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no. 78-107A



UNITED STATES DEPARTMENT OF THE INTERIOR

GEOLOGICAL SURVEY

[Reports - Open file series]

Principal facts for a gravity survey of the Double Hot Springs Known Geothermal Resource Area, Humboldt County, Nevada

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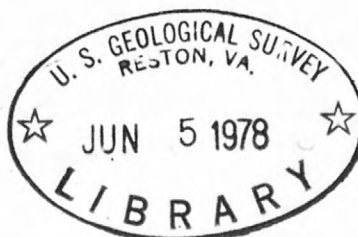
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## PRINCIPAL FACTS FOR GRAVITY STATIONS

Explanation of the headings of the accompanying table of principal facts:

Sta. no.	Gravity station number.
Latitude	North latitude in degrees, minutes, and hundredths of minutes.
Longitude	West longitude in degrees, minutes, and hundredths of minutes.
Elev, f	Elevation in feet (to convert to meters, multiply by 0.3048).
Observed gravity	Observed gravity in milligals.
Standard gravity	Theoretical gravity in milligals.
Fr.-air correction	Free-air correction in milligals.
Bouguer correction	Bouguer and curvature correction in milligals.
Fr.-air anomaly	Free-air anomaly in milligals.
Bouguer anomaly	Bouguer anomaly in milligals.

During July 1977, forty-nine gravity stations were obtained in the Double Hot Springs Known Geothermal Resource Area and vicinity, northwestern Nevada. Elevations for twenty-two stations were estimated from lake bed topographic contours. Horizontal positions for these stations were determined from topographic maps and vehicle odometer. Elevations for stations DBLD34 and DBLD35 were determined with altimeters. Positions for the remaining stations were taken from spot elevations shown on U.S. Geological Survey topographic maps at scales of 1:24,000.

The gravity observations were made with a Worden gravimeter having a scale factor of about 0.5 milligal per division.<sup>1/</sup> A base station was occupied at the beginning of each day, at mid-day, and at the end of the day.

No terrain corrections have been applied to these data. The earth tide correction was not used in drift reduction. The Geodetic Reference System 1967 formula (International Association of Geodesy, 1967) was used to compute theoretical gravity. Observed gravity is referenced to a base station in Gerlach, Nevada, having a value based on the Potsdam System of 1930 (fig. 1). A density of 2.67 g per cm<sup>3</sup> was used in computing the Bouguer anomaly.

#### Reference

International Association of Geodesy, 1967, Geodetic Reference System, 1967: International Association of Geodesy Spec. Pub. no. 3, 74 p.

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<sup>1/</sup> Use of brand names in this report is for descriptive purposes only, and in no way constitutes endorsement by the U.S. Geological Survey.

