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UNITED STATES DEPARTMENT OF THE INTERIOR  
GEOLOGICAL SURVEY

Principal facts for gravity  
stations in the Darrough Known  
Geothermal Resource Area (KGRA),  
Nevada

Nye Co

By

Donald L. Peterson and Danny Dansereau

U.S. Geological Survey

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This report is preliminary and has not been  
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Geological Survey standards and nomenclature.

UNIVERSITY OF UTAH  
RESEARCH INSTITUTE  
EARTH SCIENCE LAB.

PRINCIPAL FACTS FOR GRAVITY STATION IN  
DARROUGH HOT SPRINGS KNOWN GEOTHERMAL  
RESOURCE AREA (KGRA), NEVADA

by

DONALD L. PETERSON AND DANNY DANSEREAU

HEADINGS OF THE ACCOMPANYING TABLES OF PRINCIPAL FACTS ARE EXPLAINED IN  
THE FOLLOWING LIST:

STATION IDENTIFICATION	GRAVITY STATIONS
LATITUDE	NORTH LATITUDE IN DEGREES, MINUTES, AND HUNDREDTHS OF MINUTES
LONGITUDE	WEST LONGITUDE IN DEGREES, MINUTES, AND HUNDREDTHS OF MINUTES
ELEV. ST.	ELEVATION IN FEET <sup>1</sup> STATE POSTAL SERVICE TWO LETTER ABBREVIATION
OBSERVED GRAVITY STD. GRV.	IN MILLIGALS THEORETICAL GRAVITY
TERRAIN CORRECTION	TERRAIN CORRECTION IN MILLIGALS FOR AN ASSUMED DENSITY OF 2.67 G PER CC
FREE-AIR BOUGUER CORRECTION	FREE AIR CORRECTION IN MILLIGALS ELEVATION AND CURVATURE CORRECTION IN MILLIGALS
BOUGUER ANOMALY	COMPLETE BOUGUER ANOMALY IN MILLIGALS FOR ASSUMED DENSITY OF 2.67 G PER CC

THE DARROUGH HOT SPRINGS DATA ARE REFERENCED TO THE STATION LOCATED AT  
THE NYE COUNTY AIRPORT, 8 MILES EAST OF TONOPAH (ACIC REFERENCE NO. 0455-1).

REFERENCE

HAMMER, SIGMUND, 1939, TERRAIN CORRECTION FOR GRAVIMETER STATIONS:  
GEOPHYSICS, v. 4, p. 184-194.

<sup>1</sup>To convert feet to metres, multiply by 0.3048.

## BOUGUER GRAVITY DATA

KGRA PROJECT DARROUGH, NEVADA, BY PETERSON & DANSEREAU  
 BASE=ACIC 0455-1 GBV=979476915 (1967) & USGS BM5602 GBV=979543948 (1975)  
 DENSITY: 2.67

