CALIBRATION :

FROM	TO	TAPE	COMPASS	CLINO	PLUMB	PLAN	EAST	NORTH	HEIGHT
			0.0	0.0					
P142	VD1	0.0	0.0	0.0	-1.00	0.0	0.0	0.0	-1.000
VD1	VD2	4.60	75.0	-49.0	0.0	3.018	2.915	0.781	-3.472
VD2	VD3	4.18	123.5	-33.0	0.0	3.506	2.923	-1.935	-2.277
VD3	VD4	3.14	79.0	-37.0	0.0	2.508	2.462	0.478	-1.890
VD4	VD5	2.65	63.0	-50.0	0.0	1.703	1.518	0.773	-2.030
VD5	VD6	5.90	93.0	-4.0	0.0	5.886	5.878	-0.308	-0.412
VD6	VD7	5.00	166.0	-72.0	0.0	1.545	0.374	-1.499	-4.755
VD7	VD8	3.42	254.0	-24.0	0.0	3.124	-3.003	-0.861	-1.391
VD8	VD9	11.05	353.0	-4.0	0.0	11.023	-1.343	10.941	-0.771
VD9	VD10	3.35	335.0	-16.0	0.0	3.220	-1.361	2.919	-0.923
VD10	VD11	5.12	31.0	-16.0	0.0	4.922	2.535	4.219	-1.411
VD11	VD12	3.07	4.0	-7.0	0.0	8.953	0.625	8.931	-1.099
VD12	VD13	6.15	8.0	-17.0	0.0	5.881	0.819	5.824	-1.798
VD13	VD14	7.77	54.0	-17.0	0.0	7.430	6.011	4.368	-2.272
VD14	VD15	11.92	357.0	-6.0	0.0	11.855	-0.620	11.838	-1.246
VD15	VD16	16.40	34.0	6.0	0.0	16.310	9.121	13.522	1.714
VD16	VD17	7.90	358.0	33.0	0.0	6.625	-0.231	6.621	4.303
VD17	VD18	14.15	15.0	36.0	0.0	11.448	2.963	11.058	8.317
VD18	VD19	16.02	18.0	23.0	0.0	14.746	4.557	14.025	6.260
VD19	VD20	11.80	49.0	-5.0	0.0	11.755	8.872	7.712	-1.028
VD20	VD21	2.48	104.0	-21.0	0.0	2.315	2.247	-0.560	-0.389
VD21	VD22	15.16	28.0	1.0	0.0	15.158	7.116	13.383	0.265
VD22	VD23	3.71	14.0	-9.0	0.0	3.664	0.886	3.555	-0.580
VD23	VD24	3.72	45.0	9.0	0.0	3.674	2.598	2.598	0.582
VD24	VD25	9.14	26.0	-26.0	0.0	8.215	3.601	7.384	-4.007
VD25	VD26	5.34	349.0	15.0	0.0	5.158	-0.984	5.063	1.382
VD26	VD27	10.62	20.0	-13.0	0.0	10.348	3.539	9.724	-2.389
VD27	VD28	4.40	32.0	-22.0	0.0	4.080	2.162	3.460	-1.648
VD28	VD29	6.60	32.0	11.0	0.0	6.479	3.433	5.494	1.259
VD29	VD30	12.62	42.0	4.0	0.0	12.589	8.424	9.356	0.880
VD30	VD31	3.45	18.0	-5.0	0.0	3.437	1.062	3.269	-0.301
VD31	VD32	3.61	91.0	29.0	0.0	3.157	3.157	-0.055	1.750
VD32	VD33	3.50	34.0	-9.0	0.0	3.457	1.933	2.866	-0.548
VD33	VD34	11.04	31.0	-53.0	0.0	6.644	3.422	5.695	-8.817
VD34	VD35	15.77	289.0	43.0	0.0	11.533	-10.905	3.755	10.755
VD35	VD36	8.91	1.0	5.0	0.0	8.876	0.155	8.875	0.777
VD36	VD37	10.56	43.0	-10.0	0.0	10.400	7.092	7.606	-1.834
VD37	VD38	2.90	86.0	-13.0	0.0	2.826	2.819	0.197	-0.652
VD38	VD39	10.40	61.0	-58.0	0.0	5.511	4.820	2.672	-8.820

SU 5.13 : 1623/142 - a selection for program testing only.

