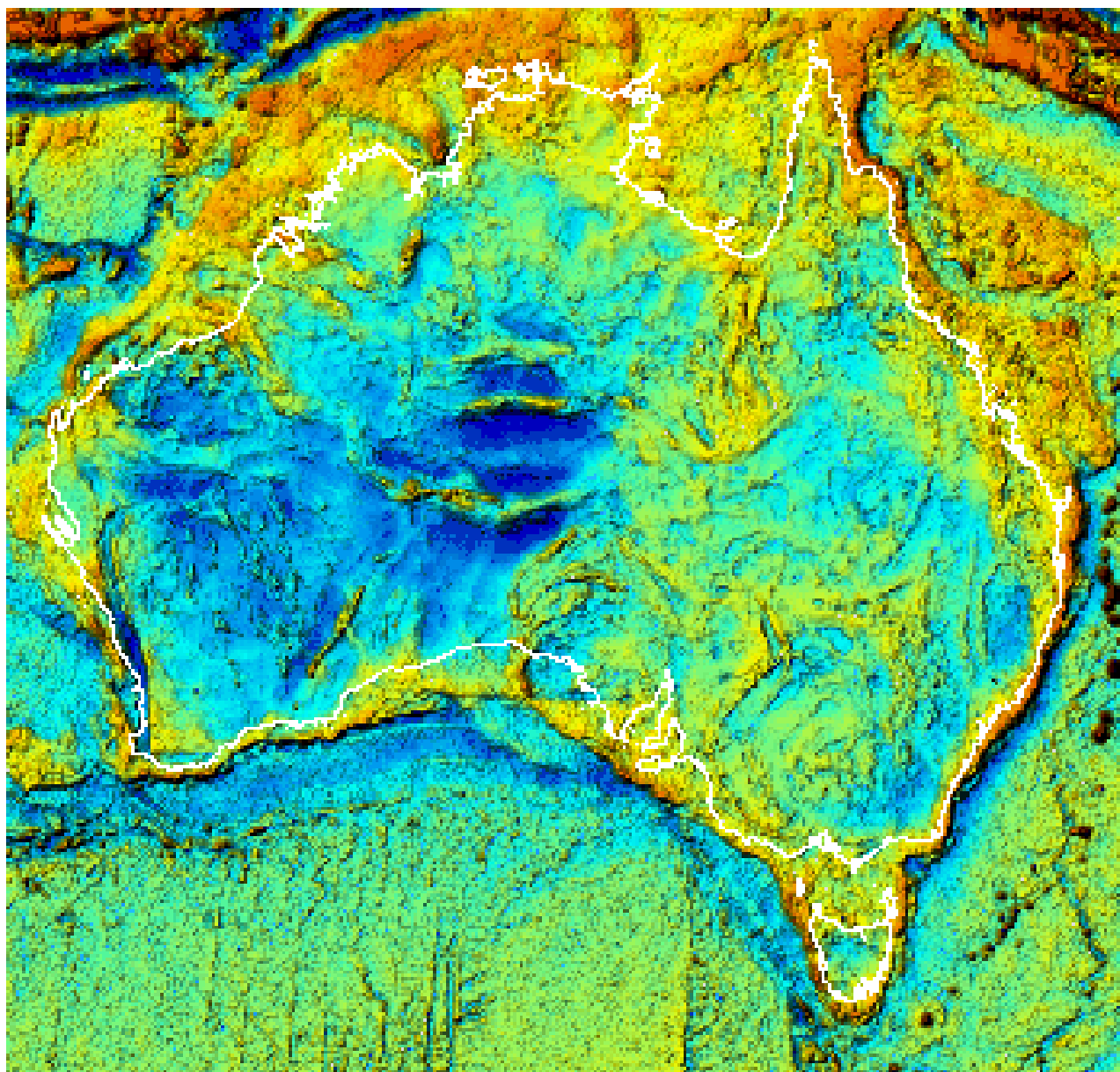


AUSTRALIAN FUNDAMENTAL GRAVITY NETWORK

1992 (inc 1996 & 1998)

**GRAVITY CONTROL STATIONS
HOBART TRIABUNNA QUEENSTOWN
TASMANIA AUSTRALIA**

OPERATIONS REPORT



AUSTRALIAN GEOLOGICAL SURVEY ORGANISATION

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by
John W Williams

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SUMMARY

This report describes gravity meter ties conducted to establish new gravity control stations in Tasmania. Many of the existing control stations around Hobart had been lost, so new stations were established with ties to the last remaining control stations at Hobart Airport and the University of Tasmania. These stations had been read on the last main control survey in 1980. New stations were also established at Triabunna, and at Queenstown, which was tied to an existing station at Strahan in the south west of Tasmania.

Following a request by the Tasmanian Mines Department to replace lost stations identified in a check of the current gravity base station network in Tasmania, ten new base stations were established between the 8th and 28th of January 1992.

Four LaCoste and Romberg gravity meters, (numbered G20, G101, G132, and G252) were used to measure the gravity intervals during the survey.

The base stations used to control this survey were located at the Hobart University front door, station **6091.0160**, Hobart airport station **7390.0260**, stations on Mt Wellington **6491.9138**, and **7090.1138**, and at the Strahan airport, station number **6491.9136**.

The new base stations have been marked with inscribed brass identifier discs or blue plugs set in concrete at the observation sites. Note that some stations have been marked by the Tasmanian Department of Mines and Mineral Resources with a vertical piece of 33 mm pipe set in a concrete slab.

The following table summarises the new station values. Except for Triabunna stations, the station locations have not been surveyed and are only approximate. A complete listing of all current Tasmanian control stations as at January 1998 is given in **Appendix 7**.

Preliminary results for work conducted during 1996 and 1998 are also presented at the back of this report for information only.

NEW STATIONS ESTABLISHED DURING THIS SURVEY

Station No.	Latitude(S)	Longitude(E)	Location	Gravity μms^{-2}	Ties
9290.0160	42° 50.4'	147° 30.4'	Aust A'lines Terminal H/A/P	9804352.083	5
9290.0260	42° 50.4'	147° 30.4'	International Terminal H/A/P	9804365.984	5
9290.0360	42° 50.4'	147° 30.4'	F.A.C Door Hobart A/P	9804362.145	6
9290.0460	42° 55.6'	147° 20.7'	Mt Nelson Cal range Cs2	9803761.783	3
9290.0560	42° 50.0'	147° 30.0'	Mt Pleasant Observatory	9804241.305	5
9290.1119	42° 32.0'	147° 55.0'	Triabunna Rd, Junction	9804016.548	2
9290.9236	42° 04.6167'	145° 31.7667'	Queenstown A/s Terminal	9802920.048	4
9290.9258	42° 32.8758'	147° 55.7586'	Triabunna PSM9258 Tide Gauge	9804069.980	2
9290.9259	42° 32.0244'	147° 55.6158'	Triab'a PSM9259 ~ fish factory	9804047.671	2
9290.9261	42° 29.5590'	147° 55.0014'	Triabunna PSM9261	9803971.002	5

INTRODUCTION

The Australian Geological Survey Organisation (AGSO) has the responsibility of maintaining the Australian Fundamental Gravity Network (AFGN), previously known as the Isogal Network. This network provides a consistent gravity datum to control all gravity surveys conducted in and around Australia.

AGSO is currently putting additional effort into a project to refurbish the AFGN since the last systematic survey of the network in 1980. A large number of base stations have been destroyed by redevelopment of roads and buildings etc. During each annual survey program while progressively restoring and augmenting the AFGN, new control stations are installed in areas requested by Government departments and the mineral exploration industry where there is only a sparse distribution of control stations.

The aim of this survey was to establish new control stations in and around Hobart to improve the coverage of gravity base stations in that area. AFGN stations were established at Mt Pleasant and at the VLBI/CIGNET to Spring Bay baseline sea level monitoring, GPS stations at Triabunna. A new station was also installed at the Queenstown airport. The opportunity was taken to visit all Tasmanian stations to check for viability and to re-mark them where appropriate with AGSO's new blue station marker plugs, where the station marker was lost, or to note building changes at the marked locations.

Between the 8th of January and 28th of January 1992, the Gravimetry Section of AGSO performed a gravity survey in the Hobart, Triabunna and Queenstown areas of Tasmania establishing new gravity control stations as described in **Appendix 2**.

The new stations were tied to gravity stations existing at Hobart University **6091.0160** (and Hobart Airport **7390.0260**) and for Queenstown at Strahan, station numbered **6491.9136**.

Four La Coste and Romberg gravity meters were read by one operator for the period of the survey.

Australian Fundamental Gravity Network measurements 1996 and 1998

In 1996 the Geographical Survey Institute of Japan visited mainland Australia and Tasmania measuring absolute gravity stations at various locations. These included one at Mt Pleasant observatory, (**9699.9160**) which was tied by Mr R Tracey (AGSO) to two new AFGN excentre station's at Mt Pleasant (**9691.0160**, **9691.0260**, **9691.0360**) and to the existing absolute station at the University of Tasmania (**7499.0160**). Stations previously measured at Triabunna (**9290.9258**, **9290.9259**, and **9290.9261**) were also tied to the new absolute station. Only values relating to the current AFGN are available at this time. Preliminary processing and diagrams are presented here for information only.

The opportunity was taken in February 1998 to strengthen some Hobart ties when an AGSO operator, Mr P Wynne, was in Hobart. Mt Pleasant stations (**9290.0560**, **9699.9160**) with selected stations at the Hobart airport (**9290.0160**, **9290.0360**) and the Hobart calibration line between the University of Tasmania (**6091.0160** CS1) and Mt Nelson (**9290.0460** CS2) were read. Preliminary processing is presented for information only.

SURVEY METHOD AND OPERATIONS

The field party consisted of John W Williams (Technical Officer), with a Toyota LWB 4WD vehicle, and four La Coste and Romberg gravity meters, G20,G101,G132 and G252.

On January 8th 1992 the party left Canberra for Port Welshpool for an 08:00 crossing of Bass Strait on the Catamaran ferry running to George Town, Tasmania, arriving very late at Launceston around 21:00.

Arrangements were made with The Federal Department of Communications to check and possibly fix a gravity station marker at the Mt Barrow Television station entrance door. On inspection the polished floor tiling was still as described and the station easily locatable so no marker was fixed. A fixed brass disc on the polished floor would be a hazard to foot traffic through the front door, and it would unnecessarily damage the floor to place a blue marker plug in the floor.

On Saturday 11th, a new BMR/AGSO blue marker was installed into the floor of the Launceston Airport Fire Station building, station numbered **6491.9971** to replace a brass disc marker that has been lost. Three old stations at the Launceston airport numbered **6491.0171**, **6491.0271**, **6491.0371** have been lost.

While travelling to Hobart the opportunity was taken to check the station at St Helens, which is still marked, however some alterations have been made to the terminal building from the original diagram, new diagrams for this station are included in this report.

On the 14th and 15th a 2:1 tie was made between the Mt Pleasant Radio Telescope (**9290.0560**)(BM, UF04) near Hobart Airport, to **9290.9261**, **9290.9259**, **9290.9258** and **9290.1119** at Triabunna, part of the Spring Bay Baseline Sea Level Monitoring Station GPS network. Road works precluded further work until the next day when the loop was repeated. Severe seismic noise around $1.5\text{--}2.0\ \mu\text{ms}^{-2}$ was apparent for the first day and $1.0\text{--}1.50\ \mu\text{ms}^{-2}$ for the second day, making readings difficult.

A 4:3 gravity tie was made on January 16th around the Hobart Airport area tying the FAC front door station (**9290.0360**) with the International Terminal front entrance, (**9290.0260**) and Australian Airlines (now Qantas) building (**9290.0160**) to the existing station in the Ansett Workshop (**7390.0260**).

The University base station (**6091.0160**) (CS1) was tied on the 17th to the new Mt Nelson calibration range station (**9290.0460**)(CS2) and to stations on Mt Wellington (**6491.9138**, **7090.1138**) and at the airport (**7390.0260**, **9290.0360**, **9290.0260**, and **9290.0160**). Problems with two meters (G101 and G132) occurred with this work and the ties of Mt Wellington are not suitable for an accurate assessment of the station gravity values on Mt Wellington and at the airport with these meters. Noise was still high during the day, being 0.5 to $1.5\ \mu\text{ms}^{-2}$.

The ties were repeated next day to Mt Nelson (3:2) and the airport stations (2:1)

Monday 20th was spent travelling to Strahan and while passing through Queenstown a 1:1 tie was made from the new station **9290.9236** installed at the Queenstown airport terminal to Strahan.

For the following five days, ties (3:2) were made from Strahan to Queenstown and a blue plug installed at Queenstown, sketches of the station made and then continued on travelling to Smithton. Here the gravity station was checked and found to be marked with a 33mm pipe by the Tas Dept. The new marking has been noted and will be found on Smithton sheet, 1 of 1. An old station using the railway heighting has been lost due to the railway being removed. At Devonport, airport stations installed in 1985 were checked, photos and drawings were made of this station, and another station was checked at the Devonport Lighthouse marked with survey marker SPM 2680 (not BMR/AGSO).

January 25th was spent on the Sea Cat travelling to Pt Welshpool staying at Bairnsdale and looking for stations **6491.1005** and **6491.9005** which could not be found and are presumed lost.

SURVEY DATA PROCESSING

The data were recorded on field sheets and then entered into a PC for preliminary processing. Owing to other work and then a long illness, further processing was not conducted till 1996 when the data was reprocessed on a Sun computer by J W Williams.

The field data from the four meters were formatted to an input file format suitable for calculation of Earth tidal gravity correction, drift and gravity interval using AGSO programs ERTIDE and GRVHTS.

The readings were arranged to form loops which were then corrected for earth tide, results of which are shown in **Appendix 4**.

The corrected readings were then input to the network adjustment program which used the unknown stations as nodes, the primary control stations being at Hobart University front door station (**6091.0160**), Ansett workshop (**7390.0260**) and Strahan airport station (**6491.9136**). Two Mt Wellington stations were also used so that instrument problems that occurred during that loop could be salvaged. The closed loops defined the drift of each meter. The drift and tide corrected measured gravity intervals between the nodes for each loop and for each meter, were least square adjusted to provide best fit values for all measured intervals. The first pass processing showed results where known power and other instrument problems causing unacceptable drift had occurred. Loops or unacceptable readings were deleted and processing completed with those measurements that gave consistent results.

Final gravity values were then calculated for each station using the five known control station values as fixed nodes and the adjusted intervals.

RESULTS

The four meters did not always give consistent results, due partly to two occasions where the meter battery failed. These results have been deleted from the field readings for final processing. Another source of inaccuracy was the very high seismic noise during the whole survey period which at times was up to $5.0 \mu\text{ms}^{-2}$. Adjustments for and between meters were only fair at better than $0.97 \mu\text{ms}^{-2}$. The standard deviation of adjustments was $0.18 \mu\text{ms}^{-2}$. Some loops and readings were discarded for the final processing as shown in **Appendix 5**.

APPENDIX 1 Field Party and Equipment

Personnel	John W Williams (Senior Officer Technical Grade C),
Gravity Meters	LaCoste and Romberg numbers G20, G101, G132 and G252.
Vehicle	Toyota LWB 4WD ZJE 005.
Other Equipment	Field Sheets, camera, cement, station markers, 25mm Portable Drill.

Control Information.

The following stations were used as control points and are described on station location diagrams for Tasmania in **Appendix 2**.

All known stations read in the Hobart area were used as fixed nodes. The following are the reference values used to control the gravity datum for this survey.

6091.0160	9804310.00 μms^{-2}	University Front Door (which is also the bottom station for the Mt Nelson Calibration range).
6491.9138	9802168.00 μms^{-2}	Mt Wellington
7090.1138	9801561.80 μms^{-2}	Mt Wellington
7390.0260	9804343.90 μms^{-2}	Ansett workshop Hobart Airport
6491.9136	9803583.80 μms^{-2}	Strahan airport

APPENDIX 2

Gravity Base Station Location Diagrams.

The following diagrams describe the locations of all current Fundamental Gravity Network stations in Tasmania covered by this survey. The descriptions and gravity values shown are accurate at the time of installation and checking (January 1992) but these may change to some degree as the environment around each station is modified in the future.

APPENDIX 3

FIELD OBSERVATIONS

Station	Time	Reading	Latitude(E)	Longitude(S)	GRAVITY
TASMANIA ISOGAL					

TRAVERSE1 1140192 20L

92900560 0905 3827505 42500000 147300000

92909261 1100 3801805 42300000 147550000

92909259 1149 3809132 42300000 147550000

92909258 1241 3811245 42300000 147550000

92901119 1310 3806198 42300000 147550000

92909261 1419 3801895

92909259 1455 3809207

92909258 1531 3811300

92901119 1613 3806240

92909261 1636 3801935

92900560 1925 3827615

ENDFLIGHT

TRAVERSE1 2150192 20L

92900560 0742 3827467

73900260 0926 3837243 42500000 147300000

92909261 1140 3801806

92900560 1415 3827582

73900260 1531 3837355

92909261 1656 3801918

92900560 1855 3827595

ENDFLIGHT

TRAVERSE1 3160192 20L

92900360 0821 3838933 42500000 147300000

92900260 0851 3839302 42500000 147300000

92900160 0907 3837955 42500000 147300000

73900260 0932 3837192

92900360 1000 3838905

92900260 1022 3839255

92900160 1039 3837952

73900260 1109 3837167

92900360 1137 3838912

92900260 1201 3839312

92900160 1216 3837962

73900260 1238 3837180

92900360 1258 3838935

ENDFLIGHT

TRAVERSE1 4170192 20L

60910160 1010 3833955 42540000 147200000

92900460 1049 3781810 42560000 147210000

64919138 1146 3630382 42535000 147142000

70901138 1223 3572670 42539000 147142000

73900260 1449 3837278

92900360 1527 3839017

92900260 1605 3839400

92900160 1651 3838117

73900260 1719 3837400 42500000 147300000

60910160 1806 3834165

ENDFLIGHT

TRAVERSE1 5180192 20L

Station	Time	Reading	Latitude(E)	Longitude(S)
60910160	1332	3833905		
92900460	1359	3781808		
60910160	1429	3833962		
92900460	1500	3781845		
60910160	1531	3834029		
92900360	1606	3839013		
92900260	1630	3839355		
92900160	1652	3838085		
73900260	1718	3837320		
60910160	1805	3834120		

ENDFLIGHT

TRAVERSE1 6200192 20L

92909236	1518	3701820	42080000	145173000
64919136	1625	3764982	42090000	145173000
92909236	3214	3702005		

ENDFLIGHT

TRAVERSE1 7210192 20L

64919136	0718	3765125		
92909236	0814	3702005		
64919136	0906	3765128		
92909236	1001	3701960		
64919136	1056	3765040		

ENDFLIGHT

TRAVERSE2 1140192 101L

92900560	0913	3872200	42500000	147300000
92909261	1107	3846460	42300000	147550000
92909259	1156	3853795	42300000	147550000
92909258	1237	3855931	42300000	147550000
92901119	1321	3850845	42300000	147550000
92909261	1423	3846490		
92909259	1457	3853835		
92909258	1538	3855951		
92901119	1615	3850845		
92909261	1639	3846525		
92900560	1928	3872312		

ENDFLIGHT

TRAVERSE2 2150192 101L

92900560	0747	3872192		
73900260	0929	3881930	42500000	147300000
92909261	1147	3846421		
92900560	1419	3872232		
73900260	1543	3882030		
92909261	1701	3846547		
92900560	1858	3872300		

ENDFLIGHT

TRAVERSE2 3160192 101L

92900360	0829	3883660	42500000	147300000
92900260	0853	3883990	42500000	147300000
92900160	0910	3882683	42500000	147300000
73900260	0937	3881885		
92900360	1006	3883625		
92900260	1024	3883975		
92900160	1043	3882648		
73900260	1112	3881870		
92900360	1142	3883608		
92900260	1203	3883995		

Station	Time	Reading	Latitude(E)	Longitude(S)
92900160	1220	3882710		
73900260	1240	3881903		
92900360	1301	3883665		

ENDFLGHT

TRAVERSE2 4170192 101L				
60910160	1014	3878670	42540000	147200000
92900460	1055	3826412	42560000	147210000
64919138	1150	3674590	42535000	147142000
70901138	1227	3616700	42539000	147142000
73900260	1455	3881985		
60910160	3735	3877920		

1

ENDFLGHT

TRAVERSE2 5180192 101L				
60910160	1335	3877920		
92900460	1403	3825700		
60910160	1432	3877952		
92900460	1503	3825735		
60910160	1534	3878029		
92900360	1609	3883025		
92900260	1633	3883390		
92900160	1656	3882100		
73900260	1720	3881318		
60910160	1808	3878114		

ENDFLGHT

TRAVERSE2 6200192 101L				
92909236	1516	3745390	42080000	145173000
64919136	1629	3808708	42090000	145173000
92909236	3217	3745620		

ENDFLGHT

TRAVERSE2 7210192 101L				
64919136	0720	3808925		
92909236	0817	3745620		
64919136	0910	3808824		
92909236	1005	3745530		
64919136	1059	3808765		

ENDFLGHT

TRAVERSE3 1140192 132L				
92900560	0919	3902045	42500000	147300000
92909261	1114	3876578	42300000	147550000
92909259	1204	3883815	42300000	147550000
92909258	1245	3885950	42300000	147550000
92901119	1327	3880930	42300000	147550000
92909261	1427	3876650		
92909259	1504	3883830		
92909258	1543	3885970		
92901119	1619	3880955		
92909261	1642	3876662		
92900560	1933	3902130		

ENDFLGHT

TRAVERSE3 2150192 132L				
92900560	0752	3901965		
73900260	0934	3911612	42500000	147300000
92909261	1151	3876495		
92900560	1424	3902025		
73900260	1537	3911740		
92909261	1706	3876520		
92900560	1902	3902030		

ENDFLGHT

Station	Time	Reading	Latitude(E)	Longitude(S)
TRAVERSE3 3160192 132L				
92900360	0833	3913498	42500000	147300000
92900260	0857	3913860	42500000	147300000
92900160	0914	3912535	42500000	147300000
73900260	0941	3911760		
92900360	1009	3913475		
92900260	1028	3913842		
92900160	1045	3912518		
73900260	1120	3911745		
92900360	1146	3913460		
92900260	1207	3913855		
92900160	1224	3912545		
73900260	1245	3911790		
92900360	1305	3913605		
TARE?				
ENDFLIGHT				
TRAVERSE3 4170192 132L				
60910160	1017	3908527	42540000	147200000
92900460	1107	3856823	42560000	147210000
64919138	1155	3706552	42535000	147142000
70901138	1230	3649282	42539000	147142000
60910160	1813	3908750		
ENDFLIGHT				
TRAVERSE3 5180192 132L				
60910160	1337	3908473		
92900460	1407	3856808		
60910160	1434	3908540		
92900460	1506	3856840		
60910160	1537	3908575		
92900360	1613	3913537		
92900260	1637	3913915		
92900160	1659	3912620		
73900260	1723	3911872		
60910160	1812	3908705		
ENDFLIGHT				
TRAVERSE3 7210192 132L				
64919136	0724	3839970	42090000	145173000
92909236	0820	3777325	42080000	145173000
64919136	0914	3839905		
92909236	1009	3777265		
64919136	1103	3839825		
ENDFLIGHT				
TRAVERSE4 1140192 252L				
92900560	0925	3973475	42500000	147300000
92909261	1123	3947790	42300000	147550000
92909259	1208	3955082	42300000	147550000
92909258	1240	3957240	42300000	147550000
92901119	1333	3952180	42300000	147550000
92909261	1431	3947856		
92909259	1508	3955160		
92909258	1547	3957280		
92901119	1622	3952160		
92909261	1647	3947850		
92900560	1938	3973550		
ENDFLIGHT				

Station	Time	Reading	Latitude(E)	Longitude(S)
TRAVERSE4	2150192	252L		
92900560	0759	3973435		
73900260	0938	3983142	42500000	147300000
92909261	1155	3947742		
92900560	1432	3973500		
73900260	1541	3983285		
92909261	1710	3947885		
92900560	1907	3973575		

ENDFLGHT

TRAVERSE4	3160192	252L		
92900360	0840	3984882	42500000	147300000
92900260	0900	3985255	42500000	147300000
92900160	0917	3983910	42500000	147300000
73900260	0948	3983123		
92900360	1013	3984865		
92900260	1031	3985225		
92900160	1048	3983895		
73900260	1123	3983128		
92900360	1150	3984873		
92900260	1210	3985265		
92900160	1227	3983925		
73900260	1248	3983171		
92900360	1314	3984855		

ENDFLGHT

TRAVERSE4	4170192	252L		
60910160	1020	3979840	42540000	147200000
92900460	1111	3927750	42560000	147210000
64919138	1159	3776275	42535000	147142000
70901138	1234	3718560	42539000	147142000
73900260	1513	3983140		
73900260	1736	3983315		
60910160	1816	3980095		

ENDFLGHT

TRAVERSE4	5180192	252L		
60910160	1339	3979855		
92900460	1410	3927782		
60910160	1439	3979903		
92900460	1509	3927837		
60910160	1540	3979965		
92900360	1616	3984945		
92900260	1640	3985335		
92900160	1701	3984038		
73900260	1728	3983288		
60910160	1814	3980090		

ENDFLGHT

TRAVERSE4	7210192	252L		
64919136	0727	3911040	42090000	145173000
92909236	0823	3847945	42080000	145173000
64919136	0916	3911010		
92909236	1012	3847878		
64919136	1106	3910915		

ENDFLGHT
ENDGRAVS

APPENDIX 4

TIDAL GRAVITY CORRECTIONS

TASMANIA ISOGAL

GRAVITY

Station.	Day	Hrs	Min	Corr.rdg.	Lat (deg.min)	Long (deg.min)	Correction (mGal)
TRAVERSE1 1	14/	1/92		20L 1.05000		GMT+ 11H 0M	
92900560		9	5	3827.576	42 50.0000 S	147 30.0000 E	0.074
92909261		11	0	3801.854	42 30.0000 S	147 55.0000 E	0.051
92909259		11	49	3809.165	42 30.0000 S	147 55.0000 E	0.034
92909258		12	41	3811.260	42 30.0000 S	147 55.0000 E	0.015
92901119		13	10	3806.203	42 30.0000 S	147 55.0000 E	0.005
92909261		14	19	3801.877	42 30.0000 S	147 55.0000 E	-0.017
92909259		14	55	3809.181	42 30.0000 S	147 55.0000 E	-0.027
92909258		15	31	3811.267	42 30.0000 S	147 55.0000 E	-0.034
92901119		16	13	3806.201	42 30.0000 S	147 55.0000 E	-0.040
92909261		16	36	3801.894	42 30.0000 S	147 55.0000 E	-0.042
92900560		19	25	3827.565	42 50.0000 S	147 30.0000 E	-0.052
TRAVERSE1 2	15/	1/92		20L 1.05000		GMT+ 11H 0M	
92900560		7	42	3827.543	42 50.0000 S	147 30.0000 E	0.080
73900260		9	26	3837.342	42 50.0000 S	147 30.0000 E	0.104
92909261		11	40	3801.880	42 30.0000 S	147 55.0000 E	0.078
92900560		14	15	3827.582	42 50.0000 S	147 30.0000 E	0.000
73900260		15	31	3837.321	42 50.0000 S	147 30.0000 E	-0.035
92909261		16	56	3801.859	42 30.0000 S	147 55.0000 E	-0.061
92900560		18	55	3827.527	42 50.0000 S	147 30.0000 E	-0.070
TRAVERSE1 3	16/	1/92		20L 1.05000		GMT+ 11H 0M	
92900360		8	21	3839.023	42 50.0000 S	147 30.0000 E	0.095
92900260		8	51	3839.406	42 50.0000 S	147 30.0000 E	0.109
92900160		9	7	3838.065	42 50.0000 S	147 30.0000 E	0.116
73900260		9	32	3837.310	42 50.0000 S	147 30.0000 E	0.124
92900360		10	0	3839.028	42 50.0000 S	147 30.0000 E	0.129
92900260		10	22	3839.380	42 50.0000 S	147 30.0000 E	0.131
92900160		10	39	3838.077	42 50.0000 S	147 30.0000 E	0.131
73900260		11	9	3837.289	42 50.0000 S	147 30.0000 E	0.128
92900360		11	37	3839.027	42 50.0000 S	147 30.0000 E	0.121
92900260		12	1	3839.419	42 50.0000 S	147 30.0000 E	0.112
92900160		12	16	3838.063	42 50.0000 S	147 30.0000 E	0.106
73900260		12	38	3837.270	42 50.0000 S	147 30.0000 E	0.095
92900360		12	58	3839.014	42 50.0000 S	147 30.0000 E	0.083
TRAVERSE1 4	17/	1/92		20L 1.05000		GMT+ 11H 0M	
60910160		10	10	3834.089	42 54.0000 S	147 20.0000 E	0.141
92900460		10	49	3781.955	42 56.0000 S	147 21.0000 E	0.152
64919138		11	46	3630.527	42 53.5000 S	147 14.2000 E	0.152
70901138		12	23	3572.806	42 53.9000 S	147 14.2000 E	0.142
73900260		14	49	3837.321	42 50.0000 S	147 30.0000 E	0.045
92900360		15	27	3839.029	42 50.0000 S	147 30.0000 E	0.013
92900260		16	5	3839.382	42 50.0000 S	147 30.0000 E	-0.018
92900160		16	51	3838.068	42 50.0000 S	147 30.0000 E	-0.050
73900260		17	19	3837.335	42 50.0000 S	147 30.0000 E	-0.067
60910160		18	6	3834.081	42 54.0000 S	147 20.0000 E	-0.087
TRAVERSE1 5	18/	1/92		20L 1.05000		GMT+ 11H 0M	
60910160		13	32	3834.042	42 54.0000 S	147 20.0000 E	0.144
92900460		13	59	3781.929	42 56.0000 S	147 21.0000 E	0.127
60910160		14	29	3834.061	42 54.0000 S	147 20.0000 E	0.104
92900460		15	0	3781.919	42 56.0000 S	147 21.0000 E	0.077
60910160		15	31	3834.075	42 54.0000 S	147 20.0000 E	0.049
92900360		16	6	3839.027	42 50.0000 S	147 30.0000 E	0.015
92900260		16	30	3839.347	42 50.0000 S	147 30.0000 E	-0.007
92900160		16	52	3838.059	42 50.0000 S	147 30.0000 E	-0.026
73900260		17	18	3837.274	42 50.0000 S	147 30.0000 E	-0.047
60910160		18	5	3834.045	42 54.0000 S	147 20.0000 E	-0.077

