



Department of
Industry and Resources

**RECORD
2007/7**

**BLACKSTONE 1:100 000
MAP SHEET GRAVITY SURVEY
— TECHNICAL SUMMARY**

compiled by M. Gray



Geological Survey of Western Australia



GEOLOGICAL SURVEY OF WESTERN AUSTRALIA

Record 2007/7

BLACKSTONE 1:100 000 MAP SHEET GRAVITY SURVEY — TECHNICAL SUMMARY

**compiled by
M. C. Gray¹**

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Perth 2007

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Blackstone 1:100 000 map sheet gravity survey — technical summary

compiled by

M. C. Gray¹

Introduction

A detailed gravity survey was performed over the northern half of the BLACKSTONE 1:100 000 map sheet (Figs 1 and 2) for 16 days during August 2006. The survey was performed collaboratively between the University of Adelaide and the Geological Survey of Western Australia (GSWA; Musgrave Project). The survey comprised a regular grid of 308 independent gravity stations collected over an area of 1870 km². The average station spacing is 2 km north–south and 3 km east–west. Bounding coordinates

for the survey area are 386700E 7128000N northeast and 443500E 7092000N southwest (GDA94; Transverse Mercator MGA52). Several culturally sensitive areas were not surveyed, at the request of the local traditional owners. Areas of significant topographic variation were also avoided (low hills and rocky outcrops).

Gravity observations and processing

Gravity observations were made using a single Lacoste and Romberg G-series meter (G37). Gravity stations (Fig. 3) were accessed by 4WD and occupied for a minimum of four minutes. Repeat stations were marked with flagging

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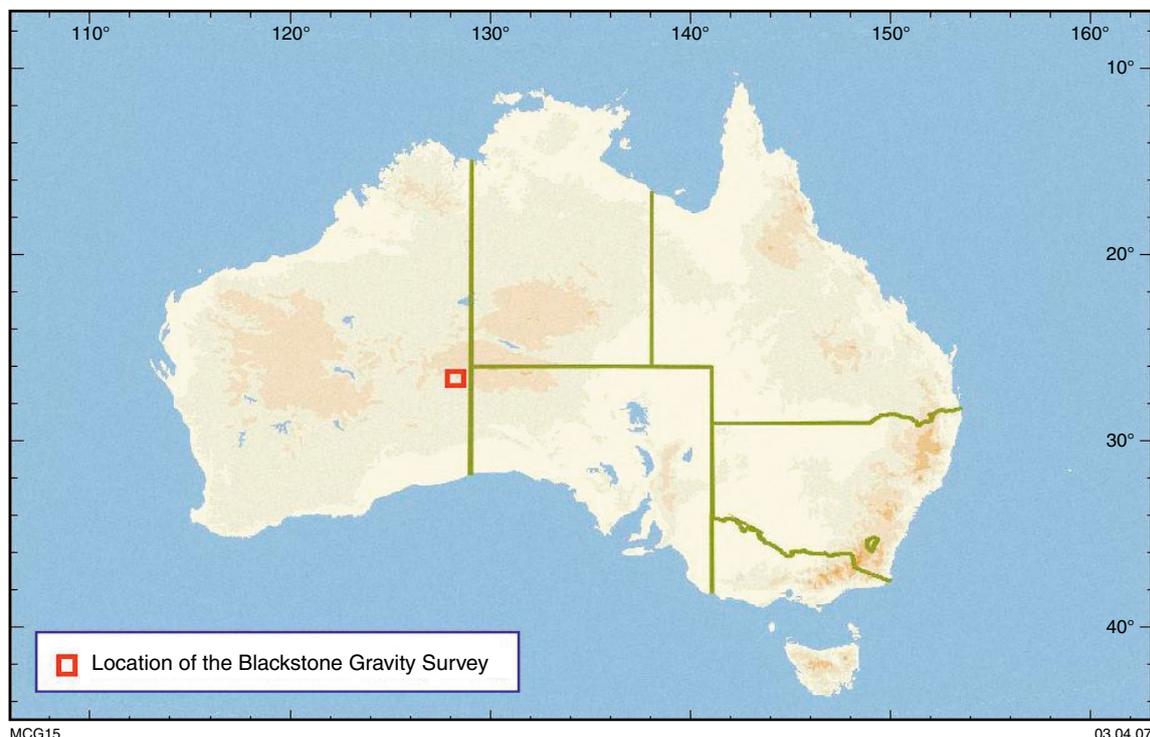
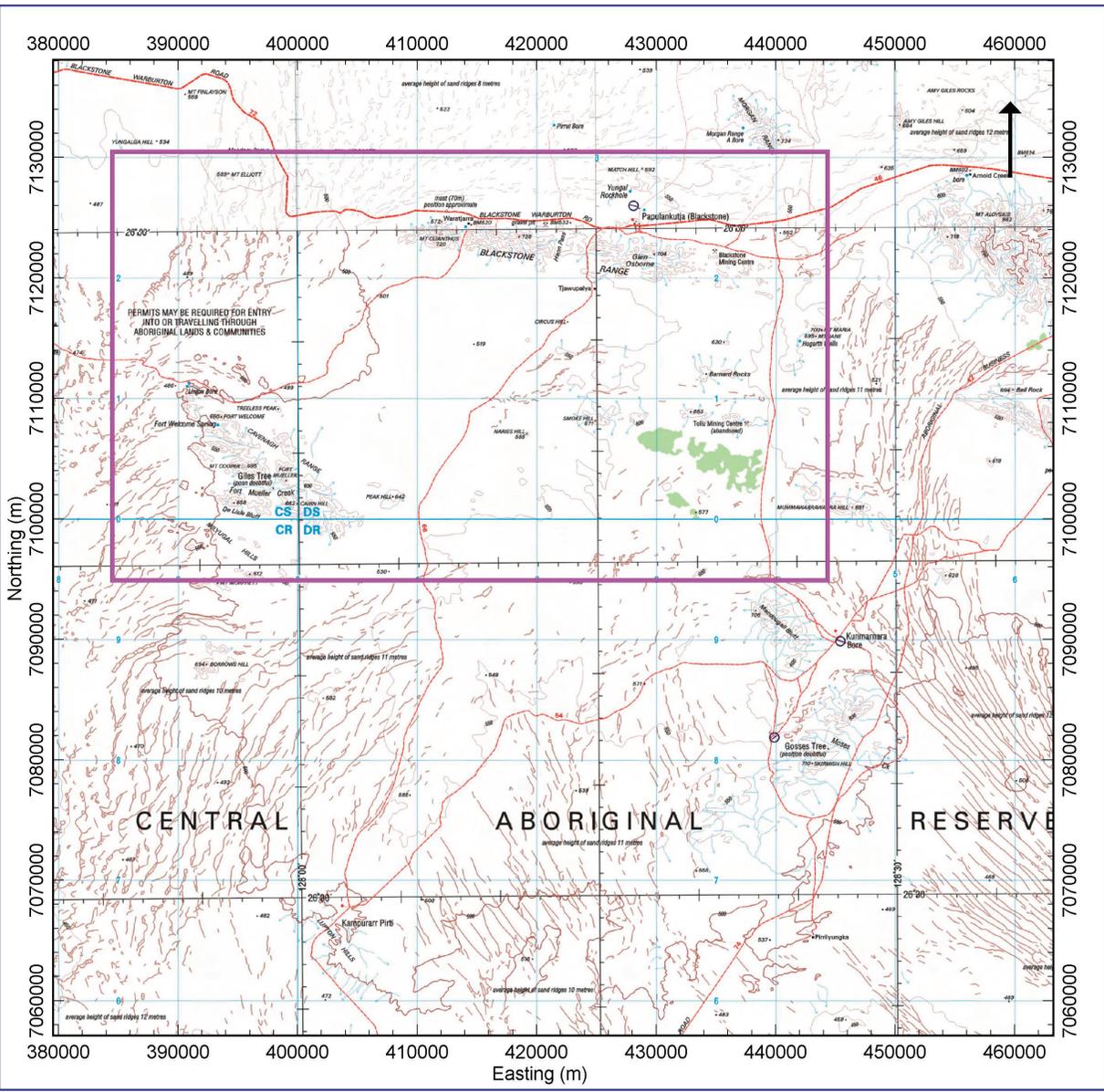


