

Geology and Mineralogy

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UNITED STATES DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

PRELIMINARY RESERVE STATEMENT 47, RESERVE BLOCK J,
LONG PARK AREA, MONTROSE COUNTY, COLORADO *

By

H. E. Bowers

June 1955

Trace Elements Memorandum Report 886

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*This report concerns work done on behalf of the Division of Raw Materials of the U. S. Atomic Energy Commission.

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U. S. Geological Survey
Colorado Plateau

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LONG PARK AREA, MONTROSE COUNTY, COLORADO

By H. E. Bowers

Location: NE1/4 sec. 27, T. 47 N., R. 17 W., New Mexico principal meridian.

Ownership: Government
Public land

Access and nearest mill: 12 miles by semi-improved road northward to U. S. Vanadium Co. mill at Urevan, Colo. (fig. 1).

Reserves: Reserves are calculated by the method used in detailed reports on drilling projects. This method uses a thickness cutoff of 1 foot and a grade cutoff of 0.10 percent U_3O_8 or 1.00 percent V_2O_5 . This reserve statement is preliminary and subject to revision.

Block J: Indicated: 4,900 short tons, averaging 0.34 percent U_3O_8 and 2.74 percent V_2O_5 .

Inferred: 650 short tons, averaging 0.27 percent U_3O_8 and 1.88 percent V_2O_5 .

Minimum depth to reserve block: 325 feet.

Minimum distance from reserve block to mine workings:
About 3,000 feet southwest to the Guadalcanal shaft of the U. S. Vanadium Co.