TRAVERSE1 6	20/	1/92	20L	1.05000		GMT+ 11H	0M	
92909236		15 18	3701.943	42	8.0000	S	145 17.3000	E 0.129
64919136		16 25	3765.051	42	9.0000	S	145 17.3000	E 0.073
92909236		32 14	3701.915	42	8.0000	S	145 17.3000	E -0.093
TRAVERSE1 7	21/	1/92	20L	1.05000		GMT+ 11H	0M	
64919136		7 18	3765.022	42	9.0000	S	145 17.3000	E -0.107
92909236		8 14	3701.915	42	8.0000	S	145 17.3000	E -0.093
64919136		9 6	3765.065	42	9.0000	S	145 17.3000	E -0.065
92909236		10 1	3701.939	42	8.0000	S	145 17.3000	E -0.021
64919136		10 56	3765.068	42	9.0000	S	145 17.3000	E 0.029
TRAVERSE2 1	14/	1/92	101L	1.05000		GMT+ 11H	0M	
92900560		9 13	3872.270	42	50.0000	S	147 30.0000	E 0.074
92909261		11 7	3846.507	42	30.0000	S	147 55.0000	E 0.049
92909259		11 56	3853.825	42	30.0000	S	147 55.0000	E 0.032
92909258		12 37	3855.947	42	30.0000	S	147 55.0000	E 0.017
92901119		13 21	3850.846	42	30.0000	S	147 55.0000	E 0.001
92909261		14 23	3846.471	42	30.0000	S	147 55.0000	E -0.018
92909259		14 57	3853.808	42	30.0000	S	147 55.0000	E -0.027
92909258		15 38	3855.917	42	30.0000	S	147 55.0000	E -0.035
92901119		16 15	3850.806	42	30.0000	S	147 55.0000	E -0.040
92909261		16 39	3846.483	42	30.0000	S	147 55.0000	E -0.043
92900560		19 28	3872.262	42	50.0000	S	147 30.0000	E -0.052
TRAVERSE2 2	15/	1/92	101L	1.05000		GMT+ 11H	0M	
92900560		7 47	3872.270	42	50.0000	S	147 30.0000	E 0.082
73900260		9 29	3882.029	42	50.0000	S	147 30.0000	E 0.104
92909261		11 47	3846.493	42	30.0000	S	147 55.0000	E 0.075
92900560		14 19	3872.229	42	50.0000	S	147 30.0000	E -0.002
73900260		15 43	3881.991	42	50.0000	S	147 30.0000	E -0.040
92909261		17 1	3846.487	42	30.0000	S	147 55.0000	E -0.061
92900560		18 58	3872.232	42	50.0000	S	147 30.0000	E -0.070
TRAVERSE2 3	16/	1/92	101L	1.05000		GMT+ 11H	0M	
92900360		8 29	3883.754	42	50.0000	S	147 30.0000	E 0.099
92900260		8 53	3884.095	42	50.0000	S	147 30.0000	E 0.110
92900160		9 10	3882.794	42	50.0000	S	147 30.0000	E 0.117
73900260		9 37	3882.004	42	50.0000	S	147 30.0000	E 0.125
92900360		10 6	3883.749	42	50.0000	S	147 30.0000	E 0.130
92900260		10 24	3884.100	42	50.0000	S	147 30.0000	E 0.131
92900160		10 43	3882.773	42	50.0000	S	147 30.0000	E 0.131
73900260		11 12	3881.991	42	50.0000	S	147 30.0000	E 0.127
92900360		11 42	3883.722	42	50.0000	S	147 30.0000	E 0.119
92900260		12 3	3884.101	42	50.0000	S	147 30.0000	E 0.111
92900160		12 20	3882.809	42	50.0000	S	147 30.0000	E 0.104
73900260		12 40	3881.992	42	50.0000	S	147 30.0000	E 0.093
92900360		13 1	3883.742	42	50.0000	S	147 30.0000	E 0.081
TRAVERSE2 4	17/	1/92	101L	1.05000		GMT+ 11H	0M	
60910160		10 14	3878.806	42	54.0000	S	147 20.0000	E 0.143
92900460		10 55	3826.557	42	56.0000	S	147 21.0000	E 0.153
64919138		11 50	3674.734	42	53.5000	S	147 14.2000	E 0.152
70901138		12 27	3616.834	42	53.9000	S	147 14.2000	E 0.141
73900260		14 55	3882.023	42	50.0000	S	147 30.0000	E 0.040
60910160	1 +	37 35	3878.076	42	54.0000	S	147 20.0000	E 0.164
TRAVERSE2 5	18/	1/92	101L	1.05000		GMT+ 11H	0M	
60910160		13 35	3878.055	42	54.0000	S	147 20.0000	E 0.142
92900460		14 3	3825.818	42	56.0000	S	147 21.0000	E 0.124
60910160		14 32	3878.049	42	54.0000	S	147 20.0000	E 0.102
92900460		15 3	3825.806	42	56.0000	S	147 21.0000	E 0.075
60910160		15 34	3878.073	42	54.0000	S	147 20.0000	E 0.046
92900360		16 9	3883.037	42	50.0000	S	147 30.0000	E 0.012
92900260		16 33	3883.380	42	50.0000	S	147 30.0000	E -0.010
92900160		16 56	3882.071	42	50.0000	S	147 30.0000	E -0.029
73900260		17 20	3881.271	42	50.0000	S	147 30.0000	E -0.048
60910160		18 8	3878.038	42	54.0000	S	147 20.0000	E -0.079
TRAVERSE2 6	20/	1/92	101L	1.05000		GMT+ 11H	0M	
92909236		15 16	3745.514	42	8.0000	S	145 17.3000	E 0.130
64919136		16 29	3808.774	42	9.0000	S	145 17.3000	E 0.069
92909236		32 17	3745.531	42	8.0000	S	145 17.3000	E -0.092

TRAVERSE2 7	21/	1/92	101L	1.05000		GMT+ 11H 0M	
64919136		7 20	3808.822	42	9.0000 S	145 17.3000 E	-0.107
92909236		8 17	3745.531	42	8.0000 S	145 17.3000 E	-0.092
64919136		9 10	3808.764	42	9.0000 S	145 17.3000 E	-0.062
92909236		10 5	3745.512	42	8.0000 S	145 17.3000 E	-0.018
64919136		10 59	3808.795	42	9.0000 S	145 17.3000 E	0.032
TRAVERSE3 1	14/	1/92	132L	1.05000		GMT+ 11H 0M	
92900560		9 19	3902.115	42	50.0000 S	147 30.0000 E	0.073
92909261		11 14	3876.622	42	30.0000 S	147 55.0000 E	0.047
92909259		12 4	3883.843	42	30.0000 S	147 55.0000 E	0.029
92909258		12 45	3885.963	42	30.0000 S	147 55.0000 E	0.014
92901119		13 27	3880.928	42	30.0000 S	147 55.0000 E	-0.001
92909261		14 27	3876.630	42	30.0000 S	147 55.0000 E	-0.020
92909259		15 4	3883.802	42	30.0000 S	147 55.0000 E	-0.029
92909258		15 43	3885.935	42	30.0000 S	147 55.0000 E	-0.036
92901119		16 19	3880.915	42	30.0000 S	147 55.0000 E	-0.041
92909261		16 42	3876.620	42	30.0000 S	147 55.0000 E	-0.043
92900560		19 33	3902.079	42	50.0000 S	147 30.0000 E	-0.052
TRAVERSE3 2	15/	1/92	132L	1.05000		GMT+ 11H 0M	
92900560		7 52	3902.045	42	50.0000 S	147 30.0000 E	0.084
73900260		9 34	3911.711	42	50.0000 S	147 30.0000 E	0.104
92909261		11 51	3876.565	42	30.0000 S	147 55.0000 E	0.073
92900560		14 24	3902.020	42	50.0000 S	147 30.0000 E	-0.004
73900260		15 37	3911.703	42	50.0000 S	147 30.0000 E	-0.037
92909261		17 6	3876.460	42	30.0000 S	147 55.0000 E	-0.062
92900560		19 2	3901.963	42	50.0000 S	147 30.0000 E	-0.070
TRAVERSE3 3	16/	1/92	132L	1.05000		GMT+ 11H 0M	
92900360		8 33	3913.594	42	50.0000 S	147 30.0000 E	0.101
92900260		8 57	3913.966	42	50.0000 S	147 30.0000 E	0.112
92900160		9 14	3912.648	42	50.0000 S	147 30.0000 E	0.118
73900260		9 41	3911.880	42	50.0000 S	147 30.0000 E	0.126
92900360		10 9	3913.599	42	50.0000 S	147 30.0000 E	0.130
92900260		10 28	3913.967	42	50.0000 S	147 30.0000 E	0.131
92900160		10 45	3912.643	42	50.0000 S	147 30.0000 E	0.131
73900260		11 20	3911.865	42	50.0000 S	147 30.0000 E	0.125
92900360		11 46	3913.572	42	50.0000 S	147 30.0000 E	0.118
92900260		12 7	3913.959	42	50.0000 S	147 30.0000 E	0.110
92900160		12 24	3912.642	42	50.0000 S	147 30.0000 E	0.102
73900260		12 45	3911.876	42	50.0000 S	147 30.0000 E	0.091
92900360		13 5	3913.680	42	50.0000 S	147 30.0000 E	0.079
TRAVERSE3 4	17/	1/92	132L	1.05000		GMT+ 11H 0M	
60910160		10 17	3908.664	42	54.0000 S	147 20.0000 E	0.144
92900460		11 7	3856.970	42	56.0000 S	147 21.0000 E	0.154
64919138		11 55	3706.695	42	53.5000 S	147 14.2000 E	0.151
70901138		12 30	3649.415	42	53.9000 S	147 14.2000 E	0.140
60910160		18 13	3908.664	42	54.0000 S	147 20.0000 E	-0.089

TRAVERSE3 5	18/	1/92	132L	1.05000		GMT+ 11H	0M	
60910160	13	37	3908.607	42	54.0000	S	147 20.0000	E 0.141
92900460	14	7	3856.923	42	56.0000	S	147 21.0000	E 0.121
60910160	14	34	3908.635	42	54.0000	S	147 20.0000	E 0.100
92900460	15	6	3856.908	42	56.0000	S	147 21.0000	E 0.072
60910160	15	37	3908.616	42	54.0000	S	147 20.0000	E 0.043
92900360	16	13	3913.545	42	50.0000	S	147 30.0000	E 0.009
92900260	16	37	3913.901	42	50.0000	S	147 30.0000	E -0.013
92900160	16	59	3912.589	42	50.0000	S	147 30.0000	E -0.032
73900260	17	23	3911.823	42	50.0000	S	147 30.0000	E -0.051
60910160	18	12	3908.627	42	54.0000	S	147 20.0000	E -0.081
TRAVERSE3 7	21/	1/92	132L	1.05000		GMT+ 11H	0M	
64919136	7	24	3839.867	42	9.0000	S	145 17.3000	E -0.107
92909236	8	20	3777.237	42	8.0000	S	145 17.3000	E -0.091
64919136	9	14	3839.848	42	9.0000	S	145 17.3000	E -0.059
92909236	10	9	3777.250	42	8.0000	S	145 17.3000	E -0.014
64919136	11	3	3839.859	42	9.0000	S	145 17.3000	E 0.036
TRAVERSE4 1	14/	1/92	252L	1.05000		GMT+ 11H	0M	
92900560	9	25	3973.544	42	50.0000	S	147 30.0000	E 0.073
92909261	11	23	3947.832	42	30.0000	S	147 55.0000	E 0.044
92909259	12	8	3955.108	42	30.0000	S	147 55.0000	E 0.028
92909258	12	40	3957.255	42	30.0000	S	147 55.0000	E 0.016
92901119	13	33	3952.176	42	30.0000	S	147 55.0000	E -0.003
92909261	14	31	3947.835	42	30.0000	S	147 55.0000	E -0.021
92909259	15	8	3955.131	42	30.0000	S	147 55.0000	E -0.029
92909258	15	47	3957.244	42	30.0000	S	147 55.0000	E -0.036
92901119	16	22	3952.120	42	30.0000	S	147 55.0000	E -0.041
92909261	16	47	3947.808	42	30.0000	S	147 55.0000	E -0.043
92900560	19	38	3973.499	42	50.0000	S	147 30.0000	E -0.052
TRAVERSE4 2	15/	1/92	252L	1.05000		GMT+ 11H	0M	
92900560	7	59	3973.517	42	50.0000	S	147 30.0000	E 0.086
73900260	9	38	3983.241	42	50.0000	S	147 30.0000	E 0.104
92909261	11	55	3947.810	42	30.0000	S	147 55.0000	E 0.072
92900560	14	32	3973.491	42	50.0000	S	147 30.0000	E -0.008
73900260	15	41	3983.247	42	50.0000	S	147 30.0000	E -0.039
92909261	17	10	3947.824	42	30.0000	S	147 55.0000	E -0.063
92900560	19	7	3973.508	42	50.0000	S	147 30.0000	E -0.070
TRAVERSE4 3	16/	1/92	252L	1.05000		GMT+ 11H	0M	
92900360	8	40	3984.981	42	50.0000	S	147 30.0000	E 0.104
92900260	9	0	3985.363	42	50.0000	S	147 30.0000	E 0.113
92900160	9	17	3984.023	42	50.0000	S	147 30.0000	E 0.119
73900260	9	48	3983.244	42	50.0000	S	147 30.0000	E 0.127
92900360	10	13	3984.989	42	50.0000	S	147 30.0000	E 0.131
92900260	10	31	3985.350	42	50.0000	S	147 30.0000	E 0.131
92900160	10	48	3984.019	42	50.0000	S	147 30.0000	E 0.131
73900260	11	23	3983.247	42	50.0000	S	147 30.0000	E 0.125
92900360	11	50	3984.984	42	50.0000	S	147 30.0000	E 0.116
92900260	12	10	3985.368	42	50.0000	S	147 30.0000	E 0.108
92900160	12	27	3984.020	42	50.0000	S	147 30.0000	E 0.100
73900260	12	48	3983.256	42	50.0000	S	147 30.0000	E 0.089
92900360	13	14	3984.925	42	50.0000	S	147 30.0000	E 0.073
TRAVERSE4 4	17/	1/92	252L	1.05000		GMT+ 11H	0M	
60910160	10	20	3979.978	42	54.0000	S	147 20.0000	E 0.145
92900460	11	11	3927.897	42	56.0000	S	147 21.0000	E 0.154
64919138	11	59	3776.418	42	53.5000	S	147 14.2000	E 0.150
70901138	12	34	3718.692	42	53.9000	S	147 14.2000	E 0.138
73900260	15	13	3983.164	42	50.0000	S	147 30.0000	E 0.025
73900260	17	36	3983.242	42	50.0000	S	147 30.0000	E -0.075
60910160	18	16	3980.008	42	54.0000	S	147 20.0000	E -0.090

Station.	Day	Hrs	Min	Corr.rdg.	Lat (deg.min)		Long (deg.min)		Correction (mGal)
TRAVERSE4 5	18/	1/92		252L	1.05000		GMT+ 11H 0M		
60910160		13	39	3979.988	42 54.0000	S	147 20.0000	E	0.140
92900460		14	10	3927.895	42 56.0000	S	147 21.0000	E	0.119
60910160		14	39	3979.994	42 54.0000	S	147 20.0000	E	0.096
92900460		15	9	3927.903	42 56.0000	S	147 21.0000	E	0.069
60910160		15	40	3980.003	42 54.0000	S	147 20.0000	E	0.040
92900360		16	16	3984.951	42 50.0000	S	147 30.0000	E	0.006
92900260		16	40	3985.319	42 50.0000	S	147 30.0000	E	-0.016
92900160		17	1	3984.005	42 50.0000	S	147 30.0000	E	-0.034
73900260		17	28	3983.235	42 50.0000	S	147 30.0000	E	-0.054
60910160		18	14	3980.011	42 54.0000	S	147 20.0000	E	-0.082
TRAVERSE4 7	21/	1/92		252L	1.05000		GMT+ 11H 0M		
64919136		7	27	3910.938	42 9.0000	S	145 17.3000	E	-0.106
92909236		8	23	3847.859	42 8.0000	S	145 17.3000	E	-0.090
64919136		9	16	3910.954	42 9.0000	S	145 17.3000	E	-0.058
92909236		10	12	3847.866	42 8.0000	S	145 17.3000	E	-0.012
64919136		11	6	3910.952	42 9.0000	S	145 17.3000	E	0.038

APPENDIX 5

INITIAL PROCESSING SUMMARY AND STATISTICS.

GRVHTS Version 6 of November 1992 - Phase one sub-program Computed on 1996/11/04 at 11:42:22

***** Input data for this pass being read from non-standard unit 40

Gravity meter data reduction
Use new scale correction for LaCoste meters
Latitude-Longitude data saved

Segment identification *TASMANIA ISOGAL

GRAVITY *

TRAVERSE	Flight 1 1	14/ 1/92	Meter	20L	Scale factor	1.05000
Scale correction factor is 1.0003520000000						
	Station	Time	Gravity	Drift	Diff	Reading
	9290.0560	905	0.000	0.000	0.011	3827.576
	9290.9261	1100	-27.043	-0.002	-0.013	3801.854
	9290.9259	1149	-19.361	0.000	-0.003	3809.165
	9290.9258	1241	-17.163	0.004	0.000	3811.260
	9290.1119	1310	-22.492	0.005	0.005	3806.203
	9290.9261	1419	-27.043	0.009	0.000	3801.877
	9290.9259	1455	-19.361	0.010	0.003	3809.181
	9290.9258	1531	-17.163	0.012	0.000	3811.267
	9290.1119	1613	-22.492	0.013	-0.005	3806.201
	9290.9261	1636	-27.043	0.014	0.013	3801.894
	9290.0560	1925	0.000	0.011	-0.011	3827.565

TRAVERSE	Flight 1 2	15/ 1/92	Meter	20L	Scale factor	1.05000
Scale correction factor is 1.0003520000000						
	Station	Time	Gravity	Drift	Diff	Reading
	9290.0560	742	0.000	0.000	-0.015	3827.543
	7390.0260	926	10.279	0.011	0.008	3837.342
	9290.9261	1140	-27.036	0.014	0.000	3801.880
	9290.0560	1415	0.000	0.012	0.014	3827.582
	7390.0260	1531	10.279	0.004	-0.008	3837.321
	9290.9261	1656	-27.036	-0.008	0.000	3801.859
	9290.0560	1855	0.000	-0.032	0.001	3827.527

TRAVERSE	Flight 1 3	16/ 1/92	Meter	20L	Scale factor	1.05000
Scale correction factor is 1.0003520000000						
	Station	Time	Gravity	Drift	Diff	Reading
	9290.0360	821	0.000	0.000	-0.006	3839.023
	9290.0260	851	0.396	0.002	0.000	3839.406
	9290.0160	907	-1.006	0.000	-0.007	3838.065
	7390.0260	932	-1.824	-0.001	0.017	3837.310
	9290.0360	1000	0.000	-0.004	0.003	3839.028
	9290.0260	1022	0.396	-0.006	-0.020	3839.380
	9290.0160	1039	-1.006	-0.005	0.009	3838.077
	7390.0260	1109	-1.824	-0.004	-0.002	3837.289
	9290.0360	1137	0.000	-0.004	0.003	3839.027
	9290.0260	1201	0.396	-0.005	0.020	3839.419
	9290.0160	1216	-1.006	-0.008	-0.002	3838.063
	7390.0260	1238	-1.824	-0.012	-0.015	3837.270
	9290.0360	1258	0.000	-0.015	0.000	3839.014

TRAVERSE Flight 1 4 17/ 1/92 Meter 20L Scale factor 1.05000

Scale correction factor is 1.0003520000000

Station	Time	Gravity	Drift	Diff	Reading
6091.0160	1010	0.000	0.000	0.004	3834.089
7390.0260	1449	3.415	-0.005	-0.004	3837.321
9290.0360	1527	5.207	-0.003	0.000	3839.029
9290.0260	1605	5.577	-0.002	0.000	3839.382
9290.0160	1651	4.192	0.000	0.000	3838.068
7390.0260	1719	3.415	0.001	0.004	3837.335
6091.0160	1806	0.000	0.000	-0.004	3834.081

TRAVERSE Flight 1 5 18/ 1/92 Meter 20L Scale factor 1.05000

Scale correction factor is 1.0003520000000

Station	Time	Gravity	Drift	Diff	Reading
6091.0160	1531	0.000	0.000	0.000	3834.075
9290.0360	1606	5.219	-0.007	0.000	3839.027
9290.0260	1630	5.560	-0.012	0.000	3839.347
9290.0160	1652	4.209	-0.017	0.000	3838.059
7390.0260	1718	3.389	-0.022	0.000	3837.274
6091.0160	1805	0.000	-0.032	0.000	3834.045

TRAVERSE Flight 2 1 14/ 1/92 Meter 101L Scale factor 1.05000

Scale correction factor is 1.0029320000000

Station	Time	Gravity	Drift	Diff	Reading
9290.0560	913	0.000	0.000	-0.013	3872.270
9290.9261	1107	-27.047	-0.002	0.003	3846.507
9290.9259	1156	-19.359	-0.007	-0.002	3853.825
9290.9258	1237	-17.135	-0.011	0.005	3855.947
9290.1119	1321	-22.489	-0.016	0.012	3850.846
9290.9261	1423	-27.047	-0.025	-0.011	3846.471
9290.9259	1457	-19.359	-0.028	0.002	3853.808
9290.9258	1538	-17.135	-0.031	-0.005	3855.917
9290.1119	1615	-22.489	-0.033	-0.012	3850.806
9290.9261	1639	-27.047	-0.032	0.009	3846.483
9290.0560	1928	0.000	-0.035	0.013	3872.262

TRAVERSE Flight 2 2 15/ 1/92 Meter 101L Scale factor 1.05000

Scale correction factor is 1.0029320000000

Station	Time	Gravity	Drift	Diff	Reading
9290.0560	747	0.000	0.000	0.001	3872.270
7390.0260	929	10.248	-0.011	0.005	3882.029
9290.9261	1147	-27.015	-0.026	-0.005	3846.493
9290.0560	1419	0.000	-0.038	-0.003	3872.229
7390.0260	1543	10.248	-0.041	-0.005	3881.991
9290.9261	1701	-27.015	-0.042	0.005	3846.487
9290.0560	1858	0.000	-0.040	0.002	3872.232

TRAVERSE	Flight 2 3	16/ 1/92	Meter	101L	Scale factor	1.05000
Scale correction factor is		1.0029320000000				
Station	Time	Gravity	Drift	Diff	Reading	
9290.0360	829	0.000	0.000	0.010	3883.754	
9290.0260	853	0.377	-0.001	-0.009	3884.095	
9290.0160	910	-0.994	-0.001	-0.002	3882.794	
7390.0260	937	-1.830	-0.003	0.006	3882.004	
9290.0360	1006	0.000	-0.006	0.010	3883.749	
9290.0260	1024	0.377	-0.009	0.004	3884.100	
9290.0160	1043	-0.994	-0.012	-0.014	3882.773	
7390.0260	1112	-1.830	-0.012	0.002	3881.991	
9290.0360	1142	0.000	-0.011	-0.013	3883.722	
9290.0260	1203	0.377	-0.008	0.004	3884.101	
9290.0160	1220	-0.994	-0.004	0.016	3882.809	
7390.0260	1240	-1.830	-0.001	-0.008	3881.992	
9290.0360	1301	0.000	0.004	-0.007	3883.742	

TRAVERSE	Flight 2 5	18/ 1/92	Meter	101L	Scale factor	1.05000
Scale correction factor is		1.0029320000000				
Station	Time	Gravity	Drift	Diff	Reading	
6091.0160	1335	0.000	0.000	-0.006	3878.055	
9290.0460	1403	-54.819	-0.003	0.005	3825.818	
6091.0160	1432	0.000	-0.008	-0.004	3878.049	
9290.0460	1503	-54.819	-0.005	-0.005	3825.806	
6091.0160	1534	0.000	0.008	0.005	3878.073	
9290.0360	1609	5.222	0.000	0.000	3883.037	
9290.0260	1633	5.588	-0.006	0.000	3883.380	
9290.0160	1656	4.220	-0.012	0.000	3882.071	
7390.0260	1720	3.386	-0.017	0.000	3881.271	
6091.0160	1808	0.000	-0.029	0.005	3878.038	

TRAVERSE	Flight 2 6	20/ 1/92	Meter	101L	Scale factor	1.05000
Scale correction factor is		1.0029320000000				
Station	Time	Gravity	Drift	Diff	Reading	
9290.9236	1516	0.000	0.000	0.000	3745.514	
6491.9136	1629	66.370	0.001	0.000	3808.774	
9290.9236	1+3217	0.000	0.018	0.000	3745.531	

TRAVERSE	Flight 2 7	21/ 1/92	Meter	101L	Scale factor	1.05000
Scale correction factor is		1.0029320000000				
Station	Time	Gravity	Drift	Diff	Reading	
6491.9136	720	0.000	0.000	0.002	3808.822	
9290.9236	817	-66.372	-0.032	0.002	3745.531	
6491.9136	910	0.000	-0.051	-0.008	3808.764	
9290.9236	1005	-66.372	-0.048	-0.002	3745.512	
6491.9136	1059	0.000	-0.032	0.006	3808.795	

