G.LOO121

Gravity observations near McDermitt, Nevada

during 1976

by

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1977

U.S. Geological Survey

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This report is preliminary
and has not been edited or
reviewed for conformity with
Geological Survey standards
and nomenclature.

INTRODUCTION

Gravity observations were made at 130 new locations near McDermitt, Nevada during September 14 to September 20, 1976 (fig. 1). The field-work was done by Donald Plouff and Arthur Conradi, Jr., using LaCoste-Romberg gravity meter G-192. The purpose of the 1976 survey was to supplement previously reported gravity data in this area (Plouff, 1976) and to tie the datum of the present and previously established gravity stations to the datum of the International Gravity Standardization Net 1971 (IGSN 71) described by Morelli (1974).

OBSERVED GRAVITY

The values of observed gravity at all stations established during 1976 again were determined relative to a local base, "MCD", on bench mark Z129 in front of the McDermitt Post Office. Base Station MCD was tied to IGSN 71 by taking a series of 4 gravity readings at MCD and at base station ACIC 2354-1 described by Jablonski (1974). The latter station, monumented by a metal disc, is located southeast of double doors in the northeast corner of the McDermitt Combined School gymnasium. The school is located one block to the east of station MCD at the Post Office. The gravity value at the school was determined to be 0.19   milligal higher than at the Post Office base. That is, the value of observed gravity at the school is 979,920.40 mgals, as tied to the California base station network (Chapman, 1966) via station MCD. The IGSN 71 value at the McDermitt School base is 979,905.90

(Jablonski, 1974). Therefore, the values of observed gravity, as tied to the IGSN 71 datum, is 14.50 mgals lower than the value previously reported for the Post Office base, MCD, which was tied to the California base network during 1975 with an accuracy of about 0.05 mgal (Plouff, 1976).

Several episodes occurred during this survey when the gravity meter produced erratic readings, apparently as an effect of using portable batteries (gel cells) that did not seem to be sufficiently charged.
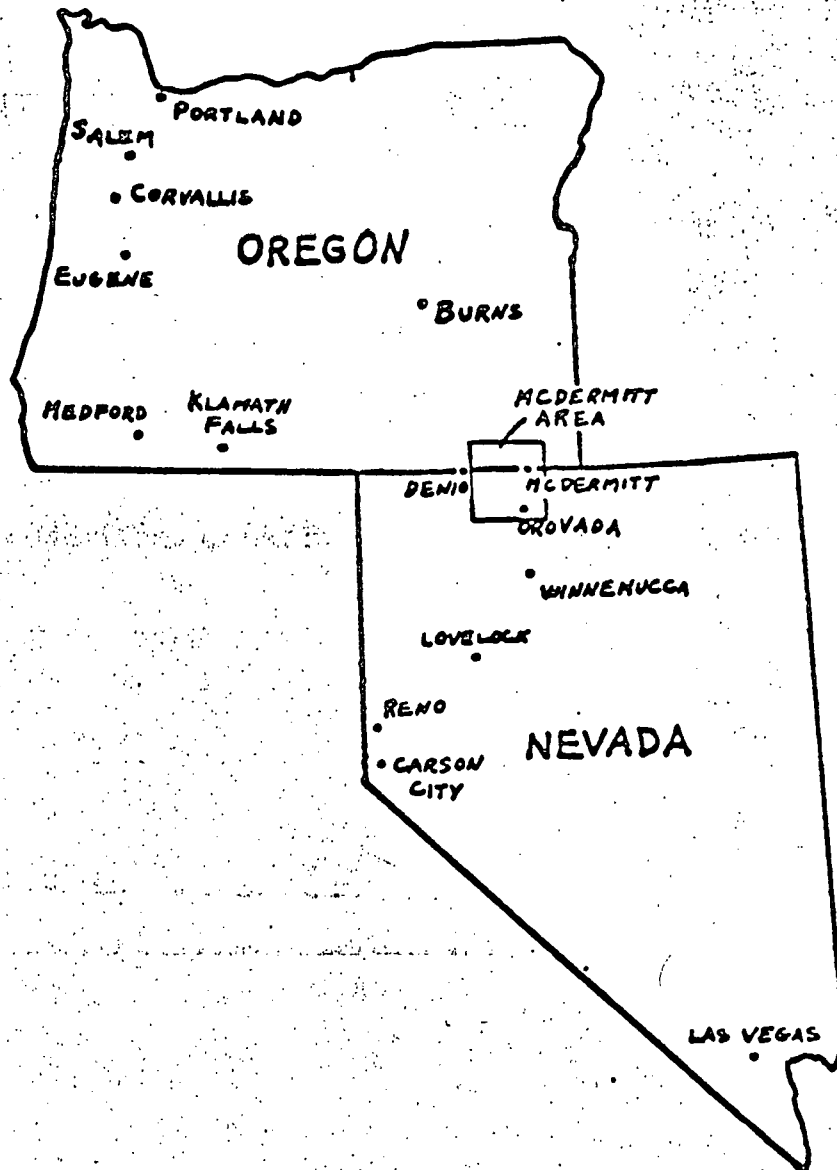
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Figure 1. Location of McDermitt area.