Figure 1. Location of the BLACKSTONE gravity survey



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BLACKSTONE - CAVANAGH REGION
Musgrave Province

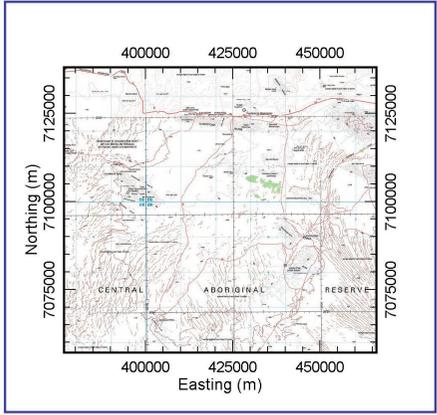
Location Diagram
Blackstone Gravity Survey (2006)

 Location of the Blackstone Gravity Survey (2006)

Base Layer : NATMAP 1:250,000
 Geoscience Australia

Datum : Geocentric Datum of Australia (GDA94)
 Projection : Transverse Mercator
 Map Grid of Australia (Zone 52)

Compiled by M.C.Gray



 10 km

Figure 2. Detailed location diagram for the BLACKSTONE gravity survey

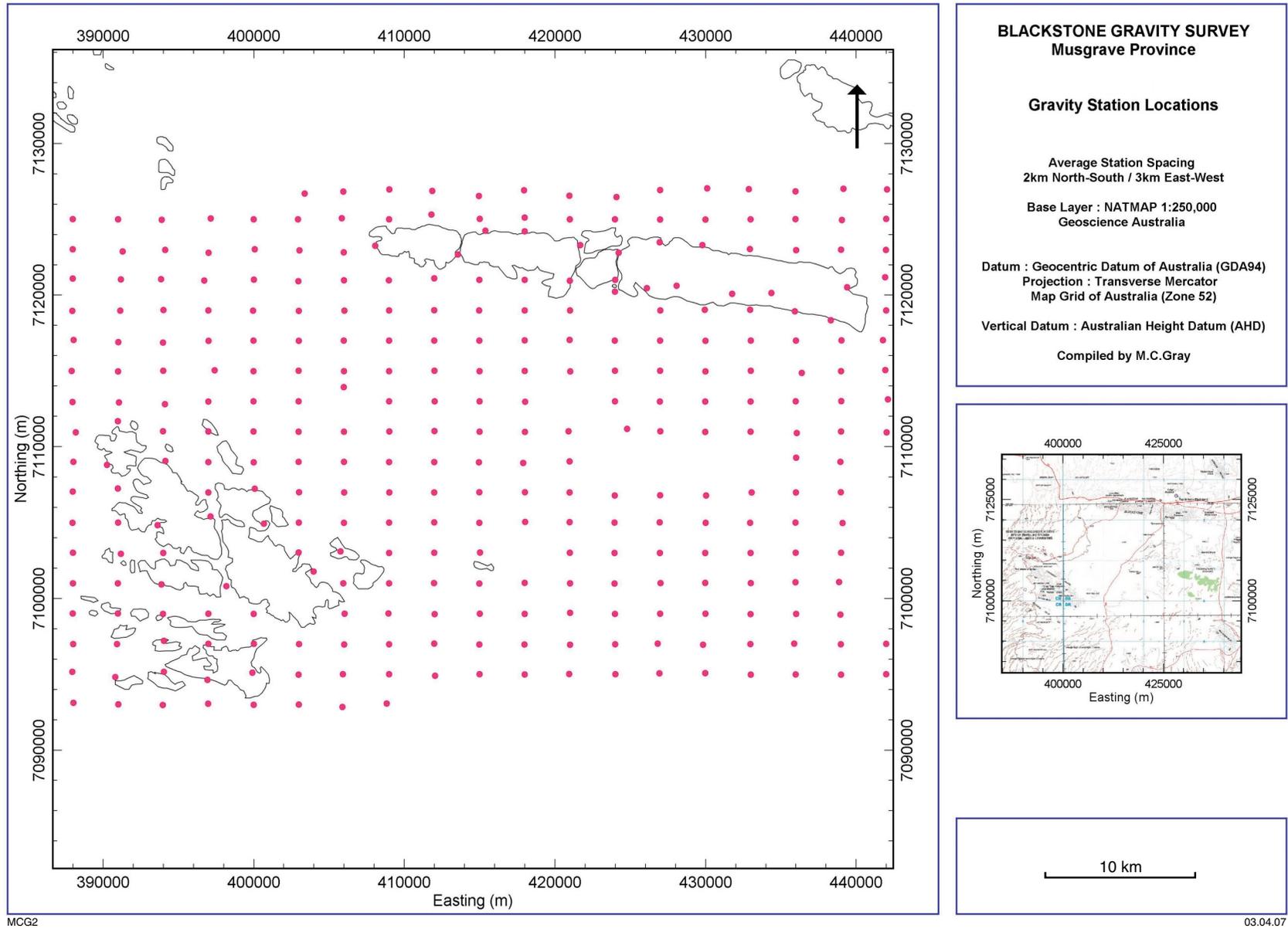


Figure 3. Station locations for the BLACKSTONE gravity survey

tape for later reoccupations. Gravity stations initially planned on moderate to severe topography (e.g. Blackstone and Cavanagh ranges) were subsequently not surveyed. All efforts to minimize the effects of local terrain were made during gravity readings. A distance of at least 200 m was always maintained between significant outcrops (low hills, boulder outcrops, large rocks etc) and the gravimeter. This sometimes required the repositioning of the planned gravity station to a more suitable nearby location. Such relocations rarely exceeded 10% of the grid spacing of the planned survey. Unless specified, all gravity units in this report and in the tabulated results are given in milliGals (mGals)

Base-station readings were obtained at the beginning and end of daily data acquisition. Repeat and tie stations were collected daily. Gravity values are related to the Geoscience Australia Fundamental Gravity Network (AFGN) using Isogal84 (ISGN71) values. All field gravity observations are expressed in milliGals and have been post-processed using standard formulae and constants to produce a final Bouguer anomaly for each gravity station.

Gravity data was processed daily in the field to ensure data quality and integrity. All data was later reprocessed to Geoscience Australia standards.

Instrument scale factor

An instrument scale factor of 1.04765 was used to correct the meter reading to a relative gravity unit based on a meter calibration table.

Instrument drift

Instrument drift was determined from both the daily base-station readings and repeat-station observations. The gravity-station meter readings were then corrected using a linear approximation of the drift behaviour between the repeat readings where:

$$\text{drift} = [(t_1 - t_n)(b_2 - b_1) / (t_2 - t_1)] \text{ and}$$

t_n = time of meter reading at each station

b_1 = base meter reading prior to station reading

t_1 = time of base reading b_1

b_2 = base meter reading after station reading

t_2 = time of base reading b_2 .