TRAVERSE Flight 3 1 14/ 1/92 Meter 132L Scale factor 1.05000

Scale correction factor is 1.0002140000000

Station	Time	Gravity	Drift	Diff	Reading
9290.0560	919	0.000	0.000	-0.003	3902.115
9290.9261	1114	-27.004	-0.007	-0.016	3876.622
9290.9259	1204	-19.377	-0.008	0.012	3883.843
9290.9258	1245	-17.119	-0.011	0.005	3885.963
9290.1119	1327	-22.445	-0.016	-0.002	3880.928
9290.9261	1427	-27.004	-0.022	0.007	3876.630
9290.9259	1504	-19.377	-0.026	-0.012	3883.802
9290.9258	1543	-17.119	-0.030	-0.005	3885.935
9290.1119	1619	-22.445	-0.033	0.002	3880.915
9290.9261	1642	-27.004	-0.034	0.009	3876.620
9290.0560	1933	0.000	-0.045	0.003	3902.079

TRAVERSE Flight 3 2 15/ 1/92 Meter 132L Scale factor 1.05000

Scale correction factor is 1.0002140000000

Station	Time	Gravity	Drift	Diff	Reading
9290.0560	752	0.000	0.000	-0.008	3902.045
7390.0260	934	10.264	-0.007	-0.017	3911.711
9290.9261	1151	-27.029	-0.013	0.024	3876.565
9290.0560	1424	0.000	-0.036	0.002	3902.020
7390.0260	1537	10.264	-0.050	0.017	3911.703
9290.9261	1706	-27.029	-0.076	-0.024	3876.460
9290.0560	1902	0.000	-0.101	0.006	3901.963

TRAVERSE Flight 3 3 16/ 1/92 Meter 132L Scale factor 1.05000

Scale correction factor is 1.0002140000000

Station	Time	Gravity	Drift	Diff	Reading
9290.0360	833	0.000	0.000	-0.008	3913.594
9290.0260	857	0.385	0.001	0.000	3913.966
9290.0160	914	-1.016	0.002	0.003	3912.648
7390.0260	941	-1.837	0.002	0.010	3911.880
9290.0360	1009	0.000	0.001	-0.003	3913.599
9290.0260	1028	0.385	-0.001	0.004	3913.967
9290.0160	1045	-1.016	-0.004	0.004	3912.643
7390.0260	1120	-1.837	-0.009	0.005	3911.865
9290.0360	1146	0.000	-0.011	-0.021	3913.572
9290.0260	1207	0.385	-0.003	-0.004	3913.959
9290.0160	1224	-1.016	0.006	-0.007	3912.642
7390.0260	1245	-1.837	0.023	-0.015	3911.876
9290.0360	1305	0.000	0.052	0.032	3913.680

TRAVERSE Flight 3 4 17/ 1/92 Meter 132L Scale factor 1.05000

Scale correction factor is 1.0002140000000

Station	Time	Gravity	Drift	Diff	Reading
6091.0160	1017	0.000	0.000	0.000	3908.664
9290.0460	1107	-54.798	0.000	0.000	3856.970
6491.9138	1155	-214.080	0.000	0.000	3706.695
7090.1138	1230	-274.784	0.000	0.000	3649.415
6091.0160	1813	0.000	0.000	0.000	3908.664

TRAVERSE	Flight 3 5	18/ 1/92	Meter	132L	Scale factor	1.05000
Scale correction factor is 1.0002140000000						
Station	Time	Gravity	Drift	Diff	Reading	
6091.0160	1337	0.000	0.000	-0.008	3908.607	
9290.0460	1407	-54.816	0.016	0.005	3856.923	
6091.0160	1434	0.000	0.019	0.003	3908.635	
9290.0460	1506	-54.816	0.010	-0.005	3856.908	
6091.0160	1537	0.000	0.000	0.002	3908.616	
9290.0360	1613	5.225	0.002	0.000	3913.545	
9290.0260	1637	5.601	0.004	0.000	3913.901	
9290.0160	1659	4.208	0.006	0.000	3912.589	
7390.0260	1723	3.394	0.008	0.000	3911.823	
6091.0160	1812	0.000	0.011	0.002	3908.627	

TRAVERSE	Flight 3 7	21/ 1/92	Meter	132L	Scale factor	1.05000
Scale correction factor is 1.0002140000000						
Station	Time	Gravity	Drift	Diff	Reading	
6491.9136	724	0.000	0.000	0.006	3839.867	
9290.9236	820	-66.366	-0.010	-0.004	3777.237	
6491.9136	914	0.000	-0.012	-0.003	3839.848	
9290.9236	1009	-66.366	-0.005	0.004	3777.250	
6491.9136	1103	0.000	0.000	-0.003	3839.859	

TRAVERSE	Flight 4 1	14/ 1/92	Meter	252L	Scale factor	1.05000
Scale correction factor is 1.0007160000000						
Station	Time	Gravity	Drift	Diff	Reading	
9290.0560	925	0.000	0.000	-0.001	3973.544	
9290.9261	1123	-27.047	-0.009	-0.003	3947.832	
9290.9259	1208	-19.376	-0.010	-0.016	3955.108	
9290.9258	1240	-17.131	-0.010	-0.002	3957.255	
9290.1119	1333	-22.496	-0.010	0.018	3952.176	
9290.9261	1431	-27.047	-0.013	0.005	3947.835	
9290.9259	1508	-19.376	-0.018	0.016	3955.131	
9290.9258	1547	-17.131	-0.024	0.002	3957.244	
9290.1119	1622	-22.496	-0.032	-0.018	3952.120	
9290.9261	1647	-27.047	-0.035	-0.002	3947.808	
9290.0560	1938	0.000	-0.049	0.001	3973.499	

TRAVERSE	Flight 4 2	15/ 1/92	Meter	252L	Scale factor	1.05000
Scale correction factor is 1.0007160000000						
Station	Time	Gravity	Drift	Diff	Reading	
9290.0560	759	0.000	0.000	0.010	3973.517	
7390.0260	938	10.254	-0.007	-0.004	3983.241	
9290.9261	1155	-27.029	-0.010	-0.004	3947.810	
9290.0560	1432	0.000	-0.011	-0.006	3973.491	
7390.0260	1541	10.254	-0.008	0.004	3983.247	
9290.9261	1710	-27.029	-0.003	0.004	3947.824	
9290.0560	1907	0.000	0.005	-0.004	3973.508	

TRAVERSE Flight 4 3 16/ 1/92 Meter 252L Scale factor 1.05000

Scale correction factor is 1.0007160000000

Station	Time	Gravity	Drift	Diff	Reading
9290.0360	840	0.000	0.000	0.005	3984.981
9290.0260	900	0.404	0.002	0.001	3985.363
9290.0160	917	-1.005	0.001	0.000	3984.023
7390.0260	948	-1.815	0.000	-0.008	3983.244
9290.0360	1013	0.000	0.000	0.014	3984.989
9290.0260	1031	0.404	-0.001	-0.009	3985.350
9290.0160	1048	-1.005	-0.001	-0.002	3984.019
7390.0260	1123	-1.815	0.001	-0.006	3983.247
9290.0360	1150	0.000	0.003	0.006	3984.984
9290.0260	1210	0.404	0.001	0.008	3985.368
9290.0160	1227	-1.005	-0.003	0.001	3984.020
7390.0260	1248	-1.815	-0.010	0.014	3983.256
9290.0360	1314	0.000	-0.029	-0.025	3984.925

TRAVERSE Flight 4 4 17/ 1/92 Meter 252L Scale factor 1.05000

Scale correction factor is 1.0007160000000

Station	Time	Gravity	Drift	Diff	Reading
6091.0160	1020	0.000	0.000	0.000	3979.978
9290.0460	1111	-54.811	0.003	0.000	3927.897
6491.9138	1159	-214.221	0.007	0.000	3776.418
7390.0260	1736	3.406	0.029	0.000	3983.242
6091.0160	1816	0.000	0.032	0.000	3980.008

TRAVERSE Flight 4 5 18/ 1/92 Meter 252L Scale factor 1.05000

Scale correction factor is 1.0007160000000

Station	Time	Gravity	Drift	Diff	Reading
6091.0160	1339	0.000	0.000	0.000	3979.988
9290.0460	1410	-54.823	0.003	0.000	3927.895
6091.0160	1439	0.000	0.007	0.000	3979.994
9290.0460	1509	-54.823	0.011	0.000	3927.903
6091.0160	1540	0.000	0.016	0.000	3980.003
9290.0360	1616	5.205	0.018	0.000	3984.951
9290.0260	1640	5.591	0.019	0.000	3985.319
9290.0160	1701	4.207	0.021	0.000	3984.005
7390.0260	1728	3.395	0.022	0.000	3983.235
6091.0160	1814	0.000	0.025	0.000	3980.011

TRAVERSE Flight 4 7 21/ 1/92 Meter 252L Scale factor 1.05000

Scale correction factor is 1.0007160000000

Station	Time	Gravity	Drift	Diff	Reading
6491.9136	727	0.000	0.000	-0.001	3910.938
9290.9236	823	-66.391	0.009	0.000	3847.859
6491.9136	916	0.000	0.015	0.002	3910.954
9290.9236	1012	-66.391	0.016	0.000	3847.866
6491.9136	1106	0.000	0.015	-0.001	3910.952

MNSLOPE completed at 1.6 seconds.

GRVHTS Version 6 of November 1992 - Phase two sub-program Computed on 1996/11/04 at 11:42:26

Least squares adjustment phase - commenced 1.8 sec

Number of segments to adjust together 1

*TASMANIA ISOGAL

GRAVITY *

Free nodes

9290.0160
9290.0260
9290.0360
9290.0460
9290.0560
9290.1119
9290.9236

9290.9258
 9290.9259
 9290.9261

Fixed nodes	Values
6091.0160	9804310.000
6491.9136	9803583.800
6491.9138	9802168.000
7090.1138	9801561.800
7390.0260	9804343.900

Final number of free nodes is 10

Final number of fixed nodes is 5

Total number of nodes in list is 15

Maximum adjustment expected - Gravity 1.00 mums-

Data search commenced 1.8 sec

Segment identification *TASMANIA ISOGAL
 GRAVITY *

TRAVERSE	1 1	14/ 1/92
TRAVERSE	1 2	15/ 1/92
TRAVERSE	1 3	16/ 1/92
TRAVERSE	1 4	17/ 1/92
TRAVERSE	1 5	18/ 1/92
TRAVERSE	2 1	14/ 1/92
TRAVERSE	2 2	15/ 1/92
TRAVERSE	2 3	16/ 1/92
TRAVERSE	2 5	18/ 1/92
TRAVERSE	2 6	20/ 1/92
TRAVERSE	2 7	21/ 1/92
TRAVERSE	3 1	14/ 1/92
TRAVERSE	3 2	15/ 1/92
TRAVERSE	3 3	16/ 1/92
TRAVERSE	3 4	17/ 1/92
TRAVERSE	3 5	18/ 1/92
TRAVERSE	3 7	21/ 1/92
TRAVERSE	4 1	14/ 1/92
TRAVERSE	4 2	15/ 1/92
TRAVERSE	4 3	16/ 1/92
TRAVERSE	4 4	17/ 1/92
TRAVERSE	4 5	18/ 1/92
TRAVERSE	4 7	21/ 1/92

Least squares values for free nodes

node	VALUE
9290.0160	9804352.083
9290.0260	9804365.984
9290.0360	9804362.145
9290.0460	9803761.783
9290.0560	9804241.305
9290.1119	9804016.548
9290.9236	9802920.048
9290.9258	9804069.980
9290.9259	9804047.671
9290.9261	9803971.002

Connection table and adjustments

Node		Node		Difference	Adjustment	Flight	
9290.0560		9290.9261		-270.430	0.128	TRAVERSE	1 1
9290.9261		9290.9259		76.819	-0.150	TRAVERSE	1 1
9290.9259		9290.9258		21.977	0.332	TRAVERSE	1 1
9290.9258		9290.1119		-53.282	-0.150	TRAVERSE	1 1
9290.1119		9290.9261		-45.514	-0.032	TRAVERSE	1 1
9290.9261		9290.9259		76.819	-0.150	TRAVERSE	1 1
9290.9259		9290.9258		21.977	0.332	TRAVERSE	1 1
9290.9258		9290.1119		-53.282	-0.150	TRAVERSE	1 1
9290.1119		9290.9261		-45.514	-0.032	TRAVERSE	1 1
9290.9261		9290.0560		270.430	-0.128	TRAVERSE	1 1
9290.0560		7390.0260	FIXED	102.792	-0.197	TRAVERSE	1 2
7390.0260	FIXED	9290.9261		-373.155	0.257	TRAVERSE	1 2
9290.9261		9290.0560		270.363	-0.060	TRAVERSE	1 2
9290.0560		7390.0260	FIXED	102.792	-0.197	TRAVERSE	1 2
7390.0260	FIXED	9290.9261		-373.155	0.257	TRAVERSE	1 2
9290.9261		9290.0560		270.363	-0.060	TRAVERSE	1 2
9290.0360		9290.0260		3.958	-0.119	TRAVERSE	1 3
9290.0260		9290.0160		-14.021	0.120	TRAVERSE	1 3
9290.0160		7390.0260	FIXED	-8.178	-0.005	TRAVERSE	1 3
7390.0260	FIXED	9290.0360		18.241	0.005	TRAVERSE	1 3
9290.0360		9290.0260		3.958	-0.119	TRAVERSE	1 3
9290.0260		9290.0160		-14.021	0.120	TRAVERSE	1 3
9290.0160		7390.0260	FIXED	-8.178	-0.005	TRAVERSE	1 3
7390.0260	FIXED	9290.0360		18.241	0.005	TRAVERSE	1 3
9290.0360		9290.0260		3.958	-0.119	TRAVERSE	1 3
9290.0260		9290.0160		-14.021	0.120	TRAVERSE	1 3
9290.0160		7390.0260	FIXED	-8.178	-0.005	TRAVERSE	1 3
7390.0260	FIXED	9290.0360		18.241	0.005	TRAVERSE	1 3
9290.0360		9290.0260		3.958	-0.119	TRAVERSE	1 3
9290.0260		9290.0160		-14.021	0.120	TRAVERSE	1 3
9290.0160		7390.0260	FIXED	-8.178	-0.005	TRAVERSE	1 3
7390.0260	FIXED	9290.0360		18.241	0.005	TRAVERSE	1 3
9290.0360		9290.0260		3.958	-0.119	TRAVERSE	1 3
9290.0260		9290.0160		-14.021	0.120	TRAVERSE	1 3
9290.0160		7390.0260	FIXED	-8.178	-0.005	TRAVERSE	1 3
7390.0260	FIXED	9290.0360		18.241	0.005	TRAVERSE	1 3
9290.0360		9290.0260		3.958	-0.119	TRAVERSE	1 3
9290.0260		9290.0160		-14.021	0.120	TRAVERSE	1 3
9290.0160		7390.0260	FIXED	-8.178	-0.005	TRAVERSE	1 3
7390.0260	FIXED	9290.0360		18.241	0.005	TRAVERSE	1 3
9290.0360		9290.0260		3.958	-0.119	TRAVERSE	1 3
9290.0260		9290.0160		-14.021	0.120	TRAVERSE	1 3
9290.0160		7390.0260	FIXED	-8.178	-0.005	TRAVERSE	1 3
7390.0260	FIXED	9290.0360		18.241	0.005	TRAVERSE	1 3
9290.0360		9290.0260		3.958	-0.119	TRAVERSE	1 3
9290.0260		9290.0160		-14.021	0.120	TRAVERSE	1 3
9290.0160		7390.0260	FIXED	-8.178	-0.005	TRAVERSE	1 3
7390.0260	FIXED	9290.0360		18.241	0.005	TRAVERSE	1 3
9290.0360		9290.0260		3.958	-0.119	TRAVERSE	1 3
9290.0260		9290.0160		-14.021	0.120	TRAVERSE	1 3
9290.0160		7390.0260	FIXED	-8.178	-0.005	TRAVERSE	1 3
7390.0260	FIXED	9290.0360		18.241	0.005	TRAVERSE	1 3
9290.0360		9290.0260		3.958	-0.119	TRAVERSE	1 3
9290.0260		9290.0160		-14.021	0.120	TRAVERSE	1 3
9290.0160		7390.0260	FIXED	-8.178	-0.005	TRAVERSE	1 3
7390.0260	FIXED	9290.0360		18.241	0.005	TRAVERSE	1 3
9290.0360		9290.0260		3.958	-0.119	TRAVERSE	1 3
9290.0260		9290.0160		-14.021	0.120	TRAVERSE	1 3
9290.0160		7390.0260	FIXED	-8.178	-0.005	TRAVERSE	1 3
7390.0260	FIXED	9290.0360		18.241	0.005	TRAVERSE	1 3
9290.0360		9290.0260		3.958	-0.119	TRAVERSE	1 3
9290.0260		9290.0160		-14.021	0.120	TRAVERSE	1 3
9290.0160		7390.0260	FIXED	-8.178	-0.005	TRAVERSE	1 3
7390.0260	FIXED	9290.0360		18.241	0.005	TRAVERSE	1 3
9290.0360		9290.0260		3.958	-0.119	TRAVERSE	1 3
9290.0260		9290.0160		-14.021	0.120	TRAVERSE	1 3
9290.0160		7390.0260	FIXED	-8.178	-0.005	TRAVERSE	1 3
7390.0260	FIXED	9290.0360		18.241	0.005	TRAVERSE	1 3
9290.0360		9290.0260		3.958	-0.119	TRAVERSE	1 3
9290.0260		9290.0160		-14.021	0.120	TRAVERSE	1 3
9290.0160		7390.0260	FIXED	-8.178	-0.005	TRAVERSE	1 3
7390.0260	FIXED	9290.0360		18.241	0.005	TRAVERSE	1 3
9290.0360		9290.0260		3.958	-0.119	TRAVERSE	1 3
9290.0260		9290.0160		-14.021	0.120	TRAVERSE	1 3
9290.0160		7390.0260	FIXED	-8.178	-0.005	TRAVERSE	1 3
7390.0260	FIXED	9290.0360		18.241	0.005	TRAVERSE	1 3
9290.0360		9290.0260		3.958	-0.119	TRAVERSE	1 3
9290.0260		9290.0160		-14.021	0.120	TRAVERSE	1 3
9290.0160		7390.0260	FIXED	-8.178	-0.005	TRAVERSE	1 3
7390.0260	FIXED	9290.0360		18.241	0.005	TRAVERSE	1 3
9290.0360		9290.0260		3.958	-0.119	TRAVERSE	1 3
9290.0260		9290.0160		-14.021	0.120	TRAVERSE	1 3
9290.0160		7390.0260	FIXED	-8.178	-0.005	TRAVERSE	1 3
7390.0260	FIXED	9290.0360		18.241	0.005	TRAVERSE	1 3
9290.0360		9290.0260		3.958	-0.119	TRAVERSE	1 3
9290.0260		9290.0160		-14.021	0.120	TRAVERSE	1 3
9290.0160		7390.0260	FIXED	-8.178	-0.005	TRAVERSE	1 3
7390.0260	FIXED	9290.0360		18.241	0.005	TRAVERSE	1 3
9290.0360		9290.0260		3.958	-0.119	TRAVERSE	1 3
9290.0260		9290.0160		-14.021	0.120	TRAVERSE	1 3
9290.0160		7390.0260	FIXED	-8.178	-0.005	TRAVERSE	1 3
7390.0260	FIXED	9290.0360		18.241	0.005	TRAVERSE	1 3
9290.0360		9290.0260		3.958	-0.119	TRAVERSE	1 3
9290.0260		9290.0160		-14.021	0.120	TRAVERSE	1 3
9290.0160		7390.0260	FIXED	-8.178	-0.005	TRAVERSE	1 3
7390.0260	FIXED	9290.0360		18.241	0.005	TRAVERSE	1 3
9290.0360		9290.0260		3.958	-0.119	TRAVERSE	1 3
9290.0260		9290.0160		-14.021	0.120	TRAVERSE	1 3
9290.0160		7390.0260	FIXED	-8.178	-0.005	TRAVERSE	1 3
7390.0260	FIXED	9290.0360		18.241	0.005	TRAVERSE	1 3
9290.0360		9290.0260		3.958	-0.119	TRAVERSE	1 3
9290.0260		9290.0160		-14.021	0.120	TRAVERSE	1 3
9290.0160		7390.0260	FIXED	-8.178	-0.005	TRAVERSE	1 3
7390.0260	FIXED	9290.0360		18.241	0.005	TRAVERSE	1 3
9290.0360		9290.0260		3.958	-0.119	TRAVERSE	1 3
9290.0260		9290.0160		-14.021	0.120	TRAVERSE	1 3
9290.0160		7390.0260	FIXED	-8.178	-0.005	TRAVERSE	1 3
7390.0260	FIXED	9290.0360		18.241	0.005	TRAVERSE	1 3
9290.0360		9290.0260		3.958	-0.119	TRAVERSE	1 3
9290.0260		9290.0160		-14.021	0.120	TRAVERSE	1 3
9290.0160		7390.0260	FIXED	-8.178	-0.005	TRAVERSE	1 3
7390.0260	FIXED	9290.0360		18.241	0.005	TRAVERSE	1 3
9290.0360		9290.0260		3.958	-0.119	TRAVERSE	1 3
9290.0260		9290.0160		-14.021	0.120	TRAVERSE	1 3
9290.0160		7390.0260	FIXED	-8.178	-0.005	TRAVERSE	1 3
7390.0260	FIXED	9290.0360		18.241	0.005	TRAVERSE	1 3
9290.0360		9290.0260		3.958	-0.119	TRAVERSE	1 3
9290.0260		9290.0160		-14.021	0.120	TRAVERSE	1 3
9290.0160		7390.0260	FIXED	-8.178	-0.005	TRAVERSE	1 3
7390.0260	FIXED	9290.0360		18.241	0.005	TRAVERSE	1 3
9290.0360		9290.0260		3.958	-0.119	TRAVERSE	1 3
9290.0260		9290.0160		-14.021	0.120	TRAVERSE	1 3
9290.0160		7390.0260	FIXED	-8.178	-0.005	TRAVERSE	1 3
7390.0260	FIXED	9290.0360		18.241	0.005	TRAVERSE	1 3
9290.0360		9290.0260		3.958	-0.119	TRAVERSE	1 3
9290.0260		9290.0160		-14.021	0.120	TRAVERSE	1 3
9290.0160		7390.0260	FIXED	-8.178	-0.005	TRAVERSE	1 3
7390.0260	FIXED	9290.0360		18.241	0.005	TRAVERSE	1 3
9290.0360		9290.0260		3.958	-0.119	TRAVERSE	1 3
9290.0260		9290.0160		-14.021	0.120	TRAVERSE	1 3
9290.0160		7390.0260	FIXED	-8.178	-0.005	TRAVERSE	1 3
7390.0260	FIXED	9290.0360		18.241	0.005	TRAVERSE	1 3
9290.0360		9290.0260		3.958	-0.119	TRAVERSE	1 3
9290.0260		9290.0160		-14.021	0.120	TRAVERSE	1 3
9290.0160		7390.0260	FIXED	-8.178	-0.005	TRAVERSE	1 3
7390.0260	FIXED	9290.0360		18.241	0.005	TRAVERSE	1 3
9290.0360		9290.0260		3.958	-0.119	TRAVERSE	1 3
9290.0260		9290.0160		-14.021	0.120	TRAVERSE	1 3
9290.0160		7390.0260	FIXED	-8.178	-0.005	TRAVERSE	1 3
7390.0260	FIXED	9290.0360		18.241	0.005	TRAVERSE	1 3
9290.0360		9290.0260		3.958	-0.119	TRAVERSE	1 3
9290.0260		9290.0160		-14.021	0.120	TRAVERSE	1 3
9290.0160		7390.0260	FIXED	-8.178	-0.005	TRAVERSE	1 3
7390.0260	FIXED	9290.0360		18.241	0.005	TRAVERSE	1 3
9290.0360		9290.0260		3.958	-0.119	TRAVERSE	1 3
9290.0260		9290.0160		-14.021	0.120	TRAVERSE	1 3
9290.0160		7390.0260	FIXED	-8.178	-0.005	TRAVERSE	1 3
7390.0260	FIXED	9290.0360		18.241	0.005	TRAVERSE	1 3
9290.0360		9290.0260		3.958	-0.119	TRAVERSE	1 3
9290.0260		9290.0160		-14.021	0.120	TRAVERSE	1 3
9290.0160		7390.0260	FIXED	-8.178	-0.005	TRAVERSE	1 3
7390.0260	FIXED	9290.0360		18.241	0.005	TRAVERSE	1 3
9290.0360		9290.0260		3.958	-0.119	TRAVERSE	1 3
9290.0260		9290.0160		-14.021	0.120	TRAVERSE	1 3
9290.0160		7390.0260	FIXED	-8.178	-0.005	TRAVERSE	1 3
7390.0260	FIXED	9290.0360		18.241	0.005	TRAVERSE	1 3
9290.0360		9290.0260		3.958	-0.119	TRAVERSE	1 3
9290.0260		9290.0160		-14.021	0.120	TRAVERSE	1 3
9290.0160		7390.0260	FIXED	-8.178	-0.005	TRAVERSE	1 3
7390.0260	FIXED	9290.0360		18.241	0.005	TRAVERSE	1 3
9290.03							

