these large ruins.

From there we drove to Citadel Ruins and arrived just in time to see a burial uncovered. The crew was making a parking area when several storage pits were uncovered. Most of them contained burials but the one most interesting was of a man in perfect shape with a bow or wand in his left arm. This bow was six feet long and had been painted red and blue. He had a perfect bracelet on his left arm.

"After asking the customary dude questions, I looked over the road repair work and the proposed trails. Dr. Colton is preparing a map showing the required trails to the most interesting places. This Monument, like most of the Southwestern Monuments, has so many interesting features that it will be hard to tell which to eliminate.

"I was strongly impressed with the need of a permanent man at these ruins. Pot-hunters have already done their share and it will be hard to prevent further vandalism after the present crews leave.

"I have phoned Mr. Hayden, the archaeologist at Navajo National Monument, and am leaving for that place in the morning.

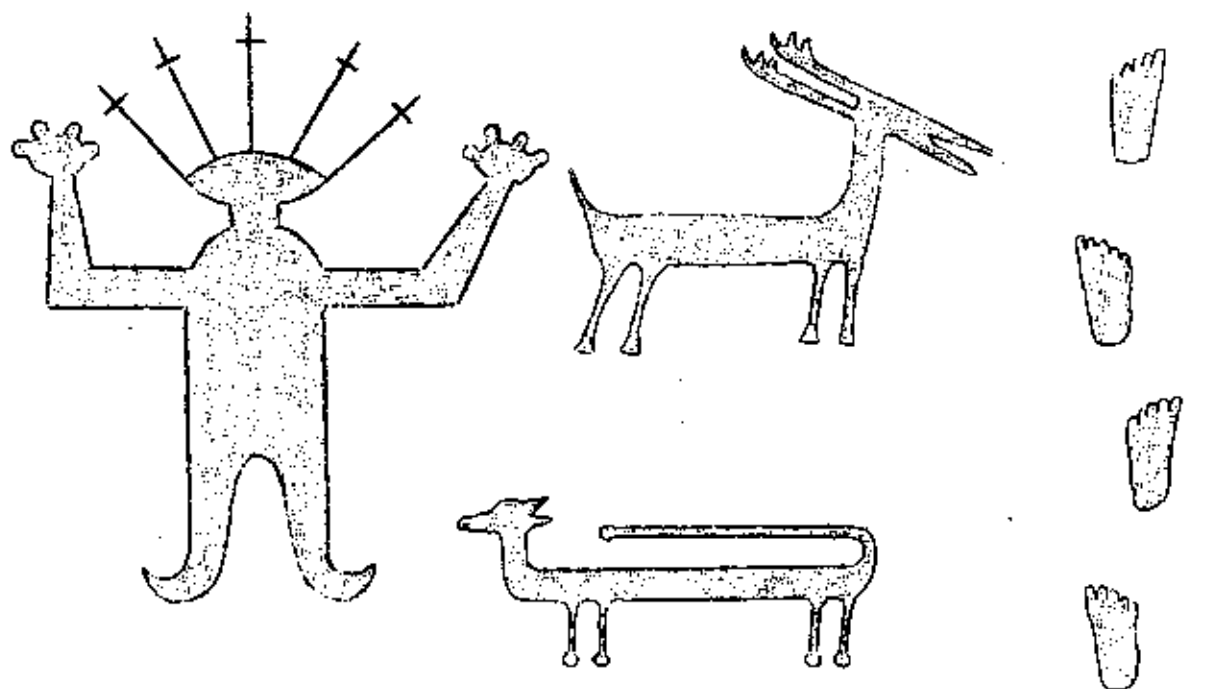
Sincerely,  
Walter."

And now we bring this part of the report to a close. I trust you will see in the cross sectional views of the Southwestern Monuments which you get in these reports from the men who are in charge, that we have had a pretty busy month and have done the best we could under the circumstances. The weather has been in our favor again and we have been able to run jobs where we could not have run them at the same time of the year in the past twenty or more years. I think the travel figures show that we are on the way back to normal numbers of visitors and in this regard our figures may be taken as an index of the visitor's curve at the parks for the coming summer.

While we have had a lot of troubles during the month, it has also given us a good deal of pleasure and we are still able to look forward to March as the ideal month we have been waiting for when nothing but good things happen.

Frank Pinkley,  
Superintendent.

