EXHIBIT IV-E

ARCHAEOLOGICAL SURVEYS

ARCHAEOLOGICAL RECONNAISSANCE IN DEADMAN CANYON, CARBON COUNTY, UTAH

by

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A Special Report
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Submitted to:
Centennial Development Company
Salt Lake City, Utah

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INTRODUCTION

On April 10, 1976, the author conducted an archaeological survey in Deadman Canyon north of Price, Utah for Centennial Development Company and Centennial Coal Associates of Salt Lake City, Utah. The survey was requested by Mr. John Peperakis, Jr. of Dr. Ray T. Matheny of the Department of Anthropology and Archaeology, Brigham Young University, who then contacted the author. Authorization to conduct the survey was granted by the Department of Interior Bureau of Land Management permit number 76-UT-036 and by Mr. Bruce Louthan, District Archaeologist, Bureau of Land Management. The purpose of the survey was to identify archaeological sites that would be impacted by the development of coal resources in the canyon.

Setting

The area surveyed was in the upper end of the canyon in Township 13 South, Range 11 East, Section 7, Wellington NW Quadrangle (7.5 minute series). Deadman Canyon is part of the Book Cliffs, and the geology of the area consists mainly of sandstones from the Star Point, Blackhawk, and Price River Formations (Young 1955: 182-186). The Blackhawk strata is coal bearing and the most important.

The vegetation in the canyon varys considerably and includes sagebrush, pinyon pine, juniper, mountain mahogany, oakbrush, maple, rabbitbrush, Ponderosa pine, and assorted forbs and grasses.

Survey procedure

By definition of the Bureau of Land Management, the survey was a reconnaissance survey. Because the proposed development in the canyon

involves impact in the canyon bottom and in the sides of the canyon, the author surveyed both terrains. Because the sides of the canyon are rugged and will be less impacted than the bottom, they were only sampled. This was accomplished by investigating the cliffs and large rocks that potentially could have been used for shelter, habitation, or art. The canyon bottom was intensively surveyed within the lease boundary shown on Map 1.

PREVIOUS ARCHAEOLOGICAL WORK

Prehistoric sites

Recorded archaeological work had never been done in Deadman Canyon prior to this survey. No sites are recorded and no mention of the canyon is made in published literature. The closest recorded sites are just west of Price, and the record of them is found in the State Antiquities Office. In another recent survey near Price, Helper, and Wellington, Patterson (1975) failed to find any prehistoric sites.

Sites are common in other places in the Book Cliffs, however. About thirty miles east of Deadman Canyon is Nine Mile Canyon. This area has been the scene of much archaeological activity since the 1920's and contains many remains of the Fremont Culture which flourished between c. A.D. 1000 to 1200. The most notable work in the Nine Mile area has been done by Morss (1931), the Claflin-Emerson Expedition (Gunnerson 1969), Reagan (1931a, 1931b, 1933), Beckwith (1931, 1932), and Gillin (1938). Petroglyphs (art carved or pecked in stone) and pictographs (painted art) are common in the canyon, and mention of these has been made by Schaafsma (1971), Siegrist (1972), and others. A study of petroglyphs in Nine Mile Canyon was made in 1974 by Louthan, Patterson, and Hurst, and their report is still in progress.

In addition to archaeological studies in Nine Mile Canyon, the many Douglas fir trees there were the basis of dendroclimatological studies by the Laboratory of Tree-ring Research (Schulman 1948, 1956). These studies also provide accurate tree-ring dates from archaeological samples from the area.

East of Nine Mile Canyon near the Green River, Leh (1936), Gunnerson (1957), and the Claflin-Emerson Expedition of 1928-29 (Gunnerson 1969) recorded sites in Range and Desolation Canyons.

In two other areas in the Book Cliffs surveyed by the author, no evidence of occupation or use by prehistoric man was found on Ford Ridge (west of Deadman Canyon) and near Sunnyside (east of Deadman Canyon).

Historical sites

Although no prehistoric sites are recorded in Deadman Canyon, several historical sites are. All of these are coal mines which were in operation between 1925 and 1964 (Doelling 1972: 394). Other canyons along the Book Cliffs contain both active and inactive coal mines dating from 1874 to the present. The most active areas have been in Spring Canyon west of Helper and at Sunnyside. Even though no archaeological work on these historical sites has been done, they are mentioned because of their importance to the coal inductry in Utah.

RESULTS OF THE SURVEY AND POSSIBLE FUTURE IMPACT

Survey results

During the survey, no prehistoric archaeological sites were found. However, the remains of several historical sites (coal mines) were found. These mines from north to south are the Hileman Mine, Zion Mine, Olson Mine (also called Rio Grande Mine), and Blue Flame (also called Sutton) No. 2 and No. 3. Historical information on these mines is rare, but

Doelling (1972: 394) gives their dates of operation, production, and owners.

Impact of development on sites

The plans of Centennial Coal Associates for Deadman Canyon include reopening several of the mines and retrieving the coal. This development would involve the construction of several buildings and shaft ventilator fans (portals), and the removal of the existing evidence of former mines. The main impact in the canyon would be on the canyon floor, and this is why it was intensively surveyed.

SURVEY CONCLUSIONS AND RECOMMENDATIONS

After researching historical records on the canyon and surveying it, the author recommends that the proposed development be permitted, with the exception that when the exact location of the portals is planned, an intensive survey take place to locate possible rock art. Because no Fremont or other prehistoric sites were found during the author's survey, the possibility is slim that such sites will be found during another survey in this part of Deadman Canyon.

The author does not deem any of the historical sites significant, and therefore, sanctions their possible destruction. In an effort to justify this statement, the author made a study of production records and ownership titles to determine the significance of the mines. Only one mine, the Zion Mine, appeared initially to have any significance, but this eventually proved to not be so.

The study of Zion Mine was made because Jesse Knight was the original owner. A study of records at Zion Securities Corporation (the present owner), Jesse Knight records in the B. Y. U. Library and the Utah Historical Society, and published works on coal mining and Jesse Knight indicated

through their lack of mention of the mine that it was not a significant holding of Jesse Knight's, nor a large coal producer, and therefore, not significant in itself.

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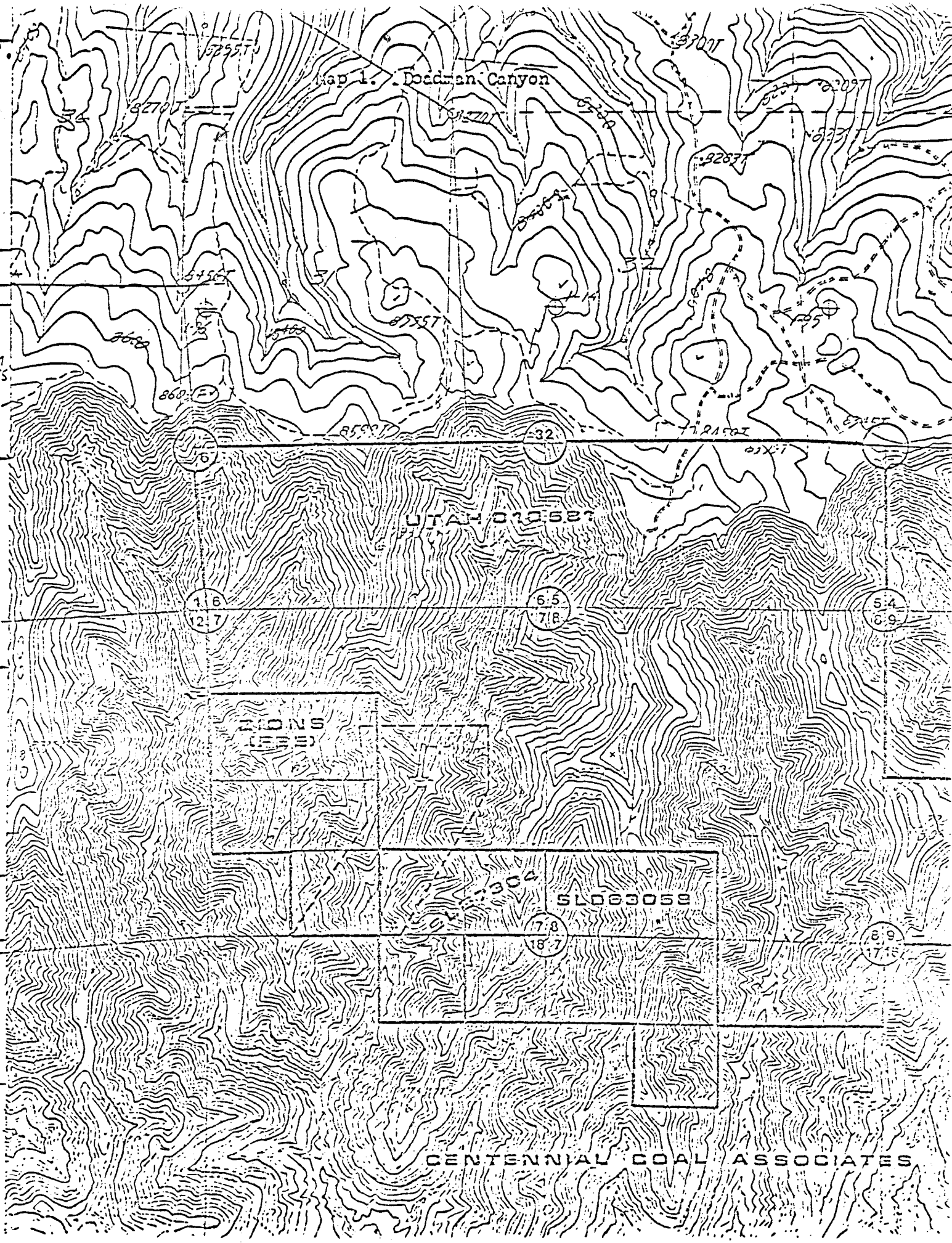
Map 1. Boadman Canyon



AN ARCHEOLOGICAL SURVEY OF PORTIONS OF FIASCO CANYON, STARPOINT CANYON AND STRAIGHT CANYON NEAR PRICE, UTAH

For the

TOWER RESOURCE-AMCA COAL COMPANY
PRICE, UTAH

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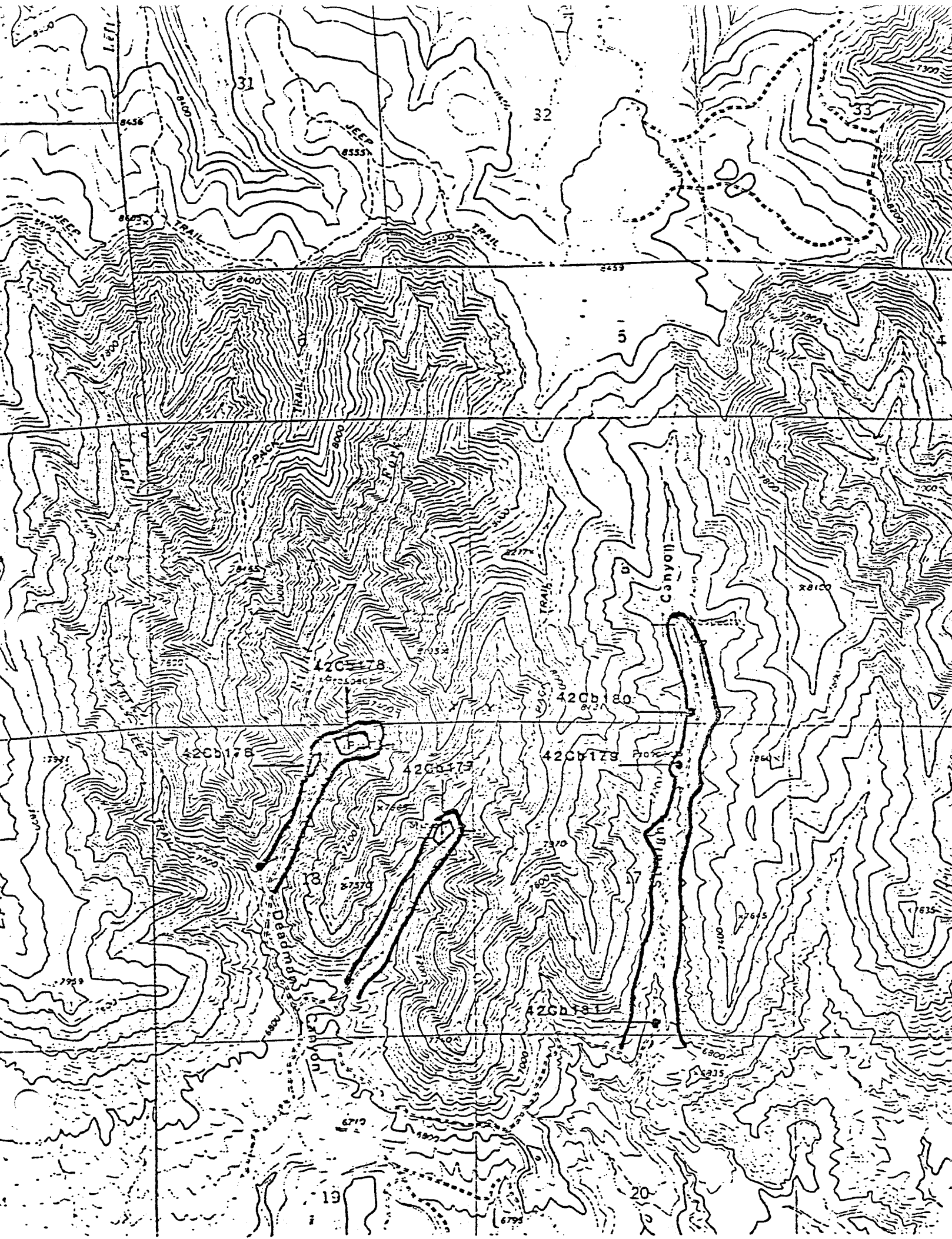
ABSTRACT

An archeological survey was conducted in portions of Fiasco, Starpoint, and Straight canyons, in the Book Cliffs area northeast of Price, Utah. The survey portions were small sections of the valley floor that have been selected for development by Tower Resources--AMCA Coal Company of Price, Utah. Although the surrounding canyons were likely heavily utilized by aboriginal groups, no prehistoric sites were located in the project area. There is a high probability that sites occur on the higher terraces atop the canyon walls. The valley floor which will be impacted is devoid of prehistoric sites. Six historic sites were located, all of which are in proximity to early 20th century mining operations. These sites were fully recorded and, lacking National Register qualifications, may be cleared for development.

INTRODUCTION

An archeological survey for Tower Resources--AMCA Coal Company of Price, Utah was comleted during May 19 through May 29. The field crew consisted at various times of Bruce Hawkins, Gregory Seward, and Deborah Truell. Under the supervision of Asa S. Nielson the survey work was carried out by the Consulting Services Branch of the Antiquities Section, Division of State History, Salt Lake City, Utah. The project area included portions of Fiasco Canyon, the Starpoint Fork of Deadman Canyon and Straight Canyon (U.S.G.S. Deadman Canyon Quadrangle 7.5 minute series) (Figure 1). The specific survey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areas were identified by Mike Glasson of Tower Resources prior to the actual field work.

The survey areas were largely in the canyon bottoms where coal mines operated between 1920 and 1960. Therefore, portions of each survey section had been to some degree impacted prior to 1980.

The terrain of the survey area is extremely rugged as the streams have cut very steeply each canyon exposing irregular profiles in the Book Cliffs stratigraphy. Dense stands of scrub oak (Quercus gambelii) on the valley floor obscurred visibility in many places and hampered orderly transects.

The survey crew walked parallel transects on the mountain floor maintaining intervals of no greater than 20 meters. The lower slopes of the canyon walls were also surveyed to ensure complete coverage of the survey area.

ENVIRONMENTAL SETTING

Location

The survey area included portions of Fiasco Canyon, the Starpoint Fork of Deadman Canyon and Straight Canyon located in Sections 17 and 18, Township 13 South, Range 11 East (U.S.G.S. Deadman Canyon Quadrangle 7.5 minute series) (Figure 1). The canyons are approximately 5.5 miles northeast of Price, Utah and accessible either by a graded dirt road or rough jeep trails. The survey area sets along the western edge of the Colorado Plateau Physiographic Province (Fenneman 1931). The canyons lie parallel to each other draining north to south and

they are perpendicular into the southern face of the Book Cliffs. The Book Cliffs Physiographic Subdivision is bordered on the north by the Uinta Basin, on the south by the Mancos Shale Lowlands, and on the west by the Wasatch Plateau and Mountain Range (Stokes 1977).

Geology

The Book Cliffs are composed of alternating strata of sandstone, shales and coal of Cretaceous and Tertiary age. The cliffs rise to over 8,550 ft. (2,606 meters) asl and descend in giant step-like terraces to southern valleys with elevations between 4,000 feet (1,219 meters) and 5,500 feet (1,676 meters), the survey area stratigraphy is classified as part of the Mesa Verde group. From the lowest stratum to the highest the stratigraphy consists of Mancos shale, Star Point Sandstone, the Blackhawk Formation (these are the coal producing strata), Castlegate Sandstone, and the Price River Formation (Hintze 1979). The easily eroded Mancos Shale and Quaternary gravel deposits dominate the valleys south of the survey area.

With the exception of the Mancos Shale Formation, which surfaces south of the survey area, Fiasco, Deadman and Straight Canyons exhibit similar stratigraphic and topographic characteristics. The canyon sides rise to a height of 1,100 feet above the wash and descend in distinctive step-like terraces to an unusually narrow valley floor.

Mining operations of the past 20-60 years have had a wide range of impacts on the valley floor. However, at the time of

the survey, natural streams and washes maintained a steady water flow. Their volumes have apparently been reduced by impact and many places, the rust of old mining roads have been incorporated into th main channels.

Climate

The climate of the Colorado Plateau is an arid continental/mid-latitude dry area (Burnham 1950). The Wasatch Mountains to the west and the Tavaputs Plateau to the north protect the survey area from storms associated with northerly and westerly winds. This essentially creates a "rain shadow" from late fall to early spring. During the summer and early fall, this mountain/plateau zone aids in the development of rainstorms that originate in the warm air masses above the Pacific and Gulf of Mexico.

The Price area receives between 6 and 20 inches of precipitation annually with increasing amounts 1) from south to north and 2) in canyon areas of higher elevation. Between one-third and one-half of the measured annual precipitation falls during the summer months. The arid nature of this region is due to its tremendous evaporation. Hunt (1974) suggests that up to 95 percent of the precipitation is lost by evaporation, seepage and transpiration.

Average annual temperatures around Price decrease 1) from south to north and 2) at higher elevations. The valley temperatures south of the survey area often exceed 95 degrees F. during the summer and rarely fall below 23 degrees F. in the winter. Temperature averages range from 65-70 degrees F. in

the summer, to 20 degrees F. in the winter in the survey area. The lowest temperatures develop in January and the highest in July. The number of frost-free days range from over 200 in the south to less than 100 in the mountain/plateau to the west and north.

Flora and Fauna

Vegetation within the survey area encompasses several plant communities and three distinct ecozones: the Pinyon-Juniper, the Mountain Brush and the Ponderosa Pine Montane.

The Pinyon-Juniper ecozone ranges from 5,000 to 7,000 feet (1,524 to 2,133 meters) and is classified as the top level of the Upper Sonoran Zone. The species within this zone include: Colorado pinyon (*Pinus edulis*), Utah juniper (*Juniperus osteosperma*), bitterbush (*Opuntia* sp.), cheatgrass (*Bromus tectorum*), and Russian thistle (*Salsola kali*). Species associated with the Big Sage zone were interspersed within the Pinyon-Juniper forest: big sagebrush (*Artemisia tridentata*), rabbitbrush (*Chrysothamnus* sp.), horsebrush (*Tetradymia* sp.), *Ephedra* and silver-leaf buffalo berry (*Schepherdia argentea*).

The Mountain Brush ecozone overlaps the upper Pinyon-Juniper level and includes the following: scrub oak (*Quercus gambelii*), serviceberry (*Amelanchier alnifolia*) and chokecherry (*[rimis vorgomoama*). These species are usually found between 7,000 and 9,000 feet (2,134-2,743 meters).

Two species characteristic of the Ponderosa Pine Montane ecozone were observed in the upper limits of the survey area between 7,500 and 7,000 feet (2,286-2,743 meters): Ponderosa

or Yellow pine (Pinus ponderosa) and mountain muhly (Muhlenbergia montana).

A wide variety of forbs and grass species are common to all three ecozones and in many places form a thick understory.

Fauna

Durrant (1952) and Behle and Perry (1975) give extensive listings for mammals and bird life found within the survey area and Utah in general. Those animals observed within the survey area were: Mule deer (Odocoileus hemionus hemionus), several rat species (Neotoma sp.), rock squirrel (Citellus variegatus utah) and chipmunk (Eutamias quadrivittatus umbrinus). The tracks of Mountain lion (Felis concolor hippolestes) and Black bear (Ursus americanus cinnamomum) were seen in muddy areas near the stream. Avifauna included Red-tailed hawk (Buteo jamaicensis), Great Horned own (Bubo virginianus) and Golden eagle (Aquila chrysaetos canadensis).

CULTURAL HISTORY

Several cultures have inhabited the Price region during the past 10,000 to 12,000 years. Beginning with the nomadic Paleo-Indian, a near occupational continuum of the area has occurred up to the present. A brief description of each of these cultures follows.

Paleo-Indian (12,000 to 9,000 B.P.)

No Paleo-Indian sites were found within the survey area, although several Paleo-Indian kill sites have been recorded in surrounding areas (Sharrock 1966; Miller and Dort 1978).

Isolated finds of the distinctive fluted projectile points used by the Paleo-Indians have been recorded in Utah (Gunnerston 1956; Trip 1964, 1966; Butler 1973; Madsen, Currey and Madsen 1976), but none have been associated with the remains of Pleistocene megafauna.

It was once assumed that the Paleo-Indians subsisted almost exclusively on Pleistocene megafauna. Some archaeologists now theorize that the hunting and gathering of plant and smaller animal species supplimented big game hunting.

Archaic (9,000-8,500 to 2,500 B.P.)

The Archaic period (lacking both pottery and agriculture) is characterized by increasingly selective hunting and gathering. With this came several technological advances in the artifact inventory. The atlatl, or spear thrower, and lanceolate or notched dart points replaced the spear. Milling stones from this period provide evidence of a greater dependence on plant foods. A sophistication in weaving can be illustrated in the manufacture of fine basketry, textiles, fur robes, snares and nets. No Archaic sites have been recorded within the area and none were observed on the survey.

Fremont (1,500 to 500 B.P.)

With the inception of the Fremont culture approximately 1,500 years ago, open-air architecture, villages, coil-made ceramics, one-rod-and-bundle basketry, corner- and side-notched projectile points used in connection with the bow and arrow, corn agriculture and trough metates were added to the Archaic inventory. Noel Morss (1931) was the first to define the

Fremont as "a peripheral culture to the Anasazi" and described them as a mixed group of semi-horticultural hunters and gatherers.

A cultural coninuum between the Archaic and the Fremont has been put for (Jennings 1957, 1978; Aikens 1970; Marwitt 1970). Conversely, others (Madsen and Berry 1975; Lindsay and Lund 1976) have defined a cultural hiatus between the two periods. Few sites containing both Archaic and Fremont components have been found in the Price area. Most excavated sites on which an obvious hiatus was visible within the stratigraphic sequence occur near prehistoric lake shorelines within the Great Basin. A few sites (e.g. Pint-Size Shelter, Clyde's Cavern, Joe's Valley Alcove) on the western Colorado Plateau appear to support the Archaic/Fremont hiatus (Lindsay and Lund 1977). At any rate, Fremont origins remain open to question.

Fremont agricultural groups abandoned Utah by 650 B.P., leaving no clear evidence of their movement. A number of reasons for the demise of the Fremont have been suggested but most archaeologists seem to agree that it was a result of many factors: i.e. competition from Paiute-Shoshoni expansion (Aikens 1970; Madsen 1975) or environmental pressures (Gunnerson 1969).

<u>Numic</u> (650 B.P. to Present) etc.

Fremont occupation was succeeded by the influx Shoshonean groups. These Numic speaking peoples evidently arrived in the area ca. A.D. 1,200 (Madsen 1975), and their migration is fairly well understood. Aikens (1970) dates the first

Shoshonean pottery to ca. A.D. 1300-1400. Steward (1938) describes a subsistence economy based on seasonal hunting and gathering rounds, but recent research has exposed many variations of and exceptions to this model. Euler (1966) and Jennings (1978) feel the Shoshonean subsistence pattern was very similar to the Archaic adaptation. Unfortunately, very little archaeological evidence is available for this period. No Numic sites were observed on the survey.

