DEPARTMENT OF THE INTERIOR
UNITED STATES GEOLOGICAL SURVEY

PREPARED IN COOPERATION WITH THE BUREAU OF LAND MANAGEMENT

MISCELLANEOUS FIELD STUDIES
MAP MF-1327-B

Table 1. -- Assay data for samples containing more than 0.08 percent U_3O_8 or more than 0.20 percent copper
TRc, Chinle Formation; TRm, Moenkopi Formation, both of Triassic age.

[<, less than; cps, cycles per second]

No	Sample Type	Length	Assay Data: U_3O_8 1/ (percent)	Assay Data: Cu 2/ (percent)	Remarks
80	Chip	15 in.	0.252	0.57	Upper portion: light-brown pebble conglomerate with abundant carbonaceous material and copper staining at base of unit (TRc); middle portion: dark-gray to black shale with copper staining (TRc); lower portion: light-gray to white, poorly sorted sandstone with carnotite(?) staining (TRc).
81	--do--	8 in.	0.573	0.45	Upper portion: gray shale with minor copper staining (TRc); middle portion: carbonaceous lens with uraninite(?) (TRc); lower portion: light gray sandstone with carnotite(?) staining and minor carbonaceous material (TRc).
86	--do--	22 in.	0.252	0.21	Upper portion: conglomerate with abundant carbonaceous material overlying light-gray mudstone with abundant copper staining (TRc); lower portion: conglomerate with abundant carbonaceous material (TRc).
88	--do--	45 in.	0.19	0.18	Upper portion: coarse-grained sandstone with clay galls and copper staining; becomes highly carbonaceous near base (TRc); lower portion: gray mudstone with scattered copper staining at top (TRm).
99	--do--	6 in.	0.017	0.60	Fine-grained, buff-colored sandstone with abundant copper-stained nodules and minor carbonaceous material (TRc).
102	--do--	14 in.	0.021	0.97	Medium - to coarse-grained sandstone with abundant copper-stained nodules and carbonaceous material (TRc).
106	--do--	4 ft	0.898	0.12	Fine - to coarse-grained sandstone with individual lamina moderately well sorted; locally abundant copper and carnotite(?) staining, and carbonaceous material (TRc).
107	--do--	2 ft	0.333	0.07	Reddish to gray-white, medium-gray sandstone with abundant carbonaceous material (TRc).
108	--do--	2 ft	0.178	0.06	Light-gray to reddish-yellow, medium-grained sandstone with abundant carbonaceous material and minor copper staining (TRc).
110	--do--	22 in.	0.410	0.11	Upper portion: intercalated fine - to coarse-grained sandstones with locally abundant carbonaceous material and copper staining (TRc); lower portion: gray silty clay with minor copper staining (TRc).
112	--do--	15 in.	0.333	0.10	White, fine-grained sandstone with abundant carbonaceous material; copper staining on leaf fragments; over 10,000 cps (TRc).
114	--do--	2.5 ft	0.226	0.13	Gray to reddish-yellow, coarse-grained sandstone with minor clay lenses and carbonaceous zone 6 in. thick which exceeds 10,000 cps (TRc).
117	--do--	2 ft	0.196	0.03	Gray to reddish-yellow, coarse-grained sandstone with 1-in.-thick carbonaceous layer which exceeds 10,000 cps (TRc).
118	--do--	1 ft	0.193	0.30	Highly carbonaceous, fine - to medium-grained sandstone with minor copper staining; over 10,000 cps (TRc).
119	--do--	1 ft	0.187	0.09	Light-gray sandstone with abundant carbonaceous material (TRc).
121	Select		5.20	2.85	Fine-grained, black sandstone with uraninite(?), over 10,000 cps (TRc).
122	Chip	7 in.	0.772	0.11	Alternating layers of light-gray sandstone and carbonaceous material; minor carnotite(?) staining; over 10,000 cps (TRc).
124	--do--	2 ft	0.314	0.03	Light-gray to reddish-yellow, coarse-grained sandstone with carbonaceous, copper-stained pods (TRc).
125	--do--	3 ft	0.386	0.10	Upper portion: poorly sorted, fine - to coarse-grained sandstone with abundant carbonaceous material, over 10,000 cps (TRc); middle portion: moderately well-sorted, coarse-grained, reddish-yellow sandstone (TRc); lower portion; light-brown, medium-grained sandstone (TRc).
128	--do--	25 in.	0.093	<0.01	Reddish-yellow to light-gray, coarse-grained, moderately well-sorted sandstone with locally abundant carbonaceous material (TRc).
129	--do--	3 in.	0.249	<0.01	Light-gray sandstone with about 75 percent carbonaceous material (TRc).
130	--do--	10 in.	0.097	<0.01	Light-brown, medium - to coarse-grained sandstone with about 30 percent carbonaceous material (TRc).
135	--do--	2 ft	0.313	<0.01	Light-gray, medium-grained sandstone with interbedded carbonaceous layers (TRc).
136	--do--	26 in.	0.082	<0.01	Upper portion: light-brown sandstone with abundant carbonaceous material (TRc); lower portion: poorly sorted conglomeratic sandstone with abundant carbonaceous material (TRc).
142	--do--	1 ft	1.03	0.46	Coarse-grained, reddish-yellow to dark-gray sandstone with locally abundant carbonaceous material and clay (TRc).
144	--do--	2 ft	0.012	0.35	Upper portion: coarse-grained, reddish-yellow conglomeratic sandstone (TRc); lower portion: light gray, clayey sandstone with abundant carbonaceous material.
145	--do--	16 in.	0.137	0.08	Upper portion: coarse-grained, yellow-brown conglomeratic sandstone (TRc); lower portion: white to light-gray, fine-grained sandstone with carbonaceous material.
147	--do--	1.5 ft	1.67	3.10	Moderately well-sorted, coarse-grained, black sandstone with abundant carbonaceous material and copper staining (TRc).
150	--do--	1.5 ft	0.133	0.07	Light - to medium-gray, poorly-sorted, silty sandstone with locally abundant carbonaceous material and minor copper staining (TRc).
152	--do--	2 ft	0.047	0.25	Upper portion: moderately well-sorted pebble conglomerate with abundant copper staining (TRc); lower portion: white to light-brown, coarse-grained sandstone with minor copper staining (TRc).