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
Office of National Parks, Buildings, and Reservations



PETRIFIED FOREST NATIONAL MONUMENT  
Holbrook, Arizona

March 1, 1934

The Director,  
Office of National Parks,  
Buildings, and Reservations,  
Washington, D. C.

Dear Mr. Director:

Another month has passed and the report of activities in the Petrified Forest National Monument for February, 1934, is respectfully submitted.

GENERAL:

Work has been continued on the various CWA jobs in this monument under Federal Project F-68, U. S. No. 7, as fast as possible, considering the restrictions imposed upon us in the matter of hours for the workers and the funds available for materials and supplies. The majority of our men are allowed to work only fifteen hours weekly. Some (from Winslow) are allowed to work twenty-four hours and some (in camp) are working thirty hours weekly. This means

that we must do a great deal of shifting around of crews and has made it almost impossible to have proper straw-boss supervision as it has been extremely difficult to correlate the skilled and semi-skilled labor with the hours for unskilled labor. Work has been concentrated as much as possible on the two most important jobs at this time, the First Forest-Eagles Nest Rock road and the cattle proof drift fence around forty square miles of the monument. Work has also proceeded on the Campground Development, the Blue Forest Trail, and the trail to Pictographs one mile from headquarters.

Under the archaeological reconnaissance the monument has been thoroughly covered by Dr. Mera and Mr. Cosgrove and all ruins found have been spotted on the topographical map. Pot sherds have been taken from all sites and sent to the Laboratory of Anthropology at Santa Fe, New Mexico, where Dr. Mera will work on them for several months to come, classifying them and correlating them as to sites and occupational horizons. When his report is published much new and valuable data will be disclosed. The Agate House restoration has been completed and this makes a very effective exhibit. One room was restored completely as to walls and roof with an entrance in the roof and a notched pole or ladder in place showing the way in which these people entered and left their dwelling. An opening was left in the side of this room, through which people may look and see the original floor of this building, with the fire pit, metate, and several other artifacts in place. Of the other rooms the largest one was left with the walls about three feet high and the other rooms were outlined with the walls left a little lower, so that all in all it makes a very balanced picture. Dr. Mera places the age of the occupation of this building at about 1000 A. D. Among the sites discovered and spotted throughout the monument, the occupational horizons range from the pit house B. M. 3-Pueblo 1, at about 500 A. D., on up through the Pueblo 1, 2, and 3, Pueblo 3 being dated a few hundred years previous to the Spanish occupation. Many of these pit house sites show a brown ware Hohokam type of pottery which, so far as Dr. Mera knows, and he is an authority on the subject, has not been discovered, or at least mentioned by other archaeologists. At the present time one of the rooms in the Rio Puerco Indian Ruins is being excavated and the walls will be left standing about two or three feet high so that people can have some knowledge of the masonry used in this site. Several shallow trenches will also be dug in order to secure knowledge of the different occupations of this site.

#### WEATHER:

The weather conditions in this monument continued ideal up to the middle of the month, when the high winds began to blow and on the 23d and 24th we had about two inches of precipitation in the form of rain and wet snow, which had practically all disappeared by the end of the month. A table of the weather statistics follows:

High temperature for the month was 69 degrees on the 3d, low was 18 degrees above zero on the 11th. Mean maximum was 55 degrees, mean minimum 23 degrees. Precipitation for the month totaled 1.22 inches. There were 18 clear days, 6 partly cloudy, and 4 cloudy days.

#### ADMINISTRATIVE:

Our office work has been kept fairly well up to date on all matters, including CWA. We are having a great many complaints from vendors from whom we have purchased materials from the beginning of the CWA project, and it is hard to explain to them why they have not received checks for materials which have been vouchered in the proper manner weeks, and in some cases months, ago. We have also been in a state of uncertainty on account of not receiving any set-up for materials, supplies or truck hire for the period commencing February 9. Of course in order to keep the project going at all, trucks must be hired and a certain amount of supplies purchased. We do not like to make commitments without proper authority.

The monument has been inspected from time to time by the Superintendent and things have been going along in fairly good shape. Assistant Engineer C. M. Bell has been in charge of all actual work going on, with the exception of the archaeological reconnaissance, and Mr. H. J. Cremer has been in charge of landscape work around headquarters.

Assistant Architect Harry Langley was in the monument from February 13th to 17th, and when he left he took Mr. Cremer with him to Grand Canyon, Mr. Cremer returning on the 23d.