FROM	TO	SURVEY DATA: TAPE	COMPASS	CLINO	PLUMB	COMPUTED VECTOR: PLAN	EAST	NORTH	HEIGHT
VD39	VD40	0.0	0.0	0.0	-32.00	0.0	0.0	0.0	-32.000
VD40	VD41	7.95	219.0	-2.0	0.0	7.945	-4.892	-6.261	-0.277
VD41	VD42	29.70	231.0	-16.0	0.0	28.549	-22.187	-17.967	-8.186
VD42	VD43	16.50	229.0	-9.0	0.0	16.297	-12.299	-10.692	-2.581
VD40	VD44	27.85	39.0	11.0	0.0	27.338	17.205	21.246	5.314
VD40	VD45	12.56	279.0	-7.0	0.0	12.466	-12.313	1.950	-1.531
VD45	VD46	10.04	346.0	-21.0	0.0	9.373	-2.268	9.095	-3.598
VD46	VD47	24.70	44.0	-22.0	0.0	22.901	15.909	16.474	-9.253
VD47	VD48	11.95	352.0	-26.0	0.0	10.741	-1.495	10.636	-5.239

VD34	SR14	5.84	270.0	34.0	0.0	4.842	-4.842	-0.000	3.266
SR13	SR14	5.36	212.5	-35.0	0.0	4.391	-2.359	-3.703	-3.074
SR13	SR12	12.00	72.5	37.0	0.0	9.584	9.140	2.882	7.222
SR11	SR12	10.86	294.0	32.0	0.0	9.210	-8.414	3.746	5.755
SR11	SR10	3.71	178.0	-25.0	0.0	3.362	0.117	-3.360	-1.569
SR9	SR10	7.23	285.0	23.0	0.0	6.655	-6.428	1.722	2.825
SR9	SR8	3.87	156.0	-46.5	0.0	2.664	1.084	-2.434	-2.807
SR7	SR8	5.43	249.0	-6.5	0.0	5.395	-5.037	-1.933	-0.615
SR7	SR6	20.50	47.0	30.0	0.0	17.754	12.984	12.108	10.250
SR5	SR6	8.33	138.0	-27.0	0.0	7.422	4.966	-5.516	-3.782
SR5	SR4	7.85	73.0	11.0	0.0	7.706	7.369	2.253	1.498
SR3	SR4	7.21	301.0	25.0	0.0	6.534	-5.601	3.365	3.047
SR3	[illegible]	16.46	119.0	-22.0	0.0	15.261	13.348	-7.399	-6.166
SR1	SR2	9.40	288.0	39.0	0.0	7.305	-6.948	2.257	5.916
[illegible]	T19	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
VD18	SR51	9.14	174.0	-35.0	0.0	7.487	0.783	-7.446	-5.242
[illegible]	SR51	13.00	31.0	31.0	0.0	11.143	5.739	9.552	6.695
SR52	SQ14	9.82	213.0	-16.5	0.0	9.416	-5.128	-7.897	-2.789
SQ13	SQ14	15.37	210.0	-25.0	0.0	13.930	-6.965	-12.064	-6.496
SQ12	SQ13	10.70	248.5	13.0	0.0	10.426	-9.700	-3.821	2.407
SQ11	SQ12	8.50	228.0	-11.0	0.0	8.344	-6.201	-5.583	-1.622
SQ10	SQ11	7.60	241.0	-10.5	0.0	7.473	-6.536	-3.623	-1.385
SQ9	SQ10	2.31	254.0	30.0	0.0	2.001	-1.923	-0.551	1.155
SQ8	SQ9	3.45	319.5	33.5	0.0	2.877	-1.868	2.188	1.904
SQ7	SQ8	4.28	341.5	-10.5	0.0	4.208	-1.335	3.991	-0.780
SQ6	SQ7	7.68	267.5	-27.0	0.0	6.843	-6.836	-0.298	-3.487
SQ5	SQ6	8.37	227.0	-30.0	0.0	7.249	-5.301	-4.944	-4.185
SQ4	SQ5	4.50	270.5	-43.0	0.0	3.291	-3.291	0.029	-3.069
SQ3	SQ4	5.55	215.5	-22.0	0.0	5.146	-2.988	-4.189	-2.079
SQ2	SQ3	3.40	315.0	27.0	0.0	3.029	-2.142	2.142	1.544
SQ1	SQ2	9.35	299.0	56.0	0.0	5.228	-4.573	2.535	7.752