1/ Radiometric assay
2/ Chemical assay

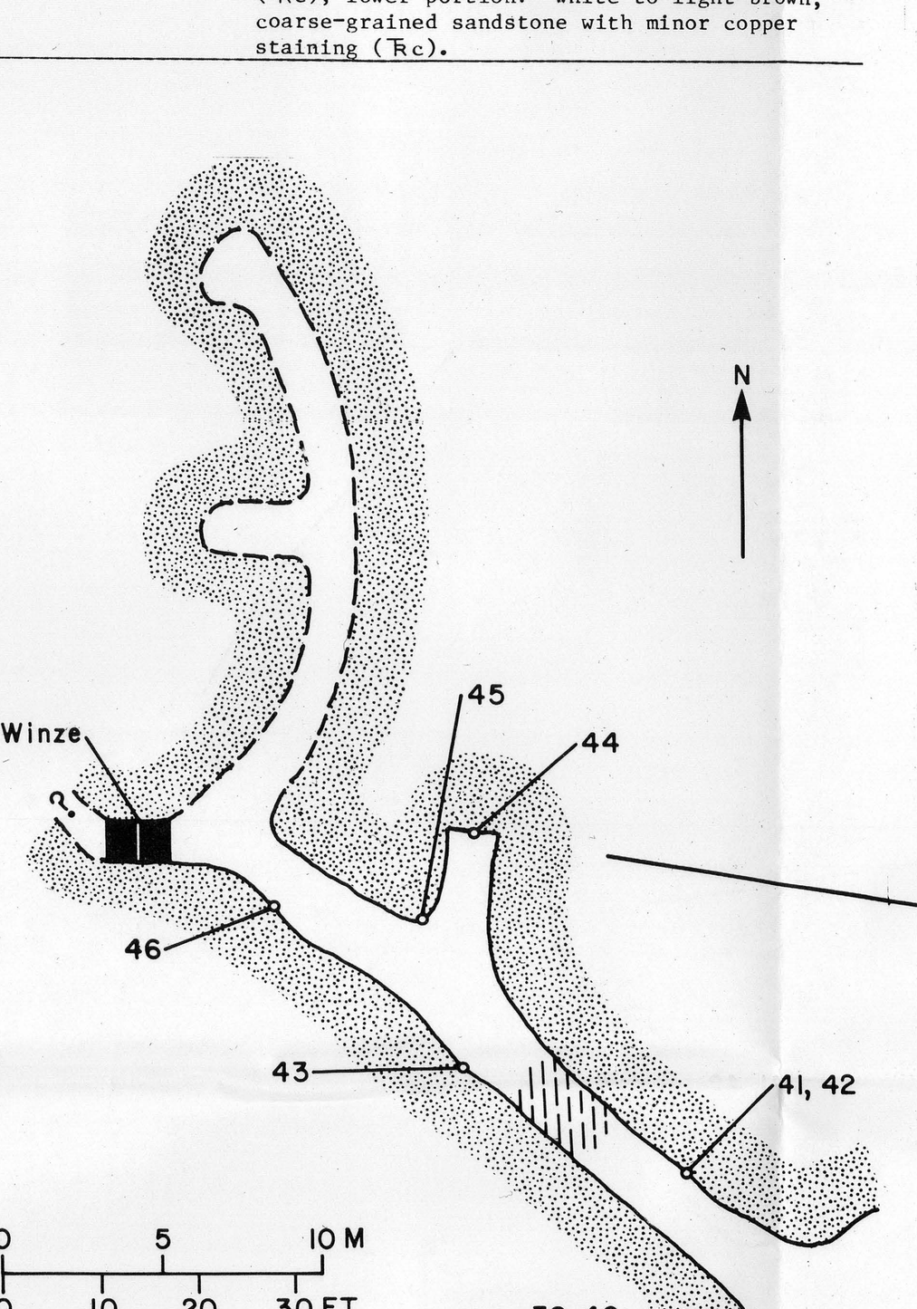


Figure 4: Sample locations, Al mine north adit.

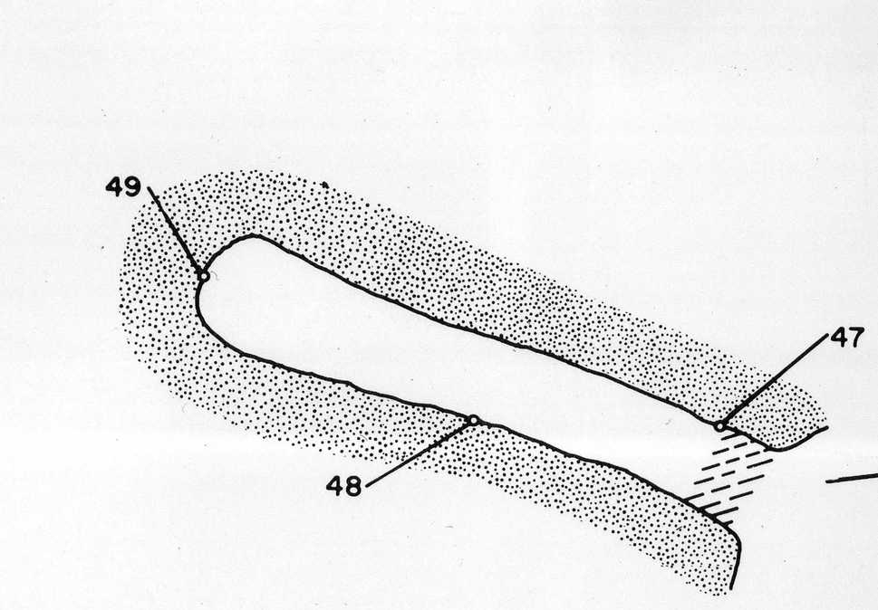
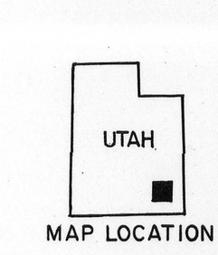


Figure 5: Sample locations, Al mine south adit.

