Report of Investigation Number Four

SELECTED PALEOZOIC STRATIGRAPHIC SECTIONS IN ARIZONA

By Edward A. Koester

ARIZONA OIL AND GAS CONSERVATION COMMISSION
4515 North Seventh Avenue, Phoenix, Arizona 85013
November, 1973

John Bannister
Executive Secretary

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INTRODUCTION

Strata of Paleozoic age crop out extensively within the Colorado Plateau province, Central Mountainous region, and the southeastern part of the Basin and Range province of Arizona. These rocks are known to occur in southwestern Arizona but are not well covered in geologic publications.

The purpose of this report is to provide geologists with the location, name, and stratigraphic interval of selected measured and described outcrop sections of Paleozoic rocks in Arizona and the references to such sections.

Uniformity of treatment, desirable as it may be, has not been achieved. For example, due to the excellent studies of McKee and Gutschick, the Mississippian has been better covered than the Permian. The detailed work of Teichert, Wright, Beus, LeMone, and Pine has given us an excellent understanding of the Devonian. Recent work in southeastern Arizona by Hayes and Krieger has cleared up many of the problems of the Cambrian.

In the preparation of this report, carefully measured sections for which locations can be determined accurately have been given preference. Unfortunately, many of the "classic" sections referred to in the geologic literature of Arizona do not come up to these standards. This is especially true of many of the very old geologic sections in the mining districts, many of which have not been listed. Fortunately, later workers in some cases have measured and described nearby sections. In many instances this work, chiefly by U. S. Geological Survey geologists, has corrected earlier determinations and correlations.

INDEX TO LOCALITIES AND SOURCES
TABLE 1

In this table, each outcrop section and pertinent source reference have been numbered. The tabulation shows: (a) the map number of each outcrop section; (b) its location by township, range, and section (insofar as possible); (c) the principal stratigraphic interval encompassed by the section; (d) the name of the section; (e) the county in which it is located; and (f) the number or numbers of the references in which the section is described or mentioned.

Stratigraphic interval. The age of rocks exposed at each section is shown in this column. The system abbreviations used are: P = Permian; Pn = Pennsylvanian; M = Mississippian; D = Devonian; O = Ordovician; C = Cambrian; and PC = Precambrian.

Location of sections. Four symbols have been used to indicate the degree of geographic information available for positioning the localities on the index map: circle = located within a specified section; upright triangle = located within two or more specified contiguous sections; inverted triangle = located within a specified township (approximate part thereof, if reported); and bar = located within two or more specified townships.

TABLE 1. INDEX TO LOCALITIES AND SOURCES

SELECTED PALEOZOIC STRATIGRAPHIC SECTIONS

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ARIZONA

TABLE 1. Index to Localities and Sources

Map No.	Location	Stratigraphic Interval	Name of Section	County	Source Reference Number
36	33N-7W-32 SW4	M	Toroweap Point	Mohave	81 87 88
37	32N-9W-24 25	M D	Whitmore Wash	Mohave	12 86 87
38	32N-9W NW part	M	Parashant Canyon	Mohave	87
39	26N-9W-6	M	Metuck Canyon	Coconino	81 87
40	27N-10W-4 5	M D	Diamond Creek	Mohave	81 87
41	26N-10W-8	M	Peach Springs Wash	Mohave	42 87
42	27N-12W-23	M	Hindu Canyon	Mohave	87
43	27N-12W-10 14	M D	Bridge Canyon	Mohave	87 12
44	28N-13W-31	M D	Meriwitica Canyon	Mohave	87 81 88
45	30N-14W-SE part	M D C	Quartermaster Canyon	Mohave	87 81 88
46	32N-16W-7	M D	Iceberg Canyon	Mohave	87 81 12
47	34N-14W	M	Grand Wash Cliff, near Trail	Mohave	87
48	35N-16W-10	Pn M	Pakoon Ridge	Mohave	87 15 90
49	32N-16W SE part	C	Rampart Cave	Mohave	81 87 90
50	17S-24E-18 SW4	D	Cochise Stronghold	Cochise	68
51	19S-15E-1?	D	Greaterville	Pima	113
52	10S-16E-21	D	Peppersauce Camp	Pinal	113
53	20S-15E-1	D	Sawmill Canyon	Santa Cruz	120
54	18S-24E-7	D	Dragoon Mtns	Cochise	45
55	18S-18E-1 11 13 24	P-PC	Whetstone NW	Pima	30
56	25N-10W-19 20 27 28	M	Nelson Station	Yavapai	87
57	24N-11W-8	M D	Cherokee Point	Mohave	87 132 12
58	24N-11W-21	M	Rock-Blye	Mohave	87 132
59	23N-11W-20	M D	Ring Cone	Mohave	87 132 12
60	24N-9W-1	M	Yampai	Yavapai	87
61	24N-8W-19	M	Pica Station	Yavapai	87
62	22N-7W-3	M	Chino Point	Yavapai	87
63	22N-8W-4	M	Seligman Field	Yavapai	87
64	22N-8W-22	M	Seligman South	Yavapai	87
65	21N-9W-21	M	North Cross Mountain	Yavapai	87
66	21N-9W-33	M D C	South Cross Mountain	Yavapai	87 90 132
67	20N-7W-2	M	West Juniper	Yavapai	87
68	21N-5W-4 11	M	Picacho 1	Yavapai	87
69	21N-4W-18	M	Picacho 2	Yavapai	87
70	20N-4W-23 26	M D	South Butte	Yavapai	87 12
71	19N-3W-9	M	Fritsche Peak	Yavapai	87
72	19N-6W-23	M	Red Mountain	Yavapai	87