#### PUBLIC WORKS PROJECTS:

The only Public Works under way by force account is No. F. P. 129.14, Water and Sewer Development. Work has been continued on the test well at headquarters as fast as possible since the first of February, allowing for several shut-downs for various reasons. In last month's report I stated that an attempt had been made to shoot off the shoe at the bottom of 675 feet of casing. In doing this the dynamite was lowered with 1" pipe and the result was that three sections of this 1" pipe was lost in the hole. I got in touch with Mr. Ernest Boardman, from whom the well rig is rented, and his superintendent was discharged and one of the well drillers

left for another job. Since that time Mr. Boardman has been in personal charge and everything has gone along as well as could be expected, considering the difficulties encountered.

First a fishing tool was rigged and the 1" pipe fished out without a hitch. Then I secured a jar-up trip spear from Los Angeles and the two 75-ton jacks were again borrowed from the Indian Service. Things again were handled in a first-class manner and after steady jarring and pulling with the jacks for four days, the "frozen" casing was pulled intact, with the exception of the shoe.

The last week has been spent in drilling out the shoe. A "mud hog" has been secured and the hole will be drilled to a solid base and one more trial made to shut off the salt water. According to the plans now, and proceeding on the best advice available, we are confident the shut-off will be made. Then we will drill confidently, expecting to secure a supply of potable water in the Coconino sandstone.

#### LABOR SITUATION:

The labor situation in this locality remains about the same, but there are still a great number of unemployed and it is expected that with the dropping of the CWA workers from the monument and from the two counties adjoining, many of these will go back on the relief rolls immediately.

#### BUREAU OF PUBLIC ROADS:

Construction work on the overpass at the Santa Fe Railroad north of the Rio Puerco has not been resumed, as it is not advisable to start the concrete slab for the roadway until all danger of freezing weather is over. Of the seven bridges over dips which are under construction through the monument, the four on the north and south road through the monument are completed with the exception of hand rails, and the approaches have been graded up to them by Everly and Allison, who have the contract for this grading. This firm has practically completed the grading and drainage of the mile of road north of the Santa Fe Railroad and are fast filling in the grade on the north approach to the overpass at this railroad. They have moved one grading camp and are now ready to start in on the grading of the four miles of U. S. 260, which is within the monument. Under Everly and Allison's contract for placing nine inches of crushed gravel on approximately twenty-five miles of road to the monument, they now have a road graded into the gravel pit in the Blue Forest and are busy getting their equipment ready for this work.

Leo Frost was awarded the contract for grading approximately

five miles of the monument road to connect with U. S. Highway No. 66, and work is well under way.

MAPS AND SURVEYS:

From time to time we see members of the party who are making a topographical survey of the monument and I understand work is progressing favorably on that project.

RANGER AND MUSEUM SERVICE:

With four men on the ranger force here, as much protection as possible is given to the natural features of the monument and excellent service is being given to the public, considering this small force.

ANIMALS:

Bands of antelope from a dozen up to twenty or more continue to be seen in the monument and on the east, south, and west sides. There are probably forty or fifty of these animals ranging just outside the monument and at times within the monument.

TRAVEL:

Our travel is still continuing in excess of last year, partly due to the business recovery throughout the country and partly to the fine weather which has been experienced throughout the winter. The travel increase this month over the corresponding month of last year is 2,457, or 46.6%.

For the month, Petrified Forest section, cars,	1,323,	people	3,929
Previously reported . . . . .,	" 7,738,	"	20,257
Total to date . . . . .,	" 9,061,	"	24,186
-----			
For the month, Painted Desert section .,	" 939,	"	3,827
Previously reported . . . . .,	" 8,707,	"	32,449
Total to date . . . . .,	" 9,646,	"	36,276
-----			
Grand total for the month , . . . . .,	" 2,262,	"	7,756
Grand total to date . . . . .,	" 18,707,	"	60,462
Grand total same month last year . . . .,	" 1,578,	"	5,299

All the states except Delaware, New Hampshire, Virginia, and Vermont are represented in the travel for the month. People from England, Canada, Bahama Islands, Switzerland, Mexico, and France, registered at the Museum during February.