Earth-tide corrections

Normally a correction is applied to account for background variations due to changes in the relative position of the moon and sun. Due to the relatively short duration of the gravity loops, a separate earth-tide correction has not been applied. For the purposes of this survey, any variation will be assumed to be linear, and accounted for during the instrumental drift correction.

Observed gravity

The drift- and earth-tide-corrected relative-gravity values are known as observed gravity. Observed gravity (in

mGals) was calculated for each gravity station using the following formula:

observed gravity = $b_g + (r_n - \text{drift}) - b_1$ where

b_g = AFGN base-station gravity value (Isogal84)

r_n = station meter reading

drift = residual drift correction

b_1 = meter reading at base station.

Theoretical normal gravity

Theoretical gravity (g_n) was calculated for each geographic location (gravity station) based on the assumption that the earth is a homogeneous ellipsoid of rotation. Theoretical gravity was calculated using the 1967 variant of the international gravity formula that corrects observed gravity for variations in latitude. This formula best approximates theoretical gravity based on the 1967 geodetic reference system (Tracey and Murray, 2002). Latitude was determined using differential GPS (Tracey and Murray (2002), chapter 3) as follows:

$$g_n = 9780318.456 \times (1 + 0.005278895 \times \sin^2 \Phi + 0.000023462 \times \sin^4 \Phi) \text{ where}$$

Φ = degrees of latitude in radians.

Free air anomaly

Gravity varies inversely with the square of distance; therefore a correction is required to account for changes in elevation between gravity stations. The free air correction is used to reduce all of the gravity station elevations to the Australian Height Datum surface (AHD71). The following formula is used to calculate the free air anomaly (FAA):

$$\text{FAA} = g_{\text{Obs}} - g_N + 3.086H \text{ where}$$

g_{Obs} = observed gravity

g_N = theoretical gravity on the ellipsoid at a given latitude

H = height of the meter above the geoid (AHD).

Bouguer anomaly

A correction is required to account for the attraction of material (mass) between the gravity station and the datum plane; this is called the Bouguer correction. The resultant gravity anomaly is called the simple Bouguer anomaly (BA) and is calculated using the following formula:

$$\text{BA} = \text{FA} - 0.419\rho E \text{ where}$$

FA = free air gravity anomaly

ρ = assumed density for the crustal mass around the geoid (2.67)

E = elevation of the ground surface above the geoid.

For this survey, the Bouguer anomaly has been calculated using a country rock density of 2.67 g/cc.

Final Bouguer anomaly

Bouguer anomalies are calculated assuming that the gravity station is sitting in a horizontal plane with no additional topography. The survey area is subject to variations in topography that in theory need to be compensated for in the gravity observations. Terrain over the wider western Musgrave area varies between 360 to 1030 m above sea level. Some severe terrain was encountered proximal to a number of stations during the survey. To compensate for these topographic effects, a terrain correction was added to the Bouguer anomaly to produce a final Bouguer anomaly using the following formula:

FBA = BA + TC where

FBA = final Bouguer anomaly

BA = Bouguer anomaly

TC = terrain correction.

Shuttle radar topography mission (SRTM) elevation data at 90-m cell size was used as the digital elevation model for the terrain correction procedure. The SRTM data is freely available from the United States Geological Survey (USGS) at <http://srtm.usgs.gov/>. The SRTM data was checked for consistency and then merged to produce a continuous surface extending well outside of the gravity survey area (Fig. 4).

Terrain corrections were determined for each independent station using a program called HAMXYZ2™, which is freeware produced by Gradient Geophysics and is available from the University of Montana website (http://www.umt.edu/geosciences/faculty/sheriff/438Gravity_Electromagnetics/TerrainCorrections.htm).

The effect of terrain extending up to 20 km from every station was calculated, with the results tabulated in Appendix A. The maximum correction applied was 0.58 mGals, whereas the average correction was 0.07 mGals.

GPS observations and processing

Three Z-12 dual-frequency Ashtech receivers were used during data acquisition. One receiver was vehicle mounted and operated in kinematic mode (ROV2), whereas another was used as a static base station (BAS3). GPS data at each gravity station were collected as carrier phase in kinematic mode at 10 s intervals for a minimum of four minutes. Base-station GPS data were acquired at 10 s intervals. It must be noted that there is an offset between the actual position of the gravity station and the position of the vehicle; therefore the horizontal positions are approximate to within 3 m of the actual reading point. The derived heights (Z) should be an accurate approximation of the height of the gravimeter due to the selection of flat terrain between the gravimeter and the 4WD. All GPS baselines to gravity stations were post-processed in 'kinematic mode' using the Ashtech proprietary software PRISM. The following antenna heights were

used: base station 9001 — 1.83 m and kinematic (4WD) — 2.05 m).

GPS coordinates were acquired in WGS84 geodetic coordinates (latitude and longitude) and later presented in the GDA94 MGA Zone 52-projected coordinate system. As WGS84 geodetic coordinates are for all practicable purposes equivalent to GDA94 geodetic coordinates, no transformation was applied. All GPS ellipsoidal heights (WGS84-GRS80) have been corrected to orthometric heights (AHD) by interpolation of the AusGeoid98 geoid model.

Survey control

One coincident GPS/gravity base station (DME 9001) was established at the survey base camp (Appendix B). A location diagram is shown in Figure 5. The GPS base was established using three days of static data, whereas final processing used baseline solutions obtained using the Geoscience Australia AUSPOS GPS processing service (<http://www.ga.gov.au/geodesy/sgc/wwwgps/>). This service provides precise positioning using established ITRF base stations. Baselines were calculated using a static method, and processed to double-difference fixed solutions with a horizontal and vertical precision of 5 mm. Final coordinates are presented in projected GDA94 MGA 52 coordinates using the GRS80 ellipsoid.

An absolute value was derived for the gravity base using Geoscience Australia AFGN station 6491.9084 located at the old Blackstone mining camp airstrip (BM81-18). A location diagram is shown in Figure 6. The expected accuracy of the base station tie is less than 0.1 gu. The location of the new base station was pegged with a metal star picket and aluminium tag stamped DME 9001. Daily gravity control was established by repeated loop observations opening and closing on base station DME 9001 (average occupancy interval approximately 8 hrs).

Repeat statistics

Eleven percent of the gravity stations were repeated to assess the integrity of the gravimeter over the duration of the survey. Due to time limitations and the difficulty of the terrain, stations were on average reoccupied every three to four hours. Analysis of the repeat-station gravity results shows excellent consistency (Appendix C), and suggests a typical accuracy of less than 0.16 mGals for the observed gravity measurements.

GPS precision for the vehicle-mounted GPS was assessed using a daily repeat GPS position located within the GSWA field camp (Appendix D). The vehicle was parked over this position and two calibrations were performed daily both before and after data acquisition. The exact repositioning of the vehicle ensured consistent results. Repeat GPS daily statistics suggest a vertical accuracy of less than 0.03 m over this position, which equates to an error in the simple Bouguer anomaly of well below 0.03 mGals.