Base from U.S. Geological Survey
Bears Ears, 1954; Growing Rim, 1952;
Fable Valley, 1954; Mouth of Dark
Canyon, 1952; Natural Bridges, 1952;
Orange Cliffs, 1953; The Needles, 1953

SCALE 1:62500
1 1/2 0 1 2 3 4 MILES
1 .5 0 1 2 3 4 KILOMETERS
CONTOUR INTERVAL 40 FEET AND 80 FEET



MAP LOCATION

MINES, PROSPECTS, MINING CLAIMS, AND SAMPLE LOCALITIES OF THE DARK CANYON INSTANT STUDY AREA AND VICINITY, SAN JUAN COUNTY, UTAH

By
Thomas D. Light, U.S. Bureau of Mines

1981

Mineral Surveys

Wilderness Studies Related to
Bureau of Land Management

The Federal Land Policy and Management Act (Public Law 94-579, Oct. 21, 1976), requires the Geological Survey and the Bureau of Mines to conduct mineral surveys on certain areas to determine their mineral resource potential. Results must be made available to the public and be submitted to the Administration and the Congress. This report presents the results of a mineral survey of the Dark Canyon Instant Study Area, San Juan County, Utah.

DISCUSSION

In conjunction with studies conducted by the U.S. Geological Survey, the U.S. Bureau of Mines conducted a mineral survey in 1979 of known mines, prospect workings, and mineralized zones in the Dark Canyon Instant Study Area, San Juan County, Utah. This map is a supplement to the Mineral Resources of the Dark Canyon Instant Study Area (Weitz and Light, 1981), and depicts the locations of mines, prospects, mining claims and sample localities for the area examined by the U.S. Bureau of Mines.

Mining claims have been located throughout the Deer Flat and Elk Ridge areas. Claims which could be accurately plotted are shown on this map, but many additional claims which could not be plotted occur along the southern boundary of the study area.

The Dark Canyon Instant Study Area contains deposits of uranium with associated copper concentrations in intercalated conglomerates, sandstones, and mudstones of the Shinarump Member at the base of the Triassic Chinle Formation. The conglomerates and sandstones locally contain abundant carbonaceous material.

Although production data are not available, it is probable that some ore was produced from the East Woodenshoe (figures 1, 2 and 3), Al (figures 4 and 5), and Hideout mines. Samples from these properties indicate that the uranium concentration within the workings is irregular and discontinuous. Sample 147, a 1.5 ft chip (table 1) contained 1.67 percent U_3O_8 and 3.10 percent copper in a highly carbonaceous, uraniferous(?) sandstone (table 1). Sample 121, a select sample of uraniferous(?) sandstone, contained 5.20 percent U_3O_8 and represents the highest uranium anomaly found in the vicinity of the study area.

Approximately 1/2 mi outside the study area in the NW1/4 sec. 5, T. 35 S., R. 17 E. is a jasper prospect. Jasper and chert occur as discontinuous nodules in the lower Chinle Formation.

Surface and underground workings in and near the Dark Canyon Instant Study Area were examined and sampled. A total of 155 samples were taken, and detailed sample descriptions and assay data are available from the Mineral Land Assessment Section, Intermountain Field Operations Center, U.S. Bureau of Mines, Building 20, Denver Federal Center, Denver, Colorado, 80225.

REFERENCES CITED

Weitz, Joseph, and Light, Thomas D., 1981, Mineral Resource Potential Map of the Dark Canyon Instant Study Area, San Juan County, Utah: U.S. Geological Survey Open File Report 81-734, 1:62,500.