### SPECIAL VISITORS:

Mr. R. C. Pelton, State CWA Engineer and Mr. Thos. B. Rice, Engineer of Division No. 2 visited the Forest on February 5th. Mr. Ira J. Stinson, Resident Engineer formerly of Carlsbad Caverns, and Mrs. Stinson, were here February 11th, enroute to Glacier National Park. Supt. Pinkley arrived on the evening of the 12th, and departed on the 14th in the new Ford car for Engineer Attwell. Engineer J. B. Hamilton and Mrs. Hamilton, of San Francisco, were here on February 14th. Mr. F. D. Glidder, archaeologist, visited the monument February 18th, and Engineer H. R. Little of El Morro National Monument visited us the same date. Mr. and Mrs. Chuck Richey were here February 20th and again on the 24th.

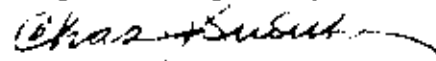
### ACCIDENTS:

No accidents under the CWA or Public Works have been reported in the monument, except that one man in the employ of Leo Frost, who has been awarded the contract for grading approximately five miles north of the Rio Puerco, was killed while unloading corrugated metal culvert piping at Adamana. It seems that there was a carload of this corrugated metal pipe and when the binders on top of the load were released the pipes spread and rolled down off the car, knocking this young man down and crushing his head. His name was Stevens and he was from Vernon, Arizona. He was killed on his first day at work.

### MISCELLANEOUS:

You will note a continuance of the pictograph series, and these illustrated were taken from the Pictograph Area a mile from headquarters.

Very truly yours,



Chas. J. Smith,  
Superintendent.

P. S. The following photographs are enclosed as part of this report:  
Agate House before any excavation; Agate House - Getting ready to start; Agate House - Removing blocks of petrified wood; Starting excavation - Dr. H. P. Mera in foreground; Adobe floor of room #3 showing original wall; Slab-lined firepit against south wall of room #2; Double wall of room #3; Adobe floor level of room #7 showing bin, metate, fire pit and stone slabs; Restoring walls east wing of Agate House; Floor of room #7 showing firepit, seat, metate, etc; Southwest corner of room #7 showing small storeroom adjoining; Workmen rebuilding walls; Agate House, room #2 on right, room #7 on left.

SUPPLEMENT TO THE  
FEBRUARY MONTHLY REPORT  
OF  
THE SOUTHWESTERN MONUMENTS  
\*\*\*\*\*

Shop talk, folks, and things in general.  
-----

THE END OF A TUNNEL.

A letter out of the Washington Office early in the month has the following to say about the now famous Montezuma Castle Tunnel:

"At a staff meeting held on February 1, Mr. Pinkley's suggestion of a tunnel approach to Montezuma Castle was discussed. Mr. Albright was present as were several who have visited the monument. It was unanimously agreed that such an artificial entry to this cliff dwelling would take away the feeling of difficult approach and would be about as inviting as the tunnels through the Hetch Hetchy Dam. All concurred in the idea that except for an approach tunnel that might eliminate the first lap, thus bringing approach over an old Indian trail, it would be unfortunate to dispense with the present means of approach.

"Mr. Vint and Mr. Rose have suggested that suitable small models could be used to illustrate the plan of the dwelling making it unnecessary for the visitor to go into every room. If this were done at the foot of the cliff the visitor could be given a clearer picture of the entire structure than could be obtained by going through the whole building. This might reduce the amount of travel actually through the Castle and yet the visitor could go away with a full understanding of its construction and arrangement. It was quite evident during the discussion that there was no one willing to support the idea of a tunnel approach such as was indicated in the preliminary plan submitted."

And so the tunnel idea is out: we can build a little tunnel up to the first ledge, if we feel tunnel-minded, but one a little longer, reaching up to the Castle is taboo. The psychology that has shown up in these tunnel arguments has afforded us a lot of fun. Please note that the idea is condemned, "because such an artificial entry to this cliff dwelling would take away the feeling of difficult approach." No one has talked in favor of the tunnel from the artistic standpoint or the aesthetic standpoint. The argument we intended to raise and have settled is: Shall we continue to put visitors through the Castle and wear it out in the next fifty years or shall we let them look into it from outside and preserve it indefinitely? The decision is that, because of the aesthetic values, we will use models and keep some of the people out and thus lengthen the life of the ruin to a hundred years. Thus we will destroy the ruin at the end of a century, but in the meantime we will have saved this lovely feeling of difficult approach, which will no doubt be a great satisfaction to the people who would like to visit the ruin in the succeeding century!

Homer Farr is looking for the man who stole a thousand feet off his volcano; thus far he has been unable to find him.