Examples of the response of gravity meter G-192 during these episodes
are shown in Figure 2. A total of 47 gravity stations (numbers 246-272
and A1-A21) were established before the portable batteries lost their
initial charge. The gravity meter was powered during most of the re-
maining time by the automobile battery, so that most of the remaining
gravity observations are accurate to better than 0.1 milligal.

Gravity observations were repeated near 7 stations of previous
surveys. New stations (numbers 258, 270 and 277) were established near
the presumed locations of stations D47, D49, and V8451 adopted from the
series of gravity values obtained from the Department of
Defense (DOD) Gravity Library. The difference of observed gravity
between the new and the old stations near the same locations are 4.50,
0.01, and 0.05 milligals, respectively. The corresponding elevation
differences of 17, 2, and 1 m, respectively, indicate that station
258 does not match the location of station 047, but the other two pairs
of stations closely agree in location, observed gravity, and elevation.
Four gravity stations established in 1975 (station OROV, 12, 62, and 76)
were repeated in 1976. The value at each station relative to base
station MCD seemed to be about 0.05 to 0.2 milligal lower in 1976
than in 1975. The cause of this apparent difference is unknown. The
site of the bench mark at base station MCD, though in a lawn about
0.5 m above street level does not seem to be disturbed--that is, lowered
a corresponding 0.3 to 1.0 m--to account for the apparent gravity change.
Other possible explanations for the apparent change are imprecision of
instrument calibration (for 2 of the stations which differ by 33 and
53 milligals from the base station value) or regional changes of sub-
surface mass distribution.

SURVEYED ELEVATIONS

A total of 92 gravity stations at 100-m average spacing were es-
tablished along three traverses. Calculation of station elevations were
recorded to the nearest 0.01-foot (3 mm) while using standard spirit
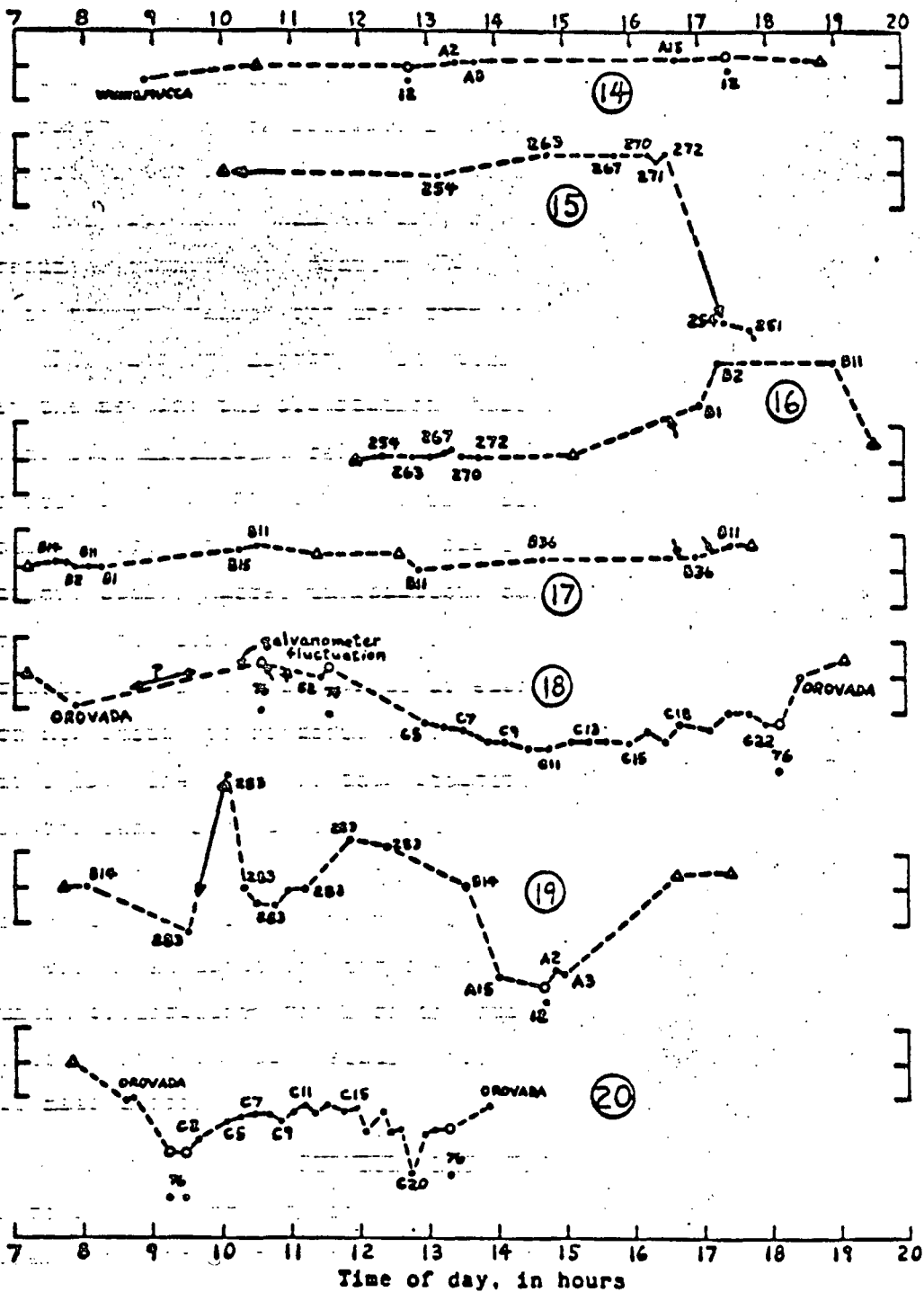
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Figure 2. Daily gravity drift for Gravity Meter G-192, September, 1976.
Triangles indicate reading at McDermitt Post Office base. Dots indicate
the best average value for repeated gravity reading. Circles
indicate new value for previously established station. Circled
numbers indicate day of month. Units of vertical scale are in
0.1 milligal increments.

