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PRINCIPAL FACTS FOR GRAVITY STATIONS IN

STEAMBOAT HILLS AND WABUSKA,
Washoe Co. → Lyon Co.

NEVADA

by Donald L. Peterson

1975

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

**UNIVERSITY OF UTAH
RESEARCH INSTITUTE
EARTH SCIENCE LAB.**

PRINCIPAL FACTS FOR GRAVITY STATIONS IN
STEAMBOAT HILLS AND WABUSKA
NEVADA

By DONALD L. PETERSON

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

STATION IDENTIFICATION	SB ARE STEAMBOAT SPRINGS STATIONS; WB ARE WABUSKA STATIONS
LATITUDE	NORTH LATITUDE IN DEGREES, MINUTES, AND HUNDREDTHS OF MINUTES
LONGITUDE	WEST LONGITUDE IN DEGREES, MINUTES, AND HUNDREDTHS OF MINUTES
ELEV	ELEVATION IN FEET ¹
OBSERVED GRAVITY	OBSERVED GRAVITY IN MILLIGALS
STD. GRAVITY	THEORETICAL GRAVITY IN MILLIGALS. THE GEODETIC REFERENCE SYSTEM OF 1967 WAS USED.
TERRAIN CORRECTION	TERRAIN CORRECTION IN MILLIGALS FOR AN ASSUMED DENSITY OF 2.67 G PER CC
FREE-AIR	FREE AIR CORRECTION IN MILLIGALS
BOUGUER CORRECTION	ELEVATION AND CURVATURE CORRECTION IN MILLIGALS
BOUGUER ANOMALY	BOUGUER ANOMALY IN MILLIGALS FOR ASSUMED DENSITY OF 2.67 G PER CC

THE STEAMBOAT HILLS DATA ARE REFERENCED TO THE RENO BASE STATION ON THE UNIVERSITY OF NEVADA CAMPUS, AND THE WABUSKA DATA ARE REFERENCED TO THE YERINGTON BASE STATION AT THE YERINGTON MUNICIPAL AIRPORT.