Homer has always maintained that his cinder pike is something over nine thousand feet high. Walt had a surveying crew doing some work at Capulin and Homer asked them to run a line of levels to the top of the Mountain for him. Walt tried to persuade him to let the Mountain alone and go ahead calling it nine thousand feet, but Homer had great hopes of finding it higher than that and said he was willing to take a chance, so the boys ran the levels and found the following altitudes:

Town of Capulin-----	6,868
Entrance Road-----	7,423
Parking Area-----	7,922
Summit-----	8,215

If you, therefore, see a thousand feet of Volcano wandering around in your neighborhood, wire Homer and he will come after it.

Tom Charles, at least, is exonerated; he may have some Folsom Points down there, but his sands are white so he must have got them from some other place than the black cone of Capulin.

By the way, Tom Charles said, along about the middle of the month, in a letter on general subjects: "Tell Walt that I needed him here last Sunday. I wanted him to sit beside me and tell me whether or not there was a hill just in front of me over the next rise in the sand. Not having him, I jumped off of one about 18 feet high. The water bottle on the back sent hit me in the back of the neck; the apples back there hit the windshield, and so did Mrs. Charles. I am now the Champion High Diver of the Great White Sands. It is another experience, anyway, and no one had to go to the hospital, not even the Chevie."

Here is an extract from a report from Laurance Cone which came in from White Sands too late to use last month. It is put in here at least partly for the benefit of Dyke Williams, who is the United Press man over in Phoenix and who wrote during the month: "The January report was interesting apart from their news content, too, I found. So, thanks to you and Mr. Miller, I shall look forward to a February copy. And here's hoping you unearth some dragon's wings or pterodactyls. I hope we learn some more, too, about that altar described by Russell Hastings, particularly if there should come out a theory that it was used for sacrifices of humans -- you know how bloodthirsty the press is!"

Well, here's Cone speaking and he has an altar that comes nearer what Dyke is looking for: "I have been able to go to several places that you will be glad to know are in and about the White Sands. It was nearly a week ago that I was able to visit the pictographs of Three Rivers. They were the most interesting thing that I have seen so far in this marvelous country. There are stones topping the mounds that are covered with carvings of wild animals and conventional designs -- the Swastika and the endless design. On the top of one of the far hills there are stones set up to form the background for what looks to me to be an altar as there are definite steps going up to the grassy platform before these high rocks. To one side and a little bit above, there is

a six or eight foot horizontal rock that has evidently been used for a sacrificial stone and again behind this are tall stones covered entirely with conventional designs and these too are stones that rise above the altar background and shoot some ten feet into the air. I don't know what this means but there is some fine material for stories behind it. Another thing that makes me think that these are altars is that they face the setting sun.

"Yesterday I drove out to the site of an old Indian village about ten miles from the northwest end of the Sands and found some extremely interesting material. There were three burials, or the remains of them. One had been washed away all except a skull which was resting on a large piece of dirt which had broken away from the bank. We looked very carefully about in the soil near it for the rest of the bones, but there was nothing on the surface and I thought that should anyone care to go back to the same site they could do the digging in the approved manner. Near this skull there were two other bodies which had been buried near the surface and the water had washed the soil from about them and they lay exposed to the sun. The skull that we located was complete though the top was crumbling due to the time it had been exposed to the air and the sun. There was another and smaller skeleton about one hundred and fifty feet from the skull, which was resting on its side and had been destroyed except for the back bone, the shoulder, and the buried side of the skull. There was also evidence of the arm and leg but the action of the water and weather had almost done away with them. This one we did nothing with. All about this burial ground there were many bits of pottery and well worked stones but an almost complete lack of flint and of arrow points. Some of the bits of pottery were new to me and so I cannot say much about them at this time."

-----

There you are, Dyke: we strive to please and you are welcome to the use of the altar to back up any story you want to put on the wires; but don't quote us as believing in human sacrifices for you will ruin our standing with the Southwestern bone diggers if you do and we have to keep on their good side for, sooner or later, we deal with all of them in our work.

-----

Here is a mighty interesting little extract from one of Dr. Bryant's letters in which he was discussing what we were saying in the Report for December, on page J, about handling visitors through our museums:

"A year ago we attempted to place one of our men in a fellowship at Yale in order to train him up to undertake the very experiments you have indicated on page J. Some idea of the interesting information that comes from such studies can be obtained from a pamphlet on this subject published by the American Museums Association. This work details the results of many experiments in different museums where checks were made of the interest of the public in labels and in different types of exhibits. It is interesting to note that any label that contains a scientific name is read less than one which omits it. We realize fully that we need to have similar work done in our museums and if there is any one in our staff interested in this work we will do anything we can to promote it."