EXPLANATION OF MAP SYMBOLS

- UNPATENTED MINING CLAIMS, REGARDLESS OF STATUS
- •10 OUTCROP SAMPLE
- ×12 PROSPECT
- 39 ADIT, ACCESSIBLE
- 37,38 ADIT, INACCESSIBLE
- DRY HOLE (OIL AND GAS WELL)
- BOUNDARY OF STUDY AREA

Numbers indicate sample locations

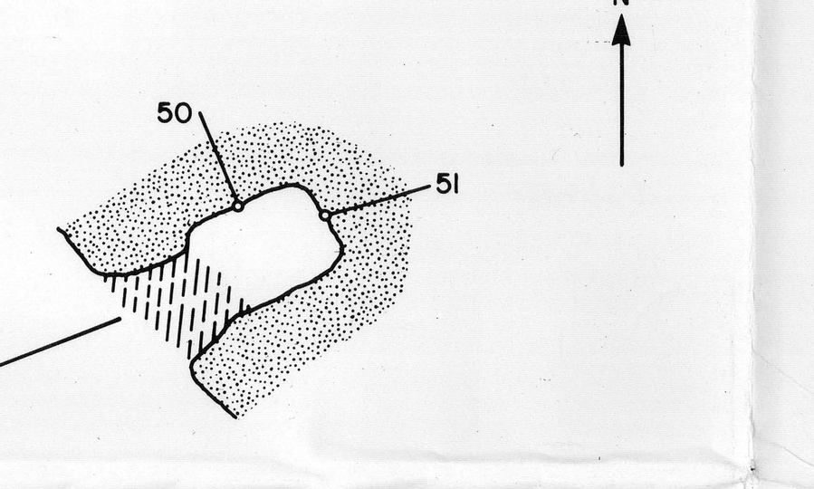


Figure 2: Sample locations, East Woodenshoe Adit No. 2.

EXPLANATION OF FIGURE SYMBOLS

- CHINLE FORMATION
- 93 SAMPLE NUMBER AND LOCATION
- 88 FAULT, SHOWING DIP
- 85 FRACTURE, SHOWING DIP
- FRACTURE, VERTICAL
- MUCK

