

P R E F A C E

THIS REPORT CONTAINS A RECORD OF CURRENT SURVEY OBSERVATIONS BEING MADE BY SURVEY DIVISION. THE HORIZONTAL AND VERTICAL MOVEMENTS OF EACH STATION ARE COMPUTED WHERE AVAILABLE DATA PERMITS. THE ANGLE OF DIP WITH REFERENCE TO THE HORIZONTAL PLANE IS ALSO COMPUTED WHEN BOTH HORIZONTAL AND VERTICAL OBSERVATIONS ARE AVAILABLE FOR CONCURRENT DATES. THE TOTAL VECTORS ARE COMPUTED USING THE FIRST AVAILABLE DATA AND MOST RECENT DATA IN THE CORRESPONDING PLANES.

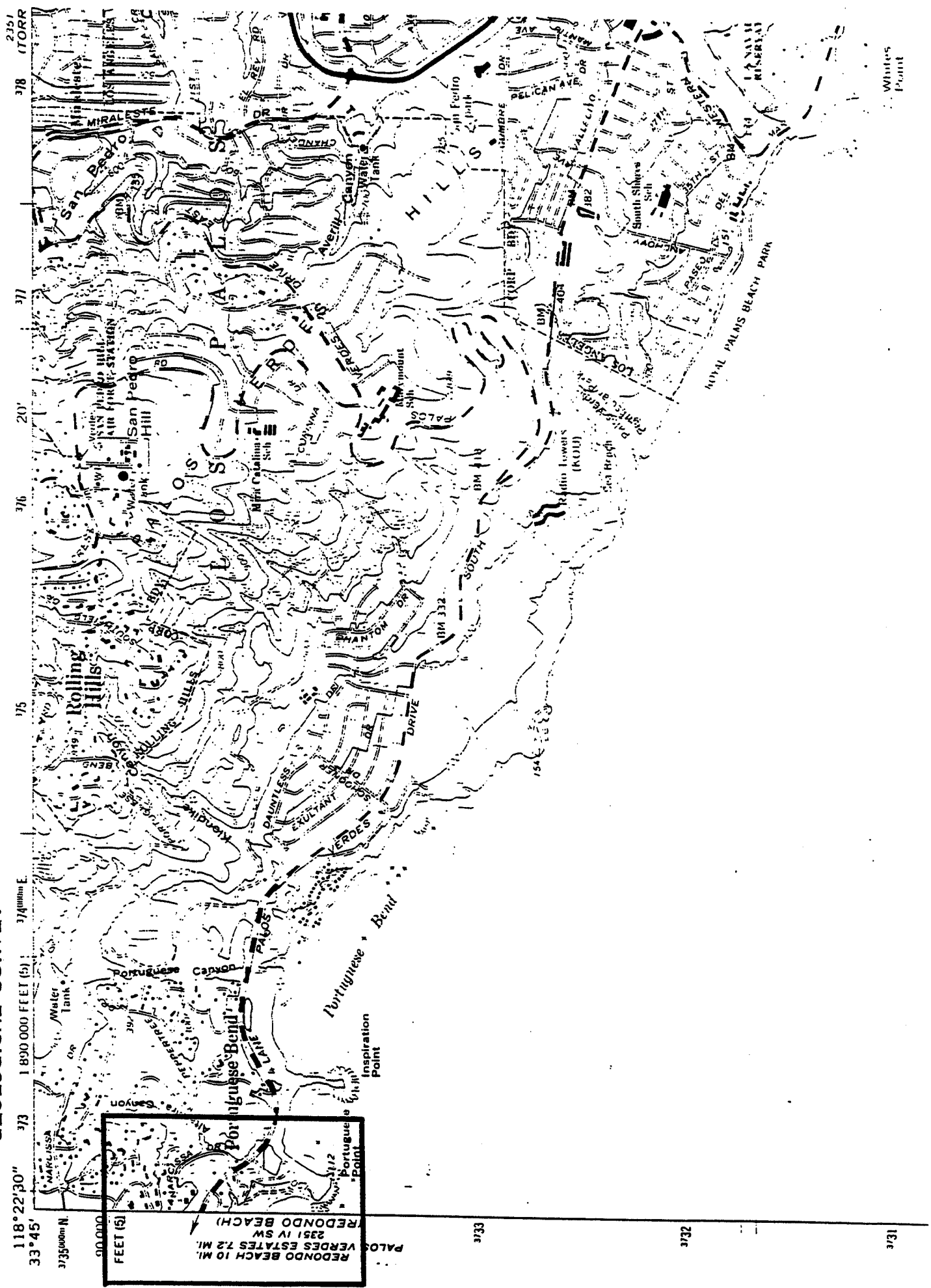
THE FOLLOWING ARE BRIEF EXPLANATIONS OF THE COLUMN HEADINGS USED IN THE REPORT:

DATE	THE DAY, MONTH, AND YEAR WHEN THE OBSERVATION WAS MADE.
COORDINATES	THE NORTHING AND EASTING OF THE STATION REFERRED TO THE CALIFORNIA COORDINATES SYSTEM, ZONE 7. WHERE THERE ARE BLANKS IMMEDIATELY FOLLOWING THE DECIMAL POINT, THE COORDINATES ARE APPROXIMATE. - SEE NOTE.
ELEVATIONS	THE ELEVATION OF THE STATION REFERRED TO THE NATIONAL GEODETIC VERTICAL DATUM OF 1929. WHERE THERE ARE BLANKS IMMEDIATELY FOLLOWING THE DECIMAL POINT THE ELEVATIONS ARE APPROXIMATE. SEE NOTE.
HORIZONTAL MOVEMENT	THE COMPUTED MOVEMENT VECTOR - DISTANCE AND BEARING BETWEEN SUCCESSIVE OBSERVATIONS, THE NUMBER OF DAYS BETWEEN SUCCESSIVE OBSERVATIONS AND THE MOVEMENT RATE IN FEET PER DAY.
VERTICAL MOVEMENT	THE COMPUTED ELEVATION DIFFERENCE BETWEEN SUCCESSIVE OBSERVATIONS AND THE CORRESPONDING PERIOD IN DAYS.
DIP	THE COMPUTED VERTICAL ANGLE OF THE MOVEMENT VECTOR WITH REFERENCE TO THE HORIZONTAL PLANE WHEN BOTH HORIZONTAL AND VERTICAL DATA HAVE BEEN OBSERVED ON CONCURRENT DAYS.
TOTAL MOVEMENT VECTORS	TOTAL MOVEMENT VECTORS ARE COMPUTED USING THE FIRST APPLICABLE OBSERVATION AND THE LAST APPLICABLE OBSERVATION IN EACH OF THE TWO PLANES. *****
NOTE	THE APPROXIMATE HORIZONTAL POSITIONS AND ELEVATIONS ARE LISTED TO FACILITATE ELECTRONIC DATA RETRIEVAL. THESE APPROXIMATE VALUES ARE SHOWN WITH BLANKS IMMEDIATELY FOLLOWING THE DECIMAL POINT. THEY ARE NOT, NOR ARE THEY TO BE, USED FOR COMPUTATION.

118° 22' 30" W
33° 45' N
REDONDO BEACH

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

STATE OF CALIFORNIA
DEPARTMENT OF WATER



Whites Point

PORTUGUESE BEND AREA

ABALONE COVE AREA

EELX

DAVIS

R1

SHIELDS

R2 ECC1
(Radial 2)

K6

K3A ECC 2

Blackley

WEST FIX

K1

POINT B2

SPH HTA ECC 5

P4A

95

SPH HB

SPH H8A

ALONE COVE

P2A

P2

P3

1

COUNTY OF LOS ANGELES
DEPARTMENT OF PUBLIC WORKS

PROGRAM EK11AP
10/19/92

SPH H 7A ECC 1
FB 4319-013

DATE DA MON YR	COORDINATES		ELEV.	DIST FT	HORIZONTAL BEARING DG MN	MOVEMENT TIME DAYS	RATE FT/DA	VERTICAL ELEV DIFF	VERTICAL MVNT TIME DAYS	DIP DG MN
2 OCT 78	NORTH	EAST								
	4019266.85	4174840.45	287.86		N 90	2681		-2.95	2681	90
3 FEB 86	4019266.85	4174840.45	284.91		N 90	25			25	DN
28 FEB 86	4019266.85	4174840.45	284.91							
29 MAR 90			284.88					-.03	1490	

***** TOTAL MOVEMENT VECTOR *****

HORIZONTAL MOVEMENT	FROM 2 OCT 78 TO 28 FEB 86	2706 DAYS	DIST = .000 FT	BEARING = N 90.00
VERTICAL MOVEMENT	FROM 2 OCT 78 TO 29 MAR 90	4196 DAYS	DIST = -2.98 FT	
RESULTANT	FROM 2 OCT 78 TO 28 FEB 86	2706 DAYS	DIP = 90 DEG	0 MIN DN

COUNTY OF LOS ANGELES
DEPARTMENT OF PUBLIC WORKS

PROGRAM EK11AP
10/19/92

SPH H 7A ECC 2
FB 4337-148

DATE DA MON YR	COORDINATES NORTH EAST	ELEV.	DIST FT	HORIZONTAL BEARING DG MN	MOVEMENT TIME DAYS	RATE FT/DA	VERTICAL ELEV DIFF	MVNT TIME DAYS	DIP DG MN
14 NOV 77	4019267.70 4174845.88	288.24							
2 OCT 78		287.97					-.27	322	
30 OCT 78		287.90					-.07	28	
15 NOV 78		287.87					-.03	16	
6 DEC 78		287.84					-.03	21	
1 MAY 79		287.47					-.37	146	
31 OCT 79		286.83					-.64	183	
13 DEC 79		286.64					-.19	43	
22 FEB 80		286.27					-.37	71	
25 APR 80		285.82					-.45	63	
16 MAY 80		285.80					-.02	21	
25 AUG 80		285.65					-.15	101	
6 FEB 81		285.46					-.19	165	
1 APR 81		285.58					.12	54	
5 AUG 81		285.49					-.09	126	
14 APR 82		285.43					-.06	252	
10 APR 82		285.43						16	
17 NOV 82		285.42					-.01	201	
8 SEP 83		285.20					-.22	295	
28 FEB 86		285.01					-.19	904	
7 MAR 88	4019260.13 4174843.74	284.88	7.866	S 15 47 W	3766	.002	-.13	738	23 8 DN
26 JUN 89	4019260.03 4174843.55	284.96	.214	S 62 14 W	476	.000	.08	476	20 26 UP
29 MAR 90	4019260.08 4174843.58	284.97	.058	N 30 58 E	276	.000	.01	276	9 44 UP
25 NOV 91	4019260.05 4174843.69	284.97	.114	S 74 45 E	606	.000		606	
18 AUG 92	4019259.99 4174843.69	284.92	.060	S	267	.000	-.05	267	39 48 DN

Δ first to last 0.045 0.14E +.04
 Δ mean to last 0.055 0.05E -.01

COUNTY OF LOS ANGELES
DEPARTMENT OF PUBLIC WORKS

PROGRAM EK11AP
10/19/92

SPH H 7A ECC 2
FB 4337-148

***** TOTAL MOVEMENT VECTOR *****

HORIZONTAL MOVEMENT	FROM 14 NOV 77 TO 18 AUG 92	5391 DAYS	DIST = 8.014 FT	BEARING = S 15 51 W
VERTICAL MOVEMENT	FROM 14 NOV 77 TO 18 AUG 92	5391 DAYS	DIST = -3.32 FT	
RESULTANT	FROM 14 NOV 77 TO 18 AUG 92	5391 DAYS	DIP = 22 DEG 30 MIN	DN

COUNTY OF LOS ANGELES
DEPARTMENT OF PUBLIC WORKS

PROGRAM EK11AP
10/19/92

SPH H 7A ECC 3
FB 4319-014

DATE DA MON YR	COORDINATES NORTH	EAST	ELEV.	DIST FT	HORIZONTAL BEARING DG MN	MOVEMENT TIME DAYS	RATE FT/DA	VERTICAL ELEV DIFF	MVNT TIME DAYS	DIP DG MN
2 OCT 78	4019277.04	4174865.76	287.52							
28 FEB 86	4019277.04	4174865.76	284.78		N 90	2706		-2.74	2706	90 DN
29 MAR 90			284.75					-.03	1490	

***** TOTAL MOVEMENT VECTOR *****

HORIZONTAL MOVEMENT	FROM 2 OCT 78 TO 28 FEB 86	2706 DAYS	DIST = .000 FT	BEARING = N 90 00
VERTICAL MOVEMENT	FROM 2 OCT 78 TO 29 MAR 90	4196 DAYS	DIST = -2.77 FT	
RESULTANT	FROM 2 OCT 78 TO 28 FEB 86	2706 DAYS	DIP = 90 DEG	0 MIN DN

COUNTY OF LOS ANGELES
DEPARTMENT OF PUBLIC WORKS

PROGRAM EK11AP
10/19/92

SPH H 7A ECC 4
FB 4319-013

DATE DA MON YR	COORDINATES		ELEV.	HORIZONTAL		MOVEMENT		RATE FT/DA	VERTICAL		DIP
	NORTH	EAST		DIST FT	BEARING DG MN	TIME DAYS	ELEV DIFF		TIME DAYS		
2 OCT 78	4019256.32	4174840.53	287.94								
28 FEB 86	4019256.32	4174840.53	284.91		N 90	2706			-3.03	2706	90 DN
29 MAR 90			284.88						-.03	1490	

***** TOTAL MOVEMENT VECTOR *****

HORIZONTAL MOVEMENT	FROM 2 OCT 78 TO 28 FEB 86	2706 DAYS	DIST = .000 FT	BEARING = N 90 00
VERTICAL MOVEMENT	FROM 2 OCT 78 TO 29 MAR 90	4196 DAYS	DIST = -3.06 FT	
RESULTANT	FROM 2 OCT 78 TO 28 FEB 86	2706 DAYS	DIP = 90 DEG	0 MIN DN

COUNTY OF LOS ANGELES
DEPARTMENT OF PUBLIC WORKS

PROGRAM EK11AP
10/19/92

SPH H 7A ECC 5
FB 2485-071

DATE LA MON YR	COORDINATES NORTH EAST	ELEV.	HORIZONTAL DIST FT	BEARING DG MN	MOVEMENT TIME DAYS	RATE FT/DA	VERTICAL ELEV DIFF	MVNT TIME DAYS	DIP DG MN
28 JAN 72	4019234.75	4174920.88	1.670	N 1 2 W	2117	.000			
14 NOV 77	4019236.42	4174920.85	.573	S 6 W	346	.001	-.41	346	35 35 DN
26 OCT 78	4019235.85	4174920.79	.140	S	16	.008	-.03	4	
30 OCT 78	4019235.85	4174920.79	.786	S 41 23 W	166	.004	-.37	166	12 5 DN
15 NOV 78	4019235.71	4174920.79		N 90	1	.007		1	25 12 DN
30 APR 79	4019235.12	4174920.27	1.362	S 18 50 W	183	.007	-.56	183	22 20 DN
1 MAY 79	4019235.12	4174920.27	1.391	S 2 53 W	176	.006			
31 OCT 79	4019233.83	4174919.83	.136	S 72 54 W	21	.005			
24 APR 80	4019232.44	4174919.76	.501	S 28 36 E	89	.002			
15 MAY 80	4019232.40	4174919.63	.394	S 59 32 W	177	.001			
12 AUG 80	4019231.96	4174919.87	.050	S 11 19 E	47	.001			
5 FEB 81	4019231.76	4174919.53	.230	S 17 39 E	134	.001			
24 MAR 81	4019231.71	4174919.54	.631	S 85 28 W	252	.002			
5 AUG 81	4019231.49	4174919.61	.550	S 74 12 E	219	.002			
14 APR 82	4019231.44	4174918.98	.700	S 43 16 W	291	.002			
19 NOV 82	4019231.29	4174919.51	.064	S 38 40 W	199	.000			
6 SEP 83	4019230.78	4174919.03		N 90	6				
23 MAR 84	4019230.73	4174918.99	.474	S 24 57 E	671	.000	-1.69	2282	25 13 DN
29 MAR 84	4019230.73	4174918.99	.136	S 17 6 W	363	.000	-.03	363	12 26 DN
29 JAN 86	4019230.30	4174919.19	.042	S 44 60 E	162	.000	-.02	162	25 14 DN
27 JAN 87	4019230.17	4174919.15	.101	N 78 41 W	243	.000	-.08	243	38 7 DN
8 JUL 87	4019230.14	4174919.18	.180	S 56 19 W	476	.000	.09	476	26 32 UP
7 MAR 88	4019230.16	4174919.08	.058	N 30 58 E	276	.000	.02	276	18 56 UP
26 JUN 89	4019230.06	4174918.93	.094	S 71 34 E	606	.000		606	
29 MAR 90	4019230.11	4174918.96							
25 NOV 91	4019230.08	4174919.05							