CHANGE THIS TO SR52

SU 5.13 : 1623/142 - a selection for program testing only.

FROM	TO	SURVEY DATA TAPE	COMPASS	CLINO	PLUMB	COMPUTED VECTOR PLAN	EAST	NORTH	HEIGHT
SP1	SQ3	4.07	5.0	31.0	0.0	3.489	0.304	3.475	2.096
SP1	SP2	16.52	316.0	45.0	0.0	11.681	-8.115	8.403	11.681
SQ14	SQ15	5.59	163.0	7.0	0.0	5.548	1.622	-5.306	0.681
SQ15	SQ16	8.22	198.0	-5.0	0.0	8.189	-2.530	-7.788	-0.716
SQ16	SQ17	10.75	171.0	9.0	0.0	10.618	1.661	-10.487	1.682
SQ17	SQ18	6.20	251.5	11.0	0.0	6.086	-5.772	-1.931	1.183
SQ18	SQ19	17.20	178.5	12.0	0.0	13.202	0.348	-13.298	2.828
SQ19	SQ20	7.29	199.0	13.0	0.0	7.103	-2.313	-6.716	1.640
SQ20	~~SQ21~~	9.07	165.5	10.5	0.0	8.918	2.233	-8.634	1.653

we overlap this whole section

change to VD11

DON'T BOTHER

U 5.13 [illegible] selection for program testing only.