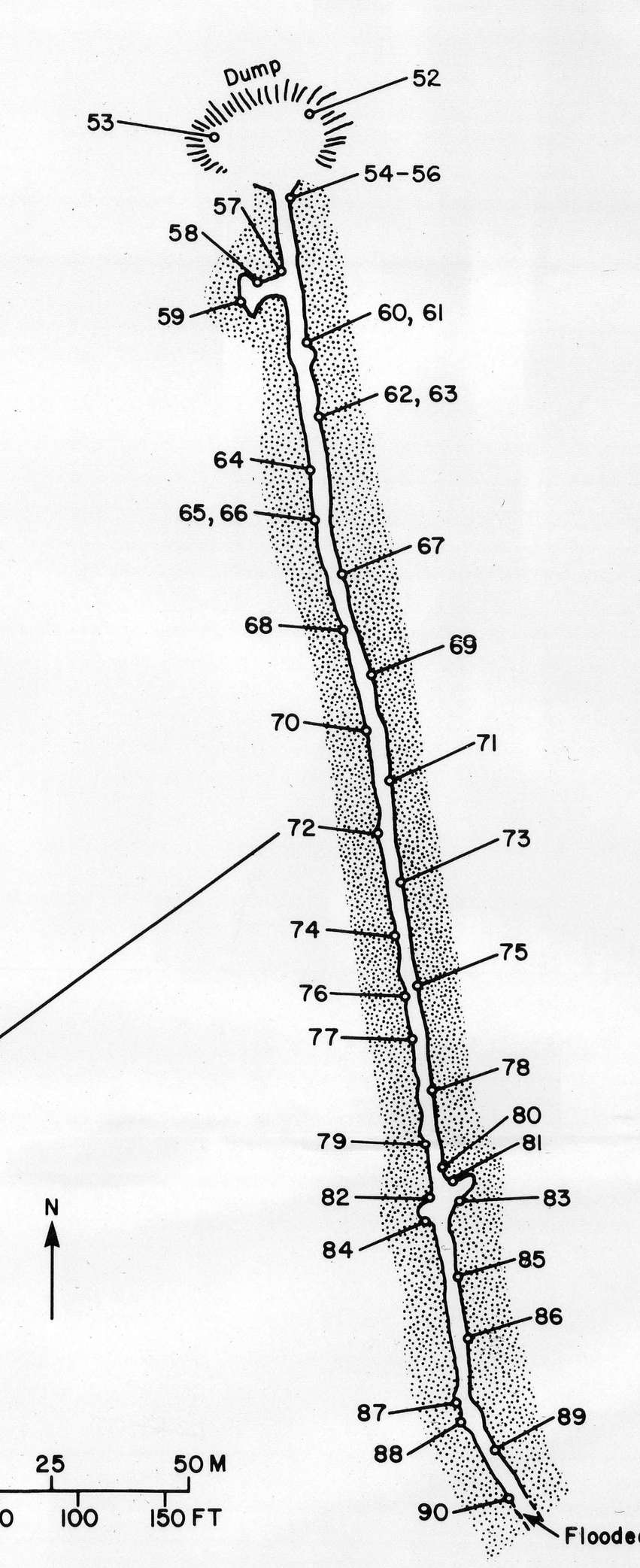


Figure 1: Sample locations, East Woodenshoe Adit No. 1.