¹To convert feet to metres, multiply by 0.3048

REFERENCE

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

BOUGUER GRAVITY DATA

STEAMBOAT AND WABSKA GRAVITY
ORIGINAL DATA
DENSITY: 2.67

STATION IDENTIFICATION	LATITUDE	LOCATION		ELFV.	OBSERVED GRAVITY		CORRECTIONS			BOUGUER ANOMALY
		LONGITUDE			STD. GRV.	TERRAIN	FREE-AIR	BOUGUER		
SB01	39 23.42	-119 43.74		4661.0	979662.62	-980114.77		438.26	-160.34	-174.23
SB03	39 23.48	-119 46.35		4915.0	979644.80	-980114.86		462.14	-169.04	-176.96
SB01	39 23.42	-119 43.74		4661.0	979662.62	-980114.77		438.26	-160.34	-174.23
SB04	39 23.58	-119 45.91		4814.0	979651.78	-980115.01		452.65	-165.58	-176.16
SB01	39 23.42	-119 43.74		4661.0	979662.62	-980114.77		438.26	-160.34	-174.23
SB05	39 23.78	-119 45.52		4761.0	979655.49	-980115.30		447.66	-163.76	-175.91
SB06	39 23.86	-119 45.35		4705.0	979658.61	-980115.42		442.40	-161.85	-176.25
SB07	39 23.99	-119 45.07		4616.0	979661.27	-980115.61		436.85	-159.83	-177.32
SB08	39 24.11	-119 44.83		4599.0	979663.05	-980115.79		432.44	-158.22	-178.52
SB09	39 24.29	-119 44.76		4571.0	979664.27	-980116.06		429.80	-157.26	-179.25
SB10	39 24.13	-119 44.49		4545.0	979666.05	-980115.82		427.36	-156.37	-178.78
SB01	39 23.42	-119 43.74		4661.0	979662.62	-980114.77		438.26	-160.34	-174.23
SB01	39 23.42	-119 43.74		4661.0	979662.62	-980114.77		438.26	-160.34	-174.23
SB11	39 23.78	-119 43.90		4594.0	979663.70	-980115.30		431.97	-159.05	-177.68
SB12	39 23.65	-119 43.55		4627.0	979663.58	-980115.11		435.07	-159.18	-175.64
SB13	39 23.53	-119 43.22		4684.0	979662.94	-980114.94		440.43	-161.13	-172.70
SB01	39 23.42	-119 43.74		4661.0	979662.62	-980114.77		438.26	-160.34	-174.23
SB14	39 22.97	-119 42.10		5602.0	979607.09	-980114.11	3.59	526.71	-192.54	-169.26
SB15	39 23.49	-119 42.32		5472.0	979615.85	-980114.88	4.35	514.49	-188.09	-168.28
SB16	39 23.64	-119 42.96		4714.0	979661.91	-980115.10	1.06	443.25	-162.16	-171.04
SB17	39 24.07	-119 42.87		4754.0	979660.30	-980115.73	0.88	447.01	-163.52	-171.06
SB18	39 23.89	-119 43.28		4764.0	979655.08	-980115.47		447.95	-163.87	-176.31
SB19	39 24.07	-119 43.35		4634.0	979663.23	-980115.73		435.73	-159.42	-176.19
SB01	39 23.42	-119 43.74		4661.0	979662.62	-980114.77		438.26	-160.34	-174.23
SB01	39 23.42	-119 43.74		4661.0	979662.62	-980114.77		438.26	-160.34	-174.23
SB01	39 23.42	-119 43.74		4661.0	979662.62	-980114.77		438.26	-160.34	-174.23
SB02	39 23.49	-119 46.73		5019.0	979639.65	-980114.88		471.91	-172.60	-175.92
SB20	39 22.60	-119 45.68		5300.0	979614.29	-980113.56		506.78	-185.29	-177.78
SB21	39 22.68	-119 45.41		5114.0	979633.11	-980113.68	1.05	480.84	-175.85	-174.53
SB22	39 22.62	-119 45.21		4995.0	979641.36	-980113.59	0.94	469.66	-171.78	-173.41
SB23	39 22.65	-119 44.80		4804.0	979653.21	-980113.63	0.86	451.71	-165.24	-173.09
SB24	39 22.71	-119 44.41		4601.0	979663.96	-980113.72		432.62	-158.28	-175.42
SB25	39 22.58	-119 44.48		4606.0	979663.66	-980113.53	0.29	433.09	-158.46	-174.95
SB26	39 22.50	-119 44.27		4619.0	979665.17	-980113.41		434.32	-158.90	-172.62
SB27	39 22.42	-119 43.92		4659.0	979663.70	-980113.29		438.08	-160.27	-171.78
SB28	39 22.31	-119 43.87		4667.0	979663.46	-980113.13		438.83	-160.55	-171.39
SB29	39 22.16	-119 43.92		4666.0	979662.87	-980112.91		438.74	-160.51	-171.81
SB30	39 23.96	-119 44.21		4570.0	979663.99	-980115.57		429.71	-157.22	-179.09
SB31	39 22.96	-119 43.29		4736.0	979658.89	-980114.09		445.31	-162.91	-172.80
SB32	39 22.57	-119 42.91		4829.0	979653.54	-980113.52	0.77	454.06	-166.09	-171.24