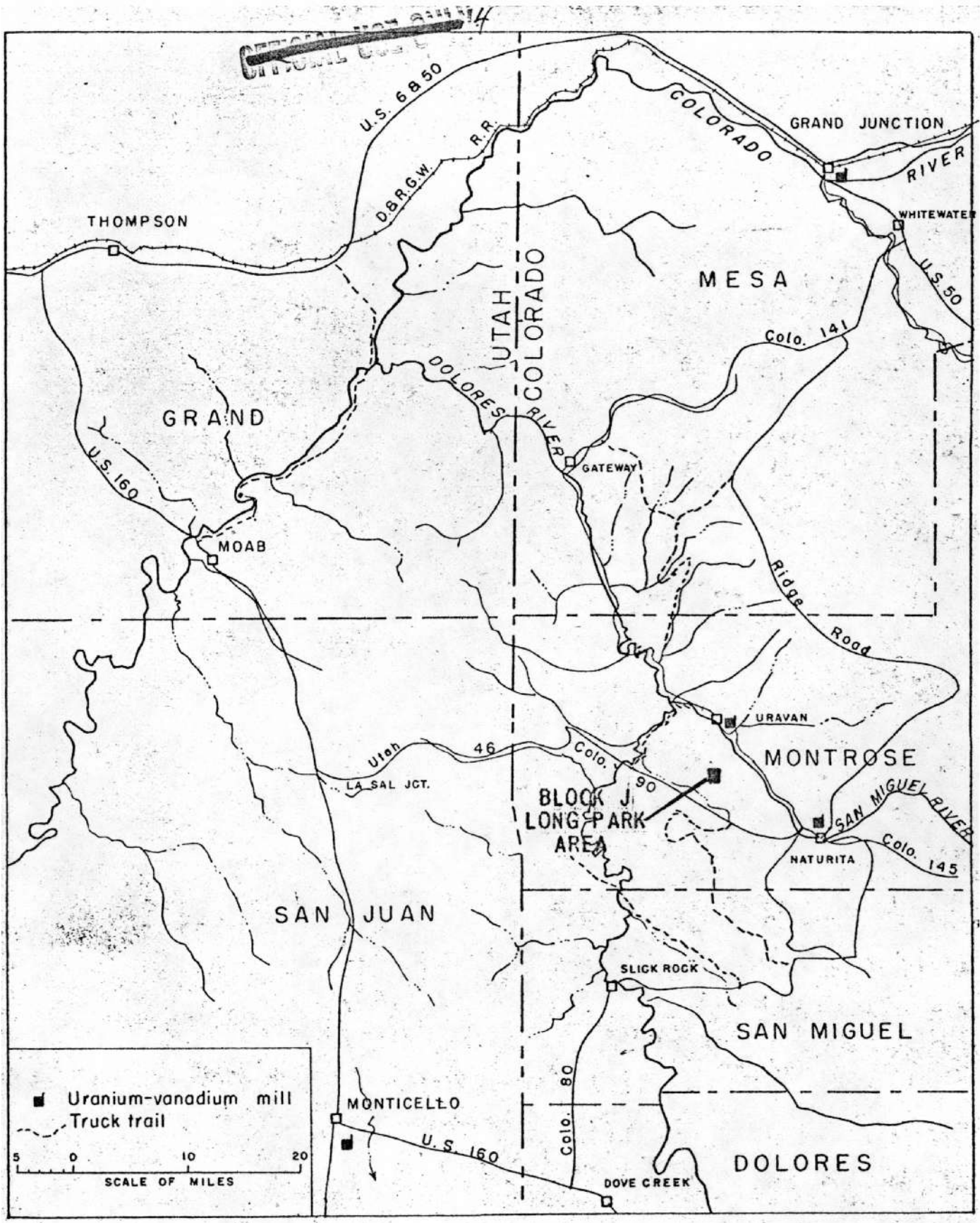


Figure 1. INDEX MAP OF PART OF THE COLORADO PLATEAU SHOWING LOCATION OF BLOCK J, LONG PARK AREA MONTROSE COUNTY, COLORADO

Discussion: Reserves in block J occur in two essentially tabular deposits; one in the Brushy Basin member and one in the Salt Wash member of the Morrison formation (fig. 2).

Most of the reserves in block J occur in a thin bed of sandstone in the Brushy Basin member of the Morrison formation about 110 feet above the top of the upper sandstone bed of the Salt Wash member. The ore-bearing rock layer is a persistent gray or black silty sandstone.

Holes 690, 700-A, 1166, and 1201 cut a mineralized layer about 1.7 feet thick, estimated to contain 4,900 short tons of indicated and 450 short tons of inferred reserves averaging 0.34 percent U_3O_8 and 2.74 percent V_2O_5 . These reserves are in public land. Strongly mineralized rock was cut in holes 325, 1203, and 1202, at the same horizon as in hole 1166, but it is too thin to qualify as ore reserve material. North of hole 1166 the single layer is split into two thinner layers.

Hole 325 cut a mineralized layer in the Salt Wash member. This deposit is about 1.0 feet thick and is estimated to contain 200 short tons of inferred reserves averaging 0.12 percent U_3O_8 and less than 0.10 percent V_2O_5 . These reserves are in public land.

Hole 690 and 700-A were not cored in the zone of the ore-bearing layer in the Brushy Basin member and the mineralized sections in these two holes are defined only by evaluations of gamma-ray logs. The average grades of reserves in block J are computed from assay and gamma-ray data. The weighted average is believed to be representative of the reserve material in the block; the average grade of ore from the individual layers, however, may differ appreciably from the above estimates.

The U. S. Geological Survey does not plan additional drilling in Block J.

Table of assay data, reserve block J, Long Park area, Montrose County, Colorado

Geological Survey exploration, 1950-54. Assays by the Geological Survey. Samples in sandstone and mudstone.

Rock units containing less than 0.020 percent U_3O_8 , less than 0.020 percent equivalent U_3O_8 , and less than 0.10 percent V_2O_5 , as determined by assay of drill core, are considered to be barren. Barren holes and rock units are omitted from this table.

Gamma-ray data obtained by probing drill holes with radiometric logging unit. Radioactivity expressed as percent equivalent U_3O_8 . Values less than 0.020 percent eU_3O_8 are omitted from this table.

Assay data listed under block J are within the block of calculated reserves discussed in this report.