PREVIOUS ARCHAEOLOGICAL WORK

No archaeological work of any kind has been done in Fiasco Canyon, Starpoint Fork or Straight Canyon prior to this survey. The nearest study was a survey performed by Walker (1976a) in the northern portion of Deadman Canyon. Archaeological work and site descriptions have been published for several locations adjacent to the survey area.

Nine Mile Canyon is aproximately 30 miles east of the survey are and since the early 1920's has been a focus for archaeological research. Montgomery (1894) of the University of Utah and Morss (1931) of the Peabody Museum conducted the first reported archaeological surveys of Nine Mile Canyon. Additional archaeological investigation in the canyon followed: the Claflin-Emerson Expedition (Gunnerson 1969), Reagan (1931a, 1931b), Beckwith (1931, 1932), Gillin (1938, 1955), Schaafsma (1971), Siefrist (1972), Hauck (1977a, 1977b) and others. Schulman (1948) using Douglas fir specimens, conducted a dendrochronological study for the Laboratory of Tree-ring Research in Tucson, Arizona.

The most recent archaeological work close to the survey area has been conducted by Berge (1977), Walker (1976a, 1976b, 1979), Hauck (1976(, Hauck et al. (1978), Hauck and Harmon (1977) and Patterson (1975).

Little information about prehistoric settlement patterns outside of Nine Mile Canyon has resulted from the substantial amount of field work performed in the area. However, the small number of recorded prehistoric sites should not discourage further archaeological study of the area.

HISTORICAL CONTEXT

Regional

Regional history of the area begins largely with the discovery of coal in Pleasant Valley in 1874. The Winterquarters Mine was opened in 1877. A narrow guage railroad was constructed in 1879 connecting the mine with Springville, Utah. The Denver and Rio Grande Railroad reached Carbon County in 1882, making large scale development economically feasible (Powell 1972). Between 1890 and 1900, 204 beehive kilns were erected at Castle Gate to improve the cooking quality of the coal. Production continued to increase until the 1920's. Production declined during the 1920's and 30's due to competition from oil and gas. Increased demains during World War II increased production until 1957 (Doelling 19720.

Local

History of the Deadman's and Straight Canyon area results

from the activities of miners, prospectors, surveyors and trappers. Prospecting has occurred in Deadman's and Straight canyons as early as 1900. Active mining began in 1925 with opening of the Zion Mine and continued sporadically until the closure of the Sutton Mines in 1964 (Doelling 1972).

A Cadastral survey party consisting of Ernest Toone, Oliver London, and Bert Birch surveyed sections 7, 8, 17, and 18 during April, 1900 (Cadastral Survey notes 1900). The surveyors noted the prospect tunnel and cabin of Jesse Knight approximately 15 - 16 chains north of the line between Sections 7 and 18 in Deadman's Canyon.

Mr. Willis Butolph of Wellington, Utah is reported to have been trapped in Straight Canyon for a number of years (Son of Willis Butolph 1980, personal communication).

HISTORIC SITES

Six historic sites were recorded during the survey. The sites include 3 coal mine complexes, 1 cabin, 1 coal prospect, and a historic petroglyph.

42Cb176 is the Zion Mine (Figure 2), active from 1925 to 1948 (Doelling 1972). The site is located on the east flank of the right fork of Deadman's Canyon across from the outlet of Fiasco Canyon the SW 1/4 of the SW 1/4 of Section 7, Township 13 South, Range 11 East at an elevation of 7,030 feet.

The site contains the remnants of a structure of unknown use. The stone forming the walls is held together with a mud mortar ais approximately 6 feet high. The floor is a prepared

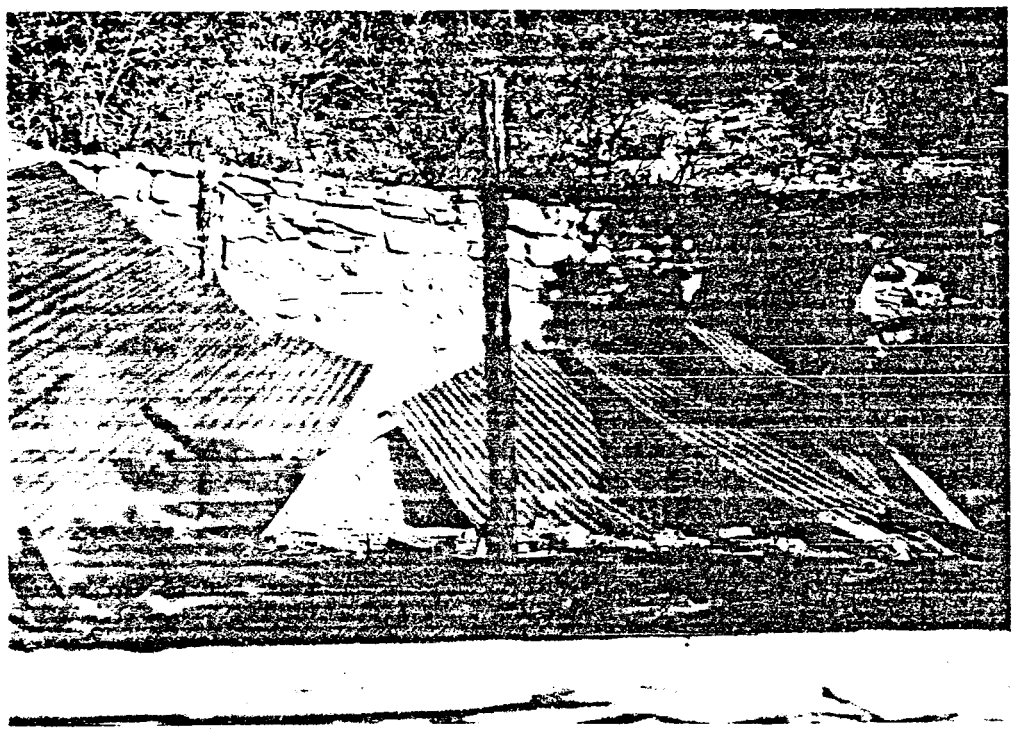

Figure 2. 42Cb176. Habitation Structure at Zion's Mine. Note inset juniper supports, stone wall and metal roof with stove-hole. Storage to right.

dirt surface. Nine juniper logs serve as support posts for the collapsed corrugated metal roofing. Two holes in the roofing indicate that stoves were used in the structure. A juniper log ramada has been built against the south wall of the structure. An underground storage area is attached to the north wall of the structure and is accessible through a window in the north wall.

An isolasted 5 foot high stone retaining wall is located north of the structure along the wash. It is built of shaped stone similar to those used in the structure described above.

42Cb177 (Figure 3) is the Blue Flame/Sutton Mine, active from 1945 to 1964 (Doelling 1972). This site is located approximately 1 1/2 miles up Starlight Canyon at the end of the present road in the NE 1/4 of the SE 1/2 of the NE 1/4, Section 18, Township 13 south, Range 11 East at an elevation between 7,150 and 7,250 feet.

This site contains 3 mine portals, 3 structures, a coal loading bin, an outhouse, a coal storage and loading area and a ventilator foundation. The 3 mine portals are heavily covered with debris from a slide. A concrete block lining is visible in one of them (Figure 4).

Structure 1 (Figure 5) is located in the bottom of the canyon. It measures approximately 10 by 10 by 9 feet high. Structure 1 is built on a square plan with an addition. The structure has a gable roof. The walls of structure 1 are constructed of stone. The addition is constructed of concrete block. The roof of structure 1 is constructed of milled lumber

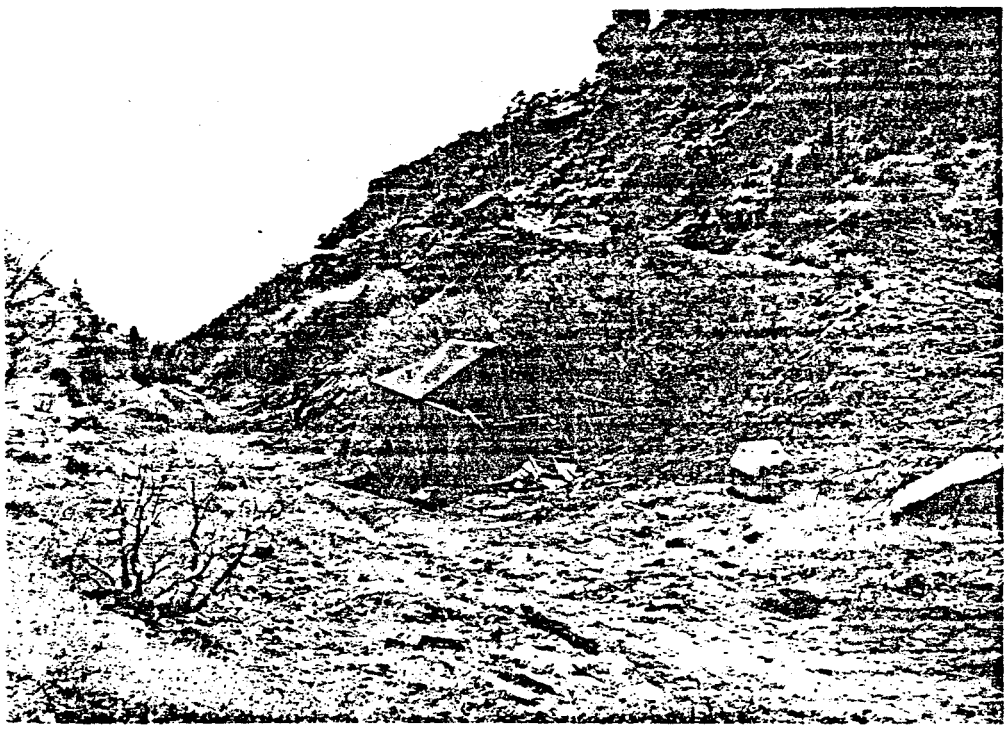

Figure 3. 42Cb177. Blue Flame/Sutton Mine. View Looking South Down Starlight Canyon.

Figure 4. 42Cb177. Collapsed Mine Portal.

Figure 5. 42Cb177. Structure 1. Note stone structure with cement block addition.

on a truss design and is shingled with asphalt shingles. Structure 1 contains 2 windows. One in the south wall is built into the stone wall. The other windows of wood frame construction is contained in the north wall. Three doorways are contained in Structure 1. One doorway is framed in wood and located in the east wall of the addition. A second doorway is also framed in wood and located in the concrete block wall separating the main structure from the additions. The third doorway is located in the south wall of the structure and opens onto a porch area which is roofed and walled with concrete block. A concrete pad is located on a framework of timbers in the southeast corner of the structure. There is no apparent wood floor. The structure interior contains coal, burnt wood, rusted metal, nails, and broken block. Function of the structure is unknown.

Structure 2 (Figure 6) is located on the west flank and approximately 100 feet above the canyon bottom. Structure 2 measures 15 by 12 by 9 feet high. The structure is constructed on a rectangular plan and has a gable roof. The structure is walled on 3 sides with concrete block and opens to the north. The roof is built on a truss design with 2 by 8, 2 by 6, and 1 by 6 inch limber. Asphalt shingles were observed on the surrounding surface. One window measuring 3 by 3 feet is contained in the east wall of the structure. A concrete pad forms the floor of structure 2. A 3 sided rectangular pit is located in the pad. A concrete footing with embedded bolts runs east-west approximately midway across the pit. Ten by 10

Figure 6. 42Cb177. Structure 2. Wood Frame Concrete Block Construction.

inch timbers, bottle glass (post 1903), gaskets, bolts, sheet metal and cans (post 1915) were found within the structure. Structure 2 probably served as a shop or housed machinery.

Structure 3 (Figure 7) is located approximately 80 feet above the canyon bottom on its east flank. Structure 3 measures 12 by 12 by 6 feet high. The structure is built on a square plan. The walls are constructed using 10 by 10 inch wood beams as studs. Two by 12 inch planks and corrugated sheet metal serve as roofing materials. A large rectangular opening in the west wall of the structure functioned as a window. An entranceway is incorporated into the north wall. No artifacts were noted in the structure interior. The function of structure 3 is unknown.

The remains of a coal loading bin (Figure 8) are located on the west flank of Starlight Canyon between structures 1 and 2. The area covered by the bin remnants is approximately 50 by 80 feet. A platform for dumping coal at the top of the bin area is constructed of railroad ties laid on top of a retaining wall of horizontal planks bolted to upright vertical timbers. Logs covered with sheet iron are positioned on the slope, utilizing gravity for the loading operation. Coal slides down these surfaces into chutes at the bottom for loading. Concrete foundation piers and remnants of a collapsed wall suggest a wooden superstructure of some size (20-30 feet high).

The outhouse (Figure 9) is located in the bottom of an east side canyon between structure 3 and the coal loading area. The outhouse is presently disconnected from its pad and resting on

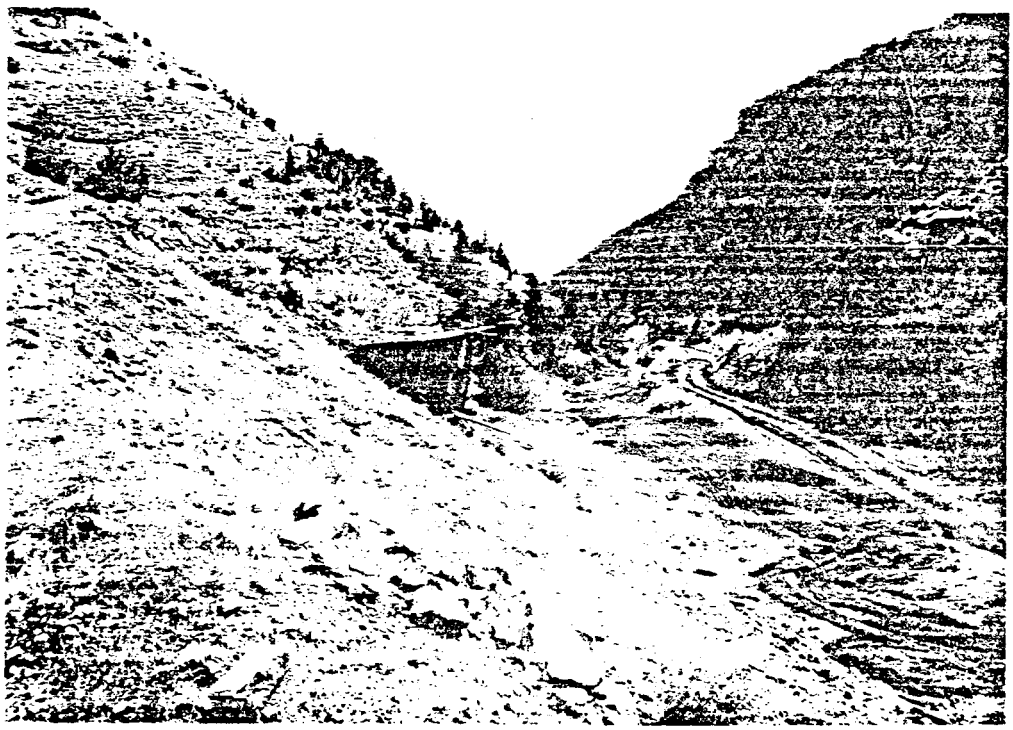

Figure 7. 42Cb177. Structure 3 on West Slope of Canyon Wall.

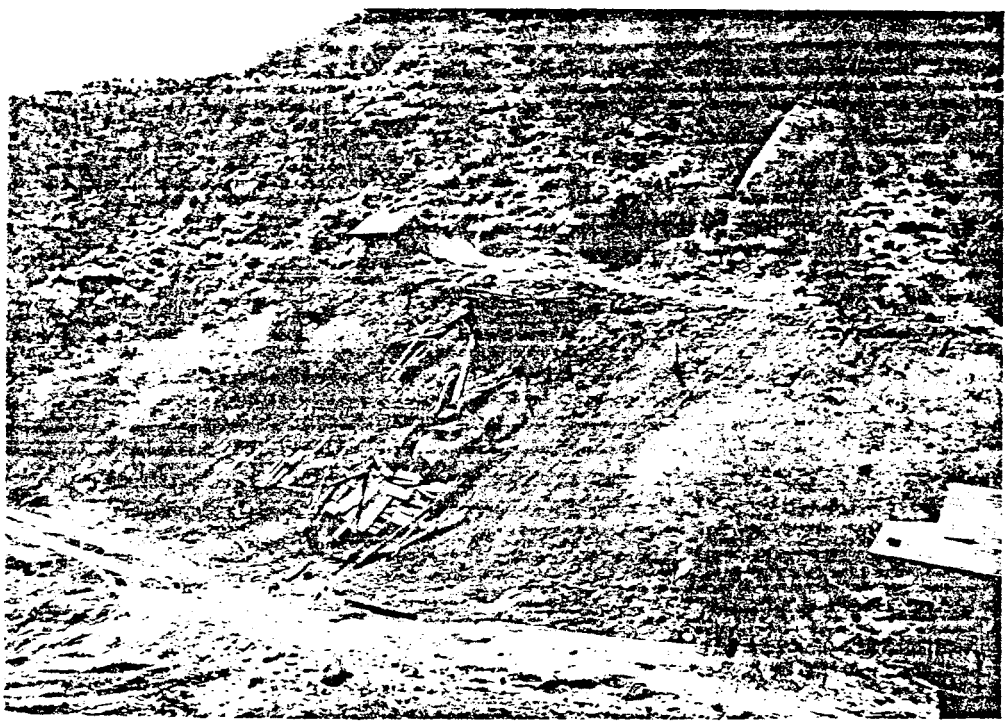

Figure 8. 42Cb177. Coal Loading Bin. Note combined use of wood, cement block and metal sheeting materials.

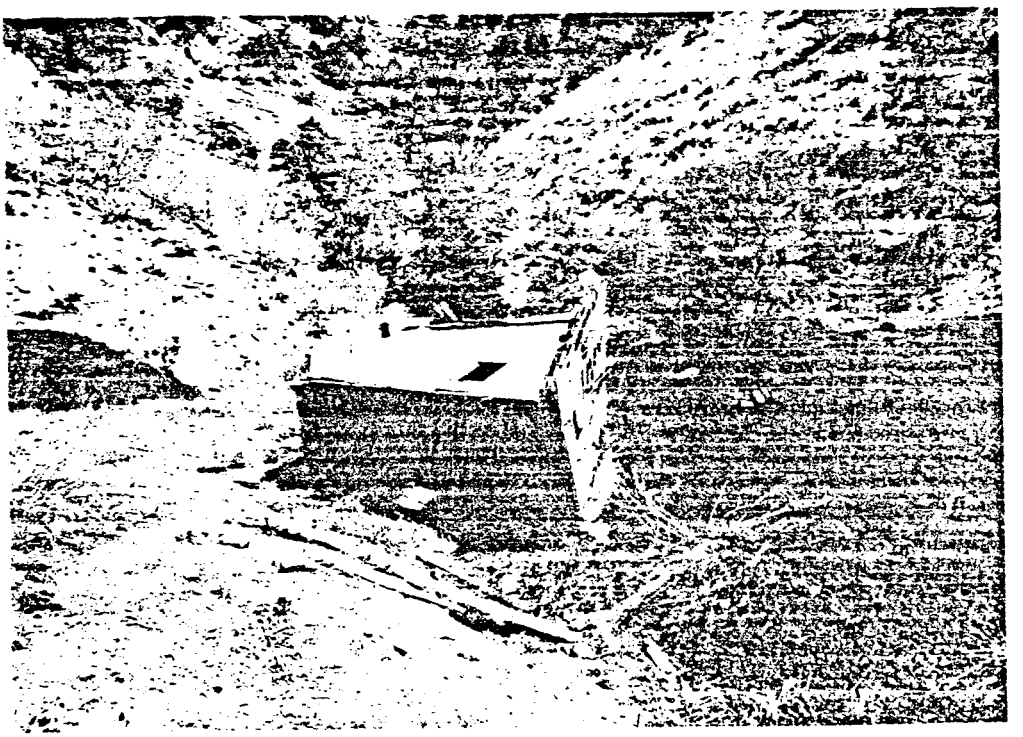

Figure 9. 42Cb177. Outhouse.

its side. The structure pad is pre-cast. The superstructure measures 4 by 4 by 7 feet high and is constructed of wood stud walls and siding. A window exists in the north wall. A door is contained in the west wall. The superstructure has a slant roof constructed with 1 by 6 inch planks. The coal loading hare (Figure 10) consists of a road, coal piles, and the remnants of a frame structure. The loading area is north of the end of the Starlight Canyon road and is oriented east-west. The coal piles measure 2-3 feet high, 12-14 feet wide and approximately 45 feet wide. The road measures 5 feet wide. The structure remnants consist of a stud wall, made of 2 by 4 inch wood studs and 1 by 6 inch planks.

The ventilator foundation (Figure 11) is located west of the coal bin, across the road. It is constructed of stone and concrete and probably contained the ventilating fan located to the northeast (Figure 12). The foundation may have also supported a building superstructure.

42Cb178 is the Rio Grande mine, active from 1940 to 1956 (Doelling 1972). The site is located in the right fork of Deadman's Canyon at the mouth of Fiasco Canyon in the W 1/2 of the NW 1/4 of the SW 1/4 of the SE 1/4, Section 7, Township 13 South, Range 11 East at an Elevation between 7,030 and 7,100 feet. The site consists of a coal loading facility, a structure pad with concrete block pillars, a concrete pad, concrete footings presently supporting a steel coal storage tower, a possible mine portal and a collapsed structure.

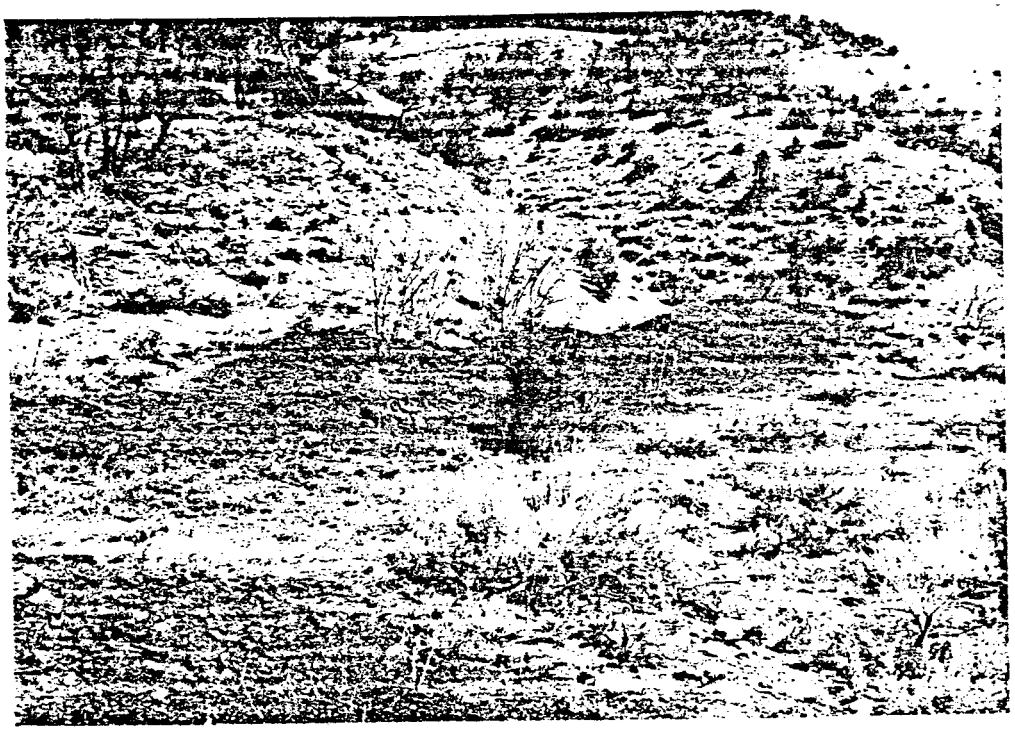

Figure 10. 42Cb177. Coal Piles on North End of Blue Flame/Sutton Mine.

Figure 11. 42Cb177. Ventilator Foundation Looking Northwest.