3.98 1.09 = 4.1'
3.41 4.03 = 3.6'

1.66 0.73 = 1.81'
1.76

1.01
1.80 = 6.6'

.02
.03

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COUNTY OF LOS ANGELES
DEPARTMENT OF PUBLIC WORKS

PROGRAM EK11AP
10/19/92

SPH H 7A ECC 5
FB 2485-071

DATE	COORDINATES	ELEV.	HORIZONTAL	MOVEMENT	RATE	VERTICAL	MVNT	DIP
DA MON YR	NORTH	EAST	DIST	BEARING	FT/DA	ELEV	TIME	DG MN
			FT	DG MN		DIFF	DAYS	
25 NOV 91	08	05						
18 AUG 92	4019230.02	4174919.05	281.02					
			280.97					
			.060	S	.000	-.05	267	39 48 DN

***** TOTAL MOVEMENT VECTOR *****

HORIZONTAL MOVEMENT	FROM 28 JAN 72 TO 18 AUG 92	7508 DAYS	DIST =	5.071 FT	BEARING =	S 21 09 W
VERTICAL MOVEMENT	FROM 14 NOV 77 TO 18 AUG 92	5391 DAYS	DIST =	-3.13 FT		
RESULTANT	FROM 14 NOV 77 TO 18 AUG 92	5391 DAYS	DIP =	25 DEG 12 MIN	DN	

COUNTY OF LOS ANGELES
DEPARTMENT OF PUBLIC WORKS

PROGRAM EK11AP
10/19/92

SPH H 7A ECC 6
FB 4205-261

DATE	COORDINATES	ELEV.	DIST	HORIZONTAL BEARING	MOVEMENT TIME	RATE	VERTICAL ELEV DIFF	MVNT TIME	DIP
DA MON YR	NORTH EAST		FT	DG MN	DAYS	FT/DA		DAYS	DG MN
29 MAR 90		281.84							

***** TOTAL MOVEMENT VECTOR *****

COUNTY OF LOS ANGELES
DEPARTMENT OF PUBLIC WORKS

PROGRAM EK11AP
10/19/92

SPH H 8
FB 4445-101

Held as fixed point.

DATE DA MON YR	COORDINATES NORTH EAST	ELEV.	HORIZONTAL DIST FT	BEARING DG MN	MOVEMENT TIME DAYS	RATE FT/DA	VERTICAL ELEV DIFF	MVNT TIME DAYS	DIP DG MN
6 SEP 83	4016759.48 4174623.86	114.22	N 90	199				199	
23 MAR 84	4016759.48 4174623.86	114.22	N 90	172					
11 SEP 84	4016759.48 4174623.86		N 90	122					
11 JAN 85	4016759.48 4174623.86		N 90	241					
9 SEP 85	4016759.48 4174623.86	114.22	N 90	142				535	
29 JAN 86	4016759.48 4174623.86	114.22	N 90	363				142	
27 JAN 87	4016759.48 4174623.86	114.22	N 90	162				363	
8 JUL 87	4016759.48 4174623.86	114.22	N 90	243				162	
7 MAR 88	4016759.48 4174623.86	114.22	N 90	476				243	
26 JUN 89	4016759.48 4174623.86	114.22	N 90	276				476	
29 MAR 90	4016759.48 4174623.86	114.22	N 90	606				276	
25 NOV 91	4016759.48 4174623.86	114.22	N 90	267				606	
18 AUG 92	4016759.48 4174623.86	114.22	N 90					267	

***** TOTAL MOVEMENT VECTOR *****

HORIZONTAL MOVEMENT	FROM 6 SEP 83 TO 18 AUG 92	3269 DAYS	DIST =	.000 FT	BEARING = N 90 00
VERTICAL MOVEMENT	FROM 6 SEP 83 TO 18 AUG 92	3269 DAYS	DIST =	.00 FT	
RESULTANT	FROM 6 SEP 83 TO 18 AUG 92	3269 DAYS	DIP =	0 DEG	0 MIN

$$\begin{array}{r}
 H-8 \ 118 \ 24 \ 26.291890 \ W \\
 shields \ 21 \ 33.208940 \ W \\
 \hline
 53.082950 = 84.46 \ (84.45988)
 \end{array}$$

COUNTY OF LOS ANGELES
DEPARTMENT OF PUBLIC WORKS

PROGRAM EK11AP
10/19/92

SPH H 8A
FB 4445-101

DATE DA MON YR	COORDINATES NORTH EAST	ELEV.	DIST FT	HORIZONTAL BEARING DG MN	MOVEMENT TIME DAYS	RATE FT/DA	VERTICAL ELEV DIFF	MVNT TIME DAYS	DIP DG MN
6 SEP 83	4017150.31 4174472.86	137.51	.053	N 21 48 W	371	.000			
11 SEP 84	4017150.36 4174472.84		.053	S 21 48 E	122	.000		493	
11 JAN 85	4017150.31 4174472.86	137.51		N 90	241			241	
9 SEP 85	4017150.31 4174472.86	137.51	.053	N 21 48 W	142	.000		142	
29 JAN 86	4017150.36 4174472.84	137.51		N 90	363			363	
27 JAN 87	4017150.36 4174472.84	137.51		N 90	162			162	
8 JUL 87	4017150.36 4174472.84	137.51		N 90	243			243	
7 MAR 88	4017150.36 4174472.84	137.51		N 90	476			476	
26 JUN 89	4017150.36 4174472.84	137.51		N 90	276			276	
29 MAR 90	4017150.36 4174472.84	137.51		N 90	606		.19	606	90
25 NOV 91	4017150.36 4174472.84	137.32		N 90	267		-.08	267	90
18 AUG 92	4017150.36 4174472.84	137.24							

***** TOTAL MOVEMENT VECTOR *****

HORIZONTAL MOVEMENT	FROM 6 SEP 83 TO 18 AUG 92	3269 DAYS	DIST = .053 FT	BEARING = N 21 48 W
VERTICAL MOVEMENT	FROM 6 SEP 83 TO 18 AUG 92	3269 DAYS	DIST = -.27 FT	
RESULTANT	FROM 6 SEP 83 TO 18 AUG 92	3269 DAYS	DIP = 78 DEG 43 MIN	DN

COUNTY OF LOS ANGELES
DEPARTMENT OF PUBLIC WORKS

PROGRAM EK11AP
10/19/92

PORT BN ACL1
FB 4205-231

14

DATE DA MON YR	COORDINATES NORTH	EAST	ELEV.	DIST FT	HORIZONTAL BEARING DG MN	MOVEMENT TIME DAYS	RATE FT/DA	VERTICAL ELEV DIFF	MVNT TIME DAYS	DIP DG MN
26 JUN 89	4018037.72	4174052.97	65.79	.080	N 82 52 W	276	.000	.44	276	79 37 UP
29 MAR 90	4018037.73	4174052.89	66.23	.040	N 90 E	606	.000	-.24	606	80 32 DN
25 NOV 91	4018037.73	4174052.93	65.99	.116	S 59 2 W	267	.000	-.64	267	79 40 DN
18 AUG 92	4018037.67	4174052.83	65.35							

37.70 ± .03 52.90 ± .07

***** TOTAL MOVEMENT VECTOR *****

3.15 years

HORIZONTAL MOVEMENT	FROM 26 JUN 89 TO 18 AUG 92	1149 DAYS	DIST =	.148 FT	BEARING = S 70 21 W
VERTICAL MOVEMENT	FROM 26 JUN 89 TO 18 AUG 92	1149 DAYS	DIST =	-.44 FT	← not correct
RESULTANT	FROM 26 JUN 89 TO 18 AUG 92	1149 DAYS	DIP =	71 DEG 20 MIN	DN

COUNTY OF LOS ANGELES
DEPARTMENT OF PUBLIC WORKS

PROGRAM EK11AP
10/19/92

PORT BN ACL2
FB 4205-232

DATE DA MON YR	COORDINATES NORTH EAST	ELEV.	DIST FT	HORIZONTAL BEARING DG MN	MOVEMENT TIME DAYS	RATE FT/DA	VERTICAL ELEV DIFF	MVNT TIME DAYS	DIP DG MN
26 JUN 89	4018662.78 4173771.31	107.58	.042	N 44 60 E	276	.000	.20	276	78 1 UP
29 MAR 90	4018662.81 4173771.34	107.78	.050	S 11 19 W	606	.000	-.28	606	79 41 DN
25 NOV 91	4018662.76 4173771.33	107.50	.031	S 71 34 E	267	.000	.03	267	43 30 UP
18 AUG 92	4018662.75 4173771.36	107.53							

3.2 yrs 62.78 ± .03 71.335 ± .025

***** TOTAL MOVEMENT VECTOR *****

3.15 years

HORIZONTAL MOVEMENT	FROM 26 JUN 89 TO 18 AUG 92	DIST =	.058 FT	BEARING =	S 59.02 E
VERTICAL MOVEMENT	FROM 26 JUN 89 TO 18 AUG 92	DIST =	-.05 FT		
RESULTANT	FROM 26 JUN 89 TO 18 AUG 92	DIP =	40 DEG 37 MIN	DN	

COUNTY OF LOS ANGELES
DEPARTMENT OF PUBLIC WORKS

PROGRAM EK11AP
10/19/92

PORT BN ACL3
FB 4205-234

DATE DA MON YR	COORDINATES NORTH EAST	ELEV.	DIST FT	HORIZONTAL BEARING DG MN	MOVEMENT TIME DAYS	RATE FT/DA	VERTICAL ELEV DIFF	MVNT TIME DAYS	DIP DG MN
26 JUN 89	4018990.39 4174686.61	168.90	.022	N 26 34 E	276	.000	.16	276	82 3 UP
29 MAR 90	4018990.41 4174686.62	169.06	.050	N 53 8 E	606	.000	-.25	606	78 41 DN
25 NOV 91	4018990.44 4174686.66	168.81	.080	S 7 8 W	267	.000	.07	267	40 58 UP
18 AUG 92	4018990.36 4174686.65	168.88							

.40 ± .04 86.635 ± .025

***** TOTAL MOVEMENT VECTOR *****

HORIZONTAL MOVEMENT	FROM 26 JUN 89 TO 18 AUG 92	DIST =	.050 FT	BEARING =	S 53 08 E
VERTICAL MOVEMENT	FROM 26 JUN 89 TO 18 AUG 92	DIST =	-.02 FT		
RESULTANT	FROM 26 JUN 89 TO 18 AUG 92	DIP =	21 DEG 48 MIN	DN	

3.15 years

COUNTY OF LOS ANGELES
DEPARTMENT OF PUBLIC WORKS

PORT BN ACL4
FB 4205-268

DATE		COORDINATES		ELEV.	HORIZONTAL BEARING		MOVEMENT TIME	RATE	VERTICAL	MOVNT	DIP
DA	MON YR	NORTH	EAST		DIST FT	DG MN	DAYS	FT/DA	ELEV DIFF	DAYS	DG MN
29	MAR 90	4017897.92	4174899.18	179.72							
25	NOV 91	4017897.95	4174899.25	179.66	.076	N 66 48 E	606	.000	-.06	606	38 14
18	AUG 92	4017897.89	4174899.17	179.62	.100	S 53 8 W	267	.000	-.04	267	21 48

 $92 \pm .03$

***** TOTAL MOVEMENT VECTOR *****

2.4 years

HORIZONTAL MOVEMENT	FROM 29 MAR 90 TO 18 AUG 92	873 DAYS	DIST =	.031 FT	BEARING = S 18 26 W
VERTICAL MOVEMENT	FROM 29 MAR 90 TO 18 AUG 92	873 DAYS	DIST =	-.10 FT	
RESULTANT	FROM 29 MAR 90 TO 18 AUG 92	873 DAYS	DIP =	72 DEG 27 MIN	DN

179.55
135.00

34.55 0.15

COUNTY OF LOS ANGELES
DEPARTMENT OF PUBLIC WORKS

PROGRAM EK11AP
10/19/92

PORT BN ACL7
FB 4205-

DATE DA MON YR	COORDINATES NORTH EAST	ELEV.	DIST FT	HORIZONTAL BEARING DG MN	MOVEMENT TIME DAYS	RATE FT/DA	VERTICAL ELEV DIFF	MVNT TIME DAYS	DIP DG MN
18 AUG 92	4018111.33 4173586.60	76 33.66 42.34							

***** TOTAL MOVEMENT VECTOR *****

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COUNTY OF LOS ANGELES
DEPARTMENT OF PUBLIC WORKS

PROGRAM EK11AP
10/19/92

PORT BN MARINE
FB 4445-101

DATE DA MON VR	COORDINATES		ELEV.	DIST FT	HORIZONTAL BEARING		MOVEMENT TIME DAYS	RATE FT/DA	VERTICAL		DIP
	NORTH	EAST			DG MN	DG MN			ELEV DIFF	MVNT TIME DAYS	
6 SEP 83	4017037.69	4166910.68			N 90		199				
23 MAR 84	4017037.69	4166910.68			N 90		287				
4 JAN 85	4017037.69	4166910.68			N 90		248				
9 SEP 85	4017037.69	4166910.68			N 90		142				
29 JAN 86	4017037.69	4166910.68			N 90		363				
27 JAN 87	4017037.69	4166910.68			N 90		162				
8 JUL 87	4017037.69	4166910.68			N 90						

***** TOTAL MOVEMENT VECTOR *****

HORIZONTAL MOVEMENT FROM 6 SEP 83 TO 8 JUL 87 1401 DAYS DIST = .000 FT BEARING = N 90 00

COUNTY OF LOS ANGELES
DEPARTMENT OF PUBLIC WORKS

PORT BN MARINE A
FB 4205-192

DATE	COORDINATES	ELEV.	HORIZONTAL	MOVEMENT	RATE	VERTICAL	MTNT	DIP
DA MON YR	NORTH	EAST	DIST FT	BEARING DG MN	TIME DAYS	FT/DA	ELEV DIFF	DG MN
7 MAR 88	4018540.14	4164709.46		N 90	476			
26 JUN 89	4018540.14	4164709.46		N 90	276			
29 MAR 90	4018540.14	4164709.46		N 90	606			
25 NOV 91	4018540.14	4164709.46		N 90	267			
18 AUG 92	4018540.14	4164709.46		N 90				

***** TOTAL MOVEMENT VECTOR *****

HORIZONTAL MOVEMENT FROM 7 MAR 88 TO 18 AUG 92 1625 DAYS DIST = .000 FT BEARING = N 90 00

89
1.5 91

COUNTY OF LOS ANGELES
DEPARTMENT OF PUBLIC WORKS

PORT BN NARCISSA I
FB 4319-007

PROGRAM EK11AP
10/19/92

DATE DA MON VR	COORDINATES		ELEV.	HORIZONTAL		MOVEMENT	RATE	VERTICAL	MOVNT	DIP
	NORTH	EAST		DIST FT	BEARING DG MN	TIME DAYS	FT/DA	ELEV DIFF	TIME DAYS	DG MN
14 NOV 78	4019409.73	4173947.15	303.75	.610	S 34 60 W	167	.003	-.17	167	15 34 DN
30 APR 79	4019409.23	4173946.80	303.58	1.018	S 19 30 E	184	.005	-.32	184	17 27 DN
31 OCT 79	4019408.27	4173947.14	303.26	1.166	S 5 54 E	176	.006	-.64	176	28 45 DN
24 APR 80	4019407.11	4173947.26	302.62	.094	S 57 60 W	21	.004	.01	21	6 3 UP
15 MAY 80	4019407.06	4173947.18	302.63	.466	S 67 17 E	89	.005	-.09	89	10 55 DN
12 AUG 80	4019406.88	4173947.61	302.54	.428	S 52 36 W	177	.002	-.07	177	9 17 DN
5 FEB 81	4019406.62	4173947.27	302.47	.060	N 90 E	47	.001	.01	47	9 28 UP
24 MAR 81	4019406.62	4173947.33	302.48	.148	S 47 44 E	134	.001	-.07	134	25 13 DN
5 AUG 81	4019406.52	4173947.44	302.41	.510	S 49 46 E	251	.002	-.05	251	5 35 DN
13 APR 82	4019406.19	4173947.83	302.36	.515	N 71 55 W	220	.002	.01	220	1 7 UP
19 NOV 82	4019406.35	4173947.34	302.37	.571	S 32 51 W	291	.001	-.14	291	13 46 DN
6 SEP 83	4019405.87	4173947.03	302.23	.028	N 44 60 E	199	.000	-.09	199	72 33 DN
23 MAR 84	4019405.89	4173947.05	302.14	.322	S 64 14 E	677	.000	-.07	677	12 16 DN
29 JAN 86	4019405.75	4173947.34	302.07	.116	S 59 2 E	363	.000	-.01	363	4 54 DN
21 JAN 87	4019405.69	4173947.44	302.06	.036	S 33 41 W	162	.000	-.02	162	29 1 DN
8 JUL 87	4019405.66	4173947.42	302.04	.108	S 56 19 W	243	.000	-.04	243	20 18 DN
7 MAR 88	4019405.60	4173947.33	302.00	.197	S 44 60 W	476	.000	.04	476	11 25 UP
26 JUN 89	4019405.46	4173947.19	302.04	.067	N 26 34 E	276	.000	.04	276	30 48 UP
29 MAR 90	4019405.52	4173947.22	302.08	.158	S 71 34 E	606	.000		606	
25 NOV 91	4019405.47	4173947.37	302.08	.092	N 12 32 E	267	.000	-.29	267	72 22 DN
18 AUG 92	4019405.56	4173947.39	301.79							