Connection table and adjustments

Node		Node		Difference	Adjustment	Flight	
9290.0160		7390.0260	FIXED	-8.357	0.174	TRAVERSE	2 3
7390.0260	FIXED	9290.0360		18.298	-0.052	TRAVERSE	2 3
6091.0160	FIXED	9290.0460		-548.188	-0.028	TRAVERSE	2 5
9290.0460		6091.0160	FIXED	548.188	0.028	TRAVERSE	2 5
6091.0160	FIXED	9290.0460		-548.188	-0.028	TRAVERSE	2 5
9290.0460		6091.0160	FIXED	548.188	0.028	TRAVERSE	2 5
6091.0160	FIXED	9290.0360		52.220	-0.075	TRAVERSE	2 5
9290.0360		9290.0260		3.656	0.182	TRAVERSE	2 5
9290.0260		9290.0160		-13.680	-0.221	TRAVERSE	2 5
9290.0160		7390.0260	FIXED	-8.337	0.154	TRAVERSE	2 5
7390.0260	FIXED	6091.0160	FIXED	-33.860	-0.040	TRAVERSE	2 5
9290.9236		6491.9136	FIXED	663.699	0.053	TRAVERSE	2 6
6491.9136	FIXED	9290.9236		-663.699	-0.053	TRAVERSE	2 6
6491.9136	FIXED	9290.9236		-663.719	-0.033	TRAVERSE	2 7
9290.9236		6491.9136	FIXED	663.719	0.033	TRAVERSE	2 7
6491.9136	FIXED	9290.9236		-663.719	-0.033	TRAVERSE	2 7
9290.9236		6491.9136	FIXED	663.719	0.033	TRAVERSE	2 7
9290.0560		9290.9261		-270.037	-0.265	TRAVERSE	3 1
9290.9261		9290.9259		76.265	0.404	TRAVERSE	3 1
9290.9259		9290.9258		22.578	-0.269	TRAVERSE	3 1
9290.9258		9290.1119		-53.257	-0.175	TRAVERSE	3 1
9290.1119		9290.9261		-45.586	0.040	TRAVERSE	3 1
9290.9261		9290.9259		76.265	0.404	TRAVERSE	3 1
9290.9259		9290.9258		22.578	-0.269	TRAVERSE	3 1
9290.9258		9290.1119		-53.257	-0.175	TRAVERSE	3 1
9290.1119		9290.9261		-45.586	0.040	TRAVERSE	3 1
9290.9261		9290.0560		270.037	0.265	TRAVERSE	3 1
9290.0560		7390.0260	FIXED	102.639	-0.043	TRAVERSE	3 2
7390.0260	FIXED	9290.9261		-372.926	0.028	TRAVERSE	3 2
9290.9261		9290.0560		270.287	0.016	TRAVERSE	3 2
9290.0560		7390.0260	FIXED	102.639	-0.043	TRAVERSE	3 2
7390.0260	FIXED	9290.9261		-372.926	0.028	TRAVERSE	3 2
9290.9261		9290.0560		270.287	0.016	TRAVERSE	3 2
9290.0360		9290.0260		3.855	-0.016	TRAVERSE	3 3
9290.0260		9290.0160		-14.013	0.113	TRAVERSE	3 3
9290.0160		7390.0260	FIXED	-8.210	0.027	TRAVERSE	3 3
7390.0260	FIXED	9290.0360		18.368	-0.123	TRAVERSE	3 3
9290.0360		9290.0260		3.855	-0.016	TRAVERSE	3 3
9290.0260		9290.0160		-14.013	0.113	TRAVERSE	3 3
9290.0160		7390.0260	FIXED	-8.210	0.027	TRAVERSE	3 3
7390.0260	FIXED	9290.0360		18.368	-0.123	TRAVERSE	3 3
9290.0360		9290.0260		3.855	-0.016	TRAVERSE	3 3
9290.0260		9290.0160		-14.013	0.113	TRAVERSE	3 3
9290.0160		7390.0260	FIXED	-8.210	0.027	TRAVERSE	3 3
7390.0260	FIXED	9290.0360		18.368	-0.123	TRAVERSE	3 3
9290.0360		9290.0260		3.855	-0.016	TRAVERSE	3 3
9290.0260		9290.0160		-14.013	0.113	TRAVERSE	3 3
9290.0160		7390.0260	FIXED	-8.210	0.027	TRAVERSE	3 3
7390.0260	FIXED	9290.0360		18.368	-0.123	TRAVERSE	3 3
6091.0160	FIXED	9290.0460		-547.980	-0.237	TRAVERSE	3 4
9290.0460		6491.9138	FIXED	-1592.815	-0.968	TRAVERSE	3 4
6491.9138	FIXED	7090.1138	FIXED	-607.047	0.847	TRAVERSE	3 4
7090.1138	FIXED	6091.0160	FIXED	2747.842	0.358	TRAVERSE	3 4
6091.0160	FIXED	9290.0460		-548.155	-0.061	TRAVERSE	3 5
9290.0460		6091.0160	FIXED	548.155	0.061	TRAVERSE	3 5
6091.0160	FIXED	9290.0460		-548.155	-0.061	TRAVERSE	3 5
9290.0460		6091.0160	FIXED	548.155	0.061	TRAVERSE	3 5
6091.0160	FIXED	9290.0360		52.250	-0.104	TRAVERSE	3 5
9290.0360		9290.0260		3.756	0.082	TRAVERSE	3 5
9290.0260		9290.0160		-13.926	0.025	TRAVERSE	3 5
9290.0160		7390.0260	FIXED	-8.139	-0.044	TRAVERSE	3 5
7390.0260	FIXED	6091.0160	FIXED	-33.941	0.041	TRAVERSE	3 5
6491.9136	FIXED	9290.9236		-663.656	-0.096	TRAVERSE	3 7
9290.9236		6491.9136	FIXED	663.656	0.096	TRAVERSE	3 7
6491.9136	FIXED	9290.9236		-663.656	-0.096	TRAVERSE	3 7
9290.9236		6491.9136	FIXED	663.656	0.096	TRAVERSE	3 7
9290.0560		9290.9261		-270.468	0.165	TRAVERSE	4 1
9290.9261		9290.9259		76.711	-0.042	TRAVERSE	4 1
9290.9259		9290.9258		22.445	-0.136	TRAVERSE	4 1
9290.9258		9290.1119		-53.650	0.217	TRAVERSE	4 1
9290.1119		9290.9261		-45.507	-0.039	TRAVERSE	4 1
9290.9261		9290.9259		76.711	-0.042	TRAVERSE	4 1
9290.9259		9290.9258		22.445	-0.136	TRAVERSE	4 1
9290.9258		9290.1119		-53.650	0.217	TRAVERSE	4 1
9290.1119		9290.9261		-45.507	-0.039	TRAVERSE	4 1
9290.9261		9290.0560		270.468	-0.165	TRAVERSE	4 1

Connection table and adjustments

Node		Node		Difference	Adjustment	Flight	
9290.0560		7390.0260	FIXED	102.539	0.057	TRAVERSE	4 2
7390.0260	FIXED	9290.9261		-372.824	-0.074	TRAVERSE	4 2
9290.9261		9290.0560		270.285	0.017	TRAVERSE	4 2
9290.0560		7390.0260	FIXED	102.539	0.057	TRAVERSE	4 2
7390.0260	FIXED	9290.9261		-372.824	-0.074	TRAVERSE	4 2
9290.9261		9290.0560		270.285	0.017	TRAVERSE	4 2

9290.0360		9290.0260		4.041	-0.202	TRAVERSE	4 3
9290.0260		9290.0160		-14.086	0.186	TRAVERSE	4 3
9290.0160		7390.0260	FIXED	-8.100	-0.083	TRAVERSE	4 3
7390.0260	FIXED	9290.0360		18.146	0.099	TRAVERSE	4 3
9290.0360		9290.0260		4.041	-0.202	TRAVERSE	4 3
9290.0260		9290.0160		-14.086	0.186	TRAVERSE	4 3
9290.0160		7390.0260	FIXED	-8.100	-0.083	TRAVERSE	4 3
7390.0260	FIXED	9290.0360		18.146	0.099	TRAVERSE	4 3
9290.0360		9290.0260		4.041	-0.202	TRAVERSE	4 3
9290.0260		9290.0160		-14.086	0.186	TRAVERSE	4 3
9290.0160		7390.0260	FIXED	-8.100	-0.083	TRAVERSE	4 3
7390.0260	FIXED	9290.0360		18.146	0.099	TRAVERSE	4 3
6091.0160	FIXED	9290.0460		-548.110	-0.107	TRAVERSE	4 4
9290.0460		6491.9138	FIXED	-1594.102	0.319	TRAVERSE	4 4
6491.9138	FIXED	7390.0260	FIXED	2176.271	-0.371	TRAVERSE	4 4
7390.0260	FIXED	6091.0160	FIXED	-34.060	0.160	TRAVERSE	4 4
6091.0160	FIXED	9290.0460		-548.230	0.013	TRAVERSE	4 5
9290.0460		6091.0160	FIXED	548.230	-0.013	TRAVERSE	4 5
6091.0160	FIXED	9290.0460		-548.230	0.013	TRAVERSE	4 5
9290.0460		6091.0160	FIXED	548.230	-0.013	TRAVERSE	4 5
6091.0160	FIXED	9290.0360		52.050	0.095	TRAVERSE	4 5
9290.0360		9290.0260		3.860	-0.021	TRAVERSE	4 5
9290.0260		9290.0160		-13.839	-0.061	TRAVERSE	4 5
9290.0160		7390.0260	FIXED	-8.118	-0.065	TRAVERSE	4 5
7390.0260	FIXED	6091.0160	FIXED	-33.953	0.053	TRAVERSE	4 5
6491.9136	FIXED	9290.9236		-663.907	0.155	TRAVERSE	4 7
9290.9236		6491.9136	FIXED	663.907	-0.155	TRAVERSE	4 7
6491.9136	FIXED	9290.9236		-663.907	0.155	TRAVERSE	4 7
9290.9236		6491.9136	FIXED	663.907	-0.155	TRAVERSE	4 7

Standard deviation of adjustments 0.18
Mean of adjustments 0.00
Maximum adjustment 0.97

Number of lines in network 172

Flight data adjusted - starting 2.3 sec.

Segment identification *TASMANIA ISOGAL
GRAVITY *
Gravity differences scaled by 10.0 for micrometres

Final sorted values

*TASMANIA ISOGAL			GRAVITY *
6091.0160	9804310.000	NODE	
6491.9136	9803583.800	NODE	
6491.9138	9802168.000	NODE	
7090.1138	9801561.800	NODE	
7390.0260	9804343.900	NODE	
9290.0160	9804352.083	NODE	
9290.0260	9804365.984	NODE	
9290.0360	9804362.145	NODE	
9290.0460	9803761.783	NODE	
9290.0560	9804241.305	NODE	
9290.1119	9804016.548	NODE	
9290.9236	9802920.048	NODE	
9290.9258	9804069.980	NODE	
9290.9259	9804047.671	NODE	
9290.9261	9803971.002	NODE	

Number of stations in sorted list 15

Number of different stations 15

Station list sort completed 2.3 sec

GRVHTS Version 6 of November 1992 - Phase two sub-program Computed on 1996/11/04 at 11:42:27

Latitude-longitude insertion phase - Commenced 2.4 sec

Number of segments to merge 1

Segment identification *TASMANIA ISOGAL

```
LATLONG *
      TRAVERSE      1  1      14/ 1/92
      TRAVERSE      1  2      15/ 1/92
      TRAVERSE      1  3      16/ 1/92
      TRAVERSE      1  4      17/ 1/92
      TRAVERSE      1  5      18/ 1/92
      TRAVERSE      2  1      14/ 1/92
      TRAVERSE      2  2      15/ 1/92
      TRAVERSE      2  3      16/ 1/92
      TRAVERSE      2  5      18/ 1/92
      TRAVERSE      2  6      20/ 1/92
      TRAVERSE      2  7      21/ 1/92
      TRAVERSE      3  1      14/ 1/92
      TRAVERSE      3  2      15/ 1/92
      TRAVERSE      3  3      16/ 1/92
      TRAVERSE      3  4      17/ 1/92
      TRAVERSE      3  5      18/ 1/92
      TRAVERSE      3  7      21/ 1/92
      TRAVERSE      4  1      14/ 1/92
      TRAVERSE      4  2      15/ 1/92
      TRAVERSE      4  3      16/ 1/92
      TRAVERSE      4  4      17/ 1/92
      TRAVERSE      4  5      18/ 1/92
      TRAVERSE      4  7      21/ 1/92
```

Final position list checked

Merging of position data completed 2.6 sec

0 Non-fatal mistakes discovered

0 Missing positions in final list

GRVHTS Version 6 of November 1992 - Phase two sub-program Computed on 1996/11/04 at 11:42:27

Creation of new segment file

New output file created on unit 2
labelled *AUSTRALIAN GRAVITY DATA

96/11/04

***** 15 Stations output in newly created segment on unit 2
labelled *TASMANIA ISOGAL

96/11/04*

New output file on unit 2 terminated

labelled *AUSTRALIAN GRAVITY DATA

96/11/04*

CREATE completed at 2.7 sec.

Processing completed for job run at 11:42:27 on 1996/11/04

APPENDIX 6

OUTPUT OF GRAVITY PROCESSING

AUSTRALIAN GRAVITY DATA
TASMANIA ISOGAL

Station Number	Latitude (S) ⁰	Longitude (E) ⁰	Height m	Gravity μms^{-2}	Location
60910160	42.900000	147.333333	20.22	9804310.00	Hobart Uni. front door. Mt Nelson Cal range station Cs1
64919136	42.150000	145.288330	22.48	9803583.80	Strahan A/s terminal.
64919138	42.891667	147.236670	997.8	9802168.00	Mt Wellington
70901138	42.898332	147.236670	1265.	9801561.80	Mt Wellington
73900260	42.833333	147.500000	3.	9804343.90	Hobart Airport Hangar workshop.
92900160	42.833333	147.500000		9804352.08	Hobart Airport Australian Airlines Terminal.
92900260	42.833333	147.500000		9804365.98	Hobart Airport International Terminal front door.
92900360	42.833333	147.500000		9804362.15	Hobart Airport F.A.C. building.
92900460	42.933333	147.350000	334.	9803761.78	Mt Nelson Cal range top station Cs2
92900560	42.833333	147.500000		9804241.30	Mt Pleasant Observatory
92901119	42.500000	147.916667		9804016.55	Triabunna - Road Junction. (PM1119)
92909236	42.133333	145.288330	264.	9802920.05	Queenstown A/s Terminal
92909258	42.500000	147.916667		9804069.98	Triabunna - Tide Gauge. (PSM9268)
92909259	42.500000	147.916667		9804047.67	Triabunna - near Fish Factory. (PSM9259)
92909261	42.500000	147.916667		9803971.00	Triabunna - base (PSM9261)

APPENDIX 7 INITIAL PROCESSING SUMMARY AND STATISTICS. 1996

GRVHTS Version 6 of November 1992 - Phase one sub-program Computed on 1998/04/06 at 10: 1: 7

Gravity meter data reduction

Use new scale correction for LaCoste meters

Latitude-Longitude data saved

*9690 Hobart Mt Stromlo Ties

GRAVITY *

NOTE: Read all 9691.9258, 9691.9259 and 9691.9261 as 9290.9258, 9290.9259 and 9290.9261

TRAVERSE Flight 2 1 18/ 2/96 Meter 101L Scale factor 1.05000

Scale correction factor is		1.0029320000000			
Station	Time	Gravity	Drift	Diff	Reading
9691.0160	1017	0.000	0.000	0.000	3851.695
9691.0160	1033	0.000	-0.004	0.000	3851.691
9691.9261	1304	-26.644	-0.006	-0.002	3826.294
9691.9261	1314	-26.644	-0.003	0.002	3826.300
9691.9258	1452	-16.761	-0.004	0.002	3835.719
9691.9258	1503	-16.761	-0.009	-0.002	3835.711
9691.9259	1536	-18.684	-0.009	-0.003	3833.876
9691.9259	1552	-18.684	-0.003	0.003	3833.888
9691.0360	1744	2.580	-0.004	0.003	3854.152
9691.0360	1755	2.580	-0.010	-0.003	3854.142
9691.0160	1824	0.000	-0.010	0.000	3851.685
9691.0160	1834	0.000	-0.004	0.000	3851.691

TRAVERSE Flight 2 2 18/ 2/96 Meter 20L Scale factor 1.05000

Scale correction factor is		1.0003520000000			
Station	Time	Gravity	Drift	Diff	Reading
9691.0160	1007	0.000	0.000	-0.002	3823.425
9691.0160	1025	0.000	-0.018	-0.002	3823.408
9691.9261	1256	-26.675	-0.013	0.002	3798.051
9691.9261	1310	-26.675	-0.017	-0.002	3798.043
9691.9258	1458	-16.816	-0.013	0.000	3807.435
9691.9259	1543	-18.765	-0.012	0.000	3805.585
9691.0360	1736	2.557	-0.008	0.001	3825.850
9691.0360	1750	2.557	-0.009	-0.001	3825.848
9691.0160	1818	0.000	-0.008	0.004	3823.423

TRAVERSE Flight 3 1 20/ 2/96 Meter 101L Scale factor 1.05000

Scale correction factor is		1.0029320000000			
Station	Time	Gravity	Drift	Diff	Reading
9691.0160	925	0.000	0.000	0.001	3851.689
9691.0160	939	0.000	0.008	0.001	3851.697
7499.0160	1040	-5.954	0.004	-0.004	3846.013
7499.0160	1049	-5.954	0.003	-0.004	3846.013
9691.0260	1149	0.273	0.001	0.006	3851.955
9691.0260	1158	0.273	0.001	0.007	3851.956
9691.0160	1218	0.000	0.000	-0.003	3851.685
9691.0160	1226	0.000	-0.004	-0.011	3851.673
7499.0160	1353	-5.954	-0.003	0.003	3846.014
7499.0160	1402	-5.954	-0.002	0.004	3846.015
9691.0260	1452	0.273	-0.001	-0.006	3851.942
9691.0260	1502	0.273	-0.001	-0.007	3851.941
9691.0160	1521	0.000	0.002	0.006	3851.695
9691.0160	1531	0.000	-0.005	0.006	3851.689

TRAVERSE Flight 3 2 20/ 2/96 Meter 20L Scale factor 1.05000

Scale correction factor is 1.0003520000000

Station	Time	Gravity	Drift	Diff	Reading
9691.0160	919	0.000	0.000	-0.003	3823.369
9691.0160	934	0.000	0.012	-0.003	3823.380
7499.0160	1032	-5.926	0.019	-0.007	3817.753
7499.0160	1045	-5.926	0.026	-0.001	3817.765
9691.0260	1142	0.310	0.031	0.009	3823.705
9691.0260	1153	0.310	0.026	-0.003	3823.688
9691.0160	1211	0.000	0.027	0.001	3823.399
9691.0160	1222	0.000	0.023	-0.006	3823.389
7499.0160	1346	-5.926	0.026	0.006	3817.772
7499.0160	1357	-5.926	0.024	0.002	3817.766
9691.0260	1445	0.310	0.026	0.002	3823.693
9691.0260	1457	0.310	0.017	-0.008	3823.675
9691.0160	1513	0.000	0.017	0.006	3823.394
9691.0160	1526	0.000	0.035	0.006	3823.411

TRAVERSE Flight 4 1 21/ 2/96 Meter 101L Scale factor 1.05000

Scale correction factor is 1.0029320000000

Station	Time	Gravity	Drift	Diff	Reading
9691.0160	857	0.000	0.000	-0.004	3851.683
9691.0160	916	0.000	-0.005	-0.004	3851.678
9691.9258	1107	-16.745	-0.007	0.000	3835.721
9691.9258	1118	-16.745	-0.006	0.000	3835.722
9691.9261	1203	-26.653	-0.007	0.002	3826.281
9691.9261	1214	-26.653	-0.012	-0.002	3826.272
9691.0360	1523	2.569	-0.014	0.002	3854.123
9691.0360	1532	2.569	-0.018	-0.002	3854.116
9691.0160	1552	0.000	-0.018	0.004	3851.673
9691.0160	1601	0.000	-0.017	0.004	3851.674

TRAVERSE Flight 4 2 21/ 2/96 Meter 20L Scale factor 1.05000

Scale correction factor is 1.0003520000000

Station	Time	Gravity	Drift	Diff	Reading
9691.0160	851	0.000	0.000	0.005	3823.440
9691.0160	911	0.000	0.000	0.005	3823.440
9691.9258	1059	-16.765	-0.006	-0.002	3807.497
9691.9258	1113	-16.765	-0.002	0.002	3807.505
9691.9261	1158	-26.678	-0.005	-0.001	3798.061
9691.9261	1209	-26.678	-0.004	0.001	3798.064
9691.0360	1516	2.525	-0.014	-0.004	3825.818
9691.0360	1528	2.525	-0.008	0.004	3825.831
9691.0160	1557	0.000	-0.009	-0.009	3823.418

TRAVERSE Flight 5 1 23/ 2/96 Meter 101L Scale factor 1.05000

Scale correction factor is 1.0029320000000

Station	Time	Gravity	Drift	Diff	Reading
9699.9160	942	0.000	0.000	0.002	3851.618
9699.9160	951	0.000	-0.003	0.002	3851.615
9691.0160	1003	0.050	-0.005	-0.002	3851.658
9691.0160	1011	0.050	-0.004	-0.001	3851.659
9290.0160	1041	11.477	-0.006	0.000	3862.549
9290.0160	1048	11.477	-0.005	0.002	3862.551
9699.9160	1114	0.000	-0.006	-0.005	3851.606
9699.9160	1120	0.000	-0.006	-0.004	3851.607
9691.0160	1130	0.050	-0.005	0.001	3851.660
9691.0160	1136	0.050	-0.004	0.002	3851.662
9290.0160	1203	11.477	-0.002	0.001	3862.554
9290.0160	1210	11.477	-0.006	-0.004	3862.545
9699.9160	1238	0.000	-0.003	0.002	3851.615
9699.9160	1244	0.000	-0.002	0.002	3851.616

TRAVERSE Flight 5 2 23/ 2/96 Meter 20L Scale factor 1.05000

Station	Time	Gravity	Drift	Diff	Reading
9699.9160	931	0.000	0.000	-0.002	3823.371
9699.9160	948	0.000	0.011	-0.002	3823.381
9691.0160	959	0.065	0.008	0.005	3823.446
9691.0160	1007	0.065	0.001	0.000	3823.436
9290.0160	1036	11.472	-0.003	-0.003	3834.268
9290.0160	1045	11.472	-0.005	-0.004	3834.265
9699.9160	1110	0.000	-0.007	-0.007	3823.360
9699.9160	1117	0.000	-0.002	0.002	3823.373
9691.0160	1126	0.065	-0.003	0.002	3823.434
9691.0160	1133	0.065	-0.008	-0.007	3823.420
9290.0160	1157	11.472	-0.009	0.004	3834.269
9290.0160	1207	11.472	-0.012	0.003	3834.265
9699.9160	1234	0.000	-0.016	0.004	3823.362
9699.9160	1241	0.000	-0.008	0.004	3823.369

MNSLOPE completed at 0.1 seconds.

***** Scratch file closed *****

GRVHTS Version 6 of November 1992 - Phase two sub-program
Computed on 1998/04/06 at 10: 1: 7

Least squares adjustment phase - commenced 0.1 sec

Number of segments to adjust together 1

*9690 Hobart Mt Stromlo Ties

GRAVITY *

Free nodes

9290.0160
9691.0160
9691.0260
9691.0360
9691.9258
9691.9259
9691.9261
9699.9160

Fixed nodes Values

7499.0160 9804178.230

Free and fixed node lists compared

Number of free nodes deleted is 0

Final number of free nodes is 8

Final number of fixed nodes is 1

Total number of nodes in list is 9

Maximum adjustment expected - Height 5.00 metres

Gravity 1.00 mums-

Magnetic 10.00 gammas

Data search commenced 0.1 sec

Segment identification

*9690 Hobart Mt Stromlo Ties

GRAVITY *

```

TRAVERSE 2 1 18/ 2/96
***** Internal loop - tied to node 9691.0160 from reading 1 to reading 2
***** Internal loop - tied to node 9691.9261 from reading 3 to reading 4
***** Internal loop - tied to node 9691.9258 from reading 5 to reading 6
***** Internal loop - tied to node 9691.9259 from reading 7 to reading 8
***** Internal loop - tied to node 9691.0360 from reading 9 to reading 10
***** Internal loop - tied to node 9691.0160 from reading 11 to reading 12

TRAVERSE 2 2 18/ 2/96
***** Internal loop - tied to node 9691.0160 from reading 1 to reading 2
***** Internal loop - tied to node 9691.9261 from reading 3 to reading 4
***** Internal loop - tied to node 9691.0360 from reading 7 to reading 8

TRAVERSE 3 1 20/ 2/96
***** Internal loop - tied to node 9691.0160 from reading 1 to reading 2
***** Internal loop - tied to node 7499.0160 from reading 3 to reading 4
***** Internal loop - tied to node 9691.0260 from reading 5 to reading 6
***** Internal loop - tied to node 9691.0160 from reading 7 to reading 8
***** Internal loop - tied to node 7499.0160 from reading 9 to reading 10
***** Internal loop - tied to node 9691.0260 from reading 11 to reading 12
***** Internal loop - tied to node 9691.0160 from reading 13 to reading 14

TRAVERSE 3 2 20/ 2/96
***** Internal loop - tied to node 9691.0160 from reading 1 to reading 2
***** Internal loop - tied to node 7499.0160 from reading 3 to reading 4
***** Internal loop - tied to node 9691.0260 from reading 5 to reading 6
***** Internal loop - tied to node 9691.0160 from reading 7 to reading 8
***** Internal loop - tied to node 7499.0160 from reading 9 to reading 10
***** Internal loop - tied to node 9691.0260 from reading 11 to reading 12
***** Internal loop - tied to node 9691.0160 from reading 13 to reading 14

TRAVERSE 4 1 21/ 2/96
***** Internal loop - tied to node 9691.0160 from reading 1 to reading 2
***** Internal loop - tied to node 9691.9258 from reading 3 to reading 4
***** Internal loop - tied to node 9691.9261 from reading 5 to reading 6
***** Internal loop - tied to node 9691.0360 from reading 7 to reading 8
***** Internal loop - tied to node 9691.0160 from reading 9 to reading 10

TRAVERSE 4 2 21/ 2/96
***** Internal loop - tied to node 9691.0160 from reading 1 to reading 2
***** Internal loop - tied to node 9691.9258 from reading 3 to reading 4
***** Internal loop - tied to node 9691.9261 from reading 5 to reading 6
***** Internal loop - tied to node 9691.0360 from reading 7 to reading 8

TRAVERSE 5 1 23/ 2/96
***** Internal loop - tied to node 9699.9160 from reading 1 to reading 2
***** Internal loop - tied to node 9691.0160 from reading 3 to reading 4
***** Internal loop - tied to node 9290.0160 from reading 5 to reading 6
***** Internal loop - tied to node 9699.9160 from reading 7 to reading 8
***** Internal loop - tied to node 9691.0160 from reading 9 to reading 10
***** Internal loop - tied to node 9290.0160 from reading 11 to reading 12
***** Internal loop - tied to node 9699.9160 from reading 13 to reading 14

TRAVERSE 5 2 23/ 2/96
***** Internal loop - tied to node 9699.9160 from reading 1 to reading 2
***** Internal loop - tied to node 9691.0160 from reading 3 to reading 4
***** Internal loop - tied to node 9290.0160 from reading 5 to reading 6
***** Internal loop - tied to node 9699.9160 from reading 7 to reading 8
***** Internal loop - tied to node 9691.0160 from reading 9 to reading 10
***** Internal loop - tied to node 9290.0160 from reading 11 to reading 12
***** Internal loop - tied to node 9699.9160 from reading 13 to reading 14

```

Linkage search commenced 0.1 sec

Matrix inversion commenced 0.1 sec

Matrix inversion completed 0.1 sec

Least squares values for free nodes

NODE	VALUE
9290.0160	9804351.801
9691.0160	9804237.631
9691.0260	9804240.547
9691.0360	9804263.251
9691.9258	9804069.962
9691.9259	9804050.459
9691.9261	9803971.067
9699.9160	9804237.056

Connection table and adjustments

Node		Node		Difference	Adjustment	Flight
9691.0160		9691.9261		-266.445	-0.119	TRAVERSE 2 1
9691.9261		9691.9258		98.839	0.056	TRAVERSE 2 1
9691.9258		9691.9259		-19.238	-0.265	TRAVERSE 2 1
9691.9259		9691.0360		212.645	0.147	TRAVERSE 2 1
9691.0360		9691.0160		-25.801	0.181	TRAVERSE 2 1
9691.0160		9691.9261		-266.748	0.184	TRAVERSE 2 2
9691.9261		9691.9258		98.584	0.311	TRAVERSE 2 2
9691.9258		9691.9259		-19.484	-0.019	TRAVERSE 2 2
9691.9259		9691.0360		213.223	-0.431	TRAVERSE 2 2
9691.0360		9691.0160		-25.574	-0.046	TRAVERSE 2 2
9691.0160		7499.0160	FIXED	-59.541	0.140	TRAVERSE 3 1
7499.0160	FIXED	9691.0260		62.275	0.042	TRAVERSE 3 1
9691.0260		9691.0160		-2.735	-0.182	TRAVERSE 3 1
9691.0160		7499.0160	FIXED	-59.541	0.140	TRAVERSE 3 1
7499.0160	FIXED	9691.0260		62.275	0.042	TRAVERSE 3 1
9691.0260		9691.0160		-2.735	-0.182	TRAVERSE 3 1
9691.0160		7499.0160	FIXED	-59.261	-0.140	TRAVERSE 3 2
7499.0160	FIXED	9691.0260		62.359	-0.042	TRAVERSE 3 2
9691.0260		9691.0160		-3.099	0.182	TRAVERSE 3 2
9691.0160		7499.0160	FIXED	-59.261	-0.140	TRAVERSE 3 2
7499.0160	FIXED	9691.0260		62.359	-0.042	TRAVERSE 3 2
9691.0260		9691.0160		-3.099	0.182	TRAVERSE 3 2
9691.0160		9691.9258		-167.452	-0.216	TRAVERSE 4 1
9691.9258		9691.9261		-99.076	0.181	TRAVERSE 4 1
9691.9261		9691.0360		292.215	-0.032	TRAVERSE 4 1
9691.0360		9691.0160		-25.687	0.067	TRAVERSE 4 1
9691.0160		9691.9258		-167.652	-0.016	TRAVERSE 4 2
9691.9258		9691.9261		-99.133	0.238	TRAVERSE 4 2
9691.9261		9691.0360		292.036	0.148	TRAVERSE 4 2
9691.0360		9691.0160		-25.251	-0.369	TRAVERSE 4 2
9699.9160		9691.0160		0.503	0.071	TRAVERSE 5 1
9691.0160		9290.0160		114.270	-0.100	TRAVERSE 5 1
9290.0160		9699.9160		-114.773	0.028	TRAVERSE 5 1
9699.9160		9691.0160		0.503	0.071	TRAVERSE 5 1
9691.0160		9290.0160		114.270	-0.100	TRAVERSE 5 1
9290.0160		9699.9160		-114.773	0.028	TRAVERSE 5 1
9699.9160		9691.0160		0.646	-0.071	TRAVERSE 5 2
9691.0160		9290.0160		114.070	0.100	TRAVERSE 5 2
9290.0160		9699.9160		-114.717	-0.028	TRAVERSE 5 2
9699.9160		9691.0160		0.646	-0.071	TRAVERSE 5 2
9691.0160		9290.0160		114.070	0.100	TRAVERSE 5 2
9290.0160		9699.9160		-114.717	-0.028	TRAVERSE 5 2

Standard deviation of adjustments 0.16
Mean of adjustments 0.00
Maximum adjustment 0.43

Number of lines in network 42

Flight data adjusted - starting 0.1 sec.