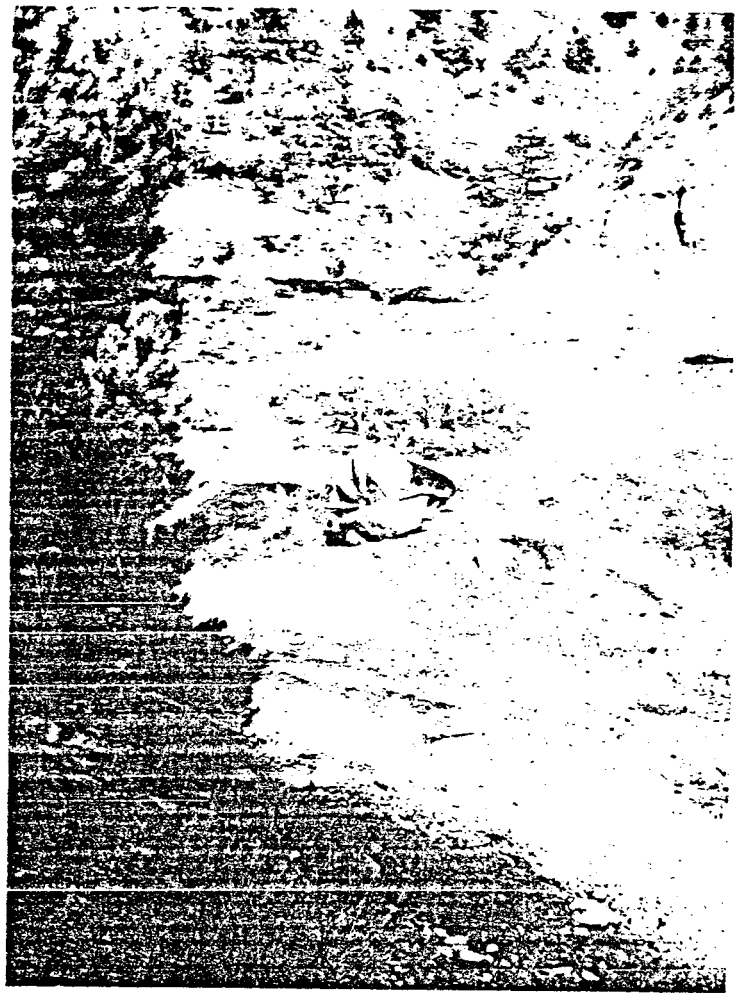

Figure 12. 42Cb177. Ventilator Fan Looking Northeast.

The coal loading facility (Figure 13) consists of an angled sheet iron platform supported by an "I" beam framework which gravity-feeds coal to a conveyor which is attached to a concrete retaining wall. The movement of coal from this point is unknown. A "Vulcan Denver" apparatus is situated immediately beneath the conveyor and two concrete pedestals are located approximately 50 feet south of the retaining wall. A considerable portion of the loading facility materials appear to have been salvaged.

The structure pad with concrete block pillars (Figure 14) is northeast of the loading facility. The concrete pad measures approximately 25 by 65 feet. Ten concrete block pillars are spaced around the perimeter of the pad. The pillars measure 15-18 inches square. Many of the pillars have collapsed to the south. The pillars appear to have originally been 14 to 15 courses high. Iron plates and bolts in the top of these piers indicate that a superstructure was attached to the piers at one time. No remains of a superstructure were observed. The materials may have been salvaged. Function of this structure is unknown.

A second concrete pad (Figure 15) is located south of the loading facility on the west side of the road. The pad measures 25 by 8 feet. A collapsed concrete ramp measuring 8 by 6 feet is attached to the south end of the pad. A 10 by 12 foot concrete pad is attached to the west side of the main pad. A wood framed, concrete block lined shaft measuring 1 by 1 foot is contained in the center of the pad. Function of the pads is unknown.

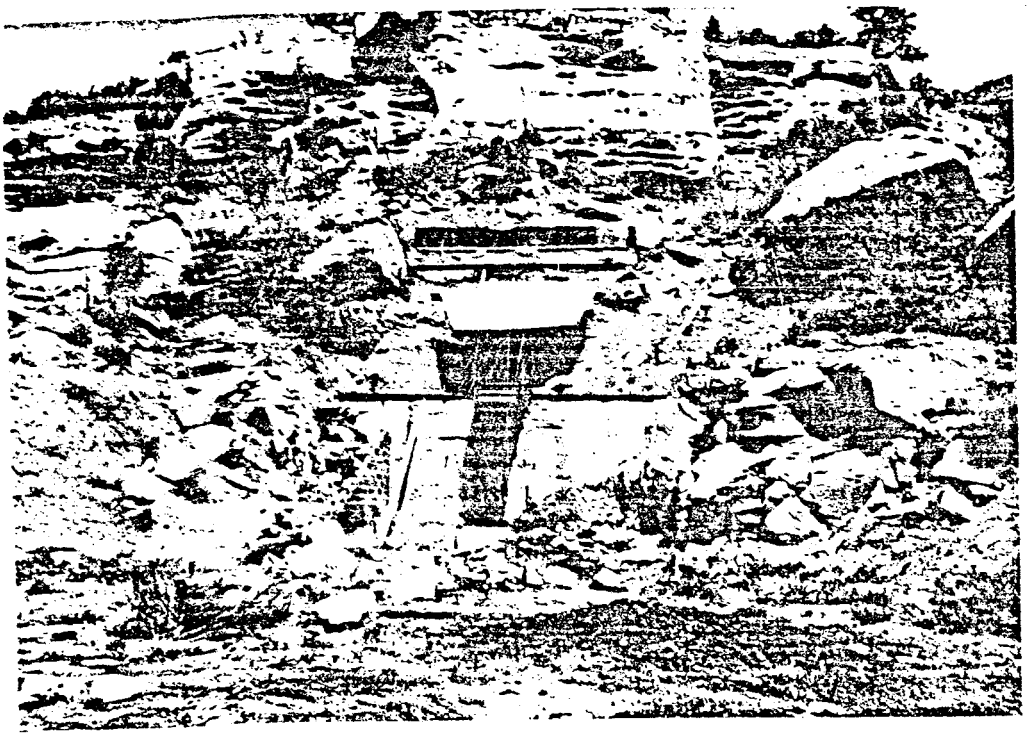

Figure 13. 42Cb178. Coal Loading Facility.

Figure 14. 42Cb178. Structure Pad with Concrete Block Pillars.

Figure 15. 42Cb178. Concrete Pad.

A series of concrete footings (Figure 16) presently support a steel tower which was used to store coal. Two footings are aligned north-south. The remaining two are aligned east-west. The area covered by the footings measures 30 by 15 feet.

A possible mine portal extends into the slope north of the loading facility. It appearently collapsed under the weight of slide debris. The portal may have been lined with concrete block with a pre-cast concrete lintel decorating the top. The width of the portal appears to be approximately 10 feet.

The wooden debris of a collapsed structure (Figure 17) is concentrated on the eastern part of the site south of a mining cut. Electrical equipment in the debris suggest that this structure may have served as a control or communication center for mine operations.

42Cb179 is a coal prospect. The site is located approximately 3/4 miles into Straight Canyon, 250 feet east of the creek and 60 feet above the canyon bottom in the NE 1/4 of the NW 1/4, Section 17, Township 13 South, Range 11 East at an elevation of 7,125 feet. The site consists of a cut revealing stratigraphy of a coal seam, a cleared area, a road leading to the site from the main canyon road and a pile of logs, one of which was squared, augered, and mortised.

42Cb180 is a log cabin (Figure 18). The site is located approximately 1 mile into the canyon, 60 feet west of the main canyon road in the SE 1/4 of the SW 1/4, Section 8, Township 13 South, Range 11 East. The cabin measures 10 by 10 by 6 feet high and is built on a square plan. The walls are constructed

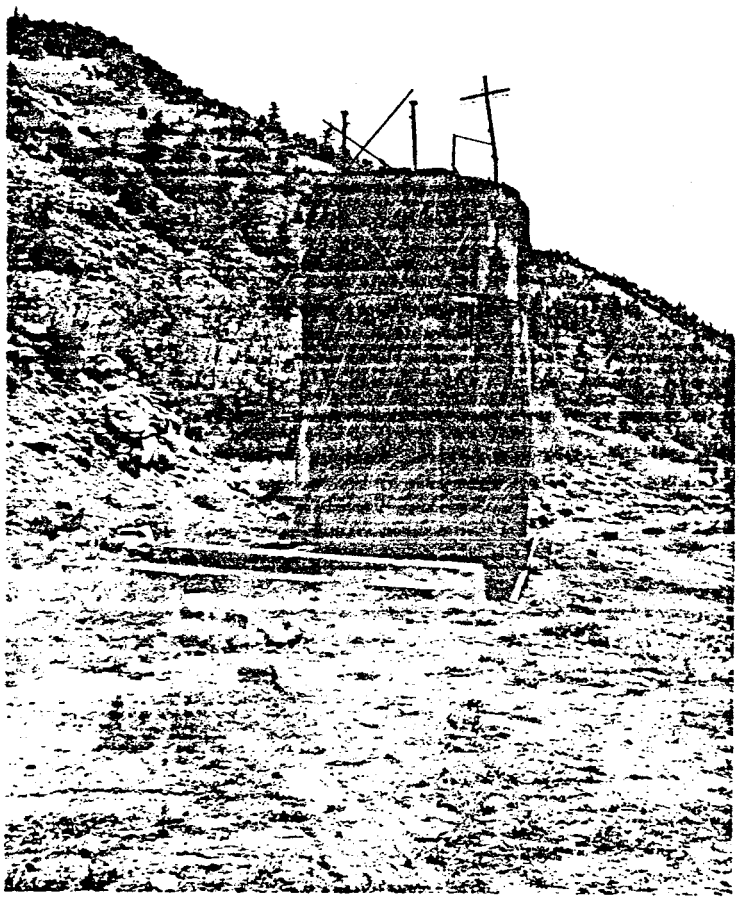

Figure 16. 42Cb178. Concrete Footings and Steel Tower.

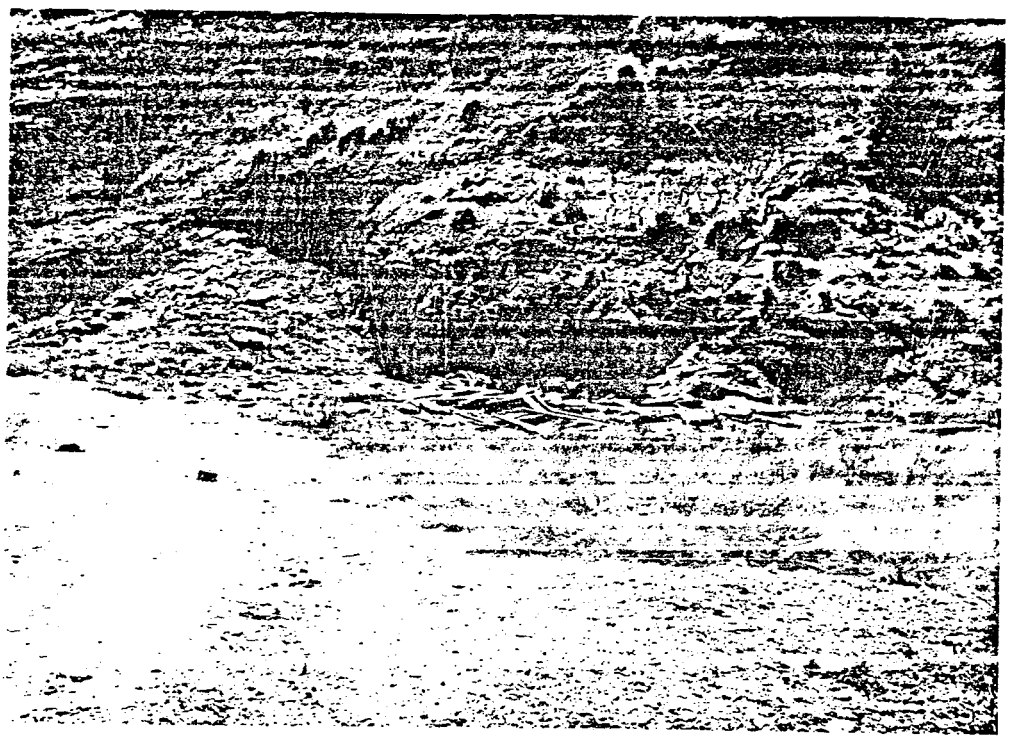

Figure 17. 42Cb178. Wooden Debris of a Collapsed Structure.

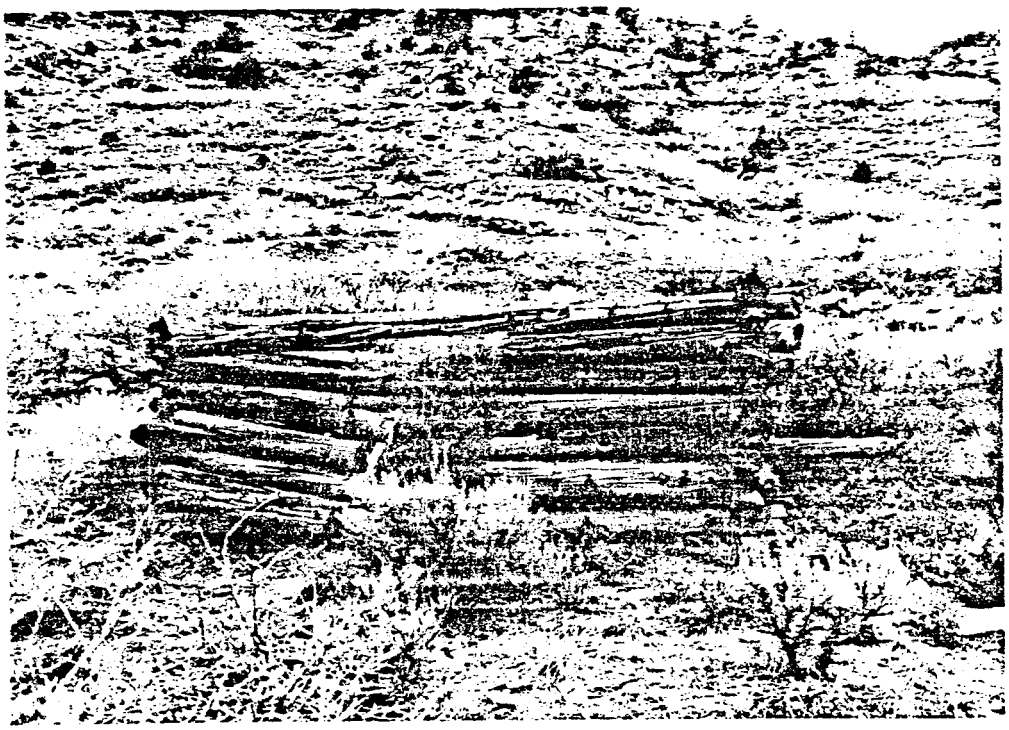

Figure 18. 42Cb180. Cabin.

of saddle notched round logs which have been squared on the interior surface. Saddle notching was done with a saw. A possible ridge pole is suspended across the center of the structure running north-south. No other roofing remains. One window is centered in the west wall and a door is centered in the east wall. A vertical slab is nailed to each side of the entrance to hold the east wall vertical. Each corner of the structure is supported by a stone. The floor appears to be earth with no artifacts other than a bedspring in association. 42Cb181 is a historic petroglyph (Figure 19) pecked on a sandstone boulder at the mouth of Straight Canyon on the east side of the road in the SW 1/4 of the SW 1/4 of the SE 1/4, Section 17, Township 13 South, Range 11 East at an elevation of 6,760 feet. The inscription reads "J.A. Peterson, May 11, 1901."

RECOMMENDATIONS

Sites 42Cb176 through 42Cb179 are not old enough to satisfy the National Register Criteria. The significance of these mines is contained in the spatial arrangement of their surface structures and in the building construction styles employed there. These aspects have been documented and all that remains is to document structure function through research in company records or conducting oral histories. These activities can be conducted at any time and should not stand in the way of development.

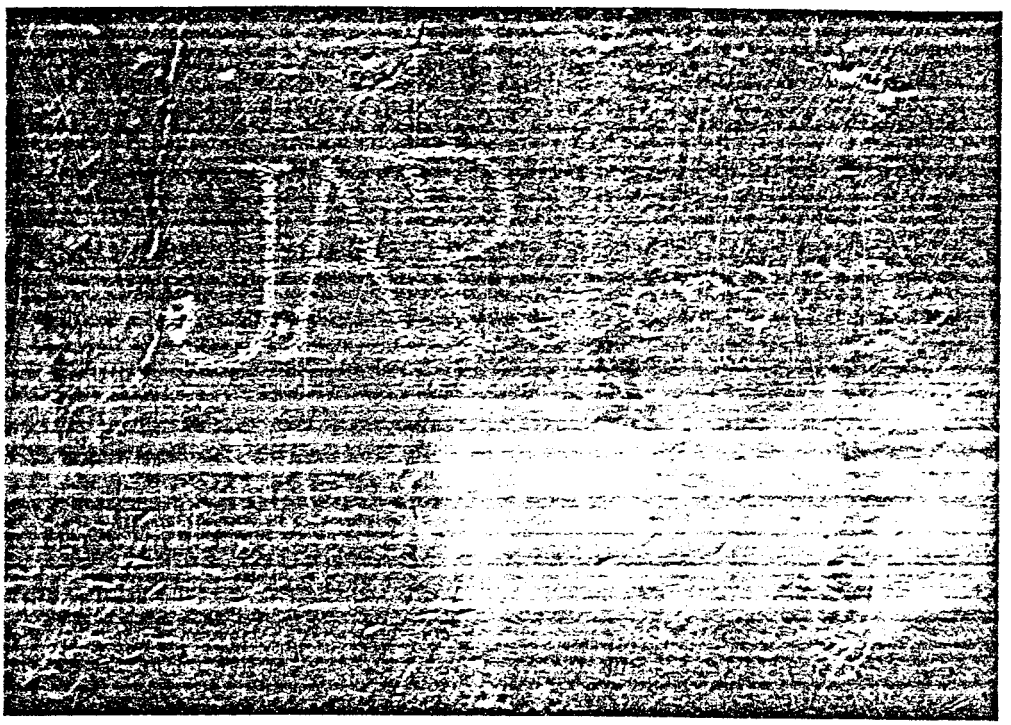

Figure 19. 42Cb181.

42Cb180

The occupant and date of construction for this cabin are presently unknown and could potentially qualify the site for the National Register. Avoidance is recommended for this site.

42Cb181

The information and location of this petroglyph has been recorded. This site is recommended cleared for development.

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RECEIVED
6-25-80

SCOTT M. MATHESON
GOVERNOR

STATE OF UTAH
DEPARTMENT OF COMMUNITY AND
ECONOMIC DEVELOPMENT

Division of
State History
(UTAH STATE HISTORICAL SOCIETY)

MELVIN T. SMITH, DIRECTOR
307 WEST 2ND SOUTH
SALT LAKE CITY, UTAH 84101
TELEPHONE 801/533-5755

June 19, 1980

Mr. Mike Glasson
AMCA-Coal, Incorporated
Walker Bank Building
Price, Utah

Dear Mr. Glasson:

Please find enclosed a report of our archeological survey in the Fiasco Straight Canyon area north of Price. You will note attached is the cover letter to the Bureau of Land Management indicating our recommendations, also attached is the bill for our five field days work.

If you have any questions, please let me know.

Sincerely,

La Mar W. Lindsay
Assistant State Archeologist

LWL:ro

Enclosures

State History Board: Milton C. Abrams, Chairman • Theron H. Luke • Ted J. Warner • Elizabeth Montague • Thomas G. Alexander
David G. Dayton • Wayne K. Hinton • Helen Z. Papanikolas • David S. Monson • Elizabeth Griffith • William D. Owens

SCOTT M. MATHESON
GOVERNOR

STATE OF UTAH
DEPARTMENT OF COMMUNITY AND
ECONOMIC DEVELOPMENT

Division of
State History
(UTAH STATE HISTORICAL SOCIETY)

MELVIN T. SMITH, DIRECTOR
307 WEST 2ND SOUTH
SALT LAKE CITY, UTAH 84101
TELEPHONE 801/533-5755

June 19, 1980

Bruce Louthan
Bureau of Land Management
Box 970
Moab, UT 84532

Dear Bruce:

Please find enclosed a copy of our report of an archeological survey for AMCA-Coal Company north of Price. Six of the sites encountered are historic - early 20th century construction, associated with mining; the seventh is historic graffiti. It is the opinion of Bruce Hawkins, Historic Archeologist, that these sites would not impede development.

This report along with necessary BLM forms has been distributed to the Price area office and the Utah State office.

If you have any questions, please let me know.

Sincerely,

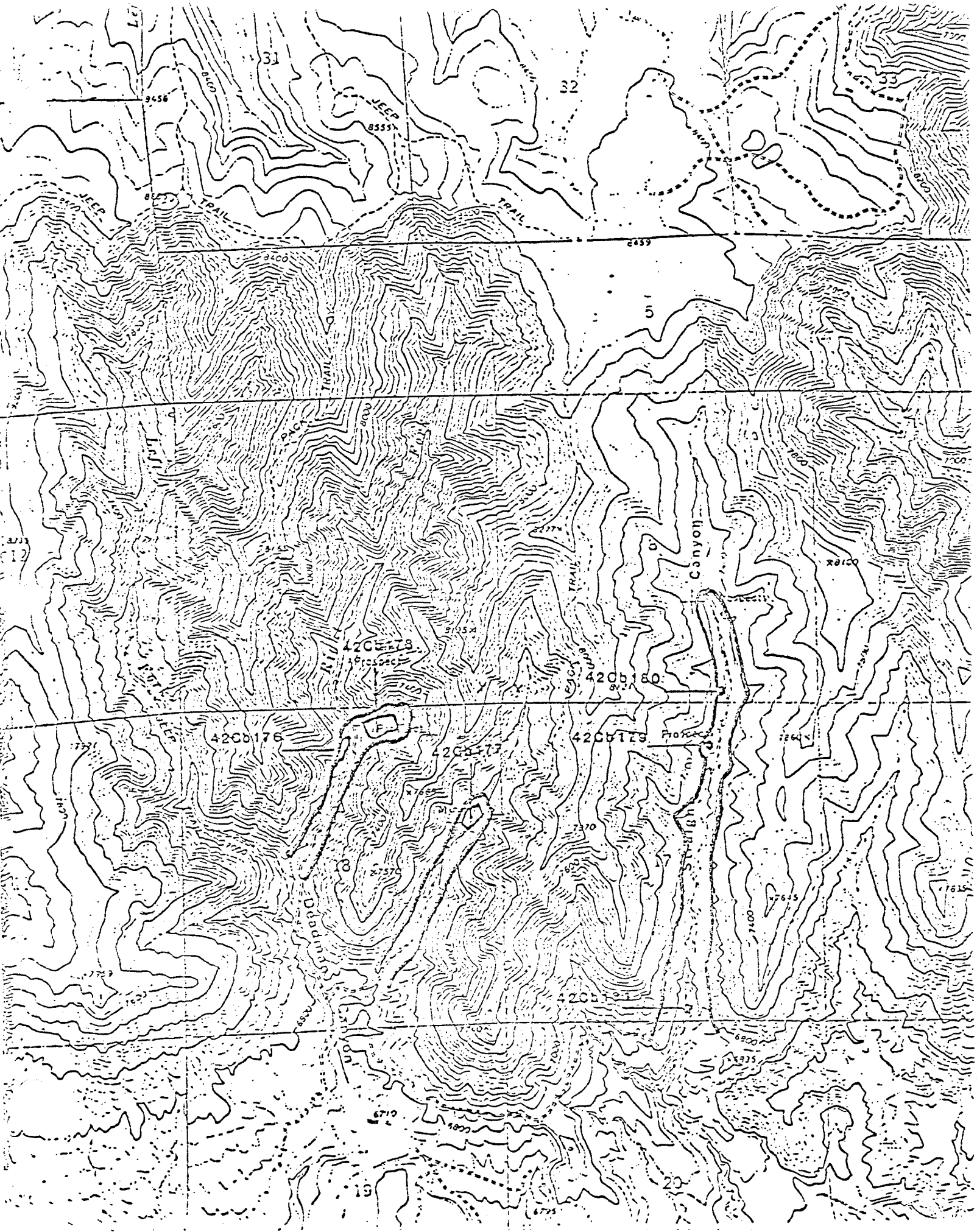
La Mar W. Lindsay
Assistant State Archeologist

LWL:ro

Enclosures

cc: Mike Glasson, AMCA-Coal Company
Mike Benson, Price BLM
Rich Fike, Salt Lake BLM

Alice C. Adams Chairman • Theron H. Lake • Todd Warner • Elizabeth Montague • [illegible]
• [illegible] • [illegible] • Doris S. Monson • [illegible] • [illegible]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JEEP TRAIL
PACK TRAIL
Canyon
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Crossed
Frosted
Stumpapo
Stumpapo
9656
8555
8459
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7370
7400
6900
6710
6715
6935

Site No. 42Cb178 County Carbon State Utah

Site name Rio Grande Mine

1. Map reference U.S.G.S. Deadman's Canyon 7.5 Min. Quad.

2. Location At the mouth of Fiasco Canyon in Deadman's Canyon

W½, NW¼ SW¼ SE¼ Sec. 7 T. 13S R. 11E

3. UTM Grid: Zone 12 Easting 523400 Northing 4394950

4. Type of site Coal mine and associated service facilities prospected 1900, active 1940-56.

5. Cultural affiliation (list basis of designation)

6. Owner and address

7. Informants

8. Previous designations and published reference for site

Central Utah Coal Fields p. 394

9. Site description and condition Coal dump and possible adit, prospect/possible adit area; coal storage tower, concrete pad, structure foundation, collapsed structure possibly associated with electrical control of some sort.