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Map No.	Location	Stratigraphic Interval	Name of Section	County	Source Reference Number
109	11N-12E-26 N2 SE4	D	Boy Scout Ranch	Gila	123
110	11N-12E-22 Center	D	Doubtful Creek	Gila	123
111	11N-12E-16 NW4	D	Tonto & Horton Creeks	Gila	123 114
112	11N-12E-21 SE4	D	Kohl Ranch SE	Gila	123
113	11N-12E-29	D	Thompson Wash	Gila	123
114	25N-10W-28	M	Shipley Quarry	Mohave	87
115	32N-10W	M	Andrus Canyon	Mohave	87
116	18N-6W-14?	D C	Walnut Creek	Yavapai	90 12
117	16N-3W	D C	Simmons Pueblo	Yavapai	90 12
118	21N-5W	M	Chino Valley	Yavapai	90
119	24N-7W to 26N-7W	P	Aubrey Cliffs	Coconino	90
120	26N & 27N - 9W & 10W	P	Peach Springs Canyon	Mohave & Coconino	90
121	22N-6W-33	M	Chino North	Yavapai	87
122	25N-11W-24?	M	Peach Springs Roadcut	Mohave	87
123	19N-3W-23	M	Black Mesa G	Yavapai	87
124	15N-3E-7	M	Clemenceau Quarry	Yavapai	87
125	16N-2E-16	M	Jerome Quarry	Yavapai	87
126	25N-10W-26	M	Nelson Quarry	Yavapai	87
127	7S-18E-15 SE4	M	Virgus Canyon	Pinal	124
128	8S-1W	M D C	Sand Tank Mountains	Maricopa	118
129	17S-17E S part	P	Eagle Cliff	Pima	38
130	1N-14E-5 6	M D	Gold Gulch	Gila	57
131	5S-15E-1?	M D	Tornado Peak	Gila	57
132	24N-11W-17 NE4	C	Cherokee Point, east	Mohave	132
133	25N-12W-20?	C	Music Mountain	Mohave	132
134	16N-2E-17?	M	Supai Shale Pit	Yavapai	87
135	19N-1W-32	M	Drake Quarry	Yavapai	87
136	18N-1W-5	M	Hell Canyon 2	Yavapai	87
137	16N-2E-16	M	First View	Yavapai	87
138	11N-11E-23 NW4	D	Diamond Point	Gila	123
139	12N-10E-31 S2	D	Webber Creek	Gila	123
140	11N-10E-6 7 8 17	Pn M D C?	East Verde River	Gila	127 123 57
141	6N-17E-30	M D	Rockhouse Butte	Gila	57
142	6N-16E-1 2 13	M D	Salt River Draw	Gila	57
143	7N-16E-4 5 8	M D	Cliff House Canyon	Navajo	57
144	3S-15E & 3S-16E	M D C	Mescal Mountains	Gila	100