BOUGUER GRAVITY DATA

STEAMBOAT AND WABSKA GRAVITY

STATION IDENTIFICATION	LATITUDE	LOCATION		ELEV.	OBSERVED GRAVITY	STD. GRV.	CORRECTIONS			BOUGUER ANOMALY
		LONGITUDE					TERRAIN	FRES-AIR	BOUGUER	
SB33	39 22.26	-119 42.33	4935.0	979646.97	-980113.06		1.45	464.02	-169.72	-170.34
SB34	39 22.78	-119 43.81	5002.0	979641.38	-980113.83		2.10	470.32	-172.01	-172.04
SB35	39 23.19	-119 44.12	4628.0	979663.28	-980114.43			435.16	-159.21	-175.20
SB36	39 24.93	-119 42.82	4530.0	979669.89	-980117.00		2.95	425.95	-155.85	-174.05
SB37	39 24.62	-119 42.52	4893.0	979650.71	-980116.55		0.20	460.07	-168.28	-173.85
SB38	39 24.65	-119 44.67	4528.0	979666.52	-980116.59			425.76	-155.78	-180.09
SB39	39 23.51	-119 44.45	4575.0	979665.64	-980114.90			430.18	-157.39	-176.47
SB40	39 23.41	-119 45.43	4882.0	979647.98	-980114.76		0.56	459.04	-167.91	-175.09
SB41	39 23.20	-119 44.96	4767.0	979656.30	-980114.45		0.62	448.23	-163.97	-173.27
SB42	39 23.10	-119 45.49	4826.0	979650.46	-980114.30		0.80	453.77	-165.99	-175.26
SB43	39 23.08	-119 46.54	4990.0	979640.70	-980114.27		0.93	469.19	-171.60	-175.05
SB44	39 22.77	-119 46.53	5290.0	979622.11	-980113.81		1.34	497.39	-181.87	-174.85
SB45	39 23.21	-119 48.28	5444.0	979613.27	-980114.46			511.86	-187.14	-176.47
SB46	39 22.82	-119 47.58	5563.0	979604.68	-980113.89		0.93	523.04	-191.20	-176.44
SB47	39 22.51	-119 47.26	5662.0	979596.49	-980113.43		1.32	532.35	-194.59	-177.86
SB48	39 23.66	-119 48.28	5418.0	979614.02	-980115.13			509.42	-186.25	-177.94
SB49	39 24.49	-119 47.95	5165.0	979629.55	-980116.35			485.64	-177.59	-178.75
SB50	39 24.89	-119 47.59	4985.0	979642.29	-980116.95			468.72	-171.43	-177.37
WB01	39 8.35	-119 9.72	4300.0	979675.44	-980092.51			404.33	-147.97	-160.71
WB01	39 8.35	-119 9.72	4300.0	979675.44	-980092.51			404.33	-147.97	-160.71
WB02	39 7.71	-119 10.79	4304.0	979671.12	-980091.57			404.71	-148.11	-163.85
WB03	39 7.68	-119 9.72	4305.0	979674.08	-980091.52			404.80	-148.14	-160.78
WB04	39 7.70	-119 8.33	4308.0	979675.23	-980091.55			405.09	-148.25	-159.48
WB05	39 5.96	-119 11.90	4320.0	979667.43	-980088.99			406.21	-148.66	-164.01
WB06	39 5.96	-119 13.04	4317.0	979667.40	-980088.99			405.93	-148.55	-164.21
WB07	39 5.94	-119 10.79	4323.0	979670.71	-980088.96			406.50	-148.76	-160.51
WB08	39 5.93	-119 9.38	4330.0	979674.71	-980088.94			407.15	-149.00	-156.06
WB09	39 4.99	-119 10.79	4333.0	979672.33	-980087.56			407.44	-149.10	-156.89
WB10	39 4.20	-119 11.91	4336.0	979672.05	-980086.39			407.72	-149.21	-155.83
WB11	39 4.19	-119 13.44	4348.0	979668.69	-980086.38			408.85	-149.62	-158.46
WB12	39 3.76	-119 10.84	4348.0	979670.36	-980085.74			408.85	-149.62	-156.15
WB13	39 2.99	-119 10.85	4347.0	979667.20	-980084.59			408.75	-149.58	-156.22
WB14	39 2.45	-119 10.83	4349.0	979664.48	-980083.81			408.94	-149.65	-160.04
WB15	39 1.57	-119 10.82	4368.0	979663.58	-980082.51			410.73	-150.30	-158.50
WB16	39 1.59	-119 12.02	4352.0	979661.60	-980082.54			409.22	-149.75	-161.47
WB01	39 8.35	-119 9.72	4300.0	979675.44	-980092.51			404.33	-147.97	-160.71
WB17	39 3.19	-119 12.85	4533.0	979655.52	-980084.90		0.60	426.24	-155.96	-158.50
WB01	39 8.35	-119 9.72	4300.0	979675.44	-980092.51			404.33	-147.97	-160.71
WB18	39 2.89	-119 10.29	4349.0	979666.04	-980084.46			408.94	-149.65	-159.13
WB19	39 2.89	-119 9.17	4348.0	979659.56	-980084.46			408.85	-149.62	-165.67
WB20	39 2.89	-119 6.94	4333.0	979660.10	-980084.46			407.44	-149.10	-166.02

