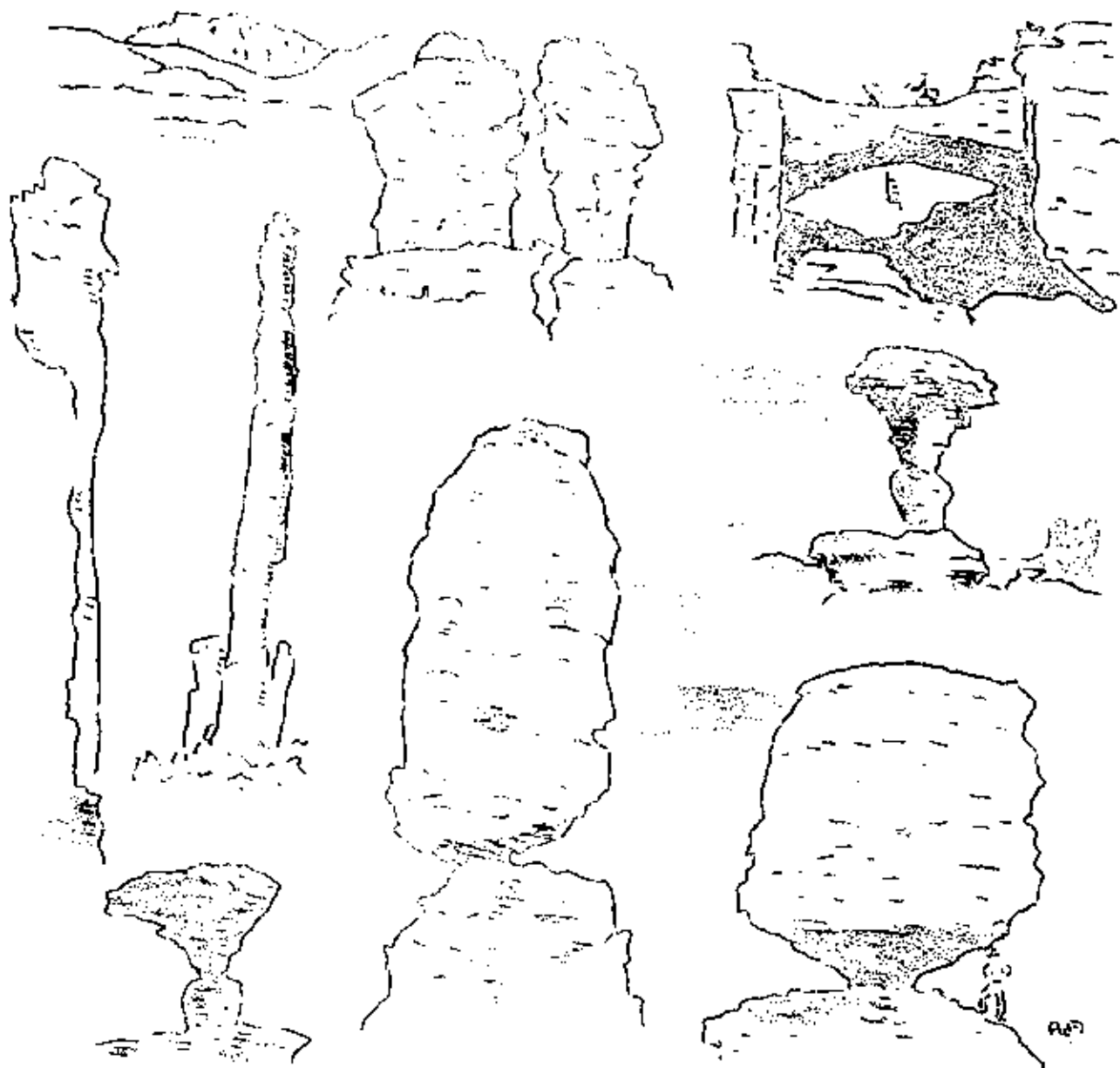
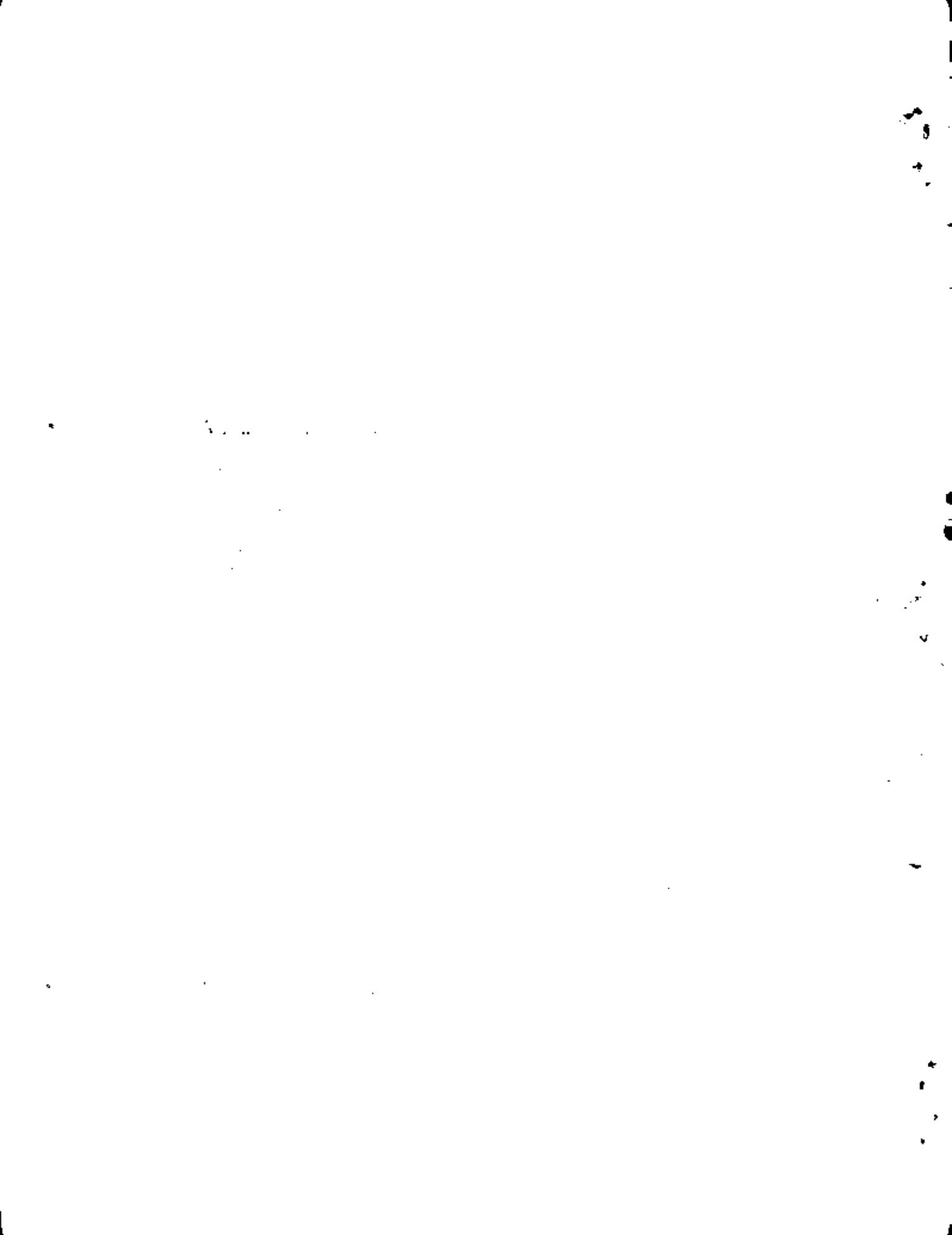


The
Southwestern Monuments
Monthly Report
MARCH 1934



— SCENES FROM ONE OF OUR NEW MONUMENTS —
CHIRICAHUA — NATIONAL — MONUMENT



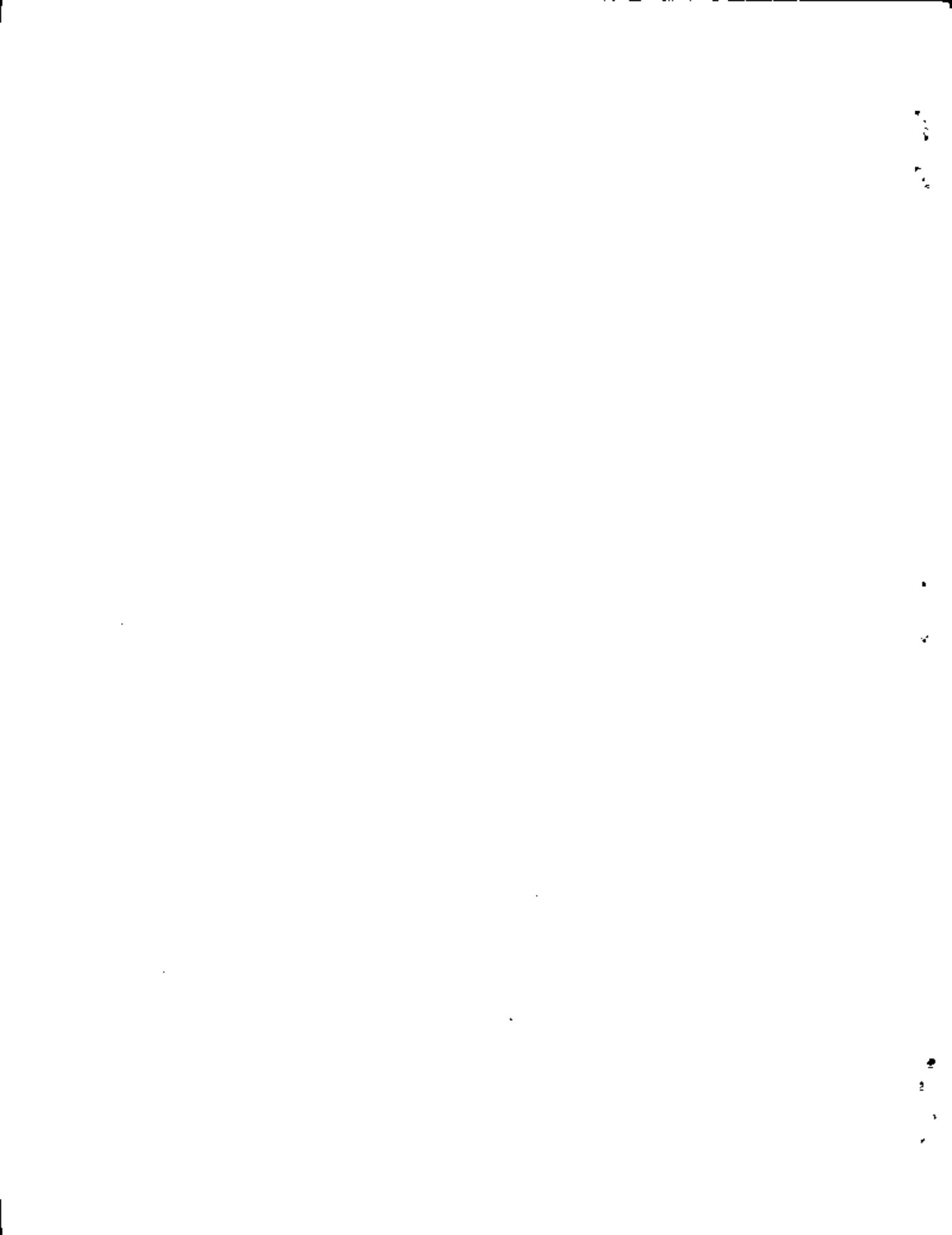
I N D E X.

SOUTHWESTERN MONUMENTS
MONTHLY REPORT
MARCH, 1934.

Introduction-----1		
Arches-----	2-6	Montezuma Castle-----7-13
Aztec-----	37-39	Montezuma Ponds----- 42
Bandelier-----	23-25	Natural Bridges----- 28
Canyon de Chelly-----	26-30	Navajo----- 2 -6
Capulin Mountain-----	13-14	Pipe Spring----- 26
Casa Grande-----	21-22	Petrified Forest----- 43-49
Chaco Canyon-----	31-33	Tuzigoot----- 26
El Morro-----	33-37	White Sands----- 19-20
Gran Quivira-----	27	Wupatki----- 16-19
Engineer's Report-----		43-49
Close-----		41.

THE SUPPLEMENT.

Archaeological Excavations at Casa Grande-----	A-E
Building up the Mesa Verde Museum, with some remarks-----	F-O
Costs per visitor-----	P
Hoe In The World Do You Government Men Spend Your Time?-----	Q-R
C.M.A. Mules, etc.-----	S
Office Order 263-----	T-U



UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
SOUTHWESTERN MONUMENTS

Coolidge Arizona, April 1, 1934.

The Director,
National Park Service,
Department of the Interior,
Washington, D. C.

Dear Mr. Director:

Another month has rolled around and we sit ourselves down to report on the work which we have been carrying on:

First, we congratulate ourselves and thank you very much indeed for the welcome change back to our old name of the National Park Service. I couldn't, in a hundred years have gone sentimental over the Office of National Parks, Buildings and Reservations; it just never did or could or would 'come trippingly on the tongue' as the late Mr. Hamlet phrases it. It is good to get back to the old name and feel like we belong to the 'Service' again.

Business has been good pretty well all over the district during the month of March, and the outlook is for a good run of traffic for the spring and summer months.

The weather remained abnormally good, from the standpoint of our work, over the district, but the ranges are getting too dry to suit the cattle men, and, unless we have a lot of precipitation between now and summer the two big irrigation projects in the southern part of the State will be pretty short of water before the summer is over. Our jobs have not averaged half a dozen days loss due to weather for the whole winter. We have been able to plow and handle ground which would have ordinarily been frozen four feet deep all winter. We have worked dirt all the way from five up to eight thousand feet.

Our big job during March was to taper the work down at the rate of eleven per cent per week with the exception of the archaeological jobs and get things closed up. It is confusing to work two and a half short days per week and with a tapering gang of men and I think some of our Custodians have mis-guessed the amount of work that could be done under such circumstances and are coming out with incomplete projects. They have a reasonable excuse, also, in the fact that the first two weeks of the program we had our full force of men and no money to run them.

The monthly reports from the various monuments follow:

I want to start the report out this month with a bit of history which should certainly be a matter of permanent record. It deals with the early days of Keet Zeel and it is John Wetherill himself talking.

"The first knowledge we have of Keet Zeel was given by Richard Wetherill, Alfred Wetherill and C.C. Mason while they were on an expedition for the American Museum of New York.

"They were in here in December, 1894. They had left Bluff City, Utah, with a party of five men, worked up the Chinlee Creek to what is now Kayenta Creek, and up the Laguna Canyon, now called Tsagie, and up Keet Zeel Canyon to Keet Zeel ruins. On the way they visited many ruins, including what is called Poncho House and Swallows Nest. They just made a hurried reconnaissance trip. At that time they did no excavation, or work, as other men had been left at Ruin Point, near Kayenta Spring to work out the mounds. From here they visited Piute Canyon and Navajo Canyon with all its different branches.

"In the fall of 1896, Richard Wetherill, heading the Whitman and Bowen Expedition, left Kinross, Colorado. Whitman was a young man of 19 years, and Bowen was his tutor. Whitman's mother put up the money for the expedition. The party came through Bluff City, Utah, to Grand Gulch, where the first Basket Makers were found in 1892. They then followed up the Chinlee to the mouth of the Kayenta, visiting and working in many ruins, excavating, photographing and mapping in the larger ones. From the mouth of the Kayenta, they worked the mounds to the Marsh Pass at the mouth of the Tsagie. They worked the Tsagie and most of its branches to the head of the Canyon. In this expedition they visited Keet Zeel, but did little work there as they had all the material they wanted.

"In 1908 Charlie Spencer visited the ruins with a party of prospectors and mining men. A few days afterward I took Edgar L. Howett in. He was one of Dean Cummings' party, who at the time were working in the Tsagie, and were out from the University of Utah. In 1909 W. L. Douglas, a surveyor from the General Land Office in Washington, looked over the ruins and decided they should be made a National Monument. Dean Cummings visited them in the fall of 1908. J. Walter Fewkes visited them after Douglas was here, and built a wagon road up the Canyon as far as the High Falls so that he could get his wife to Keet Zeel. He reached a point about two and a half miles below Keet Zeel. He came in again in the early part of 1910.

"In June of 1910, Dr. T. Mitchell Pruden, of Columbia College, New York, made his first trip to Keet Zeel. My brother Clayton and I were with him. We drove a light four horse outfit as far as the mouth of Dogusshie Canyon, about five and a half miles below Keet Zeel, and changed to horses and packs. From then on Keet Zeel was visited by a few parties each year until the present time. The wagon road Dr. Fewkes built lasted until about two weeks after Dr. Pruden was here.

"The erosion has been so great that it has been impossible to keep a road. The creek bed has so much quicksand that it is impossible to

follow it very far. We have had to change our trail after every big rain.

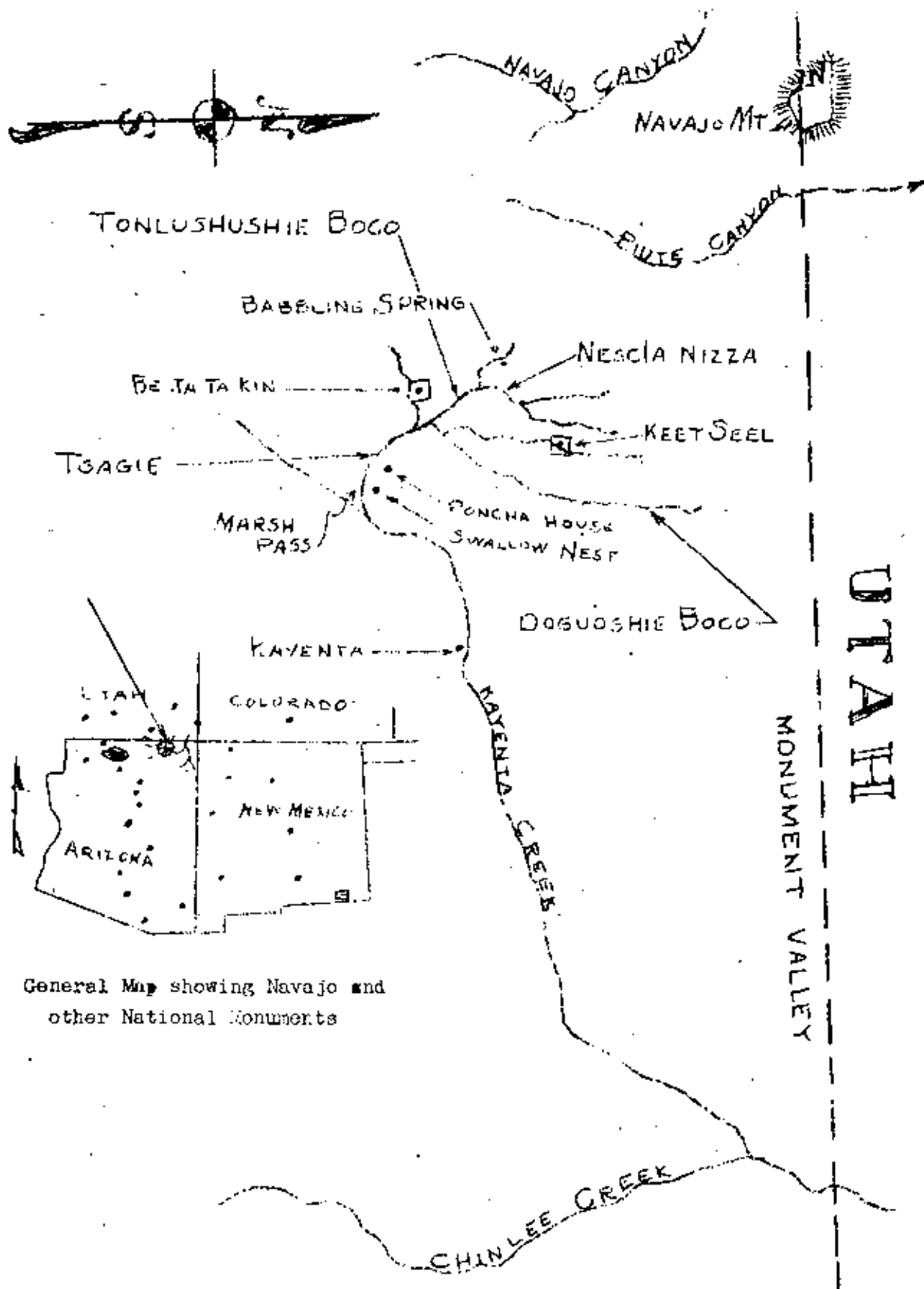
"Keet Zeeh is located near the head of Keet Zeeh Canyon. The Canyon runs southwest for six or seven miles; from there to the mouth of Tonlushushie Boco (Bubbling Springs Canyon), a distance of three miles, it bears to the south. From Tonlushushie to the Marsh Pass, it runs Southeast. From Marsh Pass it runs east to Chihkee Creek, a distance of forty-five miles, and is known as Kayenta Creek. The Indians call the Canyon and all its branches the Tsagie, called so on account of the high cliffs and rock covered talus slopes.

"For many years the Creek was called Laguna Creek, and the Canyon was known as Laguna Canyon. This information was told me by Dr. T. Mitchell Pruden. He also said that the name was first used by Kit Carson in the '60s while he was fighting the Navajos. At that time, where the creek now runs there were many lakes. Now in their place there is an arroyo from twenty to seventy-five feet deep. According to J. J. Wade, who was the head of a party of emigrants coming through from Gard City, Nevada, in April, 1880, the lakes were still here. The Navajos tell us that about 1884 the first lake went out of the Canyon. They say that an old man living at Tsa-a-way about twenty-five miles east of the mouth had told the people that the lakes were going to wash out. He had stock in the Canyon and came up to look after them. While he was up here a cloud burst came and washed the large lake near the Pass out. It did considerable damage to the crops below. The Indians held a council and tried the old man as a witch. The penalty was death. They tied ropes to his arms and legs, and four men and horses did the rest. The ropes and fragments were left when the penalty was executed.

"From then on many lakes were washed out, one after another, until in 1900 they were all gone, and a deep arroyo left in their place. The names of the different branches of the Tsagie are, Beta-ta-kin Canyon. To the west, Tonlushushie. The long fork of the Tonlushushie is known as Hoxela Nizza Canyon. About three quarters of a mile above Tonlushushie, Dogwashie Boco (Greewood Canyon) comes in from the east. In Farkes report he calls it East Canyon. Keet Zeeh is to the left, and is about nine miles long. All these Canyons have many cliff houses in them, some quite large and very interesting.

"We have had a 400% increase for the month of February. I think that you will not find a greater per cent of increase in any of the parks or monuments. In the 25 years that I have been Custodian we have never had a visitor before in the months of January or February; or March.