10. Cultural features, area of occupation, depth and character of fill

(See attached continuation sheet)

11. Environmental setting (vegetation, water, topography, etc.)

Situated at junction of 2 washes in right fork of Deadman's Canyon, Vegetation includes grasses, sage, ponderosa pine, scrub oak, juniper, ephedra, yucca and prickly pear cactus

12. Elevation 7030-7100 feet.

13. Material collected and deposition None

14. Material observed (See attached)

15. Material reported and owner/address None

16. Recommendations for further work

17. National Register potential

18. Photo Nos.

19. Type of map made by survey party Sketch

Bruce Hamilton, Chief Ranger Date 5-21-80

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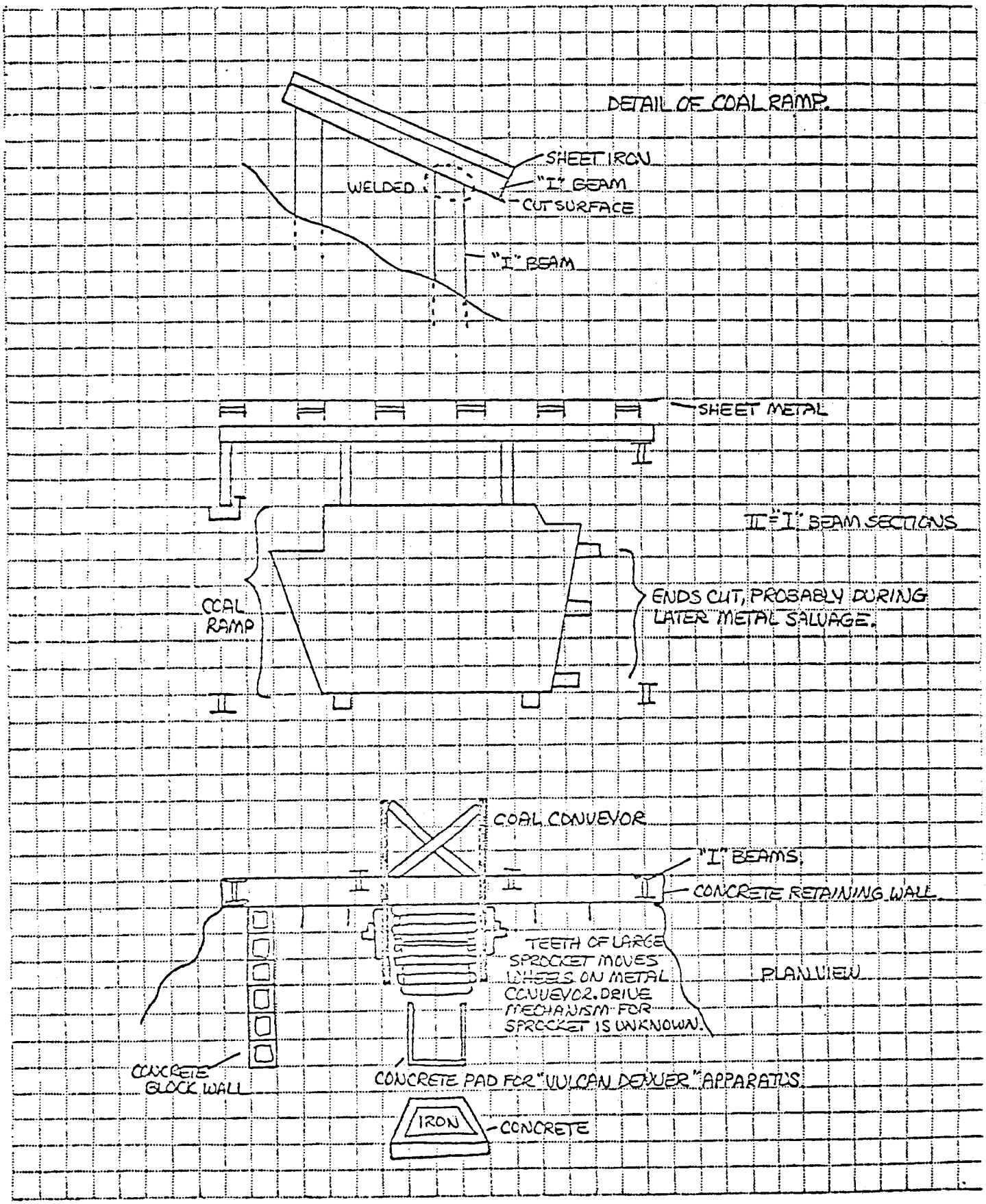
Feature No. 1 SITE 42Cb178 DATE 5/22/80



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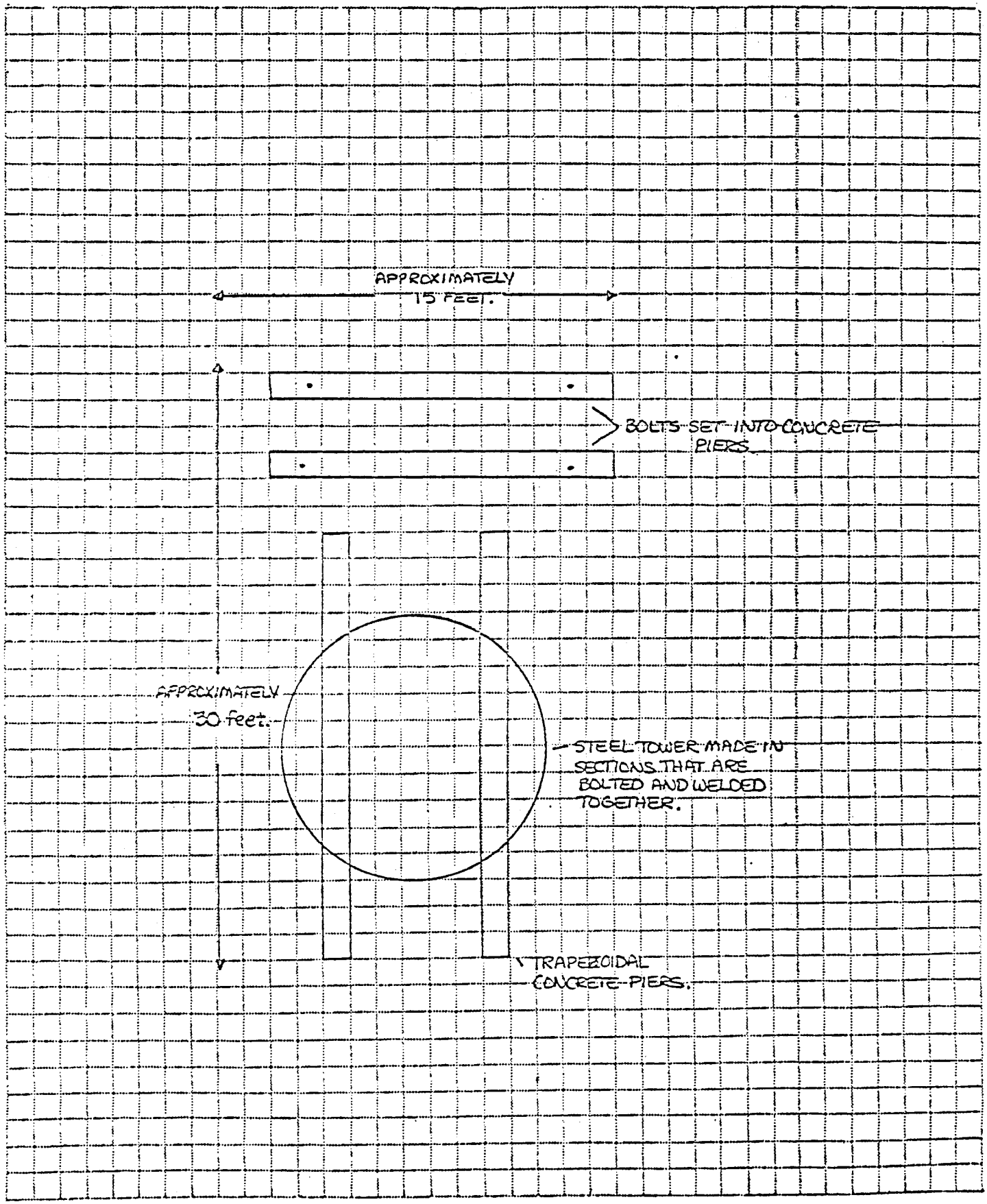

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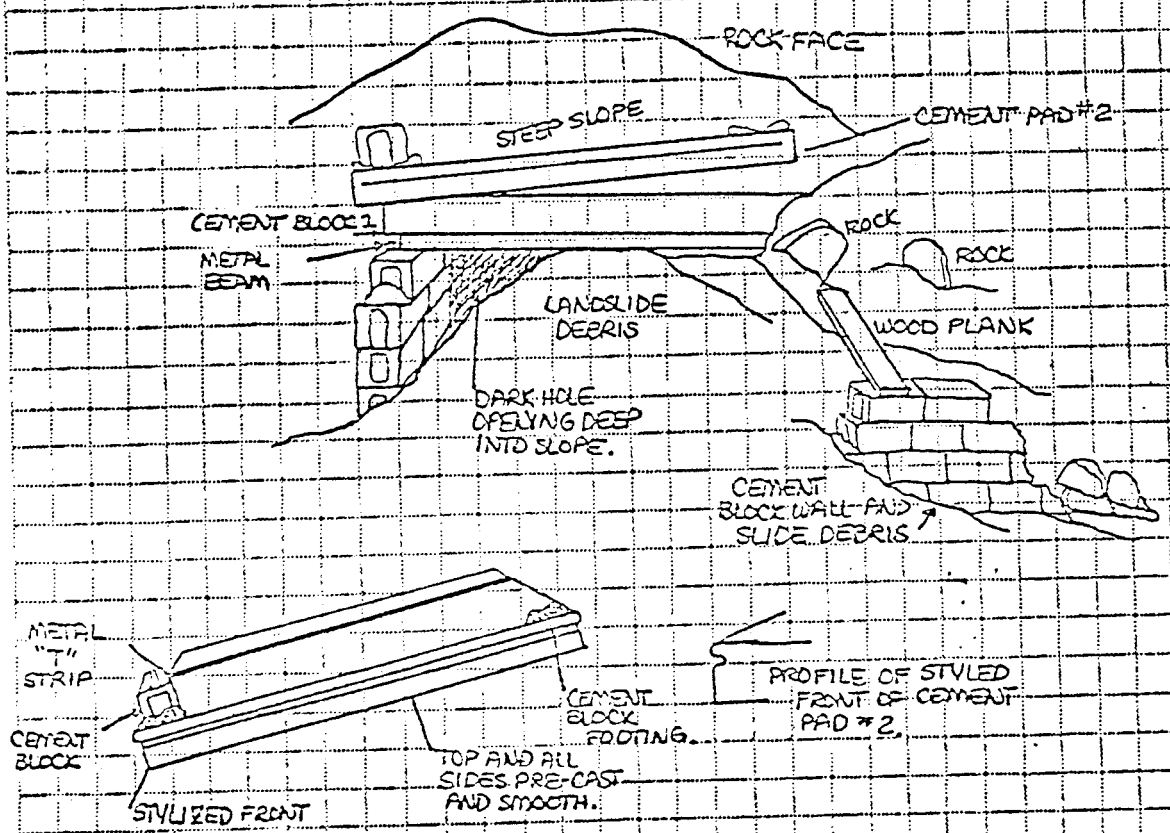
Antiquities Section Rio Grande *Division of State History*

Feature No. F-3 SITE 42Cb178 DATE 5/22/80

F-3 is a collapsed (?) structure in the south face of the slope rising north from the upper road in rio grande mine. Dirt and rock block the "front" opening of it but a top left corner is clear. Parts of 2 cement block walls emerge perpendicular to the road which runs east/west. These are connected on top by a metal beam approximately 3 inches thick. The walls themselves are 1 cement block thick. On the right side of the structure (E) a broken wall can be seen through the rubble that runs parallel to the road and stands slightly in front of the structure area. It is 4 blocks high and broken off 4 blocks wide. At this point a weathered plank connects it to the structure that has collapsed (?) Across the metal beam that connects these two sides is a cement "pad" with a crumbled face. It is 4 inches thick and 10 feet in length. The width of the structure is probably about this length (10 feet). On top of this cement pad another has fallen with the landslide. It sits at an angle, its left (west) side resting on the pad below it and its right on debris that partially buried its end. It is different in the front, it has a definite (decorative ?) smoothed face. It too has 2 cement block wall footings at either end (east and west) and is 4 inches thick. The top is smoothed horizontally and is approximately 3 feet wide (lying east/west its width is north/south) and 10 feet long. It is different too in that it has a definite and smoothed back. There is a metal T-shaped brace or support beam inlaid in it with the top of the "T" on level with the top of the cement pad. The structure seems to have been blocked by a large slide from the talus slope above and there is little else there. Strangely perhaps, there are no other cement blocks or fragments in evidence, anyway, around F-3 the debris is solely natural dirt, sand and rock material.



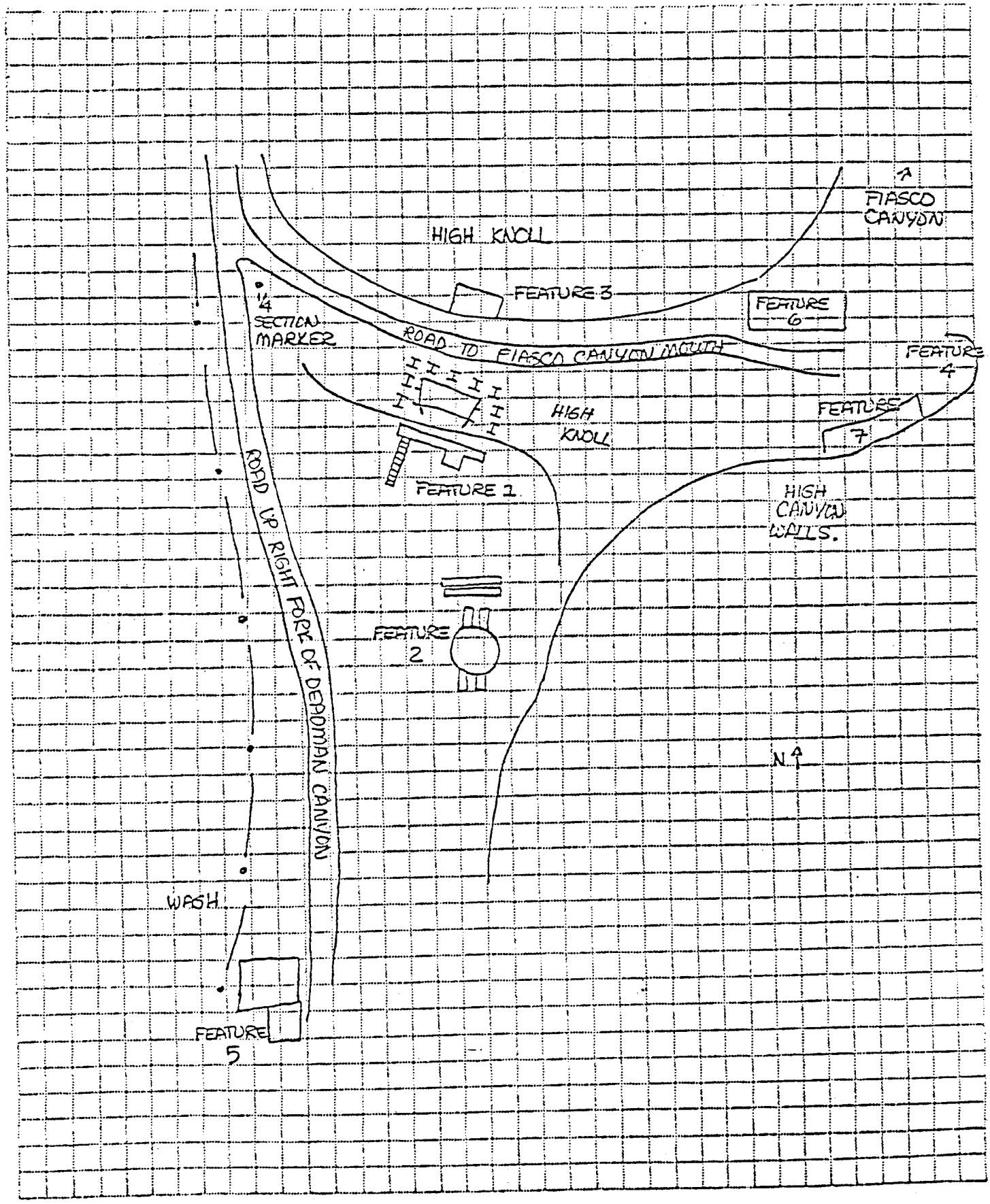
W. COOPER Debi Truett

Division of State History

Antiquities Section

Feature No. [illegible]

[illegible] 178 DATE 5/22/80

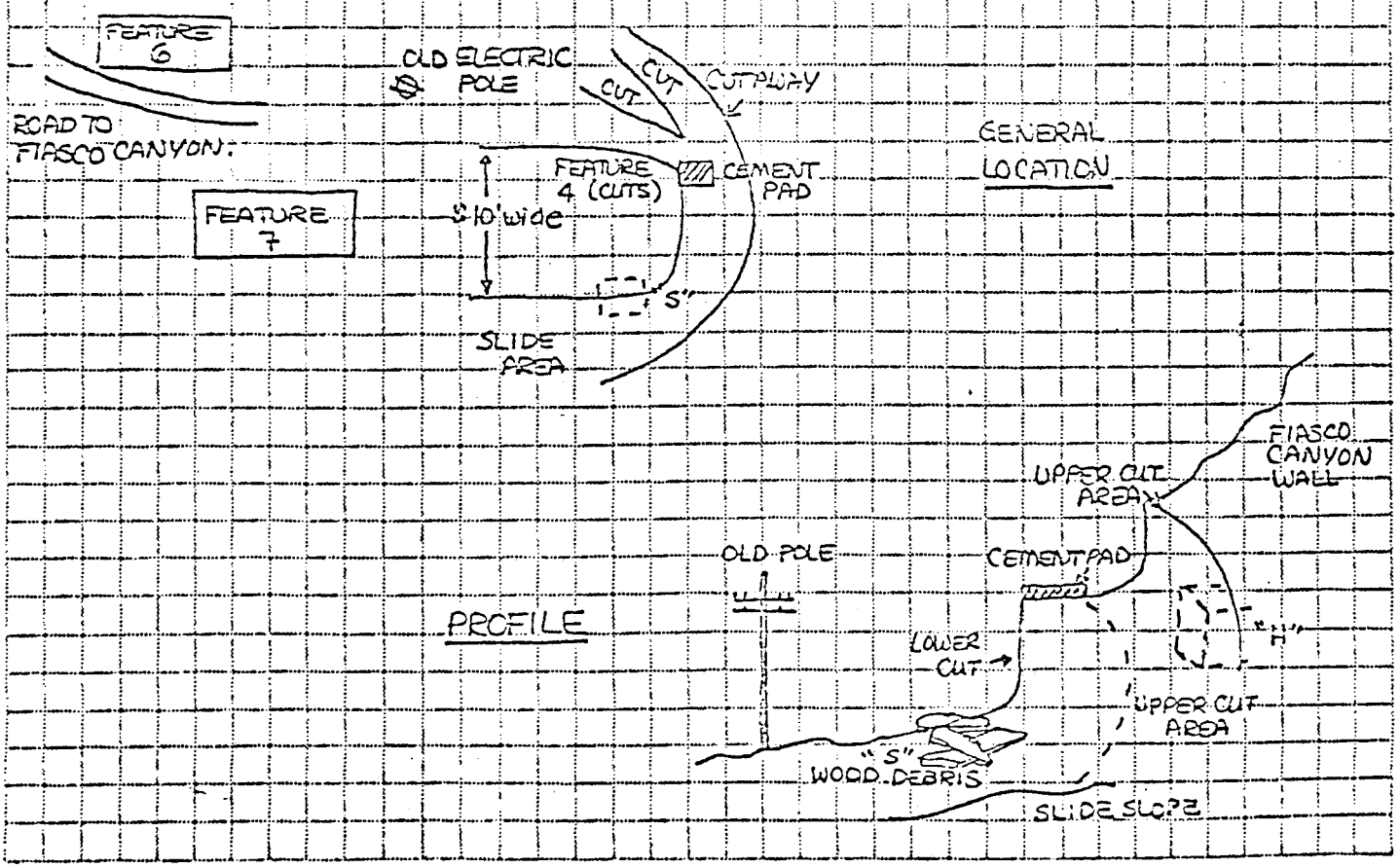


RECORDER

Antiquities Section Rio Grande *Division of State History*

Feature No. F-4 SITE 42Cb178 DATE 5-22-80

F-4 is a small series of rather large cuts east of F-7 and southeast of F-6. The lowest level one (and deepest cut) is 12-15 feet high and strewn with small boulders. The upper cut begins near the old electric pole and makes a semi-circle around the top of the lower larger one. It is only 8 or 9 feet deep at the deepest point. The southern "wall" of these cuts appears to have been a landslide and looks quite different. Under the soil of this slide slope are rather large pieces of cut lumber and planks and it appears that a structure similar to F-7 may once have stood on the southern side of F-4 (See "S" on map). Along the upper cut area on the edge of the lower cut is a small cement pad 3 inches thick by 3 feet by 5 feet. There are no other building materials near it such as metal, cement blocks, fragments, etc. The north/south width of the lower large cut is 10 feet while the width of the higher cut "step" area is 10-12 feet. The slope resumes behind this cut and rises naturally into Fiasco Canyon on the north and east. In the southeast corner of the second cut is a small (5 foot diameter) sunken area approximately 5 1/2 feet deep at the "back" nearest the high part of the slope. Rocks and dirt have fallen in on this hole and although there is no evidence at all of any man-made construction materials (i.e. cement, cement block, metal, wood planks), there is a very small opening in the debris that shows a hole of undetermined depth goes down into the hillside. (A small stone tossed down seemed to fall fairly freely for quite a way). See "H" on profile map.