ROUGHER GRAVITY DATA

STEAMBOAT AND WARSKA GRAVITY

STATION IDENTIFICATION	LOCATION		ELEV.	OBSERVED GRAVITY		CORRECTIONS			BOUGUER ANOMALY
	LATITUDE	LONGITUDE		GRAVITY	STD. GRV.	TERRAIN	FREE-AIR	BOUGUER	
WB21	39 7.70	-119 11.91	4301.0	979668.93	-980091.55		404.43	-148.01	-166.20
WB01	39 8.35	-119 9.72	4300.0	979675.44	-980092.51		404.33	-147.97	-160.71
WB22	39 8.87	-119 11.73	4293.0	979676.36	-980093.28		403.68	-147.73	-160.97
WB01	39 8.35	-119 9.72	4300.0	979675.44	-980092.51		404.33	-147.97	-160.71
WB23	39 9.73	-119 13.76	4293.0	979689.47	-980094.55	0.06	403.68	-147.73	-149.07
WB01	39 8.35	-119 9.72	4300.0	979675.44	-980092.51		404.33	-147.97	-160.71
WB24	39 9.39	-119 14.79	4403.0	979681.28	-980094.05		414.01	-151.50	-150.26
WB25	39 10.46	-119 14.27	4286.0	979691.48	-980095.63	0.06	403.02	-147.49	-148.56
WB01	39 8.35	-119 9.72	4300.0	979675.44	-980092.51		404.33	-147.97	-160.71
WB26	39 10.21	-119 10.10	4309.0	979686.03	-980095.26		405.18	-148.28	-152.33
WB27	39 11.24	-119 9.59	4884.0	979655.54	-980096.78	2.79	459.23	-167.98	-147.20
WB28	39 9.33	-119 5.96	4460.0	979683.27	-980093.96	0.61	419.37	-153.46	-144.17
WB29	39 2.49	-119 3.02	4396.0	979660.07	-980083.87		413.36	-151.26	-161.70
WB30	39 3.35	-119 3.03	4339.0	979663.11	-980085.14		408.00	-149.31	-163.34
WB31	39 11.23	-119 12.33	4886.0	979656.37	-980096.76	5.15	459.41	-168.04	-143.87
WB32	39 11.13	-119 12.54	4640.0	979671.29	-980096.62	0.32	436.29	-159.62	-148.34
WB33	39 10.86	-119 12.48	4670.0	979669.94	-980096.22	4.20	439.11	-160.65	-143.62
WB34	39 10.52	-119 12.30	4582.0	979675.78	-980095.72	2.99	430.84	-157.63	-143.74
WB35	39 10.20	-119 12.08	4469.0	979681.53	-980095.24	0.64	420.22	-153.76	-146.61
WB36	39 9.94	-119 11.80	4391.0	979684.24	-980094.86	0.18	412.89	-151.09	-148.64
WB37	39 9.65	-119 11.46	4313.0	979684.59	-980094.43		405.55	-148.42	-152.71
WB38	39 9.32	-119 11.21	4302.0	979680.77	-980093.94		404.52	-148.04	-156.69
WB39	39 9.02	-119 10.96	4295.0	979679.75	-980093.50		403.86	-147.80	-157.69
WB40	39 8.61	-119 10.83	4299.0	979676.47	-980092.90		404.24	-147.94	-160.13
WB41	39 8.30	-119 10.80	4299.0	979674.25	-980092.44		404.24	-147.94	-161.89
WB42	39 8.00	-119 10.82	4307.0	979672.82	-980092.00		404.99	-148.21	-162.40
WB43	39 7.40	-119 10.83	4312.0	979670.99	-980091.11		405.46	-148.38	-163.04
WB44	39 7.14	-119 10.83	4313.0	979670.25	-980090.73		405.55	-148.42	-163.35
WB45	39 6.82	-119 10.79	4314.0	979669.89	-980090.26		405.65	-148.45	-163.17