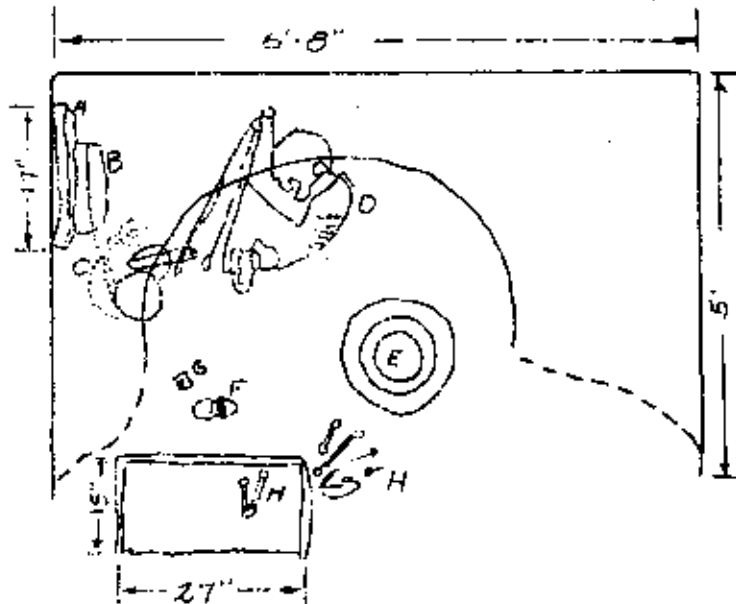
"The camp at Marsh Pass is on top of the Navajo Sandstone, in the Jurassic period. Within one and a half miles the Navajo rises to 1,200 ft. Within one mile of camp, following up the Tsagie, we pass through the Navajo, Kayenta and the Wingate Sandstones and enter the Chinle in Triassic period. In the next five miles we pass out of the Chinle after having passed through over 300 feet of it. In going up the Canyon about six and a half miles, we have passed through a Dome and again enter the Wingate Sandstone, three and a half miles further we are again in the Navajo, where Keet Zeeh is located. The Wingate and Navajo are both cross-bedded sandstones laid by the wind. Between them is the Kayenta Sandstone, laid by water. The Kayenta



General Map showing Navajo and other National Monuments



One of the Jars, Black on White,
from this burial, 5" diameter
5" height



- A Fine metate
- B Rocker Type Mano
- C Nest of Pots
- D Aged Person's Skeleton
- E Large plain gray pot 15" diam.
- F Stone Hammer
- G Pendant of Red Stone
- G Turkey Bones

formation has been known as the Todilto until the geologists got together about five years ago and changed the name to Kayenta. The cave in which Keet Zeeh is located was caused by the end of a large sand dune breaking out of the more solid formation around it. The cave is still breaking off following the lines of the sand dune."

"Since writing last month's report the work has been going on rapidly at Keet Zeeh. We will not be able to finish the job although we will have gone a long way toward completing it. We have almost finished the work in the ruin building. There will be many days work for ten men before we finish the work under the cliff. There will be a few days work taking the notes of the house and the replacing of walls before we leave.

"We have uncovered two rooms in the rubbish heap and found the remains of two of the former inhabitants and parts of three more that had been disturbed and the bones scattered. One of the skeletons was found last Saturday by Julian Hayden, under the floor of one of the rooms. (See figure above.) In putting in the room some of the bones had been broken and scattered. There was a large, unpainted jar near the skeleton also under the floor. On the floor, near the body there was a fire-pit and just above the body was a ~~fire-pit~~

metate and two manos. Everything was cleaned ready to photograph Monday morning. Monday Julian removed the material from under the room, and worked back under the wall a few inches from where the head of the skeleton laid and found five pots entire. The skeleton was twisted so that the knees were above the head.

We have had three lady visitors this month. One was a young German lady who tried the second time before she reached the camp. The first time she tried to ride Jimmy, the white mule. She reached a point about one and a half miles from Marsh Pass Camp when Jimmy decided that he had gone far enough and returned to the ~~camp~~ camp in the Pass. She tried again two days later and came on foot down the trail at Be-ta-ta-kin. She reached the Turkey Cave Camp at dark after one of the boys met her with a saddle animal.

The other two ladies were Miss Brown, County School Superintendent, and Mrs. Howard, an investigator of the C.W.I. They stayed over one day and two nights and did not want to leave when they did. They came in by way of Be-ta-ta-kin where we met them with horses. They made Turkey Creek Camp early in the evening. They were too tired to do anything but rest and sleep the first night. The day following they visited the ruins. They were very enthusiastic for all that they were so sore that they could hardly climb the sixty foot ladder to the ruin. The second evening was spent in the office tent telling experiences and having music and singing. Mr. Kartchner gave us all the old tunes he knew on his violin, Miss Brown whistled and Mrs. Howard sang. Everybody enjoyed the evening.

Last Monday our Archaeologist, Mr. Hayden, left camp about one o'clock for Kayenta. He refused to ride a horse and walked the 25 miles into Kayenta. He reached Kayenta about 9:30. He said if it had been a hundred yards further he would not have made it. The next morning he acted as if his legs wouldn't bend. His joints squeaked when he moved. Julian Hayden was put in as archaeologist in his father's place and the elder Hayden leaving did not slow up the work.

Mr. Attwell, of the Engineering Division, has been with us. He may have told you what he thought about our project. I told him all I could of the work here. He seemed satisfied with what has been done and made estimates on future work which went beyond what I had put in.

"An Indian came into camp a while back and told me that his three years old child had been standing by the fire when his shirt-tail caught on fire and burned him pretty badly. I went to see him and found the boy in bad shape. I sent him in to the hospital with my trail foreman, Preston Guston, and he is getting along all right now.

"The most of the boys are anxious to get home. Mr. Carmack has a car in the pass and he will take in all the boys who leave Friday. We will have but five of the unskilled left next week. Two of the men have had an increase in their families lately. Mr. Perkins first child arrived about three weeks ago, a boy of 9½ pounds. Mr. Bowens son of about 9 pounds came last week.

John Wetherill"

MONTEZUMA CASTLE NATIONAL MONUMENT.

Martin L. Jackson, Custodian.
Camp Verde, Arizona.

"Dear Pink:

"We find that we have had 1,036 for the month by actual count. We also find that we only have 342 names on the register. This makes fifteen months now that we found, by checking the names on the register against the number of actual visitors, that only one third of the visitors climb the ladders. You know that it has always been my contention that about one third the visitors climbed the ladders--but you would not let me get away with it. However I will not say any more on the subject because you have too many other things to remind me of that did not work out as I thought they would.

"The weather for the past month has been unusually nice for March with very little wind. All roads leading to the Monument have been open at all times and I believe this to be the first winter since I have been here that the roads to Flagstaff have not been blocked for some time at least. Stockmen are complaining about the shortage of water and grass. Some of the nearby towns are also beginning to feel a shortage of water.

"Our C.N.A. project is nearing an end and while quite a lot has been accomplished, we have not been able to finish all that we had hoped to do owing to the reduction in hours. Now the best that we can hope for is that we will be remembered by the P.N.A., the E.R.A., the C.N.A., or any other A., and allowed enough funds to finish our work.

"J. V. Lloyd, Assistant Superintendent of the Grand Canyon National Park; and Bert Harwell, Park Naturalist from Yosemite National Park, were visitors during the month. They are very fine folks and we want them to come again.

"Engineers Stewart and Lyke, part of Walt Attwell's crew, were with us during the first part of the month. They gave us some able assistance on the work being done here.

"Forest Ranger Lynn dropped in for a few minutes the past month and told me that Forest Superintendent, E. C. Miller and himself had both signed the necessary papers for the addition to the Monument. I feel sure that Walt Attwell will be pleased to hear this as he has been working to have this land included in the boundaries for some time. Thanks, Walt. I am almost convinced that you can do things other than move dirt or tear up something.

"The following is a note I received from one of the Apache boys who has been working here on the C.N.A.:

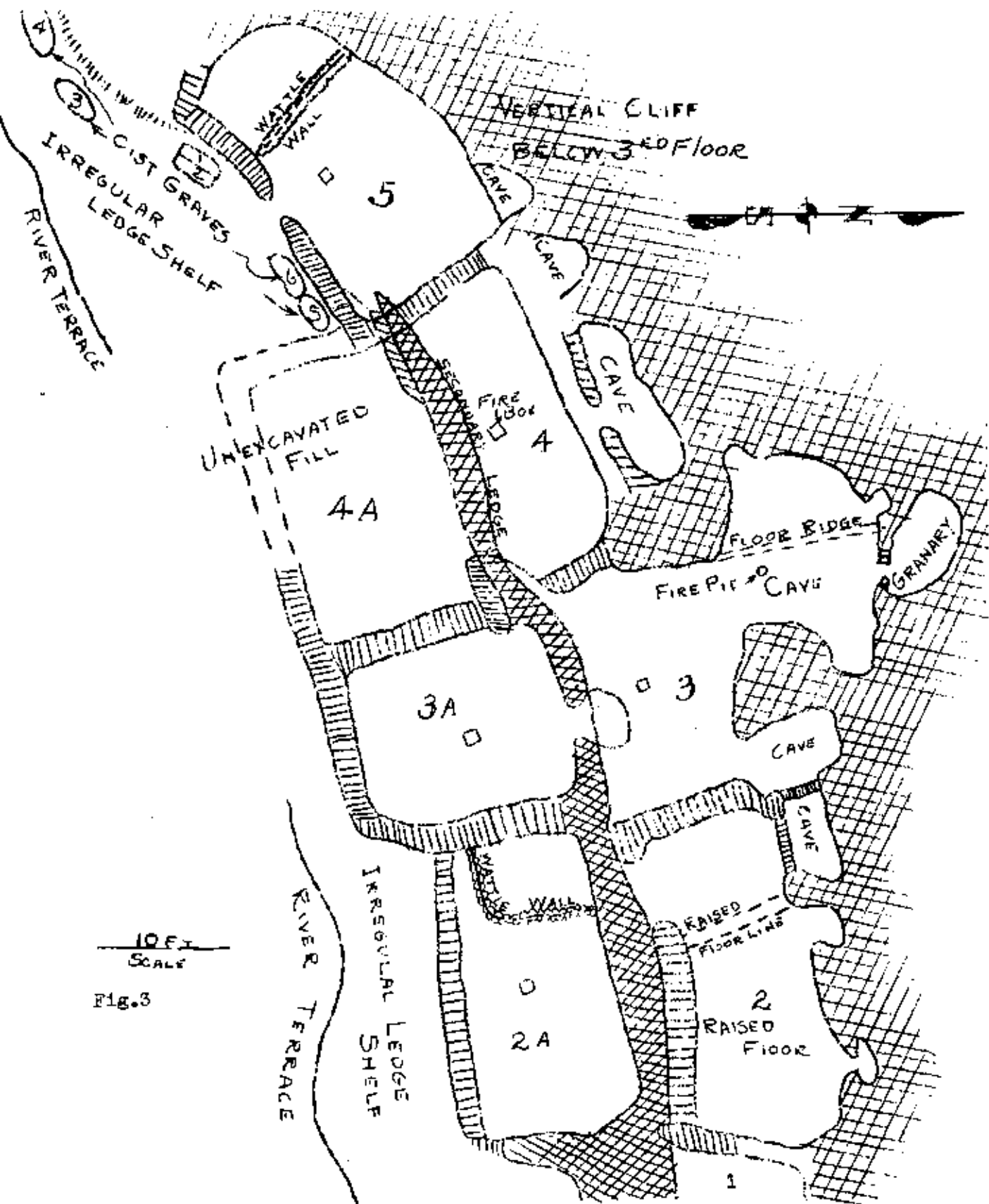
Please Jackson.

Give me an excuse for today I am wanted on the main ditch to work today. I have no one to send in my place to go up there. I am not getting out of the job I work Wednesday then that's is the ditch work is finished. Please sir I must work Wed. Thur. & Friday.

Otto Hecosque.

"Otto is one of our best workers and we managed to keep his job open for him.

Jackson."



10 FT
SCALE

Fig. 3

MONTEZUMA CASTLE, THIRD PRELIMINARY ARCHAEOLOGICAL REPORT. Earl Jackson.

"Excavation work here this past month has proved highly satisfactory from a qualitative, but rather slow from a quantitative point of view. Our small crew has made progress in fill removal from Section A (the large cliff ruin) to the extent that one additional large room has been cleaned out, another has most of the fallen material removed from the floor, a forty foot frontage of the ledge at the west end of the structure is exposed (See Plan on Page 8), on which has been located and practically excavated a small cemetery. The material for the restoration of Room 5, obtained after considerable difficulty and roaming about, is all on hand, and the wall has been built up and the stringers put in position. We believe we are going to have a restoration here to be proud of.

"The room 3a (Page 10) revealed several features of interest. It measures almost square, and is situated in the center front of the two lower tiers or base rooms. The charred ceiling fragments on the floors told us the room had either a balcony or a second story above, for on top of the burned timbers and six inch thickness of clay roof were sections of broken pottery and one full round groove stone pick. The floor of 3a is entirely cavate, with the exception of the south or front end, which is built on fill for two feet.

"The customary firebox was located, contrary to form in this ruin, slightly back of the center of the room. Four feet south of the firebox was a hole in the floor caused by a cracked ledge which contained the sherds of a large plain olla. In the northeast corner was another olla, measuring 16 inches in diameter, plain and hemispherical in form, broad mouthed and flare rimmed, with practically no neck. This piece was shattered, but complete and in position. Two metates were found, one in position, propped at an angle as it had been left after using. Along the central west wall was found a large section of charred and rotten basketry or matting of a twinned weave strikingly similar to that of the modern Papago granary baskets, made of a grass rod foundation and bound with yucca fiber, each binding strip piercing the adjacent bundle and holding some of the grass stems, making a weave as firmly held together considering the coarse texture, as an Apache basket. A storage well opening into the cliff face at the north end of the room revealed nothing but trash which had drifted in and one crude, 3/4 groove diorite or gabbro axe.

"The feature of 3a which caused the most puzzlement was the presence, about three feet from the east wall, in the northeast part of the room, of the skeleton of an elderly adult, believed male. The body was oriented north and south, with the head to the south, lying prone and extended, with the skull twisted sharply to the left. The left arm was missing, but because of the badly decayed condition of the bones may have so decomposed as to be unrecognizable. No burial artifacts were found. The bones were underneath a several inch thickness of scattered ceiling fragments, but directly under them, in contact with the floor, were a few fragments of the same charred material.

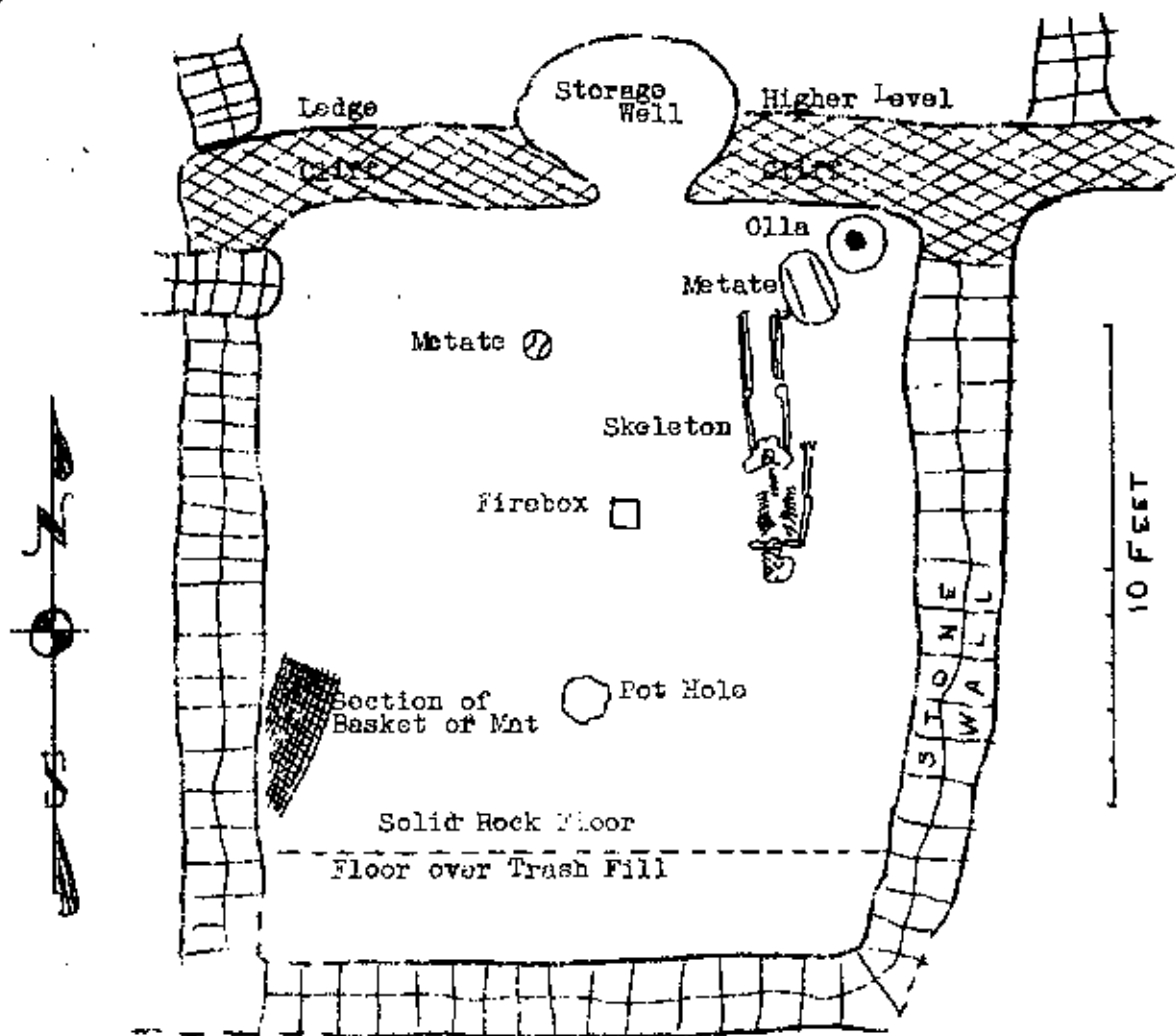


Fig.4. FLOOR PLAN ROOM 3A.

"Whether this body was buried on the floor after the ceiling fell, or was lying on the floor at the time of the fire, or was buried under the floor of the second story, we cannot determine. Each of these theories has something wrong with it, but at any rate we know the body was there!

"To the west of the room just described, on the shelving ledge running in front of and west of Room 5 (described in our first preliminary report), we have located six cyst graves, of which five have been excavated. Of the five only four had been used for inhumation, for the fifth was a shallow one and probably undesirable. From the four graves which were used, 15 burials have been removed! Of the 15, only four bodies were in normal position and complete as they had been originally placed.

"To describe a typical cyst grave as observed here: In a native

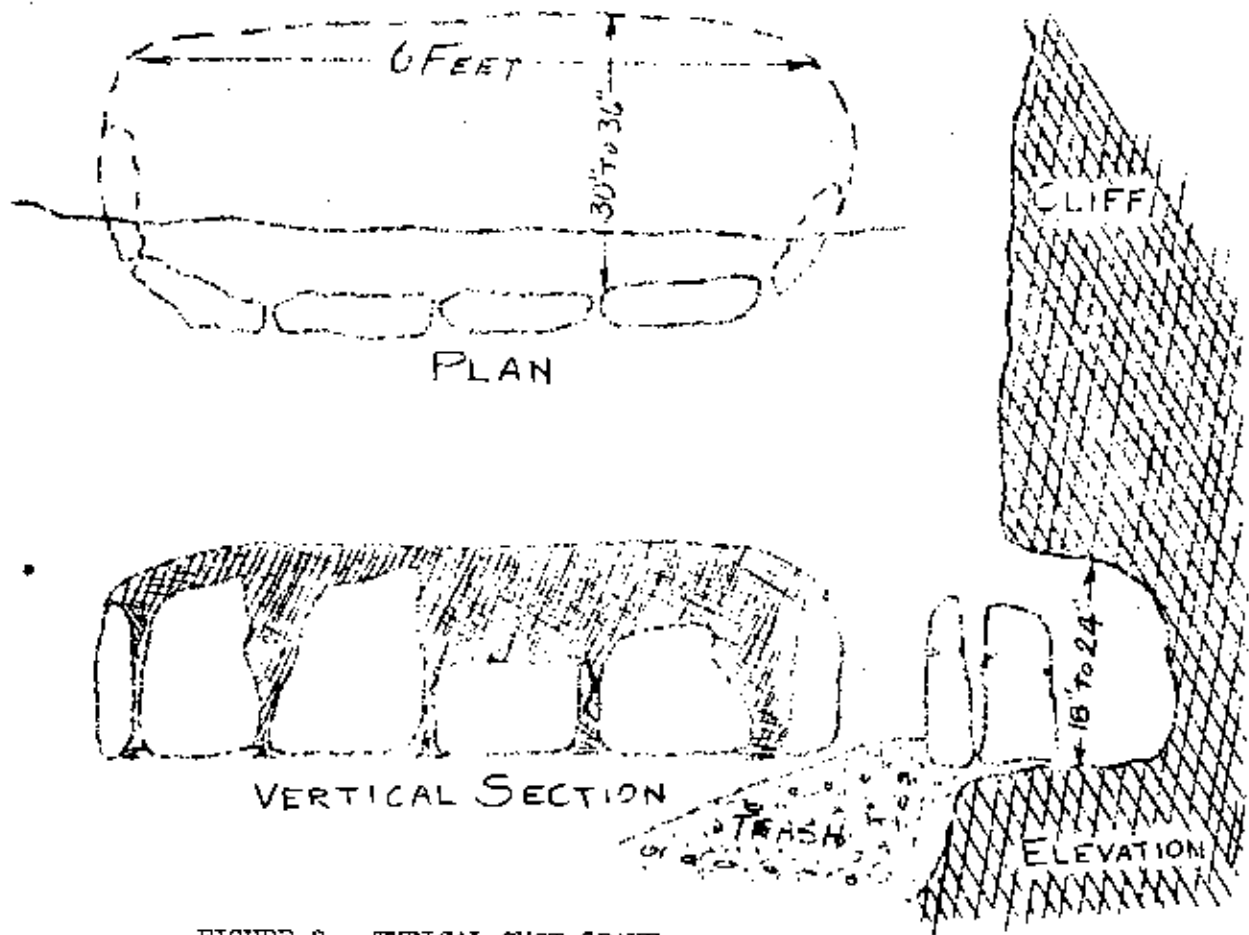


FIGURE 2 TYPICAL CYST GRAVE

clay stratum underneath a limestone ledge shelf was dug a chamber a foot and a half to two feet in height, by two and a half to three feet in breadth, by six feet in length. Such a chamber was enclosed by native material on three sides; on the south or open side was a row of large vertical limestone slabs (see Fig. 2, above) which to most practical purposes closed the vault. All are single graves save Nos. 1 & 2; here two graves were made in one by the simple addition of another row of slabs along the central length of the cyst, inside.

"Cyst graves 1 & 2 contained one undisturbed burial of an elderly female, in the midst of the scattered remains of four other burials. The body was extended with the head to the east. No artifacts save what is believed to be a batten stick, which laid along the right leg with the upper end in the right hand. Throughout the fill of the grave were found a great number of tiny shell and stone beads, disc shaped, some less than an eighth of an inch in diameter. Several turquoise pendants were also found. All of this jewelry belonged to those bodies which had been disturbed. All of the skulls from these graves were in poor condition, but one was found which was undeformed, being the only skull found

on this job which did not show occipital deformity.

"Cyst Grave 3: Not used.

"Cyst Grave 4: Contained the undisturbed skeletons of two old men, both buried at the same time, one directly on top of the other, both prone and extended, with heads to the west: three other disturbed skeletons were also in this cyst. No artifacts whatever were found.

"Cyst Grave 5: Contained the undisturbed body of an elderly female, prone, with head to the east, and the scattered bones of three adults and one child. This cyst is not yet completely cleaned. Beads, similar to those in Cysts 1 & 2, were scattered.

"Cyst Grave 6: Not excavated, but on top of the fill, and inside the outline of slabs which mark the grave, was found the only earthen vessel which was brought to light. It is a tiny olla, broad mouthed, flare rimmed, of flattened hemispherical shape, with a vertical loop handle. Decoration is in black on a white paste, on the upper half of the body. The piece is thin and excellently fired, and according to the pottery guide of the Northern Arizona Museum belongs to the classification known as Tusayan Black on White.

"In addition to the Cyst burials, in front of Cyst Graves 1 & 2 were found the fragmentary remains of two other skeletons, the bones badly mixed and the skulls gone. On the left fore arm of one of these were yet in position two large clamshell bracelets. These bodies were not in a grave, but were covered with hard packed soil to a depth of six inches, and this may represent the occupational level of the ledge. From all appearances these bones were simply thrown aside from some disturbed burial.