And, while we are talking about the flow of visitors through museums, we have turned up a fairly hard problem at Casa Grande. Through recent additions we have greatly expanded the red-on-buff phase of our museum and have found ourselves in the peculiar position of having so much material to talk about that we cannot give a satisfactory talk on it. We are therefore going to have to tear up our former arrangement in the display cases and start again. I might point out here that I was not talking at random when I was warning John Will Faris against building his proposed artistic interior museum with niches, recesses, and special arrangements to fit his collection as it now stands. These growing pains of the Casa Grande were in my mind and a room with specialized arrangements to fit our collection two months ago would be a total loss to us now.

Heretofore, at Casa Grande, we tried to show the visitor on his guided trip through the museum the red-on-buff phase of pottery first, then the Casa Grande polychrome, then the Gila polychrome, then the trade ware, and then the stone implements. These were all in the same room. We now find, with our increased red-on-buff collection that we must throw much more emphasis on this period and can break this pottery down into its three sub-periods, the Colonial, Sedentary, and Classic, having enough specimens now on our shelves to give the visitor a pretty good idea of each period. Since this will take extra time, and since our total time in the museum is pretty close to the limit that the average visitor can allow us, we will try spreading the stone artifacts through the cases showing the various periods of pottery and use the time we have heretofore spend over the stone artifacts in the discussion of this additional pottery information, simply mentioning the stone axes etc. incidentally. By this saving and by making a little time off the modern Indian exhibits, we will use a little more time and try to impart a lot more information. This method is all experimental and will probably have to be changed a couple of times before we reach the proper solution.

-----  
Here are some extracts from J. B. Hamilton's monthly report which reached us too late to make the body of this report where it belongs:

"I have continued this month, as before, to visit Aztec, Canyon de Chelly, Chaco Canyon and El Morro National Monuments to consult with the Custodians regarding the carrying out of the Civil Works and Public Works programs going on in these places. I was at my headquarters at Aztec five times, Chaco Canyon three times, Canyon de Chelly once, El Morro twice and Mesa Verde four times. These visits have required 2,135 miles of travel.

"Much has been accomplished under the Civil Works Program in spite of all the uncertainties as to the amount of money that might be expected from week to week -- from day to day it seemed at times. It makes one squirm with impatience to realize how much more could have been accomplished with the same amount of money if far seeing planning and organization could have been done.

"I believe accomplishment has been good in the monuments and park visited in contrast to many county and state jobs. I gathered this impression especially from a Colorado inspector of C.W.A. projects who visited Mesa Verde while I was there.

Aztec Ruins. "Work was limited to fifteen hours per week for all but the supervisory personnel at Aztec National Monument. The supervisors worked as long as there was anything to do; even the office force helped to pour concrete when a pour could not be finished by the regular crew, which had to lay off at noon, Wednesday of each week.

"Work was concentrated on the parking area which was completed except for the surface treatment of the surrounding wall and the paving and walks. Under contract paid by Other than Labor funds some four inches of crushed gravel was placed all over the area except the walks

"The archaeological staff continued with their work of cataloging the museum material and mending broken pottery.

"The fencing material arrived and is being placed.

"Under Public Works some 250 feet of tile has been laid for the drain about the roofed Kiva. Work has started at the lower end and extends toward the ruin. Much water is being encountered and the trench requires expensive sheet piling.

Canyon de Chelly. The detail map about Thunderbird ranch has been completed and is being traced. Good progress has been made on the mapping of the Canyons on the four inch to the mile scale.

Chaco Canyon. "The fill below Pueblo del Arroyo has been protected by a ridge of rock laid along its top so that it is not likely to wash out for a few years at least. Money was not purchased to bind this rock so it is almost certain that it will gradually be undermined and lost; then the fill will go.

"The boundary signs have arrived and are being set.

"The area south of the arroyo from opposite Kin-Klet-So to the bridge and extending to the south cliff from the arroyo has been mapped in detail. So also has the area around Chetro Keti. These maps should be useful for future planning.

El Morro. Fine work has been done at El Morro National Monument. The trail is nearly completed; as is the erosion control work. The fence has arrived and is being placed on the accurately located boundary.

