

PHOTOGRAMMETRIC CONTROL SURVEY
FOR
DAVID C. SMITH & ASSOCIATES, INC.
OF
UNITY RESERVOIR

SITUATED IN SECTION 17,18,19,20,21,28,29,30,31,32
TOWNSHIP 12 SOUTH AND RANGE 37 EAST OF THE
WILLAMETTE MERIDIAN

BAKER COUNTY, OREGON

OCTOBER, 1991



DAVID EVANS AND ASSOCIATES, INC.
2828 S.W. CORBETT AVENUE
PORTLAND, OREGON 97201
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NARRATIVE

The purpose of this survey is for mapping control for the Bureau of Reclamation. The bearings and horizontal control are based on two G.F.S. points established by the U.S.C. & G.S. published as UNITY DAM (#50), and UNITY DAM AZ MK (#37). The horizontal datum is based on the State Plane Coordinate System NAD83 (1991) Oregon North Zone. The vertical datum is based on the Bureau of Reclamation Bench Mark (*UNI4) with an elevation of 3828.05. The N.G.V.D. 1929, 1947 adjustment elevation for this point is 3828.17.

The control was established by using conventional terrestrial traverse procedures. All observations were done on October 3, 4, 7, 8, and 9, 1991, utilizing a Wild T-2002 theomat equipped with a Wild DI-2000 E.D.M. Adjustment of the coordinate differences was done in STARNET, a least squares program which is tailored to terrestrial baseline data.

The standard deviation in northings ranged from 0.01 feet to 0.10 feet and in eastings from 0.01 to 0.10 feet, and in elevations from 0.01 to 0.14 feet. The 95 percent confidence region for the semi-major axis ranged from 0.02 feet to 0.29 feet and for the semi-minor axis from 0.01 feet to 0.11 feet.



Kenneth M. Wightman

11/4/91

TRAVERSE COORDINATES			
POINT	EASTING	NORTHING	ELEVATION
1	8804991.60	310201.91	3882.31
2	8804741.64	309090.41	3886.50
3	8803469.38	308014.25	3916.69
4	8802793.73	307968.68	3917.05
5	8801047.16	307951.59	3830.75
6	8799471.16	307947.17	3888.83
7	8798520.27	307862.44	3914.95
8	8797870.91	309210.29	3915.61
9	8797180.79	310604.31	3907.09
10	8798228.49	311794.20	3895.12
11	8797351.49	312203.49	3893.25
12	8797365.57	313522.35	3852.69
13	8796599.19	314312.72	3848.63
14	8797750.06	315026.52	3820.98
15	8798080.54	315749.25	3906.29
16	8798979.73	316535.26	3900.92
17	8798520.04	317238.70	3897.18
18	8797650.13	318204.52	3832.32
19	8796437.62	319159.80	3837.87
20	8797759.20	319032.57	3906.90
21	8798342.43	319308.97	3882.15
22	8798669.17	320287.23	3849.68
23	8799232.29	321770.30	3912.14
24	8800420.73	322655.47	3957.25
25	8800763.31	323147.12	3817.19
26	8800599.71	321982.05	3934.45
27	8800405.79	320908.86	3811.27
28	8800654.43	319657.92	3814.17
29	8801104.83	318667.52	3818.93
30	8801505.83	317720.35	3830.13
31	8802076.43	316997.77	3866.59
32	8802793.62	316194.29	3836.33
33	8804268.79	316000.31	3927.08
34	8804905.84	315302.06	3916.22
35	8805821.36	314786.44	3875.28
36	8806362.51	314553.26	3832.82
37	8807058.96	314367.91	3833.91
38	8807162.77	313617.04	3831.42
39	8808130.58	314677.23	4093.17
40	8808240.25	313640.25	3820.20
41	8808294.23	313038.49	3933.84
42	8808594.23	312483.41	4083.51
43	8808122.25	312149.49	4135.34
44	8806976.32	312669.37	3831.24
50	8805713.15	311503.63	3872.62
UNI2	8801451.26	317842.99	3820.29
UNI4	8807209.09	313738.41	3828.05

GRID INVERSES			
FROM	N. AZIMUTH	DISTANCE	TO
37	205°10'00.8"	3164.70	50
50	208°59'58.9"	1488.32	1
1	192°40'26.8"	1139.26	2
2	229°46'23.2"	1666.37	3
3	266°08'30.2"	677.19	4
4	269°26'22.6"	1746.66	5
5	269°50'18.8"	1570.00	6
6	264°56'24.3"	960.64	7
7	334°16'34.6"	1496.11	8
8	356°18'05.0"	1396.94	9
9	20°37'08.0"	1271.32	10
10	295°01'04.7"	967.80	11
11	0°36'42.5"	1318.94	12
12	315°52'58.0"	1100.93	13
13	58°11'30.8"	1354.26	14
14	24°34'21.9"	794.70	15
15	48°50'33.1"	1194.30	16
16	326°50'09.4"	840.32	17
17	317°59'26.4"	1299.83	18
18	308°13'58.4"	1543.62	19
19	95°29'55.4"	1327.69	20
20	64°38'38.1"	645.41	21
21	18°28'08.1"	1031.39	22
22	20°47'30.2"	1586.38	23
23	53°19'14.2"	1481.86	24
24	34°52'08.5"	599.24	25
25	187°59'35.6"	1176.51	26
26	190°14'33.8"	1090.56	27
27	168°45'29.8"	1275.41	28
28	155°32'43.4"	1088.00	29
29	157°03'13.5"	1028.56	30
30	141°42'10.9"	920.71	31
31	138°14'53.0"	1077.00	32
32	97°29'28.4"	1487.87	33
33	137°37'26.7"	945.19	34
34	119°23'18.2"	1050.74	35
35	113°18'39.3"	589.26	36
36	104°54'09.4"	720.68	37
37	172°07'43.3"	758.02	38
38	42°23'30.8"	1435.50	39
39	173°57'47.0"	1042.76	40
40	174°52'24.6"	604.17	41
41	151°36'39.5"	630.96	42
42	234°43'14.2"	578.15	43
43	294°24'09.5"	1258.35	44
44	227°17'48.9"	1718.89	50
16	64°52'00.7"	2790.28	30
38	20°53'24.1"	129.92	UNI4
30	336°00'44.9"	134.23	UNI2

DAVID EVANS & ASSOCIATES, INC.

DATE OCTOBER, 1991

DELIVERY ORDER No. 1-PD-10-10750-002

FILED NOV. 12, 1991

BAKER COUNTY SURVEYOR
SURVEY NO. 12-37-65