"None of the burials described could have been disturbed by modern man, because of the great depth of fill which we removed above them. The fact that so many of the bones were disturbed means simply, to us, that the occupants of this cliff dwelling were hampered by the lack of sufficient suitable ledge burial places near to their homes, and consequently dug into old graves to make new ones, scattering the bones as they did so, and that through a period of years these processes were repeated as many as four times, so that always the latest burial made is undisturbed, and all preceding it are scattered. The scarcity of burial artifacts, especially pottery is quite obvious. It would indicate either indifference to poverty, or less intense religious conviction of necessity of personal appointments in the hereafter. At the best, our choice of these theories can be only conjectural.

"One other grave should be described separately, as it was not found in this ruin, but over a hundred yards east, in the trash fill of the slope in front of Montezuma Castle. This was the skeleton of an aged female, found four feet beneath the surface, and six inches above the floor of a pit house. The body was oriented east and west, prone, with the legs crossed at the ankles. No artifacts whatever were found. The skull was in excellent condition, showing the typical artificial occipital deformation.

"No further excavation can be done on the Castle slope under this

project, but I can certainly urge the importance of intensive working of this section in the eventuality that future work might be done on this Monument. We firmly believe that here will be found the long sought cemetery of the builders of the Castle, and we know that there are structures at the lower stage of this slope which would be worth excavating. Our test work here, in trenches, has uncovered great quantities of pottery sherds, signs of other human burials, and sections of stone walls several feet beneath the surface, in addition to the one large pit-house previously mentioned.

"Guess I had better sign off this report, or you will think I am trying to write a book. Am wondering whether to try to make the final detailed report on this job in one huge volume or in two small, say 500 page folios. Anyway, the rest of the ghouls and myself are going to try to be super-men and finish the excavation of this ruin in the next two weeks.

Earl Jackson."

Which strikes me as being a pretty good report. Don't you think so, Chief? I wish the Public Works folks would come on through with the money for that museum at the Castle. We have a fine collection right now that would go a long way toward filling it.

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

"Dear Mr. Pinkley:

"I have the following report to make as to the activities of the Capulin Mountain National Monument for the month of March.

"The weather has been both bad and good all this month with about one foot of snow and six feet of wind. However we have been able to work right along all the C.W.A. law would allow us and for the most part the bad weather has been coming during the last part of the week and we have been working the first.

"I am glad to report that we have accomplished a great deal this month although we have been handicapped for the want of men. We have had good workers and done plenty of work. We have gravelled two thirds of all the road below the cabin out to our boundary line and have almost completed our cut-off which eliminates 300 feet of road and leaves our entire road within our boundary limits. We have completed over one half mile of roads from the main road to the various camp grounds, four in number, and have selected sites and cleared the rocks from the grounds and are now erecting out-door fireplaces so located as to reduce the fire hazard usually accompanying the ordinary fire upon open ground.

"Stone heads for the many culverts are now being laid with stone cut to fit and laid in concrete. All heads are laid in a manner having the proper slope at each end so that in the future some possibly careless grader operator will not be able to hang up on them with possible grief to himself and damage to the culvert head.

"The accidental finding of a broken netate as we were excavating for

the new cut-off led to the discovery by the Custodian of a very odd and beautiful cavern which was an ancient habitation for the red man in years gone by. This is proven by the many sherds or pieces of broken pottery and the arrow points and parts of buffalo skulls and deer bones present in the cavern.

"The broken metate was found about three feet under ground about one hundred yards from the cavern. This cavern is only about two hundred yards from the entrance to the Monument and we return thanks for it all being on the Monument. It has a ten foot ceiling and is about 40 feet long and 20 feet wide.

"We have had only about four hundred and fifty visitors this past month. We would have been able to report more but the old weather man has not behaved himself as good as he could. After all we are very lucky to have had a fair amount of moisture.

"All our men here are remaining very loyal and we have a wonderful bunch of good workers. I hear no grumbling from those I have had to lay off although I must add here that most of them are sorely in need of more aid. Working only fifteen hours a week does not enable them to more than buy the necessaries of life and when they are laid off they have nothing to go on in the future. I am hoping this community will be able in some manner to re-employ these men again soon under Public Works, for two crop failures and long winters are hard to pull through.

Homer J. Farr."

ARCHES NATIONAL MONUMENT.

Report of the Arches National Monument Scientific Expedition for the month ending March 29, 1934. By Mr. Frank Beckwith, Leader.

"During the month of March, Geologist J. C. Anderson finished his work at the Arches Sector of the Monument; he has given that much detail and is prepared to furnish a plane table map with each major object located; he has correlated the stratigraphy of the region with known and named stratigraphy, and carried it into that area with care; he will give sections and such other information in detail as to that portion of the Monument which is expected in a geologic report.

"He has visited the Yellow Cat area twice and finished that area. The Yellow Cat area will not be gone into in as much detail as the Arches sector but it will be given in sufficient detail to cover it scientifically. The beds there differ from the others in respect that they suffer no tilting, lie horizontally, and embody sandstone layers and Morrison shale. In the Morrison shale he found many deposits of dinosaur bones, and three instances in which bones were embedded, two of which were outside the Monument area. His verbal account of Yellow Cat, upon his return after the first visit, was glowing, enthusiastically expressed, and attached much importance to that area as a dinosaur deposit.

"He visited the Devil's Garden area once, and will return again this following week to complete his work. The stratigraphy given in detail of the Arches will apply to the Devil's Garden area, as they are alike, separated only by a distance of about two miles, and of the same character

of sandstone out-crop. He will visit each major arch in that area, has taken many photos, and will present it fully.

"Ralph P. Anderson, Surveyor, finished the Arches sector during the month, after having spent eight weeks there. He reports that he wishes to put in two days more in that area on work on Salt Creek, within the boundaries. The detail and time spent by him in this area seem hardly justifiable. He visited the Yellow Cat area once. At this writing he is in the Devil's Garden area, using his own car for transportation, since it saves both time and money over the use of pack train. His first week in that area was spent near the middle of Devil's Garden, within easy distance of Fallen Rock Arch. The second week was spent at a point near the southeast tip of the long narrow strip; the third week, which will end on the date of this report, will be spent on the northwest portion of that area.

"Director Beckwith has spent his time this month largely in getting first hand information of the scenic values of the Monument area. On February 15 (the first date set for the termination of the work), neither he, J. C. Anderson, or Ralph P. Anderson were ready to hand in their work; by the first of March Beckwith had finished his work, retaken 5 by 7 photos in the Arches sector, made other exposures on smaller film, revisited many points of scenic value in the Arches sector, and visited the Devil's Garden area twice.

"During the month we were visited by Park Service officials P.P. Patraw, Harry Langley, and George W. Norgard. Packer Turnbow and Foreman Jack VanYou and J.C. Anderson all assisted Mr. Norgard in getting as much information on the Monument area as the limited time at his disposal would allow. They all took him out on long trips, requiring much riding and overtime, and the country was studied from his angle. His visit put a new line of thought into the expedition which up to that time was thinking in economical terms, with bare necessities of the first year or second year of tourist travel. Mr. Norgard saw it in terms of greater development and what was required to assist that expansion. The expedition feels much benefitted by his change of outlook on the project and now thinks in larger terms, better roads and more expanded development, to get the fullest out of the territory.

"The force has been cut down; the laborers, teamster and cook have been dismissed, and the remaining force consists of Geologist J. C. Anderson and his helper, to be dismissed as soon as possible; Engineer Ralph P. Anderson, with two assistants, also to be dismissed as soon as he has finished field work; the packer, foreman and Director.

"Archaeologically, Director Beckwith has found nothing in the Monument area of any note: around Willow Spring some small pottery sherds, buff material, and one fragment of Black-On-gray-white, painted; some few arrowheads, many 'rejects' or chipped flakes; but in the Monument area no houses nor house remains; no artifacts other than broken and poor metates, with a fair supply of knives found by chance. No doubt but that around the water of Willow Spring, Indians, modern and ancient, visited the spot for summer or winter hunting, but left no cultural evidences. Archaeologically the area yields negative results.

"The work of the expedition is fast approaching its termination. The surveying and mapping should be done now and the remaining time of the

Engineer devoted to working up his notes, drawings, and locating upon his maps the principal places of interest in the area. Geologist J. C. Anderson is nearly through, with what time remains to be devoted to office work. Director Beckwith is spending his energies in a thorough study of the scenic and tourist values of the area, with a view to presentation in terms of tourist appeal.

Wupatki National Monument. Dr. Harold S. Colton, Custodian, Flagstaff, Arizona.

"At Wupatki and Citadel the work progressed satisfactorily with ever diminishing crews. I append the reports of Dale S. King, Foreman and Archaeologist of Project 4; J. W. Brewer Jr., Foreman of Project 10, A. T. Williamson, Archaeologist, Richard F. Van Valkenburgh, Archaeologist, and J.F.C. Lotz, Architect.

"During the month we had visits from Mr. Jesse L. Musburn and Harry Langley. I was glad to show the callers the Monuments in this area, that have recently been transferred to the National Park Service, Sun-set Crater National Monument and Walnut Canyon National Monument.
Harold S. Colton."

F 68 C.N.A. Project 34 for March, 1934. by Dale King.

"Wupatki Ruin of the Wupatki National Monument has been described as unique. If this is true, then Tawalanki (The Citadel) Ruin in the same Monument merits at least the same term.

"For Tawalanki is spectacular; it covers the entire top of a circular basalt butte which as a landmark commands the whole peculiar region of black mesa, waterless grass lands, land-locked drainages, shallow canyons, and fissures in the Mohab limestone; it frowns down on the high gaping sink --- a roughly circular hole approximately 400 feet in diameter with its bottom 90 feet below the foot of Tawalanki Butte, and 170 feet below the cap rock.

"But Tawalanki is unexciting. Small Project #4 has confined its activity to excavating and partly restoring Malakihu (MA358), a ten room sandstone masonry ruin at the talus foot on the northeast side. We have been constructing a hors-d'oeuvre for the main dish which will be prepared for the consumption of visitors when a larger project can tackle the big ruin up on top.

"During the period before February 15, the Foreman and three laborers spent some time on roads, testing the area immediately adjacent to the ruin, excavated four rooms, and reconstructed a large one which will be fitted up as if the 'Anatsasis' had just left for the cornfields. It will be viewed through a window in one of its doors.

"The surveyors, -- Robert Harris, instrument man, and Charlie Steen, archaeologist and red man, -- finished the six perfect quarter sections of the locality, and finished a large section (15-foot contour intervals), shooting in some 33 previously reported sites, and taking 28 sherd collectious.

"Since February 15, the surveyors have really shifted into high gear on somewhat more level, but still chiefly juniper dotted and mesquite sprinkled country. They will have finished 15 more quarter sections by the end of the month--thus completing their outlined job 12 days

ahead of schedule. They have boosted the number of new sites beyond the 150 mark, made 20 more sherd collections, located 10 old sites, and spent several days shooting in the complex of finds at the ruin itself. They discovered two prehistoric springs, and mapped in more than 20 major fissures in the limestone, of which eight show definite evidence of a fault line that branches at a 70 degree angle to the main fault which produced the Citadel Sink and another similar sink about two miles to the southwest.

"The digging quartet, too, rather came into their own. Before February 15 some suspicious vertical slabs had been noticed in an area previously planned as parking space. After February 15 these were excavated and discovered to be a small slab lined cyst grave--- the first six burials of almost as many different types, which are associated with 12 (thus far) corn storage pits, a pigummioven, and a larger twice-remodeled storage pit which almost, but not quite, resembles a pit-house. All are definitely Pueblo III.

"Malakihu is proving interesting. A roof has been put on another room and the registration room thus affords a sheltered position for the registration book. The entire room will be excavated by April 12, the closing date. Malakihu is disclosing several marked southern characteristics. The cooking ware is predominately Verde Gray (this in a region where its scarcity is pronounced) and the finding of an olla-shaped storage pit in a room suggests southern influence. The decorated types are the conventional ones of fairly early Pueblo III in the region --- Moenkopi, Tusayan, and Deadmans Corrugated; Flagstaff and Walnut Black on White; and Tusayan Black on Red and Polychrome. The later Little Colorado wares do not appear.

"Artifacts are now reaching the 200 mark and have been prepared for shipment. Full field notes have been kept, and reports are being prepared.

"One of the burials (No. 2, a cremation) deserves especial mention because of its general characteristics, and because it occurs rather north of the usual location for the type.

"The old land surface shows at a dept of about 11 inches below the present surface. This soil layer is about five inches deep, underlain by a thick stratum of white clay.

"A sub-rectangular cremation pit (5'4" by 2'4") was excavated into the old land surface down to the white clay. A circular hole, 11 inches in diameter, was dug approximately in the center, and a post hole near each end of each long side. These holes slant at about a 25-degree angle toward the center of the pit. In them were posts which supported some sort of super-structure, perhaps a platform on which the body was incinerated. At each end of the shallow pit was a small shallow hole about 3" in diameter. These might have been the resting places of the butt ends of props.

"Fragments of charred bone were found in bunches throughout the shallow pit and in the center hole. The bones had been re-distributed after burning, for pieces of cranium were found associated with pieces of tibia, ribs, scapula, etc. In the center hole was a Flagstaff Red jar, containing burned human bone and fragments of charred cotton textile. It was covered with an inverted Flagstaff Red bowl and along-

side was a small Walnut Black on White mug. Above these was a Tusayan Black on Red ladle and a Flagstaff Black on White pitcher, both fragmentary and badly burned. Pieces of both were missing, and apparently they had been put in this position after the cremation --- a theory made more tenable by the human bone in the tightly covered Flagstaff jar.

"In the shallow pit were found a steel 3/4 grooved axe (broken by the fire), three small triangular tang-less obsidian arrowheads, and a charred glycymeris shell bracelet.

Report on Project 10. J. C. Brewer, Jr., Foreman.

"Wupatki is wonderful. We wouldn't trade any part of this Pueblo for the homestead rights on Central Park.

"To be here in the morning and see the sun come up behind the Moqui Buttes, and light up the color chart, called the Painted Desert, is a privilege; and an inspiring one, too.

"But there is no wonder in our minds regarding Mr. Attwell's report of our last month's work, 'This represents a lot of good work with a small crew. The most pessimistic tax-payer could not help feeling that it was money well spent.' We all agree with Mr. Attwell, but when it comes to putting a finger on the incentive we disagree. Williamson and Metz attribute the driving forces to the invigorating climate, while others of us find a hard work motif supplied by the rapidly diminishing allotment of personnel. Everyone knows that the best workers are being held, so who goes?

"Last month with an average crew of fifteen men, divided into three crews, the individual reports speak for themselves.

"This is the wind-up week for Mr. Van Valkenburgh. We are going to miss Van a lot, but the good work he has done will remain always a credit to his name. Good luck, Van, and we all hope a re-appropriation will bring you back soon.

"The evenings of Mr. Williamson and Mr. Metz are being occupied with the tying-in, by trail, of out-lying sites and petroglyphs, poring over the maps, to make the shortest trails include these many points of interest.

"There is some conjecture whether or not we have bitten off a larger portion than can be chewed. Our time is short and our men few, but willing, so if the good weather continues until April 12, we will welcome another visitor from Casa Grande, or else. But let me add, to be here in the evening as the sun slips behind the San Francisco snow-capped peaks and shines on the bottom of low-lying clouds, reflecting the multi-colored sands of the Little Colorado is, I repeat, a privilege."

A.T. Williamson, Archaeologist.

"Two small rooms, 8 and 9 were excavated. They were on the same level with room 4 and, judging by the material recovered, were used for storage.

"Room 3, which had been leveled off six feet above the floor to serve as a plaza for room 4, was also worked out. In one corner was a section of fallen roof and on the floor were fragments of some very large jars.

"The northwest corner of room 35 was blocked up and the room cleared preparatory to reconstruction.

"The remainder of the time was spent in wall reconstruction. The south

and west walls of room 63 were rebuilt and capped with steps leading to rooms 41 and 60. The south and west walls of rooms 60, 62 and 68 were rebuilt to a height sufficient to delineate the rooms and were capped.

"Room 41B was filled and work begun on the west wall of room 41.

J. C. F. Metz, Architect.

Room 1. During the early part of the month this room was completed. Work included the entire roof construction, repointing of the original portion of the walls with adobe mortar, interior plastering, and capping of the four walls with cement mortar.

Room 2. Work was then shifted to room 2, which has been entirely restored, - old walls repointed with adobe, all walls carried to their original height, the whole roofed and capped with cement mortar.

Room 3. The original walls of this room were repaired and the missing east wall built to a height of two feet and six inches. In order to restore room 2 it was necessary to add the equivalent of three feet in height to the north wall of room 3. Before the east wall was built a drain pipe was set and after it was built the room was back-filled to a depth of two feet.

Room 4. The original portion of the walls of this room have been repointed with adobe.

Miscellaneous. With a Brunton compass, levels were established and directions taken for a cross-section of section 1 and a plan of the same. The drawings were subsequently made.

"During the early part of the month of March the excavation of room 28 was completed. It was found that in addition to a bench above the floor of the last habitation, five floors lay below. Two burials were 'worked out' on the upper floor. The outlining of the north peripheral wall followed the excavation of room 28. Five new rooms were located during this operation. Room 43 was found to have been used as a 'parrot necropolis', five skeletons being recovered. Two of these had definitely laid upon their backs, and roid imprints were found beneath. Of additional interest was a sub-floor ventilator, slab covered, and running outward beneath the rim-rock into a private room. The remains of the usual deflector were found in the conventional place.

"The reconstruction of walls in this area began on the sixth of the month and continued throughout. The large crack in the rim-rock back of room 43 was filled with masonry, and a support was placed under a standing wall, that hitherto only archaic pine beams had supported.

"The latter part of my month was occupied in the preparation of field notes, testing unexcavated rooms for cross section data, and 'policing up' the many small items that dangle in jobs of this kind."

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

"This has been a busy month. One Sunday afternoon we had visitors from every state in the Union except Maine, New Hampshire, Vermont, Connecticut, Rhode Island, New Jersey, Delaware, Maryland, Virginia, etc., etc. This visitor business gets our goat. We have to show a good count to get money. When we get money we must show good stewardship to hold the job, so we are trying to hold the job six days in the week and

count visitors on Sunday.

"Last Sunday we had to help an overworked C.W.A. administrator and the re-employment committee find 12 men to replace a dozen who had taken contract jobs as truck drivers. It was not exactly workmen that we were looking for; the requirement was at least six dependents and an urgent need for something to eat. So that took most of the morning and it was 2 p.m. when we got out to the White Sands. From 2:00 to 3:30 we counted 36 cars with 118 people there. One party of doctors and nurses came from Fort Stanton, 100 miles away. There was a visitor from Massachusetts, one from New Orleans, two from Kansas City and others from California, Kansas, Montana and other states. On Saturday before we had 35 students and teachers from the Oklahoma A & M College and the day before that the El Paso Goodwill Trippers, 30 business men, made us a pleasant visit. It certainly seems like all the neighbors are coming in to see the baby.

"This week I have a letter from E. B. Howard, of the University of Pennsylvania Museum, in which he comments on two arrow points which I sent him recently for inspection and identification. Mr. Howard says: "The small pinkish one is certainly a typical Folsom. The other one, though not so finely flaked is a Folsom-like point, of which we have found quite a few along with better chipped ones at Clovis." Dr. Howard has made two of the nation's most remarkable finds in relation to Folsom points; the first near Carlsbad, in connection with bones of the extinct horse, muskOx, etc. and even more remarkable finds at Clovis last SUMMER.

"Dr. Crawford, of the New Mexico State College, has been working on an analysis of the water from red lakes in the Great White Sands. Evidence points to a bacterial growth as cause of the color. It is probable that the culture can be developed in the laboratory. I hope so. There will have to be something definite on these red lakes or I will have to quit talking about them.

"We are looking to Easter Sunday with considerable anticipation. For several years church organizations of adjoining towns have held their sun-rise services on Easter Sunday at the Great White Sands. This year the Alamogordo Chamber of Commerce has notified the various organizations that the planned road will be completed into the sands for a couple of miles by Easter Sunday and that they are all invited to hold their services and their Easter egg hunts in this National playground. No snakes or poisonous insects, no stones or snags. Children tumble and roll anywhere, clothes are cleaned by these alabaster sands, not soiled. It sounds ideal doesn't it? It is just as ideal as it sounds.

"We have some road news that you will be glad to hear. G. D. Macy, State Highway Engineer, writes me that the Department is closing the gaps on the final survey of the Las Cruces-Alamogordo federal highway past the White Sands, with the idea of completing it as soon as Federal money is available within the State. Since the date of his letter \$6,000,000 has been allotted to New Mexico. It would be too bad if we get an oiled highway out through this Monument. It might necessitate additional improvements, added personnel; etc. Am sure sorry to have to call your attention to such prospects, Boss.

"Everything is going nicely in the work program. You would be surprised to see how smoothly the crew is running, how anxious these men are

to hold the \$6.00 a week job. I do not believe there is a contract job in the County whose crew is better satisfied, though they may be making more money. As we get into the big hills the work is slowed up considerably. The hills take twice as much clay and the dumping is slower. It is making a pretty satisfactory road, however. We are proud of the fact, too, that we have not had an accident on the job. Of course we credit this to Hub Chase who is Engineer on the job and always on the look-out.

"I admit I had a real shock when that windstorm came from the north last week. Our sand hills build up firmly, sloping gently from the south and breaking sharply, with loose sand, to the north. Each south wind piles the dunes a little higher and pushes the top of the hill a little further north. After a hard south wind these alabaster dunes are beautiful, with outstanding arches and curves looking up in the distance. We welcome the south wind; he is a sort of Sand God bringing up the fresh crystals from the lake bed and sweeping the white hills clean. But last week we had our first north wind since we became a National Monument. It took these high cones of rippled sand and whipped them back into the valleys. It bared layers of gypsum rock, eroding them into unsightly gullies. The soothing influence of the Southwind's handiwork was wrecked by that blustering bully from the north.

"However the later south winds have already helped the white sand crystals to creep back to the hill tops and their old time beauty.

Tom Charles."

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

"Dear Mr. Pinkley:

"March gives us the opportunity for the third time to report in succession and increase of visitors. There were 2,785 visitors at Casa Grande during the month as against 2,564 a year ago, an increase of 221 or nearly 9%. 53% of these visitors were from out of state while last year only 41% were from out of state. They came in 810 cars from 42 states, Washington, D. C. Hawaii, and eight foreign countries. Each one of these 2,785 was personally contacted and conducted on a guided tour of the ruins of Compound A and the museum; 301 tours were made through the ruins and 275 through the museum. In addition to these 2,875 visitors who received service, there were 211 who came, turned around and went out again without desiring any service, making a total of 2996 visitors.

"The weather has continued hot and dry. The Phoenix Weather Bureau reports it as the hottest month of March in the record of that station. Our records for this station show the average maximum for the month was 85 degrees and the average minimum was 45 degrees, giving an average temperature for the month of 66 degrees. The maximum temperature was 92 on the 30th and 31st, and the minimum was 38 on the second. There was precipitation on only one day, the 24th, when .22 inches fell. We had one cloudy, two part cloudy and 28 clear days.

"All P.N.A. force account projects are completed and no work was done on any of them the past month. Final reports have been prepared and are only waiting the photographs for submission to Washington.

"C.N.A. operations have been carried on during the entire month. The

out to 15 hours a week and the tapering off of the men each week has kept us from accomplishing as much work as we would have liked to do. We have concentrated on getting in as much protection to ruins as possible but, owing to the reasons assigned above, the work has gone very slowly. We have gotten the curtain walls on one side of the outside walls of Compound A, on the south end and west wall and on the inside on the south end and about 200 feet on the inside of the west wall. My men all taper off next week and work was ended on the protection job on the 28th. The balance of the time will be spent in cleaning up.