4

leveling techniques. Survey ties were made to spot elevations near traverses A and B and a tie was made to a bench mark (station 76) near traverse C. An estimated accuracy of 15 mm along the surveyed traverses is significantly greater than the 60 mm elevation accuracy that is consistent with the maximum reading accuracy of 0.01 milligal for Gravity Meter G-192. Unfortunately, however, errors of observed gravity during this period may exceed 0.1 milligal.

GRAVITY ANOMALIES

The location, elevation, observed gravity (at the datum of the California base station net), free-air anomaly (1930 International Reduction Formula), and complete Bouguer anomaly are listed in Table 1 for the 130 stations of the 1976 gravity survey. Twenty-two stations of the 1975 survey (Plouff, 1976), for which changes have been made, also are included at the beginning of Table 1. Changes in location were made for stations OROV, 12, and for 7 stations previously obtained from the Department of Defense Gravity Library, which are located on the Hinkey Summit 15-minute topographic map. The free air and Bouguer anomalies for stations 47 and 131 previously were incorrect. The value of observed gravity at station 76 was changed. The value of observed gravity at the O-series in Oregon was lowered by 0.7 milligal, in order to agree with Plouff, and others (1976, p. 6) in the Charles Sheldon Antelope Range.

A four-digit accuracy code in Table 1 is associated with the 130 new gravity stations. The first digit describes the location and type of elevation at each station (Table 2). The second digit provides an estimate of the elevation accuracy (Table 3). The third digit indicates the accuracy of horizontal location (Table 4). The fourth digit refers to the accuracy of observed gravity (Table 5), which has relatively little influence on the interpretation of the Bouguer anomaly except at closely spaced stations. Note that the station elevations (Table 1) and elevation accuracy values are expressed in feet, to simplify comparison with maps in this area. Values of accuracy indicated in Tables 3, 4, and 5 are rough estimates of the maximum error to be expected.

Free-air gravity anomalies were determined by using the International Gravity Formula of 1930 for the normal gravity on the ellipsoid and Swick's formula (1942, p. 65) for the free-air correction. Bouguer, curvature, and terrain corrections were added to the free-air gravity anomaly at each station to determine complete Bouguer anomalies at reduction densities of 2.50 and 2.67 g/cm^3.

As previously described (Plouff, 1976), terrain corrections were determined for 108 stations by using cylindrical compartment elevation estimates in the distance interval between the station location and 0.9 km from the station (indicated by the letter, S, in table 1) and by using 0.5-minute gridded average elevations between 0.9 and 166.7 km from the station. A computer estimate (see Plouff, 1976, p. 6) of the terrain correction between the station and 0.9 km from the station (indicated by the letter, Z, in table 1) was made for 22 new gravity stations in Oregon, where orthophotoquads but not topographic contour maps are available.