Collar elevations and hole locations obtained by plane-table survey methods.

Undet Undetermined

e Equivalent

< Less than

Table of assay data, reserve block J, Long Park area, Montrose County, Colorado--Continued

Hole No. and collar elev. (feet)	Assay data						Gamma-ray data			
	Depth in feet		Thickness (feet)	Percent			Percent of U ₃ O ₈	Depth in feet		Thickness (feet)
	From	To		U ₃ O ₈	V ₂ O ₅	CaCO ₃		From	To	
Block J										
LP 325 (6395)	484.2	484.7	0.5	0.035	<0.05	18.6	0.020	349.2	352.0	1.8
	484.7	485.7	1.0	0.12	<0.05	36.5	0.10	352.0	352.8	0.8
							0.50	485.6	486.3	0.7
LP 690 (6436)	Upper mineralized zone not cored						1.70	390.8	391.7	0.9
							0.021	523.0	524.0	1.0
							0.031	310.3	311.5	1.2
LP 695 (6360)	No sample						0.12	350.6	353.0	2.4
							0.10	308.4	309.1	0.7
							0.11	389.0	389.8	0.8
LP 700A (6402)	Mineralized zone not cored						0.14	284.6	285.6	1.0
	308.1	309.0	0.9	0.038	0.49	0.5	0.10	308.4	309.1	0.7
							0.11	389.0	389.8	0.8
LP 1108 (6366)	389.6	390.0	0.4	0.23	1.13	0.3	0.11	389.0	389.8	0.8
	390.0	390.4	0.4	0.019e	0.84	0.3				
LP 1109 (6440)	285.9	286.5	0.6	0.020	0.33	0.4	0.14	284.6	285.6	1.0
	286.5	286.8	0.3	0.27	1.13	0.3				
LP 1114 (6342)	387.3	387.5	0.2	0.027e	0.11	Undet	0.49	387.7	388.9	1.2
LP 1116 (6422)	387.6	388.0	0.4	0.10	0.50	1.6	0.025	530.6	531.2	0.6
	388.0	388.2	0.2	0.36	4.89	1.4				
	388.2	388.5	0.3	0.50	2.37	1.4				
	388.5	390.0	1.5	0.30	4.02	1.6				
	390.0	391.0	1.0	0.029e	0.50	4.4				
	391.0	391.5	0.5	0.012e	0.29	Undet				
LP 1201 (6424)	362.7	363.0	0.3	0.030e	<0.10	Undet	0.51	372.1	372.9	0.8
	369.4	370.0	0.6	0.028e	<0.10	Undet				
	370.0	371.0	1.0	0.28	1.40	1.09				
LP 1202 (6415)	383.1	383.3	0.2	0.026e	<0.10	Undet	0.42	383.8	384.5	0.7
	383.3	383.6	0.3	0.099	0.29	0.54				
	383.6	383.9	0.3	0.26	1.13	0.26				
	383.9	384.2	0.3	0.12	1.30	0.31				
	384.2	384.4	0.2	0.026e	0.87	0.45				
LP 1203 (6423)	389.8	390.5	0.7	0.35	2.94	4.86	0.028	389.9	391.2	1.3
	390.5	391.0	0.5	0.021e	<0.10	Undet				
LP 1203 (6423)	388.6	389.6	1.0	0.021e	0.68	0.49	0.036	400.0	401.2	1.2
	398.3	399.0	0.7	0.043	1.76	2.49				
LP 1215 (6389)	331.7	332.1	0.4	0.061	0.55	0.26	0.048	329.5	330.5	1.0
	332.1	333.5	1.4	0.007e	0.43	Undet				
LP 1216 (6363)	299.0	299.7	0.7	0.009e	0.27	Undet	0.028	297.9	299.0	1.1
	301.3	301.6	0.3	0.030e	0.39	Undet				
	301.6	302.4	0.8	0.016e	0.31	Undet				
LP 1231 (6401)							0.020	339.6	340.6	1.0
	Barren									