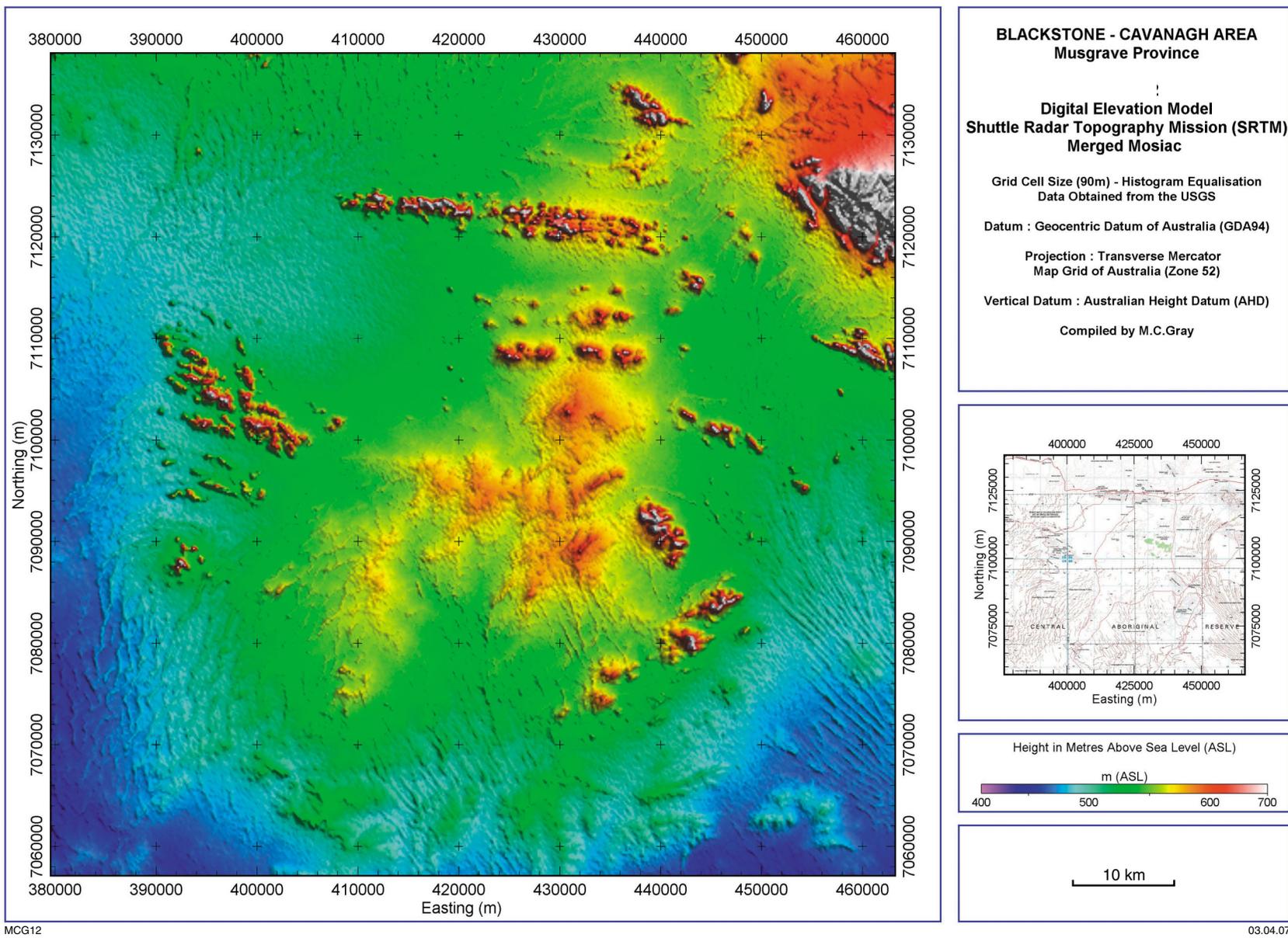


Figure 4. Regional digital elevation model (SRTM)

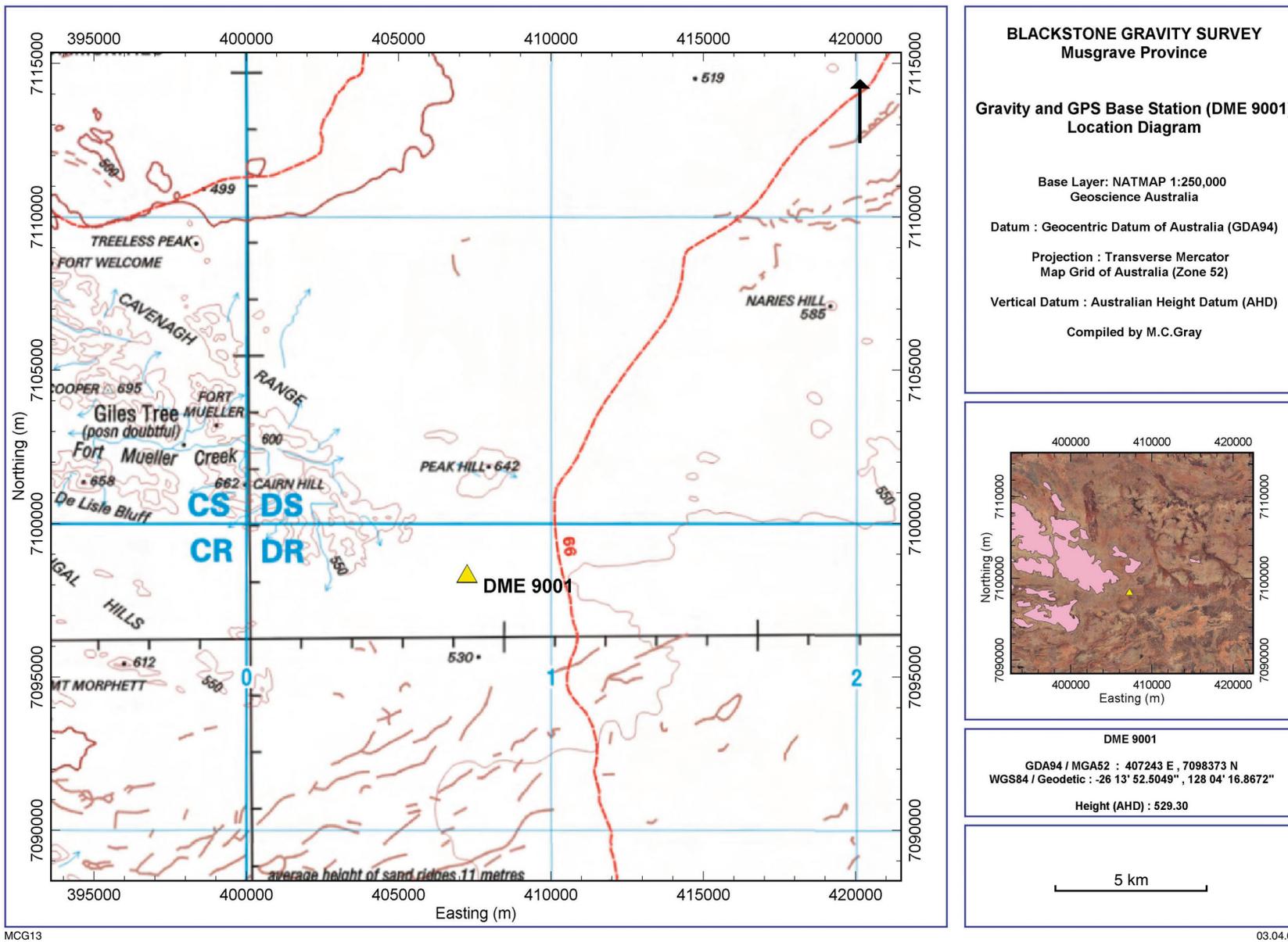
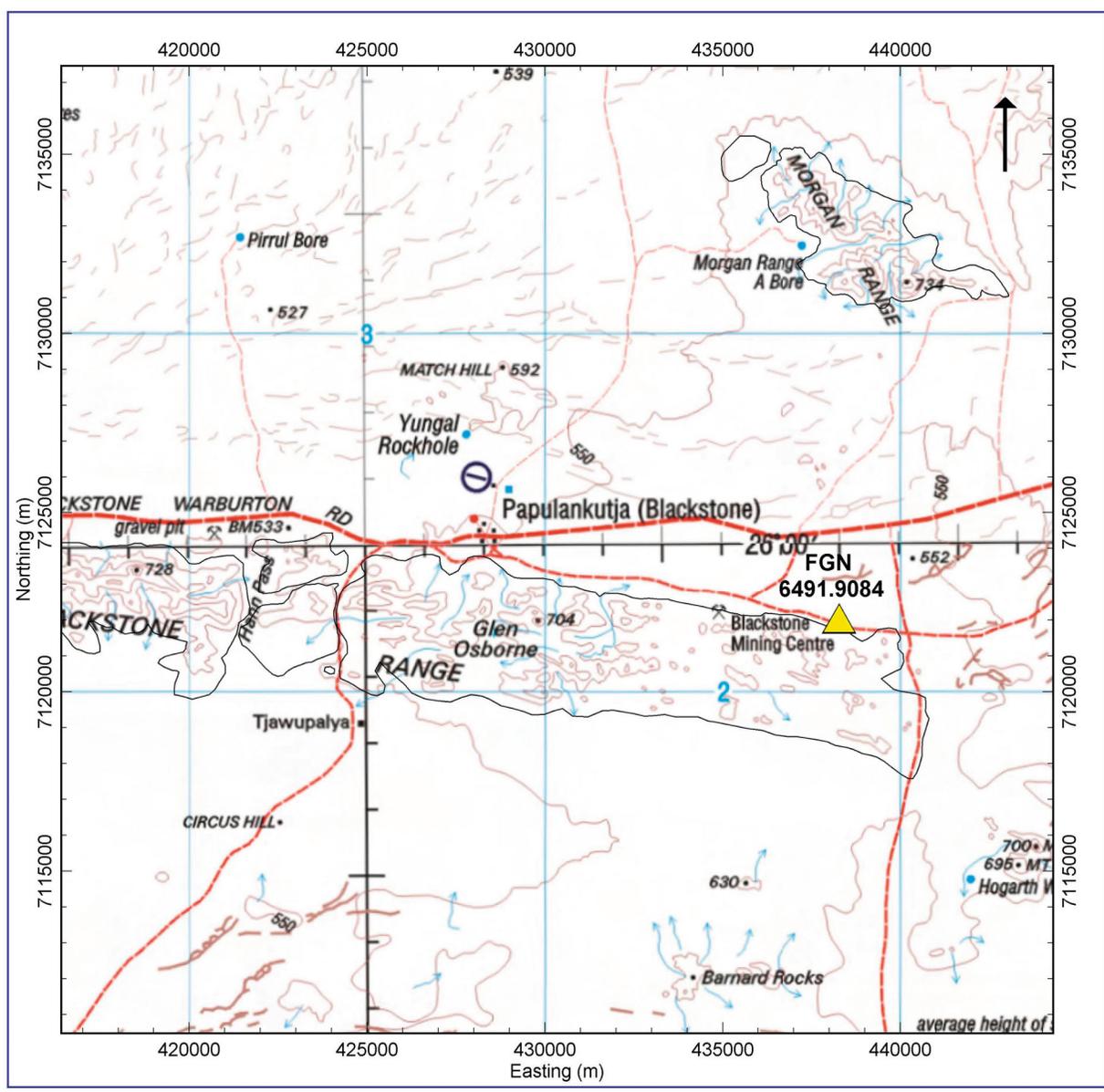