FROM	TO	VECTOR EAST	NORTH	HEIGHT	PLAN	POSITION STATION	EAST	NORTH	HEIGHT

ORIGIN 1 AT

P142	VD1	0.0	0.0	-1.000	0.0	P142	0.0	0.0	0.0
VD1	VD2	2.915	0.781	-3.472	3.018	VD1	0.0	0.0	-1.000
VD2	VD3	2.923	-1.935	-2.277	3.506	VD2	2.915	0.781	-4.472
VD3	VD4	2.462	0.478	-1.890	2.508	VD3	5.838	-1.154	-6.748
VD4	VD5	1.518	0.773	-2.030	1.703	VD4	8.300	-0.675	-8.638
VD5	VD6	5.878	-0.308	-0.412	5.886	VD5	9.818	0.098	-10.668
VD6	VD7	0.374	-1.499	-4.755	1.545	VD6	15.695	-0.210	-11.080
VD7	VD8	-3.003	-0.861	-1.391	3.124	VD7	16.069	-1.709	-15.835
VD8	VD9	-1.343	10.941	-0.771	11.023	VD8	13.066	-2.570	-17.226
VD9	VD10	-1.361	2.919	-0.923	3.220	VD9	11.722	8.371	-17.997
VD10	VD11	2.535	4.219	-1.411	4.922	VD10	10.361	11.289	-18.920
VD11	VD12	0.625	8.931	-1.099	8.953	VD11	12.896	15.508	-20.331
VD12	VD13	0.819	5.824	-1.798	5.881	VD12	13.521	24.439	-21.431
VD13	VD14	6.011	4.368	-2.272	7.430	VD13	14.339	30.263	-23.229
VD14	VD15	-0.620	11.839	-1.246	11.855	VD14	20.351	34.630	-25.500
VD15	VD16	9.121	13.522	1.714	16.310	VD15	19.730	46.469	-26.746
VD16	VD17	-0.231	6.621	4.303	6.625	VD16	28.851	59.990	-25.032
VD17	VD18	2.963	11.058	8.317	11.448	VD17	28.620	66.612	-20.729
VD18	VD19	4.557	14.025	6.260	14.746	VD18	31.582	77.669	-12.412
VD19	VD20	8.872	7.712	-1.028	11.755	VD19	36.139	91.694	-6.153
VD20	VD21	2.247	-0.560	-0.889	2.315	VD20	45.011	99.406	-7.181
VD21	VD22	7.116	13.383	0.265	15.158	VD21	47.257	98.846	-8.070
VD22	VD23	0.886	3.555	-0.580	3.664	VD22	54.374	112.229	-7.805
VD23	VD24	2.598	2.598	0.582	3.674	VD23	55.260	115.785	-8.386
VD24	VD25	3.601	7.384	-4.007	8.215	VD24	57.858	118.383	-7.804
VD25	VD26	-0.984	5.063	1.382	5.158	VD25	61.459	125.767	-11.810
VD26	VD27	3.539	9.724	-2.389	10.348	VD26	60.475	130.830	-10.428
VD27	VD28	2.162	3.460	-1.648	4.080	VD27	64.014	140.554	-12.817
VD28	VD29	3.433	5.494	1.259	6.479	VD28	66.176	144.013	-14.466
VD29	VD30	8.424	9.356	0.880	12.589	VD29	69.609	149.508	-13.206
VD30	VD31	1.062	3.269	-0.301	3.437	VD30	78.033	158.863	-12.326
VD31	VD32	3.157	-0.055	1.750	3.157	VD31	79.095	162.132	-12.627
VD32	VD33	1.933	2.866	-0.548	3.457	VD32	82.252	162.077	-10.876
VD33	VD34	3.422	5.695	-8.817	6.644	VD33	84.185	164.943	-11.424
VD34	VD35	-10.905	3.755	10.755	11.533	VD34	87.607	170.638	-20.241
VD35	VD36	0.155	8.875	0.777	8.876	VD35	76.702	174.393	-9.486
VD36	VD37	7.092	7.606	-1.834	10.400	VD36	76.857	183.267	-8.709
VD37	VD38	2.819	0.197	-0.652	2.826	VD37	83.949	190.873	-10.543
VD38	VD39	4.820	2.672	-8.820	5.511	VD38	86.768	191.070	-11.195
						VD39	91.588	193.742	-20.015

U 5.13 1623/142 - a selection for program testing only.

VECTOR						POSITION			
FROM	TO	EAST	NORTH	HEIGHT	PLAN	STATION	EAST	NORTH	HEIGHT
VD39	VD40	0.0	0.0	-32.000	0.0	VD40	91.588	193.742	-52.015
VD40	VD41	-4.892	-6.261	-0.277	7.945	VD41	86.697	187.481	-52.292
VD41	VD42	-22.187	-17.967	-8.186	28.549	VD42	64.510	169.514	-60.479
VD42	VD43	-12.299	-10.692	-2.581	16.297	VD43	52.210	158.823	-63.060
VD40	VD44	17.205	21.246	5.314	27.338	VD44	108.793	214.988	-46.701
VD40	VD45	-12.313	1.950	-1.531	12.466	VD45	79.275	195.692	-53.546
VD45	VD46	-2.268	9.095	-3.598	9.373	VD46	77.008	204.787	-57.144
VD46	VD47	15.909	16.474	-9.253	22.901	VD47	92.916	221.261	-66.396
VD47	VD48	-1.495	10.636	-5.239	10.741	VD48	91.422	231.897	-71.635
VD34	SR14	-4.842	-0.000	3.256	4.842	SR14	82.765	170.638	-16.975