4 - geo 1045 .06E

COUNTY OF LOS ANGELES
DEPARTMENT OF PUBLIC WORKS

PROGRAM EK11AP
10/19/92

PORT BN NARCISSA1
FB 4319-007

***** TOTAL MOVEMENT VECTOR *****

HORIZONTAL MOVEMENT	FROM 14 NOV 78 TO 18 AUG 92	5026 DAYS	DIST = 4.176 FT	BEARING = S 3 17 E
VERTICAL MOVEMENT	FROM 14 NOV 78 TO 18 AUG 92	5026 DAYS	DIST = -1.96 FT	
RESULTANT	FROM 14 NOV 78 TO 18 AUG 92	5026 DAYS	DIP = 25 DEG	8 MIN DN

COUNTY OF LOS ANGELES
DEPARTMENT OF PUBLIC WORKS

PORT BN P 2
FB 949-193

PROGRAM EK11AP
10/19/92

DATE UA MON YR	COORDINATES NORTH	EAST	ELEV.	HORIZONTAL DIST FT	BEARING DG MN	MOVEMENT TIME DAYS	RATE FT/DA	VERTICAL ELEV DIFF	MVNT TIME DAYS	DIP DG MN
18 JUN 57	4018877.99	4173636.87	163.51	.126	N 18 26 W	7455	.000	-.24	7455	62 12 DN
15 NOV 77	4018878.11	4173636.83	163.27	.974	S 10 2 W	345	.002			
26 OCT 78	4018877.15	4173636.66		.022	S 26 34 W	6	.003			
1 NOV 78	4018877.13	4173636.65		.250	S 53 8 W	13	.019	-.34	364	15 55 DN
14 NOV 78	4018876.98	4173636.45	162.93	2.585	S 22 59 W	167	.015	-.55	167	12 DN
30 APR 79	4018874.60	4173635.44	162.38	3.365	S 16 56 W	184	.018	-.58	184	9 47 DN
31 OCT 79	4018871.38	4173634.46	161.80	.672	S 11 8 W	43	.015	-.16	43	13 23 DN
13 DEC 79	4018870.72	4173634.33	161.64	1.836	S 21 24 W	68	.027	-.30	68	9 16 DN
19 FEB 80	4018869.01	4173633.66	161.34	2.397	S 27 19 W	65	.036	-.43	65	10 10 DN
24 APR 80	4018866.88	4173632.56	160.91	.417	S 21 2 W	21	.019	-.05	21	6 49 DN
15 MAY 80	4018866.49	4173632.41	160.86	.830	S 9 W	89	.009	-.15	89	10 14 DN
12 AUG 80	4018865.67	4173632.28	160.71	.430	S 17 35 W	65	.006	-.06	65	7 56 DN
16 OCT 80	4018865.26	4173632.15	160.65	.158	S 18 26 W	33	.004	-.03	33	10 44 DN
18 NOV 80	4018865.11	4173632.10	160.62	.308	S 35 45 W	79	.003	-.03	79	5 33 DN
5 FEB 81	4018864.86	4173631.92	160.59	.170	S 28 4 W	47	.003	-.03	47	10 DN
24 MAR 81	4018864.71	4173631.84	160.56	.353	S 8 8 W	134	.002	-.05	134	8 3 DN
5 AUG 81	4018864.36	4173631.79	160.51	.161	S 29 45 W	251	.000	-.06	251	20 25 DN
13 APR 82	4018864.22	4173631.71	160.45	.214	S 27 45 W	218	.000	-.03	218	7 57 DN
17 NOV 82	4018864.03	4173631.61	160.42	1.767	S 21 55 W	293	.006	-.26	293	8 22 DN
6 SEP 83	4018862.39	4173630.95	160.16	.531	S 19 48 W	199	.002	-.10	199	10 39 DN
23 MAR 84	4018861.89	4173630.77	160.06	.533	S 6 27 W	287	.001	-.08	287	8 32 DN
4 JAN 85	4018861.36	4173630.71	159.98	.092	N 49 24 E	248	.000	-.03	248	18 1 DN
9 SEP 85	4018861.42	4173630.78	159.95	.080	N 90 W	141	.000		141	7 8 DN
28 JAN 86	4018861.42	4173630.70	159.94	.080	S 29 45 E	364	.000	-.04	364	26 23 DN
27 JAN 87	4018861.35	4173630.74	159.90	.100	S 36 52 W	162	.000	-.04	162	21 48 DN
8 JUL 87	4018861.27	4173630.68	159.86							

COUNTY OF LOS ANGELES
DEPARTMENT OF PUBLIC WORKS

PROGRAM EK11AP
10/19/92

PORT BN P 2
FB 949-193

DATE DA MON YR	COORDINATES		ELEV.	HORIZONTAL		MOVEMENT	RATE	VERTICAL	MOVNT	DIP
	NORTH	EAST		DIST FT	BEARING DG MN	TIME DAYS	FT/DA	ELEV DIFF	TIME DAYS	DG MN
8 JUL 87	27	68	159.86	.063	S 18 26 W	243	.000	-.05	243	38 20 DN
7 MAR 88	4018861.21	4173630.66	159.81	.111	S 26 34 W	476	.000	.09	476	38 50 UP
26 JUN 89	4018861.11	4173630.61	159.90							

***** TOTAL MOVEMENT VECTOR *****

HORIZONTAL MOVEMENT	FROM 18 JUN 57 TO 26 JUN 89	1696 DAYS	DIST =	18.003 FT	BEARING =	S 20 21 W
VERTICAL MOVEMENT	FROM 18 JUN 57 TO 26 JUN 89	1696 DAYS	DIST =	-3.61 FT		
RESULTANT	FROM 18 JUN 57 TO 26 JUN 89	1696 DAYS	DIP =	11 DEG 20 MIN	DN	

COUNTY OF LOS ANGELES
DEPARTMENT OF PUBLIC WORKS

PORT BN P 2A
FB 4338-011

DATE DA MON YR	COORDINATES NORTH EAST	ELEV.	DIST FT	HORIZONTAL BEARING DG MN	MOVEMENT TIME DAYS	RATE FT/DA	VERTICAL ELEV DIFF	MVNT TIME DAYS	DIP DG MN
10 FEB 76	4018810.58 4174018.07		.082	N 75 58 W	646	.000			
17 NOV 77	4018810.60 4174017.99		1.428	S 23 31 W	343	.004			
26 OCT 78	4018809.29 4174017.42		.064	N 51 20 W	6	.010			
1 NOV 78	4018809.33 4174017.37	161.35	.333	S 48 39 W	13	.025	-.06	13	10 13 DN
14 NOV 78	4018809.11 4174017.12	178 = 2.293 161.29	2.983	S 29 45 W	167	.017	-.82	167	15 22 DN
30 APR 79	4018806.52 4174015.64	160.47	3.963	S 25 24 W	184	.021	-1.02	184	14 26 DN
31 OCT 79	4018802.94 4174013.94	159.45	.615	S 7 28 W	43	.014	-.24	43	21 19 DN
13 DEC 79	4018802.33 4174013.86	159.21 1.14 = 2.818	2.263	S 27 55 W	69	.032	-.57	69	14 8 DN
20 FEB 80	4018800.33 4174012.80	158.64	2.773	S 33 14 W	64	.043	-.73	64	14 44 DN
24 APR 80	4018798.01 4174011.28	157.91	.456	S 26 W	21	.021	-.10	21	12 22 DN
15 MAY 80	4018797.60 4174011.08	157.81	.950	S 14 37 W	89	.010	-.29	89	16 58 DN
12 AUG 80	4018796.68 4174010.84	157.52	.452	S 30 32 W	65	.006	-.10	65	12 27 DN
16 OCT 80	4018796.29 4174010.61	157.42 0.91 = 2.1261	.155	S 44 60 W	33	.004	-.04	33	14 25 DN
18 NOV 80	4018796.18 4174010.50	157.38	.272	S 28 26 W	79	.003	-.06	79	12 24 DN
5 FEB 81	4018795.94 4174010.37	157.32	.205	S 43 1 W	47	.004	-.05	47	13 41 DN
24 MAR 81	4018795.79 4174010.23	157.27	.352	S 6 31 W	134	.002	-.09	134	14 20 DN
5 AUG 81	4018795.44 4174010.19	157.18 1.45 = 0.944	.176	S 42 42 W	251	.000	-.08	251	24 20 DN
13 APR 82	4018795.31 4174010.07	157.10	.250	S 36 52 W	220	.001	-.05	220	11 19 DN
19 NOV 82	4018795.11 4174009.92	157.05	1.806	S 30 15 W	291	.006	-.45	291	13 59 DN
6 SEP 83	4018793.55 4174009.01	156.60 1.22 = 2.595	.506	S 29 36 W	199	.002	-.16	199	17 33 DN
23 MAR 84	4018793.11 4174008.76	156.44	.296	S 11 41 W	287	.001	-.14	287	25 18 DN
4 JAN 85	4018792.82 4174008.70	156.30	.290	S 1 58 E	248	.001	-.06	248	11 41 DN
9 SEP 85	4018792.53 4174008.71	156.24	.085	S 69 27 W	141	.000	-.02	141	13 10 DN
28 JAN 86	4018792.50 4174008.63	156.22	.111	S 10 18 W	364	.000	-.07	364	32 3 DN
27 JAN 87	4018792.39 4174008.61	156.15	.070	S 8 8 W	162	.000	-.05	162	35 16 DN
8 JUL 87	4018792.32 4174008.60	156.10			915				

5.05

.67

.35 = 1.756

18 feet

COUNTY OF LOS ANGELES
DEPARTMENT OF PUBLIC WORKS

PROGRAM EK11AP
10/19/92

PORT BN P 2A
FB 4338-011

DATE DA MON YR	COORDINATES NORTH	EAST	ELEV.	DIST FT	HORIZONTAL BEARING DG MN	MOVEMENT TIME DAYS	RATE FT/DA	VERTICAL ELEV DIFF	MVNT TIME DAYS	DIP DG MN
8 JUL 87	32	60	156.10	.100	S 36 52 W	243	.000	-.06	243	30 58 DN
7 MAR 88	4018792.24	4174008.54	156.04	.127	S 44 60 W	476	.000	.10	476	38 9 UP
26 JUN 89	4018792.15	4174008.45	156.14							

719
915
1634

***** TOTAL MOVEMENT VECTOR *****

HORIZONTAL MOVEMENT FROM 10 FEB 76 TO 26 JUN 89 4885 DAYS DIST = 20.789 FT BEARING = S 27 34 W
VERTICAL MOVEMENT FROM 1 NOV 78 TO 26 JUN 89 3890 DAYS DIST = -5.21 FT
RESULTANT FROM 1 NOV 78 TO 26 JUN 89 3890 DAYS DIP = 15 DEG 4 MIN DN

COUNTY OF LOS ANGELES
DEPARTMENT OF PUBLIC WORKS

PROGRAM EK11AP
10/19/92

PORT BN P 2AA
FB 4205-267

DATE DA MON YR	COORDINATES		ELEV.	DIST FT	HORIZONTAL BEARING DG MN	MOVEMENT TIME DAYS	RATE FT/DA	VERTICAL ELEV DIFF	MVNT TIME DAYS	DIP DG MN
29 MAR 90	4018793.45	4174007.30	157.62	.044	S 63 26 E	606	.000	.02	606	24 6 UP
25 NOV 91	4018793.43	4174007.34	157.64							
18 AUG 92	4018793.38	4174007.30	157.60	.064	S 38 40 W	267	.000	-.04	267	31 60 DN

.07 S .00 E .02 ↓

***** TOTAL MOVEMENT VECTOR *****

HORIZONTAL MOVEMENT FROM 29 MAR 90 TO 18 AUG 92 873 DAYS DIST = .070 FT BEARING = S 0 00
 VERTICAL MOVEMENT FROM 29 MAR 90 TO 18 AUG 92 873 DAYS DIST = -.02 FT
 RESULTANT FROM 29 MAR 90 TO 18 AUG 92 873 DAYS DIP = 15 DEG 57 MIN DN

COUNTY OF LOS ANGELES
DEPARTMENT OF PUBLIC WORKS

PORT BN P 2B
FB 4205-267

DATE DA MON YR	COORDINATES NORTH EAST	ELEV.	DIST FT	HORIZONTAL BEARING DG MN	MOVEMENT TIME DAYS	RATE FT/DA	VERTICAL ELEV DIFF	MVNT TIME DAYS	DIP DG MN
29 MAR 90	4018869.30 4173624.86	162.89	.067	S 63 26 E	606	.000	.03	606	24 6 UP
25 NOV 91	4018869.27 4173624.92	162.92	.028	S 44 60 W	267	.000	-.03	267	46 41 DN
18 AUG 92	4018869.25 4173624.90	162.89							

.055 .04E 100 ↓

***** TOTAL MOVEMENT VECTOR *****

HORIZONTAL MOVEMENT FROM 29 MAR 90 TO 18 AUG 92 873 DAYS DIST = .064 FT BEARING = S 38 40 E
 VERTICAL MOVEMENT FROM 29 MAR 90 TO 18 AUG 92 873 DAYS DIST = .00 FT
 RESULTANT FROM 29 MAR 90 TO 18 AUG 92 873 DAYS DIP = 0 DEG 0 MIN