Figure 5. Gravity base station DME 9001 and GPS base location



BLACKSTONE GRAVITY SURVEY
Musgrave Province

Absolute Gravity Base (FGN 6491.9084)
Fundamental Gravity Network (FGN)
Location Diagram

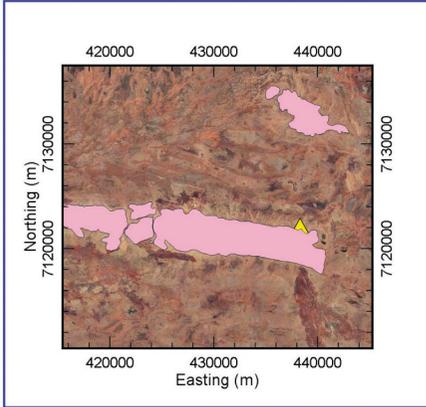
Base Layer: NATMAP 1:250,000
 Geoscience Australia

Datum : Geocentric Datum of Australia (GDA94)

Projection : Transverse Mercator
 Map Grid of Australia (Zone 52)

Vertical Datum : Australian Height Datum (AHD)

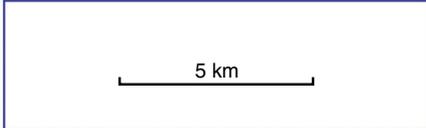
Compiled by M.C.Gray



FGN (6491.9084)

GDA94 / MGA52 : 438279 E, 7122046 N
 WGS84 / Geodetic : -26 01' 9.0697" , 128 22' 59.4672"

Height (AHD) : 559.73



MCG14

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Figure 6. Gravity base station FGN (6491.9084) location plot

Results

Tabulated results of the gravity processing are presented in Appendix A, and are also provided in digital form on the accompanying DVD (Appendix E). The final Bouguer anomaly values were gridded using a minimum curvature algorithm at a regular grid spacing of 600 m. The gridded and contoured results are shown in Figures 7 and 8. The first vertical derivative of the final Bouguer gravity is shown in Figure 9. The final Bouguer anomaly contours have also been draped onto gridded regional aeromagnetic images (Fig. 10).

Regional compilation

The Bouguer anomaly data from this survey was merged with existing Geoscience Australia gravity data covering the BLACKSTONE 1:100 000 map sheet. The station data was downloaded from the Geophysical Archive Data Delivery System (GADDS) maintained by Geoscience Australia (<http://www.geoscience.gov.au/bin/mapserv36?map=/public/http/www/geoportal/gadds/gadds.map&mode=browse>).

The merge was performed to provide complete gravity coverage of the 1:100 000 BLACKSTONE map sheet. The gravity station locations of the combined datasets are shown in Figure 11. The data were terrain-corrected and regridded using a minimum curvature interpolation at a regular grid spacing of 600 m. After inspection of the initial grids, a number of the BMR/AGSO stations were removed due to significant final Bouguer gravity mismatches with the newly acquired survey data. A majority of these stations were acquired well before the introduction of GPS technology and have questionable vertical precision. This may account for the significant differences.