REFERENCES

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TABLE 1. Principal facts and gravity anomalies, McDermitt area, 1976

STATION	CODE	LATITUDE DEG	MIN	LONGITUDE DEG	MIN	ELEVATION FEET	OBSERVED GRAVITY MGAL	FREE AIR (1930) MGAL	TERRAIN HAND MGAL	TERRAIN TOTAL MGAL	BOUGUER ANOMALY 2.67 MGAL	2.50 MGAL
MCD OROV	F523	41	34.17	117	47.06	4337.0	979887.55	-25.18	0.015	1.91	-172.51	-163.13
MCD 12	F524	41	57.79	117	46.70	4459.0	979927.58	-8.98	0.015	0.26	-162.15	-152.39
MCD 47	G743	41	54.71	117	48.45	4769.0	979907.65	4.83	0.085	0.54	-158.67	-148.26
MCD 76	N224	41	40.61	117	57.02	4270.8	979921.05	-7.24	0.025	0.66	-153.54	-166.23
MCD 131	B134	41	48.41	117	43.83	4401.4	979889.62	-38.34	0.015	0.58	-189.21	-179.60
MCDG2257	G	41	44.99	117	31.23	6727.0	979762.20	57.91	0.002	2.53	-170.52	-155.98
MCDG2258	G	41	41.59	117	30.67	6685.0	979757.63	54.48	0.002	3.06	-171.98	-157.56
MCDG2259	G	41	40.23	117	32.78	7867.0	979684.83	94.77	0.002	6.22	-168.81	-152.02
MCDG2261	G	41	36.47	117	32.23	5377.0	979830.19	11.77	0.002	3.57	-169.50	-157.96
MCDG2262	G	41	34.50	117	32.59	4975.0	979853.65	0.39	0.002	2.09	-168.61	-157.84
MCDO 182		42	6.70	117	44.80	4612.0	979934.24	-1.27	0.002	0.63	-159.31	-149.24
MCDO 339		42	4.72	117	40.62	4862.0	979923.01	13.96	0.002	0.78	-152.48	-141.88
MCDO 341		42	2.43	117	34.11	6525.0	979807.63	58.29	0.002	4.82	-160.96	-147.00
MCDO 343		42	14.23	117	42.69	5196.0	979913.22	21.33	0.002	1.08	-156.24	-144.93
MCDO 344		42	13.30	117	38.47	6193.0	979845.54	48.73	0.002	1.48	-162.52	-149.07
MCDO 348		42	0.19	117	38.99	4663.0	979914.84	-6.14	0.002	0.52	-166.02	-155.84
MCDO 349		42	12.77	117	49.50	4665.0	979935.70	-3.92	0.002	0.53	-163.86	-153.68
MCDO 350		42	13.50	117	52.49	4811.0	979925.91	-1.08	0.002	0.64	-165.91	-155.42
MCDO 351		42	14.50	117	55.09	5027.0	979913.45	5.27	0.002	0.73	-166.86	-155.90
MCDO 442		42	11.40	118	22.00	4699.0	979936.84	2.47	0.002	1.74	-157.62	-147.24
MCDV8231	H	41	40.09	117	35.27	9732.0	979542.02	127.36	0.002	34.45	-171.35	-152.33
MCDV8232	F	41	36.39	117	34.10	6027.0	979789.76	32.54	0.002	3.79	-170.72	-157.78
MCD 246	N124	41	59.90	117	44.20	4416.5	979919.22	-24.49	0.015	0.29	-176.16	-166.51
MCD 247	B134	41	59.90	117	45.61	4433.1	979918.72	-23.43	0.015	0.28	-175.69	-165.99
MCD 248	N124	41	59.90	117	46.78	4456.0	979923.08	-16.92	0.015	0.29	-169.94	-160.20
MCD 249	N124	41	59.90	117	48.19	4477.8	979929.56	-8.39	0.015	0.39	-162.06	-152.28
MCD 250	N144	42	0.05	117	48.68	4545.2	979926.49	-5.35	0.002	0.45	-161.27	-151.34
MCD 251	N134	42	0.04	117	49.07	4587.0	979923.33	-4.57	0.002	0.54	-161.83	-151.82
MCD 252	N134	42	0.30	117	50.19	4733.9	979913.00	-1.48	0.002	0.68	-163.63	-153.31
MCD 253	B144	42	1.02	117	50.89	4996.7	979897.86	7.00	0.002	0.77	-164.05	-153.16
MCD 254	N133	42	1.14	117	52.02	5261.0	979877.30	11.10	0.002	0.99	-168.78	-157.33
MCD 256	N144	42	1.52	117	53.11	5313.6	979872.46	10.64	0.002	1.02	-171.02	-159.45
MCD 257	N144	42	1.58	117	53.94	5250.0	979875.56	7.67	0.002	0.95	-171.88	-160.44
MCD 258	N144	42	1.40	117	54.80	5113.9	979882.20	1.79	0.002	1.00	-173.05	-161.92
MCD 259	N134	42	1.45	117	55.57	5003.0	979891.11	0.20	0.002	0.99	-170.86	-159.97
MCD 260	N134	42	1.04	117	56.15	4952.5	979892.65	-2.39	0.002	0.84	-171.86	-161.07
MCD 261	N134	42	1.03	117	56.99	5116.3	979882.52	2.89	0.002	0.79	-172.24	-161.09
MCD 262	N134	42	0.90	117	57.81	5297.7	979871.44	9.05	0.002	0.94	-172.14	-160.61
MCD 263	N143	42	0.92	117	58.93	5467.0	979860.71	14.20	0.002	1.44	-172.27	-160.40
MCD 264	N144	42	1.19	118	0.01	5447.5	979861.02	12.28	0.002	1.53	-173.45	-161.62
MCD 265	N444	42	1.64	118	0.09	5708.0	979844.98	20.04	0.002	3.43	-172.68	-160.41
MCD 266	N134	42	1.43	118	0.98	5253.9	979873.27	5.97	0.002	1.45	-173.21	-161.80
MCD 267	N133	42	1.20	118	2.13	5112.1	979879.60	-0.68	0.002	1.27	-175.19	-164.08
MCD 268	N134	42	0.62	118	3.11	5108.2	979879.20	-0.58	0.002	1.15	-175.08	-163.97
MCD 269	N144	42	0.95	118	3.89	5243.5	979872.54	4.98	0.002	1.74	-173.55	-162.18
MCD 270	N133	42	1.33	118	4.69	5331.8	979871.29	11.46	0.002	2.82	-169.01	-157.52
MCD 271	N153	42	1.80	118	5.64	5417.5	979871.49	19.02	0.002	2.24	-164.97	-153.25
MCD 272	N133	42	2.25	118	6.60	5524.2	979872.02	28.90	0.002	2.23	-158.75	-146.80
MCD 273	X625	41	56.89	117	47.53	4477.0	979921.87	-11.66	0.015	0.28	-165.41	-155.62
MCD 274	F524	41	34.18	117	47.92	4276.0	979886.10	-32.38	0.015	1.28	-178.24	-168.96