COUNTY OF LOS ANGELES
DEPARTMENT OF PUBLIC WORKS

PORT BN P 3
FB 949-193

PROGRAM EK11AP
10/19/92

DATE DA MON YR	COORDINATES		ELEV.	DIST FT	HORIZONTAL BEARING DG MN	MOVEMENT TIME DAYS	RATE FT/DA	VERTICAL ELEV DIFF	MVNT TIME DAYS	DIP DG MN
18 JUN 57	4018538.88	4174407.12	158.13	.305	S 31 36 W	7455	.000			
15 NOV 77	4018538.62	4174406.96	158.13	1.064	S 25 36 W	345	.003			
26 OCT 78	4018537.66	4174406.50		.064	N 51 20 W	6	.010			
1 NOV 78	4018537.70	4174406.45		.241	S 60 15 W	13	.018	-.17	364	7 39 DN
14 NOV 78	4018537.58	4174406.24	157.96	2.096	S 32 56 W	167	.012	-.26	167	7 4 DN
30 APR 79	4018535.82	4174405.10	157.70	2.924	S 26 23 W	184	.015	-.16	184	3 8 DN
31 OCT 79	4018533.20	4174403.80	157.54	.391	S 4 24 E	43	.009	.02	43	2 56 UP
13 DEC 79	4018532.81	4174403.83	157.56	1.645	S 27 30 W	69	.023	-.25	69	8 38 DN
20 FEB 80	4018531.35	4174403.07	157.31	1.988	S 33 56 W	64	.031	-.26	64	7 27 DN
24 APR 80	4018529.70	4174401.96	157.05	.254	S 41 49 W	21	.012	-.01	21	2 15 DN
15 MAY 80	4018529.51	4174401.79	157.04	.691	S 4 8 W	89	.007	-.08	89	6 36 DN
12 AUG 80	4018528.82	4174401.74	156.96	.326	S 49 58 W	65	.005	-.03	65	5 15 DN
16 OCT 80	4018528.61	4174401.49	156.93	.085	S 69 27 W	33	.002	-.02	33	13 10 DN
18 NOV 80	4018528.58	4174401.41	156.91	.174	S 13 14 W	79	.002		79	
5 FEB 81	4018528.41	4174401.37	156.91	.152	S 58 24 W	47	.003	.01	47	3 45 UP
24 MAR 81	4018528.33	4174401.24	156.92	.231	S 7 26 E	134	.001	-.04	134	9 47 DN
5 AUG 81	4018528.10	4174401.27	156.88	.143	S 65 13 W	251	.000	-.03	251	11 50 DN
13 APR 82	4018528.04	4174401.14	156.85	.202	S 32 54 W	220	.000	-.02	220	5 38 DN
19 NOV 82	4018527.87	4174401.03	156.83	1.090	S 33 24 W	291	.003	-.10	291	5 14 DN
6 SEP 83	4018526.96	4174400.43	156.73	.205	S 46 58 W	199	.001		199	
23 MAR 84	4018526.82	4174400.28	156.73	.245	S 11 46 W	287	.000	-.06	287	13 45 DN
4 JAN 85	4018526.58	4174400.23	156.67	.241	S 7 8 E	248	.000	-.01	248	2 22 DN
9 SEP 85	4018526.34	4174400.26	156.66	.063	N 71 34 W	141	.000	-.02	141	17 33 DN
28 JAN 86	4018526.36	4174400.20	156.64	.102	S 29 3 W	364	.000	-.04	364	21 14 DN
27 JAN 87	4018526.27	4174400.15	156.60							

COUNTY OF LOS ANGELES
DEPARTMENT OF PUBLIC WORKS

PROGRAM EK11AP
10/19/92

PORT BN P 3
FB 949-193

***** TOTAL MOVEMENT VECTOR *****

HORIZONTAL MOVEMENT	FROM 18 JUN 57 TO 27 JAN 87	0815 DAYS	DIST = 14.408 FT	BEARING = S 28 56 W
VERTICAL MOVEMENT	FROM 15 NOV 77 TO 27 JAN 87	3360 DAYS	DIST = -1.53 FT	
RESULTANT	FROM 15 NOV 77 TO 27 JAN 87	3360 DAYS	DIP = 6 DEG 11 MIN	DN

COUNTY OF LOS ANGELES
DEPARTMENT OF PUBLIC WORKS

PROGRAM EK11AP
10/19/92

PORT BN P 3A
FB 4205-163

DATE DA MON VR	COORDINATES NORTH EAST	ELEV.	HORIZONTAL DIST FT	BEARING DG MN	MOVEMENT TIME DAYS	RATE FT/DA	VERTICAL ELEV DIFF	MOVNT TIME DAYS	DIP DG MN
8 JUL 87	4018526.24 4174400.12	156.43	.058	S 59 2 W	243	.000	-.06	243	45 49 DN
7 MAR 88	4018526.21 4174400.07	156.37	.130	S 57 32 W	476	.000	.09	476	34 37 UP
26 JUN 89	4018526.14 4174399.96	156.46							

***** TOTAL MOVEMENT VECTOR *****

HORIZONTAL MOVEMENT	FROM 8 JUL 87 TO 26 JUN 89	719 DAYS	DIST = .188 FT	BEARING = S 57 60 W
VERTICAL MOVEMENT	FROM 8 JUL 87 TO 26 JUN 89	719 DAYS	DIST = .03 FT	
RESULTANT	FROM 8 JUL 87 TO 26 JUN 89	719 DAYS	DIP = 9 DEG	2 MIN UP

COUNTY OF LOS ANGELES
DEPARTMENT OF PUBLIC WORKS

PROGRAM EK11AP
10/19/92

PORT BN P 3B
FB 4205-268

DATE DA MON YR	COORDINATES NORTH	EAST	ELEV.	DIST FT	HORIZONTAL BEARING DG MN	MOVEMENT TIME DAYS	RATE FT/DA	VERTICAL ELEV DIFF	MVNT TIME DAYS	DIP DG MN
29 MAR 90	4018526.14	4174399.97	155.06	.080	S 82 52 E	606	.000	.05	606	31 48 UP
25 NOV 91	4018526.13	4174400.05	155.11	.064	S 38 40 W	267	.000	-.04	267	31 60 DN
18 AUG 92	4018526.08	4174400.01	155.07							

106 S

.04E

+0.01

(.26 inches)

***** TOTAL MOVEMENT VECTOR *****

HORIZONTAL MOVEMENT	FROM 29 MAR 90 TO 18 AUG 92	873 DAYS	DIST =	.072 FT	BEARING =	S 33 41 E
VERTICAL MOVEMENT	FROM 29 MAR 90 TO 18 AUG 92	873 DAYS	DIST =	.01 FT		
RESULTANT	FROM 29 MAR 90 TO 18 AUG 92	873 DAYS	DIP =	7 DEG 53 MIN	UP	

COUNTY OF LOS ANGELES
DEPARTMENT OF PUBLIC WORKS

PROGRAM EK11AP
10/19/92

PORT BN P 4A
FB 2485-018

DATE DA MON YR	COORDINATES		ELEV.	DIST FT	HORIZONTAL BEARING DG MN	MOVEMENT TIME DAYS	RATE FT/DA	VERTICAL ELEV DIFF	MVNT TIME DAYS	DIP DG MN
	NORTH	EAST								
21 AUG 75	4018277.10	4175047.06	305.26	.134	S 26 34 E	810	.000			
8 NOV 77	4018276.98	4175047.12		.723	S 11 9 W	371	.001			
14 NOV 78	4018276.27	4175046.98		.567	S 40 43 W	167	.003			
30 APR 79	4018275.84	4175046.61		.910	S 8 50 W	184	.004			
31 OCT 79	4018274.94	4175046.47		.130	S 67 23 E	43	.003			
13 DEC 79	4018274.89	4175046.59		.370	S 1 33 E	69	.005			
20 FEB 80	4018274.52	4175046.60		.396	S 49 5 W	64	.006			
24 APR 80	4018274.26	4175046.30		.050	N 53 8 W	21	.002			
15 MAY 80	4018274.29	4175046.26		.396	S 10 10 E	89	.004			
12 AUG 80	4018273.90	4175046.33		.390	N 90 W	9	.043	-.30	1017	5 12 DN
21 AUG 80	4018273.90	4175045.94	304.96	.294	S 80 13 E	56	.005			
16 OCT 80	4018273.85	4175046.23		.036	S 33 41 W	33	.001			
18 NOV 80	4018273.82	4175046.21		.092	S 49 24 W	79	.001			
5 FEB 81	4018273.76	4175046.14		.220	S 87 24 W	6	.036	-.02	174	7 32 DN
11 FEB 81	4018273.75	4175045.92	304.94	.194	S 78 7 E	41	.004			
24 MAR 81	4018273.71	4175046.11		.156	S 63 26 W	10	.015	-.04	51	18 19 DN
3 APR 81	4018273.64	4175045.97	304.90	.186	S 74 29 W	124	.001	.04	124	12 5 UP
5 AUG 81	4018273.59	4175045.79	304.94	.272	S 72 54 E	251	.001	-.07	251	14 26 DN
13 APR 82	4018273.51	4175046.05	304.87	.203	S 11 19 W	217	.000	.01	217	2 48 UP
16 NOV 82	4018273.31	4175046.01	304.88	.453	S 48 35 W	294	.001	-.02	294	2 32 DN
6 SEP 83	4018273.01	4175045.67	304.86		N 90	199			199	
23 MAR 84	4018273.01	4175045.67	304.86	.290	S 1 58 E	287	.001	-.07	287	13 34 DN
4 JAN 85	4018272.72	4175045.68	304.79	.240	S 4 46 E	248	.000			
9 SEP 85	4018272.48	4175045.70		.070	N 44 60 W	142	.000	-.06	390	17 19 DN
29 JAN 86	4018272.53	4175045.65	304.73	.180	S 19 26 W	363	.000		363	
27 JAN 87	4018272.36	4175045.59	304.73							

COUNTY OF LOS ANGELES
DEPARTMENT OF PUBLIC WORKS

PROGRAM EK11AP
10/19/92

PORT BN P 4A
FB 2485-018

DATE DA MON YR	COORDINATES		ELEV.	HORIZONTAL		MOVEMENT TIME DAYS	RATE FT/DA	VERTICAL		DIP
	NORTH	EAST		DIST FT	BEARING DG MN			ELEV DIFF	MVNT TIME DAYS	
27 JAN 87	36	59	304.73	.022	S 63 26 E	162	.000	-.03	162	53 18 DN
8 JUL 87	4018272.35	4175045.61	304.70	.020	N 90 W	243	.000	-.09	243	77 28 DN
7 MAR 88	4018272.35	4175045.59	304.61	.130	S 67 23 W	476	.000	.14	476	47 7 UP
26 JUN 89	4018272.30	4175045.47	304.75	.022	S 63 26 E	276	.000	-.05	276	65 54 DN
29 MAR 90	4018272.29	4175045.49	304.70	.050	S 78 41 E	606	.000	.03	606	30 28 UP
25 NOV 91	4018272.28	4175045.54	304.73	.104	S 16 42 W	267	.000		267	
18 AUG 92	4018272.18	4175045.51	304.73							

57.98185

0.14 ft/yr

***** TOTAL MOVEMENT VECTOR *****

HORIZONTAL MOVEMENT	FROM 21 AUG 75 TO 18 AUG 92	6207 DAYS	DIST =	5.158 FT	BEARING =	S 17 29 W
VERTICAL MOVEMENT	FROM 8 NOV 77 TO 18 AUG 92	5397 DAYS	DIST =	-.53 FT		
RESULTANT	FROM 8 NOV 77 TO 18 AUG 92	5397 DAYS	DIP =	5 DEG 58 MIN	DN	

COUNTY OF LOS ANGELES
DEPARTMENT OF PUBLIC WORKS

PROGRAM EK11AP
10/19/92

PORT BN PI 1A
FB 2849-089

DATE DA MON YR	COORDINATES		ELEV.	DIST FT	HORIZONTAL BEARING DG MN	MOVEMENT TIME DAYS	RATE FT/DA	VERTICAL ELEV DIFF	VERTICAL MVNT TIME DAYS	DIP DG MN
18 JUL 62	4019600.00	4174300.00	333.70		N 90	5920		-.17	5920	90 DN
2 OCT 78	4019600.00	4174300.00	333.53		N 90	28		-.07	28	90 DN
30 OCT 78	4019600.00	4174300.00	333.46		N 90	15		-.02	15	90 DN
14 NOV 78	4019600.00	4174300.00	333.44		N 90	167		-.36	167	90 DN
30 APR 79	4019600.00	4174300.00	333.08		N 90	184		-.70	184	90 DN
31 OCT 79	4019600.00	4174300.00	332.38		N 90	43		-.20	43	90 DN
13 DEC 79	4019600.00	4174300.00	332.18		N 90	71		-.33	71	90 DN
22 FEB 80	4019600.00	4174300.00	331.85		N 90	62		-.53	62	90 DN
24 APR 80	4019600.00	4174300.00	331.32		N 90	22			22	
16 MAY 80	4019600.00	4174300.00	331.32		N 90	101		-.19	101	90 DN
25 AUG 80	4019600.00	4174300.00	331.13		N 90	164		-.14	164	90 DN
5 FEB 81	4019600.00	4174300.00	330.99		N 90	47			47	
24 MAR 81	4019600.00	4174300.00	330.99		N 90	134		-.10	134	90 DN
5 AUG 81	4019600.00	4174300.00	330.89		N 90	251		-.05	251	90 DN
13 APR 82	4019600.00	4174300.00	330.84		N 90	218		-.03	218	90 DN
17 NOV 82	4019600.00	4174300.00	330.81		N 90	293		-.22	293	90 DN
6 SEP 83	4019600.00	4174300.00	330.59		N 90	883		-.26	883	90 DN
5 FEB 86	4019600.00	4174300.00	330.33		N 90	761		-.07	761	90 DN
7 MAR 88	4019600.00	4174300.00	330.26		N 90	476		-.01	476	90 DN
26 JUN 89	4019600.00	4174300.00	330.25		N 90					
29 MAR 90			330.33					.08	276	
25 NOV 91			330.31					-.02	606	
18 AUG 92			330.27					-.04	267	

330,30 ± .04
6 measurements

COUNTY OF LOS ANGELES
DEPARTMENT OF PUBLIC WORKS

PROGRAM EK11AP
10/19/92

PORT BN PI 1A
FB 2849-089

***** TOTAL MOVEMENT VECTOR *****

HORIZONTAL MOVEMENT	FROM 18 JUL 62 TO 26 JUN 89	9840 DAYS	DIST = .000 FT	BEARING = N 90 00
VERTICAL MOVEMENT	FROM 18 JUL 62 TO 18 AUG 92	0989 DAYS	DIST = -3.43 FT	
RESULTANT	FROM 18 JUL 62 TO 26 JUN 89	9840 DAYS	DIP = 90 DEG	0 MIN DN

COUNTY OF LOS ANGELES
DEPARTMENT OF PUBLIC WORKS

PROGRAM EK11AP
10/19/92

PORT BN PI 3A
FB 2849-089

DATE DA MON YR	COORDINATES NORTH EAST	ELEV.	DIST FT	HORIZONTAL BEARING DG MN	MOVEMENT TIME DAYS	RATE FT/DA	VERTICAL ELEV DIFF	MTNT TIME DAYS	DIP DG MN
27 NOV 63	4020100.00 4174200.00	372.96		N 90	5101		.10	5101	90 UP
14 NOV 77	4020100.00 4174200.00	373.06		N 90	322		-.04	322	90 DN
2 OCT 78	4020100.00 4174200.00	373.02		N 90	28		-.02	28	90 DN
30 OCT 78	4020100.00 4174200.00	373.00		N 90	15		-.01	15	90 DN
14 NOV 78	4020100.00 4174200.00	372.99		N 90	167		.05	167	90 UP
30 APR 79	4020100.00 4174200.00	373.04		N 90	184		-.01	184	90 DN
31 OCT 79	4020100.00 4174200.00	373.03		N 90	43		-.06	43	90 DN
13 DEC 79	4020100.00 4174200.00	372.97		N 90	71		.12	71	90 UP
22 FEB 80	4020100.00 4174200.00	373.09		N 90	62		-.13	62	90 DN
24 APR 80	4020100.00 4174200.00	372.96		N 90	22		.06	22	90 UP
16 MAY 80	4020100.00 4174200.00	373.02		N 90	101		.09	101	90 UP
25 AUG 80	4020100.00 4174200.00	373.11		N 90	164		-.11	164	90 DN
5 FEB 81	4020100.00 4174200.00	373.00		N 90	47		.04	47	90 UP
24 MAR 81	4020100.00 4174200.00	373.04		N 90	134		-.05	134	90 DN
5 AUG 81	4020100.00 4174200.00	372.99		N 90	252		-.02	252	90 DN
14 APR 82	4020100.00 4174200.00	372.97		N 90	217		.01	217	90 UP
17 NOV 82	4020100.00 4174200.00	372.98		N 90	293			293	
6 SEP 83	4020100.00 4174200.00	372.98		N 90	883		-.02	883	90 DN
5 FEB 86	4020100.00 4174200.00	372.96		N 90	761		-.05	761	90 DN
7 MAR 88	4020100.00 4174200.00	372.91		N 90	476		.03	476	90 UP
26 JUN 89	4020100.00 4174200.00	372.94					.10	276	
29 MAR 90		373.04					-.01	606	
25 NOV 91		373.03							

Stable leveling monument
373.01 ± 0.10 23 measurements
373.00 ± 0.04 18 measurements

COUNTY OF LOS ANGELES
DEPARTMENT OF PUBLIC WORKS

PORT BN PI 3A
FB 2849-089

PROGRAM EK11AP
10/19/92

***** TOTAL MOVEMENT VECTOR *****

HORIZONTAL MOVEMENT	FROM 27 NOV 63 TO 26 JUN 89	9343 DAYS	DIST =	.000 FT	BEARING = N 90 00
VERTICAL MOVEMENT	FROM 27 NOV 63 TO 25 NOV 91	10225 DAYS	DIST =	.07 FT↑	
RESULTANT	FROM 27 NOV 63 TO 26 JUN 89	9343 DAYS	DIP =	90 DEG 0 MIN	DN