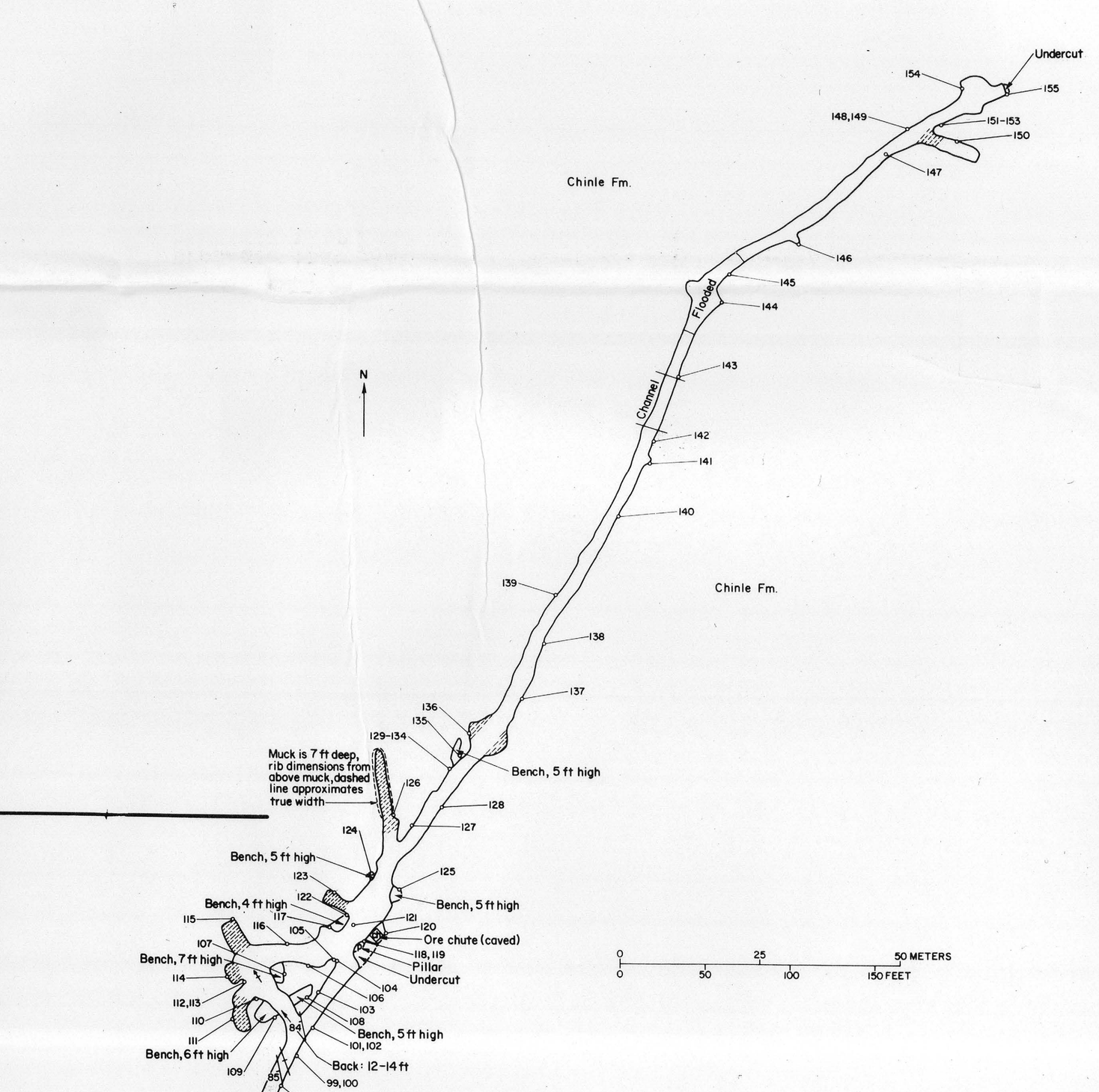
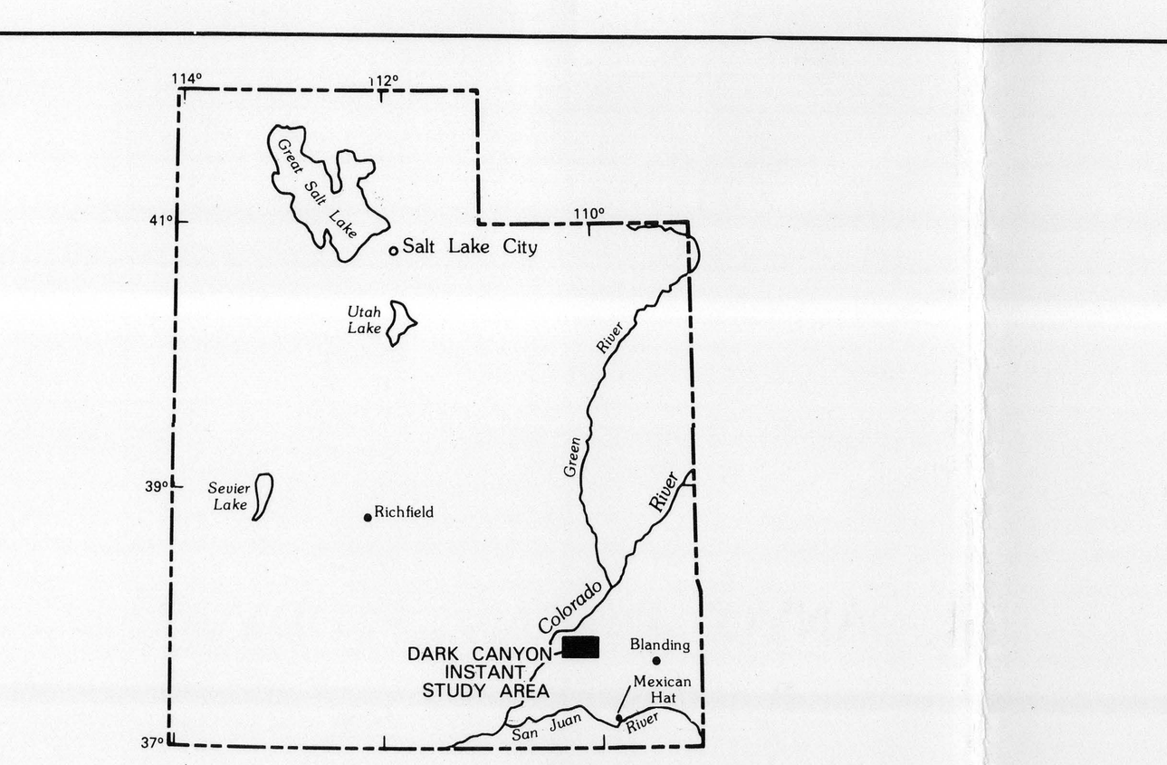


Figure 3: Sample locations, East Woodenshoe Adit No. 3.



INDEX MAP OF UTAH SHOWING LOCATION OF DARK CANYON INSTANT STUDY AREA

INTERIOR—GEOLOGICAL SURVEY, RESTON, VIRGINIA—1981

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