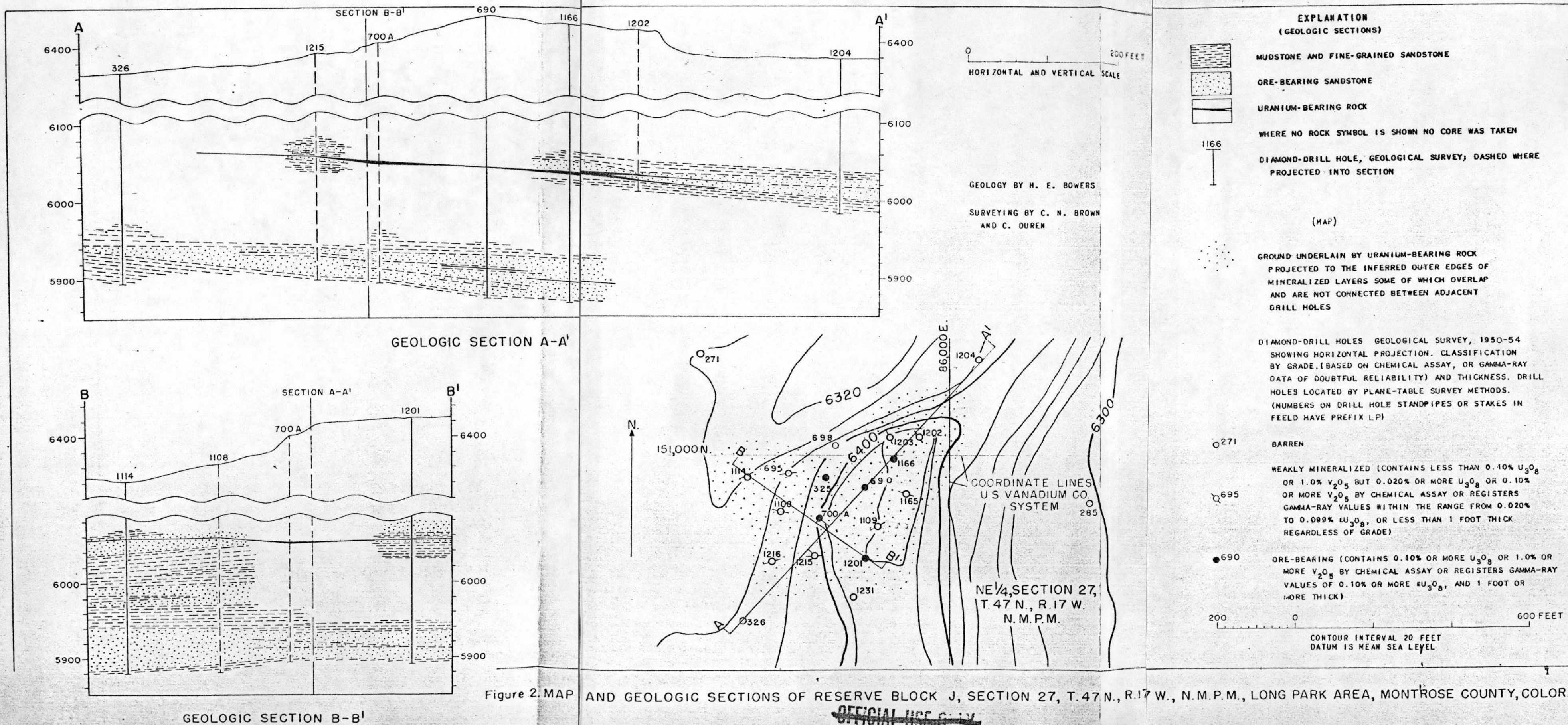


Figure 2. MAP AND GEOLOGIC SECTIONS OF RESERVE BLOCK J, SECTION 27, T. 47 N., R. 17 W., N. M. P. M., LONG PARK AREA, MONTROSE COUNTY, COLORADO