TABLE 1--CONTINUED

STATION	CODE	LATITUDE DEG MIN	LONGITUDE DEG MIN	ELEVATION FEET	OBSERVED GRAVITY MGAL	FREE AIR (1930) MGAL	TERRAIN HAND MGAL	TERRAIN TOTAL MGAL	BOUGUER ANOMALY 2.67 MGAL	2.50 MGAL
MCD 275	F524	41 34.19	117 48.51	4248.0	979884.80	-36.33	0.01S	1.02	-181.50	-172.25
MCD 276	F524	41 34.20	117 49.67	4212.0	979885.37	-39.16	0.01S	0.69	-183.42	-174.24
MCD 277	D536	41 34.21	117 50.82	4184.0	979886.27	-40.90	0.01S	0.49	-184.41	-175.27
MCD 278	X526	41 33.32	117 52.02	4166.0	979886.91	-40.63	0.01S	0.36	-183.65	-174.54
MCD 279	X526	41 34.20	117 52.02	4166.0	979888.29	-40.56	0.01S	0.36	-183.58	-176.47
MCD 280	F526	41 34.81	117 54.62	4158.0	979902.78	-27.73	0.01S	0.28	-170.56	-161.47
MCD 281	F526	41 34.68	117 53.70	4163.0	979895.66	-34.19	0.01S	0.27	-177.19	-168.09
MCD 282	G626	41 38.87	117 57.78	4228.0	979921.10	-8.90	0.02S	1.09	-153.31	-144.12
MCD 283	G745	41 48.03	117 53.93	5504.0	979849.47	25.71	0.35S	1.92	-161.55	-149.63
MCD 285	F536	41 57.32	117 45.56	4530.0	979922.64	-6.55	0.23S	0.46	-161.94	-152.05
MCD A 1	P524	41 57.81	117 46.76	4460.1	979927.19	-9.30	0.01S	0.26	-162.50	-152.74
MCD A 2	P524	41 57.83	117 46.81	4462.5	979926.63	-9.66	0.01S	0.26	-162.95	-153.19
MCD A 3	P524	41 57.85	117 46.86	4463.9	979926.41	-9.78	0.01S	0.26	-163.11	-153.35
MCD A 4	P524	41 57.88	117 46.93	4465.6	979925.77	-10.31	0.01S	0.26	-163.69	-153.93
MCD A 5	P524	41 57.90	117 47.00	4468.2	979925.29	-10.57	0.01S	0.26	-164.05	-154.28
MCD A 6	P524	41 57.91	117 47.05	4469.8	979924.95	-10.78	0.01S	0.26	-164.31	-154.53
MCD A 7	P524	41 57.91	117 47.11	4471.7	979924.48	-11.07	0.01S	0.26	-164.66	-154.88
MCD A 8	P524	41 57.91	117 47.20	4473.9	979924.06	-11.28	0.01S	0.26	-164.95	-155.17
MCD A 9	P524	41 57.91	117 47.28	4476.0	979923.64	-11.51	0.01S	0.26	-165.24	-155.45
MCD A10	P524	41 57.90	117 47.36	4477.8	979923.22	-11.74	0.01S	0.27	-165.54	-155.75
MCD A11	P524	41 57.90	117 47.44	4479.8	979922.84	-11.93	0.01S	0.27	-165.80	-156.00
MCD A12	P524	41 57.90	117 47.49	4481.2	979922.55	-12.09	0.01S	0.27	-166.00	-156.20
MCD A13	P524	41 57.89	117 47.55	4482.8	979922.30	-12.18	0.01S	0.27	-166.14	-156.34
MCD A14	P524	41 57.89	117 47.62	4484.8	979922.12	-12.17	0.01S	0.27	-166.20	-156.39
MCD A15	P524	41 57.89	117 47.72	4487.8	979921.99	-12.02	0.01S	0.27	-166.15	-156.33
MCD A16	P524	41 57.76	117 46.62	4457.0	979927.88	-8.83	0.01S	0.25	-161.92	-152.17
MCD A17	P524	41 57.75	117 46.58	4456.1	979927.96	-8.82	0.01S	0.25	-161.88	-152.13
MCD A18	P524	41 57.73	117 46.52	4454.2	979928.10	-8.82	0.01S	0.25	-161.83	-152.08
MCD A19	P524	41 57.71	117 46.46	4453.1	979928.20	-8.80	0.01S	0.25	-161.76	-152.02
MCD A20	P524	41 57.70	117 46.40	4451.0	979928.31	-8.87	0.01S	0.25	-161.76	-152.03
MCD A21	P524	41 57.68	117 46.34	4449.9	979928.35	-8.90	0.01S	0.25	-161.76	-152.03
MCD B 1	P524	41 56.80	117 47.52	4478.7	979921.91	-11.32	0.01S	0.29	-165.13	-155.34
MCD B 2	P524	41 56.80	117 47.43	4475.9	979922.23	-11.27	0.01S	0.28	-164.98	-155.19
MCD B 3	P526	41 56.80	117 47.38	4474.3	979922.50	-11.15	0.01S	0.28	-164.80	-155.02
MCD B 4	P526	41 56.80	117 47.30	4472.3	979922.85	-10.98	0.01S	0.28	-164.58	-154.80
MCD B 5	P526	41 56.80	117 47.24	4470.0	979923.25	-10.80	0.01S	0.28	-164.31	-154.54
MCD B 6	P526	41 56.80	117 47.17	4468.0	979923.68	-10.56	0.01S	0.28	-164.00	-154.23
MCD B 7	P526	41 56.80	117 47.10	4465.8	979924.08	-10.36	0.01S	0.28	-163.73	-153.97
MCD B 8	P526	41 56.80	117 47.04	4464.2	979924.29	-10.30	0.01S	0.28	-163.62	-153.86
MCD B 9	P526	41 56.80	117 46.99	4462.6	979924.47	-10.28	0.01S	0.28	-163.54	-153.78
MCD B10	P526	41 56.80	117 46.92	4461.4	979924.64	-10.22	0.01S	0.28	-163.44	-153.68
MCD B11	P524	41 56.80	117 46.87	4460.0	979924.83	-10.16	0.01S	0.28	-163.33	-153.58
MCD B12	P526	41 56.80	117 46.80	4457.9	979925.07	-10.12	0.01S	0.28	-163.22	-153.47
MCD B13	P526	41 56.80	117 46.72	4456.1	979925.34	-10.02	0.01S	0.28	-163.06	-153.31
MCD B15	P524	41 56.80	117 48.40	4515.1	979919.05	-10.76	0.01S	0.31	-165.79	-155.92
MCD B16	P525	41 56.80	117 47.59	4480.8	979921.60	-11.43	0.01S	0.29	-165.31	-155.52
MCD B17	P525	41 56.80	117 47.67	4483.3	979921.20	-11.60	0.01S	0.29	-165.56	-155.76
MCD B18	P525	41 56.80	117 47.73	4485.9	979920.84	-11.72	0.01S	0.29	-165.77	-155.96
MCD B19	P525	41 56.80	117 47.80	4488.4	979920.53	-11.79	0.01S	0.29	-165.92	-156.11
MCD B20	P525	41 56.80	117 47.87	4691.0	979920.30	-11.78	0.01S	0.29	-166.00	-156.18