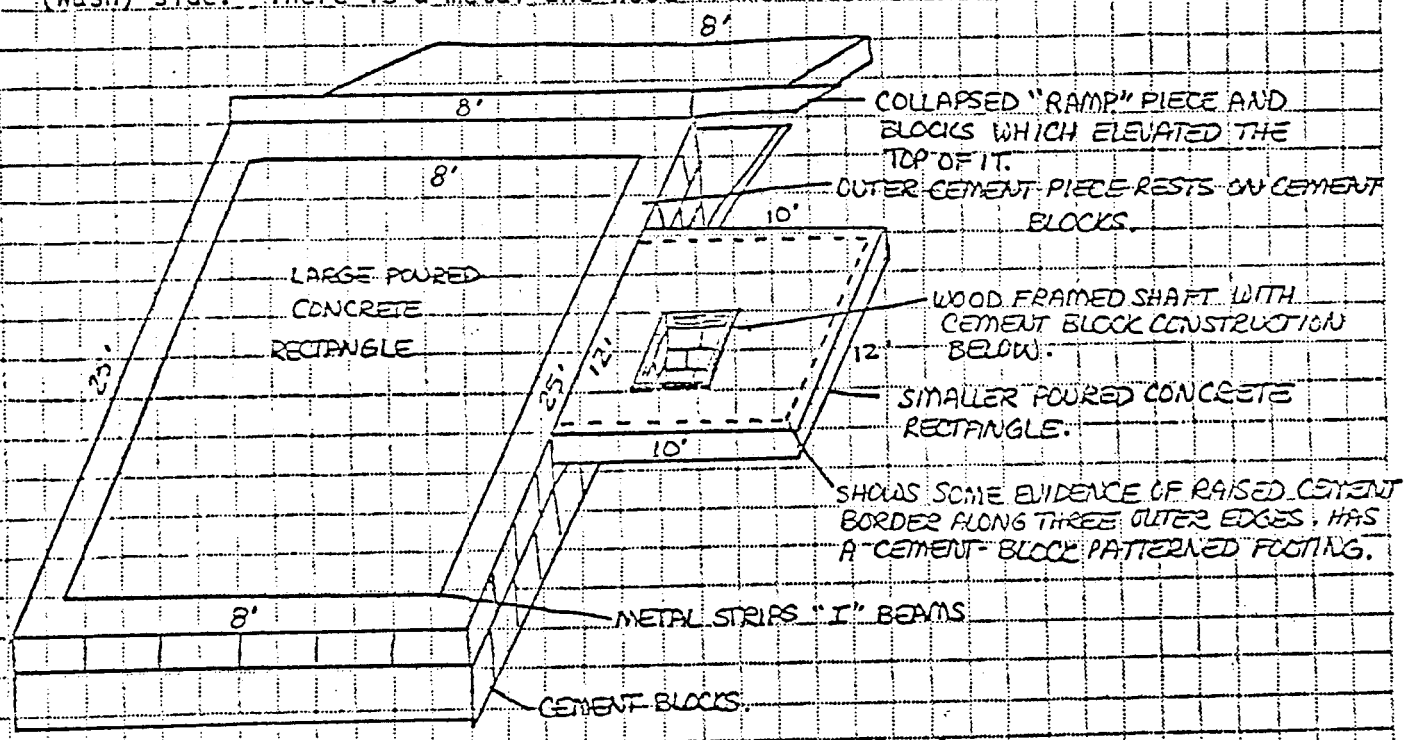


FINAL SHEET YES ☐ NO ☒ RECORDER Debi Tough

Antiquities Section Rio Grande *Division of State History*

Feature No. F-5 SITE 42Cb178 DATE 5/22/80

F-5 lies southwest of the silo-type F-2 structure of the Rio Grande mine. It is on the east side of the wash that runs down from Deadman's (right fork) Canyon and just below Fiasco Canyon. It consists of a large "pad" of poured cement. A large rectangular part is closest to the road. To the west (its left facing north) lies a smaller poured cement pad with a wood framed opening ( ) constructed beneath the pad of cement block. This has been filled in for the most part and it is impossible to guess how deep a shaft this may be. The large rectangle has a border of two metal strips, placed about 2 inches apart and rimmed with a layer of cement block topped with poured concrete (see diagram). To the south of this large rectangle in a separate piece is another slab of poured concrete. The northern edge of this (almost touching the large rectangular pad) is elevated by a cement block while the southern edge lies on the ground, forming a rough ramp. (The concrete has cracked and the "ramp" collapsed). A few wooden planks with nails lie around the area particularly on the west (wash) side. There is a metal and wood frame underneath.



LARGER RECTANGLE: 25'×8'
SMALLER RECTANGLE: 10'×12'
SHAFT: 1'×1'
RAMP: 8'×6'
RAMP HEIGHT AT APEX: 1'

S↑

FIRST SHEET YES ☐ NO ☒ RECORDER Debi Taylor

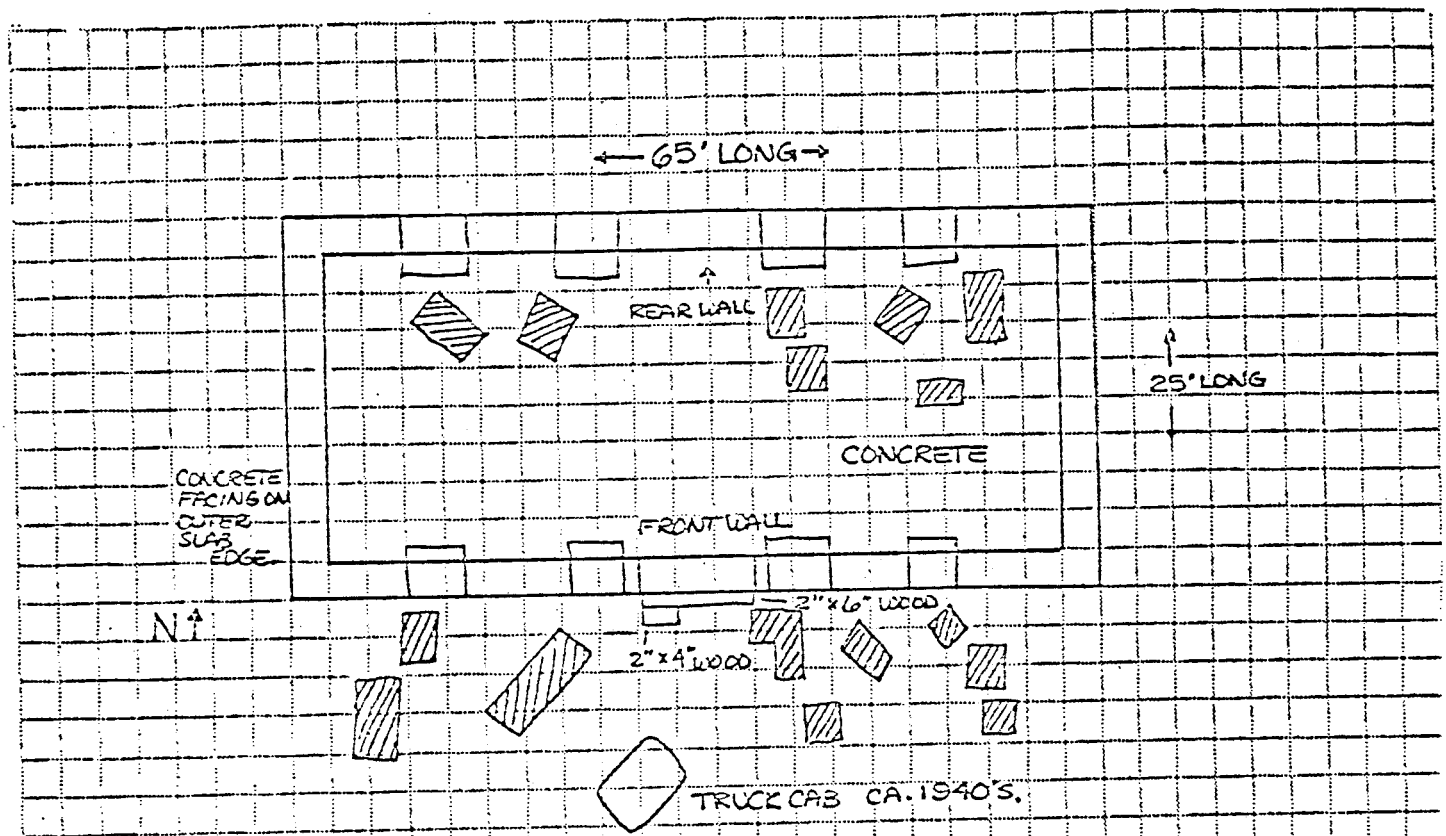
Antiquities Section

Division of State History

Feature No. 6

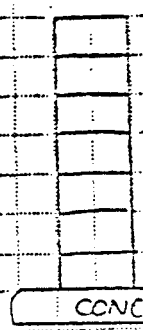
SITE 42 Cb 178

DATE 5-22-80



PLAN VIEW

CEMENT PILLARS (FALLEN)



CROSS-SECTION - FRONT WALL PILLAR.

ARTIFACTS: ROUND NAILS, (16 penny and 8 penny). CONCRETE BLOCK FRAGS, WINDOW GLASS FRAGMENTS, RUBBER INNER TUBE, LUMBER FRAGS, FLUE TI SHEET METAL, GAS CAN, ELECTRIC (or GAS) STOVE ELECTRICAL CABLE? LIGHT BULB SOCKETS.

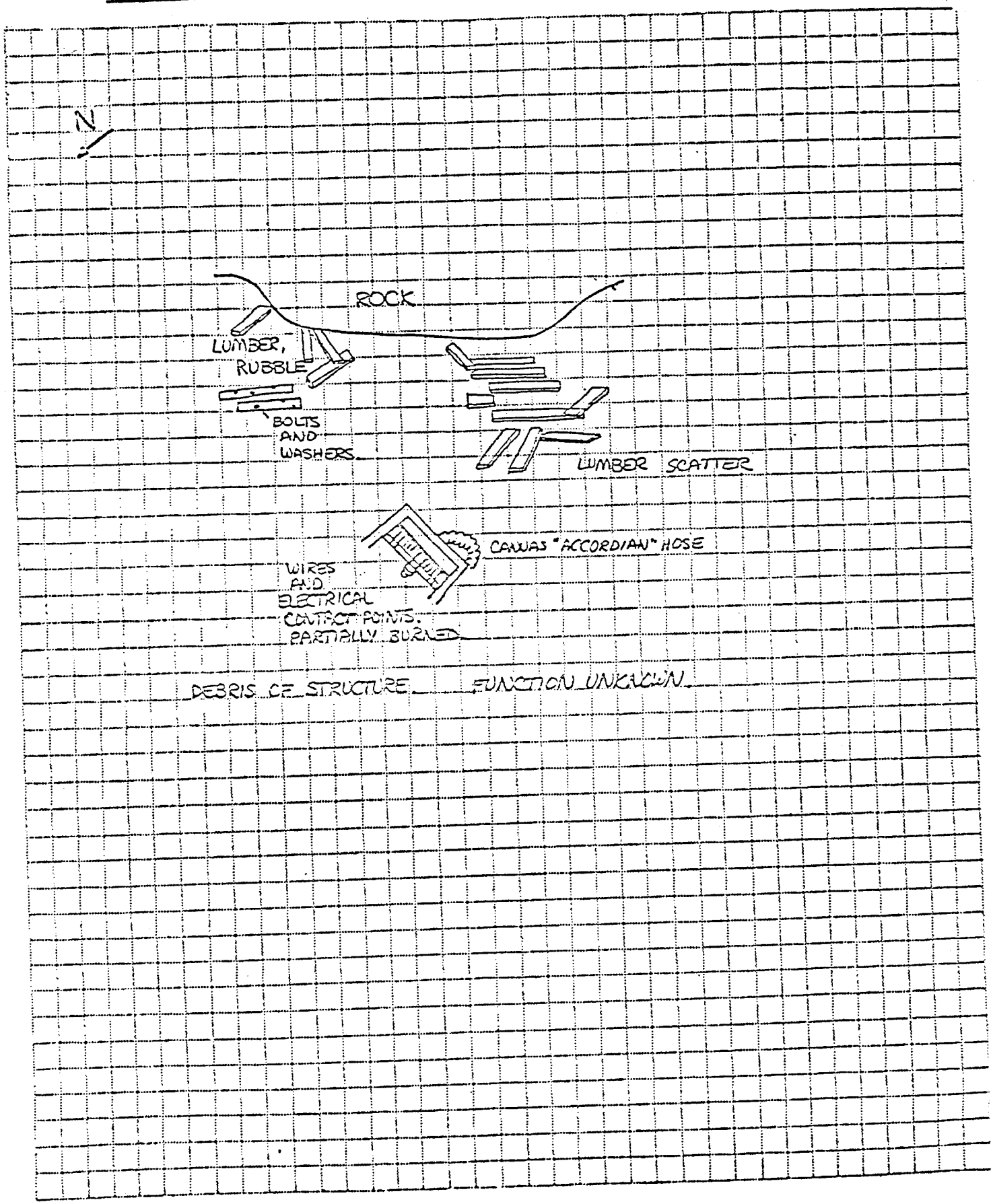
RECORDER

Antiquities Section

Division of State History

Feature No. 7

SITE 42 Cb 178 DATE 5/22/80



TOTAL SHEET YES ☐ NO ☐

RECORDER

Archeological Survey

Site No. 42Cb179 County Carbon State Utah

Site name

1. Map reference U.S.G.S. Deadman's Canyon 7.5 Min. Quad.

2. Location 60 feet above and 250 feet east of Creek in Straight Canyon

NE¼ NW¼ Sec. 17 T. 13S R. 11E

3. UTM Grid: Zone Easting Northing

4. Type of site Prospect (coal mining)

5. Cultural affiliation (list basis of designation) Historic

6. Owner and address

7. Informants

8. Previous designations and published reference for site
U.S.G.S. Quad and central Utah Coal Fields

9. Site description and condition on 20 degree slope north of creek on north flank of Straight Canyon. A zig-zag road leads up slope from main canyon road to cut and possible adit.

10. Cultural features, area of occupation, depth and character of fill
Prospect cut (possible adit), pile of notched, mortised, and augered logs. One log is squarred by adze and is mortised, ends are sawed; small tailings pile with small coal debris content.

11. Environmental setting (vegetation, water, topography, etc.)
grasses, pines, scrub oak, sage

12. Elevation 7125 feet.

13. Material collected and deposition None

14. Material observed Sawn and adzed logs.

15. Material reported and owner/address Not available

16. Recommendations for further work None

17. National Register potential None

18. Photo Nos. 2-13,14

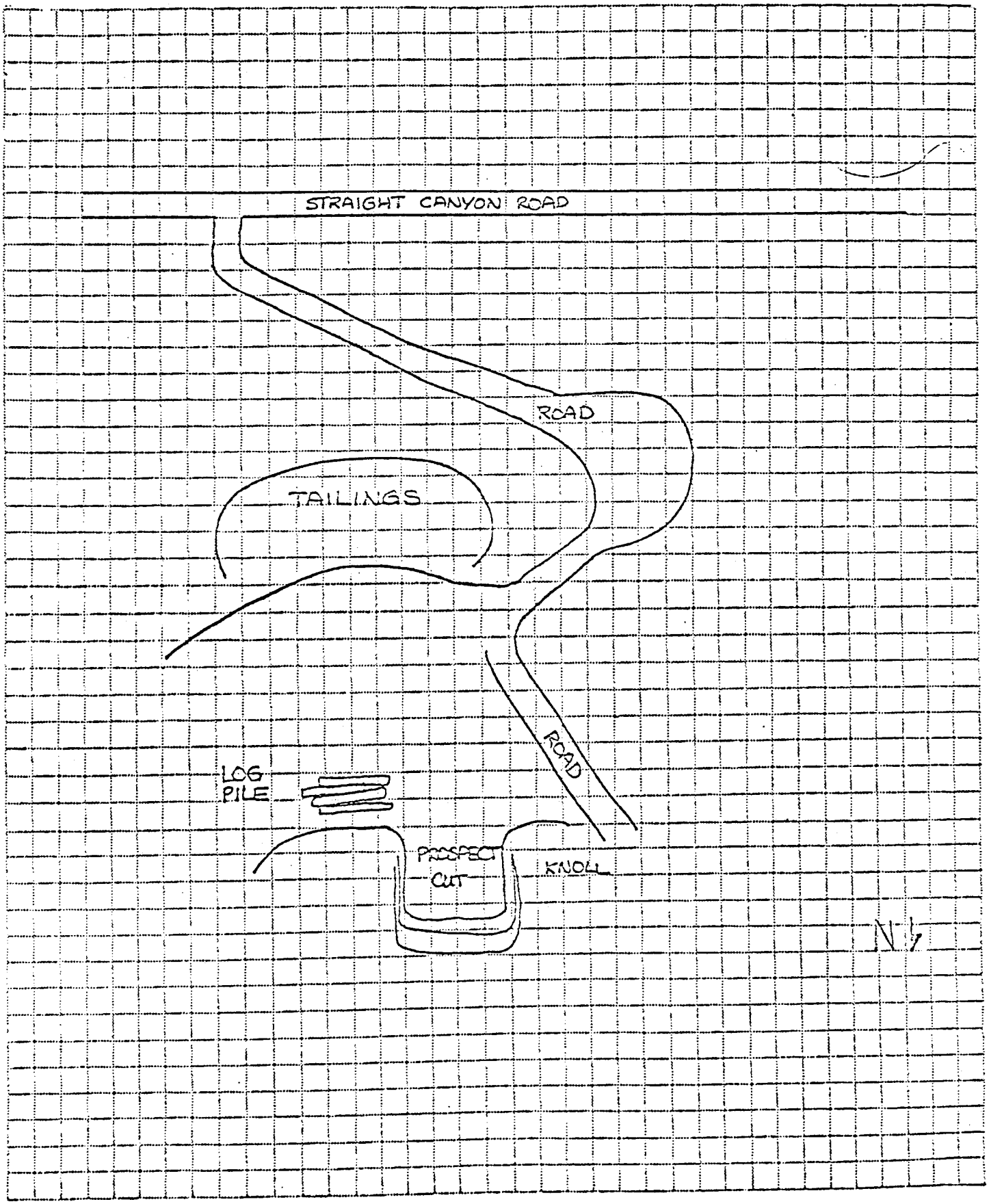
Sketch

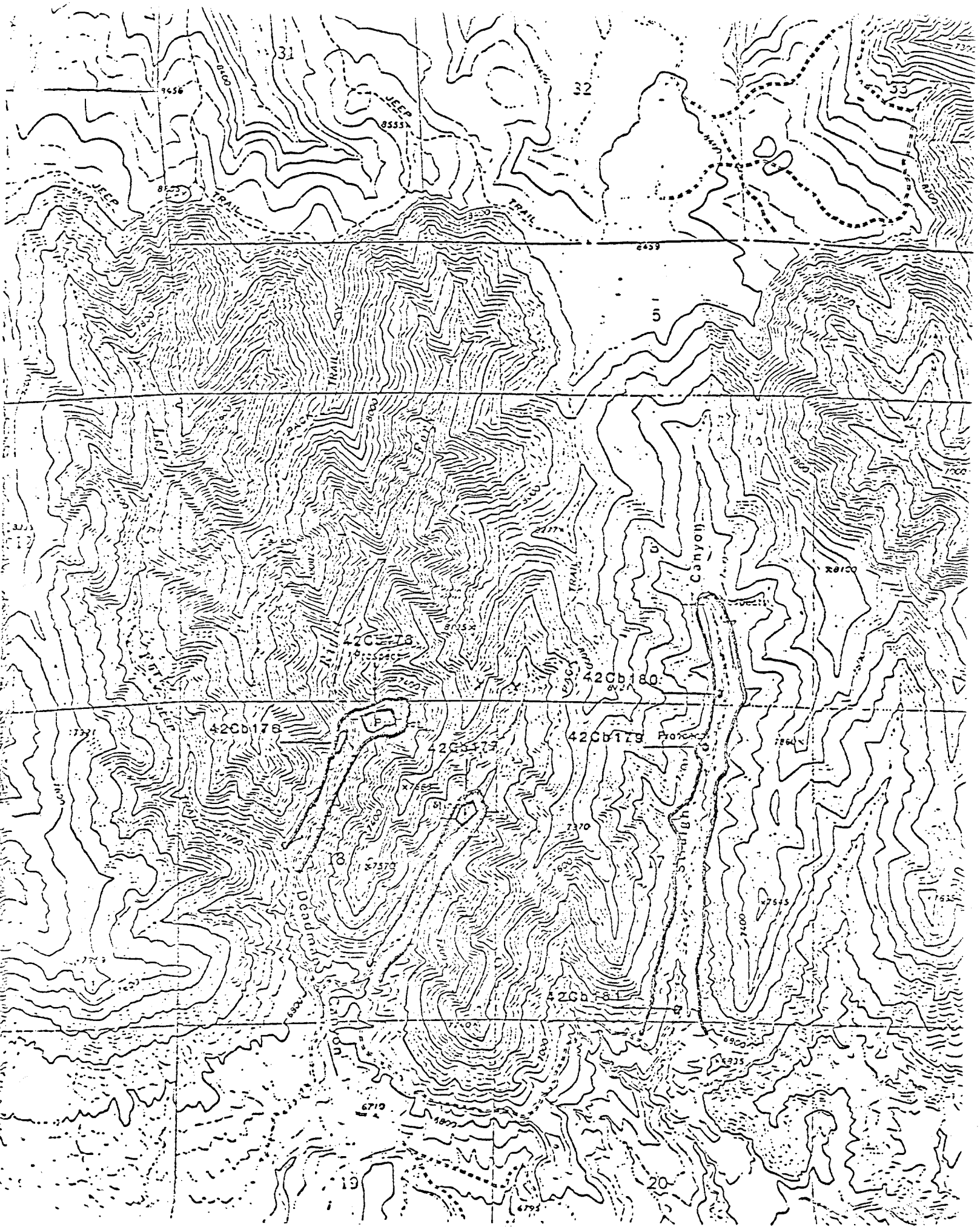
Antiquities Section

Division of State History

Feature No. _____

SITE 42 CO 179 DATE 5/23/80




31
32
33
5
JEEP
TRAIL
42Cb178
42Cb180
42Cb176
42Cb179
42Cb181
18
19
20
Canyon
Deadman
Slough

Antiquity Section

Archeological Survey

Site No. 42Cb180 County Carbon State Utah

Site name

1. Map reference U.S.G.S. Deadman's Canyon 7.5 Min. Quad.

2. Location 60 feet west of Straight Canyon road.

SE¼, SW¼ Sec. 8 T.13S R.11E

3. UTM Grid: Zone Easting Northing

4. Type of site Historic Cabin and Coal Prospect Cut

5. Cultural affiliation (list basis of designation)

6. Owner and address

7. Informants

8. Previous designations and published reference for site

9. Site description and condition

10. Cultural features, area of occupation, depth and character of fill Cabin 10 feet x 10 feet, presently standing 6 feet high rests on corner foundation stones saddle notched (using saw and axe); log insides are hewn flat while outsides are still rounded cut consists of a cut 10 feet high paralelling the north canyon flank. The roof is/was apparently flat and 25 feet high.

11. Environmental setting (vegetation, water, topography, etc.) pines, grasses, sage, scruboak; water source 80 feet south of cabin.

12. Elevation 7080 - 7160 feet.

13. Material collected and deposition None

14. Material observed Cans of unknown date

15. Material reported and owner/address

16. Recommendations for further work

17. National Register potential

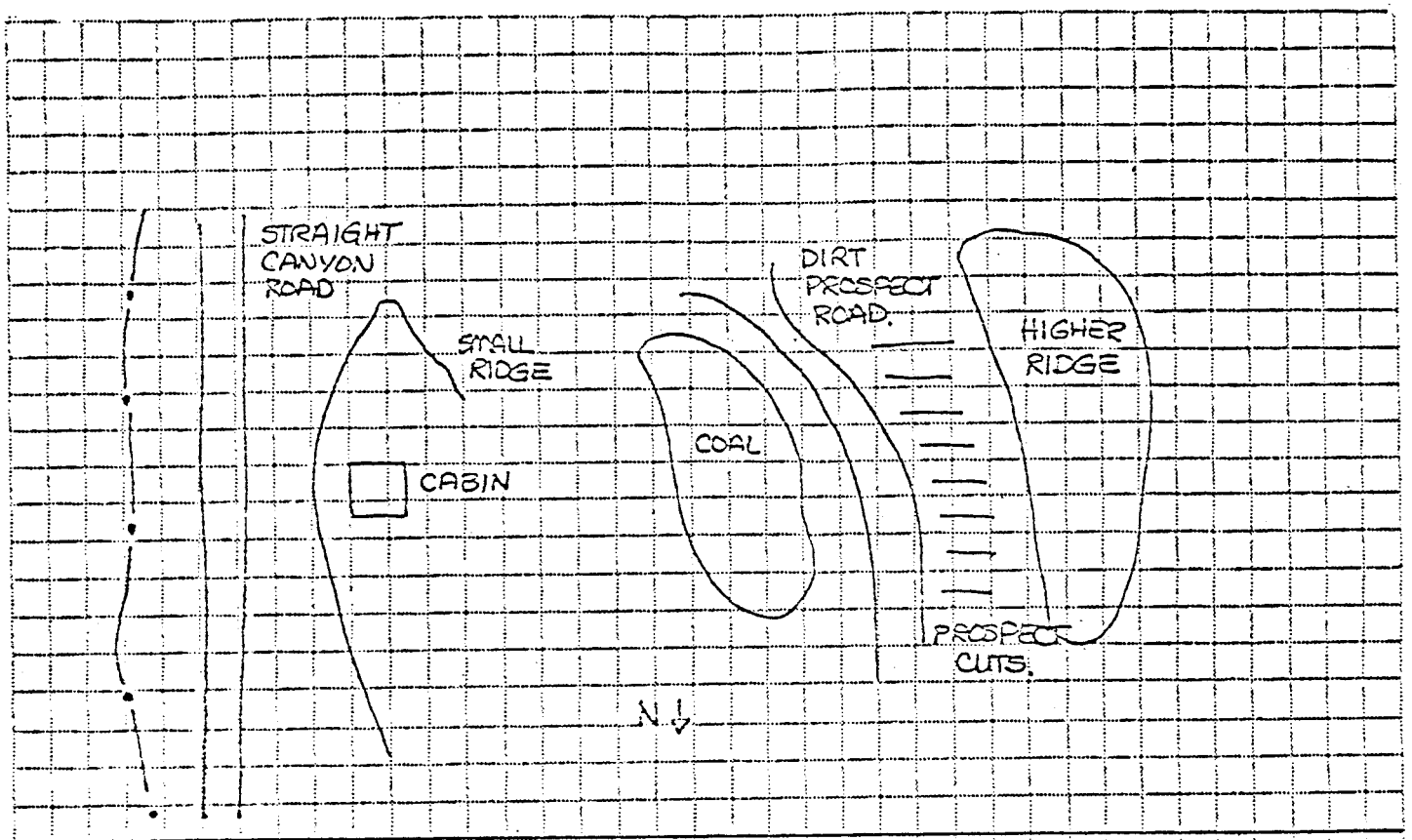
18. Photo Nos.