PROGRAM EK11AP
10/15/92

PORT BN PB 1
FB 4319-187

DATE DA MON YR	COORDINATES		ELEV.	DIST FT	HORIZONTAL BEARING DG MN	MOVEMENT TIME DAYS	RATE FT/DA	VERTICAL ELEV DIFF	MVNT TIME DAYS	DIP
	NORTH	EAST								
21 AUG 80	4018459.36	4175146.26	306.57	.200	S 2 52 W	174	.001	-.04	174	11 18 DN
11 FEB 81	4018459.16	4175146.25	306.53		N 90	51		.01	51	90 UP
3 APR 81	4018459.16	4175146.25	306.54	.147	S 28 18 W	124	.001		124	
5 AUG 81	4018459.03	4175146.18	306.54	.133	S 12 59 W	246	.000	-.11	246	39 30 DN
8 APR 82	4018458.90	4175146.15	306.43	.040	S	222	.000	.02	222	26 34 UP
16 NOV 82	4018458.86	4175146.15	306.45	.510	S	294	.001		294	
6 SEP 83	4018458.35	4175146.15	306.45	.360	S 1 35 E	500	.000	-.03	500	4 46 UN
18 JAN 85	4018457.99	4175146.16	306.42	.056	N 44 60 E	382	.000	-.05	382	41 29 DN
4 FEB 86	4018458.03	4175146.20	306.37	.472	S 53 37 W	519	.000	-.03	519	3 38 DN
8 JUL 87	4018457.75	4175145.82	306.34	.277	S 59 45 E	719	.000	.06	719	12 11 UP
26 JUN 89	4018457.61	4175146.06	306.40	.090	S 6 20 W	276	.000	-.11	276	50 32 DN
29 MAR 90	4018457.52	4175146.05	306.29	.111	N 63 26 E	606	.000	.14	606	51 23 UP
135 07E 25 NOV 91	4018457.57	4175146.15	306.43	.092	S 12 32 W	267	.000		267	
18 AUG 92	4018457.48	4175146.13	306.43							

***** TOTAL MOVEMENT VECTOR *****

HORIZONTAL MOVEMENT	FROM 21 AUG 80 TO 18 AUG 92	4380 DAYS	DIST =	1.884 FT	BEARING = S 3 3 57 W
VERTICAL MOVEMENT	FROM 21 AUG 80 TO 18 AUG 92	4380 DAYS	DIST =	-.14 FT	
RESULTANT	FROM 21 AUG 80 TO 18 AUG 92	4380 DAYS	DIP =	4 DEG 15 MIN	DN

COUNTY OF LOS ANGELES
DEPARTMENT OF PUBLIC WORKS

PORT BN PB 4
FB 4319-187

DATE DA MON YR	COORDINATES		ELEV.	HORIZONTAL		MOVEMENT TIME DAYS	RATE FT/DA	VERTICAL ELEV DIFF	MVNT TIME DAYS	DIP DG MN
	NORTH	EAST		DIST FT	BEARING DG MN					
21 AUG 80	4018074.75	4174743.38	171.60	.110	S 84 48 W	174	.000	-.02	174	10 16 DN
11 FEB 81	4018074.74	4174743.27	171.58	.053	S 21 48 E	51	.001	.02	51	20 22 UP
3 APR 81	4018074.69	4174743.29	171.60	.250	S 85 26 W	124	.002	-.01	124	2 17 DN
5 AUG 81	4018074.67	4174743.04	171.59	.072	S 15 57 W	246	.000	-.01	246	7 49 DN
8 APR 82	4018074.60	4174743.02	171.58	.121	N 9 28 W	222	.000	-.02	222	9 20 DN
16 NOV 82	4018074.72	4174743.00	171.56	.304	S 48 59 W	294	.001	-.01	294	1 53 DN
6 SEP 83	4018074.52	4174742.77	171.55	.136	S 72 54 W	500	.000		500	
18 JAN 85	4018074.48	4174742.64	171.55	.253	S 80 55 W	382	.000		382	
4 FEB 86	4018074.44	4174742.39	171.55	.286	S 60 45 W	519	.000	-.06	519	11 50 DN
8 JUL 87	4018074.30	4174742.14	171.49					.01	995	
29 MAR 90			171.50					.07	606	
25 NOV 91			171.57					-.03	267	
18 AUG 92			171.54							

***** TOTAL MOVEMENT VECTOR *****

HORIZONTAL MOVEMENT FROM 21 AUG 80 TO 8 JUL 87 2512 DAYS DIST = 1.319 FT BEARING = S 70 03 W
VERTICAL MOVEMENT FROM 21 AUG 80 TO 18 AUG 92 4380 DAYS DIST = -.06 FT
RESULTANT FROM 21 AUG 80 TO 8 JUL 87 2512 DAYS DIP = 4 DEG 46 MIN DN

COUNTY OF LOS ANGELES
DEPARTMENT OF PUBLIC WORKS

PROGRAM EK11AP
10/19/92

PORT BN Q 1
FB 949-195

DATE DA MON YR	COORDINATES		ELEV.	DIST FT	HORIZONTAL BEARING DG MN	MOVEMENT TIME DAYS	RATE FT/DA	VERTICAL ELEV DIFF	MVNT TIME DAYS	DIP DG MN
18 JUN 57	4018708.43	4173035.75		.460	S	6785	.000			
15 JAN 76	4018707.97	4173035.75			N 90	4				
19 JAN 76	4018707.97	4173035.75	145.32		N 90	29		-.01	29	90 DN
17 FEB 76	4018707.97	4173035.75	145.31		N 90	29			29	
17 MAR 76	4018707.97	4173035.75	145.31		N 90	29		-.01	29	90 DN
15 APR 76	4018707.97	4173035.75	145.30		N 90	55		.01	55	90 UP
9 JUN 76	4018707.97	4173035.75	145.31		N 90	78			78	
26 AUG 76	4018707.97	4173035.75	145.31	.050	N 36 52 W	60	.000	.02	60	21 48 UP
25 OCT 76	4018708.01	4173035.72	145.33		N 90	77			77	
10 JAN 77	4018708.01	4173035.72	145.33	.089	N 63 26 W	122	.000	-.01	122	6 23 DN
12 MAY 77	4018708.05	4173035.64	145.32		N 90	75			75	
26 JUL 77	4018708.05	4173035.64	145.32	.094	S 18 26 W	112	.000	-.01	112	6 1 DN
15 NOV 77	4018707.96	4173035.61	145.31	.142	N 50 43 E	72	.001	.05	72	19 23 UP
26 JAN 78	4018708.05	4173035.72	145.36	.098	S 44 60 E	273	.000			
26 OCT 78	4018707.98	4173035.79		.053	N 68 12 W	6	.008			
1 NOV 78	4018708.00	4173035.74		.100	N 36 52 W	13	.007	-.13	292	68 58 DN
14 NOV 78	4018708.08	4173035.68	145.23	.022	N 26 34 W	22	.001			
6 DEC 78	4018708.10	4173035.67		.060	S 9 28 W	145	.000	-.01	167	12 36 DN
30 APR 79	4018708.04	4173035.66	145.22	.215	N 68 12 E	184	.001	.04	184	10 31 UP
31 OCT 79	4018708.12	4173035.86	145.26	.022	N 63 26 E	43	.000	-.04	43	60 48 DN
13 DEC 79	4018708.13	4173035.88	145.22	.108	N 56 19 E	70	.001	.14	70	52 19 UP
21 FEB 80	4018708.19	4173035.97	145.36	.319	S 69 52 W	63	.005	-.13	63	22 8 DN
24 APR 80	4018708.08	4173035.67	145.23	.041	N 75 58 E	21	.001	.01	21	13 38 UP
15 MAY 80	4018708.09	4173035.71	145.24	.276	N 49 24 E	89	.003	-.01	89	2 4 DN
12 AUG 80	4018708.27	4173035.92	145.23	.080	S	65	.001		65	
16 OCT 80	4018708.19	4173035.92	145.23							

leveling surveys
horizontal not measured

COUNTY OF LOS ANGELES
DEPARTMENT OF PUBLIC WORKS

PROGRAM EK11AP
10/19/92

PORT BN Q 1
FB 949-195

DATE DA MON YR	COORDINATES NORTH	EAST	ELEV.	DIST FT	HORIZONTAL BEARING DG MN	MOVEMENT TIME DAYS	RATE FT/DA	VERTICAL ELEV DIFF	VERTICAL MVNT TIME DAYS	DIP DG MN
16 OCT 80	19	92	145.23	.143	S 24 46 W	33	.004	-.01	33	3 60 DN
18 NOV 80	4018708.06	4173035.86	145.22	.010	N 90 W	79	.000	.01	79	44 60 UP
5 FEB 81	4018708.06	4173035.85	145.23	.089	N 26 34 W	47	.001	.02	47	12 36 UP
24 MAR 81	4018708.14	4173035.81	145.25	.116	S 30 58 E	134	.000	-.03	134	14 25 DN
5 AUG 81	4018708.04	4173035.87	145.22	.022	N 26 34 W		.022			
5 AUG 81	4018708.06	4173035.86	145.22	.058	N 30 58 W	251	.000	-.01	251	9 44 DN
13 APR 82	4018708.11	4173035.83	145.21	.042	S 44 60 E	220	.000	.03	220	35 16 UP
19 NOV 82	4018708.08	4173035.86	145.24	.264	S 24 37 W	291	.000	-.03	291	6 29 DN
6 SEP 83	4018707.84	4173035.75	145.21	.014	S 44 60 E	199	.000	.02	199	54 44 UP
23 MAR 84	4018707.83	4173035.76	145.23	.110	N 5 12 E	287	.000		287	
4 JAN 85	4018707.94	4173035.77	145.23	.416	N 35 13 E	248	.001	-.45	248	47 14 DN
9 SEP 85	4018708.28	4173036.01	144.78	.086	N 54 28 W	142	.000	.04	142	24 56 UP
29 JAN 86	4018708.33	4173035.94	144.82	.050	N 53 8 E	363	.000	-.03	363	30 58 DN
27 JAN 87	4018708.36	4173035.98	144.79	.082	S 14 2 W	405	.000	-.06	405	36 2 DN
7 MAR 88	4018708.28	4173035.96	144.73	.111	S 10 18 W	476	.000	.10	476	41 49 UP
26 JUN 89	4018708.17	4173035.94	144.83	.089	N 26 34 W	276	.000	-.09	276	45 11 DN
29 MAR 90	4018708.25	4173035.90	144.74	.050	S 53 8 E	606	.000	.01	606	11 19 UP
25 NOV 91	4018708.22	4173035.94	144.75	.053	N 21 48 E	267	.000	.01	267	10 31 UP
18 AUG 92	4018708.27	4173035.96	144.76							

***** TOTAL MOVEMENT VECTOR *****

HORIZONTAL MOVEMENT FROM 18 JUN 57 TO 18 AUG 92 2845 DAYS DIST = .264 FT BEARING = S 52 42 E

VERTICAL MOVEMENT FROM 19 JAN 76 TO 18 AUG 92 6056 DAYS DIST = -.56 FT

RESULTANT FROM 19 JAN 76 TO 18 AUG 92 6056 DAYS DIP = 56 DEG 49 MIN DN

COUNTY OF LOS ANGELES
DEPARTMENT OF PUBLIC WORKS

PROGRAM EK11AP
10/19/92

PORT BN Q 1A
FB 2485-028

DATE DA MON VR	COORDINATES		ELEV.	HORIZONTAL		MOVEMENT TIME DAYS	RATE FT/DA	VERTICAL ELEV DIFF	MVNT TIME DAYS	DIP	
	NORTH	EAST		DIST FT	BEARING DG MN					DG	MN
15 JAN 76	4018468.74	4173414.82	69.94		N 90	2					
17 JAN 76	4018468.74	4173414.82			N 90	2		-.01	2	90	DN
19 JAN 76	4018468.74	4173414.82	69.93	.020	N 90	58	.000		58		
17 MAR 76	4018468.74	4173414.84	69.93	.044	S 63 26 W	27	.001		27		
13 APR 76	4018468.72	4173414.80	69.93	.060	N 90	57	.001	.01	57	9	28 UP
9 JUN 76	4018468.72	4173414.86	69.94	.022	N 63 26 W	78	.000	-.03	78	53	18 DN
26 AUG 76	4018468.73	4173414.84	69.91	.010	N	67	.000	.04	67	75	58 UP
1 NOV 76	4018468.74	4173414.84	69.95	.044	S 26 34 E	70	.000	-.02	70	24	6 DN
10 JAN 77	4018468.70	4173414.86	69.93	.110	N 90	122	.000	.02	122	10	18 UP
12 MAY 77	4018468.70	4173414.75	69.95	.060	S 9 28 W	75	.000		75		
26 JUL 77	4018468.64	4173414.74	69.95	.014	S 44 60 W	112	.000	-.04	112	70	32 DN
15 NOV 77	4018468.63	4173414.73	69.91	.104	N 73 18 E	72	.001	.11	72	46	30 UP
26 JAN 78	4018468.66	4173414.83	70.02	.342	S 37 52 W	273	.001				
26 OCT 78	4018468.39	4173414.62		.076	S 23 12 W	6	.012				
1 NOV 78	4018468.32	4173414.59		.028	N 44 60 W	13	.002				
14 NOV 78	4018468.34	4173414.57		.064	S 51 20 W	22	.002				
6 DEC 78	4018468.30	4173414.52		.466	S 35 24 W	145	.003				
30 APR 79	4018467.92	4173414.25		1.944	S 30 15 W	184	.010				
31 OCT 79	4018466.24	4173413.27		.632	S 31 26 W	43	.014				
13 DEC 79	4018465.70	4173412.94		1.382	S 31 23 W	69	.020				
20 FEB 80	4018464.52	4173412.22		1.605	S 43 44 W	64	.025				
24 APR 80	4018463.36	4173411.11		.244	S 34 60 W	21	.011				
15 MAY 80	4018463.16	4173410.97		.439	S 41 18 W	89	.004				
12 AUG 80	4018462.83	4173410.68		.685	S 33 41 W	177	.003	-.97	1106	7	3 DN
5 FEB 81	4018462.26	4173410.30	69.05	.206	S 39 6 W	47	.004	-.33	47	58	DN
24 MAR 81	4018462.10	4173410.17	68.72								

COUNTY OF LOS ANGELES
DEPARTMENT OF PUBLIC WORKSPORT BN Q 1A
FB 2485-028

DATE DA MON YR	COORDINATES		ELEV.	DIST FT	HORIZONTAL BEARING DG MN		MOVEMENT TIME DAYS	RATE FT/DA	VERTICAL ELEV DIFF	MVNT TIME DAYS	DIP	
	NORTH	EAST									DG MN	
24 MAR 81	10	17	68.72	.218	S 15 57 W		134	.001	.21	134	43 53	UP
5 AUG 81	4018461.89	4173410.11	68.93	.102	S 29 3 W		232	.000	-.26	132	68 24	DN
25 MAR 82	4018461.80	4173410.06	68.67	.148	S 70 21 W		239	.000	.21	239	54 42	UP
19 NOV 82	4018461.75	4173409.92	68.88	1.356	S 29 35 W		291	.004	.19	291	7 58	UP
6 SEP 83	4018460.57	4173409.25	69.07	.396	S 33 41 W		199	.001	.09	199	12 47	UP
23 MAR 84	4018460.24	4173409.03	69.16	.344	S 25 49 W		287	.001	.05	287	8 15	UP
4 JAN 85	4018459.93	4173408.88	69.21	.042	S 44 60 E		248	.000	.07	248	58 47	UP
9 SEP 85	4018459.90	4173408.91	69.28	.053	S 68 12 W		142	.000	.07	142	52 26	UP
29 JAN 86	4018459.88	4173408.86	69.35	.418	N 56 41 E		363	.001	.02	363	2 44	UP
27 JAN 87	4018460.11	4173409.21	69.37	.530	S 47 17 W		405	.001	-.26	405	26 6	DN
7 MAR 88	4018459.75	4173408.82	69.11	.241	S 29 45 W		476	.000	.09	476	20 25	UP
26 JUN 89	4018459.54	4173408.70	69.20	.050	N 11 19 E		276	.000	.29	276	80 2	UP
29 MAR 90	4018459.59	4173408.71	69.49	.072	N 56 19 E		606	.000	-.23	606	72 36	DN
25 NOV 91	4018459.63	4173408.77	69.26	.067	S 63 26 W		267	.000	-.54	267	82 55	DN
18 AUG 92	4018459.60	4173408.71	68.72									