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sta. no.	latitude		location		elev. f	observed gravity	standard gravity	corrections		anomalies	
			longitude					fr.-air	bouguer	fr.-air	bouguer
DBLD01	40	56.46	-119	6.82	3905.0	979869.57	-980255.99	367.18	-134.43	-19.24	-155.67
DBLD02	40	56.84	-119	6.58	3905.0	979869.97	-980256.56	367.18	-134.43	-19.41	-155.84
DBLD03	40	59.18	-119	6.18	3904.0	979870.56	-980257.07	367.09	-134.40	-19.42	-155.82
DBLD04	40	59.50	-119	5.80	3904.0	979870.56	-980257.55	367.09	-134.40	-19.90	-154.30
DBLD05	40	59.93	-119	2.80	3904.0	979868.87	-980258.19	367.09	-134.40	-22.23	-156.63
DBLD06	41	0.22	-119	4.92	3905.0	979869.55	-980258.62	367.18	-134.43	-21.89	-156.32
DBLD07	41	0.54	-119	4.53	3906.0	979869.65	-980259.10	367.28	-134.46	-22.17	-156.63
DBLD08	41	0.85	-119	4.17	3907.0	979870.53	-980259.56	367.37	-134.50	-21.66	-156.16
DBLD09	41	1.18	-119	3.79	3908.0	979872.05	-980260.05	367.47	-134.53	-20.53	-155.06
DBLD10	41	1.52	-119	3.39	3911.0	979874.36	-980260.56	367.75	-134.64	-18.45	-155.09
DBLD11	41	1.78	-119	2.90	3918.0	979876.87	-980260.95	368.41	-134.88	-15.67	-150.55
DBLD12	41	2.12	-119	2.53	3927.0	979880.01	-980261.46	369.25	-135.18	-12.20	-147.36
DBLD13	41	2.54	-119	1.71	3973.0	979885.73	-980262.08	373.58	-136.76	-2.77	-139.53
DBLD14	41	2.80	-119	1.67	3976.0	979884.99	-980262.47	373.86	-136.86	-3.62	-140.46
DBLD15	41	3.03	-119	1.50	3979.0	979892.45	-980262.82	374.14	-136.97	3.77	-135.20
DBLD16	41	3.15	-119	1.40	3991.0	979893.61	-980263.00	375.27	-137.38	5.88	-131.50
DBLD17	41	3.42	-119	1.50	3979.0	979893.26	-980263.40	374.14	-136.97	4.00	-132.97
DBLD18	41	3.79	-119	1.60	3972.0	979889.95	-980263.95	373.48	-136.73	-0.52	-137.25
DBLD19	41	4.38	-119	1.37	4012.0	979883.57	-980264.83	377.24	-138.10	-4.02	-142.12
DBLD20	41	4.62	-119	1.22	3986.0	979883.64	-980265.19	374.80	-137.21	-6.75	-145.96
DBLD21	41	4.89	-119	0.69	3996.0	979884.79	-980265.59	375.74	-137.55	-5.06	-142.61
DBLD22	41	5.28	-119	0.29	3981.0	979887.79	-980266.18	374.33	-137.04	-4.06	-141.10
DBLD23	41	2.85	-119	1.27	3986.0	979894.79	-980262.55	374.80	-137.21	7.04	-130.17
DBLD24	41	2.50	-119	1.19	3980.0	979894.69	-980262.03	374.23	-137.00	6.89	-130.11
DBLD25	41	1.58	-119	1.07	3958.0	979892.80	-980260.65	372.17	-136.25	4.32	-131.93
DBLD26	41	0.84	-119	1.02	3962.0	979893.34	-980259.55	372.54	-136.39	6.33	-130.06
DBLD27	41	0.50	-119	1.18	3939.0	979888.67	-980259.04	370.38	-135.60	0.01	-135.59
DBLD28	40	59.70	-119	0.79	3938.0	979891.82	-980257.84	370.29	-135.56	4.27	-131.29
DBLD29	40	59.71	-119	0.37	3964.0	979898.74	-980257.86	372.73	-136.45	13.61	-122.64
DBLD30	40	59.48	-118	59.19	4141.0	979886.76	-980257.52	369.37	-142.52	18.61	-123.91
DBLD31	40	59.40	-118	58.42	4164.0	979885.04	-980257.40	391.53	-143.31	19.17	-124.14
DBLD32	40	59.40	-119	0.75	3926.0	979890.29	-980257.40	369.35	-135.22	2.24	-132.98
DBLD33	41	3.21	-119	0.70	4078.0	979888.58	-980263.08	363.44	-140.36	8.94	-131.42
DBLD34	41	3.18	-119	1.02	4015.0	979893.58	-980263.04	377.52	-138.20	8.06	-130.14
DBLD35	41	0.40	-119	9.28	4106.0	979875.90	-980258.89	366.27	-141.39	3.26	-138.11
DBLD36	41	0.41	-119	8.89	4025.0	979880.76	-980258.90	378.46	-138.55	0.32	-138.23
DBLD37	41	0.34	-119	8.44	3968.0	979882.43	-980258.80	373.11	-136.59	-3.26	-139.65
DBLD38	41	0.42	-119	7.86	3930.0	979880.67	-980258.92	369.53	-135.29	-8.72	-144.01
DBLD39	41	0.50	-119	7.29	3914.0	979878.31	-980259.04	368.03	-134.74	-12.70	-147.44
DBLD40	41	0.58	-119	6.71	3908.0	979876.20	-980259.16	367.47	-134.53	-15.49	-150.02