STATION IDENTIFICATION	LATITUDE	LOCATION		ELEV.	ST.	OBSERVED		CORRECTIONS			BOUGUER ANOMALY	SPEC. FIELD
		LONGITUDE				GRAVITY	STD. GRV.	TERRAIN	FREE-AIR	BOUGUER		
GRAVITY. BASE5602				0.0	NE	979543.48						
GRAVITY. DA01	38 50.55	-117 11.61		5699.0	NE	979543.68	-980066.27	0.39	535.83	-195.85	-182.22	
GRAVITY. DA02	38 50.54	-117 11.80		5734.0	NE	979542.56	-980066.26	0.44	539.12	-197.05	-181.19	
GRAVITY. DA03	39 50.62	-117 12.03		5790.0	NE	979540.49	-980066.38	0.80	544.38	-198.96	-179.67	
GRAVITY. DA04	38 50.64	-117 12.26		5834.0	NE	979537.84	-980066.41	1.77	548.52	-200.47	-178.75	
GRAVITY. DA05	38 50.72	-117 12.61		5924.0	NE	979533.33	-980066.52	2.48	556.98	-203.54	-177.27	
GRAVITY. DA06	38 50.69	-117 12.86		6015.0	NE	979531.02	-980066.48	3.21	565.53	-206.65	-173.37	
GRAVITY. DA07	39 49.92	-117 11.32		5687.0	NE	979541.73	-980065.20	0.35	534.71	-195.44	-183.85	
GRAVITY. DA08	38 49.84	-117 11.21		5650.0	NE	979543.01	-980065.23	0.22	531.23	-194.18	-184.95	
GRAVITY. DA09	38 49.90	-117 11.00		5600.0	NE	979544.62	-980065.32	0.11	526.53	-192.47	-186.53	
GRAVITY. DA10	38 49.98	-117 10.92		5596.0	NE	979544.89	-980065.44	0.05	526.15	-192.33	-186.68	
GRAVITY. DA11	38 50.10	-117 10.84		5598.0	NE	979544.84	-980065.61	0.05	526.34	-192.40	-186.78	
GRAVITY. DA12	38 50.57	-117 10.51		5579.0	NE	979544.93	-980066.30	0.04	524.55	-191.75	-138.53	
GRAVITY. DA13	38 50.58	-117 10.02		5567.0	NE	979542.23	-980066.32	0.02	523.43	-191.34	-191.98	
GRAVITY. DA14	38 50.34	-117 10.02		5557.0	NE	979542.22	-980065.97	0.01	522.49	-191.00	-192.25	
GRAVITY. DA15	38 50.33	-117 9.73		5548.0	NE	979541.63	-980065.95	0.01	521.64	-190.69	-193.36	
GRAVITY. DA16	38 50.07	-117 9.31		5538.0	NE	979541.56	-980065.57	0.00	520.70	-190.35	-193.66	
GRAVITY. DA17	38 49.99	-117 9.09		5534.0	NE	979541.12	-980065.45	0.00	520.32	-190.21	-194.22	
GRAVITY. DA18	38 49.93	-117 8.75		5535.0	NE	979540.73	-980065.36	0.00	520.42	-190.25	-194.46	
GRAVITY. DA19	38 49.85	-117 8.37		5533.0	NE	979540.23	-980065.24	0.00	520.23	-190.18	-194.96	
GRAVITY. DA20	38 49.71	-117 7.62		5537.0	NE	979539.05	-980065.04		520.61	-190.32	-195.70	
GRAVITY. DA21	38 49.57	-117 6.81		5545.0	NE	979538.21	-980064.83		521.36	-190.59	-195.85	
GRAVITY. DA22	38 49.39	-117 6.18		5561.0	NE	979539.09	-980064.57		522.86	-191.14	-193.76	
GRAVITY. BASE5602				0.0	NE	979543.48						
GRAVITY. BASE0455				0.0	NE	979476.15						
GRAVITY. BASE5602				0.0	NE	979543.48						
GRAVITY. DA23	39 48.65	-117 11.25		5699.0	NE	979539.27	-980063.48	0.37	535.83	-195.85	-183.86	
GRAVITY. DA24	38 48.69	-117 11.50		5763.0	NE	979535.30	-980063.54	0.40	541.85	-198.04	-134.03	
GRAVITY. DA25	38 48.91	-117 11.29		5727.0	NE	979537.64	-980063.86	0.41	538.46	-196.81	-134.15	
GRAVITY. DA26	38 48.76	-117 11.77		5913.0	NE	979529.80	-980063.64	0.92	555.94	-203.17	-130.15	
GRAVITY. DA27	39 48.80	-117 11.99		5964.0	NE	979524.40	-980063.70	1.84	560.74	-204.91	-131.63	
GRAVITY. DA28	39 48.83	-117 12.29		6171.0	NE	979516.31	-980063.82	2.77	580.19	-211.98	-176.53	
GRAVITY. DA29	38 48.93	-117 12.55		6326.0	NE	979505.91	-980063.89	3.68	594.76	-217.27	-176.61	
GRAVITY. DA30	38 50.91	-117 11.64		5724.0	NE	979543.30	-980065.80	0.38	538.18	-196.71	-181.65	
GRAVITY. DA31	38 51.62	-117 12.03		5701.0	NE	979545.59	-980067.05	0.32	536.02	-195.92	-181.84	
GRAVITY. DA32	38 51.51	-117 11.44		5671.0	NE	979544.36	-980067.69	0.20	533.20	-194.90	-184.83	
GRAVITY. DA33	38 51.37	-117 10.22		5594.0	NE	979542.45	-980067.48	0.20	525.96	-192.26	-191.13	
GRAVITY. DA34	38 51.68	-117 9.88		5585.0	NE	979541.81	-980067.94	0.19	525.12	-191.96	-192.78	
GRAVITY. BASE5602				0.0	NE	979543.48						
GRAVITY. DA35	39 48.56	-117 11.11		5644.0	NE	979541.07	-980063.34	0.34	530.66	-193.97	-185.24	