"This C. W. program has given us a lot of valuable work even though it has been hard to administer on account of working through other agencies instead of handling the thing ourselves, and we are glad to report that we have accomplished much that we had not hoped to get for many years to come. This community is being hard hit by discontinuance of the work as there are not enough Public Works Projects going to absorb the men we are laying off and farming operations cannot absorb them all.

"Bids were opened on March 3rd. for the construction of a new residence to be built with P. W. funds. We had \$4,500 available for the project and the lowest of eight bids was \$4,872. All bids were rejected and a few eliminations and changes were made in the specifications. New bids were called for which were opened on March 13th. Only one bid for \$4242.42 was received and the contract was awarded to Cecil Nowlin, of Coolidge, Arizona. The contract was prepared and sent to Washington and approval was received on March 27th. Work will start on the building on April 2nd, and it will be completed in not more than 90 days.

"I have read the Louis Schellbach III report on Southwestern Museums with a good deal of interest. I believe, however, that Casa Grande should be made the museum center rather than Mesa Verde. With the addition which we have asked for to our museum, we would have the room; we are open twelve months out of the year instead of five; we are on the main highway instead of 127 miles off of one; we have 25,000 visitors a year instead of 16,000; and last but not least some of our best archaeologists believe that the beginning of civilization in the Southwest was in the Gila Valley and that this culture here influenced all the other cultures in agriculture, pottery, etc. In other words, our Ho-ho-kam were about four jumps ahead of every other culture in the Southwest and all the others learned about agriculture and pottery making from them.

"Anyway, I can't see why every museum should not be independent of every other museum. A very small percentage of the visitors to one place visit more than one or two others and the repetition of the story told in a different way by a different man can do nothing more than impress upon the visitor's mind the truth of what he has heard somewhere else. Just because a visitor has seen and heard about a bear at Yellowstone is no reason why he should not see and hear and learn about bears in Yosemite; and I never heard of a person who wasn't interested in bears in Yosemite because he had seen a bear in Yellowstone; does not this same argument hold true for prehistoric pottery and other artifacts?

"Visitors who go to Mesa Verde in summer time do not go to Casa Grande before the following winter and by that time they have forgotten many of the details which they learned at Mesa Verde, consequently repetition

brings back to them many things they would have forgotten entirely and the same thing is true of the visitor who comes to Casa Grande in the winter and goes to Mesa Verde the following summer.

"We have many 'repenter' visitors at Casa Grande and they tell us that they enjoy their second, third and fourth trips as much as the first one. Evidently repetition is not obnoxious to them.

"And so we go into the beginning of another month.

Hilding F. Palmer."

BANDELIER NATIONAL MONUMENT. H.O. Evenstad, Acting Custodian, Box 669,
Santa Fe, New Mexico.

"Dear Boss:

"The weather continued fair throughout the month and the number of visitors reached 280. This includes about 50 men from the Santa Fe Chamber of Commerce who visited here on the 9th and attended a banquet at the C.C.C. camp? About 80 of the visitors were of the Courier-car parties, the balance being tourists and Sunday picnickers.

"Associate Engineer, Attwell arrived on the 3rd, and headquartered here until the 15th, making several trips to other Monuments in the meantime. Assistant Landscape Architect, Richey, made an official trip to the Monument on the 5th and remained until the 7th. Chief Clerk Hugh Miller, with Mrs. Miller, visited here from the 9th to the 12th. We were glad to see Hugh and meet the new Mrs. Miller.

"Our main activities during the month were centered on the road work, most of which consisted in widening the road from Station 85 and making cuts and fill through the several deep arroyos on the down grade leading to the bottom of the Canyon. On this we are now using 12 teams with frescoes in addition to the two tractors with bulldozers and tumblebugs. Landscaping was continued along the road way where the grading was already completed. During the month we have moved about 7,000 cubic yards of fill, and we expect to have the bulk of this finished by the end of the month.

"Renovation of the Ranger Cabin was started during the month. The necessary material has been purchased, and is ready for use. The renovation includes replacing window frames, outside doors, also installing new floors, and replacing the wooden porch floors with concrete. Kitchen cabinets will be built and bath room fixtures installed, as well as piping water into the house and building a sewer system. In addition to this the old stone stable is being converted into two guest rooms with modern toilet facilities by adding a small bath room. We will need until about the middle of April to complete the renovation.

"Some clean-up work and landscaping was done along the pipe line layout, which was completed last month. The archaeological part of the program was taken care of by Paul Reiter, who is appending a separate report on this activity.

"Shortly after one O'clock on March 9, a fire was spotted about two miles down the Canyon from the C.C.C. camp. With about 40 men from the camp reaching the fire at 1:30, we got it under control about 2:30. During the clean-up work C.C.C. leader, Santos Martinez, who had been placed in charge of the clean-up crew, was hit by a falling tree.

One of the boys was sent back to the camp for the doctor and a stretcher and part of the crew was started back to the camp carrying Martinez on an improvised stretcher. He was taken to the camp infirmary and then in an army ambulance to the Indian School Hospital at Santa Fe, where he died during the night. Martinez was one of our Local Experienced men who had had a good deal of experience in fighting fires and was considered one of our best men on fire duty.

"The fire was extinguished after burning an area of about half an acre. It had started in a bad place, where there was an accumulation of dead logs and other debris as well as a heavy growth of underbrush, and the area contained five dead standing trees. One of these, a snag about three feet through and 25 feet high, was the tree that hit Martinez. Some inquiry developed the fact that two boys who had been working here on C.W.A. work had started, about noon, for their homes in Pena Blanca, about 17 miles away. The time of the fire fitted in with about the time they had passed over the trail. I located and questioned these boys the next day and although they denied having started any fire, they admitted having smoked on the way home. I am satisfied that these boys started the fire, though unintentionally, but am of the opinion that a prosecution of their case would do no good. I conferred with the U.S. District Attorney in Santa Fe, and his opinion was that the evidence would be insufficient to secure a conviction. I believe the boys were impressed with the fact that they had been traced at once and I am satisfied that they will be very careful about fires in the future.

"Barring the accident mentioned, the month has on the whole been quite satisfactory. No delay on account of weather and our activities were not seriously hampered, except through unavoidable delays caused by the breakdown of some of the equipment.

"The unusually dry winter has already raised a real fire hazard. Ordinarily, according to Forest Service officials, the fire season does not begin until May. A program of mutual cooperation on forest fire fighting is being worked out with the Forest Service, with the expectation of having to depend on the C.C.C. camp for furnishing the necessary personnel. The summer camp program will be formulated with the idea in mind to lay out our work so that sufficient men will be readily available to meet any fire emergency.

"According to E.C.W. Supplement No. 32 it is now definitely established that our present C.C.C. camp will continue for another six months.

M.O. Evenstad."

ARCHAEOLOGICAL REPORT. Paul Reiter.

"Dear Mr. Pinkley.

"The first part of the last month was spent finishing work on the painted wall described in the preceding letter, and in mounting plate glass over the painting. I had had luck with the first piece of glass; it broke just after the whole job was finished and the glass plastered into place. A second piece of glass was broken by the glass company, and the third piece rests securely -- but quite loosely, believe me, -- in the recess in the cliff.

"I am rather well satisfied with the result. The reflection remains at a minimum, and Mr. Evenstad says that the glass remains unnoticed until one approaches to within twelve feet of the cliff. I

haven't yet had time to finish the photograph of the completed job, but will forward one to you soon -- in addition to the one accompanying my final report.

"Part of the month was spent in checking ruin mapping with the topographical mapping crew. I am only partly finished with this work. Preparation of repair plans for the community house took considerable time, and necessitated the working out of many details. If this project is approved some time must be spent in experimentation.

"Today we began work on the mapping of the detached section of the Monument, twelve miles to the north of Frijoles Canyon. The area of this section is just under eight square miles, slightly more than I at first thought.

"So you see, with this mapping, the experimenting for repair work, the checking over of the topog map of the Canyon, and a detailed report of the whole project, I shall be quite busy until the 19th. You may rest assured that I will trouble you little with details.

Paul Reiter."

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

"Dear Mr. Pinkley:

"Visitors for the month, 1,215.

"We had a night and a day of rain this month and things are green once more and the cattle men are well pleased.

"This was by far the mildest winter of the twelve I have spent in Arizona. Many of the northern birds wintered here instead of going further south as they usually do. The say's Phoebe who has nested in the Sacristy of the Mission for the past eleven years and who has used the same nest every year, had her nest stolen last winter, but we are happy to say she has built a new nest about a tenth the size of the old one, which was of course an accumulation of years.

"Our G.W.A. project will be discontinued here the fifth of April and I am very sorry to say it leaves us with our walls unfinished and several hundred feet of outside walls uncapped and unplastered. Unless funds are available later the rains may do some damage to the unfinished walls. I am glad to say the entire section on the lower part of the Mission walls is now in good repair except for a short strip on one side.

"I noticed by the register that General Dawes was a visitor the past month. I did not recognize him at the time, but our visitors this month have been unusually intelligent and interested.

"Assistant Superintendent Rose and wife, of Casa Grande, and Bert Harwell, the Chief Naturalist of Yosemite National Park, with his daughter, paid us a short visit during the month.

"It wasn't until the last strip of drainage ditch across the patio to the east of the Mission had been dug that we definitely located the plaza level of the old patio of the Padres. We also found the foundation of a room almost in the center of the patio whose walls had had several coats of different colored plaster.

George L. Boundey."

Mr. Boundey told a very good story in another letter during the

month of showing an interested but rather quiet visitor around his Mission and, after explaining the usage and various interesting features of the Sacristy, his visitor pointed with his cane over into one corner and said: "I slept there a couple of nights when I was serving as a lieutenant in the army." The visitor was General John J. Pershing.

 PIPE SPRING NATIONAL MONUMENT. Leonard Heaton, Acting Custodian,
 Pecosasin, Arizona.

"Dear Boss:

"Here goes for another monthly report even though it seems that it was only last week that the February report was sent in.

"The travel this month has been as follows:

Arizona Trucks,	35	Persons,	104
Arizona Cars,-----	77	Persons,	251
Utah Trucks,-----	26	"	59
Utah cars,-----	15	"	60
U.S. cars & trucks---	17	"	73
California Trucks,---	11	"	33
California Cars-----	5	"	8
New Mexico Cars-----	1	"	1
Horse Riders-----		"	24
Totals-----	188	"	617

"Since the C.W.A. work has stopped here I have also let down on my ambition and it is with an effort that I am trying to get this report to you with some degree of fairness to the Monument.

"We have had two good spring rains the past week and I only regret that I haven't some grass seeds to plant on the ground that we have been working. I have also been finishing up some odds and ends of work that had been left unfinished, as I don't want this place left as it is all summer. I surely hope that we can at least get money to complete the projects that we have been working on.

"I will get you a complete report of the C.W.A. work as soon as I can and segregate it into the different projects and the work done on each.

"Spring surely has come now as most of the fruit trees are in bloom and shade trees are putting out their leaves. Flowers are blooming and all Nature is bursting out in all its splendor. Our fly catcher and blue birds are back with us and doing house cleaning and I am in hopes we will have a wonderful season for the visitors.

"Mr. Cowell has been out here about once every two weeks to keep the engineering end of the C.W.A. work up and he told me there was only one more day of work for him and he would be all caught up until another program was started.

"I also had Mr. Langley on the 16th for six hours going over the place and making suggestions and getting a better understanding of what he wanted here. In my last month's report I opposed some of the things Mr. Langley proposed; this was because we did not understand each other and now I think we are of the same opinion as to what we will do in the improvement of the grounds about the Fort.

"While Harry was here he spent an hour in fishing and caught five

good sized trout. Since there are only 32 fish in the ponds, Harry wants me to get some more fish so that he can get to fish every time he comes in. I am willing to get them and take care of them if the Park Service will make the arrangements with the Government fish department to deliver them to Cedar City, Utah.

Leonard Heaton."

The line of Landscapers who want to help us out with landscaping Pipe Spring National Monument, please form on the left and wait your turn to go into conference about future improvements to the fish ponds at Pipe.

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

"Dear Boss:

"The time has come again to submit another report. It seems that I scarcely get the last month's report off until it is time to send another. But the great satisfaction is when I receive my copy of the report of the month's operations in the Southwestern Monuments. I scarcely let it go until I have read every article and occasionally when I find an article that is especially interesting to me I re-read it several times.

"I have registered 305 visitors entering the Monument in 58 cars, wagons, horseback parties and otherwise. This is slightly above our last month's number and is more than three times the amount we have had for the same period last year. Weather conditions have been very nice for travel although we have had our usual March high winds. The temperature has been somewhat higher during the month than has been usual for this mountainous region. The green is beginning to peep out as a result of the warm days and the bright sunshine and of course it is welcomed by the stockmen.

"The C.W.A. work here is progressing nicely, but with the termination of the program drawing near and the consequent tapering off in the number of men, it will be impossible to accomplish all we had hoped to get done. I think I can safely say, however, that the approach road will be finished to grade from the west line of the Monument to the parking area, and a substantial cattle guard installed. We will be able to bring the parking area near enough to grade and level enough to permit the parking of vehicles on it, but the trail construction will have to be omitted entirely. I feel that this program has been a great help in that it has furnished work for a good many of the needy of this community, besides the long-needed improvements to our Monument derived from the money spent here. As I walk over the newly constructed road, and visualize its final completion, with full surfacing of caliche, or perhaps an oiled surface; the parking area fully completed; well constructed trails running to the various and many places of interest, I -- well I must confess that a 'lump' of pride rises up and causes my chest to expand several inches.

W. H. Smith."

Mr. Smith may take some comfort from the fact that practically no one in the Southwest was able to carry out the original program under the C. W. A. just as he set it up at the beginning. He is not the only one who has some work left over until the next time.

NATURAL BRIDGES NATIONAL MONUMENT. Zeke Johnson, Custodian, Blanding, Utah.

"Dear Frank:

"I succeeded in getting \$10,000 for the improvement of the first 20 miles of road out to the Forest boundary. I was given the project and the authority to come to Blanding and put 55 men and 20 teams at work and to work 190 hours per man at 30 hours per week. I was just ready to start when I was called up to the Capitol and told to wait a day or two. After two days I was told to come down and call the men out and, instead of spending the money on the present road they would put some engineers on the job and start a highway that would be up to U.S. specifications with the intentions of carrying it through to completion as soon as possible. So here we are, hitting the pipe for the Bridges, but of course the little amount won't go very far, but it is a start and Zeke is happy with the hopes that something will be done to keep the road on its way westward. The weather is ideal and every man on the job seems to think that we will have a highway connecting this country with western Utah.

"I am inclosing some clippings which will tell you of some of my other activities. The trip to Milford was a great success, or at least we all felt that way about it.

"Cars can go to the Bridges now and I may run over in a few days or as soon as I can get a day off and see if the dear old bridges are still standing. I am still expecting to hear that I will have some improvements out at the Monument this spring. There are so many inquiries coming in about the Bridges that I expect a lot of people out there in the near future and must have some help out there in the way of improvements. Zeke."

CANYON DE CHELLY NATIONAL MONUMENT, W. Verde Watson, Acting Custodian, Chinlee, Arizona.

"We who have actively engaged in the making of a topographic map of the Canyon de Chelly National Monument, are fully convinced that it is a mapping job of the first order, and it seems to me fitting that I should set down here a few of the major points by way of justification of this conviction. To date we have been able to map about 25 square miles of the one hundred and thirty-one included in the Monument. This may seem like a small accomplishment for three months in the field, but I am sincerely of the belief that we have done all that a similar crew could do in the same length of time. In this connection I would like to point out that we are virtually mapping cubic rather than square miles.

"The depth and precipitous character of the canyons, their far flung, branched and sinuous courses, the general rough, inaccessible, and, in many cases, heavily timbered nature of the country as a whole are some of the major reasons why topographic mapping here is anything but easy or rapidly done.

"At its mouth here at Chin Lee, Canyon de Chelly's walls are but a few feet high. At its junction with Göl Muerto the rims are 450 feet above the floor of the canyon, and as we work now some ten miles, via the canyons from Cozy McSparron's Dude Ranch, we read 10 to 30 degree angles on our Navajo rodmen who, in some manner or other manage to climb to the dizzy heights to give such needed shots just below rims which stand 700 to 900

feet sheer above us. The secondary rim bench back from sheer walls, and thus add from 100 feet to 300 feet to the actual depth of the canyons. To date our highest walls have been mapped in de Chelly and I want to say here that if one really wants to thoroughly appreciate the depth of the canyon he should spend a windy day shooting triangulation from an overhanging point ten feet square just 900 feet above the river.

"Even higher walls are to be encountered a short distance above our present operations in del Huerto. In fact our present knowledge of the canyon country leads me to believe that the greatest depth will be found a mile or so below Harry Cave -- at this point I am quite positive that at least 1,000 feet cliffs will be measured.

"Such depths and sheerness of walls mean, of course, that the canyons can be gotten down into only at comparatively few and very special places by way of thousand year old cliff dweller made trails, now in every day use by Navajos and the 'Sovayers.' The Canyons, being choked with ice during the winter and now running a goodly stream of water, have been impossible to travel by truck, so we have been forced to travel as far as possible by trail roads above the rims, walk a mile or two to the rim of the canyon, then climb, each man with a pack on his back, 400 to 800 feet down one of these trails to the bottom of the canyon. And what trails they are! A mighty interesting book could be written about them. In a few places where a huge talus slope reaches up near the top or in a side canyon an occasional 'horse trail' may be found dropping by terrific switch backs into the canyon, but for the most part the trails consist of hand and foot holds cut into the solid sandstone of the walls and supplemented by numerous ladders made of huge cedar poles which are placed in cracks or where the ledges overhang. From the bottom of the trail it is usually not more than two miles up or down the canyon to the site of the day's work. This will be the case if a man is working in the canyon, but if his work is on the north rim of de Chelly or the south rim of del Huerto he is still 400 to 800 feet below his work, anywhere from half a mile to two miles up or down the canyon to another trail out, then a mile or so up or down the rim to his last setup. Some of us really enjoy these trails, others frankly abhor the more precipitous ones, even with a load, on the down trip in the morning, and even climbing the opposite wall is not so bad early in the day. And even when returning after the day's work the descent into the canyon is not so bad, but I've yet to meet the man say that he enjoyed the last climb out and the mile or more walk to the truck, -- the sight of these 800 feet of hand and foot niches (many of them long ago worn out past safe usage) and crude ladders reaching their precarious way upward is disheartening to say the least at the end of a hard day in the field. So much for our daily job of getting into and out of the canyons. But before this trip can be made we must first take a 10 to 15 mile truck ride into the general vicinity of the rim where our trail drops into the canyon.

"A glance at the sketch map (prepared by Mr. Low, our draftsman and artist as well as topographer) will reveal the sinuous and widely spreading character of the canyon systems which makes necessity of splitting our crews into, at present, three different groups, which, when at work, are separated by several miles of canyons and high country.

"One group leaves our base, here at McSparran's for a 12 mile truck trip by trail road to a point on the northwest rim of del Huerto. From

here the descent into the canyon and a walk of two miles lands this group in the area being worked. Another group also leaves Cozy's for a similar trip up the south side of de Chelly. This group of trucks about 10 miles up and splits into three parties. Each party must, after the south rim is worked, here, also, make the climb into and out of the canyon, and, after the bottom has been mapped, each party must make two trips down and two up the canyon walls in order to map the north rim of de Chelly. At least three hours of each day is spent by each of these two truck groups in making the round trip to and from work and two thirds of this time will always consist of genuine hard labor getting down and up the walls. The third group mentioned above has been working a little differently from the other two. This group, consisting of two plane table parties, leaves the ranch on saddle horses for about a seven mile ride up the canyon floors. Their work has been in the canyons -- both de Chelly and del Muerto, -- and on the rims made by the wedge of rough country between the two. In this case, too, the trip from floor to rim must be made via one of the trails, and the round trip time from McGarrons is at least four hours. Thus getting to and from work is a major task under the present arrangement, and one which will increase with every mile we proceed up the canyons.

"A rather complex factor which has caused us much trouble so far and will become more and more of a problem as we progress is the inaccessible, rough, and heavily wooded character of the country just back from the canyon rims -- that country between our few trail roads and the rims and that between the canyons themselves. In our present work across the ground is so cut up with secondary drainage ways and so heavily timbered with cedar and pinyon that no work can be done except by short shot traverses -- triangulation points, even when the country offers them, can seldom be seen from a ground setup in such country. These heavily timbered areas are wholly inaccessible by truck, and thus we have spent and will spend many hours carrying equipment on our backs when mapping them -- often in such areas we have spent but an hour or so a day in actual mapping, the rest of the day being spent just in getting to the setup and back to camp.

"These are a few of the main reasons why we believe this to be a major topographic undertaking; at the same time they should justify our results so far. In three months we have covered 25 square miles with detailed topography; there are, perhaps, 75 to 100 more that should be mapped. Six months more of ideal going might finish the job, but I am inclined to believe that a full year would be a much better estimate, and this under the proper kind of working arrangements in the field.

"Obviously further work should not be undertaken under such a setup as we are now using -- not if economy is any consideration. Any further work should be done from a movable camp in the canyons, and transportation suitable for use in the canyons, -- sturdy trucks equipped for sand travel or pack animals, -- will have to be provided by the Government. A plan can, perhaps, be worked out under which the men could provide their own camp, -- mess, beds, etc. -- but they cannot do so under the present 30 hour plan. Under any plan the men should have positive assurance that the job would last sufficiently long and pay a high enough wage to justify them in making the necessary personal outlay for suitable camp equipment.

W. Verde Watson."

CHACO CANYON NATIONAL MONUMENT. Huret R. Julian, Custodian, Crosspoint,
New Mexico.

"Dear Boss:

During the month of March, 1934, there were 202 visitors to the Chaco Canyon National Monument. The registrations show that by far the larger number of these visitors came from New Mexico and Colorado, five states however were represented.

"On Sunday, March 18, we had the first day of the season when it was necessary to put two men on the job of handling visitors. Luckily we still have the archaeological reconnaissance crew with us and relief guides are easily secured.

"The C. W. M. work is slowing down to the finishing touches and the cleaning up after the job, although dirt is still moving into the revetment at Pueblo del Arroyo, and some repair of fallen walls is being done. The draftsman is busy recording the field work of our engineering crews, and we are all writing reports and figuring costs. Our offices and tool rooms will soon be moved into the store building and all traces of the occupancy of the ruins will be erased.

"The well finally is finished. We have an abundance of good water and it is easily secured. A pump lifts the water from the well into the barrels and other containers in which it is transported to the residence and other points where water is needed.

"Mr. Richardson, the State C. W. A. Safety Engineer, was pleased that we were moving our offices away from the vicinity of the 'Threatening Rock' although he said that he would not order them moved on the possibility of the rock falling in the immediate future. Yet he was positive that the rock was going to fall, and if it did, there might be a possibility that the falling walls of the ruins would push each other over after the fashion of a row of dominoes placed on end in a row.

"We are ready to demonstrate to the most skeptical person that any of the various types of wall capping which have been used to date on either Pueblo Bonito or Chetro Keti are doing nothing except helping the destructive forces of nature tear the walls down. I am ready to admit that the type of capping which I have favored up to the present, namely, the flat top type, is little better than the trough type which has been used, although it is not quite so destructive as the latter.

"We are ready to recommend the removal of all the cement which has been used to cover the spaces surrounding the kivas, that is the triangular places formed by the cylindrical kiva being set in a square room and these triangular corners being filled with dirt at the time of construction, and to state that if it is not removed within a few years, there will be no kiva walls to protect.