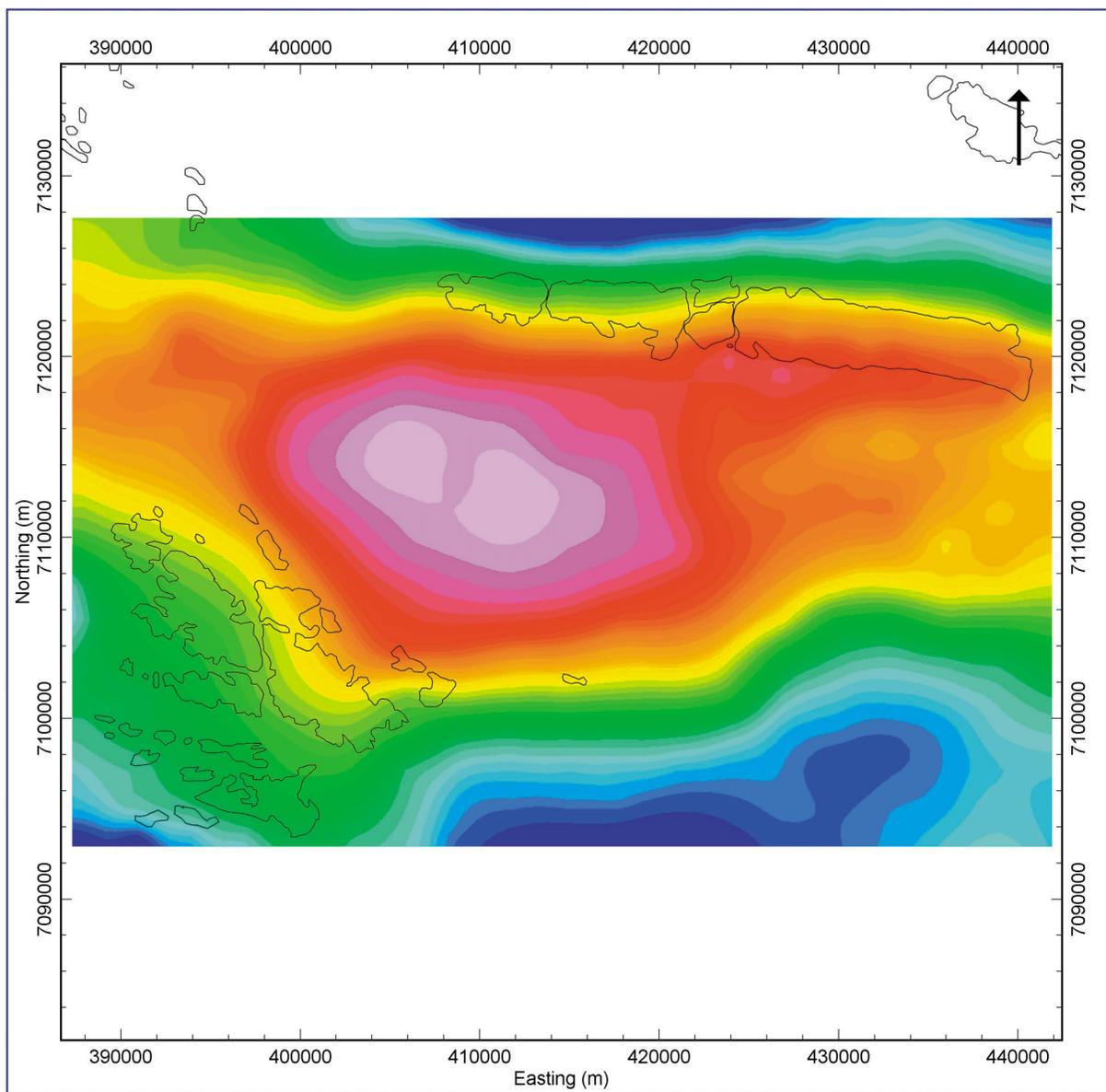
The gridded final Bouguer anomaly results are shown in Figures 12 and 13. The first vertical derivative of the final Bouguer gravity is also presented (Fig. 14). The final Bouguer anomaly contours have also been draped onto gridded regional aeromagnetic images (Fig. 15). The gravity datum is Isogal84. All heights are in AHD (Ausgeoid98) and all station locations are given as GDA94; MGA Zone 52.

Acknowledgement

The author would like to thank the Ngaanyatjarra Council and the local traditional owners in the Blackstone area for their help and support, and for allowing access to their lands for the purposes of scientific research.

Reference

TRACEY, R. M., and MURRAY, A. S., 2001, Best practice in gravity surveying: Geoscience Australia, Report Book no. 2236.



BLACKSTONE GRAVITY SURVEY
Musgrave Province

Terrain Corrected
Final Bouguer Anomaly

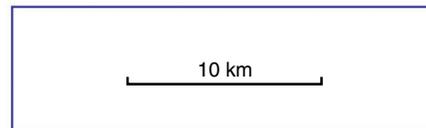
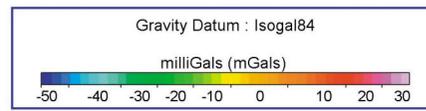
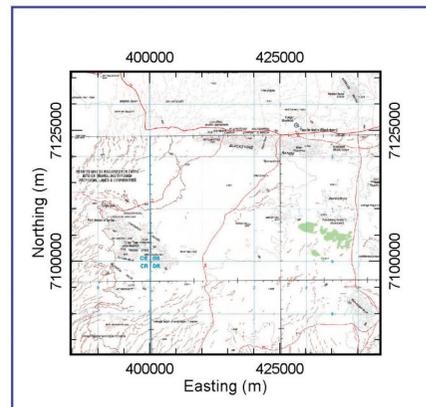
Minimum Curvature Gridding
 Grid Cell Size (600m), Search Radius 4000m

Mafic-Ultramafic Giles Complex Outcrop Annotated
 Geosoft Colour with Histogram Equalisation

Datum : Geocentric Datum of Australia (GDA94)
 Projection : Transverse Mercator
 Map Grid of Australia (Zone 52)

Vertical Datum : Australian Height Datum (AHD)