"The archaeologists are gathering a lot of data regarding ruins in the vicinity. A good accurate map of the monument is nearing completion.

J. B. Hamilton, Associate Engineer."

And here is a little supplementary report from Hosteen John Wetherill which comes in with the morning mail:

"Dear Frank:

"When I arrived at camp last Friday, I found that Hayden knew his parrot. He took a great deal of interest in the backbone of the parrot that he and his helpers took to be the head of a wild goose. We have been finding quite a few interesting specimens this last week. One that the whole party was very much interested in was a large jar of about six gallons capacity having the thumb print designs. It was the second large jar that we found embedded in the floor. They are still embedded just where they were found. One of the boys found

a bouquet holder; at least that is what it looks like. Sam Guernsey of the Peabody Museum, while working here in the ruins in 1915 found one, but he knows about as much about it as I do.

"We have found many bone and wooden tools, some cotton cloth and pieces of baskets. We have great piles of broken pottery, and several bushels of corn cobs, without the corn on them; both beans and corn seem to have been plentiful, scattered through the rubbish. Beans reminds me of the teacher who asked her pupils to give sentences with beans in them. One little boy said; 'My father raises beans;' a little girl said; 'My mother cooks beans,' and another little girl said; 'We are human beans.' If this is not too prehistoric you may tell it. I have been working in the ruins so long that I am apt to get modern and ancient history mixed.

"We have had two days storm and I put all the men in the ruin. They made a big showing. The old cliff dweller would have thought his house had been pre-empted by a hard looking outfit if he had seen them working in a cloud of dust.

"Two of my men went to other jobs some time ago. There is a chance for one of my men; otherwise the men cannot get jobs in the county unless there is work on some other project.

"In regard to economizing on office material, if you do not return so many of our vouchers and ask for so many reports, we would save a lot.

Yours truly,  
John Weatherill."

---

Homer has the following interesting notes in something he sent us about the middle of the month about Capulin Mountain.

"The past week has found us working on the two trails, one around the rim of the crater and the other to the bottom of the crater. It is quite a novelty building a trail into the crater of an extinct volcano. We find most of the lava around the rim or top of the crater very soft and all the rock in the bottom extremely hard and very heavy. We have had about 250 feet of large, hard, heavy boulders weighing many tons and all odd shapes to build a trail through. When the trail is finished it will be odd, weird and rather beautiful.

"One freak we have noticed is that when the wind is from the north the south rim is very windy and the north rim is rather quiet; the bottom of the crater being extremely windy when the wind is from either direction."

---

Laurence Cone, writing from White Sands at the end of the month says:

"I don't know whether it will prove of any special importance or not but today when we were out on the lake Lucero, which is on the southwest corner of the Monument we came across a good portion of a human skull. The face and the jaw were missing but the entire top of the head was complete and in good condition. This may not be of importance but surely is of interest for it happens to be the first skull that has been picked up on the Monument. I am going to wait until Mr. Atwell

comes and he may be able to tell me something about the age, and perhaps something of the probably history.

"The first parking area is getting under way now finally after the necessary wait for the authorization and we are anxiously looking forward to seeing the first building started on the White Sands. The two Hogans and the Kiosk will be started soon too and then the replanting of the area will start."

When the C.W.A. work first started and we found our regular \$100 exemption on open market purchases would not be allowed, but that we would have to go through the new process of accumulating thirteen pages of forms and blanks to cover minor purchases, we were rather thunder-struck. However we tightened our belts and started to work and the Custodians will bear us out when we say that whole flocks of vouchers were returned for proper completion. Meanwhile we kept fighting for our regular \$100 exemption and finally got it through. This was a big relief to us and allowed us to speed up the paper work. Just the other day we got the order for a \$300 exemption which we take to be an admission that the original thirteen page scheme had broken down as we suspected it would. If we could have had that ruling at the beginning of the program, how much faster the paper work would have moved!

As things now stand, and we are sure it will continue with the decreasing pressure, the field men can tell all persons who inquire as to when their checks will arrive that this office is in the clear but that the vouchers are banked up in the state offices awaiting audit before the checks can be sent out from Phoenix or Albuquerque.

Well, I guess this just about runs us out of raw material and it is time to close this report anyway or we will never catch up on the regular routine of office work which has to be pushed aside when the monthly report is on the pan.

With all the grief and things to wof over, we have had a lot of fun and it could have been a whole lot worse!

Cordially,

*The Boss*