"Naturally you are not ready to accept this radical about face in protection policy without further proof and explanation. To illustrate the principal by which the 'protection' which we have given these walls in the past is tearing them down, we will consider a condition in Mesa Verde.

"The summer before last, when we visited Mesa Verde we were told by one of the lecturers that the caves in which the cliff dwellings were situated were made by the water penetrating the upper surface of the sandstone layer from top to bottom. This water, upon reaching the impermeable layer of shale at the bottom of the strata of sandstone could

go no further, and consequently evaporated along the point where the stone and shale met. This evaporation or passing of the water outward took tiny particles of the stone with it, thus by a process known as 'exfoliation' the caverns were formed.

"We have the same condition in a ruins wall except that the direction of the action is reversed. Moisture from the ground goes up a wall as oil goes up a lamp wick. Why, we have no idea. We have invented such terms as exosmosis and the like to describe processes which apparently defy the accepted laws governing the action of certain substances under certain conditions. Apparently the water rises in the stone as well as in the dirt mortar. One can easily demonstrate this principle by making a small hole in the earth and filling it with water. It will be noted that the water immediately rises in the embankment surrounding your miniature lake to a height of inches above the level of the water in the pool. This is exactly what takes place in a wall which is composed of stone and dirt mortar.

"Returning to the Mesa Verde condition again; this water is stopped by the cement capping as certainly as it is stopped by the underlying stratum of shale, it can do nothing except evaporate by exfoliation, tear out the wall immediately under the capping. Any flat capping which is water proof, or any trough capping which is strong enough that it will hold, will tear out the wall at a point where it joins the stones under it; and trough capping, which is not so substantial will become a terrible menace because it concentrates the water and pours it down through the center of the wall, and we will have a condition which is apparent at Pueblo Bonito, where we have the center of the wall washed out and only the shell standing.

"Persons have been severely criticized for tearing down our ideals and offering nothing with which their place can be taken. This is true even though nothing would be far better than the conditions which were attacked. Consequently I am offering a tentative solution to this problem. It may not be the best, but I am convinced that it is far better than anything else yet suggested. We know that many of these walls have weathered at least eight hundred years of exposure with nothing more substantial to protect them than plain dirt. We know that dirt will work for five centuries, so why not use dirt? Perhaps within that time we will have thought of something better.

"For the same reasons given in support of this capping theory, I am convinced that we must get the ground level at the same height on each side of all our walls, otherwise exfoliation takes place on the lower side.

"Perhaps it will be felt that I have devoted entirely too much time to the results of our wall capping research, but when it is recalled that we have three miles of wall in Pueblo Bonito along that is slowly but surely falling, the importance of this matter can be realized.

"Measurements of position of the 'Threatening Rock' tell us that the rock has not moved in the past six months, although earthquakes in nearby Utah caused us to become concerned. But measurements of the position of the four story wall of the north side of Pueblo Bonito indicate that it has fallen outward from an eighth of an inch to perhaps a quarter of an inch in places within the past year. The tallest wall in ancient America (in the United States) is falling in a mass, and we

must do something about it immediately; plans for its protection will be submitted in the next report.

"Among the other signs of spring in the Chaco Canyon was the appearance of the first Hunter Clarkson car which arrived at the Canyon March 24. Things are taking on the appearance of spring, grass and bushes are getting a suggestion of greenness about them, and the birds are returning, all of which tells us that we must make preparation for another busy travel season.

Hurst R. Julian."

That is an interesting report on the settlement of the north wall of Bonito and I will ask Mr. Julian to check up on it every two or three months and see if it continues. It certainly hasn't settled at that rate steadily for the last fourteen years for we have been rough-checking on it for that period of time and the total settlement has been too small to catch. Jackson and myself filed a report on that wall several years ago when he capped it, but I doubt if it could be recovered from the files at this late date.

There will certainly be great excitement in the engineering world if Mr. Julian can prove that capillary attraction is carrying water up to the top of eight, ten and fifteen foot walls and, being stopped from carrying it any further by our cement cappings, it is there coming out through the sides and disintegrating the stones and destroying the walls. If I remember correctly, a good many years ago when they tried to inoculate me with the rudiments of Physics, capillary attraction couldn't have done that,-- but these be other times and maybe it works differently in New Mexico or possibly Congress has passed a law about it and we are not up to date. There is one thing about the trough shaped capping, though which Mr. Julian does not bring out. Why not punch a hole here and there in the bottom of it and let this water which is drawn up by capillary attraction come right up through the bottom of the trough and run away? That wouldn't do though, come to think of it, because it would all concentrate and run down through the breaks in the trough as he explains and wash out the center of the wall; but why should it come up one place and go down another? Boy, page Hi-Ball Attwell or one of these other expert engineers; I'm out of my depth in all this water which is under discussion!

EL MORRO NATIONAL MONUMENT. E. Z. Vogt, Custodian, Ranch, New Mexico.

"Dear Frank:

"I have been holding up my monthly report to you so as to include the latest news of the tapering off process of the C.W.A. program at El Morro and at the same time cover some of the plans for a continued set-up.

"Up to today Mr. Hamilton and I have been waiting here at Santa Fe for word from Washington which we understand has been sent on here to Miss Reeves on March 21. Nothing has come through yet and if nothing arrives tonight I think we will pack our bags and drift back to the cows and chickens of the hinterland. No doubt you will get word through Phoenix and let us know by the time we get back so we can lay out an intelligent and acceptable plan of accomplishment.

"While writing here at Santa Fe, Mr. Hamilton and I have followed up the visit which Mr. Richey and I made here on March 5 to the Highway Dept. Today we saw the Governor, State Highway Engineer, Macy, and three members of the State Highway Commission. We also talked with Engineer Howard who has had charge of the State projects of C.R.A. and will have a great deal to do with work relief. After several conferences we believe they have found a way by which a grade and drainage can be thrown up on the uncompleted portion of the road up Zuni Canyon over the mountains to El Morro and Ramah. It takes but 20 miles of road to connect the end of this road to the graded road at Ramah and this connection would take the road right past our Monument. It remains for Mr. Hamilton and me to stop off at Balcon on the way to El Morro to see the County Relief Work Chairman in order to assure cooperation on this much needed road.

"I am glad to say that I feel greatly encouraged over the possibility of making the Ice Cave Country a Park Service recreational area. I don't claim to be a prophet but I do feel that there are grounds for a thorough examination of this untouched and interesting region which is still largely unexplored. If it is turned down, or if it is felt that I have been too insistent about it, I hope it will be realized that what efforts I have made have been for the sake of conserving one of the most absorbingly beautiful and interesting places in the United States. If the lumber company gets their road in there and those noble pine trees are cut and the forest denuded and the ice wall is all cut away, it certainly cannot be said that I haven't tried to get what is beautiful and valuable saved for future generations.

"Our visitors at El Morro are increasing in numbers daily and all seemed to be very much pleased with the work we have done. First, they are impressed with our ample and substantial cattle guard, our good looking and strong fence, then when they start up the trail to the north ruins, all are surprised at the beautiful views through the pines of the mountains, now seen easily from the turns of the trail, they are entranced.

"The carved steps along past the north ruin, the view of the blind canyon, the carved stairway up to the highest crest of the cliff, then across to the south ruin, gives them quite a kick.

"Going down on the east side they wind through little canyons and descend to the plain through the reverse spiral stairway chiselled through the solid rock. One lady, who has travelled much, said that our stone work was so fine that it should be called sculpturing.

"On the plain the trail is completed past the pictographs to the water cove and around past the inscriptions. The widening of the trail and levelling off of areas in front of each of the principal inscriptions has not yet been done but will be undertaken next week and perhaps finished before the end of our program. We should, however, include conveniently with this work the taking away of the guard rails which I placed there some ten years ago and in their place put large, natural colored rocks and plant cactus or yucca in a protective way so that the would-be carver cannot deface the history laden cliff walls. Mr. Richey, on his last visit, explained to us how this could be done and we are going to try to accomplish protection without any pronounced artificial means. The translation signs will also be put on new posts

and lowered to an unobtrusive location.

"After we received word of our 'other than labor' allowance, we continued again with our great fill of the big arroyo on the south face of the cliff and brought the filled area around to the nose of the cliff and on to the major erosion dam at the bridge. We spent some time in getting the ideas of soil and grass experts on how to bring the grass back on this fill which amounted to well over 20,000 yards of dirt. After getting many ideas, we harrowed the whole rincón and valley down like a garden which a timely wetting of the ground allowed us to do. We then harrowed in a crop of yellow clover seed followed by oats. Then we brought several wagon loads of small cedars and pinons from the Zuni Mountains and planted them in small groves. We think now that some watering of the seedlings will allow them to take hold and these with the sprouting clover and oats will help the natural grow grass to get a foothold and gradually regrow the whole of the disturbed area.

"The fence building was a difficult job to complete owing to the very rough nature of the uneven cliff surface on the south and west boundaries. The posts had to be set in concrete in drilled holes in the mesa and the wire, 47 inches high, had to be stretched with greatest care so as to get a good looking and strong job.

"Robert Little, our engineer, is now completing the topographical map which Landscape Architect Richey needs for planning location of parking area, administration headquarters, camp ground and complete Master Plan.

"Our archaeologist, Ted Amsden, is finishing a map of the immediate four townships which corner right here northwest of our Monument line. On this map there is being marked the major ruin sites so they can be found by future scientific parties.

"We found that as the work of examining ruins became more remote, owing to distance from our improvised headquarters, it was necessary to abandon the daily trip with saddle horses and resort to a car so that the members of the party could go out and return with their collections of sherds, etc., by nightfall. We are now about ready to turn over to the institutions the sherd collections the party has made. A comprehensive report of the region is being written up by Mr. Amsden.

"Our young lady sign painter, only woman C.W.A. we had, has finished some 60 signs in all for the many ranch, road, water and main roads which traverse this country. We have now placed the signs which prevent the visitor from getting lost in all the County to the east of us as far as the Ice Caves and Grants. Another batch of signs will be placed toward Ramah, another towards Atarque and another group will enable the traveller to find the Monument from the Quemado and Techado direction. A total of 250 miles of road will be posted with signs.

"State Road 32 from the Monument to Techado has recently been improved by ranchmen working under C.W.A. and this holds true of the other roads mentioned above.

"The most ambitious signs we undertook are the two attractive oak carved signs with vermilion lettering following the script of the Don Manuel De Silva Nieto Inscription (1629) on the Rock. One of these signs will be placed at Grants where the road takes off to El Morro and the other at Gallup where the El Morro road leaves 66 just west of town.

"The oak timbers, mortised and braced by iron bars will support

the signs and we think will be so attractive and unusual that the passing tourist will catch his breath, stop, read and perhaps follow the arrow pointing out to our Monument.

"These signs will be finished in a few days. I am sure they will excite the wonder, and, we hope, the admiration of all who see them.

"We have hauled 275 cubic feet of rock for our parking retaining wall and for the headquarters building and have the rock neatly stacked where it will be handy when the time comes. We urge you to see that this is soon.

"There is still a great deal of need for employment though many of the men who have been working for us have now commenced planting or at least plowing while others have gotten jobs in other places. Some look forward to being employed in herding and shearing work of the sheep men and others plan to get positions with road and Indian projects.

"The great snowfall of February 24 was a life saver for the farmers and stockmen for with the additional moisture which has fallen since I would say that the prospects for a green spring are good. Wool prices are a bit drabby but still much better than last year. The Navajos think they will get 25 cents per pound for their wool in the grease while American raisers are holding for thirty cents. Lambs are being contracted for 7 cents per pound for November delivery. Steers are also being bought up and last year's bean crop is pretty well cleaned up. General conditions have greatly helped here in the country where all live close to the soil.

"Mr. Richey and Mr. Hamilton have both been here several times and kept us guided in our work so that we did not make too many mistakes. On March 2 when they were on their way out they let Mr. Hamilton's new Ford sedan take them so fast into a side ditch filled with snow that they became helplessly stuck unable to move ahead or back up though every time they started the engine they found they were able to go down deeper and deeper into the snow and mud. Their patience and fortitude was exemplary on an empty stomach and equalled their gratitude when I drove over the hill with a crew of workers from El Hierro. By main strength of a New Mexico frijoles, carne and chile diet the men lifted that car out of the hole and onto the road so they were able to return to the warmth and food so welcome as night comes on at this altitude of 7,000 feet.

"Visitors are beginning to come into the Monument from the east from road 66 in ever increasing numbers. Among those who come this month was Chief Ranger Carl Lehner of Carlsbad Cavern who came with a letter from Superintendent Boles. Mr. Lehner and his charming wife and interesting little boy drank up the beauties and values of our Monument with great pleasure. They were especially struck with our trail work and promised to come back. Mrs. Lehner is the daughter of one of the Kolb Brothers of Grand Canyon fame whom I had the pleasure of meeting many years ago.

"With Mr. Richey and Lyle Bennett, I visited Bandelier National Monument last month and was amazed at the great work being done by the C.N.A. crew both in roads and archeology.

"I took the time off from the work to visit Fort Defiance, Arizona, Indian Agency, where I met many Interior Department employees including Mr. John Collier, who again struck me with his fine sincerity and helpful

plans for Navajo progress. I think Mr. Collier the most understanding Indian Commissioner who has ever held that office.

"I saw many of my Navajo friends as well as some of the Pueblos, including Tony Lujan and Manuel Lujan, of Taos. The interest shown by the Navajos in the new deal, with its comprehensive plans for their welfare, was intense, intelligent and favorable.

"The discussions about range control and grazing were most interesting to me and were very vital to this tribe of 45,000 Indians who own one fiftieth of all the sheep in the United States.

"The real purpose of my visit there was to get in touch with the Commissioner and his expert in lands, Mr. A. M. Stewart, and to secure their cooperation on a land trade for extending our El Morro boundary. I found them entirely friendly and they promised to work out a plan whereby the Indian allotment adjoining our west line can be added to our 240 acres, thus making us 400 acres and giving the Indian the land further west, which is of equal value to his family for life and grazing.

"There are other land problems to be worked out here at our Monument which will take more time but are very essential to give our Monument proper setting and protection.

"I am expecting you to visit us soon, now that the C.T.A. pressure has let up. We are down to 15 men compared to 58 when in full swing. All have enjoyed the work and been helped both from a health and financial standpoint.

Ever."

AZTEC RUINS NATIONAL MONUMENT. Johnwill Ferris, Custodian, Aztec, New Mexico.

"Dear Boss:

"Evidently the weather man has his tables turned and we got our summer when we should have had winter and now that spring is definitely announced, our weather is threatening and spits of snow occur from time to time. This, however, is no hindrance as yet to the work and I am pleased to report good progress in all projects.

"Our visitors total 429 for the month with Sundays peak days. Yesterday I counted 77 of this number. It was our pleasure to entertain Superintendent Leavitt and his wife, of Mesa Verde, and we appreciated their visit very much. It is hoped that they can see their way clear to get down our way very often.

"We were quite surprised when Bob Rose dropped in for a few days and we hope that both yourself and Huch will pull the same stunt on us. We were particularly pleased to have Bob drop in as it was about this time that we were confronted by some problems on our museum index that needed his attention. We had hoped that he would be back by this time with Carl Russell and Louis Schellbach. We are anxiously awaiting their arrival in order to go over museum plans with them.

"All Public Works at the Monument has been centered on our drain and from rumors I hear this drain is getting us in bad with the Washington Office since someone has the impression that we are excavating. I have tried to impress in my archaeological report that such is not the case and was furthest from our minds in crossing the area wherein these finds were encountered. We have our ditch up to the ruins proper now and by

the end of the week hope to start across the plaza. It is so deep that we are having trouble getting rid of all the dirt. We expect to have a team and scraper get this away after today. We are also starting, as of this date, two teams hauling gravel for partial refill about the tile across the plaza.

"We contacted the Reemployment Board several times for complete clearance on all Public Works men. It was necessary to obtain new cards even though some of our Civil Works crew are being used on Public Works, having been released from C.W.A.

"Our Civil Works has moved along smoothly as anyone could ask. Project 1, which was the removal of the barn, is of course complete and is merely a matter of history from our standpoint now.

"Project 2, the fence, was completed and while we still hope to cement in several line posts, the fence itself is complete. We almost have to laugh at putting up a fence as sturdy and stock proof as we have and then have Chuck design a splendid and inviting entrance which he will not allow closed. The entrance will present a serious problem from the stock standpoint and we have yet to figure adequate means of excluding all animals from our parking unit. Anyway Chuck will devise some way of helping us out and we are mighty proud of the entrance he has given us. The lettering on the big redwood beams has been painted and the carving is very good and certainly very effective. This is certainly a monument to Chuck's genius.

"Project 3, the parking area, has been at a standstill since the gravel was spread and its completion awaits only ample time and material.

"We have made seemingly little progress in our cleanup since we have so much torn up that it is hard to see where several days have been spent in clean-up work. We were, however, fortunate enough, by noon of March 21st, when we released practically all our Civil Works men to have completed the patio, all its walls and the pond build for in the Master Plan. Added effort was concentrated on this area that all walls around our administration unit would be uniform by gunnite coating. The Gunite Concrete and Construction Company, of Kansas City, were the low bidders on rental of gunnite equipment and their work for us has been most pleasing. We have a very uniform and desirable surface on all cement walls so far constructed. We were also able to finish both the interior and exterior of our well house. The front of the Morris residence, comfort station, and parapet walls in both the residence and garage were also gunnite coated. These added features, while not originally planned, were of vital importance and would have demanded attention sooner or later at best.

"Speaking of the well house, I might mention that seemingly in accordance with our good fortune, our gunnite coating was completed Friday night and Saturday afternoon our pressure switch went to pieces and consequently we went without water for a time. A second hand switch was purchased from a oil air compressor and a wire immediately dispatched to Crane Co. for parts needed in our other switch. The constant use of the water in all concrete work, particularly gunnite usage, has been a drain on our pump and has necessitated the above repairs and a new belt. These purchases are the first of any consequences spent on our pump in its three years of use.

"It was our intention to tile the irrigation across the administration

area but in opening the ground wall after wall was encountered and so Chuck finally gave us permission to abandon this tiling and allowed us to put in a cement bottom and rock an open ditch. This will make a very neat appearing feature and will avoid endangering any walls.

"The archaeological reconnaissance work is of course centering about pottery repair and museum indexing. A complete report was transmitted to the Washington Office regarding this division. It is hoped that this report was in keeping with Associate Director Demray's letter of February 15, 1934.

"All features of our entire setup have progressed satisfactorily. The men took the lay off in splendid manner and each seemed thankful for the work he had received rather than disgruntled because he did not receive more. It is an inspiration to work with such individuals and should a crew of men ever be necessary at Aztec Ruins, our Civil Works set-up has certainly given us an excellent list to choose from.

"We appreciate the help and assistance your office has given us on all our problems and want to thank each member of your staff for this help.

Johnwill Paris."

SOME MORE WHITE SANDS. Laurence Cone, Landscaper.

"Dear Mr. Pinkley:

"This seems to be the time for the report on the work here at the Sands -- and I am glad to report that all is going well. The work on the road is fast coming to the point when one can say that every one can go out into the Sands as far as they want to -- up to this point there have been times when you did not want people to try the road for there were places where cars were liable to get into the drifts and from which it would be difficult for them to get out. Now there is small danger of that for the road is fast going past these places and if usual care is taken there is no great danger of anything other than getting the thrill of their lives. I think that every day people desire to get out into the sands, -- really out into them -- into the real sands, where they are white and where there is no growth, -- then there is something for those few to enjoy. I say far far there have been many who started out but the sight of the trucks and fresnos and teams have scared most of them back.

"The first parking area is going well and the stone work is starting and there are signs that we soon will be announcing to the public that the Great White Sands of Alamo Verde are ready to welcome them. The road past the first parking area is shaping well and, strangely enough, it makes the white sands even whiter by contrast, and to make them whiter is some feat because they are dazzling now.

"The work on the wiping out of the first made roads is going well and where there were narrow streaks through the meadows there are now no traces and the sands stand out as the main attraction. You would never know in most of the places that there were ever old roads for there are now yuccas and sage and here and there cactus growing naturally out of the soil.

"I am looking forward to the day when the barrier will be down and every one may enter, rest, and appreciate.

Laurence Cone."

"Dear Boss:

"March found me in the Navajo National Monument in Hosteen John's country. I intended to visit this Monument and look over the C.W.A. work from an inspection and engineering view point but continually found myself viewing the ruins from the tourist eyes. Even Tom Charles couldn't do justice to this Monument.

"The freezing weather had caused the abandonment of the trail work about midway between Marsh Pass and Keet Seel Ruin. Many of the dangerous places have been removed. The elimination of many bad creek crossings has been accomplished. The entire trail has been improved but it still is far below the Park Service standards. It is hoped that the next Public Works allotments will include sufficient funds to eliminate the rest of the ice and quicksand crossings.

"The careful work in repairing Keet Seel Ruin impressed me favorably. It was an excellent start but funds and men were too conservative to more than complete a small portion of this immense ruin.

"Erosion control is an undertaking at Navajo National Monument that requires engineering study. During the past fifty-five years the flat valley in front of Keet Seel Ruin has eroded away to a depth of as great as 70 feet for a distance of several miles. This valley was traversed a few years ago by a wagon road. Now it is only accessible by horse during low water. If this rapid erosion is not checked soon, there will be only a rock canyon where 80 years ago there was a lake and fifty years ago there was a meadow. Most of the willow trees in the whole valley have died, caused by the lowering of the water table. An engineering study of this water problem would probably result in the construction of stone dams at several points where the rock outcrops. This would cause the wash sand to back fill the arroyo to the height of the dams after which another dam could be constructed and the bottom of the arroyo could be again raised. In the course of ten years the arroyo could be completely filled by nature and vegetation again restored to the floor of the valley.

"The photographs show the effects of drainage over the face of Keet Seel Cave. This drainage has caused much damage in the past. Entire sections of the ceiling have fallen. If this surface water is continued to be permitted to enter the cave this damage will increase. This may be eliminated by an 800 foot surface ditch above the cave to cut off the drainage of about 30 acres of slick rock. The cost of constructing the ditch will be the entire cost of the protection as there will be no upkeep required.

"On my way out I visited Betatakin Ruin and the new sheep trail into the canyon. This trail makes a fence at Betatakin imperative to prevent damage to the ruins and shrubbery by sheep. I believe that the entire canyon should be fenced against sheep and goats. I noticed many goats grazing on the greasewood and sage brush. There is not one cottonwood left on the entire monument, all have been eaten by goats.

"I arrived that night at Kayenta, Arizona. By the way, in speaking of post offices, Kayenta is the official post office for Navajo National Monument and has the distinction of being the greatest distance

from the railroad of any post office in the United States., a matter of some 175 miles. On the following day I drove through Monument Valley and arrived at Canyon de Chelly in time to eat lunch with Cozy McSparron and Engineer Weintz and then proceeded to Albuquerque that evening, and Bandelier the following morning.

"I spent ten days at Bandelier on the entrance road, equipment and engineering drawings. During that time I made one trip to Capulin Mountain regarding the road construction, culverts and boundary survey.

"On the 14th I visited Great Quivira and inspected the new entrance road and parking area. Foruma Scharf was relieved from duty and his position was filled by Mr. E. B. Smith.

"On Friday, the 15th, I arrived at the Great White Sands at night. The following morning, accompanied by Custodian Charles and Engineer Chase, I covered the entire project, discussing grading, plating and parking area. I left that night for Casa Grande arriving there at 3:00 a.m. Sunday.

"After getting my office work herded together, I made a one day trip to Tumacacori looking over cattle guards, drainage and walls. After a few days in the office I expect to return to Bandelier to reorganize the third period of the C.C.C. camp.

Walter G. Attwell."

CLOSE.

And so, Chief, we come to the end of another month. I believe you will catch from these reports that the Southwestern Monument personnel has been pretty busy and have had a pretty good time at their work.