***** TOTAL MOVEMENT VECTOR *****

HORIZONTAL MOVEMENT FROM 15 JAN 76 TO 18 AUG 92 6060 DAYS DIST = 10.994 FT BEARING = S 33 46 W
VERTICAL MOVEMENT FROM 17 JAN 76 TO 18 AUG 92 6058 DAYS DIST = -1.22 FT
RESULTANT FROM 17 JAN 76 TO 18 AUG 92 6058 DAYS DIP = 6 DEG 20 MIN DN

COUNTY OF LOS ANGELES
DEPARTMENT OF PUBLIC WORKS

PORT BN Q 2
FB 949-199

DATE DA MON YR	COORDINATES NORTH	EAST	ELEV.	DIST FT	HORIZONTAL BEARING DG MN	MOVEMENT TIME DAYS	RATE FT/DA	VERTICAL ELEV DIFF	VERTICAL ELEV DIFF	MOVNT TIME DAYS	DIP DG MN
18 JUN 57	4018228.60	4173796.47	26029+21.81	4.076	S 31 40 W	6789	.000				
19 JAN 76	4018225.13	4173794.33	69.28	.100	S 53 8 W	58	.001	-.02		58	11 19 DN
17 MAR 76	4018225.07	4173794.25	69.26	.070	S 44 60 W	27	.002	-.01		27	8 3 DN
13 APR 76	4018225.02	4173794.20	69.25	.020	N 90 E	57	.000			57	
9 JUN 76	4018225.02	4173794.22	69.25	.070	S 44 60 W	78	.000	-.03		78	22 59 DN
26 AUG 76	4018224.97	4173794.17	69.22	.128	N 38 40 E	67	.001	.04		67	17 21 UP
1 NOV 76	4018225.07	4173794.25	69.26	.264	S 37 18 W	70	.003	-.03		70	6 29 DN
10 JAN 77	4018224.86	4173794.09	69.23	.277	S 64 22 W	122	.002	-.02		122	4 7 DN
12 MAY 77	4018224.74	4173793.84	69.21	.044	S 26 34 W	76	.000	.01		76	12 36 UP
27 JUL 77	4018224.70	4173793.82	69.22	.178	S 38 9 W	111	.001	-.13		111	36 8 DN
15 NOV 77	4018224.56	4173793.71	69.09	.350	S 36 52 W	72	.004	.09		72	14 25 UP
26 JAN 78	4018224.28	4173793.50	2.60 = 3.84	3.494	S 43 9 W	273	.012				
26 OCT 78	4018221.73	4173791.11		.402	S 34 52 W	6	.067				
1 NOV 78	4018221.40	4173790.88		.223	S 63 26 W	13	.017				
14 NOV 78	4018221.30	4173790.68	3.39 = 5.048	.297	S 42 16 W	22	.013				
6 DEC 78	4018221.08	4173790.48		4.143	S 41 46 W	145	.028				
30 APR 79	4018217.99	4173787.72		5.204	S 39 47 W	184	.028				
31 OCT 79	4018213.99	4173784.39	2.39 = 3.758	.992	S 40 55 W	43	.023				
13 DEC 79	4018213.24	4173783.74		2.765	S 38 59 W	69	.040				
20 FEB 80	4018211.09	4173782.00		4.075	S 41 7 W	64	.063				
24 APR 80	4018208.02	4173779.32		.500	S 36 52 W	21	.023				
15 MAY 80	4018207.62	4173779.02	1.58 = 2.549	1.058	S 39 15 W	89	.011				
12 AUG 80	4018206.80	4173778.35		.990	S 38 2 W	177	.005	-2.97		1106	7 1 DN
5 FEB 81	4018206.02	4173777.74	66.21	.292	S 51 57 W	47	.006	-.15		47	27 11 DN
24 MAR 81	4018205.84	4173777.51	66.06	.393	S 27 13 W	134	.002	-.09		134	12 53 DN
5 AUG 81	4018205.49	4173777.33	65.97								

352

1.31 1.62-1.66 1.80

0.557 in/day

17.51 14.51-22.71

19.92 17.15

25.91 ft

22.58 19.27

29.68

74 = 11090

COUNTY OF LOS ANGELES
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PORT BN Q 3
FB 949-199

DATE DA MON YR	COORDINATES NORTH	EAST	ELEV.	DIST FT	HORIZONTAL BEARING DG MN	MOVEMENT TIME DAYS	RATE FT/DA	VERTICAL ELEV DIFF	MVNT TIME DAYS	DIP DG MN
18 JUN 57	4017902.97	4174312.72	82.71	2.696	S 32 16 W	6787	.000			
17 JAN 76	4017900.69	4174311.28	82.72		N 90	3		.01	3	90 UP
20 JAN 76	4017900.69	4174311.28	82.70	.050	N 36 52 E	57	.000	-.02	57	21 48 DN
17 MAR 76	4017900.73	4174311.31	82.86	.082	S 75 58 W	27	.003	.16	27	62 44 UP
13 APR 76	4017900.71	4174311.23	82.69	.070	N 90 E	57	.001	-.17	57	67 37 DN
9 JUN 76	4017900.71	4174311.30	82.67	.050	S 78 41 W	78	.000	-.02	78	21 25 DN
26 AUG 76	4017900.70	4174311.25	82.70	.067	N 63 26 E	67	.001	.03	67	24 6 UP
1 NOV 76	4017900.73	4174311.31	82.67	.214	S 52 36 W	70	.003	-.03	70	7 59 DN
10 JAN 77	4017900.60	4174311.14	82.66	.120	N 90 W	122	.000	-.01	122	4 46 DN
12 MAY 77	4017900.60	4174311.02	82.66	.080	S 29 45 W	75	.001		75	
26 JUL 77	4017900.53	4174310.98	82.58	.072	S 74 3 W	112	.000	-.08	112	47 42 DN
15 NOV 77	4017900.51	4174310.91	82.63	.120	S 41 38 W	72	.001	.05	72	22 33 UP
26 JAN 78	4017900.42	4174310.83	82.63	1.647	S 56 53 W	273	.006			
26 OCT 78	4017899.52	4174309.45		.290	S 46 24 W	6	.048			
1 NOV 78	4017899.32	4174309.24		.121	S 80 32 W	13	.009			
14 NOV 78	4017899.30	4174309.12		.194	S 55 29 W	22	.008			
6 DEC 78	4017899.19	4174308.96		2.593	S 48 45 W	145	.017			
30 APR 79	4017897.48	4174307.01		4.285	S 44 15 W	227	.018			
13 DEC 79	4017894.41	4174304.02		1.874	S 43 29 W	69	.027			
20 FEB 80	4017893.05	4174302.73		2.658	S 44 60 W	64	.041			
24 APR 80	4017891.17	4174300.85		.794	S 68 36 W	21	.037			
15 MAY 80	4017890.88	4174300.11		.571	S 4 1 W	89	.006			
12 AUG 80	4017890.31	4174300.07		.664	S 46 13 W	177	.003	-3.16	1106	11 34 DN
5 FEB 81	4017889.85	4174299.59	79.47	.178	S 63 26 W	47	.003	-.11	47	31 35 DN
24 MAR 81	4017889.77	4174299.43	79.36	.300	S 29 59 W	134	.002	-.01	134	1 54 DN
5 AUG 81	4017889.51	4174299.28	79.35							

1.46 = 3.112
2.44 = 3.180

1.26 = 1.825

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DATE DA MON YR	COORDINATES NORTH EAST	ELEV.	DIST FT	HORIZONTAL BEARING DG MN	MOVEMENT TIME DAYS	RATE FT/DA	VERTICAL ELEV DIFF	MVMT TIME DAYS	DIP DG MN
5 AUG 81	51 { 54 } 28	79.35	.181	N 83 40 W	232	.000	-.05	232	15 26 DN
25 MAR 82	4017889.53 { 265 } 10	79.30	.234	S 19 59 W	239	.000	-.05	239	12 3 DN
19 NOV 82	4017889.31 { 54 } 02	79.25	1.400	S 45 35 W	291	.004	-.13	291	5 18 DN
6 SEP 83	4017888.33 { 51 } 02	79.12	.438	S 55 13 W	199	.002	-.09	199	11 36 DN
23 MAR 84	4017888.08 { 51 } 66	79.03	.368	S 40 36 W	287	.001	-.04	287	6 11 DN
4 JAN 85	4017887.80 { 51 } 42	78.99	.098	S 66 2 W	248	.000	-.03	248	16 56 DN
9 SEP 85	4017887.76 { 51 } 33	78.96	.067	N 63 26 W	142	.000	.03	142	24 6 UP
29 JAN 86	4017887.79 { 51 } 27	78.99	.130	S 32 28 W	363	.000	-.02	363	8 43 DN
27 JAN 87	4017887.68 { 51 } 20	78.97	.085	N 69 27 W	405	.000	-.17	405	63 19 DN
7 MAR 88	4017887.71 { 51 } 12	78.80	.134	S 26 34 W	476	.000	.04	476	16 36 UP
26 JUN 89	4017887.59 { 51 } 06	78.84	.100	S	276	.000	.41	276	76 18 UP
29 MAR 90	4017887.49 { 51 } 06	79.25	.133	N 12 59 W	606	.000	-.25	606	61 55 DN
25 NOV 91	4017887.62 { 51 } 03	79.00	.086	S 54 28 W	267	.000	-.59	267	81 42 DN
18 AUG 92	4017887.57 { 51 } 96	78.41							

***** TOTAL MOVEMENT VECTOR *****

HORIZONTAL MOVEMENT FROM 18 JUN 57 TO 18 AUG 92 2845 DAYS DIST = 22.034 FT BEARING = S 45 40 W
 VERTICAL MOVEMENT FROM 17 JAN 76 TO 18 AUG 92 6058 DAYS DIST = -4.30 FT
 RESULTANT FROM 17 JAN 76 TO 18 AUG 92 6058 DAYS DIP = 12 DEG 29 MIN DN

17
12

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PORT BN Q 4
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DATE DA MON YR	COORDINATES	
	NORTH	EAST
18 JUN 57	4017656.85	4174702.92
21 JAN 63	4017657.21	4174700.74

ELEV.

DIST FT	HORIZONTAL BEARING		MOVEMENT TIME DAYS	RATE FT/DA	VERTICAL ELEV DIFF	MVNT TIME DAYS	DIP DG MN
	DG MN	DG MN					
2.209	N 80	37 W	2043	.001			

***** TOTAL MOVEMENT VECTOR *****

HORIZONTAL MOVEMENT FROM 18 JUN 57 TO 21 JAN 63 2043 DAYS DIST = 2.209 FT BEARING = N 80 37 W

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PORT BN Q 4A
FB 2485-008

DATE DA MON YR	COORDINATES NORTH	EAST	ELEV.	DIST FT	HORIZONTAL BEARING DG MN	MOVEMENT TIME DAYS	RATE FT/DA	VERTICAL ELEV DIFF	MVNT TIME DAYS	DIP DG MN
15 JAN 76	4017657.21	4174700.74	215.95		N 90	5				
20 JAN 76	4017657.21	4174700.74	215.95		N 90	28			28	
17 FEB 76	4017657.21	4174700.74	215.95	.290	N 86 3 W	328	.000	.04	328	7 50 UP
10 JAN 77	4017657.23	4174700.45	215.99	.171	N 83 17 W	122	.001	.03	122	9 56 UP
12 MAY 77	4017657.25	4174700.28	216.02		N 90	75		.03	75	90 UP
26 JUL 77	4017657.25	4174700.28	216.05	.158	N 71 34 W	113	.001	.01	113	3 37 UP
16 NOV 77	4017657.30	4174700.13	216.06	.041	N 75 58 W	72	.000	-.01	72	13 38 DN
27 JAN 78	4017657.31	4174700.09	216.05							

***** TOTAL MOVEMENT VECTOR *****

HORIZONTAL MOVEMENT	FROM 15 JAN 76 TO 27 JAN 78	743 DAYS	DIST =	.657 FT	BEARING = N 81 15 W
VERTICAL MOVEMENT	FROM 20 JAN 76 TO 27 JAN 78	738 DAYS	DIST =	.10 FT	
RESULTANT	FROM 20 JAN 76 TO 27 JAN 78	738 DAYS	DIP =	8 DEG 39 MIN	UP

COUNTY OF LOS ANGELES
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PROGRAM EK11AP
10/19/92

PORT BN Q 4B
FB 2485-008

DATE		COORDINATES		ELEV.	DIST FT	HORIZONTAL BEARING DG MN	MOVEMENT TIME DAYS	RATE FT/DA	VERTICAL ELEV DIFF	MVNT TIME DAYS	DIP
DA	MON YR	NORTH	EAST								
15	JAN 76	4017677.83	4174668.10			N 90	5				
20	JAN 76	4017677.83	4174668.10	201.00		N 90	28			28	
17	FEB 76	4017677.83	4174668.10	201.00	.178	S 63 26 W	328	.000	.02	328	6 23 UP
10	JAN 77	4017677.75	4174667.94	201.02	.130	N 90 W	122	.001	.03	122	12 59 UP
12	MAY 77	4017677.75	4174667.81	201.05		N 90	75		.02	75	90 UP
26	JUL 77	4017677.75	4174667.81	201.07	.193	N 68 45 W	113	.001	.02	113	5 55 UP
16	NOV 77	4017677.82	4174667.63	201.09	.053	N 68 12 W	72	.000	-.01	72	10 31 DN
27	JAN 78	4017677.84	4174667.58	201.08							

***** TOTAL MOVEMENT VECTOR *****

HORIZONTAL MOVEMENT	FROM 15 JAN 76 TO 27 JAN 78	743 DAYS	DIST =	.520 FT	BEARING = N 88 54 W
VERTICAL MOVEMENT	FROM 20 JAN 76 TO 27 JAN 78	738 DAYS	DIST =	.08 FT	
RESULTANT	FROM 20 JAN 76 TO 27 JAN 78	738 DAYS	DIP =	8 DEG 45 MIN	UP

COUNTY OF LOS ANGELES
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PORT BN Q 5
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PROGRAM EK11AP
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DATE DA MON YR	COORDINATES		ELEV.	DIST FT	HORIZONTAL BEARING DG MN	MOVEMENT TIME DAYS	RATE FT/DA	VERTICAL ELEV DIFF	VERTICAL MVNT TIME DAYS	DIP DG MN
15 JAN 76	4017629.70	4174744.37	231.09		N 90	5				
20 JAN 76	4017629.70	4174744.37	231.10		N 90	28		.01	28	90 UP
17 FEB 76	4017629.70	4174744.37	231.09		N 90	30		-.01	30	90 DN
18 MAR 76	4017629.70	4174744.37	231.09		N 90	28			28	
15 APR 76	4017629.70	4174744.37	231.09		N 90	55		.02	55	90 UP
9 JUN 76	4017629.70	4174744.37	231.11	.060	N 90 W	78	.000		78	
26 AUG 76	4017629.70	4174744.31	231.11	.130	S 32 28 W	60	.002	.03	60	12 57 UP
25 OCT 76	4017629.59	4174744.24	231.14		N 90	77		-.01	77	90 DN
10 JAN 77	4017629.59	4174744.24	231.13	.181	N 83 40 W	122	.001	.03	122	9 24 UP
12 MAY 77	4017629.61	4174744.06	231.16		N 90	76		.02	76	90 UP
27 JUL 77	4017629.61	4174744.06	231.18	.126	N 71 34 W	112	.001	.01	112	4 31 UP
16 NOV 77	4017629.65	4174743.94	231.19	.044	S 63 26 W	72	.000	.01	72	12 36 UP
27 JAN 78	4017629.63	4174743.90	231.20	1.040	N 89 27 W	272	.003			
26 OCT 78	4017629.64	4174742.86		.020	N	6	.003	.08	278	4 23 UP
1 NOV 78	4017629.66	4174742.86	231.28	.139	S 68 58 W	13	.010		13	
14 NOV 78	4017629.61	4174742.73	231.28	.126	N 18 26 W	22	.005			
6 DEC 78	4017629.73	4174742.69		.794	N 84 13 W	145	.005	.15	167	9 58 UP
30 APR 79	4017629.81	4174741.90	231.43	.812	S 80 4 W	184	.004	.20	184	13 50 UP
31 OCT 79	4017629.67	4174741.10	231.63	.147	N 61 42 W	43	.003	.08	43	28 27 UP
13 DEC 79	4017629.74	4174740.97	231.71	.390	N 88 32 W	70	.005	.06	70	8 44 UP
21 FEB 80	4017629.75	4174740.58	231.77	.605	N 82 24 W	63	.009	.03	63	2 50 UP
24 APR 80	4017629.83	4174739.98	231.80	.080	N 82 52 W	21	.003	.03	21	20 25 UP
15 MAY 80	4017629.84	4174739.90	231.83	.210	S 84 34 W	89	.002	.05	89	13 20 UP
12 AUG 80	4017629.82	4174739.69	231.88	.210	S 87 16 W	65	.003	.04	65	10 46 UP
16 OCT 80	4017629.81	4174739.48	231.92	.072	S 56 19 W	33	.002		33	
18 NOV 80	4017629.77	4174739.42	231.92							