Compiled by M.C.Gray



MCG3

03.04.07

Figure 7. Final Bouguer anomaly for the BLACKSTONE gravity survey

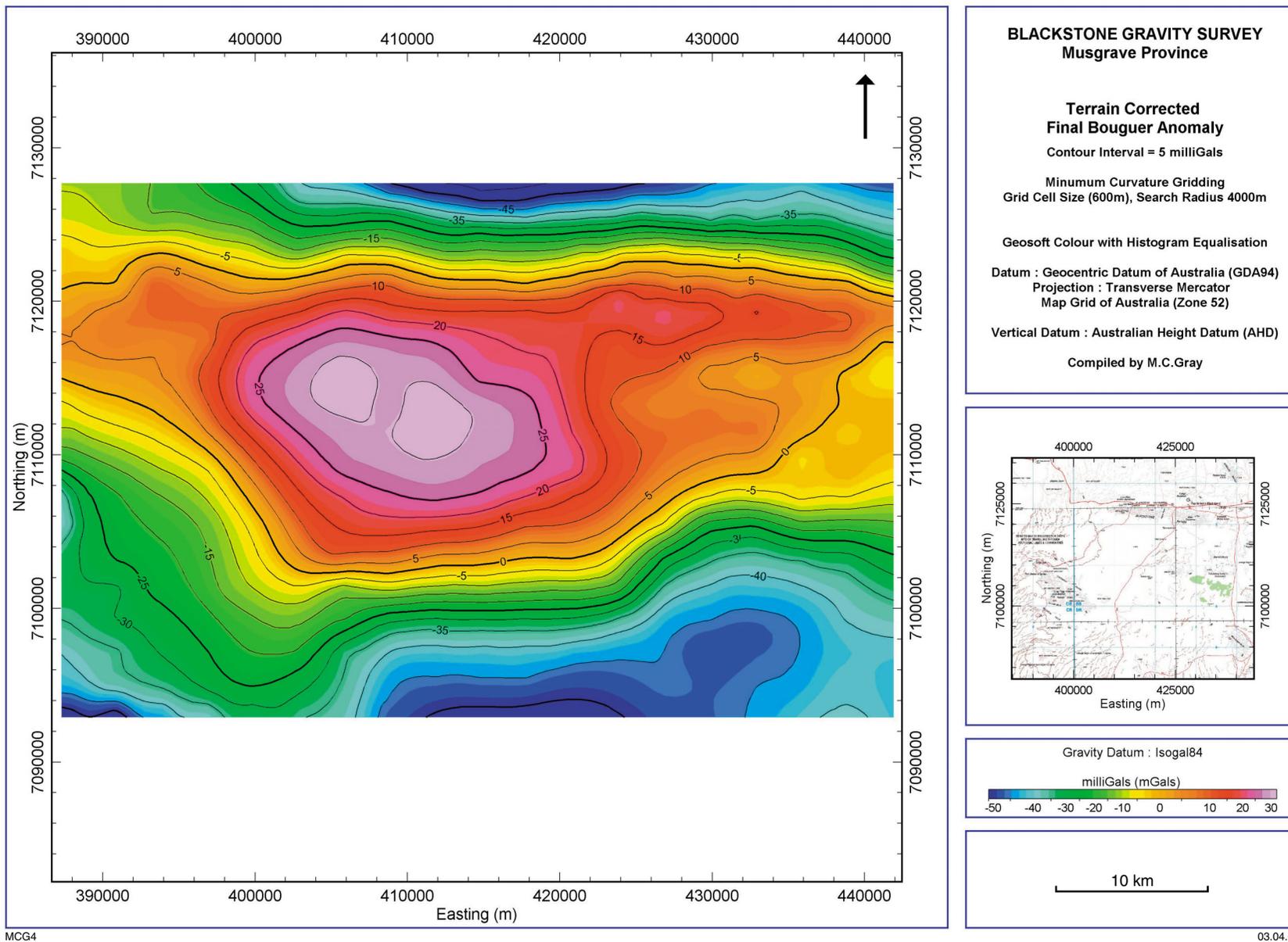


Figure 8. Final Bouguer anomaly (contoured) for the BLACKSTONE gravity survey

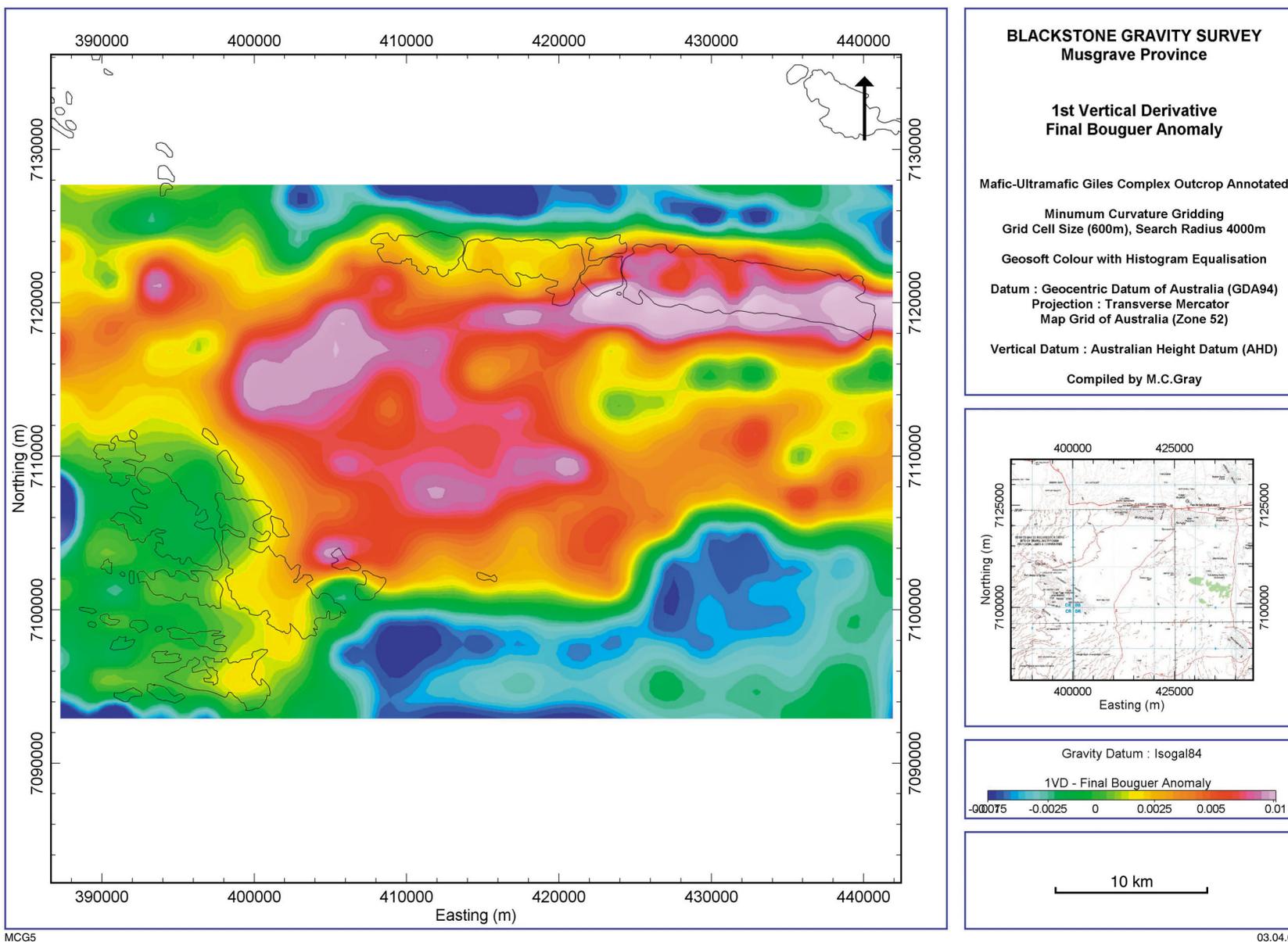


Figure 9. Final Bouguer anomaly for the BLACKSTONE gravity survey (1st vertical derivative)