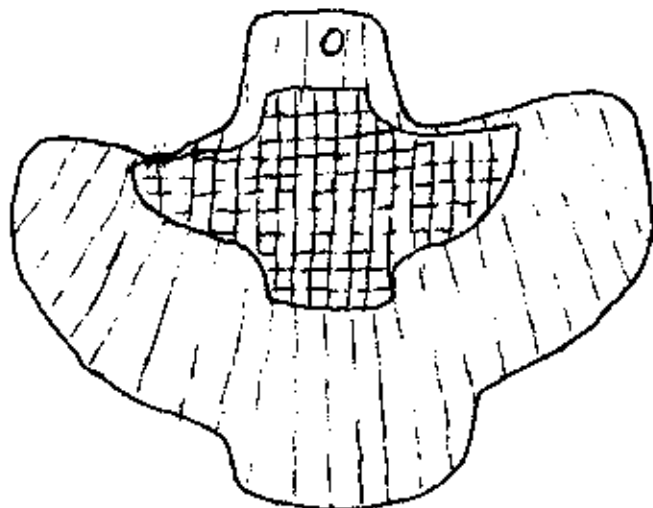
At headquarters we have kept our heads above the flood of paper work and the office work is practically current. We had supposed that the tapering program would taper the office work, but as the pay rolls grow lighter the demands for reports grow heavier and it looks like we will be filling our rooms of reports long after the C.W.A. is a matter of ancient history.

But it has been a good month as we look back on it and we have had a lot of fun along with the snarls and kinks that take time and temper to unravel.

Cordially,

Frank Pinkley

Frank Pinkley,
Superintendent.



-Thunder Bird Pendant.
Natural Size.

LAST MINUTE EXCAVATION NOTES FROM MONTEZUMA CASTLE JOB.

"Cyst Grave 8, which was not cleaned out until after the last monthly report had been sent in, has turned out to be by far the most important burial uncovered in the vicinity of the Castle. The burial chamber itself was typical of the cyst graves already described in the report, situated under a ledge and sealed with limestone slabs in front. The contents, however, were singular among this group in that the undisturbed remains of the deepest inhumation were unattended by the scattered bodies of other burials.

"The skeleton was that of a middle aged female, in the prone, extended position, arms and legs straight, and face straight up, with head to the west. The skull showed the typical occipital flattening, and was removed intact save for a portion of the basal aspect, although the rest of the bones were in very poor condition.

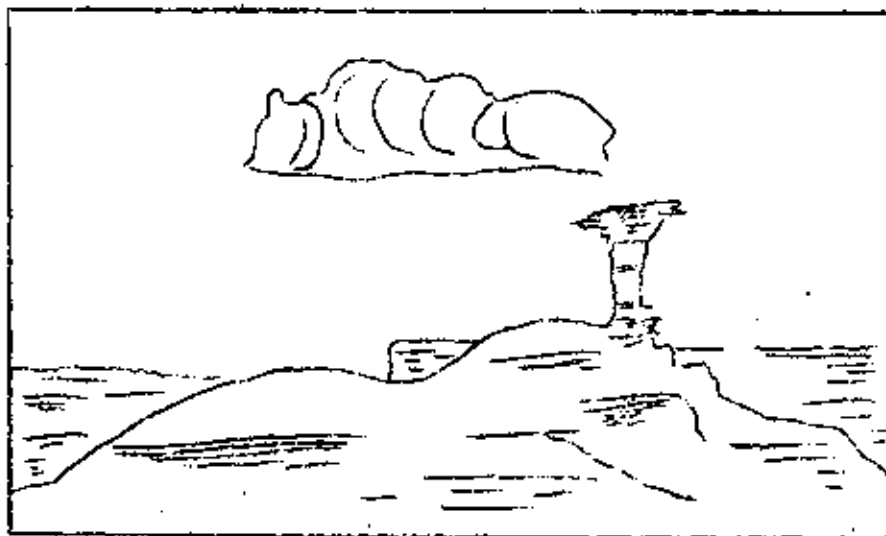
"Directly underneath the mandible was found the Thunder Bird pendant shown in the above sketch, the base carved from a clam shell and the turquoise sets glued to a strip of bark which in turn was glued to the shell. The adhesive was probably mesquite gum. Much of the bark had rotted and the sets had fallen off, but the cross hatched portion of the sketch shows where the stones remained, and there was sufficient outline on the shell to indicate the probable form of the setting as in miniature of the shell. 83 pieces of turquoise were found which belong to this pendant. In addition to this pendant, this woman was possessed of turquoise ear pendants, and a number of tiny disc shaped beads found may have once been on the ear pendant string, as the beads were not sufficient in number to make a necklace.

"Resting over the left hand was a deep, undecorated red bowl, and three inches from the left fibula, to the side, was a large semi-spherical polychrome bowl, of a type tentatively classed as Winslow Polychrome.

"No other artifacts were found in this grave, and no recognizable signs of matting or other burial wrap. However the Tusayan Black on White bowl with vertical loop handle described in the report may have belonged to this burial, although it was found entirely outside the grave, on top, but directly over the feet.

Earl Jackson."

U. S. DEPARTMENT OF THE INTERIOR - NATIONAL PARK SERVICE



Eagle Nest Rock, First Forest

Petrified Forest National Monument, Holbrook, Arizona

April 2, 1934

The Director,
National Park Service,
Washington, D. C.

Dear Mr. Director:

The narrative report of activities in Petrified Forest National Monument for the month of March, 1934, is respectfully submitted.

GENERAL:

Work has continued on the various C.W.A. (F-68, U. S. No. 7) activities in this monument with fair speed, but there will be several jobs incomplete when the program ends on April 26. The following jobs will be fully completed:

1. The First Forest-Eagle Nest Road. This is a road about one mile long, graded through the First Forest, making a loop around the Eagle Nest Rock and returning to the First Forest parking area. This will be a very nice road of 14-ft. standard con-

struction, well graded and drained, and surfaced with 4 inches of gravel. This road will provide an opportunity for people who are not able to walk over the footpaths in the various forests to drive comfortably through one of the finest areas in the monument. The road has also been constructed under careful landscape supervision.

2. The drift fence around forty square miles of the monument, consisting of thirty miles of 4-strand barbed wire with juniper posts spaced $16\frac{1}{2}$ feet apart. This is a very fine thing and is for the purpose of excluding all cattle from this area so that the range will come back in first-class condition and provide a refuge for the antelope, which will have free movement back and forth through the monument.

3. The landscaping at headquarters is completed in as far as this may be done, pending the success or failure of water development at headquarters.

4. The campground development is also completed, pending development of water for the planting of shrubbery and piping of water into the campground area.

5. The installing of stone steps on Panorama Knoll and extending the Third Forest Trail to Agate House.

6. Field work in connection with the archaeological reconnaissance is completed with the restoration of Agate House, as stated in last month's report, and now three rooms in the Rio Puerco Pueblo have been cleared out and the walls have been rebuilt on the original foundation to a height of about three feet. In the excavation of these three rooms, one of which was a store room which had evidently been destroyed by fire, the remains of a great quantity of food products in a charred condition was found. This consists of corn on the cob, in very good condition, pumpkin seeds, beans, squash seeds, and burned globular masses, which were probably pumpkins or squash. These have all been carefully preserved for future observation. The amount of pottery found in this pueblo was rather small, indicating that although the pueblo covered more than an acre of ground, the occupation did not cover a long term of years.

Mr. C. B. Cosgrove, Jr., who was in charge of the work on the ground, has left for Santa Fe, New Mexico, where he will be engaged for the next two weeks in the preparation of reports in collaboration with Dr. H. P. Mera of the Laboratory of Anthropology, who was the archaeologist in charge of the work. Jesse L. Nusbaum, Director of the Laboratory of Anthropology, was in the monument on March 25 and expressed himself as very happy that this work had been accomplished and that the Laboratory was able

to cooperate with the National Park Service in it. After examination of the restored Agate House, which was apparently of greater interest than he had anticipated, Mr. Nusbaum said, "I still say there ain't no such animal."

I wish to say that I consider it very fortunate for us that the Laboratory was able to cooperate with us in this work, and that they were able to have Dr. Mera in direct charge. I feel sure that when the complete report is published a considerable contribution to the archaeological history of the southwest will have been made.

The projects which are incomplete or will be partially unfinished at the end of this program consist of:

1. Cleaning ditches and dressing banks on about four miles of the highway.
2. The one-mile road from headquarters to Pictographs.
3. The 1/2-mile trail to ruins situated a mile from headquarters.
4. The side road to Newspaper Rock.
5. The Blue Forest road.
6. Blue Forest Trail and proposed bank protection at the Rio Puerco.

It is hoped that we will be able to finish up these projects under an additional F.E.R.A. program, the details of which are now being taken up with the State Administrator.

WEATHER:

Weather conditions have continued good through the month, with some high winds, but not as much as usually expected at this time of the year. A table of weather statistics follows:

High temperature for the month was 83 degrees on the 17th, low was 24 degrees on the 10th. Mean maximum was 68.3 degrees, mean minimum 34.6. Precipitation for the month totaled .40 of an inch. There were 28 clear days, 1 partly cloudy day, and 2 cloudy days.

ADMINISTRATIVE:

Our office work has been kept up to date on all matters, including Civil Works. We are still having many complaints from vendors who have not received their pay for materials and truck

services which have been rendered in some cases at the very beginning of the project. They feel there must be something wrong in not receiving their pay after such a long period of time.

The monument has been inspected periodically by the Superintendent and routine matters are proceeding in a satisfactory condition. Assistant Engineer C. M. Bell, who was detailed from the office of the Chief Engineer at San Francisco, has been in immediate charge of the work, and Mr. H. J. Cremer was in charge of landscape C.W.A. work until March 23, when he departed on account of our arbitrary reduction in Civil Works force.

Assistant Architect Harry Langley was in the monument on the 29th and 30th, and went over all the projects being constructed under Public Works with Resident Engineer L. G. Watters of the Bureau of Public Roads, who is in immediate charge of all major road construction. He went over all other projects with the Superintendent and found them in very satisfactory condition from the landscape point of view.

PUBLIC WORKS PROJECTS:

The only Public Works project we have under force account is No. F.P. 129.14, Water and Sewer Development. Under this project work has continued on the test well at headquarters, with the exception of several shut-downs for various reasons. At the close of last month I stated that the "frozen" casing had been removed and that the shoe was being drilled out of the hole. Work has continued on deepening the hole to a solid impervious foundation in the Coconino sandstone and the casing is now seated in this formation at 745 feet. On March 29 about three cubic yards of gumbo clay in a fluid state was forced through the casing until muddy water circulated through the top of the outside of the casing, and operations have now been suspended for a few days to allow this clay to settle. We have strong hopes that the flow of salt water will be shut off. In reaming this hole down to a solid foundation many difficulties were encountered. There were several places in which it seemed almost impossible to secure a straight hole on account of a harder formation on one side, which forced the tools to the other side, thereby making a crooked hole. The hole was filled with rock and drilled out, but still this crooked condition prevailed, so that finally two blasts were set off at these points in the hole, which remedied this condition, and the casing went down to the bottom without any further difficulty. Drilling on this test well will start again about April 5.

LABOR SITUATION:

The labor situation in this locality is probably not much improved, although many of the men we have been employing on

Civil Works have secured other jobs of their own accord, which helped us a great deal in the arbitrary reduction of thirteen men weekly, which had to be done. It is hoped that the additional programs under the F.E.R.A. will relieve this condition.

BUREAU OF PUBLIC ROADS:

The road contracts which are under way under the supervision of the Bureau of Public Roads with Public Works allotments are as follow:

Grading and draining of four miles of U. S. 260. Work is proceeding under a contract by Everly and Allison.

Approximately six miles of road north of the A. T. & S. F. Railroad is under a grading and draining contract by Leo Frost and this job is probably 75% complete.

Under another contract Everly and Allison are proceeding efficiently in the laying of .7 inches of crushed gravel on the regular monument highway.

Del E. Webb, who has the contract for constructing the overpass at the Santa Fe Railroad, which was suspended during the winter, has started in again on this job and the overpass will be completed in time for the heavy summer travel.

MAPS AND SURVEYS:

We have nothing to report under this heading except that the surveys and plans for all C.W.A. projects have been done under the direction of Mr. C. M. Bell and have been submitted to the Chief Engineer of the National Park Service at San Francisco.

RANGER AND MUSEUM SERVICE:

With only four men on the ranger force and the travel constantly increasing, it is inevitable that complete service to the tourists and full protection of the natural features of the monument cannot be accomplished. However, considering these difficulties, excellent service is being given to the public.

ANIMALS:

As stated, a drift fence has been completed around the monument to exclude cattle, and it seems that even in this short time of a few weeks in which the cattle have been excluded, the antelope have been seen in the monument in larger numbers than ever before. We hope that before many years a great number of these animals will be ranging in the monument a large part of the time.

TRAVEL:

Travel is good. Up to this time we show an increase over last year of 107% and the increase over the corresponding month of last year is 4711, or 64%.

For the month, Petrified Forest section, cars,	1,849,	people,	5,642
Previously reported,	"	9,061	" 24,186
Total to date,	"	10,910	" 29,828

For the month, Painted Desert section .,	"	1,456	" 6,437
Previously reported,	"	9,646	" 36,276
Total to date,	"	11,102	" 42,713

Grand total for the month,	"	3,305	" 12,079
Grand total same month last year,	"	2,353	" 7,368
Grand total to date,	"	22,012	" 72,643
Grand total same date last year,	"	11,414	" 35,075

Travel from all states was registered during the month, and also from the Phillipine Islands, Hawaiian Islands, and the Canal Zone. Foreign countries represented were Africa, Belgium, Canada, England, France, Germany, and Peru.

SPECIAL VISITORS:

Special visitors to the monument during March were as follow: Chief Ranger Lehnert and family of Carlsbad Caverns National Park, March 7; Hugh M. Miller, Chief Clerk, Southwestern National Monuments, accompanied by Mrs. Miller, March 15; Dr. C. H. Watkins of the Mayo Clinic in Rochester, Minn., March 15 and 16, guest of Superintendent Smith; Miss Leila Roosevelt, cousin of President Franklin D. Roosevelt, March 18; Bert Harwell, Park Naturalist of Yosemite National Park, accompanied by his daughter, March 19; Ben Thompson, Wild Life Division of the National Park Service, March 21; Mr. and Mrs. Ralph McDonald of Rocky Mountain National Park, March 24; Mr. and Mrs. Cosy McSparron, Canyon DeChelly National Monument, March 25 to 27, guests of Superintendent and Mrs. Smith.

ACCIDENTS:

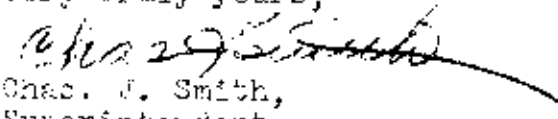
No accidents under C.W.A. have been reported except one or two minor ones, such as bruised fingers, etc. Two accidents have been reported under the road contracts supervised by the Bureau, one man being hit on the head by a flying rock from a blast and knocked unconscious, and another man sustaining a serious injury to his eye while cutting off wire material used in the basket ripping at Dry Creek Wash.

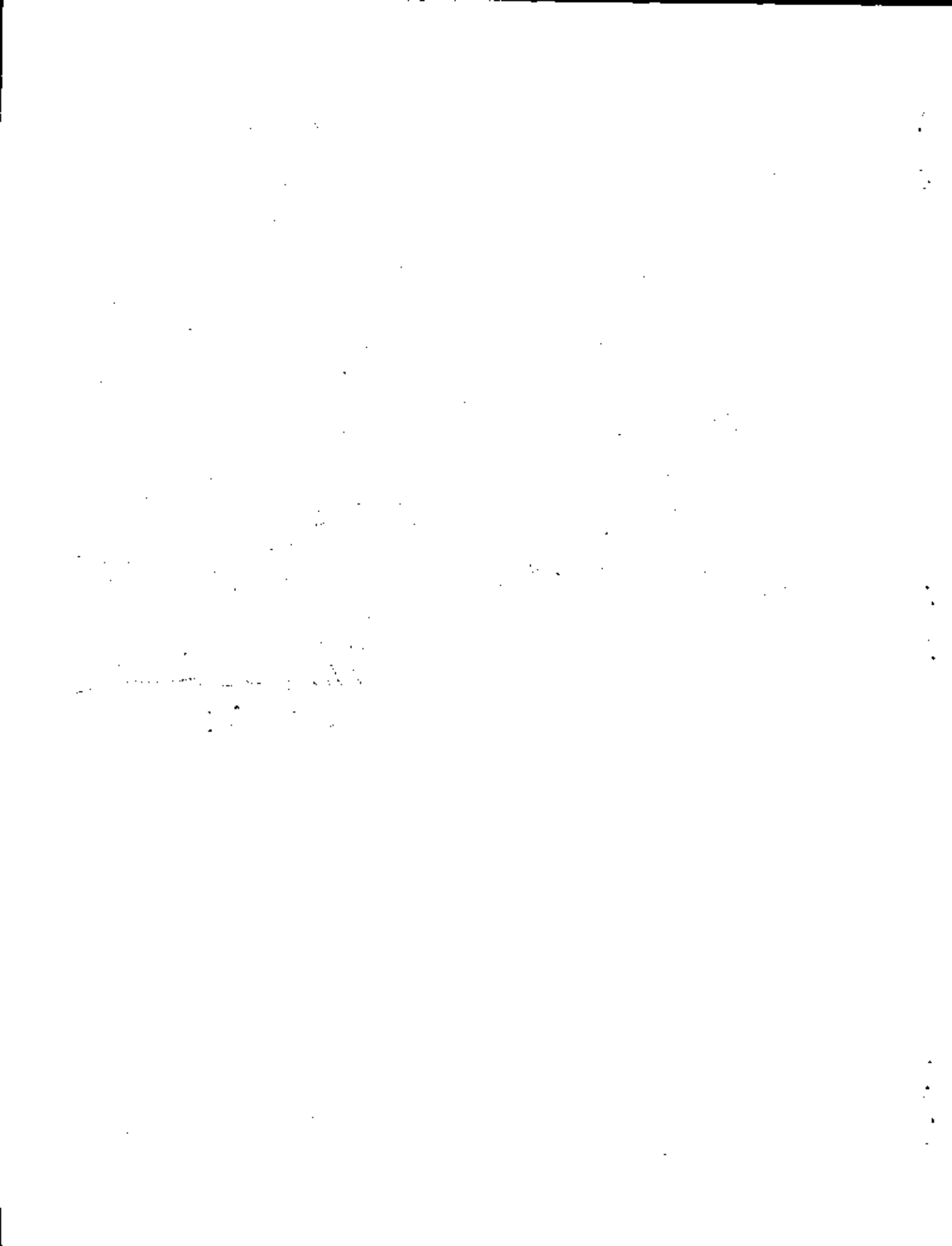
MISCELLANEOUS:

Considerable correspondence has passed between your office, myself, and Richard P. Schuster of Los Angeles, concerning the so-called Adolph Schuster collection of historic and prehistoric pottery, baskets, plaques, etc. This collection has been housed for a number of years in the Los Angeles Museum. It has been the desire of the Schuster family, who are pioneers in this region and have stores respectively in St. Johns, the county seat of Apache County, and Holbrook, the county seat of Navajo County, to have this collection in Petrified Forest. I am happy to state that we have now secured the transportation of this collection from Los Angeles and have it here ready for display. For the present it will be displayed in the cases which we secured from Mesa Verde National Park some time ago, in the east wing of the building at headquarters under a permanent loan from the Schuster family. The collection consists of 172 articles, including prehistoric pottery, old baskets, plaques, beads, artifacts, etc. I am looking forward to unpacking this collection with a great deal of pleasure.

Former President Herbert Hoover visited the Painted Desert Section March 28. No statement was secured from him but he seemed to enjoy the views on the Rim Road very much. This section, comprising 53,300 acres, was added to the monument by Proclamation approved by President Hoover September 25, 1932.

Very truly yours,


Chas. J. Smith,
Superintendent.



SUPPLEMENT TO THE
MARCH MONTHLY REPORT
OF
THE SOUTH-EASTERN MONUMENTS
****-*****

Shop talk, folks, and things in general.

REPORT OF ARCHAEOLOGICAL EXCAVATIONS
UNDER C W A AT CASA GRANDE NATIONAL MONUMENT.

Archaeological work at Casa Grande was carried on under my direction from December 11, 1933 till February 15, 1934. There were seven C.W.A. laborers from the beginning of work until January 22 after which time twelve men were assigned to the job but they worked only half time.

The work consisted of two operations; Operation I, obtaining stratigraphic tests from a group of three rubbish mounds and intensive work in a group of houses nearby (see Plate I); Operation II, obtaining stratigraphic tests from a rubbish mound and trenching the adjacent house block to determine whether or not a compound wall was present. Operation III lay about 150 yards east of Operation I.

When operations were begun, the sites were covered with the typical desert growths, grease wood, cactus, and an occasional mesquite tree. The rubbish mounds were inconspicuous and the house blocks less prominent. (see Plate IIa). In fact, the dwelling area of Operation I was located only after a great deal of exploratory trenching. The dwelling area of Operation II was apparent as a very low mound covered with sherds and dark soil but it proved not to be nearly as extensive as had been anticipated.

THE ARCHITECTURAL TYPES - OPERATION I

Type 1 house - Pit-house. Room numbers 3, 5, 7, 9, (See Plate IIb)

Form and size - Rectangular with rounded corners. Lengths - 14' 4" to 19' 7", widths - 8' 2" to 10' 10", depths - 14" to 24" at present. Probably about 10" deep originally.

Floor features - Fire pit in front of entranceway. May or may not have post holes encircling the floor. Probably all had posts but in some cases the posts were outside the limits of the floor and so were not evident.

Walls - Inside, walls were plastered with caliche up to the ground level. Outside, heavy plaster covered the posts and other solid structure.

Openings - Vestibule entranceway near the center of a long side.

Roof - No evidence.

Remarks - Room 9 is the only one of this type to show many posts in the floor but it is felt that in the others, the posts were just outside of the floor as a lip at the edge of the floor indicates that a plaster was carried up from the floor. These houses do not all face the same direction.

Type 2 house - Pit-house. Room numbers 6, 8, and 12, (see Plate III a).

Form and size - Straight sides and semi-circular ends. Lengths - 14' 0" to 17' 6", widths - 8' 6" to 11' 4", depths - 18" to 36" at present. Original depth probably about 9" to 24".

Floor features - Fire pit in front of entranceway. Post holes encircle the floor.

Walls - Caliche plaster reinforced. Largest beams indicated by casts in the plaster were about 4" in diameter. Openings, vestibule entranceway near the center of a long side.

Roof - No evidence.

Remarks - Room 6 shows no post holes but a series of shallow depressions about 4" in diameter, near the perimeter of the floor are felt to have been caused by posts resting directly on the floor. These houses do not all face the same direction.

Type 3 house - Pit-house (?) and surface house. Room numbers 2, 4, 10, 13, 14, 15, (see plate III b).

Form and size - (More or less) rectangular having straight sides and angular corners. Lengths - 14' 3" to 17' 3", widths - 6' 10" to 13' 8", depths - 3" to 29" at present. Original depth probably 0" to 20". (about).

Floor features - Fire pits are located near the center of a long side of the room but do not occur in all houses of this type.

Walls - Solid caliche 10" to 14" thick, smooth plaster on the interior.

Roof - No evidence.

Remarks - Rooms 4 and 13 may possibly have been contiguous but 13 was in such poor condition that its walls and floor could not be followed with any degree of accuracy.

No compound wall was encountered on this site.

Operation II - The dwelling block was trenched to see if a compound wall was present. No compound wall was encountered but rooms were built contiguously in some instances. The walls were caliche 12" thick and floors varied from 5" to 25" below the surface. No rooms were entirely excavated so no details can be given.