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PORT BN Q 5
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DATE DA MON YR	COORDINATES NORTH	EAST	ELEV.	DIST FT	HORIZONTAL BEARING DG MN	MOVEMENT TIME DAYS	RATE FT/DA	VERTICAL ELEV DIFF	MVNT TIME DAYS	DIP DG MN
18 NOV 80	77	42	231.92	.086	N 35 32 W	79	.001	.04	79	24 56 UP
5 FEB 81	4017629.84	4174739.37	231.96	.160	N 86 25 W	47	.003	.04	47	14 1 UP
24 MAR 81	4017629.85	4174739.21	232.00	.180	S 56 19 W	134	.001	.01	134	3 10 UP
5 AUG 81	4017629.75	4174739.06	232.01	.010	N		.010			
5 AUG 81	4017629.76	4174739.06	232.01	.205	N 60 57 W	251	.000	.05	251	13 39 UP
13 APR 82	4017629.86	4174738.88	232.06	.164	S 75 58 W	220	.000		220	
19 NOV 82	4017629.82	4174738.72	232.06	.622	S 85 23 W	291	.002	.14	291	12 41 UP
6 SEP 83	4017629.77	4174738.10	232.20	.219	N 65 46 W	199	.001	.08	199	20 2 UP
23 MAR 84	4017629.86	4174737.90	232.28	.231	S 82 34 W	287	.000	.23	287	44 45 UP
4 JAN 85	4017629.83	4174737.67	232.51	.085	S 69 27 W	248	.000	.04	248	25 5 UP
9 SEP 85	4017629.80	4174737.59	232.55	.120	N 85 14 W	142	.000	-.20	142	58 57 DN
29 JAN 86	4017629.81	4174737.47	232.35	.196	S 75 15 W	363	.000	.01	363	2 55 UP
27 JAN 87	4017629.76	4174737.28	232.36	.030	N	162	.000		162	
8 JUL 87	4017629.79	4174737.28	232.36	.044	N 63 26 W	243	.000	.02	243	24 6 UP
7 MAR 88	4017629.81	4174737.24	232.38	.110	N 84 48 W	476	.000	.05	476	24 21 UP
26 JUN 89	4017629.82	4174737.13	232.43	.031	N 71 34 W	276	.000		276	
29 MAR 90	4017629.83	4174737.10	232.43	.036	S 56 19 W	606	.000	.03	606	39 46 UP
25 NOV 91	4017629.81	4174737.07	232.46	.114	S 74 45 W	267	.000		267	
18 AUG 92	4017629.78	4174736.96	232.46							

***** TOTAL MOVEMENT VECTOR *****

HORIZONTAL MOVEMENT FROM 15 JAN 76 TO 18 AUG 92 6060 DAYS DIST = 7.410 FT BEARING = N 89 23 W
 VERTICAL MOVEMENT FROM 20 JAN 76 TO 18 AUG 92 6055 DAYS DIST = 1.37 FT
 RESULTANT FROM 20 JAN 76 TO 18 AUG 92 6055 DAYS DIP = 10 DEG 28 MIN UP

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Fixed point allowed to float.

DATE DA MON YR	COORDINATES		ELEV.	DIST FT	HORIZONTAL BEARING DG MN	MOVEMENT TIME DAYS	RATE FT/DA	VERTICAL ELEV DIFF	MVNT TIME DAYS	DIP DG MN
26 OCT 78	4018895.32	4173287.46	167.18	.060	N 80 32 W	6	.010			
1 NOV 78	4018895.33	4173287.40		.102	N 60 57 W	13	.007		19	
14 NOV 78	4018895.38	4173287.31	167.18	.040	N 90 W	167	.000	-.03	167	36 52 DN
30 APR 79	4018895.38	4173287.27	167.15	.300	N 60 1 E	184	.001	.04	184	7 35 UP
31 OCT 79	4018895.53	4173287.53	167.19	.100	S 36 52 E	43	.002	-.04	43	21 48 DN
13 DEC 79	4018895.45	4173287.59	167.15	.106	N 48 49 E	69	.001	.05	69	25 11 UP
20 FEB 80	4018895.52	4173287.67	167.20	.354	S 73 37 W	64	.005	-.05	64	8 2 DN
24 APR 80	4018895.42	4173287.33	167.15	.080	N 60 15 E	21	.003	.01	21	7 4 UP
15 MAY 80	4018895.46	4173287.40	167.16	.248	N 49 54 E	89	.002	.02	89	4 36 UP
12 AUG 80	4018895.62	4173287.59	167.18	.094	S 18 26 W	65	.001	-.01	65	6 1 DN
16 OCT 80	4018895.53	4173287.56	167.17	.082	S 14 2 W	33	.002	-.01	33	6 55 DN
18 NOV 80	4018895.45	4173287.54	167.16	.078	S 50 12 W	79	.000	.01	79	7 18 UP
5 FEB 81	4018895.40	4173287.48	167.17	.085	N 20 33 W	47	.001	.01	47	6 40 UP
24 MAR 81	4018895.48	4173287.45	167.18	.107	S 68 12 E	134	.000	-.01	134	5 18 DN
5 AUG 81	4018895.44	4173287.55	167.17	.092	N 49 24 W	251	.000	-.01	251	6 11 DN
13 APR 82	4018895.50	4173287.48	167.16	.053	S 21 48 W	220	.000		220	
19 NOV 82	4018895.45	4173287.46	167.16	.208	S 16 42 W	291	.000	.01	291	2 44 UP
6 SEP 83	4018895.25	4173287.40	167.17	.014	N 44 60 W	199	.000	.01	199	35 16 UP
23 MAR 84	4018895.26	4173287.39	167.18	.106	N 41 11 E	287	.000	-.02	287	10 39 DN
4 JAN 85	4018895.34	4173287.46	167.16	.202	N 57 6 E	248	.000	.02	248	5 38 UP
9 SEP 85	4018895.45	4173287.63	167.18	.086	N 54 28 W	141	.000		141	
28 JAN 86	4018895.50	4173287.56	167.18	.094	N 57 60 E	364	.000	-.02	364	11 58 DN
27 JAN 87	4018895.55	4173287.64	167.16							

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***** TOTAL MOVEMENT VECTOR *****

HORIZONTAL MOVEMENT	FROM 26 OCT 78 TO 27 JAN 87	3015 DAYS	DIST =	.292 FT	BEARING = N 38 03 E
VERTICAL MOVEMENT	FROM 26 OCT 78 TO 27 JAN 87	3015 DAYS	DIST =	-.02 FT	
RESULTANT	FROM 26 OCT 78 TO 27 JAN 87	3015 DAYS	DIP =	3 DEG 55 MIN	DN

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PORT BN TBM 31A
FB 4205-191

DATE	COORDINATES	ELEV.	DIST	HORIZONTAL BEARING	MOVEMENT TIME	RATE	VERTICAL ELEV DIFF	MOVNT TIME	DIP
DA MON YR	NORTH EAST		FT	DG MN	DAYS	FT/DA		DAYS	DG MN
7 MAR 88	4018892.73 4173314.85	166.51							

***** TOTAL MOVEMENT VECTOR *****

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PORT BN TBM 31B
FB 4205-228

DATE	COORDINATES	ELEV.
DA MON YR	NORTH EAST	
26 JUN 89	4018886.05 4173325.18	166.58

VERTICAL	DIP
ELEV	DG MN
DIFF	

MOVEMENT	RATE
TIME	FT/DA
DAYS	

HORIZONTAL	BEARING
DIST	DG MN
FT	

***** TOTAL MOVEMENT VECTOR *****

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PORT BN TBM 31C
FB 4205-267

DATE DA MON YR	COORDINATES NORTH	EAST	ELEV.	DIST FT	HORIZONTAL BEARING DG MN	MOVEMENT TIME DAYS	RATE FT/DA	VERTICAL ELEV DIFF	MOVNT TIME DAYS	DIP DG MN
29 MAR 90	4018881.86	4173319.07	167.67	.085	N 69 27 E	606	.000	.05	606	30 20 UP
25 NOV 91	4018881.89	4173319.15	167.72	.040	N	267	.000	-.02	267	26 34 DN
18 AUG 92	4018881.93	4173319.15	167.70							

***** TOTAL MOVEMENT VECTOR *****

HORIZONTAL MOVEMENT	FROM 29 MAR 90 TO 18 AUG 92	873 DAYS	DIST =	.106 FT	BEARING = N 48 49 E
VERTICAL MOVEMENT	FROM 29 MAR 90 TO 18 AUG 92	873 DAYS	DIST =	.03 FT	
RESULTANT	FROM 29 MAR 90 TO 18 AUG 92	873 DAYS	DIP =	15 DEG 46 MIN	UP

COUNTY OF LOS ANGELES
DEPARTMENT OF PUBLIC WORKS

PORT BN WF
FB 2849-136

PROGRAM EK11AP
10/19/92

DATE DA MON YR	COORDINATES		ELEV.	DIST FT	HORIZONTAL BEARING DG MN	MOVEMENT TIME DAYS	RATE FT/DA	VERTICAL ELEV DIFF	MTNT TIME DAYS	DIP DG MN
26 OCT 78	4019015.21	4173519.15	213.35	.058	N 59 2 W	6	.009			
1 NOV 78	4019015.24	4173519.10		.085	N 69 27 W	13	.006	.01	19	3 60 UP
14 NOV 78	4019015.27	4173519.02	213.36							
30 APR 79	4019015.29	4173519.01	213.13	.022	N 26 34 W	167	.000	-.23	167	84 27 DN
31 OCT 79	4019015.32	4173519.28	213.37	.271	N 83 40 E	184	.001	.24	184	41 27 UP
13 DEC 79	4019015.33	4173519.34	213.32	.060	N 80 32 E	43	.001	-.05	43	39 25 DN
24 APR 80	4019015.34	4173519.08	213.32	.260	N 87 48 W	133	.001		133	
15 MAY 80	4019015.34	4173519.15	213.34	.070	N 90 E	21	.003	.02	21	15 57 UP
12 AUG 80	4019015.48	4173519.35	213.36	.244	N 55 E	89	.002	.02	89	4 41 UP
5 FEB 81	4019015.28	4173519.25	213.35	.223	S 26 34 W	177	.001	-.01	177	2 34 DN
24 MAR 81	4019015.36	4173519.22	213.36	.085	N 20 33 W	47	.001	.01	47	6 40 UP
5 AUG 81	4019015.27	4173519.23	213.35	.090	S 6 20 E	134	.000	-.01	134	6 18 DN
13 APR 82	4019015.40	4173519.27	213.33	.136	N 17 6 E	251	.000	-.02	251	8 22 DN
19 NOV 82	4019015.34	4173519.25	213.34	.063	S 18 26 W	220	.000	.01	220	8 59 UP
6 SEP 83	4019015.12	4173519.08	213.34	.278	S 37 42 W	291	.000		291	
23 MAR 84	4019015.17	4173519.08	213.34	.050	N	199	.000		199	
9 SEP 85	4019015.30	4173519.36	213.33	.308	N 65 6 E	535	.000	-.01	535	1 51 DN
28 JAN 86	4019015.34	4173519.30	213.33	.072	N 56 19 W	141	.000		141	
27 JAN 87	4019015.39	4173519.35	213.32	.070	N 44 60 E	364	.000	-.01	364	8 3 DN
7 MAR 88	4019015.30	4173519.32	213.27	.094	S 18 26 W	405	.000	-.05	405	27 47 DN
26 JUN 89	4019015.22	4173519.28	213.33	.089	S 26 34 W	476	.000	.06	476	33 51 UP
29 MAR 90	4019015.25	4173519.18	213.32	.104	N 73 18 W	276	.000	-.01	276	5 28 DN
25 NOV 91	4019015.28	4173519.30	213.32	.123	N 75 58 E	606	.000		606	
18 AUG 92	4019015.37	4173519.32	213.33	.092	N 12 32 E	267	.000	.01	267	6 11 UP

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102 E

15N
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COUNTY OF LOS ANGELES
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PROGRAM EK11AP
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***** TOTAL MOVEMENT VECTOR *****

HORIZONTAL MOVEMENT	FROM 26 OCT 78 TO 18 AUG 92	5045 DAYS	DIST =	.233 FT	BEARING = N 46 44 E
VERTICAL MOVEMENT	FROM 26 OCT 78 TO 18 AUG 92	5045 DAYS	DIST =	-.02 FT	
RESULTANT	FROM 26 OCT 78 TO 18 AUG 92	5045 DAYS	DIP =	4 DEG 54 MIN	DN

COUNTY OF LOS ANGELES
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PORT BN WF 1
FB 2849-090

DATE DA MON YR	COORDINATES		ELEV.	HORIZONTAL		MOVEMENT TIME DAYS	RATE FT/DA	VERTICAL ELEV DIFF	MVNT TIME DAYS	DIP DG MN
	NORTH	EAST		DIST FT	BEARING DG MN					
26 OCT 78	4019125.70	4173528.12	210.45	.070	N 81 52 W	6	.011			
1 NOV 78	4019125.71	4173528.05		.086	N 54 28 W	13	.006	.02	19	7 29 UP
14 NOV 78	4019125.76	4173527.98	210.47							
30 APR 79	4019125.77	4173527.96	210.44	.022	N 63 26 W	167	.000	-.03	167	53 18 DN
31 OCT 79	4019125.77	4173528.28	210.48	.320	N 90 E	184	.001	.04	184	7 8 UP
13 DEC 79	4019125.79	4173528.26	210.43	.028	N 44 60 W	43	.000	-.05	43	60 30 DN
24 APR 80	4019125.81	4173528.03	210.44	.230	N 85 2 W	133	.001	.01	133	2 29 UP
15 MAY 80	4019125.83	4173528.12	210.46	.092	N 77 28 E	21	.004	.02	21	12 14 UP
12 AUG 80	4019125.99	4173528.34	210.46	.272	N 53 58 E	89	.003		89	
5 FEB 81	4019125.75	4173528.22	210.46	.268	S 26 34 W	177	.001		177	
24 MAR 81	4019125.83	4173528.18	210.47	.089	N 26 34 W	47	.001	.01	47	6 23 UP
5 AUG 81	4019125.79	4173528.22	210.46	.056	S 44 60 E	134	.000	-.01	134	10 2 DN
13 APR 82	4019125.84	4173528.21	210.43	.050	N 11 19 W	251	.000	-.03	251	30 28 DN
19 NOV 82	4019125.79	4173528.19	210.44	.053	S 21 48 W	220	.000	.01	220	10 31 UP
6 SEP 83	4019125.57	4173528.02	210.45	.278	S 37 42 W	291	.000	.01	291	2 3 UP
23 MAR 84	4019125.66	4173528.02	210.44	.090	N	199	.000	-.01	199	6 20 DN
9 SEP 85	4019125.79	4173528.32	210.45	.326	N 66 34 E	535	.000	.01	535	1 45 UP
28 JAN 86	4019125.81	4173528.27	210.45	.053	N 68 12 W	141	.000		141	
27 JAN 87	4019125.89	4173528.33	210.44	.100	N 36 52 E	364	.000	-.01	364	5 43 DN
7 MAR 88	4019125.79	4173528.28	210.38	.111	S 26 34 W	405	.000	-.06	405	28 13 DN
26 JUN 89	4019125.71	4173528.23	210.45	.094	S 32 W	476	.000	.07	476	36 35 UP
29 MAR 90	4019125.75	4173528.20	210.44	.050	N 36 52 W	276	.000	-.01	276	11 19 DN
25 NOV 91	4019125.77	4173528.26	210.44	.063	N 71 34 E	606	.000		606	
18 AUG 92	4019125.87	4173528.27	210.44	.100	N 5 43 E	267	.000		267	