## BOUGUER GRAVITY DATA

KGRA PROJECT DARROUGH, NEVADA, BY PETERSON &amp; DANSEREAU

STATION IDENTIFICATION	LATITUDE	LOCATION		ELEV.	ST.	OBSERVED		CORRECTIONS				BOUGUER ANOMALY	SPEC. FIELD
		LONGITUDE				GRAVITY	STD. GRV.	TERRAIN	FREE-AIR	BOUGUER	SPECIAL		
GRAVTY. DA36	38 48.02	-117 11.20		5661.0	NE	979540.34	-980062.55	0.38	532.26	-194.55		-134.12	
GRAVTY. DA37	38 47.07	-117 10.81		5660.0	NE	979539.55	-980061.15	0.36	532.17	-194.52		-183.59	
GRAVTY. DA38	38 46.61	-117 10.91		5721.0	NE	979538.18	-980050.47	0.45	537.90	-196.61		-130.55	
GRAVTY. DA39	38 46.05	-117 11.47		5871.0	NE	979532.89	-980059.65	1.07	552.00	-201.73		-175.42	
GRAVTY. DA40	38 46.11	-117 10.81		5723.0	NE	979538.39	-980059.74	0.15	538.09	-196.67		-179.78	
GRAVTY. DA41	38 46.21	-117 9.90		5611.0	NE	979537.65	-980059.89	0.31	527.56	-192.85		-187.22	
GRAVTY. DA42	38 45.70	-117 8.76		5627.0	NE	979532.47	-980059.14	0.00	529.07	-193.39		-190.99	
GRAVTY. DA43	38 46.03	-117 8.42		5634.0	NE	979532.75	-980059.62		529.72	-193.63		-190.78	
GRAVTY. DA44	38 46.87	-117 8.39		5610.0	NE	979534.66	-980060.86		527.47	-192.81		-191.54	
GRAVTY. DA45	38 47.48	-117 8.68		5577.0	NE	979536.24	-980061.76		524.37	-191.68		-192.83	
GRAVTY. DA46	38 47.37	-117 9.28		5578.0	NS	979536.44	-980061.59		524.46	-191.72		-192.41	
GRAVTY. DA47	38 47.48	-117 9.77		5575.0	NE	979538.06	-980051.76		524.18	-191.61		-191.13	
GRAVTY. DA48	38 47.72	-117 9.76		5568.0	NE	979538.26	-980062.11		523.52	-191.38		-191.71	
GRAVTY. DA49	38 48.37	-117 9.77		5555.0	NE	979539.39	-980063.06		522.30	-190.93		-192.30	
GRAVTY. DA50	38 48.77	-117 9.33		5549.0	NE	979538.91	-980063.65		521.74	-190.73		-193.73	
GRAVTY. DA51	38 49.10	-117 9.63		5544.0	NE	979540.33	-980064.14		521.26	-190.55		-193.10	
GRAVTY. DA52	38 49.25	-117 9.75		5541.0	NE	979540.82	-980064.36		520.98	-190.45		-193.01	
GRAVTY. DA53	38 49.24	-117 10.03		5543.0	NE	979541.32	-980064.35		521.17	-190.52		-192.38	
GRAVTY. DA54	38 49.10	-117 10.34		5544.0	NE	979542.07	-980064.14	0.18	521.26	-190.55		-191.18	
GRAVTY. DA55	38 49.30	-117 10.58		5550.0	NE	979543.15	-980064.43	0.19	521.83	-190.76		-190.02	
GRAVTY. BASE5602				0.0	NE	979543.48							
GRAVTY. BASE0455				0.0	NE	979476.15							
GRAVTY. BASE0455				0.0	NE	979476.15							
GRAVTY. BASE5602				0.0	NE	979543.48							
GRAVTY. DA56	38 49.25	-117 5.42		5604.0	NE	979540.22	-980064.36		526.90	-192.61		-189.85	
GRAVTY. DA57	38 49.26	-117 5.06		5627.0	NE	979540.22	-980064.37		529.07	-193.39		-188.47	
GRAVTY. DA58	38 49.12	-117 4.53		5705.0	NE	979538.90	-980064.17	0.12	536.40	-196.06		-184.81	
GRAVTY. DA59	38 48.61	-117 2.99		6234.0	NE	979508.06	-980063.42	0.37	586.11	-214.13		-183.01	
GRAVTY. DA60	38 48.52	-117 1.64		6711.0	NE	979479.66	-980063.29	1.83	630.94	-230.41		-181.27	
GRAVTY. DA61	38 48.94	-117 0.98		6628.0	NE	979469.10	-980063.90	2.09	641.93	-234.40		-135.18	
GRAVTY. DA62	38 47.78	-117 2.93		6275.0	NE	979505.91	-980062.20	0.34	589.97	-215.53		-181.51	
GRAVTY. DA63	38 46.96	-117 1.37		6933.0	NE	979465.37	-980060.99	3.95	651.90	-237.98		-177.95	
GRAVTY. DA64	38 45.61	-117 0.85		7313.0	NE	979444.97	-980060.47	3.07	687.51	-250.93		-175.85	
GRAVTY. DA65	38 47.00	-117 2.15		6666.0	NE	979482.50	-980061.05	0.41	626.71	-228.87		-180.30	
GRAVTY. DA66	38 47.01	-117 3.32		6259.0	NE	979504.16	-980061.06	0.33	588.46	-214.98		-183.09	
GRAVTY. DA67	38 46.93	-117 4.22		5975.0	NE	979519.31	-980060.95	0.25	561.77	-205.28		-184.90	
GRAVTY. DA68	38 46.89	-117 5.34		5810.0	NE	979529.02	-980060.89	0.10	546.27	-199.65		-185.15	
GRAVTY. DA69	38 46.81	-117 6.35		5703.0	NE	979534.20	-980060.77	0.01	536.21	-195.99		-186.34	
GRAVTY. DA70	38 47.55	-117 6.27		5656.0	NE	979533.76	-980061.86	0.00	531.79	-194.38		-190.69	
GRAVTY. DA71	38 48.35	-117 6.20		5608.0	NE	979536.65	-980063.04		527.28	-192.74		-191.85	
GRAVTY. BASE5602				0.0	NE	979543.48							