Segment identification
 *9690 Hobart Mt Stromlo Ties GRAVITY *
 Gravity differences scaled by 10.0 for micrometres

Station list sort commenced 0.1 sec

Final sorted values

*9690 Hobart Mt Stromlo Ties GRAVITY *
 7499.0160 9804178.230 NODE
 9290.0160 9804351.801 NODE
 9691.0160 9804237.631 NODE
 9691.0260 9804240.547 NODE
 9691.0360 9804263.251 NODE
 9691.9258 9804069.962 NODE
 9691.9259 9804050.459 NODE
 9691.9261 9803971.067 NODE
 9699.9160 9804237.056 NODE

Number of stations in sorted list 9

Number of different stations 9

Station list sort completed 0.1 sec

GRVHTS Version 6 of November 1992 - Phase two sub-program
 Computed on 1998/04/06 at 10: 1: 7

APPENDIX 8

OUTPUT OF GRAVITY PROCESSING

TASMANIA ISOGAL 1996

AUSTRALIAN GRAVITY DATA
9691 HOBART TIES

Station Number	Latitude (S) ⁰	Longitude (E) ⁰	Height m	Gravity µms ⁻²	Location
74990160	42.900000	147.316667		9804178.23	"Seismic Vault Tas Uni"
92900160	42.833333	147.500000		9804351.80	"Hobart A/P Qantas Terminal"
92909258	42.533333	147.933333		9804069.96	"SPM 9258 Tide Gauge"
92909259	42.533333	147.916667		9804050.46	"SPM 9259"
92909261	42.483333	147.916667		9803971.07	"SPM 9261"
96910160	42.833333	147.500000		9804237.63	"96999160 RM1"
96910260				9804240.55	SPM 9407
96910360	42.833333	147.500000		9804263.25	"AU016 RM3 Mt Pleasant"
96999160				9804237.06	Absolute Mt Pleasant

APPENDIX 9
INITIAL PROCESSING SUMMARY AND STATISTICS.
1998

GRVHTS Version 6 of November 1992 - Phase one sub-program Computed on 1998/03/14 at 19:33:15

Gravity meter data reduction

Segment identification *9891 HOBART TIES

GRAVITY *

TRAVERSE	Flight a 1	22/ 2/98	Meter	101L	Scale factor	1.05000
Scale correction factor is 1.002928018569946						
	Station	Time	Gravity	Drift	Diff	Reading
	6091.0160	1148	.000	.000	-.003	3859.540
	9290.0460	1224	-54.840	-.031	-.003	3807.244
	6091.0160	1240	.000	-.036	-.011	3859.497
	9290.0460	1259	-54.840	-.035	.008	3807.252
	6091.0160	1315	.000	-.042	-.008	3859.495
	9290.0460	1331	-54.840	-.047	-.005	3807.227
	6091.0160	1409	.000	-.043	-.001	3859.501
	9290.0360	1443	5.201	-.032	.006	3864.475
	6091.0160	1513	.000	-.024	.002	3859.521
	9290.0360	1540	5.201	-.017	.002	3864.485
	6091.0160	1606	.000	-.014	.007	3859.536
	9290.0360	1638	5.201	-.009	-.008	3864.483
	9290.0160	1700	4.215	-.001	.000	3863.559
	6091.0160	1733	.000	.011	.014	3859.566

TRAVERSE	Flight a 2	23/ 2/98	Meter	101L	Scale factor	1.05000
Scale correction factor is 1.002928018569946						
	Station	Time	Gravity	Drift	Diff	Reading
	9290.0360	753	.000	.000	.007	3864.576
	9290.0560	831	-12.075	.001	-.005	3853.058
	9699.9160	842	-12.443	.000	.013	3852.723
	9290.0360	858	.000	-.006	.015	3864.578
	9290.0560	915	-12.075	-.016	.004	3853.050
	9699.9160	922	-12.443	-.020	-.007	3852.685
	9290.0160	941	-1.018	-.025	-.017	3863.559
	9290.0560	1003	-12.075	-.027	.006	3853.042
	9699.9160	1012	-12.443	-.029	-.003	3852.681
	9290.0160	1039	-1.018	-.036	.017	3863.581
	9290.0360	1045	.000	-.039	-.010	3864.523
	9290.0560	1105	-12.075	-.049	-.005	3853.010
	9699.9160	1113	-12.443	-.052	-.003	3852.658
	9290.0360	1129	.000	-.061	-.012	3864.500

MNSLOPE completed at .0 seconds.

Position data saved on scratch file

Position data transfer completed at .0 sec

Scratch file closed

—

GRVHTS Version 6 of November 1992 - Phase two sub-program
Computed on 1998/03/14 at 19:33:15

Least squares adjustment phase - commenced .0 sec

Number of segments to adjust together 1

*9891 HOBART TIES

GRAVITY *

Free nodes

9290.0360
9290.0460

Fixed nodes Values

6091.0160 9804310.000

Free and fixed node lists compared

Number of free nodes deleted is 0

Final number of free nodes is 2

Final number of fixed nodes is 1

Total number of nodes in list is 3

Maximum adjustment expected - Height 5.00 metres
Gravity 1.00 mums-
Magnetic 10.00 gammas

Data search commenced .0 sec

Segment identification *9891 HOBART TIES

GRAVITY *

TRAVERSE a 1 22/ 2/98

TRAVERSE a 2 23/ 2/98

**** Internal loop - tied to node 9290.0360 from reading 1 to reading 4

**** Internal loop - tied to node 9290.0360 from reading 4 to reading 11

**** Internal loop - tied to node 9290.0360 from reading 11 to reading 14

Linkage search commenced .0 sec

Matrix inversion commenced .0 sec

Matrix inversion completed .0 sec

—

Least squares values for free nodes

node VALUE

9290.0360 9804362.012
9290.0460 9803761.597

Connection table and adjustments

Node		Node		Difference	Adjustment	Flight	
6091.0160	FIXED	9290.0460		-548.403	.000	TRAVERSE	a 1
9290.0460		6091.0160	FIXED	548.403	.000	TRAVERSE	a 1
6091.0160	FIXED	9290.0460		-548.403	.000	TRAVERSE	a 1
9290.0460		6091.0160	FIXED	548.403	.000	TRAVERSE	a 1
6091.0160	FIXED	9290.0460		-548.403	.000	TRAVERSE	a 1
9290.0460		6091.0160	FIXED	548.403	.000	TRAVERSE	a 1
6091.0160	FIXED	9290.0360		52.012	.000	TRAVERSE	a 1
9290.0360		6091.0160	FIXED	-52.012	.000	TRAVERSE	a 1
6091.0160	FIXED	9290.0360		52.012	.000	TRAVERSE	a 1
9290.0360		6091.0160	FIXED	-52.012	.000	TRAVERSE	a 1
6091.0160	FIXED	9290.0360		52.012	.000	TRAVERSE	a 1
9290.0360		6091.0160	FIXED	-52.012	.000	TRAVERSE	a 1

Standard deviation of adjustments .00
Mean of adjustments .00
Maximum adjustment .00

Number of lines in network 12

Flight data adjusted - starting .0 sec.

Segment identification *9891 HOBART TIES

GRAVITY *

Gravity differences scaled by 10.0 for micrometres

Station list sort commenced .0 sec
Final sorted values

*9891 HOBART TIES				GRAVITY *
6091.0160	9804310.000	NODE		
9290.0160	9804351.828	23/ 2/98a 2	.000	Multiple
9290.0160	9804351.828	23/ 2/98a 2	-.326	Multiple
9290.0160	9804352.154	22/ 2/98a 1		
9290.0360	9804362.012	NODE		
9290.0460	9803761.597	NODE		
9290.0560	9804241.263	23/ 2/98a 2	.000	Multiple
9290.0560	9804241.263	23/ 2/98a 2	.000	Multiple
9290.0560	9804241.263	23/ 2/98a 2	.000	Multiple
9290.0560	9804241.263	23/ 2/98a 2		
9699.9160	9804237.582	23/ 2/98a 2	.000	Multiple
9699.9160	9804237.582	23/ 2/98a 2	.000	Multiple
9699.9160	9804237.582	23/ 2/98a 2	.000	Multiple
9699.9160	9804237.582	23/ 2/98a 2		

Number of stations in sorted list 14
Number of different stations 6
Station list sort completed .0 sec

GRVHTS Version 6 of November 1992 - Phase two sub-program
Computed on 1998/03/14 at 19:33:15

***** 6 Stations output in newly created segment on unit 2
labelled *9891 HOBART TIES

Segment 1 named 9891 HOBART TIES

Number of stations = 6
Stop - Program terminated.

APPENDIX 10

OUTPUT OF GRAVITY PROCESSING

TASMANIA ISOGAL 1998

AUSTRALIAN GRAVITY DATA
9891 HOBART TIES

Station Number	Latitude (S) ⁰	Longitude (E) ⁰	Height m	Gravity μms^{-2}	Location
60910160	42° 54.2'	147° 19.6'	20.22	9804310.00	Hobart University front door Cs1
92900160	42° 50.4'	147° 30.4'	3.	9804351.94	Qantas Airlines Domestic Terminal
92900360	42° 50.4'	147° 30.4'	3.	9804362.01	FAC door Hobart Airport.
92900460	42° 55.6'	147° 20.7'	334.5	9803761.60	Mt Nelson Calibration Range Cs2
92900560	42° 50. '	147° 30		9804241.26	Mt Pleasant Observatory
96999160	42° 50. '	147° 30		9804237.58	Mt Pleasant Observatory Absolute <i>Preliminary only</i>

APPENDIX 11

Tasmanian Control Stations as at January 1996

Station	Latitude	Longitude	Ht	μms^{-2}	Location
Devonport					
6491.1141	41° 09.6'	146° 25.5'	24.0	9802686.2	Lighthouse
8591.1141	41° 10.4'	146° 25.5'	8.	9802709.2	Airport Tarmac.
8591.2141	41° 10.4'	146° 25.5'	8.	9802706.3	Airport East West Terminal
6491.9141		Lost			A/S near Terminal
6491.9141		Lost			A/S Terminal
Hobart					
6091.0160	42° 54.2'	147° 19.6'	20.22	984310.0	Hobart University front door CS1
6491.0260	42° 53.1'	147° 20.0'	2.41	9804372.5	Hobart pier
6491.0360	42° 54.5'	147° 19.2'	132.	9804172.4	University Vault 4399
6491.9138	42° 53.5'	147° 14.2'	997.80	9802168.0	Mt Wellington
6491.9960	42° 54.5'	147° 19.2'	132.24	9804177.4	University Vault
7090.1138	42° 53.9'	147° 14.2'	1262. 97	9801561.8	Mt Wellington
7390.0260	42° 50.4'	147° 30.4'	3.	9804343.9	Airport Hangar Workshop
7499.0160	42° 54.5'	147° 19.2'	132.00	9804178.23	Absolute 1974
9290.0160	42° 50.4'	147° 30.4'	3.	9804352.083	Qantas Terminal Airport
9290.0260	42° 50.4'	147° 30.4'	3.	9804365.984	International Terminal Airport
9290.0360	42° 50.4'	147° 30.4'	3.	9804362.145	F.A.C. Door Hobart Airport
9290.0460	42° 55.6'	147° 20.7'	334.5	9803761.783	Mt Nelson Calabration range CS2
9290.0560	42° 50.'	147° 30.'		9804241.305	Mt Pleasant Observatory UF04
9691.0160	42° 50.'	147° 30.'		9804237.63	Mt Pleasant (96999160 RM1)
9691.0260	42° 50.'	147° 30.'		9804240.55	(SPM 9407)
9691.0360	42° 50.'	147° 30.'		9804263.25	Mt Pleasant (AU016 RM3)
9699.9160	42° 50.'	147° 30.'		9804237.06	Mt Pleasant Absolute Value; Preliminary only
6091.0260		Lost			Mt Nelson CS2
6491.0160		Lost			Airport Terminal
7390.0160		Lost			Airport fuel point
8090.0160		Lost			Airport terminal
Launceston					
6491.9971	41° 32.9'	147° 12.6'	170.10	9802620.1	Airport Fire Station
6850.0171	41° 32.8'	147° 12.3'	170.	9802620.2	Airport New Terminal
6850.0271	41° 32.8'	147° 12.3'	171.	9802619.3	Airport New Terminal
6491.0171		Lost			Airport old apron
6491.0271		Lost			Airport old TAA
6491.0371		Lost			Airport old ANA

Mt Barrow

6491.1003	41° 23.6'	147° 25.6'	1317.8	9800144.3	TV Station Entrance
6491.9003	41° 22.8'	147° 25.4'	1308.9	9800127.1	Mt Barrow Hut - concrete porch

Station	Latitude	Longitude	Ht	μms^{-2}	Location
---------	----------	-----------	----	---------------------	----------

Queenstown

9290.9236	42° 04.617'	145° 31.767'	262.35	9802920.048	Queenstown Airport Terminal
-----------	-------------	--------------	--------	-------------	-----------------------------

Smithton

6491.9142	40° 49.8'	145° 05.0'	5.7	9802626.5	Airport Terminal
-----------	-----------	------------	-----	-----------	------------------

6491.1142		Lost			Railway Line
-----------	--	------	--	--	--------------

St Helens

6491.9139	41° 20.3'	148° 16.7'	45.65	9802888.6	Airport Terminal
-----------	-----------	------------	-------	-----------	------------------

Strahan

6491.9136	42° 09.0'	145° 17.3'	22.48	9803583.8	Airport Terminal
-----------	-----------	------------	-------	-----------	------------------

Triabunna

9290.1119				9804016.548	Road Junction (pm I119)
9290.9258	42° 32.0244'	147° 55.7586'	2.529	9804069.980	Triabunna Tide Gauge PSM9258
9290.9259	42° 32.0244'	147° 55.6158'	2.34	9804047.671	Triabunna near Fish Factory PSM9259
9290.9261	42° 29.5590'	147° 55.0014'	12.729	9803971.002	Triabunna PSM9261

STATION NAME

Devonport

STATION CODE

8591.1141

LOCATION

Airport Terminal

DESCRIBED / RECOVERED BY

J W Williams - 1992

*Drawn by J W Williams*OBSERVED GRAVITY (μms^{-2})

9802709.2

Edition

1998

DESCRIPTION:

Station Class:

STATION TYPE: Base.**POSITION:** S 41° 10' 18" E 146° 25' 44"**Position Source:** CAA Enroute Supplement**ELEVATION:** 10. M**Elevation Source:** Est. From above

Bass Strait

Mersey Bluff Lighthouse

6491.1141

Aerodrome

8591.1141

8591.2141

Wesley Vale

DEVONPORT

Latrobe

Mersey R



Tarmac

8591.1141
(Brass disc)

Fence

Gate

Arrivals

Departures

Arrivals

E. West Airlines

Ansett Airlines

8591.2141

Road



GRAVITY STATIONS

AUSTRALIAN FUNDAMENTAL GRAVITY NETWORK

STATION NAME

Devonport

STATION CODE

8591.2141

LOCATION

Airport Terminal

DESCRIBED / RECOVERED BY

J W Williams - 1992

*Drawn by J W Williams*OBSERVED GRAVITY (μms^{-2})

9802706.3

Edition

1998

DESCRIPTION:

Station Class:

STATION TYPE: Base.**POSITION:** S 41° 10' 18" E 146° 25' 44"**Position Source:** CAA Enroute Supplement**ELEVATION:** 10. M**Elevation Source:** Est. From above

Bass Strait

Mersey Bluff Lighthouse

6491.1141

Aerodrome

8591.1141

8591.2141

Wesley Vale

DEVONPORT

Latrobe

Mersey R



8591.2141

Tarmac

8591.1141

Fence

Gate

Arrivals

Departures

Arrivals

E. West Airlines

Ansett Airlines

8591.2141

Road

(Brass disc)



GRAVITY STATIONS
AUSTRALIAN FUNDAMENTAL GRAVITY NETWORK

STATION NAME

Devonport

STATION CODE

6491.1141

LOCATION

Airport Terminal

DESCRIBED / RECOVERED BY

J W Williams - 1992

*Drawn by J W Williams*OBSERVED GRAVITY (μms^{-2})

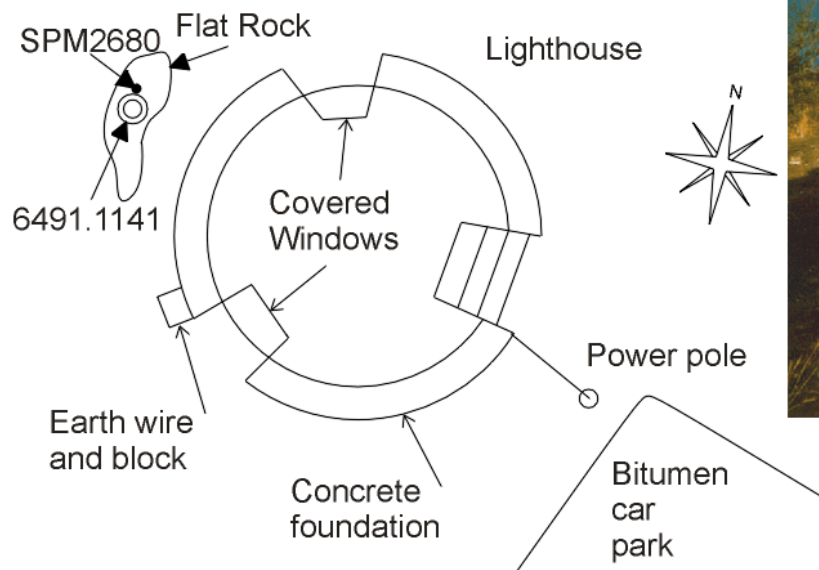
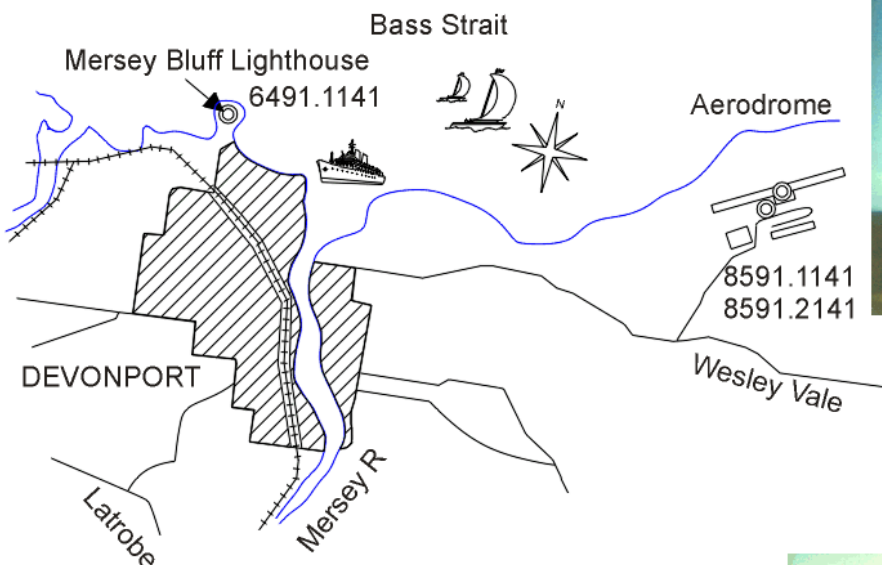
9802686.2

Edition

1998

DESCRIPTION:

Station Class:

STATION TYPE: Base.**POSITION:** S 41° 09' 36" E 146° 21' 12"**Position Source:** Report 261**ELEVATION:** 24. m**Elevation Source:** Report 261

GRAVITY STATIONS
AUSTRALIAN FUNDAMENTAL GRAVITY NETWORK

STATION NAME

Hobart Tas.

STATION CODE

General

LOCATION

Hobart Area.

DESCRIBED / RECOVERED BY

J W Williams

Drawn by J W Williams

Edition

1997

DESCRIPTION:

Station Class:

STATION TYPE: Base.

▲ Primary base

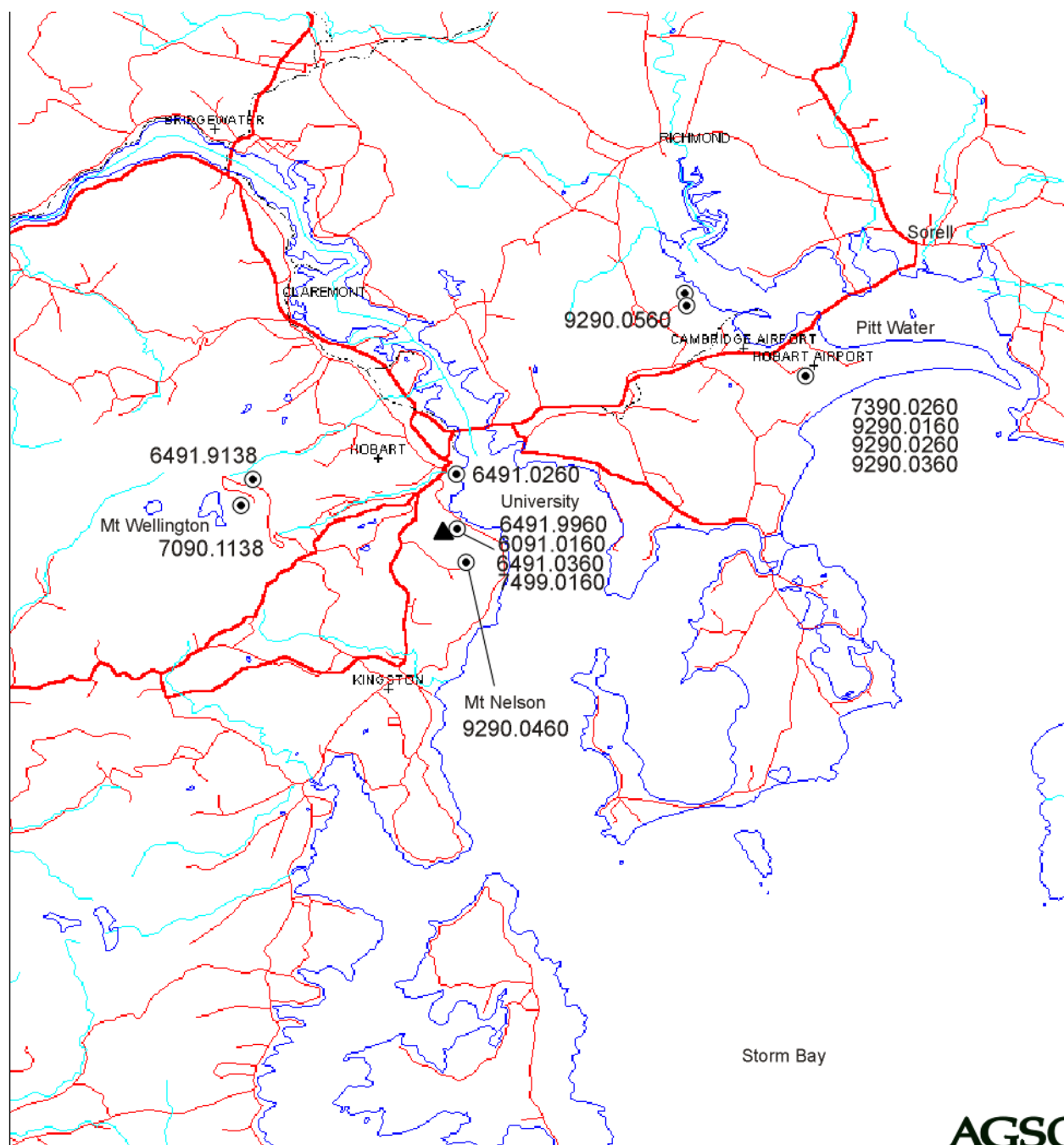
POSITION:

⊙ Excentre

Position Source:

ELEVATION:

Elevation Source:



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GRAVITY STATIONS
AUSTRALIAN FUNDAMENTAL GRAVITY NETWORK



STATION NAME

Hobart

STATION CODE

6491.0360 6491.9960 7499.0160

LOCATION

Hobart University Vault

DESCRIBED / RECOVERED BY

J W Williams

*Drawn by J W Williams*OBSERVED GRAVITY (μms^{-2})

6491.0360 - 9804172.4

6491.9960 - 9804177.4

7499.0160 - 9804178.23

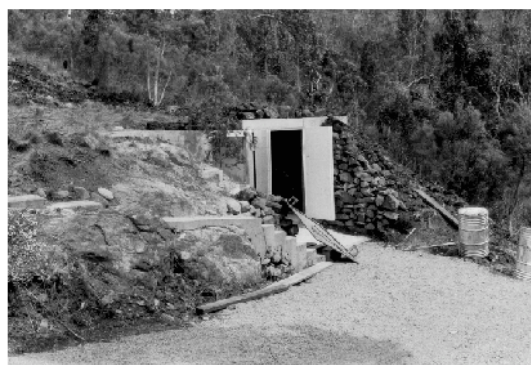
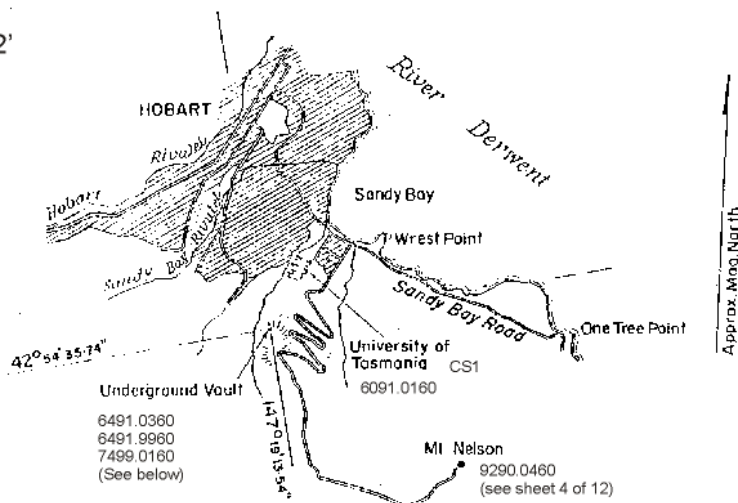
Edition

1997

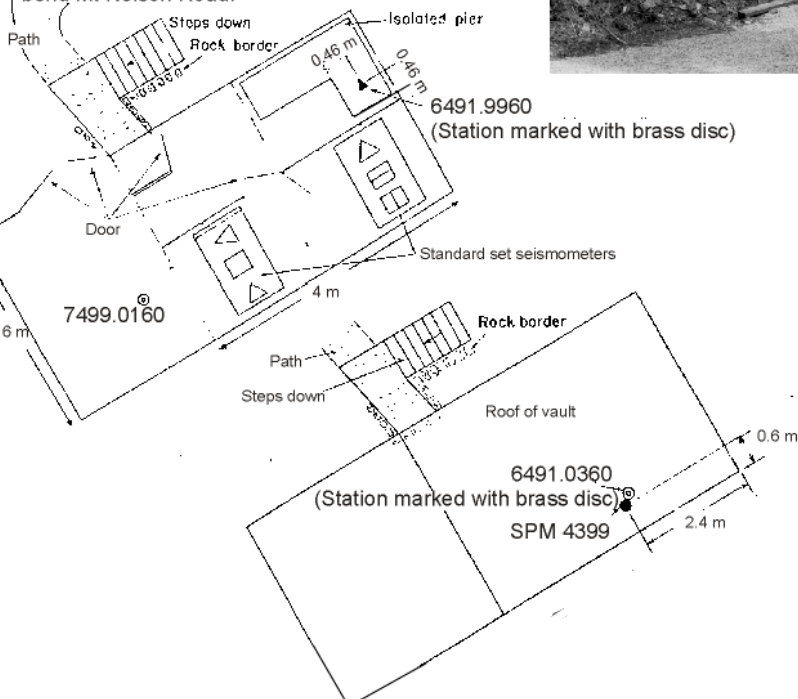
DESCRIPTION:

STATION TYPE: Base.**POSITION:** S 42° 54.5' E 147° 19.2'**Position Source:** Report 261**ELEVATION:** 132. m**Elevation Source:** Report 261

UNDERGROUND SEISMOLOGICAL VAULT



0.3 km gravel drive to fifth bend Mt Nelson Road.