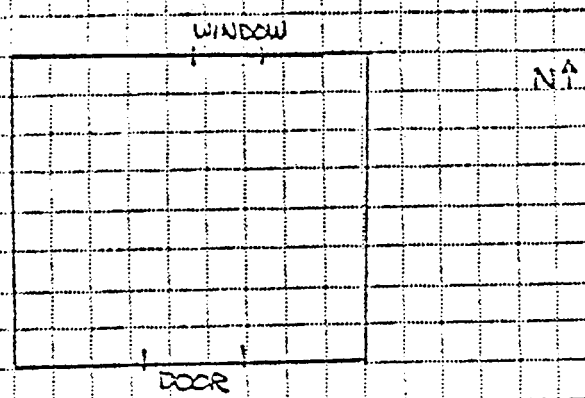
19. Type of map made by survey party Sketch and elevation ~~and plan~~

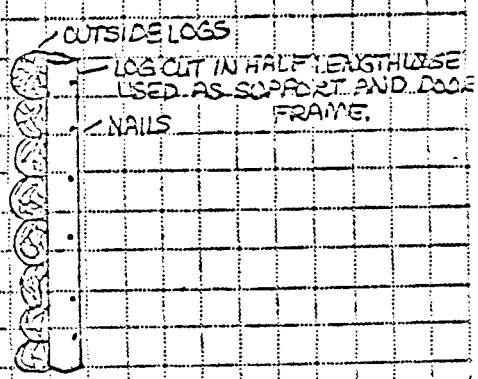
Antiquities Section

Division of State History

Feature No. _____ SITE 42 Cb 180 DATE 5/23/80







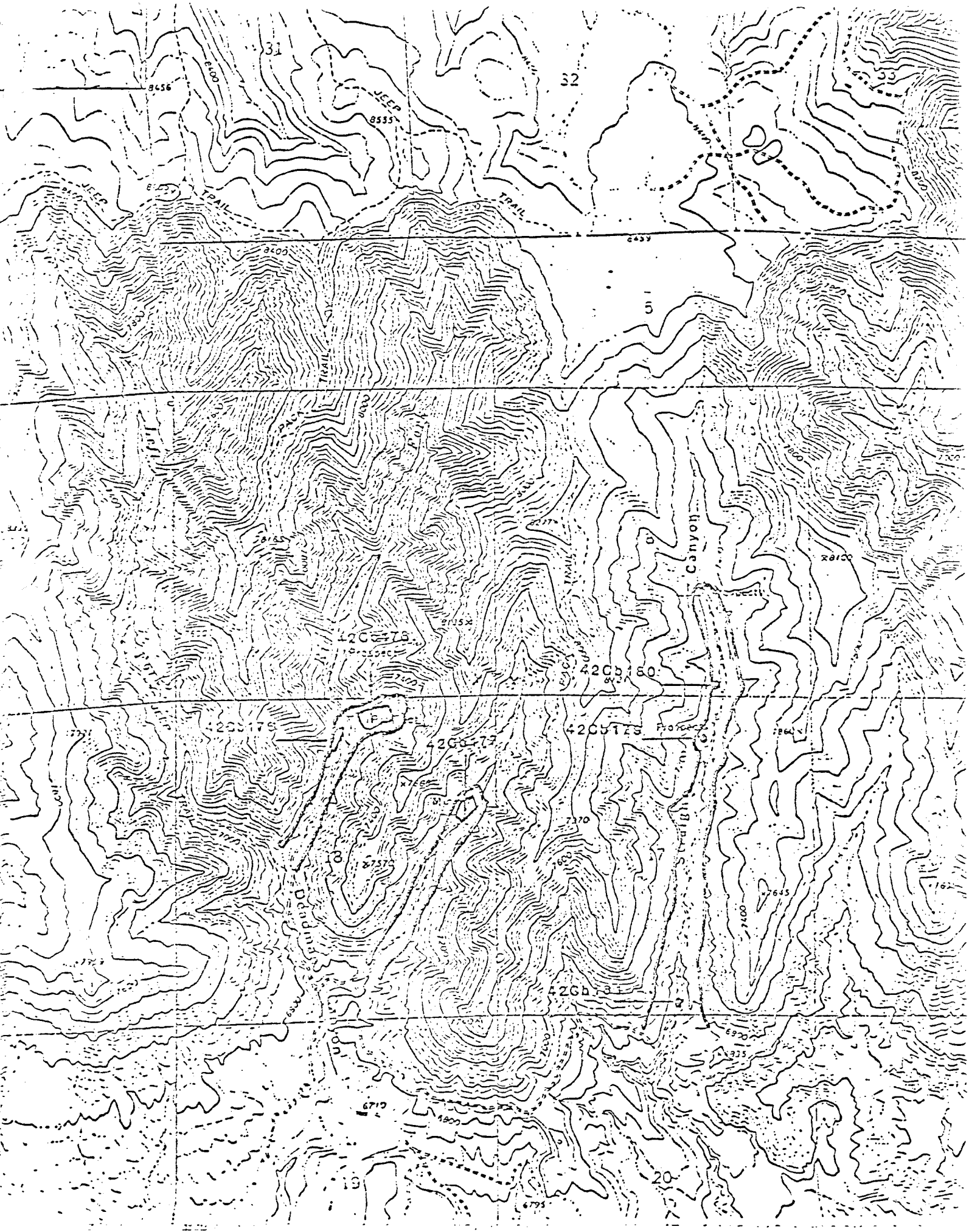
CROSS-SECTION OF CABIN WALL AT DOORWAY.

STRUCTURE MAY HAVE BEEN FLAT-ROOFED WITH LOGS.

ARTIFACTS: A RUSTED MATTRESS SPRING BOARD HAD BEEN DISCARDED INSIDE.

FILL SHEET YES ☐ NO ☐

RECORDER _____


31
32
33
5
8
18
19
20
JEEP TRAIL
PACK TRAIL
Canyon
42Cb179
42Cb178
42Cb177
42Cb176
42Cb175
42Cb180
42Cb181
8535
8400
8100
7370
7645
6930
6710
6795

Archeological Survey

Site No. 42Cb181 County Carbon State Utah

Site name

1. Map reference U.S.G.S. Deadman's Canyon 7.5 Min. Quad.

2. Location 1/16 mile north of section line in Straight Canyon 5-10 feet from (west) existing road on boulder face.

Sec. 17 T. R.

3. UTM Grid: Zone Easting Northing

4. Type of site Historic Petroglyph/Inscription

5. Cultural affiliation (list basis of designation)

6. Owner and address

7. Informants None

8. Previous designations and published reference for site Not available

9. Site description and condition Condition good (see photo) Inscription is pecked into sandstone face of boulder and reads "J.A. Peterson, May 11, 1901".

10. Cultural features, area of occupation, depth and character of fill

11. Environmental setting (vegetation, water, topography, etc.)

12. Elevation

13. Material collected and deposition None

14. Material observed None

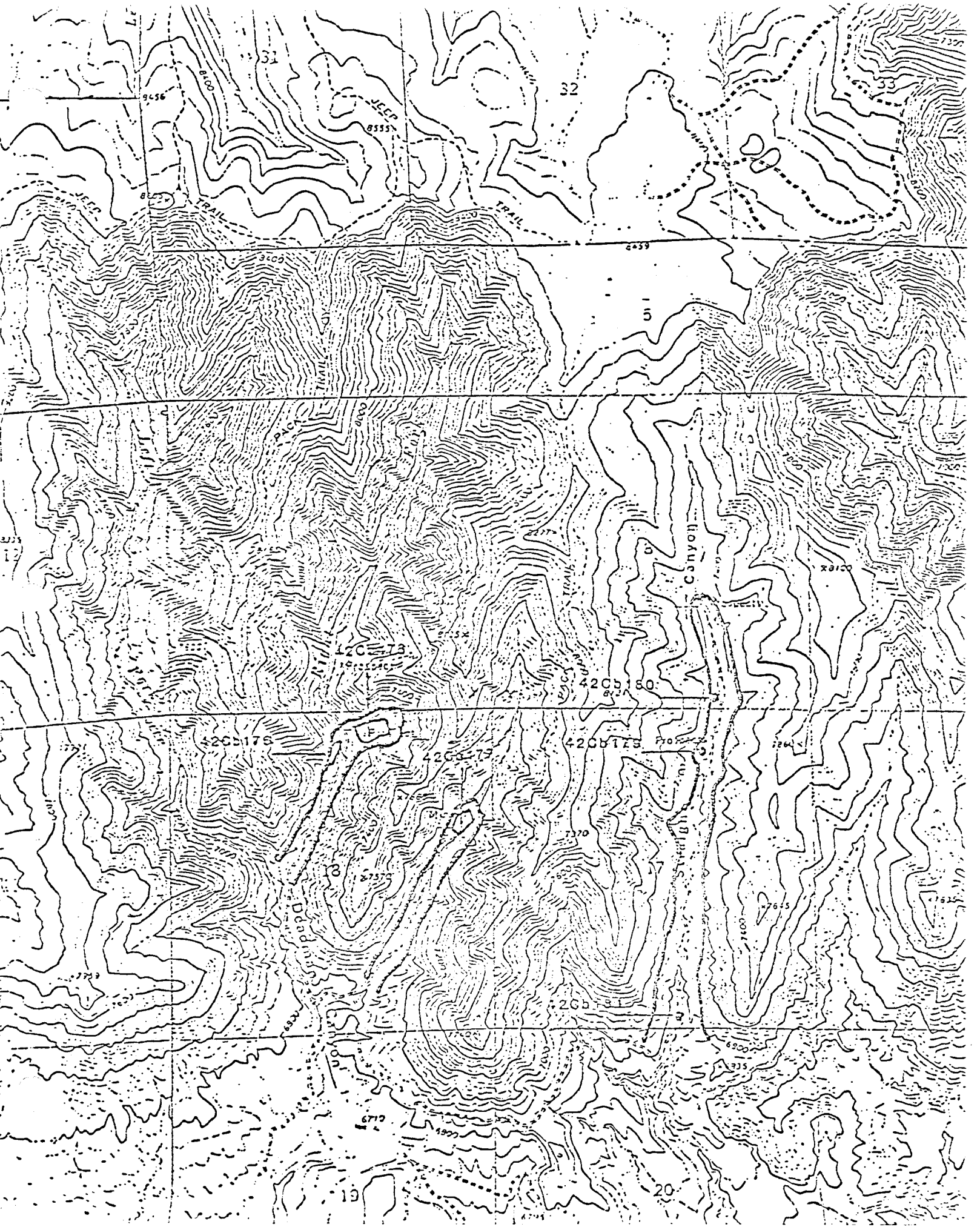
15. Material reported and owner/address None

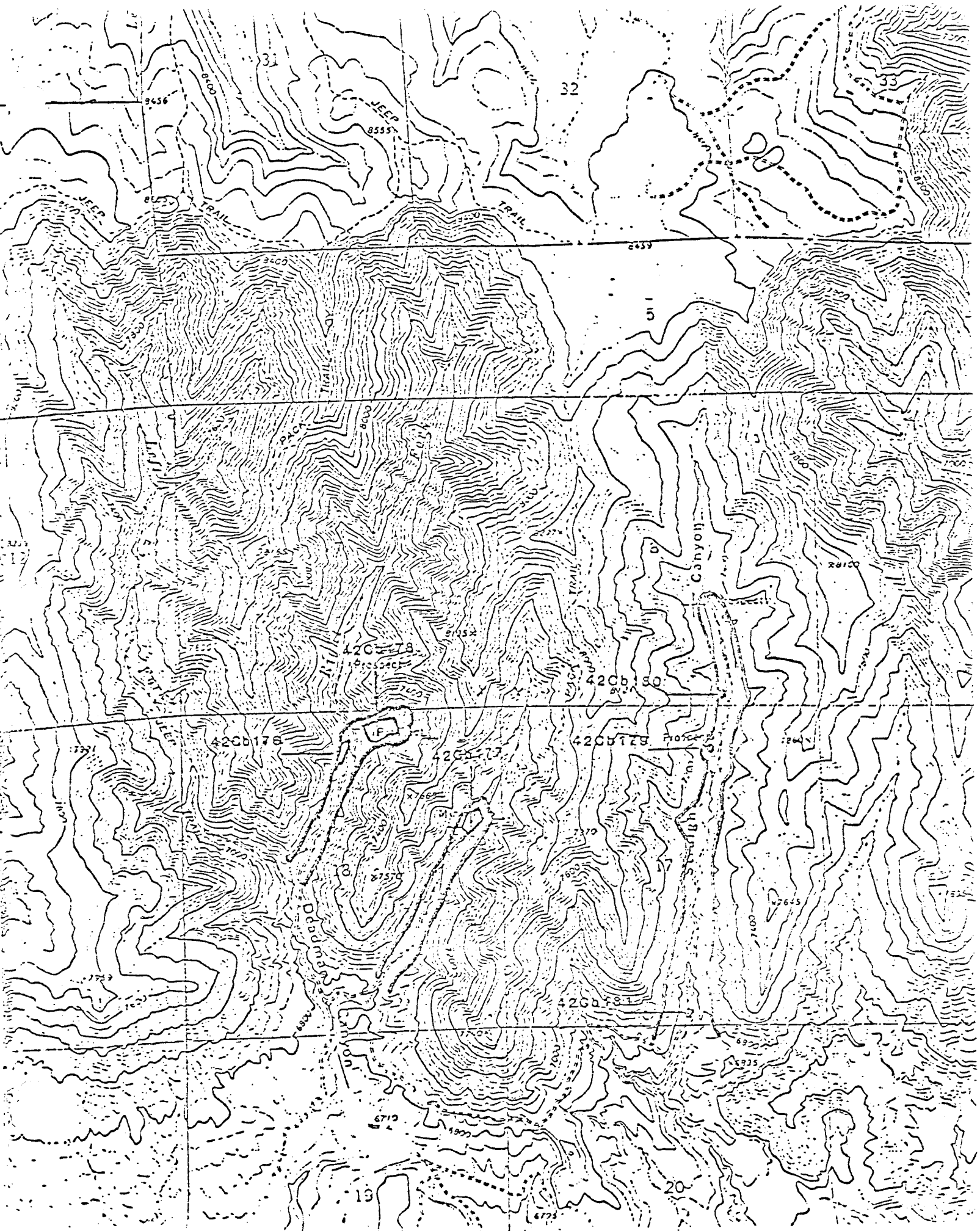
16. Recommendations for further work 1. Avoid. 2. If avoidance not possible, remove to Price Museum

17. National Register potential Possibly

18. Photo Nos.

19. Type of map made by survey party None


31
32
33
5
8
17
19
20
JEEP
TRAIL
PACK
TRAIL
Canyon
42C-73
42Cb-80
42Cb-175
42Cb-79
42Cb-31
8456
8555
8659
7370
7600
7655
6900
6710


31
32
33
JEEP
TRAIL
PACK
TRAIL
5
42Cb178
42Cb180
42Cb179
42Cb181
Canyon
Slough
19
20

Site No. 42Cb177 County Carbon State Utah

Site name Blue Flame/Sutton Mines

1. Map reference U.S.G.S. Deadman's Canyon 7.5 Min. Quad.

2. Location Approximately 2/3 distance up Starlight Canyon of present road end (approximately) 1 1/2 miles from canyon intersection with Deadman's Canyon

NE of SE of NE¼ Sec. 18 T.13S R.11E

3. UTM Grid: Zone 12 Easting 523940 Northing 4394370

4. Type of site Coal mines and associated service structures, active 1945-1954

5. Cultural affiliation (list basis of designation)

6. Owner and address

7. Informants

8. Previous designations and published reference for site Central Utah Coal Fields p. 390-91, 394

9. Site description and condition Coal storage and loading bin, 3 coal prospect/adit areas, 2 service structures, coal storage and loading area, outhouse, roads

10. Cultural features, area of occupation, depth and character of fill (See attached continuation sheet)

11. Environmental setting (vegetation, water, topography, etc.) Situated on either side of Starlight Canyon Creek into which excess coal from loading operations has been dumped. Vegetation includes: grasses, sage, ponderosa pine, scrub oak, juniper, ephedra, yucca, and prickly pear cactus.

12. Elevation 7150-7250 feet.

13. Material collected and deposition None

14. Material observed (see attached)

15. Material reported and owner/address None

16. Recommendations for further work

17. National Register potential

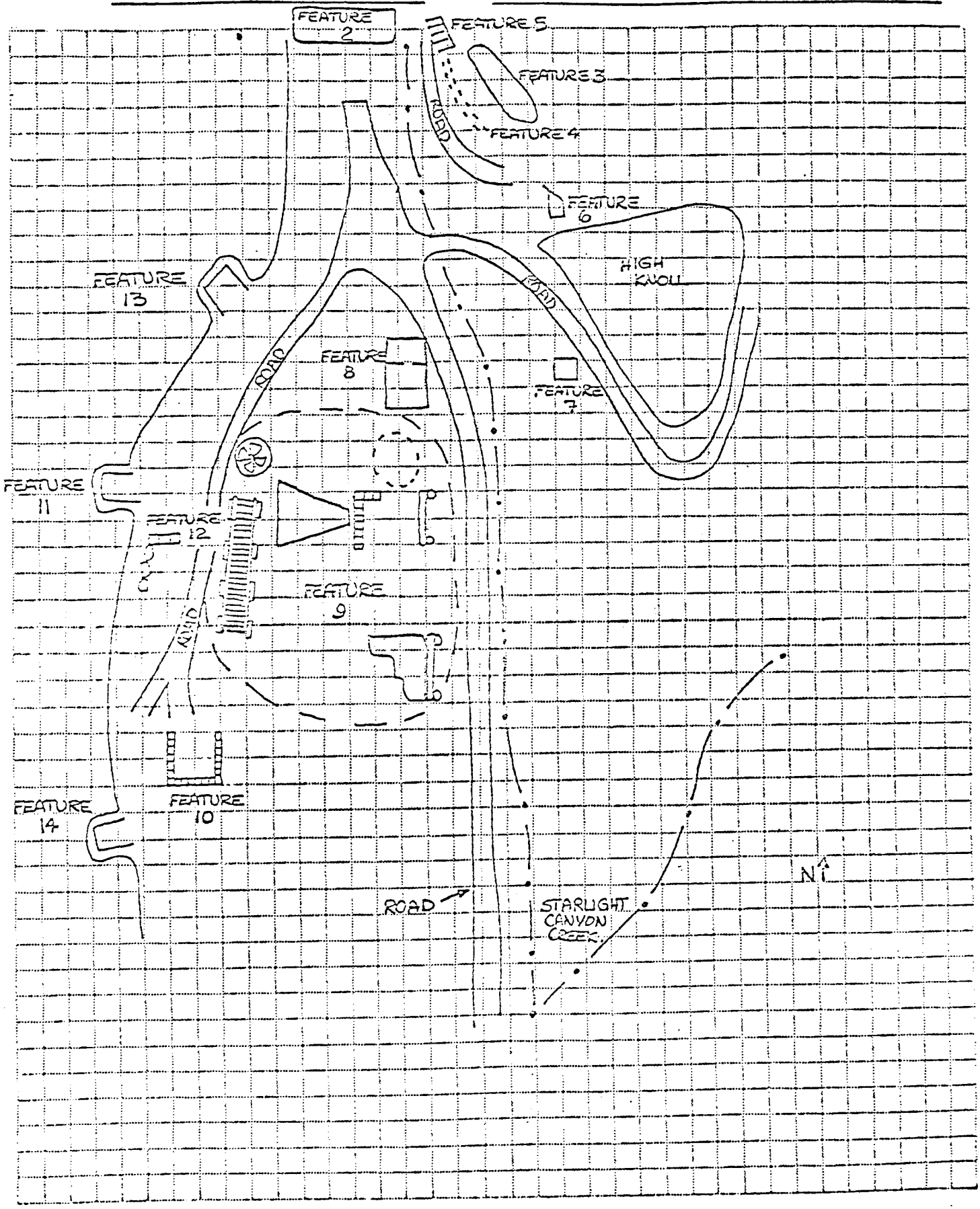
18. Photo Nos.

19. Type of map made by survey party Sketch

Antiquities Section

Division of State History

Feature No. SKETCH PLAN MAP. SITE 42 Cb 177 DATE 5/21/80



MAP SHEET YES ☐ NO ☐

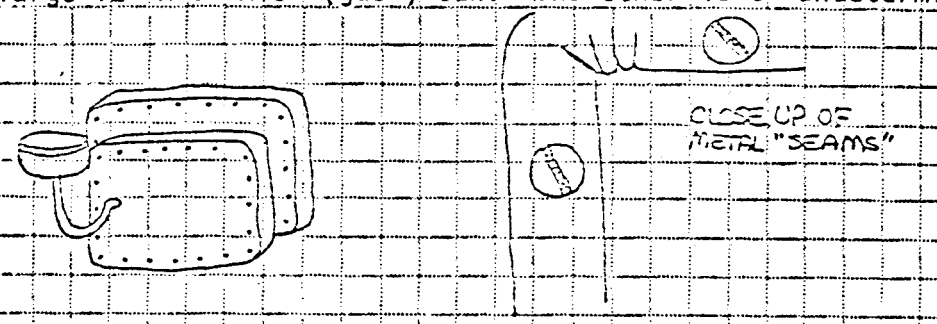
RECORDER

Antiquities Section Sutton, Blue Flame Mine, Starlight Canyon *Division of State History*

Feature No. F-2, F-3, F-4, F-5 SITE 42Cb177 DATE 5-21-80

F-2,3,4,and 5 lie north of road fork where existing structures stand.

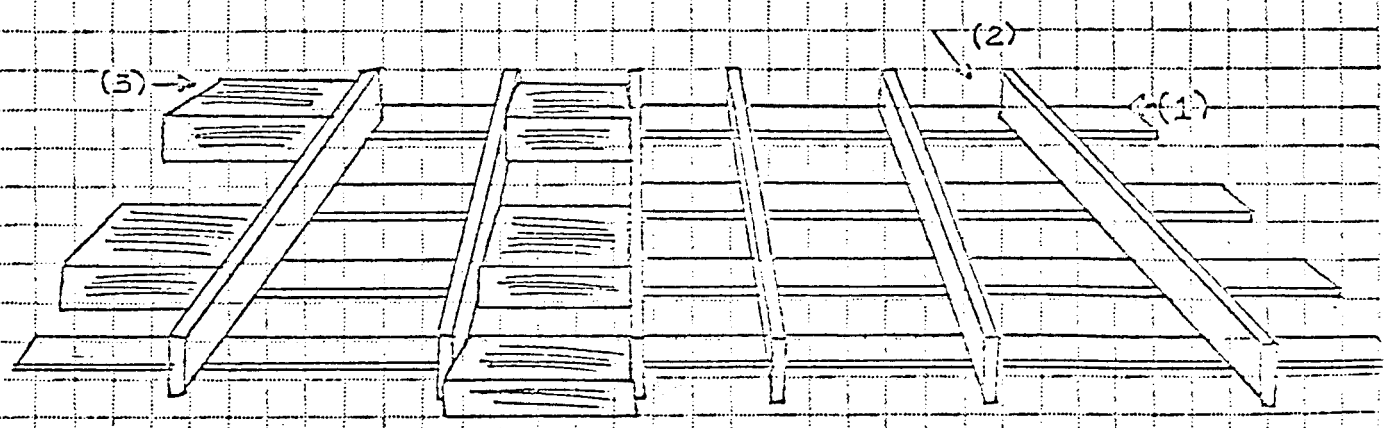
F-2 piles of coal are on the east side are a few very rustic metal artifacts. One a large 12" x 6" x 8" (gas?) can. The other is of undetermined use and looks thus:



F-3 piles of coal north and east of a possible old road (F-4). Although the piles are fairly high (2-3 feet) they appear to lie on leveled ground. As this is on the slope of a large hill, it was possibly leveled intentionally perhaps as a building/habitation site. It is approximately 12-14 feet wide (east/west) AND 15 yards long (north/south) along F-4. Below it and the possible road the regular line of the slope resumes and drops to the natural wash 10 feet below.