Mixing pits - (See Plate IV). A number of these pits varying from 18" to 30" in diameter were found on both operations and 23 of them have been located on the map of the entire site. They have caliche walls which are extremely hard and with one exception they are roughly hemispherical. Their identification as being the pits in which the caliche wall material was mixed is based on two instances where the pits were found still containing the caliche mortar. They occur in areas which show no other occupation and above floors of type 1 and type 2 houses but never above floors of type 3 houses.

SUPERPOSITION

The pottery content of type 2 houses and type 3 houses showed no difference but from two instances where all three room types were superimposed one upon another, the sequence of house types is clearly shown. The first instance - room 5, type 1 early; room 6, type 2 middle; room 4, type three late. The second instance - room 9, type 1 early; room 8, type 2 middle; room 10, type 3 late.

FEATURES.

Unusual features were found only in the late type of house. Feature I in room 2 is a flat triangular rock set three inches into the floor and on it are two rounded boulders, one of which is painted red. (see Plate V a). Feature II in room 4 is a raised "disc" of caliche approximately 24" in diameter and an inch high. It is thought to have been a basket rest or a hearth. The room is without a fire pit, (see Plate V b). An incised design was found on a piece of wall material from room 4. It was indistinct but a little could be made out from it, (see Plate V c).

POTTERY.

The local types - All of the pottery of this site was typically Hohokam. With the exception of Gila Redware, all the Hohokam types were represented in sherds and whole pieces. Santa Cruz Red-on-Buff jars were not common. Effigies - Two pottery effigies were recovered from the site, neither of them complete. Both were animal forms bearing considerable resemblance to a dog. The smaller of the two, having a length of about two inches, was apparently an ornament broken from the piece of which it was a part. The legs indicate that it was on a spherical surface, possibly a large jar. Stratigraphy and intrusives - Operation I - All horizons between late Colonial and Classic are represented. Intrusives were few and were judged to be Pueblo II sherds. No polychrome was encountered. Operation II - stratigraphic tests indicate a short period of occupation, most of the sherds being Classic. Intrusives were Pueblo III. No polychrome sherds were recovered from below ground but a very few were found on the surface. Gila Redware appears in Operation II but not in Operation I.

OTHER ARTIFACTS.

Stone work - Largely agricultural. Thin scrapers and hoes were the most numerous specimens recovered. Three-quarter grooved axes, a trough matate, and rectangular flat manos ground only on one side were also present. Ornaments - Were all of shell excepting one small stone bird effigy drilled for use as a pendant (?), and one small fragment of a turquoise pendant. The shell pieces indicate the use of bracelets, rings, pendants, and beads.

DISPOSAL OF THE DEAD.

Cremation appears to have been the only method employed. One cremation pit and 22 cremation burials were uncovered. The cremation burials were of two main types - 1. (a) Calcined bones alone buried in a pocket, (Plate 6a). (b) Calcined bones buried in a pocket with sherds or other small artifacts, (Plate VI b). 2. Calcined bones placed in a pot and buried (a) with, or (b) without other offerings, (Plate VII a and b). The pots containing bones were found in all positions from right side up to upside down. The various types were not separated in different burial areas and many stray sherds and bones were found all through the fill. Probably the same burial ground was used during the whole period of occupation of the site, late burials disturbing earlier ones thereby scattering bones and sherds throughout the burial area.

CONCLUSIONS.

Dating - Unfortunately there is no direct means of dating the ruins in the Gila River Valley but we can get some idea, indirectly from the intrusive shords which are datable. From datable intrusives in Operation I, I can only say that the site was occupied at about 900 AD. It does not necessarily follow that this represents the earliest date of the site but it is the only date represented by intrusive shords. From the indigenous types represented, I should judge that the site was occupied for several hundred years beginning probably before 900 AD. Part of the occupation of the site represented by Operation II, I feel to have been contemporaneous with the last period of Operation I. This is shown by the similarity in pottery and architecture. That Operation II was occupied after the abandonment of Operation I cannot be doubted as polychrome and Gila Redware are found only on the second operation. The approximate on Operation II is 1250 AD. to 1350 AD. The time relations of the sites represented by Operations I and II compared with other Hohokam sites are shown in Plate VIII.

Architecture - The architectural types uncovered in this work substantiate the general Hohokam types as defined at Roosevelt ;9:6 and the Greve Site during the early periods and fits well with the later types previously known from Sacaton ;9:6 and Sacaton :9:1 excepting in the lack of a compound wall. The only explanation for this lack that has been advanced to date is that other dwellings nearby which were occupied contemporaneously had compound walls so in time of emergency the inhabitants of these dwellings could temporarily abandon them and retreat to a nearby compound. This explanation is suggested merely as a possibility and not as a proven fact.

Each of the architectural types must be considered an indigenous Hohokam development as each of the types is found in pre-polychrome horizons. The evidence from this site alone would indicate that the compound wall came in after polychrome contact and therefore might be considered a Salado innovation, but the fact is refuted by other sites.

Pottery - The absence of Gila Redware except in the late part of Operation II, immediately before the arrival of polychrome, may indicate that Gila Redware is a Salado ware and not an indigenous Hohokam ware as has previously been supposed. Approximately a dozen other sites represented by sherd collections at Gila Pueblo tend to substantiate this idea but the point is by no means proven yet.

recovered

The specimens/during this work have been deposited at the museum at Casa Grande National Monument. The shords from surface collections and from stratigraphic tests have been deposited with Gila Pueblo, Globe, Arizona. Complete copies of the field notes are to be found both at Casa Grande National Monument and at Gila Pueblo. Blue prints of the original map showing all excavations are at The National Park Offices, Washington, D.C., Casa Grande National Monument, and at Gila Pueblo.

No information regarding the excavations can be gotten from again visiting the site as all excavations have been back-filled and the site left as nearly as possible in its original condition. There are no open trenches or pits and no piles of dirt or rubbish.

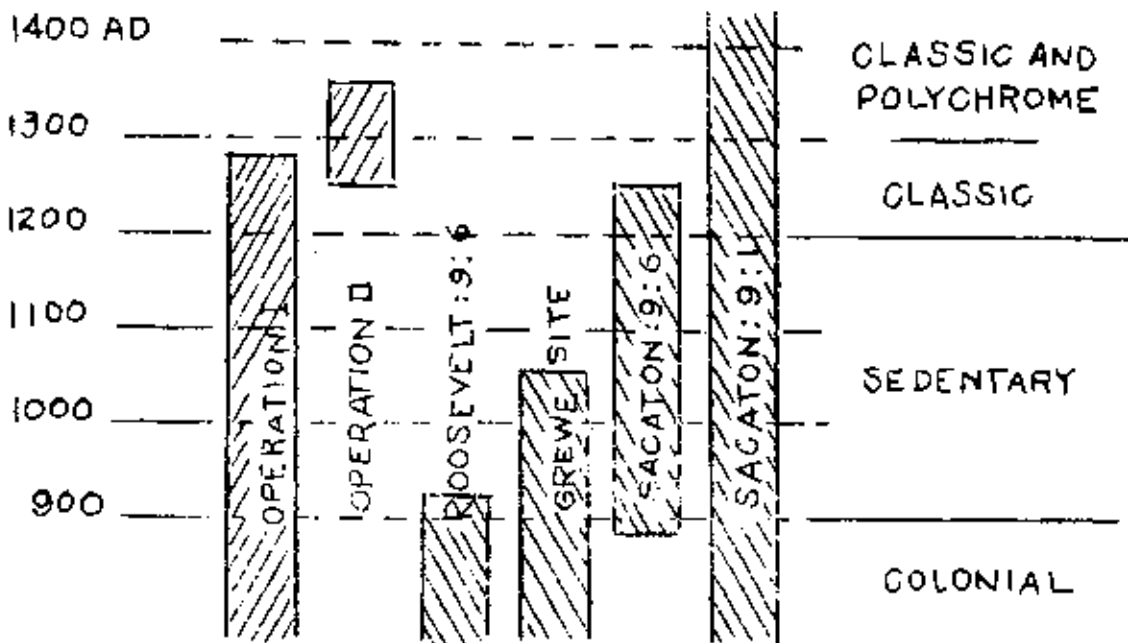
Report submitted March 22, 1934.

RUSSELL HASTINGS.

BIBLIOGRAPHY.

- Gladwin, Winifred and Harold S. - Medallion Papers Nos. III, IV, V, VIII, and XIII.
 _____, E. W. - Medallion Papers, No. XI.
 Woodward, Arthur - The Grewe Site, Occasional Papers No. 1, Los Angeles Museum.

E



TIME AND PERIOD RELATIONS OF OPERATIONS I AND II TO OTHER SITES

E.

BUILDING UP THE MESA VERDE MUSEUM.

The Educational Division of the Berkeley Office has recently broken out with a new idea which I think ought to receive a little more publicity than they originally intended it to have. We therefore copy the greater part of it into this month's report. It is written by Louis Schellback III and sent out under the authority of Ansel Hall. Here it is:

SOUTHWESTERN ARCHAEOLOGICAL PROGRAMME.

It is suggested that thought be given at this time to the problem of our Southwestern Monuments and their educational program on archaeology. It seems that now as never before we should concentrate upon formulating a unified educational plan for presenting our archaeological features and the story of archaeology to the public in the area.

How best to utilize our opportunities with the cooperation of all concerned is the problem. At present there seems to be no such plan for a unified museum development in the Southwest.

With each unit working independently without a unified plan for the whole group, there is the ever present possibility of excessive duplication and a disregard for systematic arrangement of the archaeological story as a whole. It does not seem necessary for each and every museum unit in our Southwest to attempt covering the field of archaeological research in their displays or exhibits. To attempt that adequately would entail a greater collection of artifacts than is now available at any one of them. The mass of technical information presented would make for confusion in the minds of the majority of our visitors.

At only one place should the entire story of archaeology be worked up in displays and exhibits, bringing together the detailed exhibits or stories of our archaeological units in our Southwestern National Park and Monuments system. This should be one of our major sites.

The most logical to the writer would be Mesa Verde National Park, a major unit and the only archaeological park we have. Despite the argument advanced that the number of visitors is not as great as at other places, the fact still remains that because of its location within the archaeological field, the number of its spectacular ruins and sites, and the support it no doubt will receive from scientific institutions as development goes on, archaeology will always be its main feature. It will be a place where archaeological material is assembled for the student, teacher and public interested in archaeology mainly.

Here would be the coming together of all things archaeological. Here archaeological tours could be started on their way through our system of archaeological Monuments and Parks, or be the final stop in the system where all they have seen and heard before is summed up for them in a graphic portrayal of the whole.

For some time there has been the germ of an idea in the mind of the writer of a plan whereby every archaeological monument in the Southwest would take its place in an archaeological scheme of the whole. Each would have the individual story of its ruins and interpret also the archaeological sub-area of which it is a part.

The formulating of such a plan would be the beginning of what in the future would develop into an Educational Circuit or Archaeological Tour of the great Southwest. (This is in line with suggestions of Dr. Bumpus and Dr. Bryant's letter to Hall, February 5, 1934.)

A movement should be started and the problem discussed with the Educational Advisory Board and the superintendents and custodians concerned before some of the Parks and Monuments start planning museums. Otherwise, each unit will be infringing upon the domain of the other. Close cooperation is needed of those concerned which, the writer feels sure, will develop an educational feature that will be a credit to the Service and a boon to the touring public.

Accompanying this paper is a map of the Southwestern archaeological field. It is presented with a view toward making clear the first steps necessary -- that of assigning to each archaeological Monument and Park within the field certain archaeological features which each is to develop in addition to its particular major feature.

In looking at the map it will be noted that the field has been divided by students into major archaeological sub-areas. There are eight of these areas, each one differing from the other in specialized cultural phases. Some of these sub-areas are further divided into districts of high specialization and sub-culture areas. (Not shown on the map.)

On the map is spotted the location of our National Monuments and Parks. Note how in every case, with the exception of the Mimbres and Chihuahua areas, there are one or more monuments in each area. (In the Mimbres area there is the Gila Cliff Dwellings National Monument under the Department of Agriculture, which it is understood, is to be under our supervision.) The Chihuahua area is in Old Mexico; its place in the scheme of Southwestern archaeology would be presented at Mesa Verde National Park.

Here then is a basis upon which we could assign to each National Monument the field it would represent in addition to its major feature, the ruins. In other words, each monument would concentrate upon the field assigned to it and work up the subject as completely as possible, aided by specimens in its museum.

We could liken each Monument's presentation to a chapter in the story of archaeology of the Southwest and finally all the chapters of the story brought together at one central and main point.

The Monuments are not organized along this line at present in presenting their museum material.

Upon this some basis the story of ethnology could be worked up. Certain Monuments would be in a better position to tell the story and display Indian material than others.

(We now eliminate a page or more of general definitions of the several classifications of the pre-historic cultures of the Southwest which are not germane to the discussion in hand, and cut in again when the paper gets back to its mittens.)

HISTORIC CULTURES. (ETHNOLOGY).

Within this field of Southwestern Archaeology we have our modern Indian peoples also to consider, viz; the Pueblo peoples of Arizona and New Mexico, the Navajo, the Ute, the Piute, the Apache and the Yuman peoples of the west and south of the area.

Because of their local ranges today they also lend themselves to representation in museum displays of certain Southwestern Monuments.

Adequate museums are badly needed in all of the Southwestern Monuments in order to properly display and house the many valuable and irreplaceable objects left by the prehistoric peoples. These objects are just as important for illustrating the story of archaeology as the ruins themselves.

If these rare and fine specimens are to be made available for future generations to study, they must be properly prepared, housed and protected from excessive handling or possible pilfering.

A heterogeneous collection of arrow points, a few baskets, a blanket and some Indian pottery from widely scattered regions, however, does not constitute an educational display. We must look upon specimens as illustrations in a definite story and not as a collection of objects to be displayed because they are Indian, because they are curious, or just because some kind hearted soul presented them with the idea that they should be displayed.

If left to themselves, the individual Monuments will develop their own museum displays and stories with no thought to the group as a whole. This will make for a number of museums throughout the Southwest duplicating each other with little chance of anyone fully able to cover any subject completely and in detail.

We lose the opportunity of making the most of our educational possibilities and also that of routing the public from one to another of our Monuments.

Most of our Southwestern archaeological monuments have been set

aside to protect the spectacular ruins they contain. Most of these ruins belong to the great Pueblo III period. In order to vary their stories and make them more interesting and educational, each should be assigned a further archaeological feature to work up in its museum exhibits. This should be done according to an archaeological plan for the whole. A preliminary outline for such a plan is the basis of this paper.

We have heard much about duplication of exhibits and stories as presented in the Southwest. However it must be borne in mind that a certain amount of duplication will be necessary. This will have to do only with the general outline of the Southwestern archaeology necessary for the orientation of the visitor. The exhibits for this are few and consist of a graphic chart, brief explanatory copy, and a map. No artifacts are necessary, and the guide can give as much time as he desires on this introduction. He will also have the opportunity of pausing in his story to call attention to the national monuments wherein that part is told in detail by exhibits.

Taking up each sub-area in the Southwest, and the parks and monuments within its borders, we can begin to logically assign to each additional archaeological and ethnological material for exhibits, without infringing upon the domain of others.

The attached layout shows the archaeological sub-areas, the parks or monuments within these areas, and the archaeological and ethnological story and exhibits assigned to each. For want of a better name at this time, we might call it a Master Plan for Southwestern Archaeological and Ethnological Museum Exhibits.

(The tabulated scheme, outlined by major sub-areas, minor sub-areas etc., is too large to insert here as it is in the paper, but we can give the distribution by parks and monuments, showing the proposed field of each and suppressing archaeological information at some of the places in order to play it up at some other place a state or two distant. Here is the list:)

Mesa Verde National Park, Colorado.

To be the archaeological center dealing with archaeology and ethnology.

To cover the major archaeological area of the San Juan drainage.

To cover also the major sub-area of Chihuahua in Old Mexico.

To cover the sub-culture of Mesa Verde.

To interpret the story of its ruins.

Yucca House National Monument, Colorado.

Not as yet developed.

Besides the story of its ruins it might be assigned the ethnology of the Southern Utes when developed.

Hovenweep National Monument, Colorado-Utah.

Not as yet developed.

- To work up the story of its ruins.
 Story of McElmo sub-district.
- Chaco Canyon National Monument, New Mexico.
 To confine itself to the sub-culture of the Chaco.
 To interpret the story of its ruins.
- Navajo National Monument, Arizona.
 To confine itself to the Kayenta sub-culture.
 To interpret the story of its ruins.
- Canyon de Chelly National Monument, Arizona.
 To feature Navajo ethnological exhibits.
 To interpret the story of its ruins.
- Natural Bridges National Monument, Utah.
 Geological story of wind erosion. Archaeological material
 kept in study collection or sent to Navajo National
 Monument to round out their archaeology.
- Aztec National Monument, New Mexico.
 To interpret the story of its ruins.
 It is on the border line between Mesa Verde and Chaco sub-
 cultures and has the influence of both. Aztec sub-district.
 It might also be assigned the ethnological exhibits of the
 Jicarilla Apache.
- Casa Grande National Monument.
 To cover the field of the Gila-Salt Drainage archaeology,
 divided into the minor sub-area of the Upper, Middle and
 Lower Gila.
 The Hohokam Culture stressed.
 The story of Casa Grande Ruins.
 Ethnology of the Pima and Papago Indians.
- Tumacacori National Monument, Arizona.
 Spanish Colonial History.
 Bringing in only such Indian material as is necessary to the
 story.
- Wupatki National Monument, Arizona.
 To cover the field of the San Francisco Culture.
 To feature the ethnology of the Hopi Pueblo Cultures.
 The story of its ruins.
- Hontozuka Castle National Monument.
 On border line between Gila-Salt area and Little Colorado.
 The local story of its own ruins and what they reveal and
 their place in the scheme of S.W. Arch. in time.
- Grand Canyon National Park, Arizona.
 To cover the field of Tusayan Culture.
 The brief story of man entering earth history, then America,
 the Southwest and in detail Grand Canyon region.
 The ethnology of the Havasupi peoples.
 To be also the geological center dealing with the geology
 of the Southwest.
- Petrified Forest National Monument, Arizona.
 The geological and paleontological story.
 Archaeological and ethnological material to be kept in
 study collections.

- El Morro National Monument.
 Spanish Expeditions. (Conquistadores).
 Ethnology of Zuni Indians.
 Archaeology kept in study collections.
- Bandelier National Monument.
 To cover the major archaeological area of the
 Rio Grande Valley.
 To interpret its ruins.
 To feature also the ethnology of the Rio Grande Pueblos.
- Gran Quivira National Monument, New Mexico.
 To cover Spanish Colonial History of New Mexico and
 such archaeological material as pertains to its site.
- Gila Cliff Dwellings National Monument, New Mexico.
 To interpret its ruins.
 To cover the special culture of the Himbres area.
- The Chihuahua Major sub-area has no local representation.
 It is a major sub-area of Mexico running over the line
 into New Mexico. The story of this major sub-area
 to be told at Mesa Verde in its logical sequence of
 Southwestern cultures.
- The White Sands National Monument. New Mexico.
 Geological story.
 Ethnology of the Mesquero Apache Indians.
 Archaeology of the Eastern Peripheral-Folsom find
 and Carlsbad find.
- Carlsbad Caverns National Park, New Mexico.
 Geological Cavern story.
- Zion National Park, Utah.
 To cover the archaeology of this area.
 Also the ethnology of the Piute Indians.
- Dryce Canyon National Park.
 Its archaeological and ethnological material to be
 kept for study collections.
- Pipe Springs National Monument, Arizona.
 Historical feature.
 Archaeological and ethnological material kept in study
 collections.
- Capulin National Monument, New Mexico.
 Not within the Southwestern archaeological field.
 Geological story. Archaeological material placed in
 study collections.
- Great Sand Dunes National Monument, Colorado.
 Not within the S.W. Archaeological field.
 Geological story. Archaeological material placed in
 study collections.
-

And so there she is, Chief, and you won't be doing right by the
 Barkley Boys if you don't sit back and admire it. It looks mighty fine
 for Mesa Verde, which sits tight and gives up nothing, but it is going to
 be fairly hard on the rest of us to send some of our best archaeological

stuff up to Mesa Verde so they can have the best archaeological collection in the Southwest and use it to direct those 16,000 visitors they had last year to these other southwestern monuments who had something over 500,000 visitors last year. Mesa Verde already has the highest cost per visitor in the southwest, it costing them about \$2.45 each to handle visitors where we are expected to handle them among the monuments of the Southwest for 14 cents per visitor. Now if they can high-grade our collections to build up their museum and borrow a few Grade A Ruins out of our Monuments, they might be able to run their visitors up to 25,000, and if they then were able to direct each one of those 25,000 visitors to some of our Southwestern monuments, we might notice the rise from 325,000 visitors last year to 350,000 and give it a paragraph in our annual report, calling attention to a slight rise in the total number of visitors.

Of course Louie doesn't come right out and say so in his paper, but I suspect they think the Lord didn't use very good judgment in locating the ancient cultures in the Southwest, and, while they wouldn't hurt his feelings by calling his attention to it, it being too late anyway probably to correct the matter, they would just quietly re-arrange the archaeology of the country and put the collections where the Lord should have put the people if he had his mind out in when this country was settled up. Thus we quite logically pick Mesa Verde which has 16,000 visitors per year and is open almost all the year except from late September until the first of May. Mesa Verde also, as Louie points out has a halo of sanctity given it by Congress which, in its infinite wisdom has, by its legal action, spelled Monument, P-a-r-k, which, of course made the ruins quite a bit larger than two or three of our monuments ruins which still persist in not knowing it and measuring larger than those in Mesa Verde, and no doubt also made much finer wall construction there, although the engineers still fobblishly register finer wall construction and more of it in a couple of our monuments.

Also, it is well known that Mesa Verde is the archaeological center of the Southwest, as Louie states, except for the fact that he himself shows on his map and says in his printed matter that Capulin and Great Sand dunes are both outside the area, which would indicate that it is about 100 miles northeast to the circumference from the center and it must be about six hundred miles the other way to the other edge of the field. We fellows who ride the southwest from end to end get awfully tired of being told that Santa Fe and Mesa Verde are the center of the Southwestern archaeology

And no doubt the 250,000 or 300,000 visitors who are going to visit White Mountain Smith's Petrified Forest next year will be tickled pink to hear that they can see his very interesting archaeological material on display at Mesa Verde which is only a couple of hundred miles off their road as they go east, and can see the very interesting geological display of the district at the Grand Canyon which is not more than 70 miles off their road as they go west, but it wouldn't be at all fitting to have them right here on the ground where the visitors would expect to see them; I don't know why it wouldn't but that seems to be the decision of the Berkeley Boys.

Chief, I don't know much about this Southwest country, - not half what I'd like to know, - and I don't know much about visitors, for they are always springing a new angle on me, but I do know that all this talk about duplicating museum collections is bunk. They are afraid that a visitor going from one museum to another, a day or two apart, and finding three or four charts and three or four tables of figures and a few pieces of pottery from surrounding cultures to be used in talks to point out likenesses or differences, will recognize these things and say that the museums are alike; and they are wrong as they well can be. If they trust to labels to get these things over, the visitor won't read both sets and I will take an even bet that he won't read either of them, and if your man talks about them, the two men can talk so differently that the visitor will listen open mouthed to both of them or if they are poor talkers he won't listen to either of them.