GRAVITY STATIONS
AUSTRALIAN FUNDAMENTAL GRAVITY NETWORK

STATION NAME		STATION CODE	
Calibration Station Cs 1		6091.0160	
LOCATION	Hobart	DESCRIBED / RECOVERED BY	OBSERVED GRAVITY (μms^{-2})
University of Tasmania		J W Williams / 1992 <i>Drawn by J W Williams</i>	9804310.0
			Edition 1997

DESCRIPTION:

Station Class:

STATION TYPE:

Base.

POSITION:

S 42° 54.2' E 147° 19.6'

Position Source:

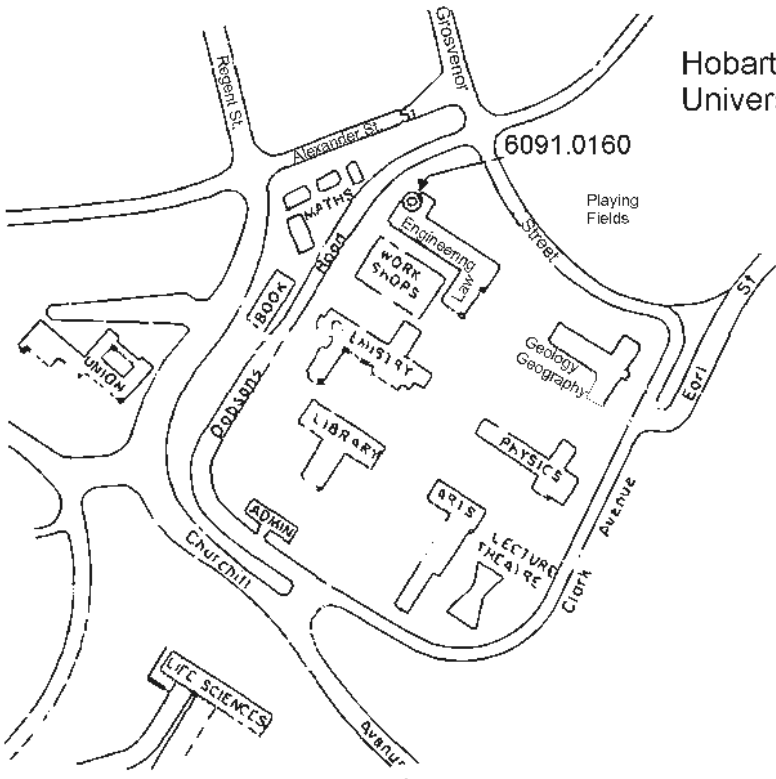
Report 261

ELEVATION:

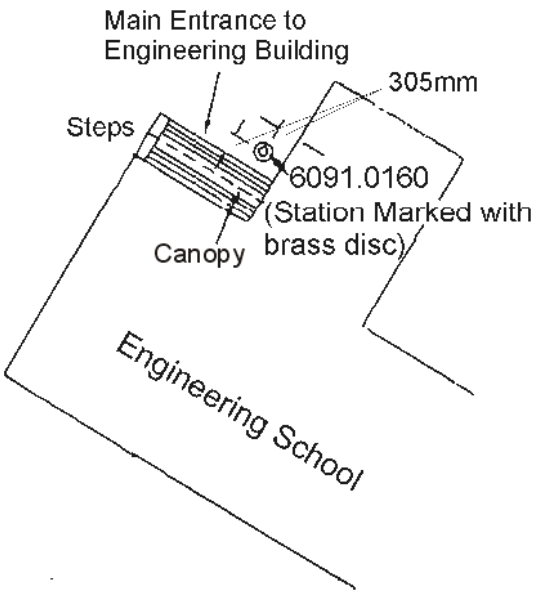
20.2 m

Elevation Source:

Report 261



Hobart Calibration Station No1
University of Tasmania



STATION NAME

Mt Nelson Cs2

STATION CODE

9290.0460

LOCATION

Mt Nelson Signal Station

DESCRIBED / RECOVERED BY

J W Williams 1992

*Drawn by J W Williams*OBSERVED GRAVITY (μms^{-2})

9803761.783

Edition

1997

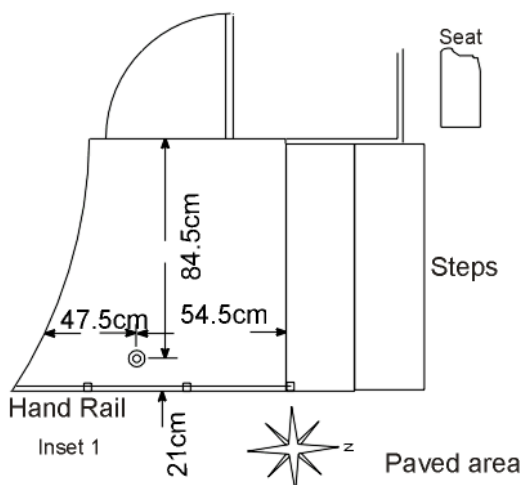
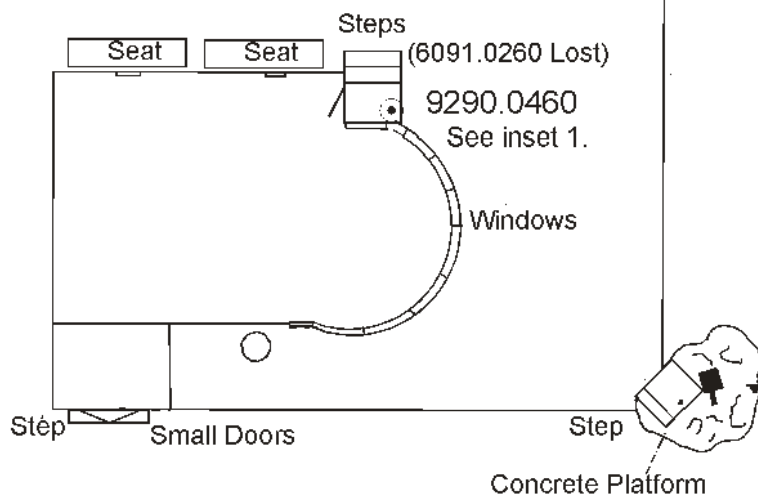
DESCRIPTION:

Station Class:

STATION TYPE: Base.**POSITION:** S 42° 55.6' E 147° 20.7'**Position Source:** Report 261**ELEVATION:** 334.5 m**Elevation Source:** Report 261Hobart Calibration Station No2
Mt Nelson Signal Station

To parking area

Paved Area



STATION NAME

Hobart Harbour

STATION CODE

6491.0260

LOCATION

Elizabeth Street Pier

DESCRIBED / RECOVERED BY

J W Williams 1992

*Drawn by J W Williams*OBSERVED GRAVITY (μms^{-2})

9804372.5

Edition

1997

DESCRIPTION:

STATION TYPE:

Base.

POSITION:

S 42° 53.1' E 147° 20.0'

Position Source:

Report 261

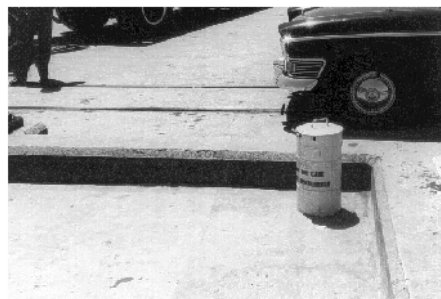
ELEVATION:

2.41 m

Elevation Source:

Report 261

Station Class:

Marine Board
Mechanical Equip
Building

Franklin Wharf

Concrete Wharf

Double Rolling
DoorsWindow "Marine Board
of Hobart"
Plaque

Railway

Tying up Bollards

Tracks

Elizabeth St Pier

Lamp Post
305mm
6491.0260
(Station marked with
33 mm round pipe set in concrete)

Water



Wharf

Queens Pier

Kings Pier

Elizabeth St Pier

Franklin Pier

Brooke St Pier

Princes Wharf

Ocean Pier

6491.0260

GRAVITY STATIONS

AUSTRALIAN FUNDAMENTAL GRAVITY NETWORK



STATION NAME

Hobart Airport

STATION CODE

9290.0160 9290.0260

LOCATION

Terminal Buildings

DESCRIBED / RECOVERED BY

J W Williams - 1992

*Drawn by J W Williams*OBSERVED GRAVITY (μms^{-2})

9290.0160 9804352.083

9290.0260 9804365.984

Edition

1997

DESCRIPTION:

Station Class:

STATION TYPE:

Base.

POSITION:

S 42° 50.4' E 147° 30.4'

Position Source:

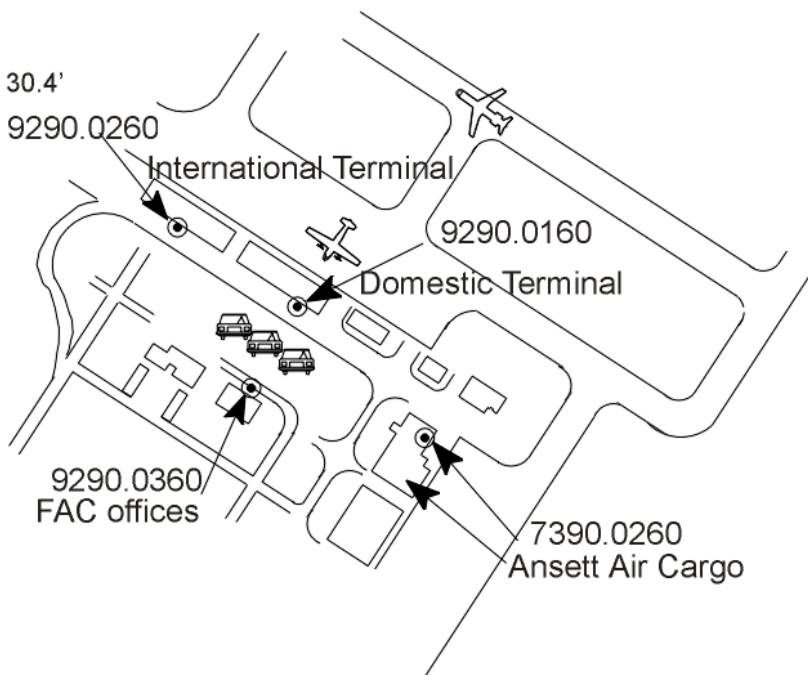
Report 261

ELEVATION:

3. m

Elevation Source:

Report 261



International Terminal



Domestic Terminal

9290.0260

9290.0160

Arrivals

Station marked with
blue plug 33 cm
from glass and wall

Brick wall 32 cm

Station marked with Blue plug

33 cm Trolleys



GRAVITY STATIONS
AUSTRALIAN FUNDAMENTAL GRAVITY NETWORK

STATION NAME

Hobart Airport

STATION CODE

7390.0260

LOCATION

Ansett Air Cargo

DESCRIBED / RECOVERED BY

J W Williams / 1992

*Drawn by J W Williams*OBSERVED GRAVITY (μms^{-2})

9804343.9

Edition

1997

DESCRIPTION:

Station Class:

STATION TYPE:

Base.

POSITION:

S 42° 50.4' E 147° 30.4'

Position Source:

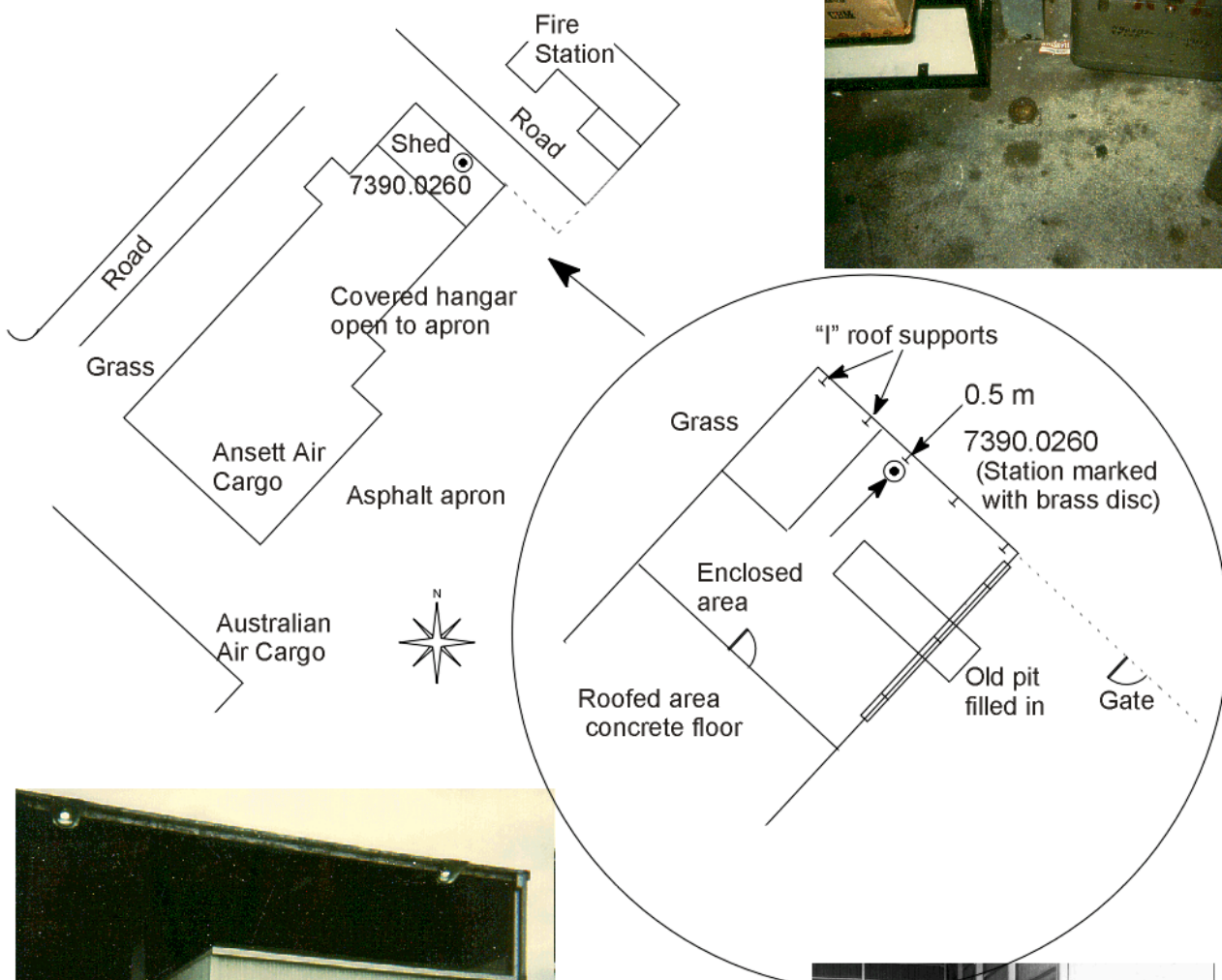
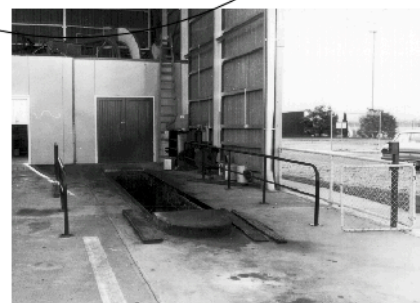
Report 261

ELEVATION:

3. m

Elevation Source:

Report 261

Modified shed
C: 1992

C: 1980

GRAVITY STATIONS
AUSTRALIAN FUNDAMENTAL GRAVITY NETWORK



STATION NAME

Hobart Airport

STATION CODE

9290.0360

LOCATION

FAC Office

DESCRIBED / RECOVERED BY

J W Williams / 1992

*Drawn by J W Williams*OBSERVED GRAVITY (μms^{-2})

9804362.145

Edition

1997

DESCRIPTION:

Station Class:

STATION TYPE:

Base.

POSITION:

S 42° 50.4' E 147° 30.4'

Position Source:

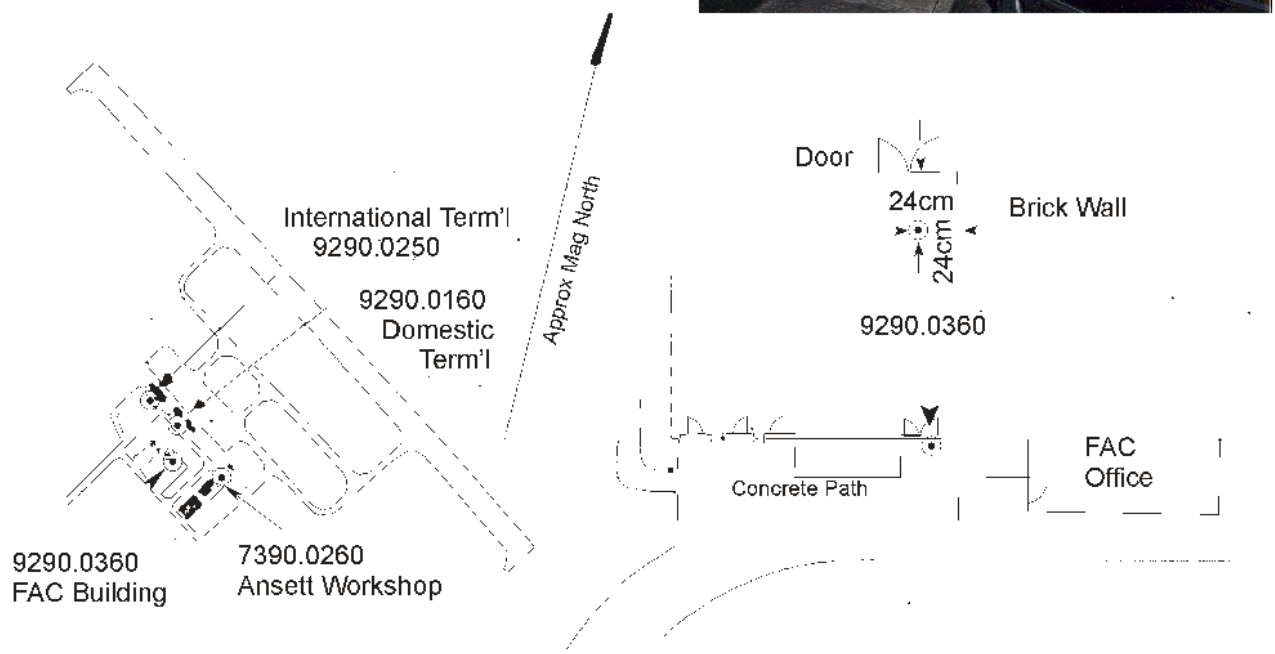
Report 261

ELEVATION:

3. m

Elevation Source:

Report 261



STATION NAME
Hobart VLBI Observatory

STATION CODE

9290.0560

LOCATION

Mt Pleasant

DESCRIBED / RECOVERED BY

J W Williams - 1992

Drawn by J W Williams

OBSERVED GRAVITY (μms^{-2})

9804241.305

Edition

1997

DESCRIPTION:

Station Class:

STATION TYPE:

Base.

POSITION:

S 42° 48' 17" E 147° 26' 19"

Position Source:

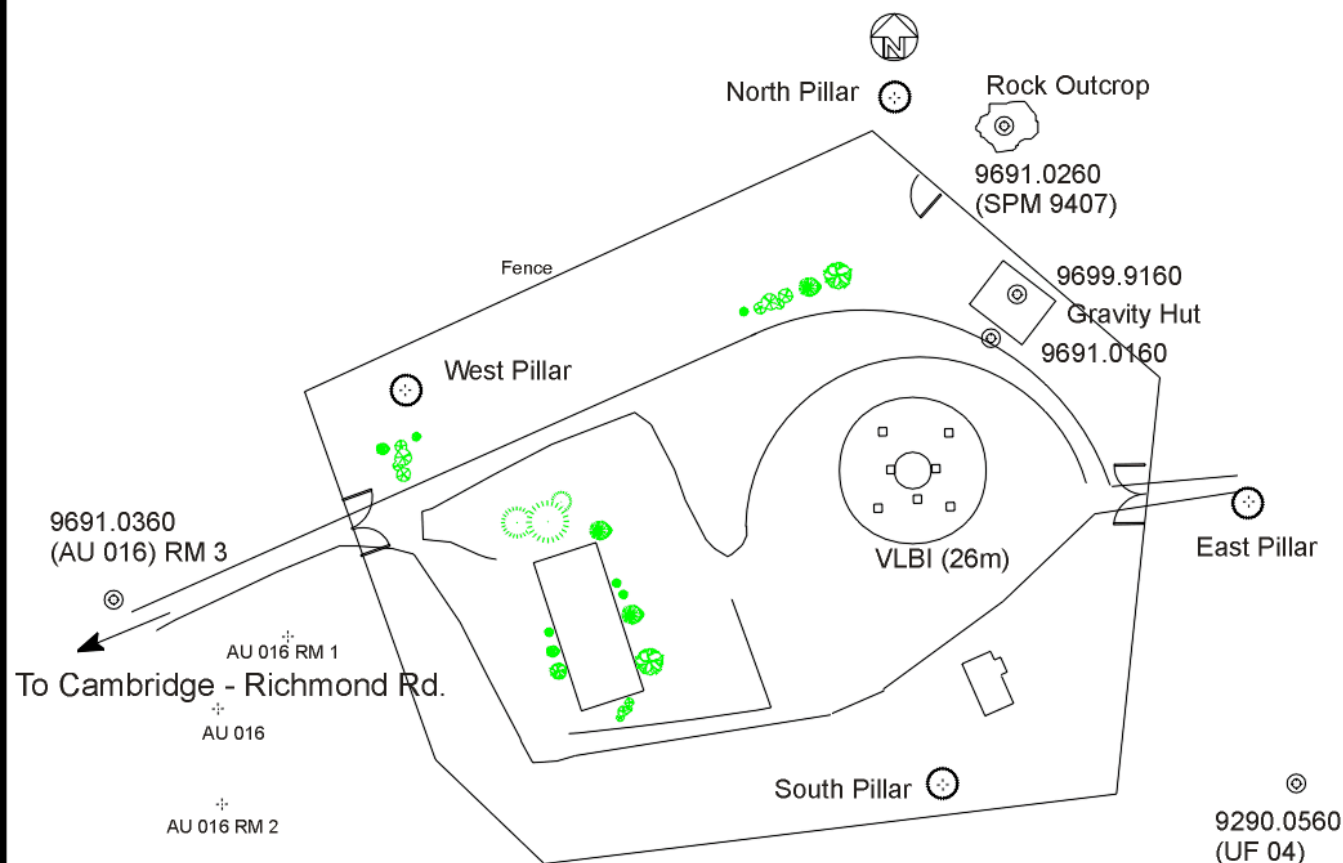
AUSLIG

ELEVATION:

54.479 m

Elevation Source:

AUSLIG



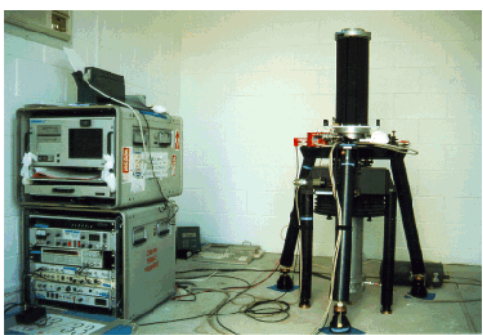
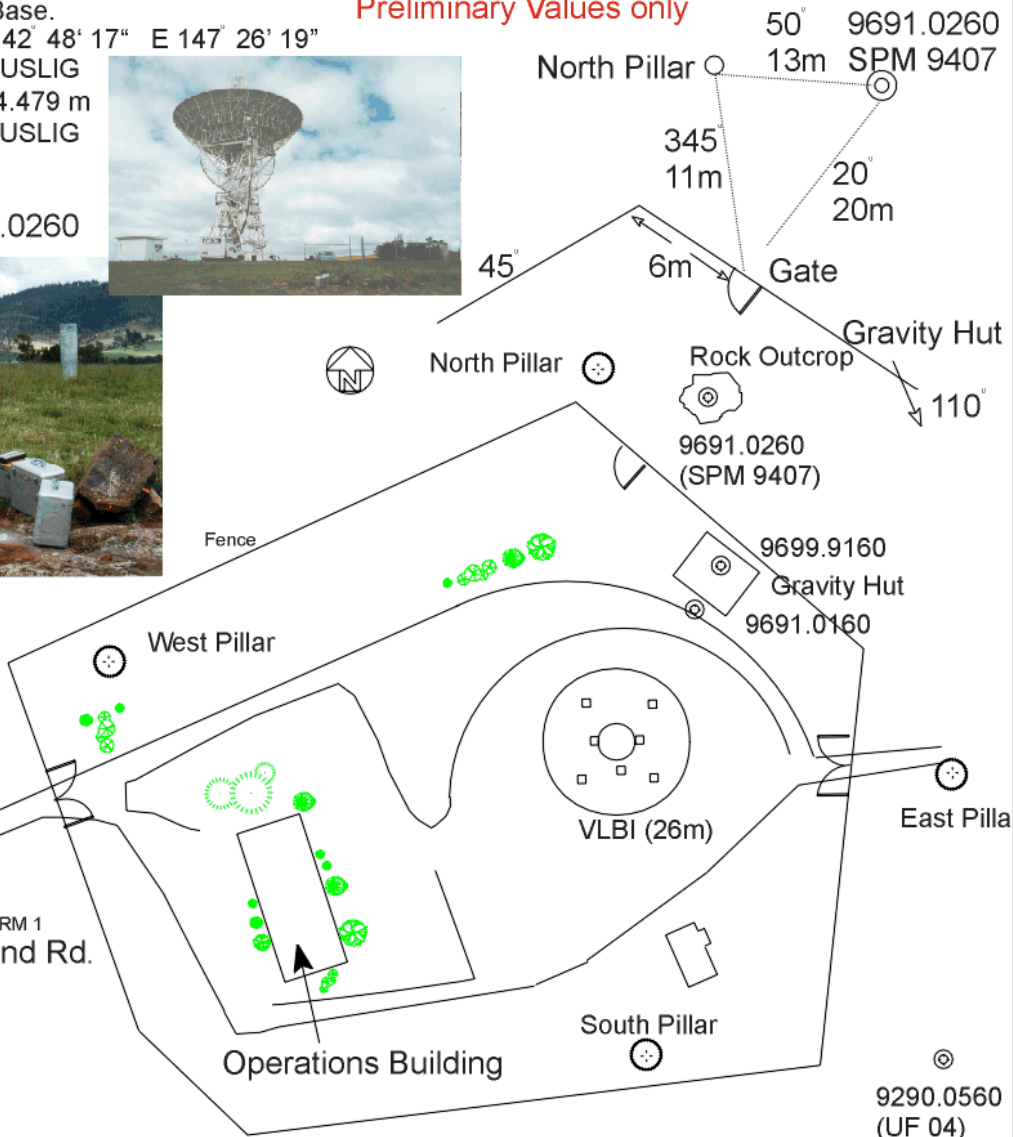
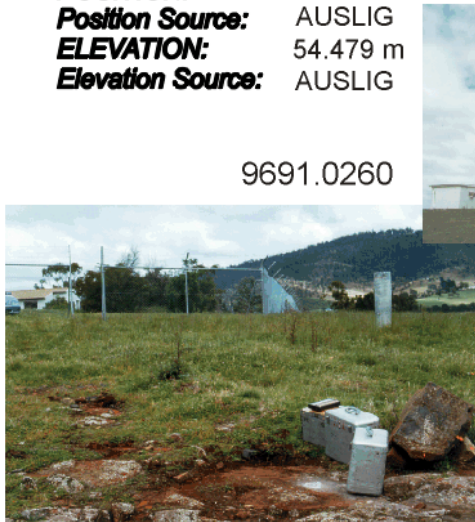
GRAVITY STATIONS
AUSTRALIAN FUNDAMENTAL GRAVITY NETWORK

STATION NAME Hobart VLBI Observatory		STATION CODE 9691.0160 / .0260 / .0360 9699.9160		
LOCATION Mt Pleasant	DESCRIBED / RECOVERED BY R Tracey - 1996 <i>Drawn by J W Williams</i>	OBSERVED GRAVITY (μms^{-2}) 9699.9160 - 9804237.06 9691.0160 - 9804237.63	Edition 1997	

DESCRIPTION:
Values based on Fundamental Network and not new Absolute Preliminary Values only

9691.0260 - 9804240.55
9691.0360 - 9804263.25

STATION TYPE: Base.
POSITION: S 42° 48' 17" E 147° 26' 19"
Position Source: AUSLIG
ELEVATION: 54.479 m
Elevation Source: AUSLIG



STATION NAME

Hobart

STATION CODE

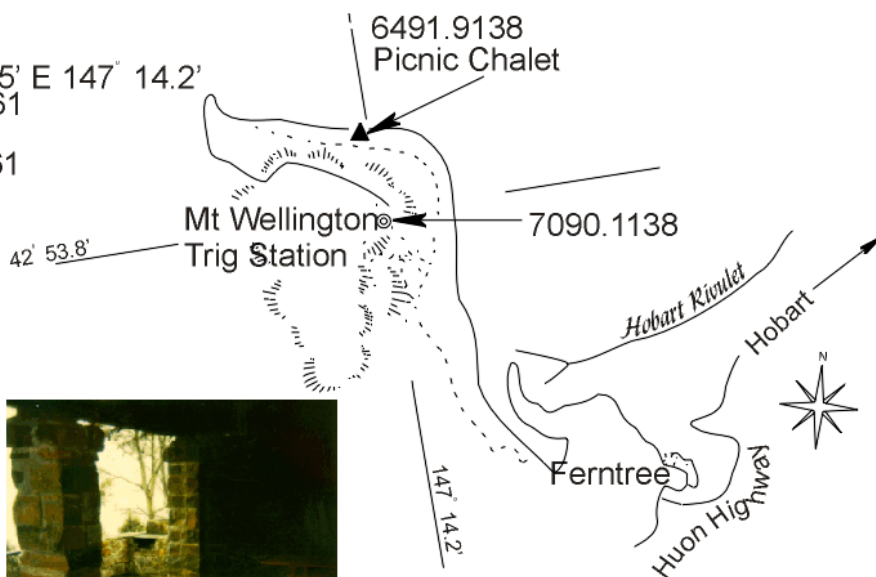
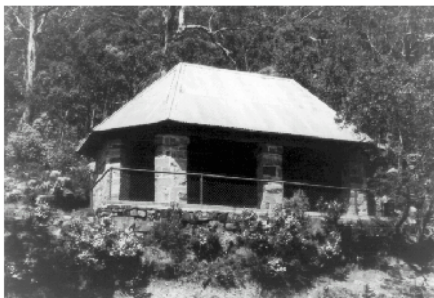
6491.9138

LOCATION
Mt Wellington
Picnic ChaletDESCRIBED / RECOVERED BY
J W Williams - 1992
*Drawn by J W Williams*OBSERVED GRAVITY (μms^{-2})
9802168.0Edition
1997

DESCRIPTION:

Station Class:

STATION TYPE: Base.
POSITION: S 42° 53.5' E 147° 14.2'
Position Source: Report 261
ELEVATION: 997.80 m
Elevation Source: Report 261



Picnic Chalet
Fire Place
Water

No Parking
Turning Circle

Roadway

Kerb

Concrete

Bushes and rocks

Cyclone wire and iron pipes

Bitumen surface

Rubbish bin

Note
Station marked
with 33mm
round pipe.