SR13	SR14	-2.359	-3.703	-3.074	4.391
SR13	SR12	9.140	2.882	7.222	9.584
SR11	SR12	-8.414	3.746	5.755	9.210
SR11	SR10	0.117	-3.360	-1.568	3.362
SR9	SR10	-6.428	1.722	2.825	6.655
SR9	SR8	1.084	-2.434	-2.807	2.664
SR7	SR8	-5.037	-1.933	-0.615	5.395
SR7	SR6	12.984	12.103	10.250	17.754
SR5	SR6	4.966	-5.516	-3.782	7.422
SR5	SR4	7.369	2.253	1.498	7.706
SR3	SR4	-5.601	3.265	3.047	6.534
SR3	SR2	13.348	-7.399	-6.166	15.261
SR1	SR2	-6.948	2.257	5.916	7.305
SR1	T19	0.0	0.0	0.0	0.0
V018	SR51	0.783	-7.446	-5.242	7.487
SR52	SR51	5.739	9.552	6.695	11.143
SR52	SQ14	-5.128	-7.897	-2.789	9.416
SQ13	SQ14	-6.965	-12.064	-6.496	13.930
SQ12	SQ13	-9.700	-3.821	2.407	10.426
SQ11	SQ12	-6.201	-5.583	-1.622	8.344
SQ10	SQ11	-6.536	-3.623	-1.385	7.473
SQ9	SQ10	-1.923	-0.551	1.155	2.001
SQ8	SQ9	-1.868	2.188	1.904	2.877
SQ7	SQ8	-1.335	3.991	-0.780	4.208
SQ6	SQ7	-6.836	-0.298	-3.487	6.843
SQ5	SQ6	-5.301	-4.944	-4.185	7.249
SQ4	SQ5	-3.291	0.029	-3.069	3.291
SQ3	SQ4	-2.988	-4.189	-2.079	5.146
SQ2	SQ3	-2.142	2.142	1.544	3.029
SQ1	SQ2	-4.573	2.535	7.752	5.228

SR13	85.125	174.341	-13.901
SR12	94.265	177.222	-6.679
SR11	102.678	173.477	-12.434
SR10	102.796	170.116	-14.002
SR9	109.224	168.394	-16.827
SR8	110.307	165.960	-19.634
SR7	115.344	167.893	-19.019
SR6	128.328	180.001	-8.769
SR5	123.362	185.517	-4.988
SR4	130.731	187.770	-3.490
SR3	136.332	184.404	-6.537
SR2	149.680	177.006	-12.703
SR1	156.628	174.748	-18.618
T19	156.628	174.748	-18.618
SR51	32.365	70.223	-17.655
SR52	26.626	60.672	-24.350
SQ14	21.498	52.775	-27.139
SQ13	28.463	64.839	-20.644
SQ12	38.163	68.660	-23.050
SQ11	44.364	74.243	-21.429
SQ10	50.899	77.866	-20.044
SQ9	52.822	78.417	-21.199
SQ8	54.691	76.230	-23.103
SQ7	56.026	72.239	-22.323
SQ6	62.863	72.537	-18.836
SQ5	68.164	77.481	-14.651
SQ4	71.455	77.452	-11.582
SQ3	74.443	81.641	-9.503
SQ2	76.585	79.499	-11.047
SQ1	81.158	76.964	-18.798

U 5.13 1623/142 - a selection for program testing only.

VECTOR					
FROM	TO	EAST	NORTH	HEIGHT	PLAN
SP1	SQ3	0.304	3.475	2.096	3.489
SP1	SP2	-8.115	8.403	11.681	11.681
SQ14	SQ15	1.622	-5.306	0.681	5.548
SQ15	SQ16	-2.530	-7.788	-0.716	8.139
SQ16	SQ17	1.661	-10.487	1.682	10.618
SQ17	SQ18	-5.772	-1.931	1.183	6.086
SQ18	SQ19	0.348	-13.298	2.828	13.303
SQ19	SQ20	-2.313	-6.716	1.640	7.103
SQ20	SQ21	2.233	-8.634	1.653	8.918

POSITION			
STATION	EAST	NORTH	HEIGHT
SP1	74.139	78.166	-11.599
SP2	66.024	86.569	0.082
SQ15	23.120	47.469	-26.458
SQ16	20.589	39.681	-27.174
SQ17	22.250	29.194	-25.493
SQ18	16.479	27.263	-24.310
SQ19	16.827	13.965	-21.482
SQ20	14.514	7.249	-19.842
SQ21	16.747	-1.385	-18.189

TOTAL PLAN LENGTH OF SURVEY : 689.695
TOTAL TRAVERSE LENGTH : 796.094

APER LONG AXIS IS ON A BEARING OF 45. DEGREES

XTENT OF SURVEY IN SCALE PAPER SPACE:
WIDTH AXIS -12.822 99.331