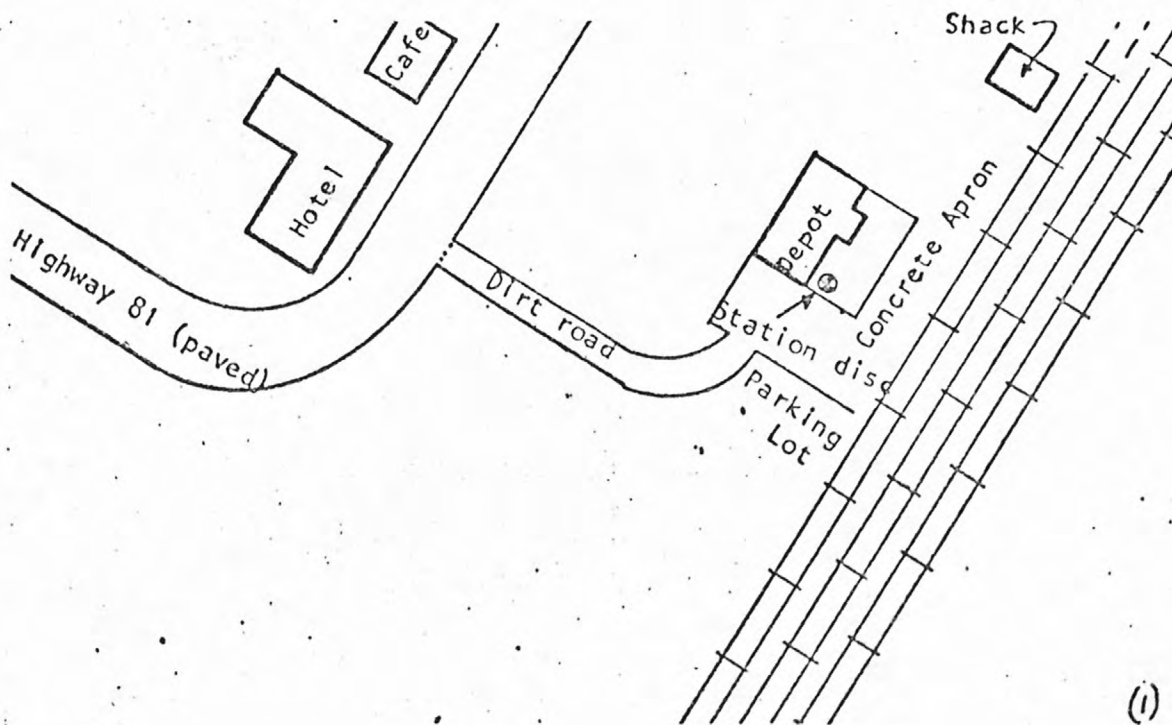
sta. no.	location		elev, f	observed gravity	standard gravity	corrections		anomalies	
	latitude	longitude				fr.-air	bouguer	fr.-air	bouguer
DBLD41	41 0.66	-119 6.14	3907.0	979874.48	-980259.28	367.37	-134.50	-17.43	-151.93
DBLD42	41 0.72	-119 5.58	3905.0	979872.71	-980259.37	367.18	-134.43	-19.48	-153.91
DBLD43	41 0.80	-119 5.00	3906.0	979871.53	-980259.49	367.28	-134.46	-20.68	-155.14
DBLD44	41 0.88	-119 4.40	3907.0	979870.60	-980259.61	367.37	-134.50	-21.64	-156.14
DBLD45	41 0.97	-119 3.82	3908.0	979871.48	-980259.74	367.47	-134.53	-20.79	-155.32
DBLD46	41 1.03	-119 3.25	3911.0	979873.25	-980259.83	367.75	-134.64	-18.83	-153.47
DBLD47	41 1.11	-119 2.68	3915.0	979875.95	-980259.95	368.12	-134.77	-15.88	-150.65
DBLD48	41 1.19	-119 2.09	3932.0	979879.61	-980260.07	369.72	-135.36	-10.74	-146.10
DBLD49	41 1.27	-119 1.50	3950.0	979885.36	-980260.19	371.41	-135.97	-3.42	-139.39

### GRAVITY BASE STATION

LATITUDE <div style="text-align: center;">40° 39.1' N (1)</div>	STATION DESIGNATION <div style="text-align: center;">GERLACH</div>	
LONGITUDE <div style="text-align: center;">119° 21.2' W (1)</div>		
ELEVATION <div style="text-align: center;">1199 METERS (1)</div>	COUNTRY/STATE <div style="text-align: center;">USA/Nevada</div>	
REFERENCE CODE NUMBERS ACIC 2350-1 IGB 15609J		ADOPTED GRAVITY VALUE <div style="text-align: center;">g = 979 829.16 mgals</div>
		ESTIMATED ACCURACY <div style="text-align: center;">± 0.1 mgals</div>
		DATE MONTH/YEAR <div style="text-align: center;">Jan/1969</div>

DESCRIPTION AND/OR SKETCH

Station is in Gerlach, on the east side of town, at the Western Pacific Railroad depot, which is 50 yds, southeast of Nevada Highway 81, and across the street from a cafe and a hotel. Station is outside the depot building, on the east side of it, (i.e. facing the tracks), and at the southeast corner of it, 0.5 ft. from the wall, on the concrete apron. Site is monumented with a standard "USAF Gravity Station" disc. (1)



REFERENCE SOURCE

(1) Personal Communication 1st GSS (23 Jan 69)



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NAVY BASE STATION

STATION NUMBER	10
SECTION	10
DATE	10/1/50
MONTHLY	10/1/50
YEAR	1950

This is a station of the Navy Base Station, located on the west side of town, at the western part of the town, which is a part of the town of Haverhill, Massachusetts. The station is located on the west side of town, at the western part of the town, which is a part of the town of Haverhill, Massachusetts. The station is located on the west side of town, at the western part of the town, which is a part of the town of Haverhill, Massachusetts.