TABLE 1--CONTINUED

STATION		CODE	LATITUDE DEG MIN	LONGITUDE DEG MIN	ELEVATION FEET	OBSERVED GRAVITY MGAL	FREE AIR (1930) MGAL	TERRAIN HAND TOTAL MGAL		BOUGUER ANOMALY 2.67 2.50 MGAL	
MCD	B21	P525	41 56.80	117 47.95	4493.2	979920.11	-11.76	0.01S	0.30	-166.05	-156.23
MCD	B22	P525	41 56.80	117 48.00	4496.1	979919.91	-11.69	0.01S	0.30	-166.08	-156.25
MCD	B23	P525	41 56.80	117 48.06	4499.2	979919.78	-11.53	0.01S	0.30	-166.02	-156.19
MCD	B24	P525	41 56.80	117 48.13	4502.7	979919.56	-11.42	0.01S	0.30	-166.03	-156.19
MCD	B25	P525	41 56.80	117 48.22	4506.2	979919.43	-11.22	0.01S	0.30	-165.95	-156.10
MCD	B26	P525	41 56.80	117 46.67	4454.0	979925.78	-9.77	0.01S	0.28	-162.74	-153.00
MCD	B27	P525	41 56.80	117 46.60	4453.2	979926.16	-9.47	0.01S	0.27	-162.41	-152.68
MCD	B28	P525	41 56.80	117 46.50	4450.2	979926.75	-9.16	0.01S	0.28	-162.00	-152.27
MCD	B29	P525	41 56.80	117 46.42	4448.6	979927.35	-8.71	0.01S	0.27	-161.50	-151.77
MCD	B30	P525	41 56.80	117 46.35	4446.8	979928.04	-8.19	0.01S	0.27	-160.92	-151.19
MCD	B31	P525	41 56.80	117 46.28	4465.0	979928.77	-7.63	0.01S	0.27	-160.29	-150.57
MCD	B32	P525	41 56.80	117 46.20	4443.1	979929.64	-6.94	0.01S	0.27	-159.54	-149.82
MCD	B33	P525	41 56.80	117 46.13	4440.9	979930.36	-6.42	0.01S	0.28	-158.95	-149.24
MCD	B34	P525	41 56.80	117 46.07	4439.3	979930.85	-6.09	0.01S	0.28	-158.55	-148.85
MCD	B35	P525	41 56.86	117 46.07	4439.2	979930.80	-6.23	0.01S	0.27	-158.70	-148.99
MCD	B36	P524	41 56.90	117 46.06	4438.9	979930.63	-6.49	0.01S	0.27	-158.95	-149.24
MCD	B37	P525	41 56.90	117 45.98	4436.9	979930.84	-6.47	0.01S	0.27	-158.86	-149.16
MCD	B38	P525	41 56.90	117 45.91	4436.1	979930.93	-6.45	0.01S	0.27	-158.82	-149.12
MCD	B39	P525	41 56.90	117 45.85	4434.2	979930.92	-6.64	0.01S	0.27	-158.94	-149.24
MCD	B40	P525	41 56.90	117 45.76	4432.5	979930.83	-6.89	0.01S	0.27	-159.13	-149.44
MCD	B41	P525	41 56.90	117 45.69	4430.6	979930.57	-7.33	0.01S	0.27	-159.50	-149.82
MCD	B42	P525	41 56.90	117 45.61	4428.7	979930.71	-7.37	0.01S	0.27	-159.48	-149.79
MCD	B43	P525	41 56.90	117 45.55	4427.0	979930.94	-7.30	0.01S	0.27	-159.35	-149.67
MCD	B44	P525	41 56.90	117 45.50	4426.4	979930.95	-7.35	0.01S	0.27	-159.37	-149.69