COUNTY OF LOS ANGELES
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PORT BN WF 1
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***** TOTAL MOVEMENT VECTOR *****

HORIZONTAL MOVEMENT	FROM 26 OCT 78 TO 18 AUG 92	5045 DAYS	DIST =	.226 FT	BEARING = N 41 25 E
VERTICAL MOVEMENT	FROM 26 OCT 78 TO 18 AUG 92	5045 DAYS	DIST =	-.01 FT	
RESULTANT	FROM 26 OCT 78 TO 18 AUG 92	5045 DAYS	DIP =	2 DEG 32 MIN	DN

COUNTY OF LOS ANGELES
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PORT BN WF 2
FB 2899-194

DATE DA MON YR	COORDINATES NORTH EAST	ELEV.	DIST FT	HORIZONTAL BEARING DG MN	MOVEMENT TIME DAYS	RATE FT/DA	VERTICAL ELEV DIFF	MVNT TIME DAYS	DIP DG MN
19 FEB 74	4019001.22 4173469.67	207.45	.133	N 12 59 W	1364	.000	.04	1364	16 41 UP
14 NOV 77	4019001.35 4173469.64	207.49	.194	S 55 29 E	346	.000	-.04	346	11 38 DN
26 OCT 78	4019001.24 4173469.80	207.45	.050	N 53 8 W	6	.008			
1 NOV 78	4019001.27 4173469.76		.089	N 63 26 W	13	.006	.01	19	4 7 UP
14 NOV 78	4019001.31 4173469.68	207.46	.022	N 63 26 W	167	.000	-.03	167	53 18 DN
30 APR 79	4019001.32 4173469.66	207.43	.284	N 79 53 E	184	.001	.03	184	6 1 UP
31 OCT 79	4019001.37 4173469.94	207.46	.028	S 44 60 E	43	.000	-.05	43	60 30 DN
13 DEC 79	4019001.35 4173469.96	207.41	.240	N 87 37 W	133	.001	.01	133	2 23 UP
24 APR 80	4019001.36 4173469.72	207.42	.094	N 71 34 E	21	.004	.03	21	17 33 UP
15 MAY 80	4019001.39 4173469.81	207.45	.230	N 55 37 E	89	.002	.01	89	2 29 UP
12 AUG 80	4019001.52 4173470.00	207.46	.228	S 23 12 W	177	.001	-.01	177	2 30 DN
5 FEB 81	4019001.31 4173469.91	207.45	.098	N 23 58 W	47	.002	.02	47	11 29 UP
24 MAR 81	4019001.40 4173469.87	207.47	.090	S 6 20 E	134	.000	-.02	134	12 27 DN
5 AUG 81	4019001.31 4173469.88	207.45	.139	N 21 2 E	251	.000	-.02	251	8 10 DN
13 APR 82	4019001.44 4173469.93	207.43	.067	S 26 34 W	220	.000		220	
19 NOV 82	4019001.38 4173469.90	207.43	.266	S 34 17 W	291	.000	.02	291	4 18 UP
6 SEP 83	4019001.16 4173469.75	207.45	.036	N 33 41 W	199	.000	-.01	199	15 30 DN
23 MAR 84	4019001.19 4173469.73	207.44	.304	N 62 35 E	535	.000		535	
9 SEP 85	4019001.33 4173470.00	207.44	.064	N 38 40 W	141	.000		141	
28 JAN 86	4019001.38 4173469.96	207.44	.050	N 36 52 E	364	.000	-.01	364	11 19 DN
27 JAN 87	4019001.42 4173469.99	207.43	.094	S 18 26 W	405	.000	-.05	405	27 47 DN
7 MAR 88	4019001.33 4173469.96	207.38	.098	S 23 58 W	476	.000	.06	476	31 21 UP
26 JUN 89	4019001.24 4173469.92	207.44	.078	N 50 12 W	276	.000	-.01	276	7 18 DN
29 MAR 90	4019001.29 4173469.86	207.43	.072	S 74 3 E	606	.000	.01	606	7 49 UP
25 NOV 91	4019001.27 4173469.93	207.44	.131	N 8 45 E	267	.000		267	
18 AUG 92	4019001.40 4173469.95	207.44							

COUNTY OF LOS ANGELES
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PORT BN WF 2
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***** TOTAL MOVEMENT VECTOR *****

HORIZONTAL MOVEMENT	FROM 19 FEB 74 TO 18 AUG 92	6755 DAYS	DIST =	.332 FT	BEARING = N 57 16 E
VERTICAL MOVEMENT	FROM 19 FEB 74 TO 18 AUG 92	6755 DAYS	DIST =	-.01 FT	
RESULTANT	FROM 19 FEB 74 TO 18 AUG 92	6755 DAYS	DIP =	1 DEG 43 MIN	DN

COUNTY OF LOS ANGELES
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PORT BN WF 3
FB 4319-038

DATE DA MON YR	COORDINATES		ELEV.	DIST FT	HORIZONTAL BEARING DG MN	MOVEMENT TIME DAYS	RATE FT/DA	VERTICAL ELEV DIFF	MVNT TIME DAYS	DIP DG MN
26 OCT 78	4018972.67	4173448.66	204.51	.050	N 53 8 W	6	.008			
1 NOV 78	4018972.70	4173448.62		.089	N 63 26 W	13	.006	.01	19	4 7 UP
14 NOV 78	4018972.74	4173448.54	204.52	.020	N 90 W	167	.000	-.03	167	56 19 DN
30 APR 79	4018972.74	4173448.52	204.49	.269	N 74 56 E	184	.001	.03	184	6 21 UP
31 OCT 79	4018972.81	4173448.78	204.52	.050	S 36 52 E	43	.001	-.06	43	50 12 DN
13 DEC 79	4018972.77	4173448.81	204.46	.230	N 90 W	133	.001	.04	133	9 52 UP
24 APR 80	4018972.77	4173448.58	204.50	.076	N 66 48 E	21	.003	.02	21	14 43 UP
15 MAY 80	4018972.80	4173448.65	204.52	.238	N 56 59 E	89	.002	.04	89	9 31 UP
12 AUG 80	4018972.93	4173448.85	204.56	.053	S 21 48 W	65	.000	-.03	65	29 7 DN
16 OCT 80	4018972.88	4173448.83	204.53	.136	S 36 1 W	33	.004	.01	33	4 12 UP
18 NOV 80	4018972.77	4173448.75	204.54	.044	S 26 34 W	79	.000	.01	79	12 36 UP
5 FEB 81	4018972.73	4173448.73	204.55	.082	N 14 2 W	47	.001	-.01	47	6 55 DN
24 MAR 81	4018972.81	4173448.71	204.54	.092	S 12 32 E	134	.000	-.03	134	18 1 DN
5 AUG 81	4018972.72	4173448.73	204.51	.130	N 22 37 E	251	.000	-.05	251	21 2 DN
13 APR 82	4018972.84	4173448.78	204.46	.076	S 23 12 W	220	.000	.	220	
19 NOV 82	4018972.77	4173448.75	204.46	.260	S 32 28 W	291	.000	.02	291	4 23 UP
6 SEP 83	4018972.55	4173448.61	204.48	.041	N 14 2 W	199	.000	.01	199	13 38 UP
23 MAR 84	4018972.59	4173448.60	204.49	.058	N 59 2 E	287	.000			
4 JAN 85	4018972.62	4173448.65		.219	N 65 46 E	248	.000			
9 SEP 85	4018972.71	4173448.85		.064	N 51 20 W	141	.000	-.01	676	2 14 DN
28 JAN 86	4018972.75	4173448.80	204.48	.067	N 63 26 E	364	.000	-.01	364	8 28 DN
27 JAN 87	4018972.78	4173448.86	204.47	.098	S 23 58 W	405	.000	-.03	405	16 56 DN
7 MAR 88	4018972.69	4173448.82	204.44	.107	S 21 48 W	476	.000	.07	476	33 1 UP
26 JUN 89	4018972.59	4173448.78	204.51	.078	N 50 12 W	276	.000		276	
29 MAR 90	4018972.64	4173448.72	204.51	.060	N 90 E	606	.000	-.02	606	18 26 DN
25 NOV 91	4018972.64	4173448.78	204.49							

COUNTY OF LOS ANGELES
DEPARTMENT OF PUBLIC WORKS

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DATE	COORDINATES	ELEV.	HORIZONTAL	MOVEMENT	RATE	VERTICAL	MOVNT	DIP
DA MON YR	NORTH	EAST	DIST	BEARING	FT/DA	ELEV	TIME	DG MN
			FT	DG MN		DIFF	DAYS	
25 NOV 91	64	78						
18 AUG 92	4018972.70	4173448.78	.060	N	.000	.01	267	9 28 UP

.060 N 100 E

***** TOTAL MOVEMENT VECTOR *****

HORIZONTAL MOVEMENT	FROM 26 OCT 78 TO 18 AUG 92	5045 DAYS	DIST =	.123 FT	BEARING =	N 75 58 E
VERTICAL MOVEMENT	FROM 26 OCT 78 TO 18 AUG 92	5045 DAYS	DIST =	-.01 FT		
RESULTANT	FROM 26 OCT 78 TO 18 AUG 92	5045 DAYS	DIP =	4 DEG 37 MIN	DN	

COUNTY OF LOS ANGELES
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PORT BN WF 4
FB 4319-058

PROGRAM EK11AP
10/19/92

DATE DA MON YR	COORDINATES		ELEV.	DIST FT	BEARING DG MN	MOVEMENT TIME DAYS	RATE FT/DA	VERTICAL ELEV DIFF	VMNT TIME DAYS	DIP DG MN
14 NOV 78	4019047.53	4173822.59	211.91	1.903	S 19	W	.011	-.89	167	25 3 DN
30 APR 79	4019045.73	4173821.97	211.02	2.871	S 7	W	.015	-.82	184	15 56 DN
31 OCT 79	4019042.88	4173821.62	210.20	2.148	S 9	22 W	.019	-1.04	110	25 50 DN
18 FEB 80	4019040.76	4173821.27	209.16	2.170	S 16	36 W	.032	-.97	66	24 5 DN
24 APR 80	4019038.68	4173820.65	208.19	.380	S 26	34 W	.018	-.14	21	20 13 DN
15 MAY 80	4019038.34	4173820.48	208.05	.827	S 14	42 E	.009	-.32	89	21 9 DN
12 AUG 80	4019037.54	4173820.69	207.73	.794	S 31	5 W	.004	-.17	177	12 5 DN
5 FEB 81	4019036.86	4173820.28	207.56	.121	S 9	28 W	.002	-.05	47	22 21 DN
24 MAR 81	4019036.74	4173820.26	207.51	.331	S 5	12 E	.002	-.12	134	19 54 DN
5 AUG 81	4019036.41	4173820.29	207.39	.302	S 55	47 W	.001	-.05	251	9 23 DN
13 APR 82	4019036.24	4173820.04	207.34	.120	S 24	27 E	.000	-.05	220	22 29 DN
19 NOV 82	4019036.13	4173820.09	207.29	1.555	S 17	58 W	.005	-.78	291	26 37 DN
6 SEP 83	4019034.65	4173819.61	206.51	.241	S 7	8 W	.001	-.18	199	36 39 DN
23 MAR 84	4019034.41	4173819.58	206.33	.640	S 2	41 W	.000	-.21	677	18 9 DN
29 JAN 86	4019033.77	4173819.55	206.12	.136	S 17	6 W	.000	-.11	363	38 58 DN
27 JAN 87	4019033.64	4173819.51	206.01	.060	S 80	32 E	.000	-.07	162	49 1 DN
8 JUL 87	4019033.63	4173819.57	205.94	.156	S 50	12 W	.000	-.02	243	7 18 DN
7 MAR 88	4019033.53	4173819.45	205.92	.233	S 46	44 W	.000	.05	476	12 5 UP
26 JUN 89	4019033.37	4173819.28	205.97	.072	N 74	3 E	.000	-.04	276	28 47 DN
29 MAR 90	4019033.39	4173819.35	205.93	.076	S 66	48 E	.000	-.02	606	14 43 DN
25 NOV 91	4019033.36	4173819.42	205.91	.044	S 63	26 E	.000	-.03	267	33 51 DN
18 AUG 92	4019033.34	4173819.46	205.88							

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COUNTY OF LOS ANGELES
DEPARTMENT OF PUBLIC WORKS

PROGRAM EK11AP
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***** TOTAL MOVEMENT VECTOR *****

HORIZONTAL MOVEMENT	FROM 14 NOV 78 TO 18 AUG 92	5026 DAYS	DIST =	14.531 FT	BEARING = S 12 26 W
VERTICAL MOVEMENT	FROM 14 NOV 78 TO 18 AUG 92	5026 DAYS	DIST =	-6.03 FT	
RESULTANT	FROM 14 NOV 78 TO 18 AUG 92	5026 DAYS	DIP =	22 DEG 32 MIN	DN

COUNTY OF LOS ANGELES
DEPARTMENT OF PUBLIC WORKS

PROGRAM EK11AP
10/19/92

PORT BN WF 4A
FB 4319-058

DATE DA MON YR	COORDINATES NORTH	EAST	ELEV.	DIST FT	HORIZONTAL BEARING DG MN	MOVEMENT TIME DAYS	RATE FT/DA	VERTICAL ELEV DIFF	MVNT TIME DAYS	DIP DG MN
14 NOV 78	4019055.40	4173817.48	211.64	1.531	S 19 51 W	167	.009	-.37	167	13 35 DN
30 APR 79	4019053.96	4173816.96	211.27	2.523	S 7 45 W	184	.013	-.41	184	9 14 DN
31 OCT 79	4019051.46	4173816.62	210.86	2.011	S 8 17 W	113	.017			
21 FEB 80	4019049.47	4173816.33		2.197	S 18 51 W	63	.034	-1.17	176	15 36 DN
24 APR 80	4019047.39	4173815.62	209.69	.360	S 33 41 W	21	.017	-.19	21	27 47 DN
15 MAY 80	4019047.09	4173815.42	209.50	.774	S 17 16 E	89	.008	-.39	89	26 43 DN
12 AUG 80	4019046.35	4173815.65	209.11	.968	S 38 17 W	177	.005	-.06	177	3 33 DN
5 FEB 81	4019045.59	4173815.05	209.05	.140	N 85 55 E	47	.002	.22	47	57 28 UP
24 MAR 81	4019045.60	4173815.19	209.27	.342	S 6 42 E	134	.002	-.36	134	46 26 DN
5 AUG 81	4019045.26	4173815.23	208.91	.294	S 54 41 W	251	.001	-.07	251	13 23 DN
13 APR 82	4019045.09	4173814.99	208.84	.120	S 24 27 E	220	.000	-.05	220	22 29 DN
19 NOV 82	4019044.98	4173815.04	208.79	1.568	S 19 21 W	291	.005	-.59	291	20 37 DN
6 SEP 83	4019043.50	4173814.52	208.20	.240	S 4 46 W	199	.001	-.20	199	39 42 DN
23 MAR 84	4019043.26	4173814.50	208.00	.650	S 2 38 W	678	.000	-.22	678	18 41 DN
30 JAN 86	4019042.61	4173814.47	207.78	.170	S	362	.000	-.08	362	25 12 DN
27 JAN 87	4019042.44	4173814.47	207.70	.102	S 29 3 W	405	.000	-.07	405	34 13 DN
7 MAR 88	4019042.35	4173814.42	207.63					.01	752	
29 MAR 90			207.64					-.01	606	
25 NOV 91			207.63					-.02	267	
18 AUG 92			207.61							

***** TOTAL MOVEMENT VECTOR *****

HORIZONTAL MOVEMENT FROM 14 NOV 78 TO 7 MAR 88 3401 DAYS DIST = 13.403 FT BEARING = S 13 12 W
 VERTICAL MOVEMENT FROM 14 NOV 78 TO 18 AUG 92 5026 DAYS DIST = -4.03 FT
 RESULTANT FROM 14 NOV 78 TO 7 MAR 88 3401 DAYS DIP = 16 DEG 39 MIN DN