F-4 is a leveled and cleared "path" running approximately north-south along the bottom of a large slope. It is approximately 5 feet in width and continues for about 18 yards. Above (east and up toward the high point of the hill) is F-5 on a slight higher level area. Below F-4 the natural line of the slope resumes and drops 8 feet into the wash area.

F-5 is a foundation (?) wood plank frame.(1) It is composed of planks set into the earth slightly. They are 5-6 inches wide and only 1 inch thick. Set sideways above these planks (spaced about 3 inches apart) are "beams, cut by machine approximately 2" thick and 4" wide.(2) These sit perpendicular to the inland thinner planks. In some places there is evidence of larger 4 x 4" thick beams perpendicular to the 2 x 4's and parallel to the inlaid planks(3) These are all connected with "modern" (not handmade) 2" nails. Some pieces of the same configuration--that is the thick 4 x 4 beam connected perpendicular to the 2 x 4 beam are not inset and appear to have simply fallen on top.



CONTINUATION FORM

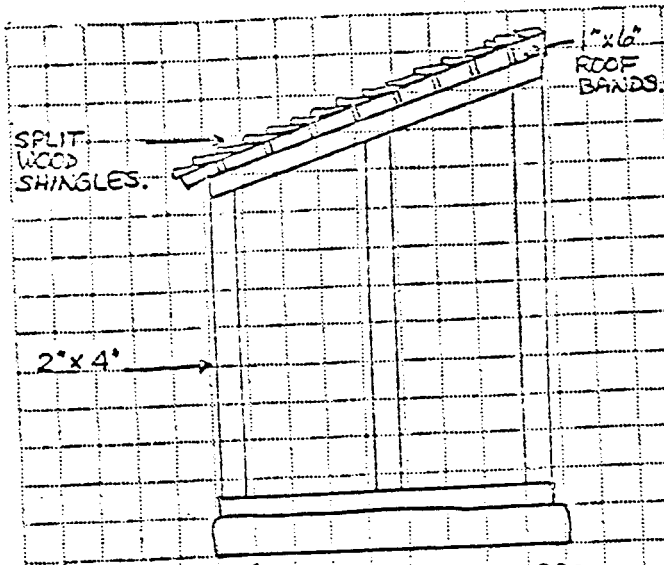
PAGE

Division of State History

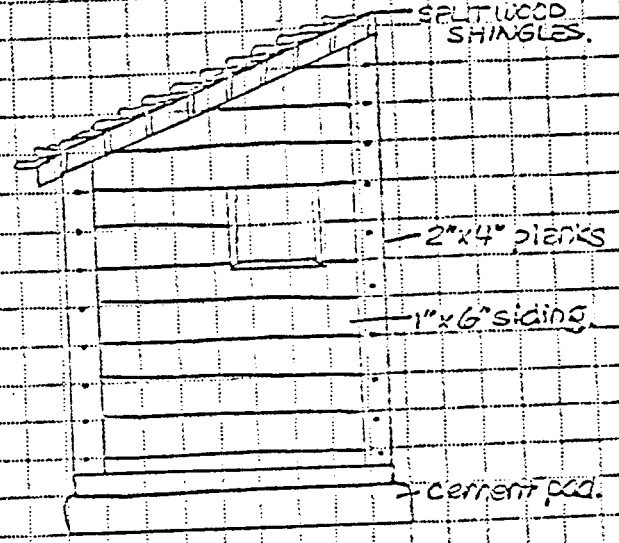
Antiquities Section

Feature No. 6

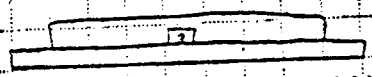
SITE 42 Cb 177 DATE 5/21/80



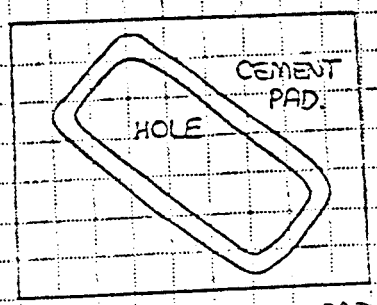
PRE-CAST CONCRETE PAD.



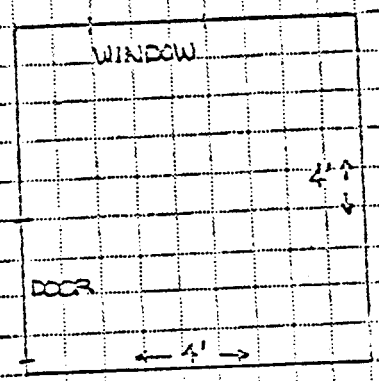
VIEW WITH SIDING



ELEVATION: CONCRETE PAD.



PLAN VIEW: CONCRETE PAD.



PLAN VIEW.

INTERPRETATION: OUTHOUSE/PRIVY

RECORDER

CONTINUATION FORM

PAGE

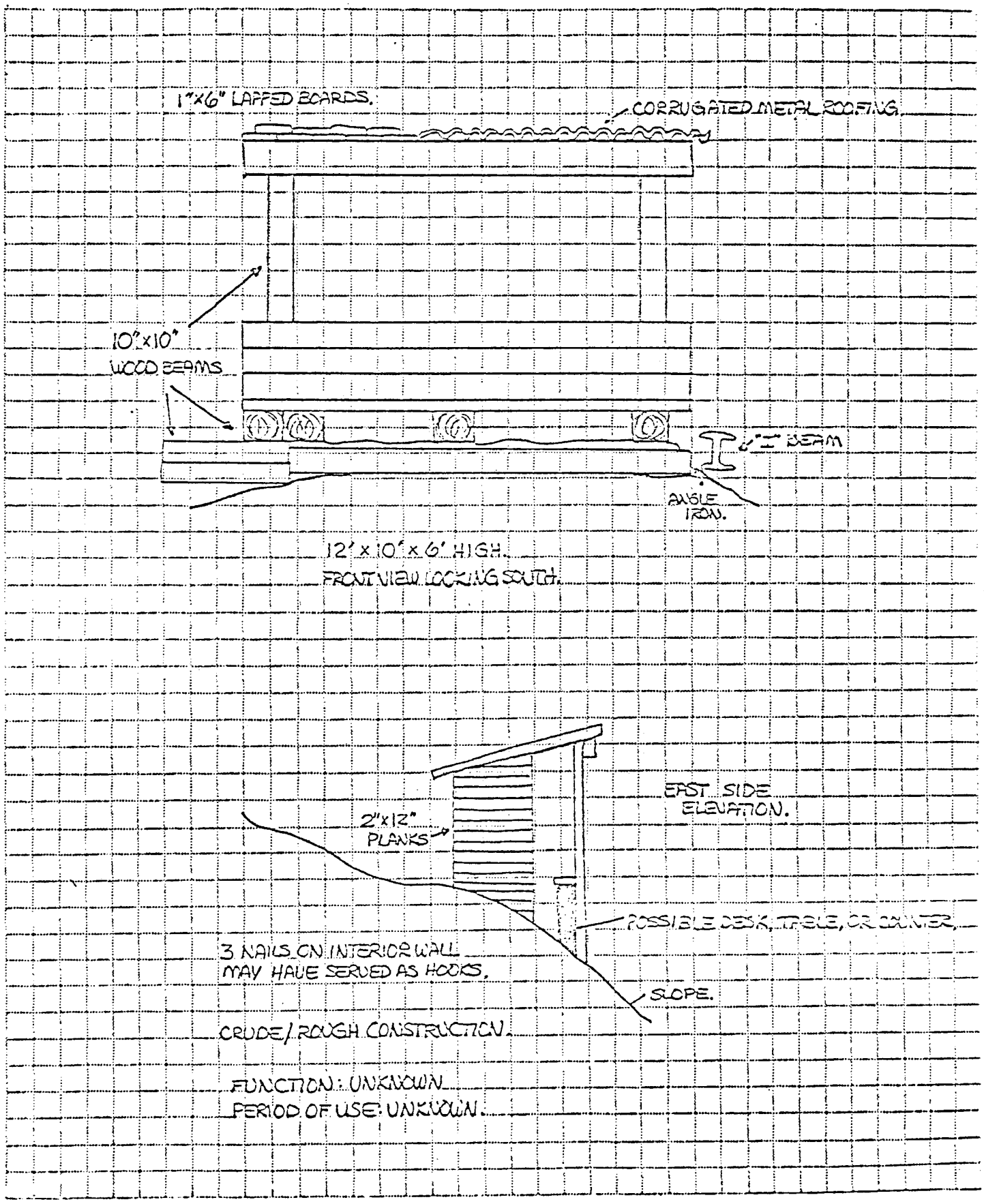
Antiquities Section

Division of State History

Feature No. 7

SITE 42 CO 177

DATE 5/21/80



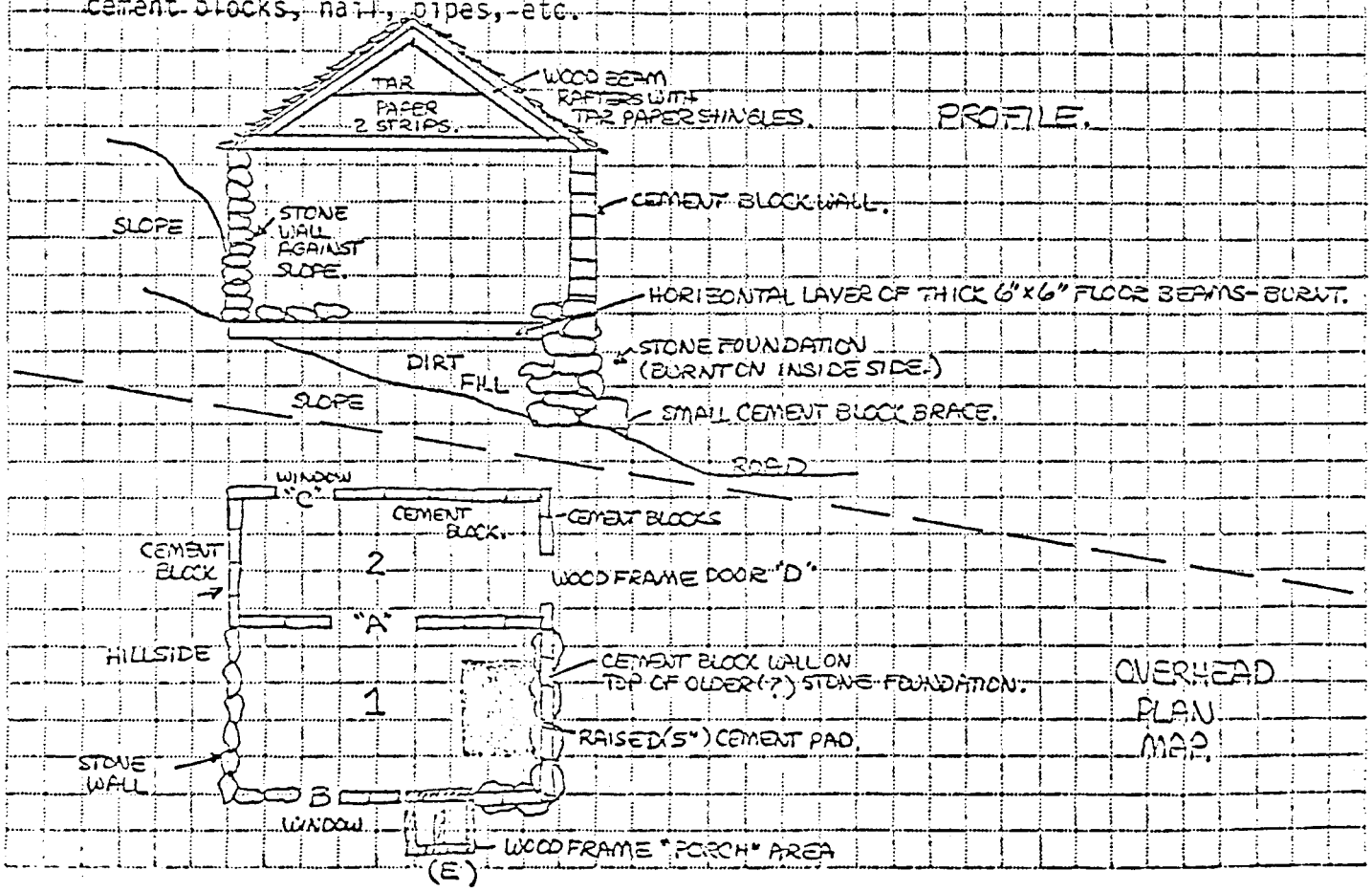
CONTINUATION FORM

PAGE

Antiquities Section Starlight Canyon-Sutton Blue Flame Mine *Division of State History*

Feature No. F-8 SITE 42Cb177 DATE 5/21/80

F-8 was apparently built in 2 phases. Phase one consists of a stone foundation and stone walls to a large room (10 x 10 feet) now on the south side of the final building. The stone foundation is cemented roughly together and also serves as a brace on the east, down slope side near the road. Following the stone construction north, it turns back into the hill (west) at a present height of only 2 stones. The rest of the north wall is now cemented back as is the east wall. There is a large doorway framed by wood (A in overview). The back (west) wall against the slope itself is still completely made of stone and chinked with small rocks and cement. It stands 9 feet high and meets the better wood frame roof. The south wall is half stone to about the middle where there is a window (B in overview), but is full height up to there. From the window (B) to the east wall, the wall is now cement block standing on a base of the once stone wall. Room one is constructed then in two phases. The window was built in with the stone phase. All the stones are burnt on some parts of the wall but there is no sign of this same blackening on the cement blocks. room 2, smaller, to the north side of F-8 is constructed entirely of cement block and cement with a wood framed (C) window and wide east side entryway (D) (about 6 x 6 feet). It does not rest on a stone foundation or have any of the older stone about. It was apparently constructed in building phase 2, when the cement blocks replaced/repaired the stone building that had been there earlier. This room has no remaining roof structure at all and none has fallen in. On the east inner wall of room 2 an effort has been made to "plaster" and smooth the cement blocks by applying a thin layer of cement. South of room one lies a small "porch"-type area, built of 2 cement block walls with a miniature wood frame roof over the top of it (E). The "floors" of both rooms are under a thick dirty layer of blackened coal, burnt wood, rusted metal, broken cement blocks, nail, pipes, etc.

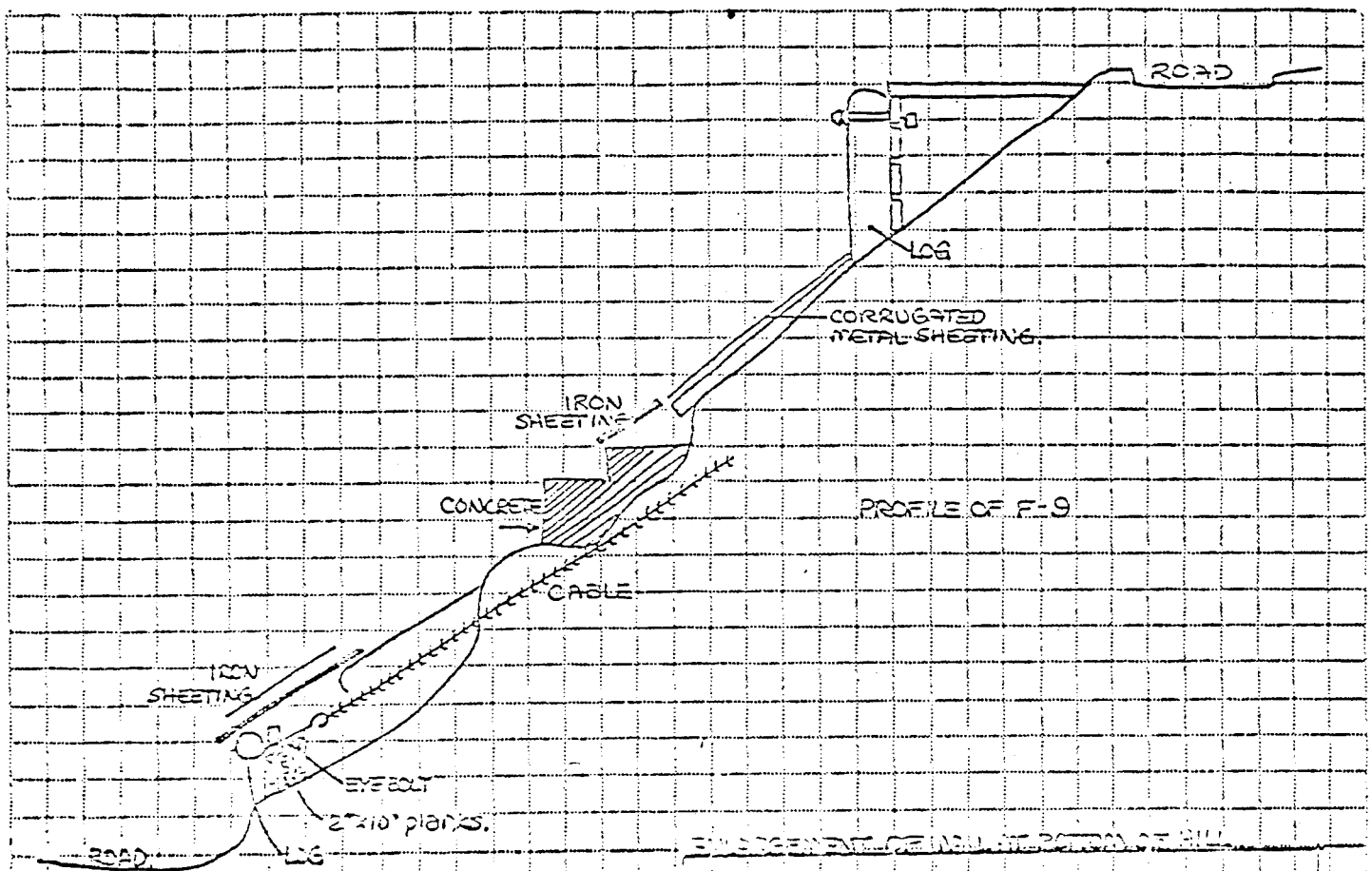


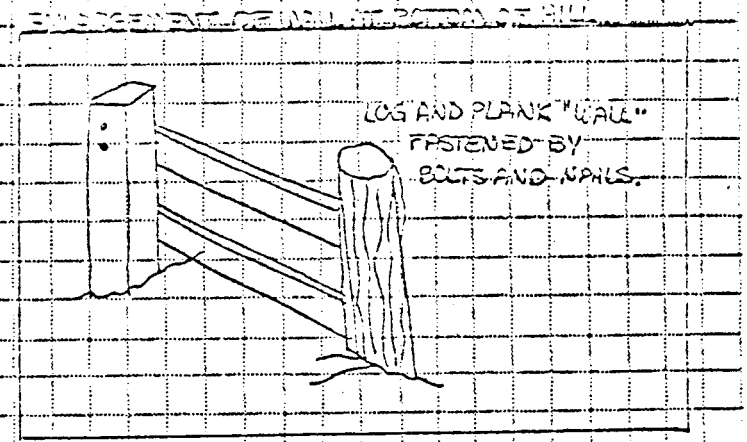
RECORDER

PAGE

Antiquities Section *Division of State History*

Feature No. 9 SITE 42 Cb 177 DATE 5/21/80





ASSOCIATED ARTIFACTS:
MACHINE RUBBERIZED BOLTS, GLASS,
MISCELLANEOUS METAL PARTS, COAL,
RUBBER VEHICLE TIRE PARTS.

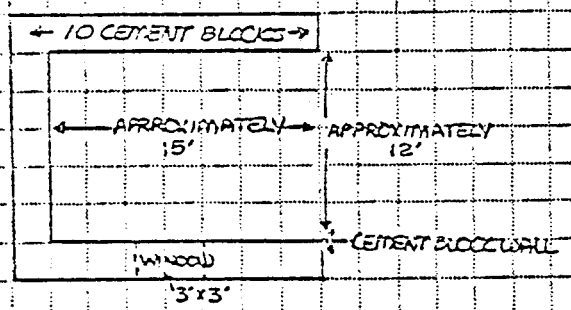
INTERPRETATION: COAL STORAGE BIN AND TIPPLE CIRCA pre-1920
≈50' x 80'

PHOTO PLACE YES ☐ NO ☐ RECORDER

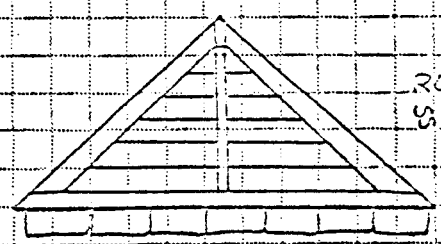
Feature No. F-10 SITE 42Db177 DATE 5-21-80

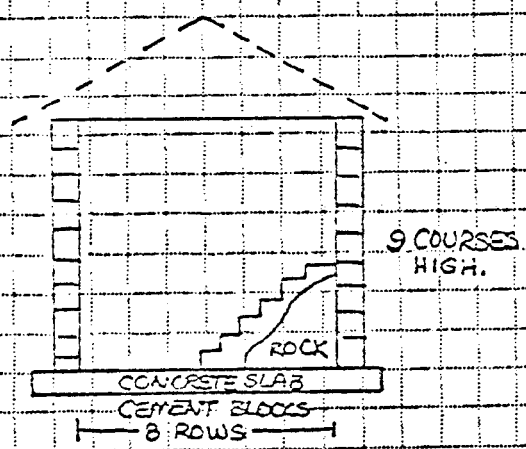
3/4 inches steel cables (1) appear to run under structure.

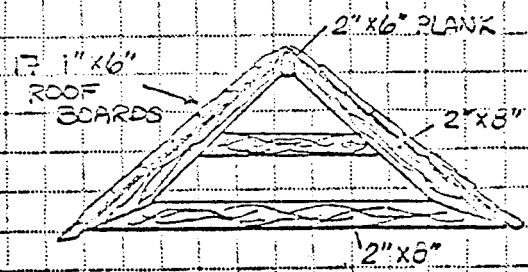
INTERPRETATION: 1920-30's structure skidded to location and jacked up under dry laid rock foundation, probably used as a shop. Structure probably skidded to area formerly occupied by Feature Remnants of which are piled on the hill below.



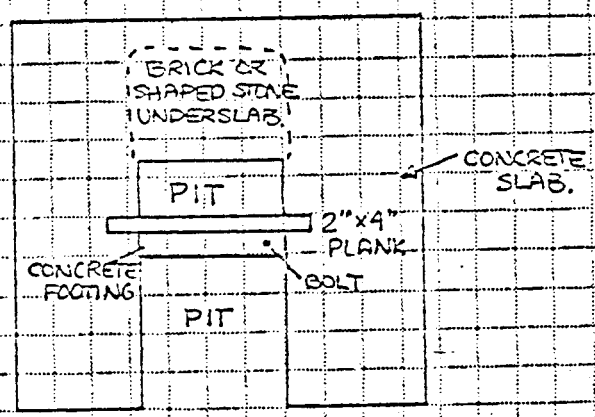
PLAN VIEW







TRUSS CONSTRUCTION.



INTERIOR PLAN.

SURFACE INTERIOR ARTIFACTS: GASKETS, BOLTS, BROWN AND GREEN BOTTLE GLASS, (AUTOMATIC BOTTLE MACHINE), POST-1915 CANS, SHEET METAL FOR STOVE PIPE OPENING, RUBBER HOSE.

FINAL SHEET YES ☐ NO ☒ RECORDER Bruce Hawkins

Feature No. 11, 12, 13, 14 SITE 42Cb177 DATE 5-23-80

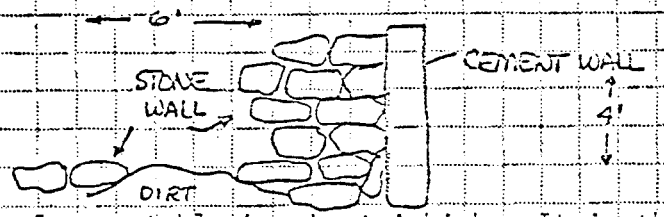
F-11 Cut and Depression

Measures 10 feet wide x 25 feet long x 20 feet high. Made into coal vein. If adit, entrance probably sealed by rubble slide. One narrow guage rail in association.

Interpretation/ Prospect/ possible mine adit.