MCD	B45	P525	41 56.90	117 45.41	4423.6	979931.00	-7.56	0.01S	0.28	-159.49	-149.82
MCD	B46	P525	41 56.89	117 45.35	4422.3	979930.85	-7.82	0.01S	0.28	-159.70	-150.03
MCD	B47	P525	41 56.89	117 45.29	4420.4	979930.79	-8.06	0.01S	0.28	-159.87	-150.21
MCD	B48	P526	41 56.89	117 45.19	4418.7	979930.51	-8.50	0.01S	0.28	-160.26	-150.59
MCD	B49	P526	41 56.90	117 46.17	4441.7	979929.61	-7.25	0.01S	0.27	-159.80	-150.09
MCD	B50	P525	41 56.80	117 48.30	4509.6	979919.29	-11.04	0.01S	0.30	-165.88	-156.02
MCD	C 1	P126	41 40.40	117 57.00	4269.2	979921.18	-7.23	0.02S	0.66	-153.49	-144.18
MCD	C 2	P125	41 40.42	117 57.02	4270.4	979921.08	-7.25	0.02S	0.66	-153.54	-144.23
MCD	C 3	P126	41 40.45	117 57.07	4272.6	979920.92	-7.25	0.02S	0.68	-153.60	-144.28
MCD	C 4	P126	41 40.49	117 57.12	4276.3	979920.80	-7.08	0.02S	0.70	-153.54	-144.21
MCD	C 5	P125	41 40.52	117 57.18	4287.9	979920.18	-6.65	0.02S	0.70	-153.51	-144.16
MCD	C 6	P125	41 40.58	117 57.27	4300.3	979919.41	-6.35	0.02S	0.72	-153.61	-144.23
MCD	C 7	P125	41 40.61	117 57.31	4311.5	979918.85	-5.90	0.02S	0.71	-153.55	-144.15
MCD	C 8	P125	41 40.66	117 57.38	4327.2	979917.93	-5.42	0.03S	0.73	-153.59	-144.16
MCD	C 9	P125	41 40.70	117 57.43	4341.2	979917.04	-5.05	0.03S	0.72	-153.71	-144.25
MCD	C10	P125	41 40.77	117 57.51	4348.4	979916.45	-5.07	0.05S	0.76	-153.94	-144.46
MCD	C11	P125	41 40.81	117 57.59	4359.3	979915.64	-4.91	0.07S	0.79	-154.13	-144.63
MCD	C12	P125	41 40.86	117 57.65	4371.7	979914.60	-4.86	0.07S	0.78	-154.51	-144.98
MCD	C13	P125	41 40.90	117 57.70	4383.2	979913.74	-4.70	0.10S	0.80	-154.72	-145.17
MCD	C14	P125	41 40.94	117 57.77	4403.3	979912.13	-4.48	0.10S	0.78	-155.21	-145.61
MCD	C15	P125	41 40.97	117 57.80	4424.2	979910.61	-4.08	0.10S	0.75	-155.56	-145.91
MCD	C16	P125	41 40.99	117 57.85	4441.0	979909.60	-3.54	0.10S	0.74	-155.61	-145.93
MCD	C17	P125	41 41.03	117 57.89	4457.8	979908.45	-3.16	0.11S	0.73	-155.81	-146.09
MCD	C18	P125	41 41.06	117 57.94	4474.4	979906.88	-3.23	0.11S	0.71	-156.46	-146.71
MCD	C19	P125	41 41.10	117 58.00	4482.0	979905.76	-3.69	0.14S	0.74	-157.16	-147.39
MCD	C20	P125	41 41.15	117 58.07	4487.8	979904.91	-6.07	0.03S	0.63	-157.85	-148.06