6491.9138

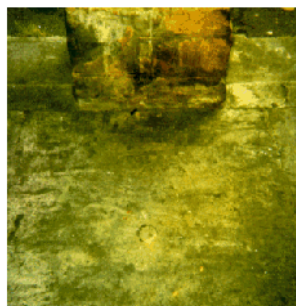
610 mm

Tables & Seats

Tap and trough

Concrete

Track



GRAVITY STATIONS
AUSTRALIAN FUNDAMENTAL GRAVITY NETWORK



STATION NAME

Hobart

STATION CODE

7090.1138

LOCATION

Mt Wellington Hut

DESCRIBED / RECOVERED BY

J W Williams - 1992

*Drawn by J W Williams*OBSERVED GRAVITY (μms^{-2})

9801561.80

Edition

1997

DESCRIPTION:

Station Class:

STATION TYPE:

Base.

POSITION:

S 42° 53.9' E 147° 14.2'

Position Source:

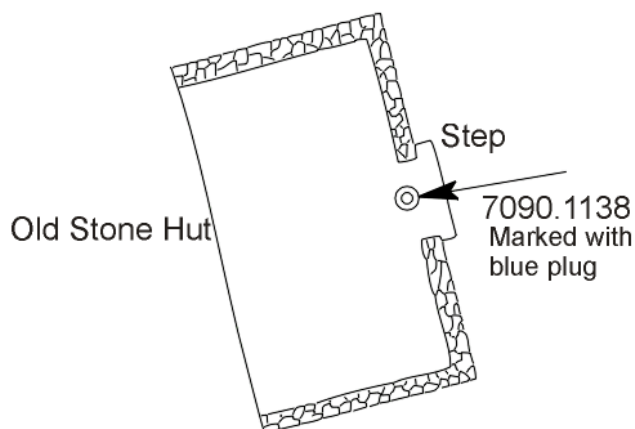
Report 261

ELEVATION:

1262.97 m

Elevation Source:

Report 261



GRAVITY STATIONS
AUSTRALIAN FUNDAMENTAL GRAVITY NETWORK

STATION NAME

Launceston Tas

STATION CODE

General

LOCATION

Launceston Aerodrome

DESCRIBED / RECOVERED BY

J W Williams - 1992
*Drawn by J W Williams*OBSERVED GRAVITY (μms^{-2})

Edition

1998

DESCRIPTION:

Station Class:

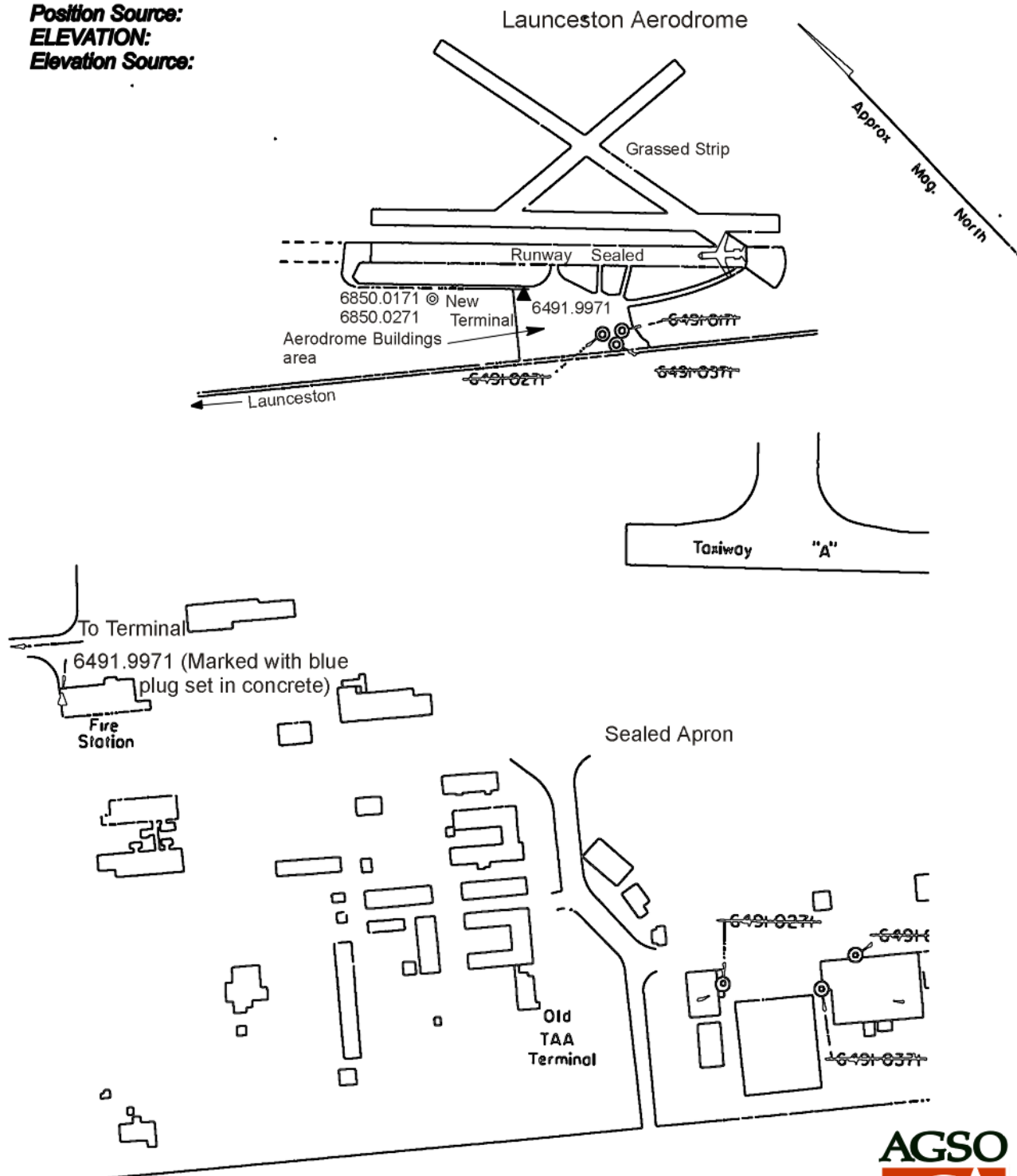
STATION TYPE: Base.

POSITION: S 41° 32.6' E 147° 12.9'

Position Source:

ELEVATION:

Elevation Source:



GRAVITY STATIONS
AUSTRALIAN FUNDAMENTAL GRAVITY NETWORK

STATION NAME

Launceston Tas

STATION CODE

6850.0171

6850.0271

LOCATION

Launceston A/P Terminal

DESCRIBED / RECOVERED BY

J W Williams - 1992

*Drawn by J W Williams*OBSERVED GRAVITY (μms^{-2})

6850.0171 9802620.2

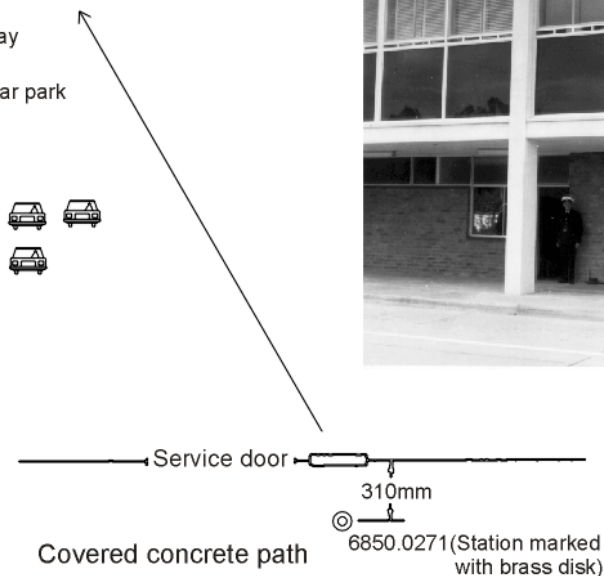
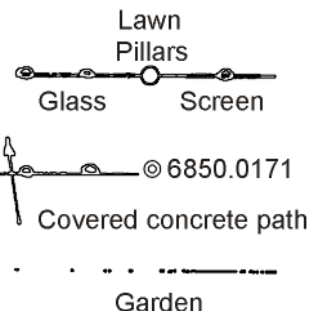
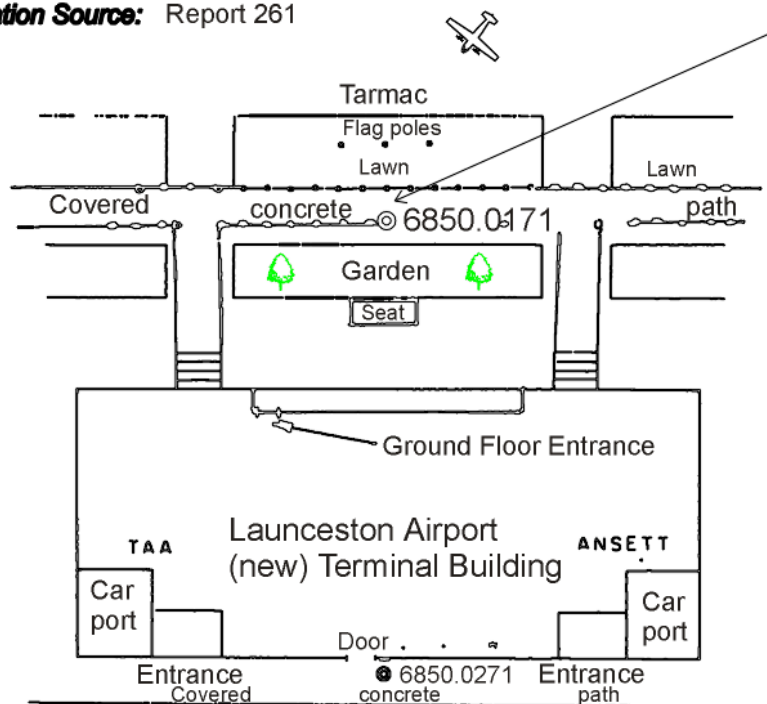
6850.0271 9802619.3

Edition

1998

DESCRIPTION:

Station Class:

STATION TYPE: Base.**POSITION:** S 41° 32.8' E 147° 12.3'**Position Source:** Report 261**ELEVATION:** 170m & 171m**Elevation Source:** Report 261

GRAVITY STATIONS
AUSTRALIAN FUNDAMENTAL GRAVITY NETWORK

STATION NAME

Launceston Tas

STATION CODE

6491.9971

LOCATION Launceston A/P
Fire Station

DESCRIBED / RECOVERED BY

J W Williams - 1992

*Drawn by J W Williams*OBSERVED GRAVITY (μms^{-2})

9802620.1

Edition

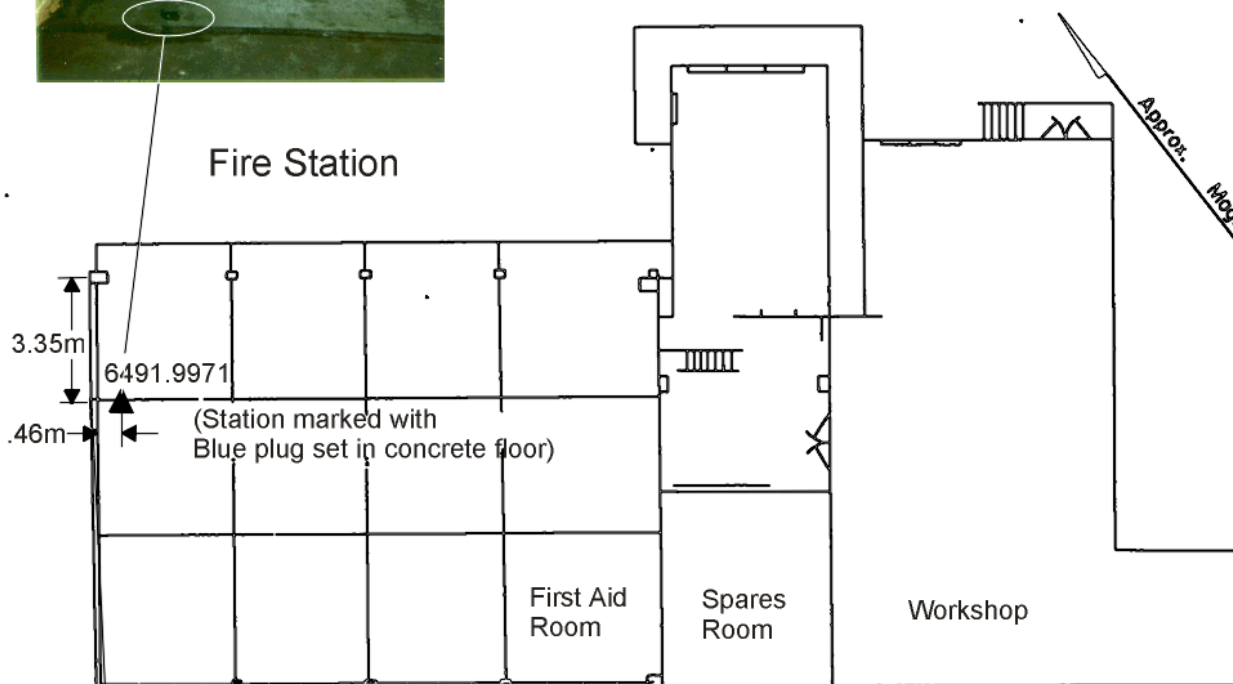
1998

DESCRIPTION:

Station Class:

STATION TYPE: Base.**POSITION:** S 41° 32.9' E 147° 12.6'**Position Source:** Report 261**ELEVATION:** 170.10 m**Elevation Source:** Report 261

Fire Station



STATION NAME

Mt Barrow Tas

STATION CODE

6491.9003

LOCATION Mt Barrow
Transformer Hut

DESCRIBED / RECOVERED BY

J W Williams - 1992

*Drawn by J W Williams*OBSERVED GRAVITY (μms^{-2})

9800127.1

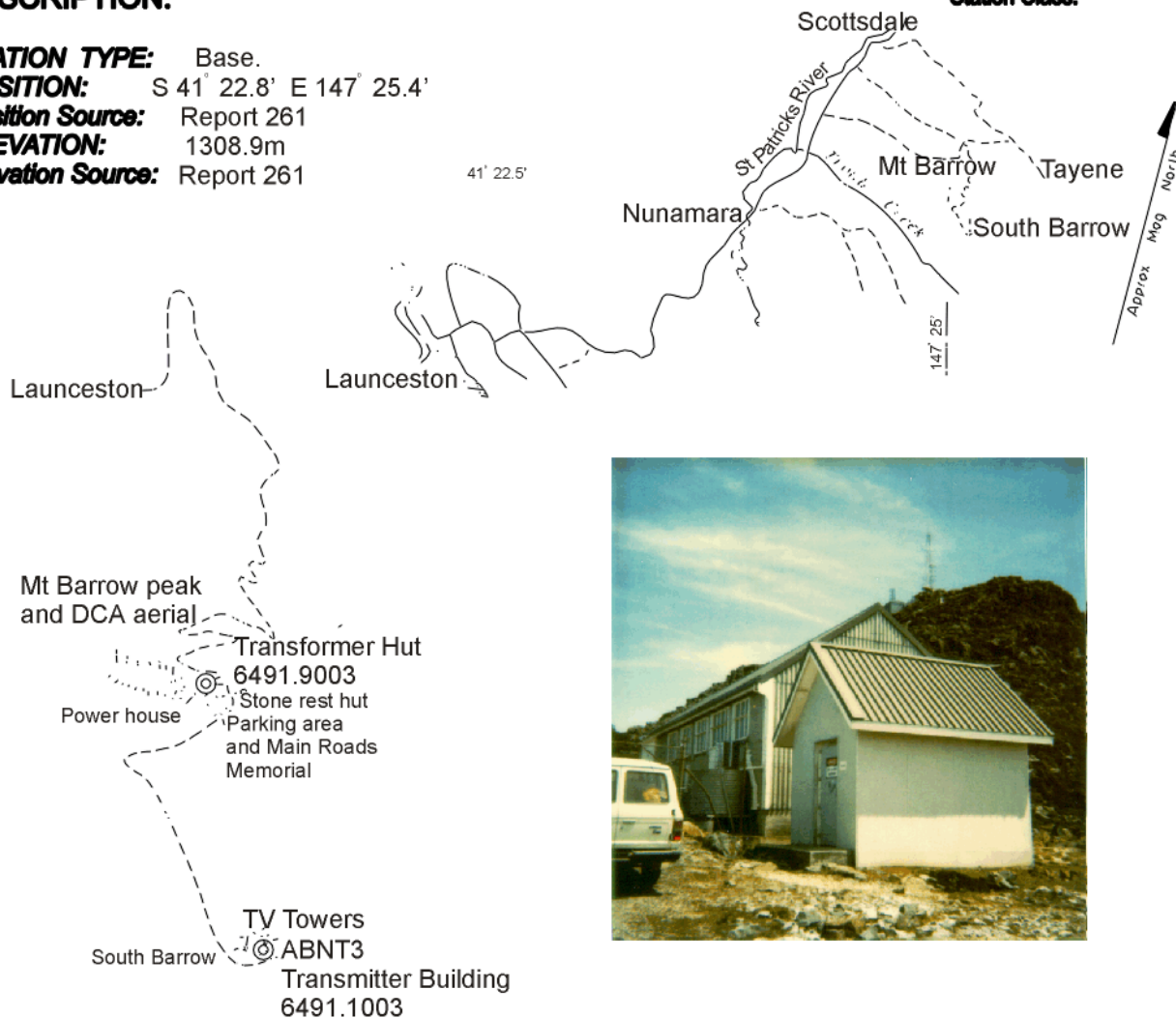
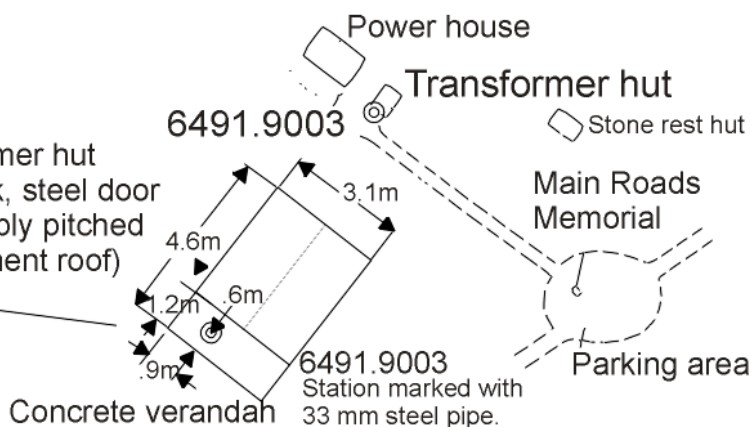
Edition

1998

DESCRIPTION:

STATION TYPE: Base.**POSITION:** S 41° 22.8' E 147° 25.4'**Position Source:** Report 261**ELEVATION:** 1308.9m**Elevation Source:** Report 261

Station Class:

Transformer hut
(red brick, steel door
and steeply pitched
fibro-cement roof)GRAVITY STATIONS
AUSTRALIAN FUNDAMENTAL GRAVITY NETWORK

STATION NAME

Mt Barrow Tas

STATION CODE

6491.1003

LOCATION

Mt Barrow

ABNT3 Entrance

DESCRIBED / RECOVERED BY

J W Williams - 1992

*Drawn by J W Williams*OBSERVED GRAVITY (μms^{-2})

9800144.3

Edition

1998

DESCRIPTION:

STATION TYPE:

Base.

POSITION:

S 41° 23.6' E 147° 25.6'

Position Source:

Report 261

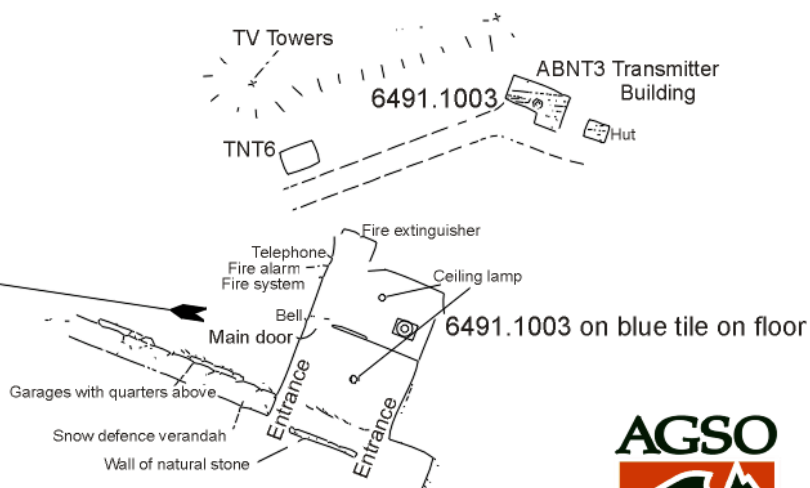
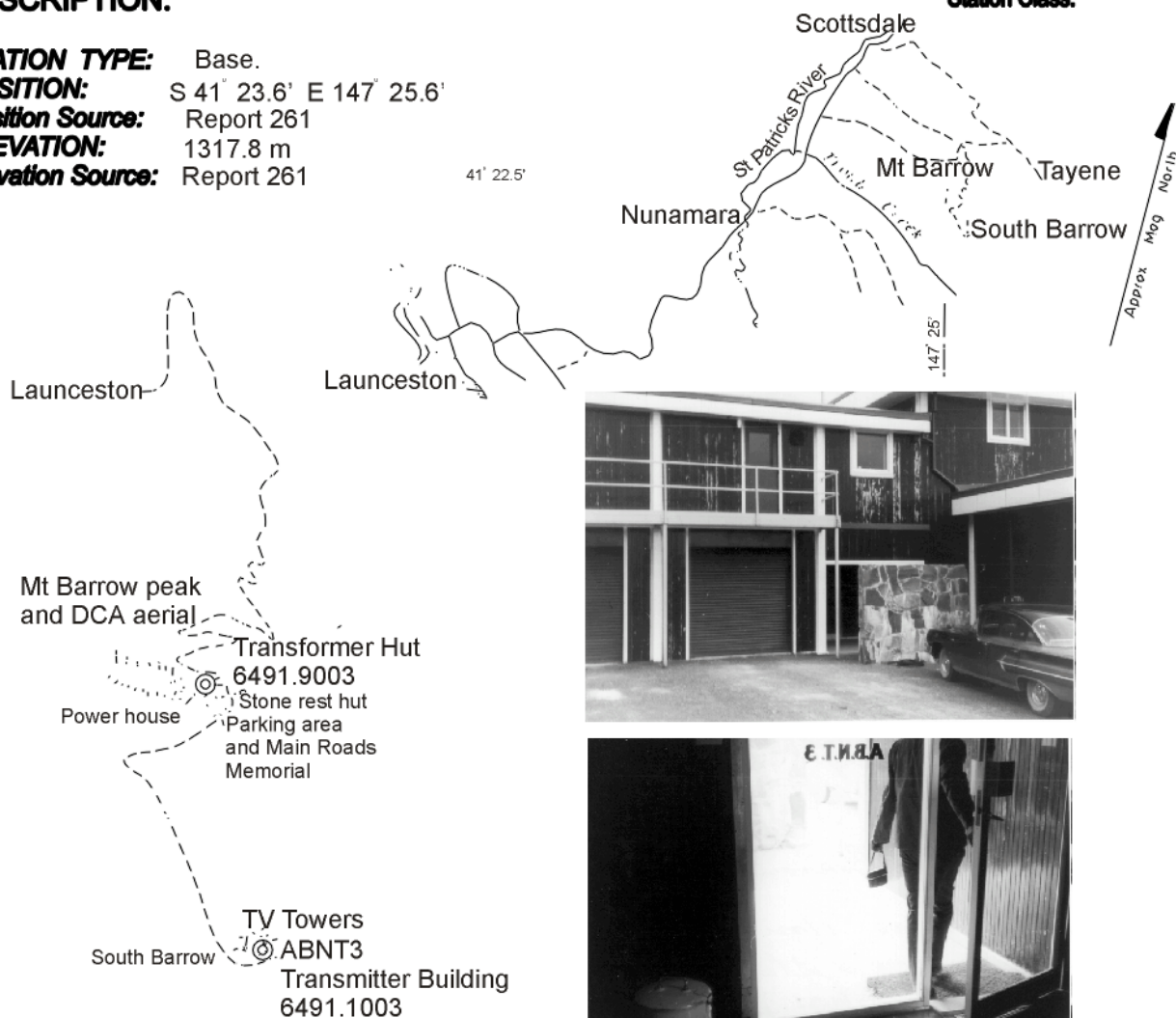
ELEVATION:

1317.8 m

Elevation Source:

Report 261

Station Class:



GRAVITY STATIONS
AUSTRALIAN FUNDAMENTAL GRAVITY NETWORK

STATION NAME

Queenstown Tas.