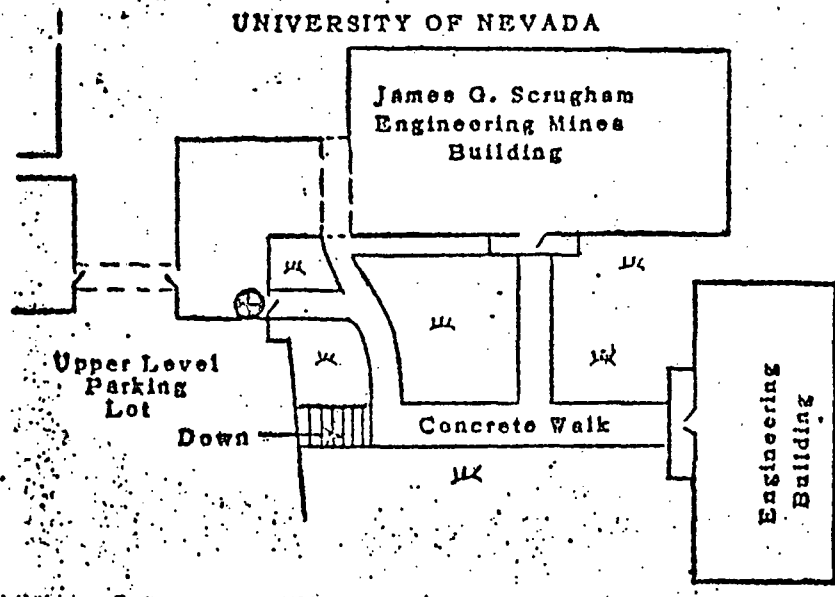
GRAVITY BASE STATION

LATITUDE	39° 32.30' N (1)	STATION DESIGNATION	
LONGITUDE	119° 48.70' W (1)	RENO	
ELEVATION	4574.49 feet (1)	COUNTRY/STATE	
REFERENCE CODE NUMBERS		ADOPTED GRAVITY VALUE	
ACIC 0454-1		g = 979 688.40	mgals
IGC 12099B			
		ESTIMATED ACCURACY	DATE
		± 0.1 mgals	MONTH/YEAR
			July/1967

DESCRIPTION AND/OR SKETCH

The station is in North Reno on the University of Nevada campus, at the James G. Scrugham Engineering Mines Building, in the west wing, at the southeast corner entrance (this entrance is about 66 feet northwest of the stairs leading down from the upper level parking lot), inside and 3.3 feet south of the door, at the corner in the wall under the stairway, on the concrete floor.

Station is monumented with a National Gravity Base Disk. (1)



(1)

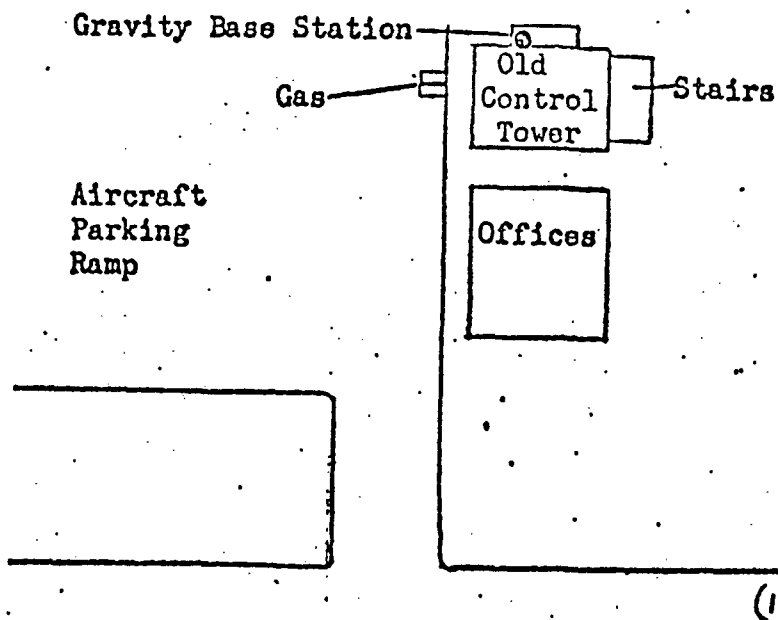
REFERENCE SOURCE
(1) 02733

GRAVITY BASE STATION

LATITUDE 38° 59.91' N (1)	STATION DESIGNATION YERINGTON	
LONGITUDE 119° 09.55' W (1)		
ELEVATION 4377 feet (1)	COUNTRY/STATE USA/Nevada	
REFERENCE CODE NUMBERS		ADOPTED GRAVITY VALUE
ACIC 2347-1	$g = 979\ 659.29$ mgals	
IGB 12089K		
ESTIMATED ACCURACY		DATE
± 0.1 mgals		MONTH/YEAR Jan/1969

DESCRIPTION AND/OR SKETCH

The station is at the Yerington Municipal Airport at the north edge of town, on a concrete slab north of the old control tower, in the southwest corner of the slab. Site is monumented with a "USAF Gravity Station" disc. (1)



REFERENCE SOURCE

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