TABLE 1. Index to Localities and Sources

Map	Location	Stratigraphic Interval	Name of Section	County	Source Reference Number
181	22S-23E-20 SE4	P Pn	Northwest Mule Mountains	Cochise	53
182	4S-15E-26 NW4	M	Hayden	Gila	96
183	20S-22E-23	M D	Military Hill	Cochise	96 133 45
184	10S-2E-1	P-PC	Vekol Mountains	Pinal	26 127 54
185	10S-4E-1 12?	M D C	Slate Mountains	Pinal	54 77
186	12S-7E-24	M	Kohtkohl Hill	Pima	78
187	12S-8E-36 & 12S-9E-31	P-PC	Waterman Mountains	Pima	77 114
188	10S-16E-33	M D C	Nuggett Canyon	Pinal	30 133 102
189	21S-16E?-2?	P	Alamo Gorge	Santa Cruz	38
190	12S-18E-5 8	M D	Buehman Canyon	Pima	133 89
191	21S-31E-29 NW4	D	Boss Ranch 2	Cochise	133
192	16S-17E-9	D	Colossal Cave	Cochise	133
193	14S-21E-34 35	D	Deepwell Ranch	Cochise	133
194	18S-24E-31 NW4	M D C	Dragoon Mountains	Cochise	133 45
195	19S-19E-14 15 21 22 23 27	Pn M D	Dry Canyon	Cochise	133 30 114
196	15S-22E-9 15	M D	Seven Dash Ranch	Cochise	133 45 46
197	9S-5E-30	M D C	Lake Shore Mine	Pinal	133 50
198	12S-8E-25 W2	D C	Waterman Mountains	Pima	133 76 68
199	15S-12E-3 4	P	Snyder Hill	Pima	38
200	15N-2E-NE part	M D	Hairpin Turn	Yavapai	90
201	18S-19E-27 34	M D C	Middle Canyon	Cochise	126 30 45
202	20S-14E-29	P Pn M	Montosa Canyon	Santa Cruz	4 127
203	20S-22E-22 SE4	Pn M D C	Ajax Hill	Cochise	45 68
204	20S-22E-26 35	P Pn	Colina Ridge	Cochise	45 127 114
205	14S-21E-16 SW4 & 14S-21E-15 SE4	Pn	Johnny Lyon Hills	Cochise	114
206	20S-29E-25 & 20S-30E-31	P Pn	Limestone Mountain	Cochise	114
207	7S-18E-7 SE4	D C	Holy Joe Peak	Pinal	102 64
208	32N-8W-18?	Pn	Mile 187	Mohave	15
209	33N-7W-31	P Pn	Toroweap Valley	Mohave	15 111
210	33N-4W-15	P Pn	Supai	Coconino	15
211	36N-14W-2	P Pn	Nutter Twists	Mohave	15
212	6S-17E-7 8	M D C	Whitakker Ranch North	Pinal	65
213	26N-9W-4 5	Pn	Hualapai Indian Res NW	Coconino	15
214	1N-14E-19 SW4	D	Castle Dome	Gila	102
215	1N-14E-1 SE4	D	Sleeping Beauty	Pinal	102

TABLE 1. Index to Localities and Sources

Map No.	Location	Stratigraphic Interval	Name of Section	County	Source Reference Number
253	38N-14W?-24?	P	Black Rock Spring	Mohave	111
254	41N-14W-21	P	Virgin River Narrows	Mohave	111 15
255	31N-6E-29	P	Cedar Mountain	Coconino	95
256	17N-2E-4 9	D	Verde River Canyon	Yavapai	67 12
257	39N-3E-5 NE4	P	Burro Canyon	Coconino	129
258	38N-3E-3 N2	P	House Rock Canyon	Coconino	129
259	3N-17W-9	P-PC	Six Price Mine	Yuma	92
260	4N-12W-7 & 4N-13W-12	D	L Harquahala Mountains, NE	Yuma	51
261	4N-13W-27 S2	P Pn	Harquahala Mine	Yuma	127
262	5S-16E-22 SE4	Pn	Roach Wash Gap	Pinal	127 65
263	18S-17E-7	P Pn	Empire Mountains	Pima	127 42
264	2S-29E-32 SE4	Pn	Sardine Saddle	Greenlee	127
265	3S-18E-10 15	Pn	San Carlos Reservoir	Pinal	127
266	20S-27E-12	Pn	Swisshelm Mine	Cochise	127
267	6N-20E & 21E?	Pn	Carrizo Tributary	Gila	127
268	20S-27E-15	C	Swisshelm Lodge	Cochise	45
269	4½N-21E?-27	Pn	White River	Gila	126 56 57
270	41N-22E?	P	Comb Ridge	Apache	98
271	5N-8W?	P	Canyon de Chelly	Apache	98
272	3N-9W?	P	Nazlini Canyon	Apache	98
273	27N-30E-13 14	P	Bonito Canyon	Apache	98
274	25N-30E?	P	Hunters Point	Apache	98
275	24N-30E?	P	Oak Spring Cliff	Apache	98
276	23N-30E?-8?	P	Black Creek Canyon	Apache	98
277	23N-29E-14?	P	Pine Springs	Apache	98
278	1N-13E	Pn M D C	Haunted Canyon	Apache	101
279	26N-11W	D	Peach Springs	Mohave	12
280	19N-5W-8	D	West Chino Valley	Yavapai	12
281	15N-1E-1	D	Coyote Canyon	Yavapai	12
282	17N-1W-3 4	D	Verde Monocline	Yavapai	12
283	17N-1E-4	D	Verde River	Yavapai	12
284	32N-5E-10 14	D	Temple Butte	Coconino	12
285	33N-16W SE part	D	North Grand Wash	Mohave	83
286	22N-6W	D	Seligman	Yavapai	12
287	23N-11W-19 30	C	Lion Mountain	Mohave	132
288	23N-11W-33	D	Lion Mountain South	Mohave	132
289	23N-11W-15	C	Lion Mountain A	Mohave	132

TABLE 2. SELECTED REFERENCES

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TABLE 2. Selected References

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