STATION CODE

9290.9236

LOCATION

Queenstown Airport

DESCRIBED / RECOVERED BY

J W Williams - 1992

*Drawn by J W Williams*OBSERVED GRAVITY (μms^{-2})

9802920.048

Edition

1997

DESCRIPTION:

Station Class:

STATION TYPE: Base.**POSITION:** S 42° 04.617' E 145° 31.767'**Position Source:** CAA Enroute Supplement**ELEVATION:** 262.35 m**Elevation Source:** CAA as above

GRAVITY STATIONS
AUSTRALIAN FUNDAMENTAL GRAVITY NETWORK

STATION NAME

SMITHTON TAS

STATION CODE

6491.1142

LOCATION

Smithton Airport

DESCRIBED / RECOVERED BY

J W Williams / 1992

*Drawn by J W Williams*OBSERVED GRAVITY (μms^{-2})

9802626.5

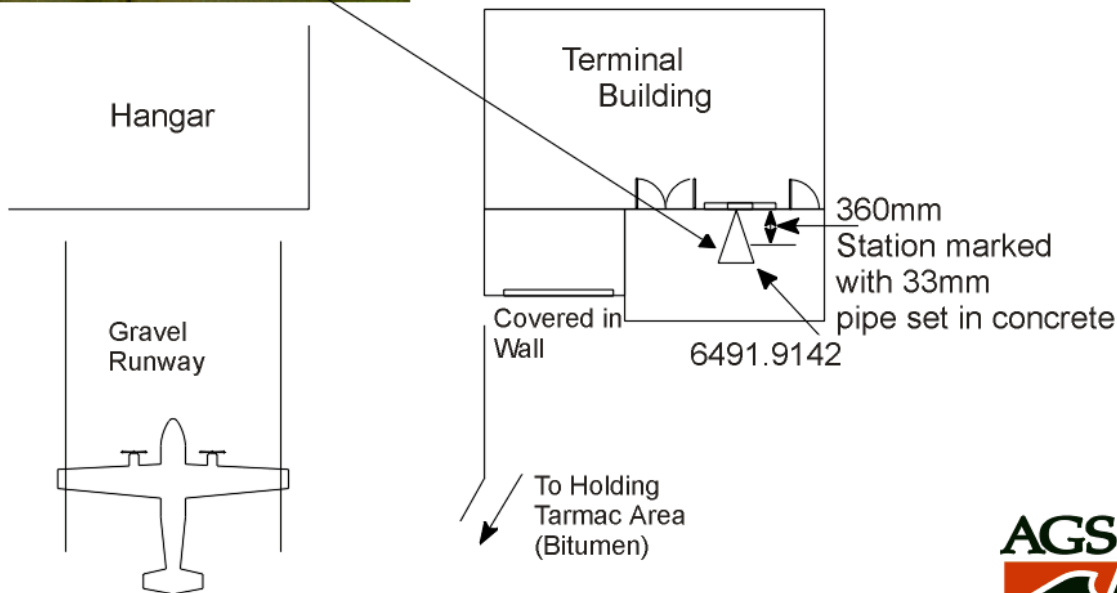
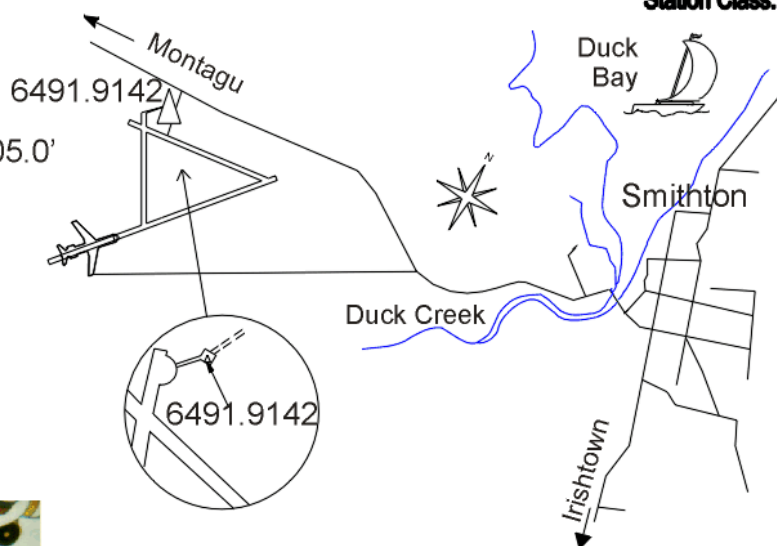
Edition

1997

DESCRIPTION:

STATION TYPE: Base.**POSITION:** S 40° 49.8' E 145° 05.0'**Position Source:** Report 261**ELEVATION:** 5.7 m**Elevation Source:** Report 261

Station Class:



GRAVITY STATIONS
AUSTRALIAN FUNDAMENTAL GRAVITY NETWORK

STATION NAME

St Helens Tas.

STATION CODE

6491.9139

LOCATION

St Helens Airport

DESCRIBED / RECOVERED BY

J W Williams - 1992

*Drawn by J W Williams*OBSERVED GRAVITY (μms^{-2})

9802888.6

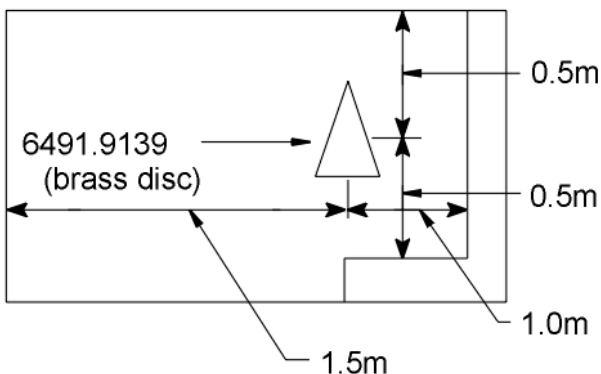
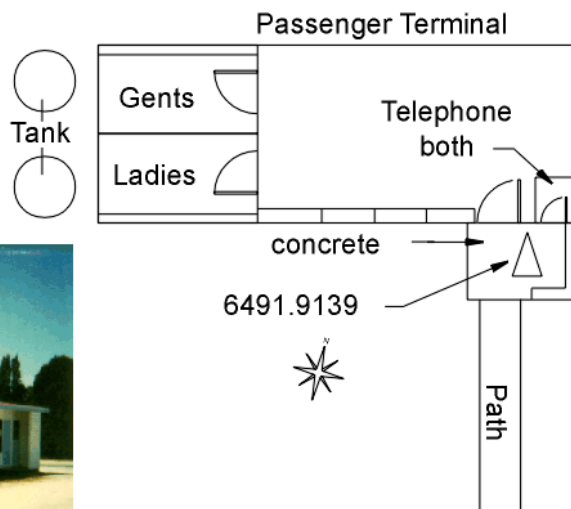
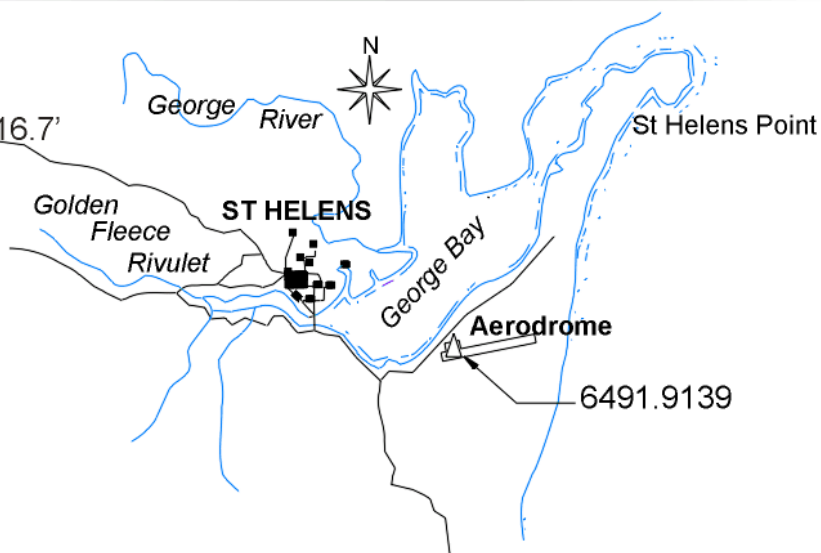
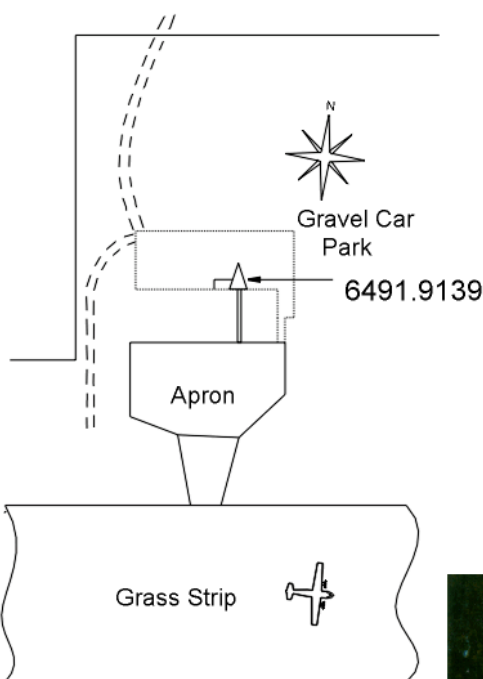
Edition

1997

DESCRIPTION:

STATION TYPE:

Base.

POSITION: S 41° 20.3' E 148° 16.7'**Position Source:** Report 261**ELEVATION:** 45.65 m**Elevation Source:** Report 261

GRAVITY STATIONS
AUSTRALIAN FUNDAMENTAL GRAVITY NETWORK

STATION NAME

Strahan Tas.

STATION CODE

6491.9136

LOCATION

Strahan Airport

DESCRIBED / RECOVERED BY

J W Williams - 1992

*Drawn by J W Williams*OBSERVED GRAVITY (μms^{-2})

9803583.8

Edition

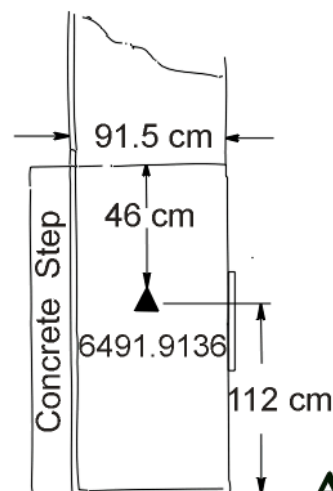
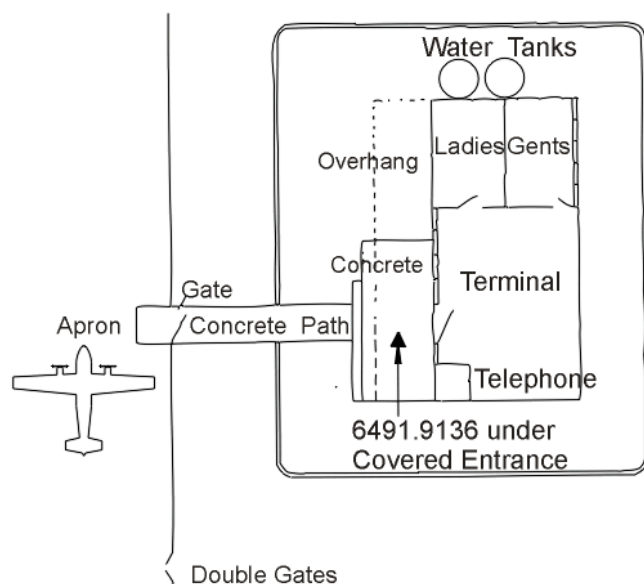
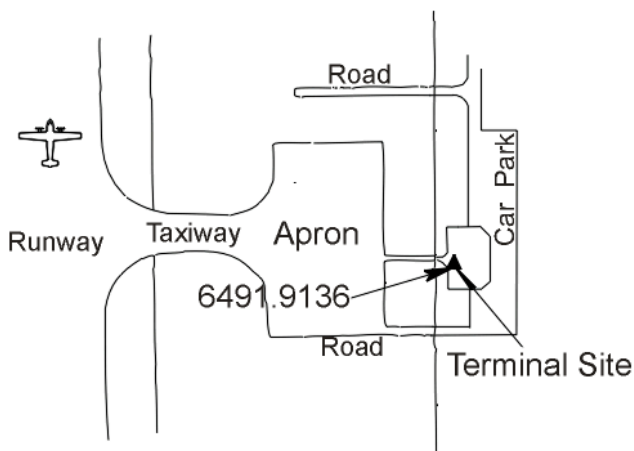
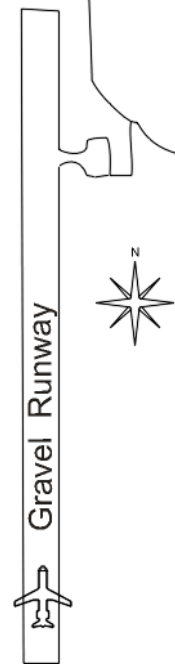
1998

DESCRIPTION:

STATION TYPE: Base.**POSITION:** S 42° 09.0' E 145° 17.3'**Position Source:** Report 261**ELEVATION:** 22.48 m**Elevation Source:** Report 261

Station Class:

Ocean Road



GRAVITY STATIONS
AUSTRALIAN FUNDAMENTAL GRAVITY NETWORK



STATION NAME

Triabunna

STATION CODE

9290.9261 (PSM 9261)

LOCATION Triabunna
Rostrevor creek

DESCRIBED / RECOVERED BY

J W Williams - 1992
*Drawn by J W Williams*OBSERVED GRAVITY (μms^{-2})

9803971.002

Edition

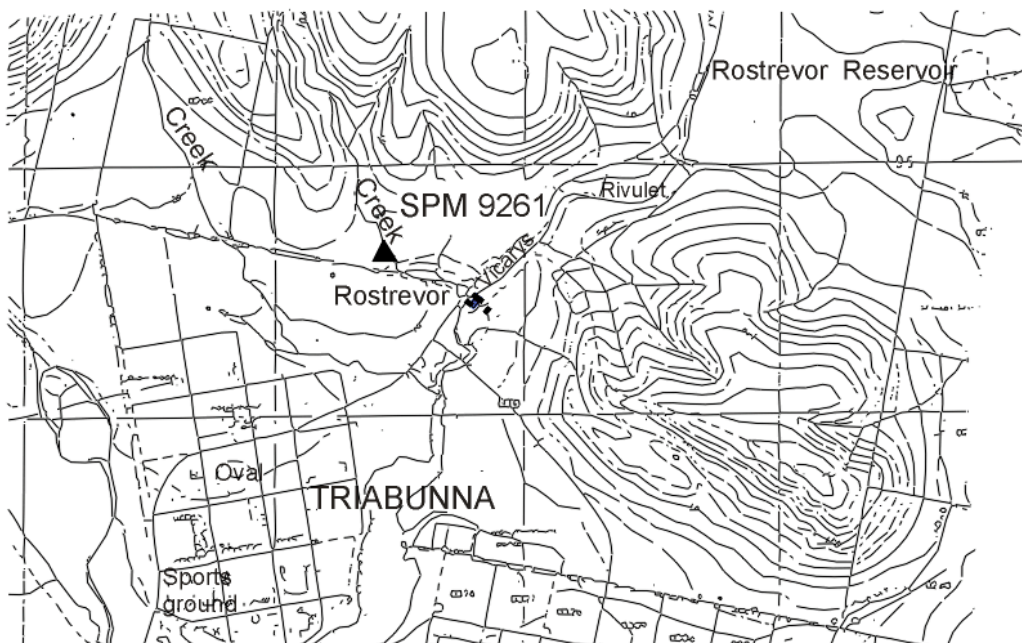
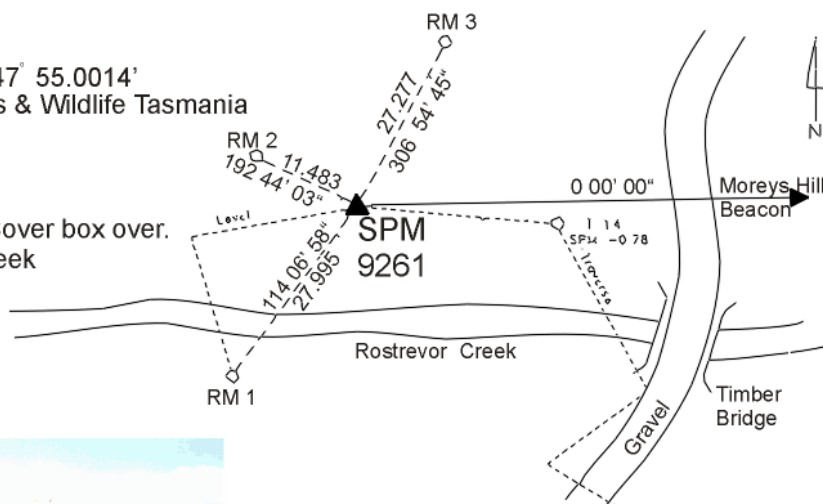
1998

DESCRIPTION:

Station Class:

STATION TYPE: Base.**POSITION:** S 42° 29.5590' E 147° 55.0014'**Position Source:** Dept. Lands, Parks & Wildlife Tasmania**ELEVATION:** 12.729 m**Elevation Source:** As above.

Station is stainless steel rod in dolerite. Cover box over.
Dolerite outcrop adjacent to Rostrevor creek
approx 500m from highway.
Reference marks: RM 1, 2, & 3
are domed galvanised bolts
cemented in rock.



GRAVITY STATIONS
AUSTRALIAN FUNDAMENTAL GRAVITY NETWORK



STATION NAME

Triabunna Tasmania

STATION CODE

9290.1119

LOCATION

Triabunna
Spring Bay Crossing

DESCRIBED / RECOVERED BY

J W Williams - 1992

*Drawn by J W Williams*OBSERVED GRAVITY (μms^{-2})

9804016.548

Edition

1998

DESCRIPTION:

Station Class:

STATION TYPE:

Base.

POSITION:

S 42° 32.0244' E 147° 55.7586'

Position Source:

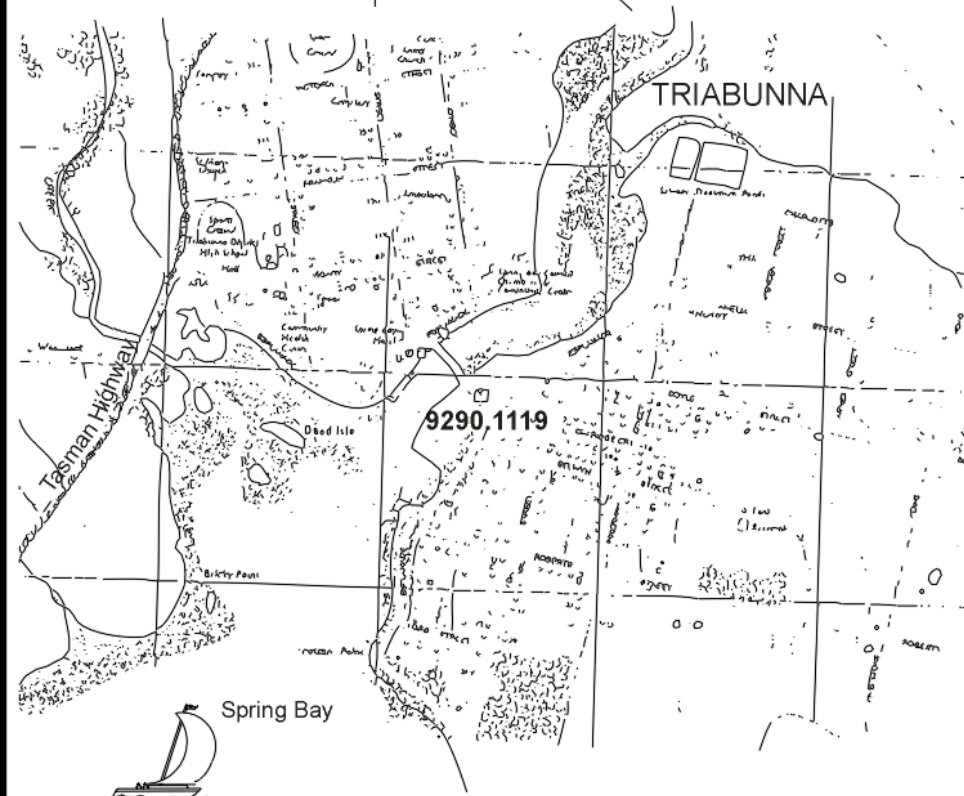
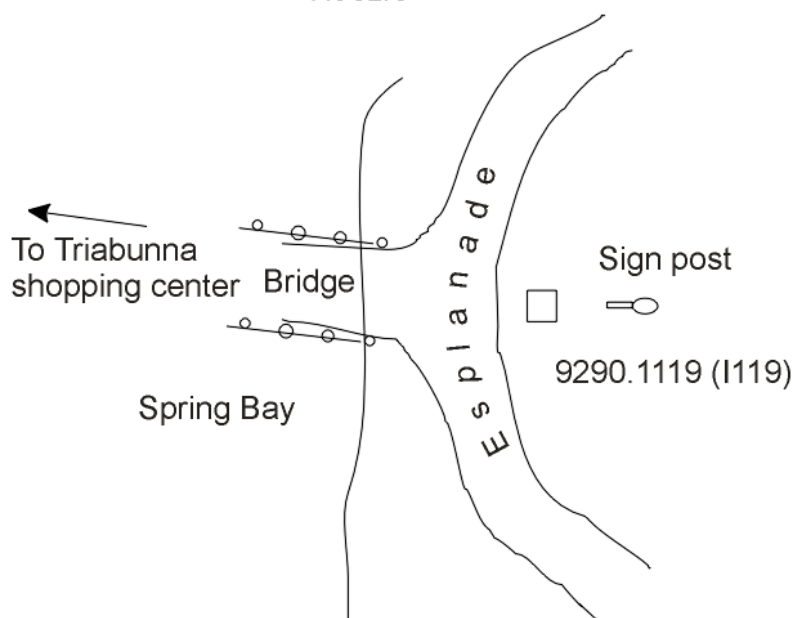
AUSLIG

ELEVATION:

2.529 m

Elevation Source:

AUSLIG



GRAVITY STATIONS
AUSTRALIAN FUNDAMENTAL GRAVITY NETWORK

STATION NAME

Triabunna Tasmania

STATION CODE

9290.9259 (SPM 9259)

LOCATION

Near Triabunna
Fish Factory

DESCRIBED / RECOVERED BY

J W Williams - 1992

*Drawn by J W Williams*OBSERVED GRAVITY (μms^{-2})

9804047.671

Edition

1998

DESCRIPTION:

Station Class:

STATION TYPE:

Base.

POSITION:

S 42° 32' 01.5" E 147° 55' 37"

Position Source:

AUSLIG

ELEVATION:

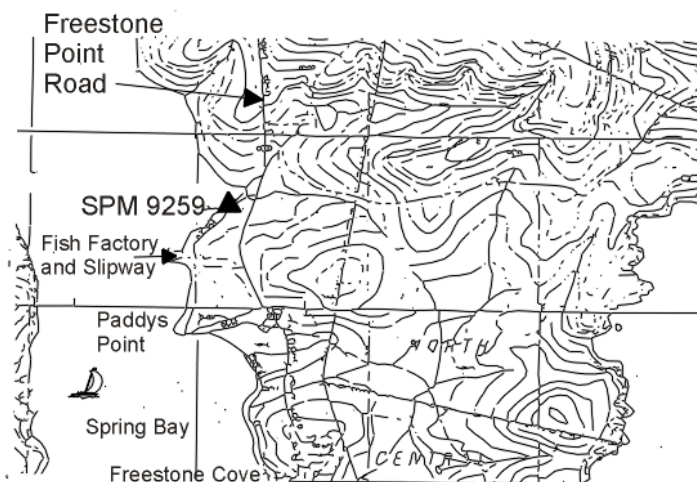
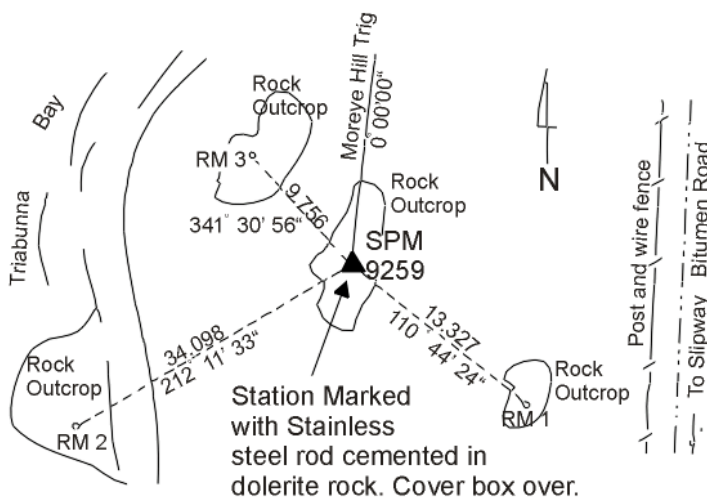
2.342 m

Elevation Source:

AUSLIG

Locality

In rock outcrop adjacent to road
to slipway near Triabunna fish
meal plant.



GRAVITY STATIONS
AUSTRALIAN FUNDAMENTAL GRAVITY NETWORK

STATION NAME

Triabunna Tas.

STATION CODE

9290.9258

LOCATION Tide Gauge

DESCRIBED / RECOVERED BY

OBSERVED GRAVITY (μms^{-2})

Edition

Spring Bay
Freestone Cove Triabunna

J W Williams - 1992

Drawn by J W Williams

9804069.980

1998

DESCRIPTION:

Station Class:

STATION TYPE:

Base.

POSITION:

S 42° 32.0244' E 147° 55.7586'

Position Source:

AUSLIG

ELEVATION:

2.529 m

Elevation Source:

AUSLIG

Spring Bay
(Freestone Cove)

Tide Gauge Hut

0.2 m

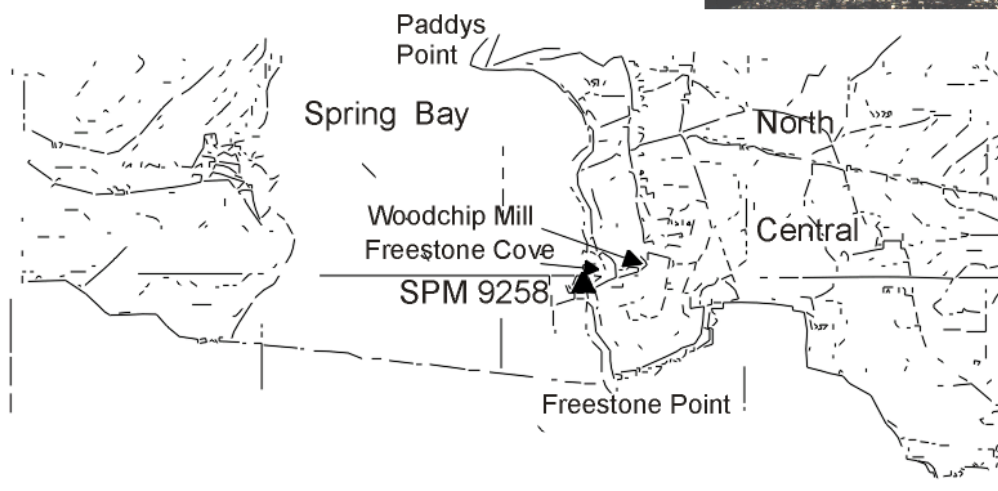
0.7 m

Station marked with
Brass lands disc set
in concrete structure

Walkway



Note:
Access through T.P.F.H.
Woodchip plant at
the end of Freestone
Point Road.



GRAVITY STATIONS
AUSTRALIAN FUNDAMENTAL GRAVITY NETWORK