TABLE 1--CONTINUED

STATION	CODE	LATITUDE DEG MIN	LONGITUDE DEG MIN	ELEVATION FEET	OBSERVED GRAVITY MGAL	FREE AIR (1930) MGAL	TERRAIN HAND TOTAL MGAL	BOUGUER ANOMALY 2.67 2.50 MGAL
MCD	C21	P125 41 41.20	117 58.14	4496.5	979904.61	-3.63	0.025 0.62	-157.72 -147.91
MCD	C22	P125 41 41.25	117 58.21	4505.7	979905.40	-2.05	0.025 0.61	-156.46 -146.63

11

Table 2. Location description code (digit one).

[The number after the alphabetical code indicates the total number of gravity stations for which the code was used.]

B   2   On level-line bench mark or other permanent marks incorporated into U.S. Geological Survey vertical control system.

N   23   Near level-line bench mark.

H   1   Near vertical angle bench mark.

X   3   Near location markers such as section corners, wells, or windmills.

D   1   Near assumed location of any of the above markers that was destroyed or not found.

F   6   Near a location with or without a marker at which a surveyed elevation is indicated on a published topographic map.

G   2   Near a location (on a manuscript map or a published map) at which spot elevations are determined by photogrammetry or near a doubtful F-location.

P   92   Surveyed elevation.

Table 3. Accuracy of elevations (digit two)

[The number after the numerical code indicates the total number of stations for which the code was used. Note that uncertainty of horizontal location tends to reduce the elevation accuracy.]

Code	Number	Accuracy (feet)	Examples
1	47	0.1	On or tied to bench mark by surveying.
4	1	2	Near assumed location of bench mark that was not found.
5	79	5	Near or tied to surveyed spot elevation indicated on USGS topographic map.
6	2	10	Photogrammetric elevation of precise location such as fence corner.
7	1	20	Photogrammetric elevation on map with a 40-foot contour interval.

Table 4. Accuracy of horizontal location (digit three)

[The number after the numerical code indicates the total number of stations for which the code was used.]

Code	Number	Accuracy (meters)	Examples
2	104	26	Near section corners, bench marks, road intersections or stream crossings.
3	15	64	Sharp road curve; uncertain spot elevation location.
4	10	128	Broad road curve or gentle hillcrest
5	1	256	Location depends on odometer measurement or other estimate.

Table 5. Accuracy of observed gravity (digit four)

[The number after the numerical code indicates the total number of stations for which the code was used. Accuracies are relative to the value at the McDermitt Post Office base.]

Code	Number	Accuracy (mgal)	Examples
3	6	0.05	Repeated reading with good drift control.
4	49	0.10	Non-repeated reading or repeated reading with fair drift control.
5	53	0.2	Non-repeated reading taken during general period of high drift.
6	22	0.5	Reading taken near time of erratic drift.

13