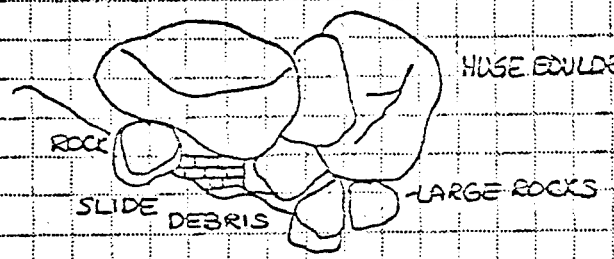
F-12 Concrete rock cemented together appears to have been added to the stone wall (which is made of cut stone). Indentation and curvature appear to match ventilatin fan to the southeast.

Feature 12 may be a structure foundation associated with Feature 9.



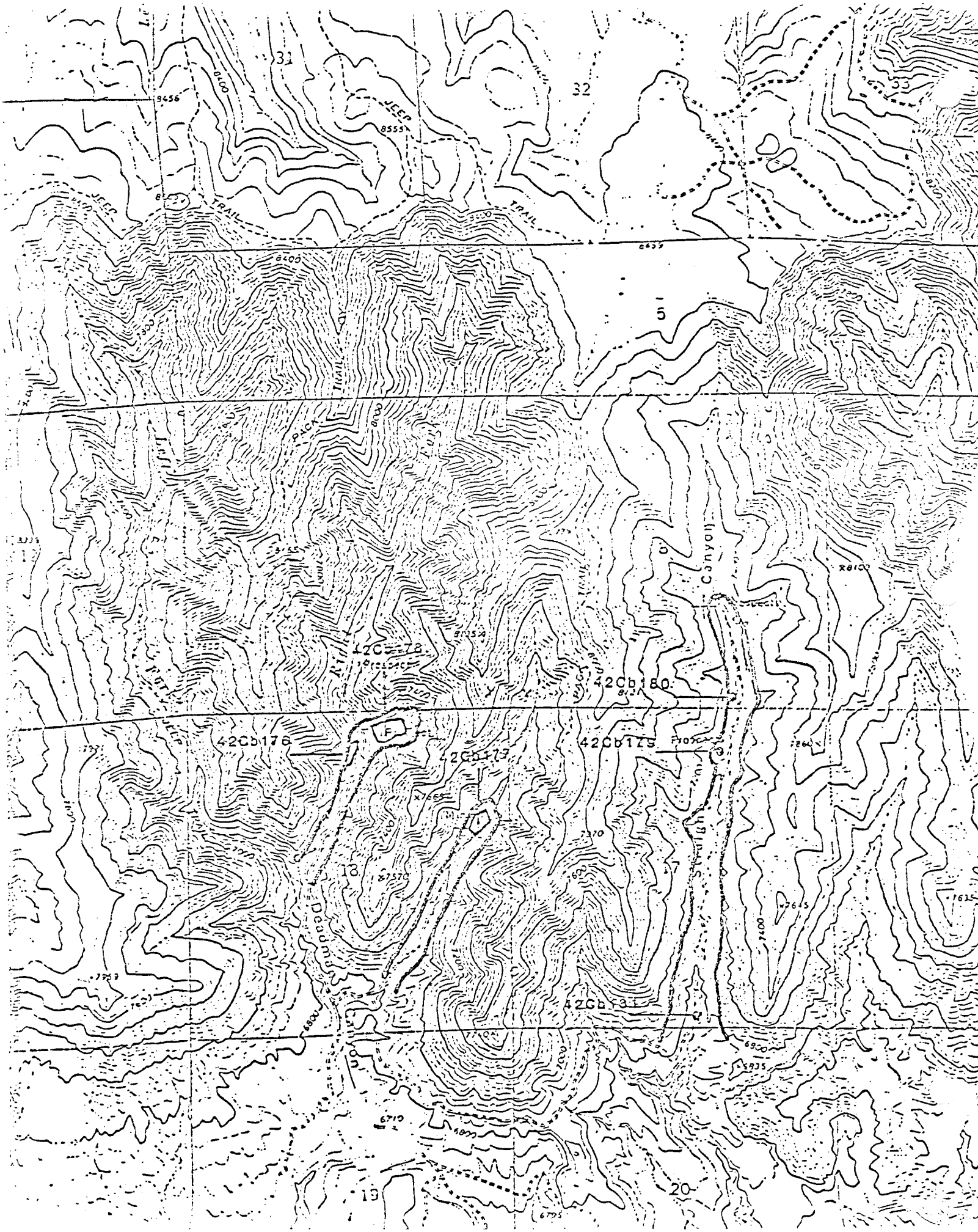
F-13 is a cement wall of cement blocks about 4 high. It is the corner of some kind of structure, the major exposed part running north/south and disappearing into the slope to the west under caved-in debris. It appears to have been an underground shaft or casement. The cut is 20 feet high, 20 feet long into a coal vein. Cable, standard and narrow guage rail, concrete, concrete blocks, stone rubble, iron sheating, and sawn logs are concentrated into a rubble pile at the mouth of the cut.

Interpretation: possible mine adit - completely covered over by rubble slide debri



F-14 is a prospect or possible adit totally covered over by rock rubble.

FINAL SHEET YES ☒ NO ☐ RECORDER Bruce Hawkins


31
32
33
5
JEEP
TRAIL
PACK
42C-78
42Cb180
42Cb176
42Cb177
42Cb175
42Cb181
18
19
20
Canyon
Deadman
Bluff
8400
8555
8456
8757
7765
7370
7000
6900
6710
6795
6935
7615

Site No. 42Cb176 County Carbon State Utah

Site name Zion Mine

1. Map reference U.S.G.S. Deadman's Canyon 7.5 Min. Quad.

2. Location On the east flank of Right Fork of Deadman's Canyon across from outlet of Fiasco Canyon

SE of SW¼ Sec. 18 & T. 13S R. 11E

3. UTM Grid: Zone 12 Easting 523100 Northing 4395000

4. Type of site Historic coal mine and service facilities. Prospected 1906, active 1925-1948

5. Cultural affiliation (list basis of designation)

6. Owner and address

7. Informants

8. Previous designations and published reference for site Central Utah Coal Fields p. 394

9. Site description and condition Structure, outhouse and retaining wall condition; standing remains

10. Cultural features, area of occupation, depth and character of fill (See attached continuation sheet)

11. Environmental setting (vegetation, water, topography, etc.)

12. Elevation 7030 feet.

13. Material collected and deposition Medicine bottle (green)

14. Material observed 2 large (14") buckets, 1 piece green glass, window glass, knife fragment, leather glove

15. Material reported and owner/address None

16. Recommendations for further work

17. National Register potential

18. Photo Nos.

19. Type of map made by survey party Sketch

[illegible] 5-20-80

Antiquities Section *Division of State History*

Feature No. 42Cb176 = Zion Mine SITE Outhouse (F-2) Structure (F-1) DATE 5-20-80

Although the water supplying this canyon was reported to be sizeable only in the spring, then still very minimal. The north/south wash down Deadman is indeed flowing rapidly and rather deep for a seasonal wash.

Structure a few hundred meters south (?) of survey area, but along the access road and Deadman's Wash was investigated. It was built of "shaped" rock and "cemented" with mud mortar containing very few chinking pieces. It was checked to determine if the stone used had been borrowed from a prehistoric ruin. The stone appears to be naturally shaped but is used in construction here much like it was in Anasazi ruins. Its placement is much rougher (cruder) though. Larger rocks protrude to 6 inches out of the walls in places but only on the outside of the structure. This may be merely the result of building into the earth that has since eroded from around the wall in places. The inside surfaces of the walls are very straight and smooth with blackened areas of burning. (The blackening took place within this structure.) In some instances, stones taken from prehistoric ruins are already blackened from prehistoric fires and when used again, the placement of these blackened ones doesn't make sense. (Another evidence of this structure not being built from "Anasazi" rock is the firing then.) Located at the merging of two washes at the right fork of Deadman's Canyon and a very small canyon that stretches NW(?). See #1 on xeroxed map. To the left (south) of the structure is a large "ramada" of juniper logs with some smaller wood intertwined still in place in the "roof". A few very large boulders lie along its border on the outer 3 sides. a 3 seater outhouse built south toward old wash next to huge blown-out boulder.

F-3 of Zion Mine is a stone wall already impacted by stripping machinery. It is west of the Rio Grande site "C" directly across the wash from Rio Grande F-1 and F-2. It is southwest of the quarter section marker and directly on a vein of coal that they are now exposing. This exposure has ripped out part of the wall and/or structure that once stood there. The impact has been rather indirect in that the wall is collapsing becaus of cuts made immediately below it, undercutting its footing base. It is, of coursed mostly sandstone masonry held together with chinking of mud and smaller rocks. It stands at its highest point at 5 feet high. It is impossible to tell whether the wall once extended west into the slope of the hill because of all the debris that has been pushed down on top of it by the machinery working above. The ends of the wall as they now stand seem to show no sign of a "corner" though, and it is possible that this served as a retaining wall. In any case, with all the debris piling up behind it, now during construction, it serves as a retaining wall above the new roadway, albeit a feeble one. The stone construction, like that of F-1 to the south resembles Anasazi architecture to a degree. There are a few cut logs lying around in the debris but it is impossible to tell if they have been pushed down from above.

RECORDER Debi Truell

CONTINUATION FORM

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Antiquities Section *Division of State History*

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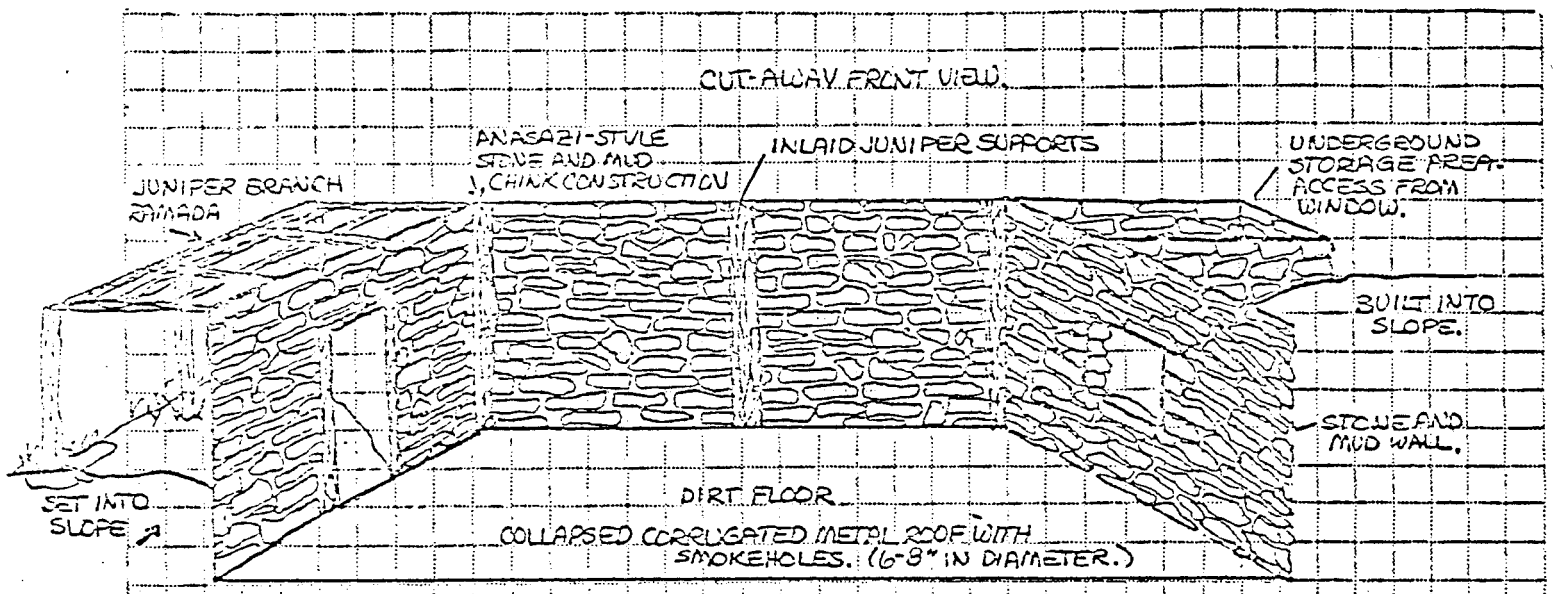

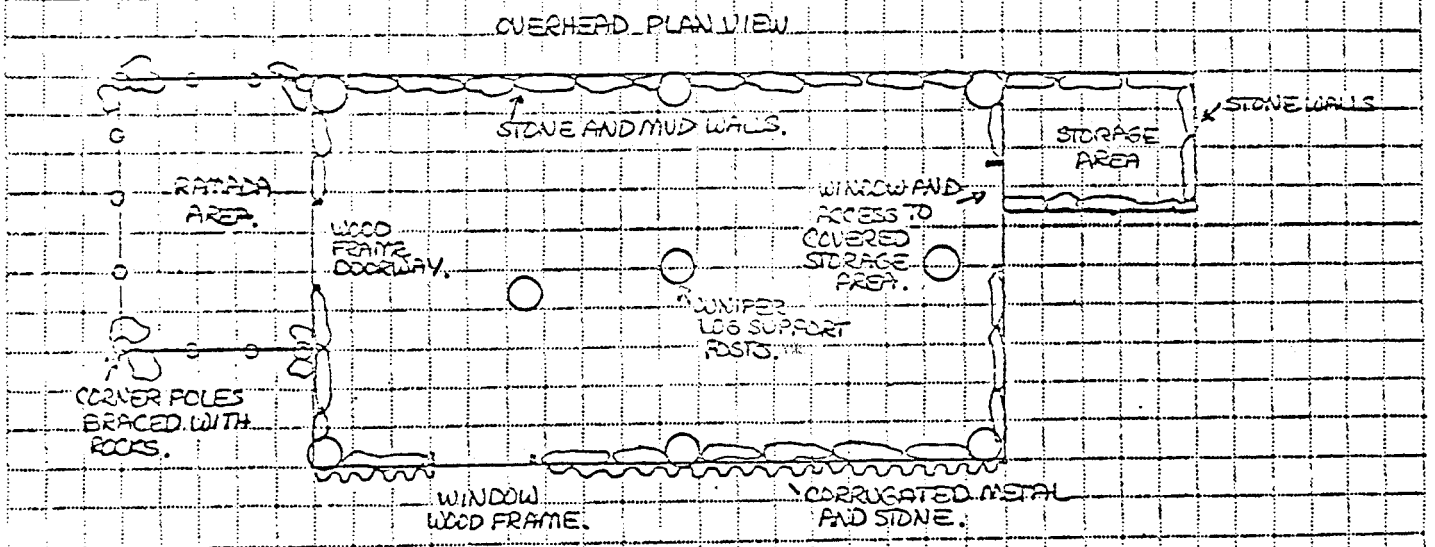

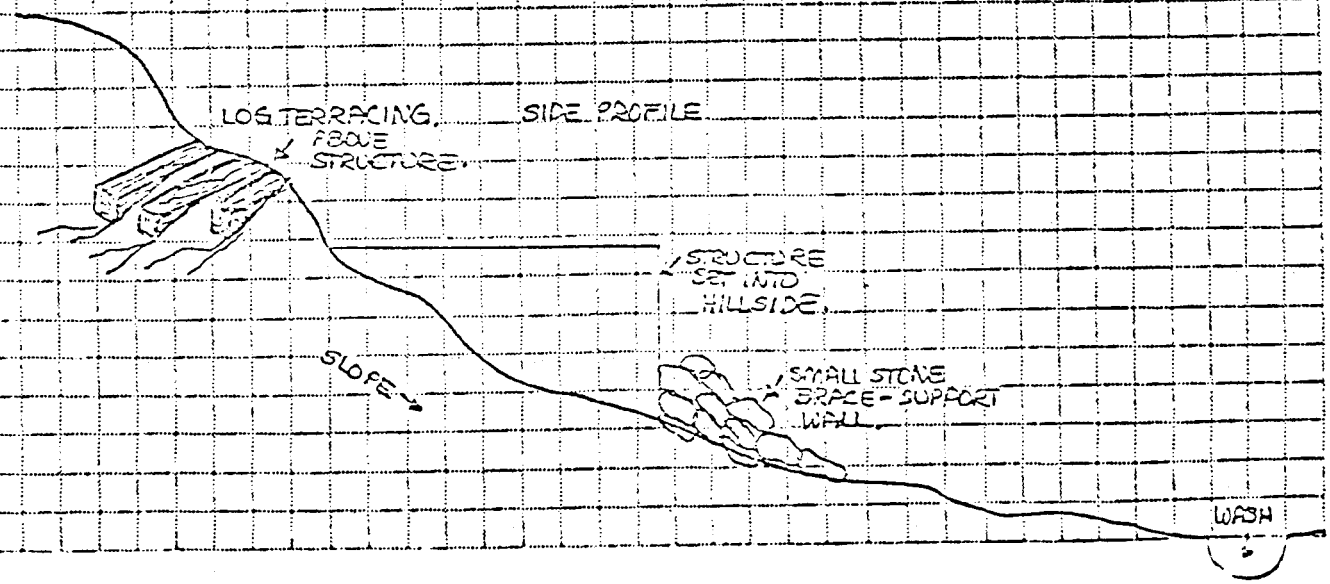

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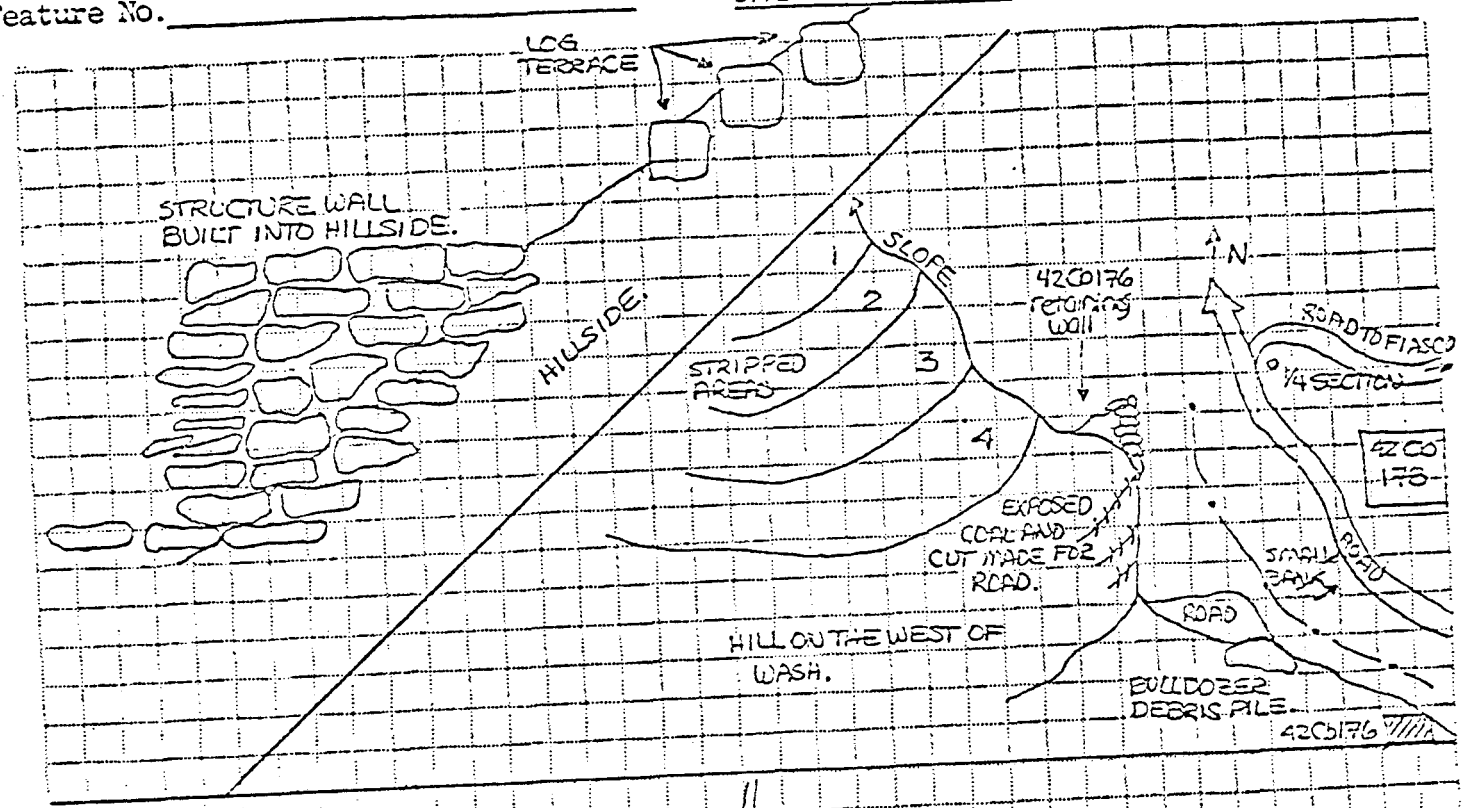
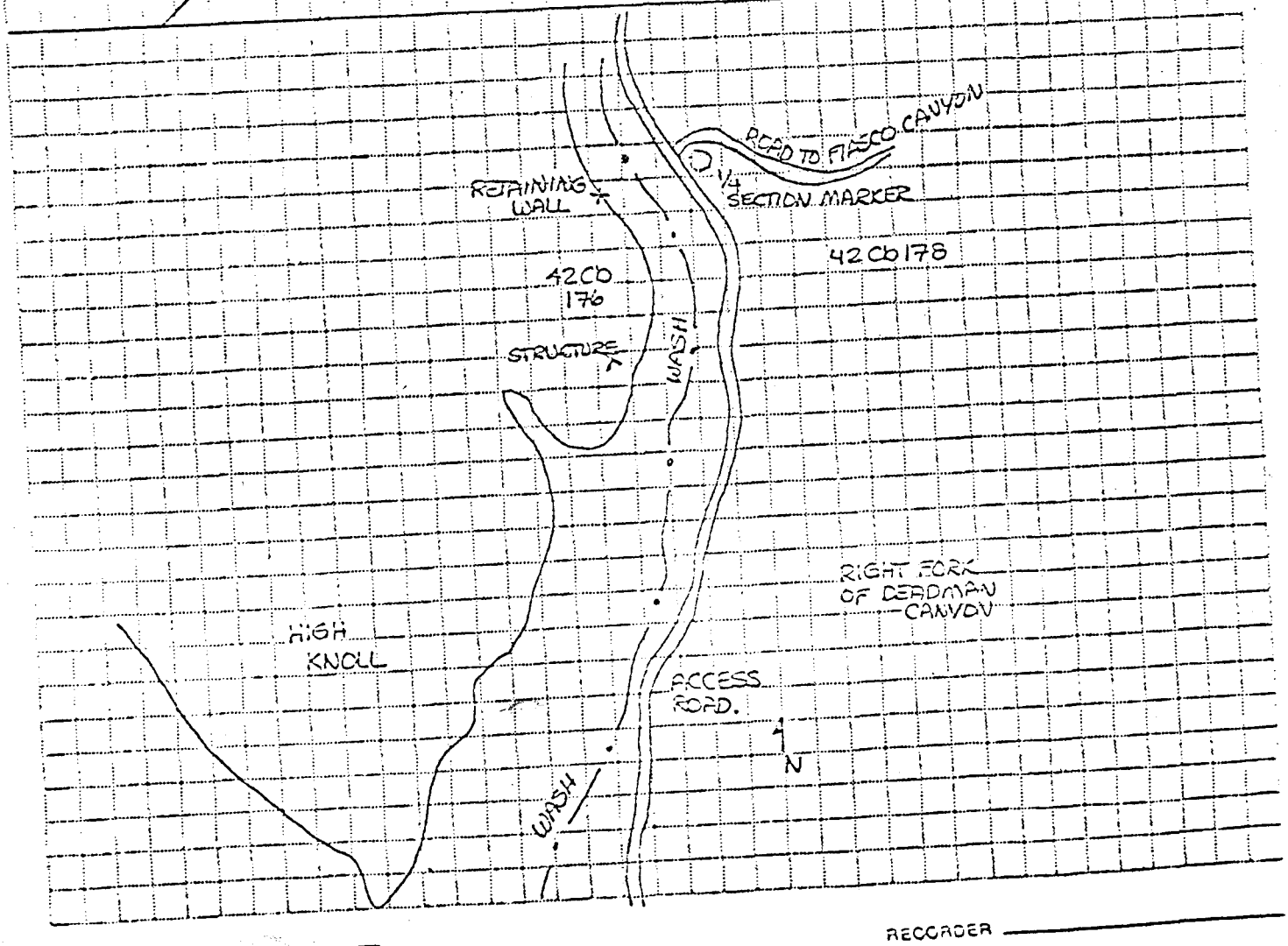
Division of State History

Antiquities Section

Feature No. _____ SITE 42 CO 176 DATE 5/20/80





RECORDER _____

YES ☐ NO ☐