I have never understood why Mesa Verde won't guide its visitors through the museum and talk to them. It could do it because it only has ten visitors per day per ranger on the average, and there wouldn't be any comparison between the reaction on the visitor, labels just simply don't get across; they are only better than nothing at all. You don't have to be an Educational Division man to see this. You put a string of beads and a cremation burial and a stone axe and a couple of other things in a glass case and label them to your heart's content and count the average stop per person before that case. Then I can go up there and begin talking to them about these things and tell them all the little details about making beads and axes and what they were used for and why and I will bet I can hold them on the average twenty times as long as your labels. And they can go on up to Jack's place at the Montezuma castle and he can do exactly the same stunt tomorrow with another bunch of beads and axes and cloth, because he is a different man talking about some other Indians in a different way. So long as you mix good men in with your museums, the public will take them one after the other, but if you try to palm off a couple of hundred labels on them in lieu of some service, your visitors are likely to go stale.

And after all, this paper is built upon the supposition that there is a material overlapping of visitors at various monuments. Now, before we ship the cream of our archaeological stuff up to Mesa Verde, I want some facts on the number of these visitors who visit a 'string' of our monuments. Mesa Verde uses one of its rangers to stop visitors at the front gate and ask them a lot of questions. Have these Berkeley Boys ever suggested getting an actual count on 4,000 or 5,000 of the Mesa Verde visitors and finding how many 'string' visitors there are among them and what monuments they have visited last year? Such figures would give us something solid to bite on. In the meantime let us not adopt this Mesa Verde Master Plan based on what might afterward prove to be some bad guessing.

When it comes to guessing, let me do a little of it. I guess that not to exceed 5% of the 21,000 visitors at Casa Grande last year had visited Mesa Verde that year or the preceding one, - let us say, roughly, 1,000 of them. Now what right would we have to tell 20,000 of these visitors

that we have sent some of our finest material up to Mesa Verde and so they cannot see it here, nor can we refer in our museum to comparative pieces of pottery from other districts of the Southwest, nor can we give them any but the barest idea of the general story of mankind; all because it might be duplication for that other five per cent? Does that really appeal to you as being good sense? 20,000 people can't hear and see things here because for one thousand it might be duplication.

Of the 16,000 people who visited Mesa Verde last year probably 10% also visited the Petrified Forest, - let's go strong and call it 2,000. And so White Mountain Smith, according to this paper, must not play up the archaeological angle of the Petrified Forest at all because out of his 225,000 visitors less than one percent would have seen some archaeological stuff at Mesa Verde. Does that sound like good sense?

What's the matter with these Educational boys that they can't plan a string of a dozen museums all different enough to keep the visitor interested in each one as he comes to it? Do they consider a museum such a deadly tiresome thing that if a visitor gets out of one alive he never wants to go to another? Our Monument museums are not that bad and we who have built them up just run museums as a side line to half a dozen other jobs; surely an expert educational man ought to do as well as these dumb ones who are running the monuments.

As I think these things all over, Chief, I don't believe I am going to like this Mesa Verde Master Museum plan and I may later ask leave to rise and remark about it. Let's give this plan to the funny papers and start at this problem right by getting some figures together. Don't let them guess us out of the kind of a museum we think our visitors want to see. We handle visitors by the hundred thousand and we have been handling them for a good many years. Being pretty dumb ourselves, maybe we can guess pretty close to what a dumb visitor wants to see.

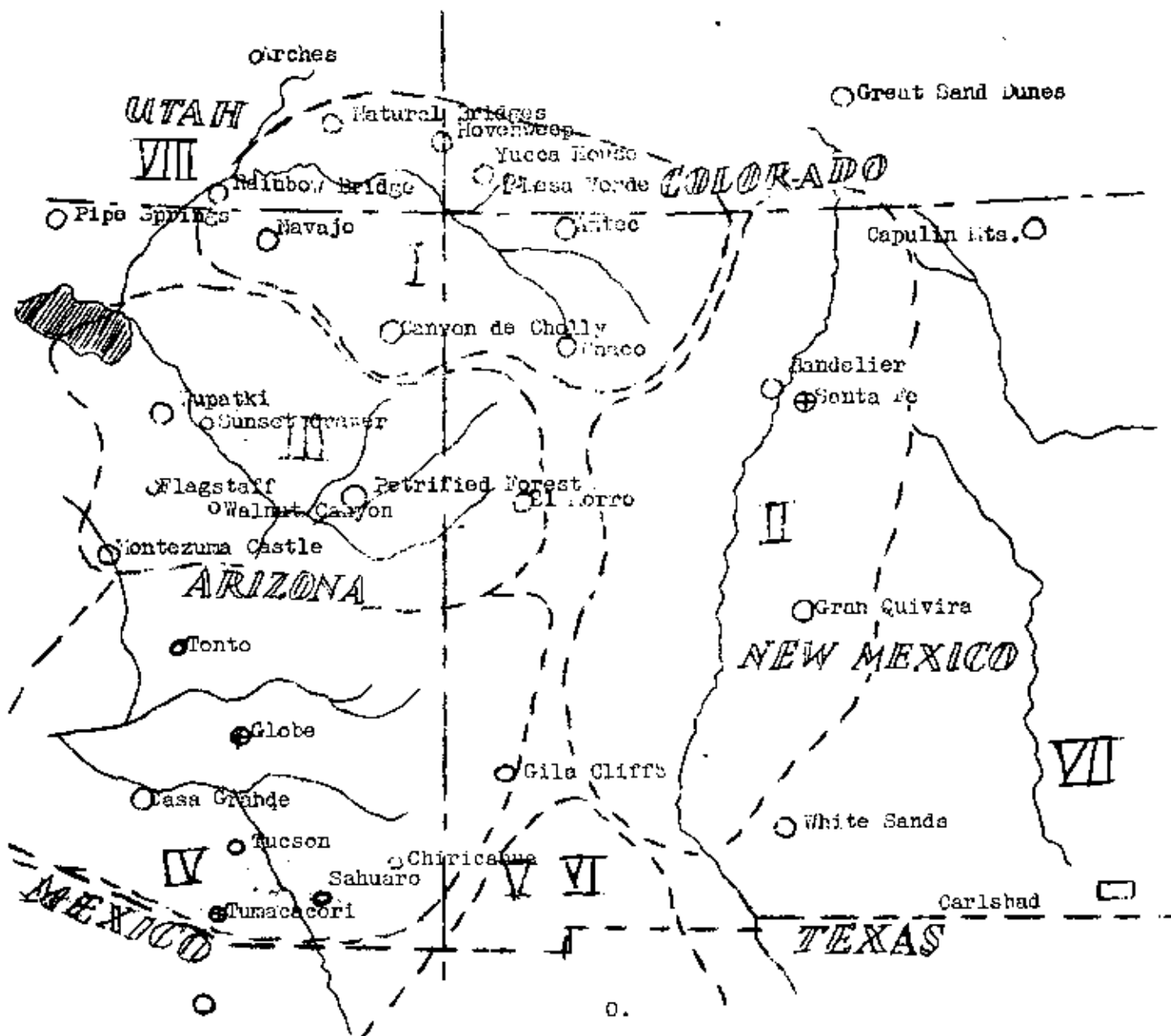
And, speaking of museums, I am reminded to say that we have been having a great time at Casa Grande this last month with the greatly enlarged collection. It has brought us to the point where we are fighting the 'museum fatigue' problem on pottery and, thus far, have not found the answer. You can see the interest drop before you have covered the subject and then of course you begin skipping and shortening up and get the visitors out into the next room where the beads and shell ornaments and stone tools make a complete break in the line of thought and you can see your party revive, quiet down and again become intensely interested.

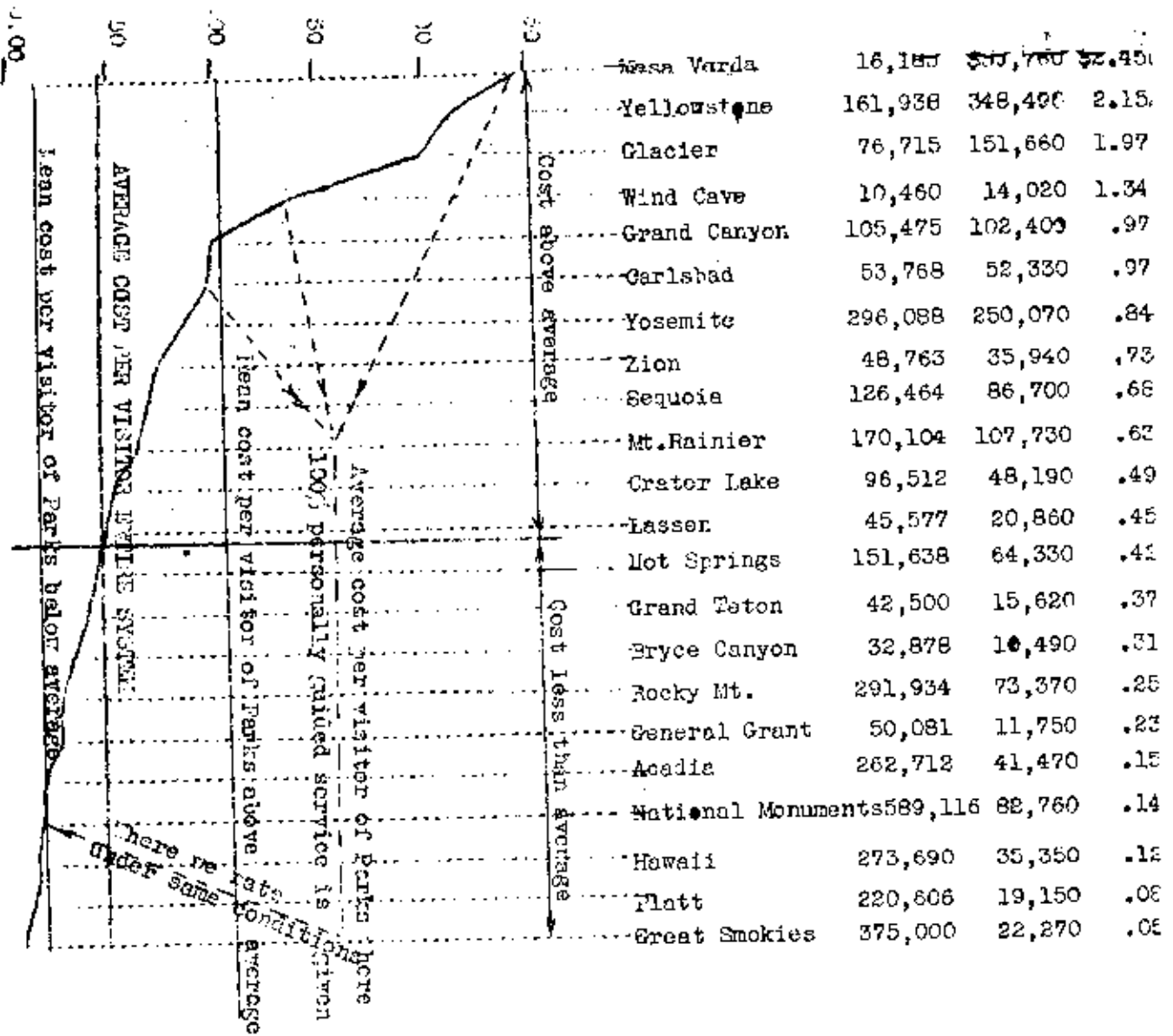
There is, of course, a way to get that mass of pottery over and all we have to do is to have patience and keep plugging; eventually one of the boys will get the solution. Mr. Palmer sprung a new trick during the month which has helped materially. He proposed what we now call an 'Index Case.' This case contains a few of pieces of each of our pottery periods, characteristic in shapes and decorations, arranged from the bottom to the top in time periods, and gives a chance to put the whole problem before the visitor as an index and then turn to the rest of the room for the general talk.

We show below the map which goes with the Schellbach paper which we have mentioned above. The map shows, among other things, how near Mesa Verde is to the center of the Southwest field and puts a delicate point on the statement made about displaying the Chihuahua Culture, which is in Area VI on and across the Mexican Border, up at Mesa Verde, which is only about 400 miles away across four other cultural areas.

The map shows most of our Southwest Monuments, the parks, and the following areas:

- I- San Juan Major sub-area.
- II- Rio Grande Major sub-area.
- III- Little Colorado Major sub-area.
- IV- Gila-Salt Major sub-area.
- V- Mimbres Major sub-area.
- VI- Chihuahua Major sub-area.
- VII- Eastern Peripheral area.
- VIII- Western Peripheral Area.





COST PER VISITOR AT VARIOUS UNITS.

If you divide the number of visitors for the Park Year 1933, which are the last figures available, into the amount of money appropriated for the Fiscal Year 1933, which are also the latest figures available, you get what we call above the cost per visitor, and these figures put together in the above table make some fairly interesting comparisons.

On the right half of the above table will be found in the first column the name of the park; in the second column the number of its visitors last year, and; in the next column, the amount appropriated for its Administration, Protection and Maintenance for next year. The fourth column is the result of dividing the figures of the second into the third and is called the 'cost per visitor.'

On the left half of the table the cost per visitor at the various units is shown graphically.

The table will become more interesting as you study it.

HOW IN THE WORLD DO YOU GOVERNMENT MEN SPEND YOUR TIME ?

Your sign out on the highway says visitors are not received after five o'clock and at five-thirty, while you are cleaning up your desk and getting ready to knock off, a couple of visitors cheerfully come in and announce that they are a trifle late but want to look around anyway. You take them around for an hour and find they are very pleasant people. You get to your supper at ~~6:45~~ when you were expected at 6:00. At 7:20 a man with a Dutch accent comes to your door and wants to camp on your picnic ground for the night, so you go out and take down the chain and let him and his wife drive back under the trees where they will sleep in their car which is arranged for that purpose. This means these folks will be on dock at the stroke of eight in the morning to be shown around and the service must be there for them. You make a note of that in your mind and go back to your pleasant home to read. At eight o'clock three high school boys knock and ask permission to hold a moonlight picnic on your camp-ground, assuring you they are properly supervised and will not get too noisy. You give the permission and they are off on the run to tell the rest of the gang that it is all right.

ANOTHER DAY.

You step out after supper to do an errand at the next house and notice a man and woman coming around the Administration Building looking for some one in charge. They prove to be out-of-state people who have been mis-directed this afternoon by a dumb cluck in a Chamber of Commerce 60 miles away and have driven 40 unnecessary miles to get to your place. They are west bound and cannot come back tomorrow and would like for you to show them around 'just a little bit.' You do so and at 8:10 they thank you profusely after the man has tried to pay you for your time which you have given them, and depart on their way to California.

ANOTHER DAY.

For very good reasons only two men are available for duty today and they have to split the noon shift, leaving only one man on the job. As soon as his partner leaves a party arrives and the man on duty takes them over to the ruins. A well known man, who drops in about three times a year and always asks the boss to leave his desk and take his party around, then arrives at 12:20 or thereabouts, finds the Administration Building locked until the guide gets back with his party, writes a cutting note on the register page about the lack of service, and promptly departs, - the party in the ruins seeing the arrival and departure is evidence that the visitor could have seen the guide and his party and joined them if he wished.

The Custodian afterward writes the man a letter explaining that there was only one man on duty at that time and he was in the ruins; that if the gentleman would come back when two or more men were on duty he could get immediate service, otherwise he might have to wait ten or fifteen minutes. The reply was a curt letter saying the service was not good and no excuse would stand.

ANOTHER DAY.

It is Sunday night and you have been on duty from eight in the mor-

ning until a quarter of six and are now trying to get closed up.

A man and wife arrive with some dozen youngsters of high school age and explain that it is a history class which has been out on a two day week end trip and have been so busy that they just couldn't get to your Monument any sooner and they know they are late but can't you spend just a little time showing them around yet tonight? You decide to take a chance on them and spend the next hour and twenty minutes talking to them. You find them pretty nice folks except for two members of the Hand Holders' Union who persist in talking to each other in a steady low monotone for the last thirty minutes, forcing you to pitch your voice a bit higher than you want to after a days' talking and exert yourself to hold the rest of the party against the distraction, whereas if the two Hand Holders would walk out on you and do their cooling outside, you could hold the attention of the rest with no trouble at all. Finally, a little after seven, they bid you goodnight. The man tries to pay you for the extra service and you have to explain that you don't do business that way, - that it was your pleasure to present him and his party with an hour and a half of your time and he can't pay anybody for it. Then he takes your name in his note-book and will mention it in the paper tomorrow as having shown them around, and you can feel all filled with pride at getting so much publicity, - and sit down to your dinner over an hour late. WHAT IS THE ANSWER ?

ANOTHER DAY.

A fellow you know comes along about six-twenty and calls you from your dinner to ask if he can take some young people over around the ruins. He has been delayed by business until the hour is late and he doesn't want to take you from your dinner but he would like to take his folks' over through the ruins. You rather regretfully give him permission, remembering this is about the third time he has pulled this same stunt in the last year and feeling certain in your bones that the garbled second hand talk that he will give them about your ruins will forever preclude their getting an adequate idea of what it is all about. Should you; (1) get up from the table and go out and take care of the party properly, or; (2) tell him to beat it and come back some time in regular hours when you can give him and his party real service, or; (3) let him do as he asks and, after spilling nine gallons of misinformation to his party, go away with the sublime belief that he knows as much and can talk a little better about your ruins than you can yourself. WHAT IS THE ANSWER ?

C.W.A. MULES.

The State C.W.A. officials in Arizona have caused us a good deal of amusement by demanding a vendor's certificate with each and every voucher. They returned a voucher for team hire to headquarters demanding a certificate before they would pass it. Bud. sent it back to Jackson with the following note: "Regarding Item 1, I am at a loss to understand just how and why anyone is going to certify as to the manufacture of these mules in the United States and of American materials, and of compliance with N.R.A. code concerning mules. Perhaps Mr. Coombs who owns them may be willing to make such certification. The mules obviously could not. The parents of the mules, if highly educated, might be able to do so. In

this connection it is pointed out that such certification must be made by the mother, it not being legal for the father to testify as to the parentage of the offspring. Rules being noted for obstinacy, not to mention obstreperousness, I suggest that Mr. Coombs be prevailed upon to execute the Vendor's Certificate. "

In the due process of time the voucher with an attached Vendor's Certificate was returned to headquarters, and we were quite surprised to find that, like the late Silas Wegg, Mr. Jackson or some one for him, had "dropped into poetry" to the following extent:

Old Vern (M) and Sol (F)
Old Kitt (F) and Pal (M)
Work with regularity,
To think they do not earn their pay
Would be rank vulgarity.
Now that they have been introduced
I shall flat they were manufactured & produced
In this good old U.S.A.
According to the N.R.A.
Now that the contractor complies
To see that material and supplies
Are approved by the code of competition
For the trade or industry or subdivision,
These old rules are not concerned,
If they get their oats, the tax be burned!

This rule that they will not pass a voucher without a Vendor's Certificate has its foolish phases. We issued some gasoline from our tank at headquarters to a car belonging to another monument and had to put through a voucher transferring the charge on the books. The gasoline had come into the Government possession of course under a Vendor's Certificate and we tried to explain that it didn't need another to transfer it to another place in the possession of the Government, but they made us swear that we were complying with the code in the matter of working not over thirty hours a week, etc. before they would accept the voucher for payment.

The latest stunt the State has pulled on us is to refuse to accept the \$300 exemption because Mr. Hopkins has not yet ordered them to change the instructions in the little book under which they operate. We have the Presidential Order and the exemption has been passed in the law by Congress, but we must continue to get competition on small amounts because the little book of instructions has not yet been changed. It means that we are going to have to send a flock of vouchers back into the field if we can't get the State C.N.A. to admit that the President and Congress meant what they said when they told us we didn't have to get bids up to the sum of \$300.

We wrote Hosteen John Wetherill saying we thought he ought to have a first aid kit and asking his opinion on it. Here is his reply:

"Send your first aid along if you think we need it. We have some cough syrup, Mercuriochrome, Aspirin, Zinc Ointment, Liniment, Vick's Salve, Iodine, Zinc Oxide, Adhesive Plaster, Plaster Paris Bandages, Gauze, and some more stuff that I don't know how to spell.

If the kit contains snake remedies, send it along as I think we could use it, though we have no snakes.

In regard to the report required by the Washington Office, Mr. Hayden says the work can be done in two years at \$2,500 per year. We have four weeks to do it in and we will do our darndest to get the report out. We have had the typewriter going every minute that we could spare since yesterday morning copying the catalogue numbers. I will need two more typewriters to get the work done by the 19th of April. It takes most of the Archaeologists about ten years to get out a little pamphlet. You see what we are up against."

Just to keep the record straight on that snake bite outfit, we are thinking of sending along a couple of snakes.

OFFICE ORDER NO. 285.

MUSEUM PLANNING.

The staff at the Berkeley Office of the Western Field Headquarters has recently been enlarged so that that Office is equipped to offer the Park Superintendents greater assistance in their museum problems.

Most parks do not yet have a well studied, long time program of museum development. The museum staff at the Berkeley headquarters is now prepared to give museum problems expert attention and offer assistance in the field.

A museum plan should be a definite part of the Master Plan for the development of each Park, and it is desired immediately to develop this phase of the Master Plan to its proper proportion.

As provided in Office Order No. 286, the Master Plan requires that a development outline for museums be prepared by the Park Superintendent. The development outline for museums is a statement detailing the scope of the museum program. It should include a listing of the existing facilities with a description in particular as to their relation to the ultimate plan (whether they are temporary and will be replaced, or if they are to be a part of the ultimate scheme). In addition it should include a statement of proposed facilities which are required to bring the physical development up to the requirements of the general museum program. This development outline is the basis on which the development plan is based. In brief, it is a statement of the museum problem for that particular park.

When the development outlines are completed the Berkeley Office of the Educational Branch will collaborate with the Branch of Plans and Design, San Francisco, in preparing the museum development plan. These plans will then be circulated for approval before they are included in the Master Plan for the Development of the Park.

It is expected that preliminary sketches for museum buildings for the future projects will be developed. The requirements of these buildings will be tentatively drawn up by the park superintendents, with the assistance of their naturalist staffs; and sent to the Berkeley Office for detailed study by the museum headquarters staff. At this stage problems in museum circulation, scope of exhibits, arrangement of exhibits, etc. should enter into consideration. When suitable to the museum staff and the superintendents the tentative layout will be sent to the Branch of Plans and Design for preparation of preliminary sketches. In the development of

the latter, members of the headquarters museum staff will be called into consultation.

At the Berkeley headquarters are also several well-equipped museum laboratories, and a large staff of museum preparators (under E.C.W. and C.W. A.) are engaged in making charts, diagrams, labels, relief models, miniature and full sized groups, and other exhibits for existing and planned museums. Park Superintendents should submit to the Berkeley Office a list of exhibits most desired, together with details regarding their construction.

Correspondence to the Berkeley Office should be addressed to Division of Education and Forestry, National Park Service, 353 Hilgard Hall, Berkeley, California, and a carbon copy should be sent to the Director to keep the Washington Office advised.

PLEASE ACKNOWLEDGE RECEIPT OF THIS ORDER.

(Signed) Arno B. Coe, Director.

Chief, I have received a sufficient number of copies of this Office Order No. 255 to send one to each of the Southwestern Monument men, so, I suppose, they can see how the park museums under the park superintendents are going to be benefitted by the Berkeley Office staff. It is very interesting to us and we ohly wish that the writer could have included the 67 National Monuments of our Service in the plan as well as the couple of dozen National Parks. Maybe a future Office Order is planned which will include Custodians and Monuments in this scheme. If so we wish you would ask the boys to get it out.

We ought not to close this Supplement without thanking Walt. Attwell's brother for the artistic cover page, representing one of our new babies, the grotesque stone formations of the Chiricahua National Monument. We had five of these babies delivered on our doorstep in one letter last week, and only Ansel Hall knows how proud we feel. Old Hi-Ball himself drew the maps and plans and things in the periods of rest between arriving from a field trip at 3:00 a.m. and going to work at 8:00, for all of which we render due thanks.

And as we put the last few keys, Harry Langley comes in to urge us to enlarge the fish ponds at Pipe and to unload a new bale of woe on our desk. Who ever invented Landscapers and Engineers, anyway?

The Boss