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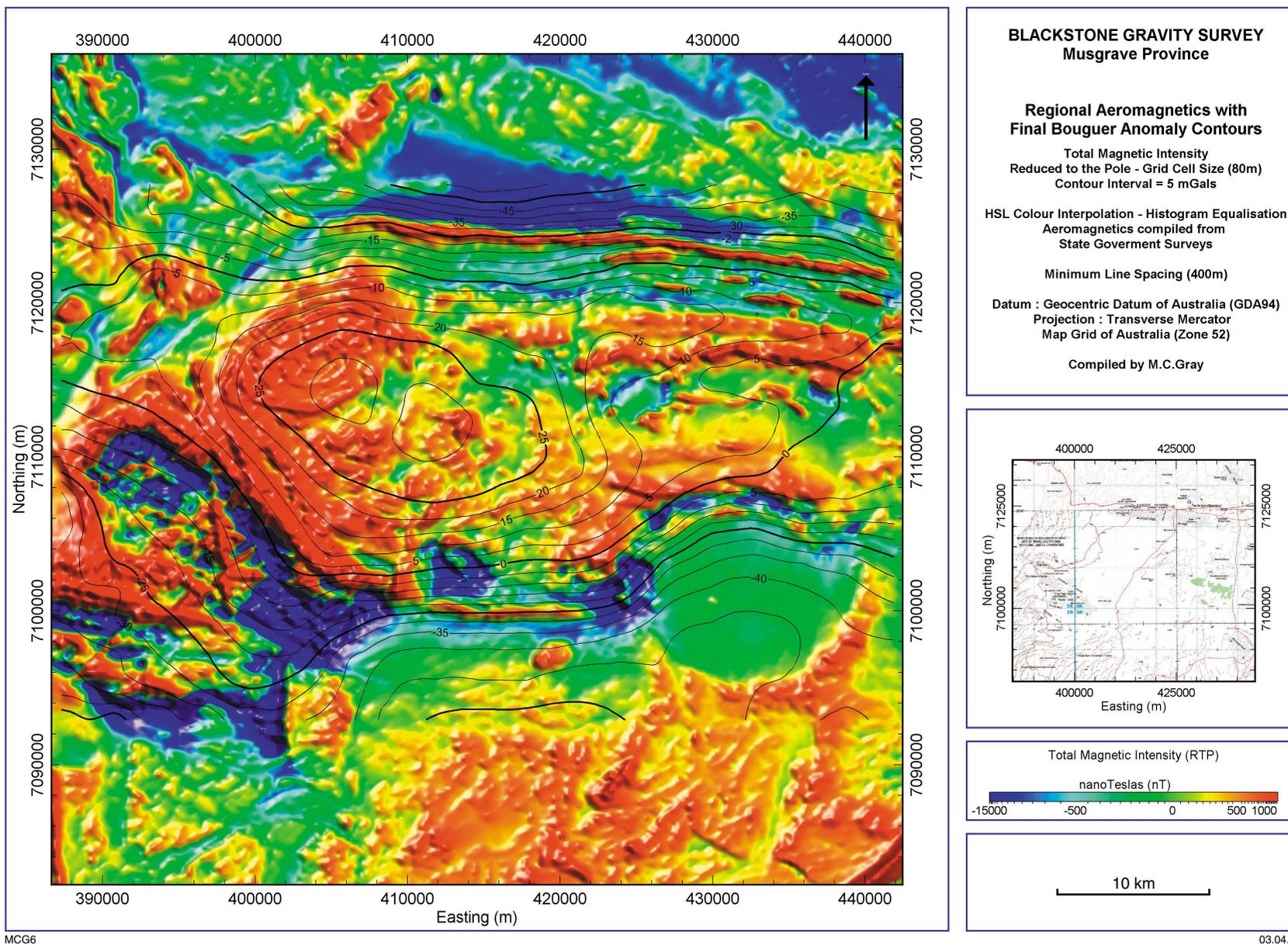
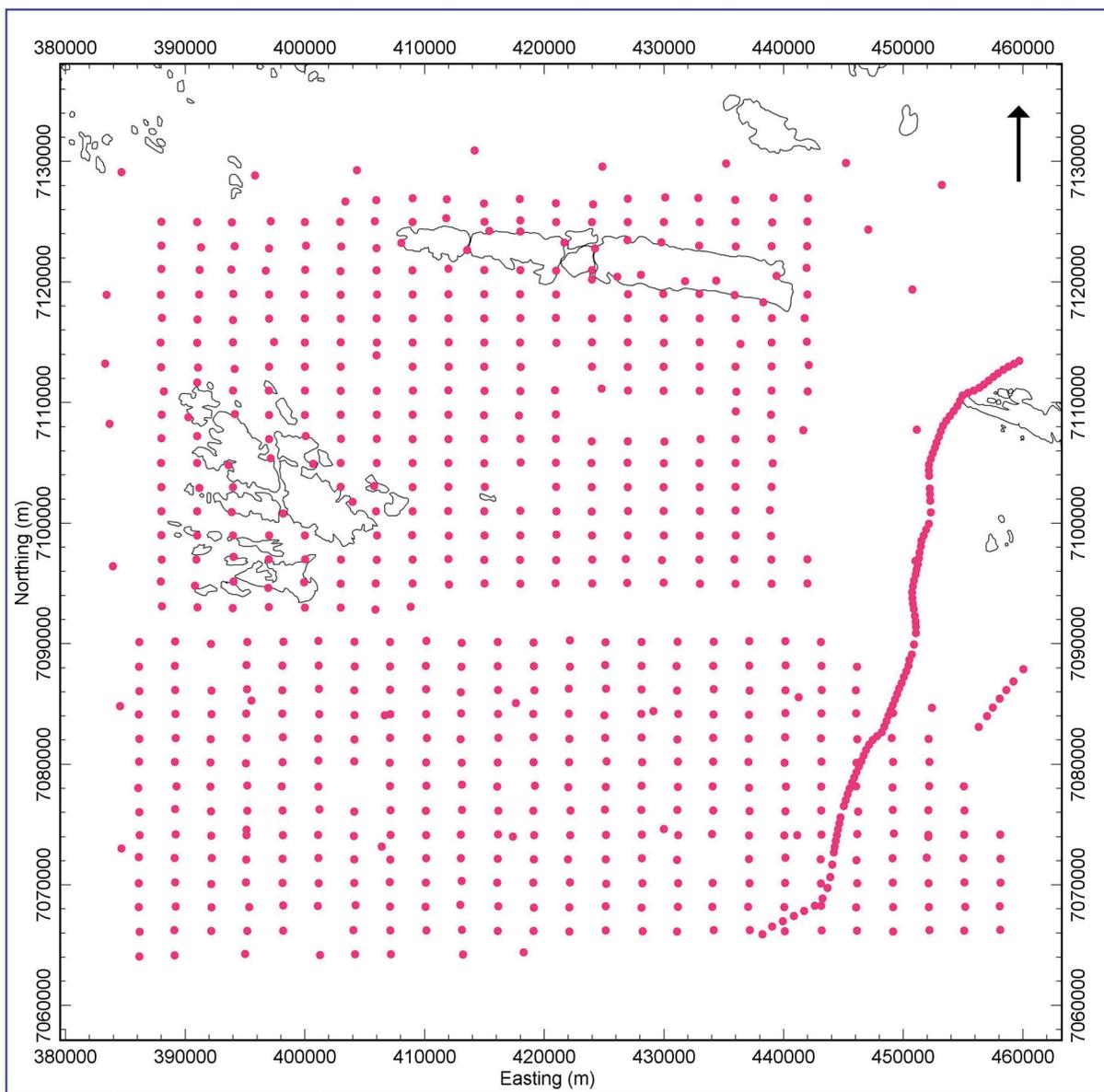


Figure 10. TMI with Bouguer anomaly contours for the BLACKSTONE gravity survey



MCG7

BLACKSTONE - CAVANAGH AREA
Musgrave Province

Gravity Station Locations
Combined Surveys

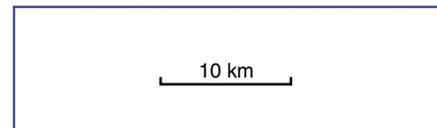
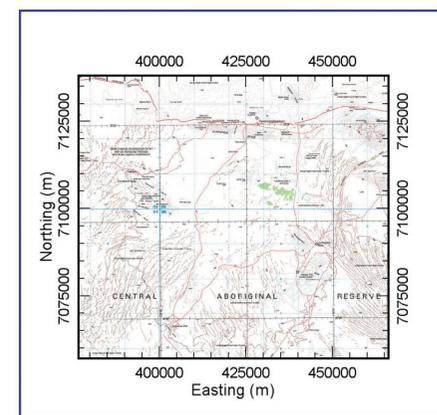
Mafic-Ultramafic Giles Complex Outcrop Annotated

Additional data obtained from the
Australian Gravity database maintained
by Geoscience Australia

Datum : Geocentric Datum of Australia (GDA94)
Projection : Transverse Mercator
Map Grid of Australia (Zone 52)

Vertical Datum : Australian Height Datum (AHD)

Compiled by M.C.Gray



03.04.07

Figure 11. Station locations for the combined surveys

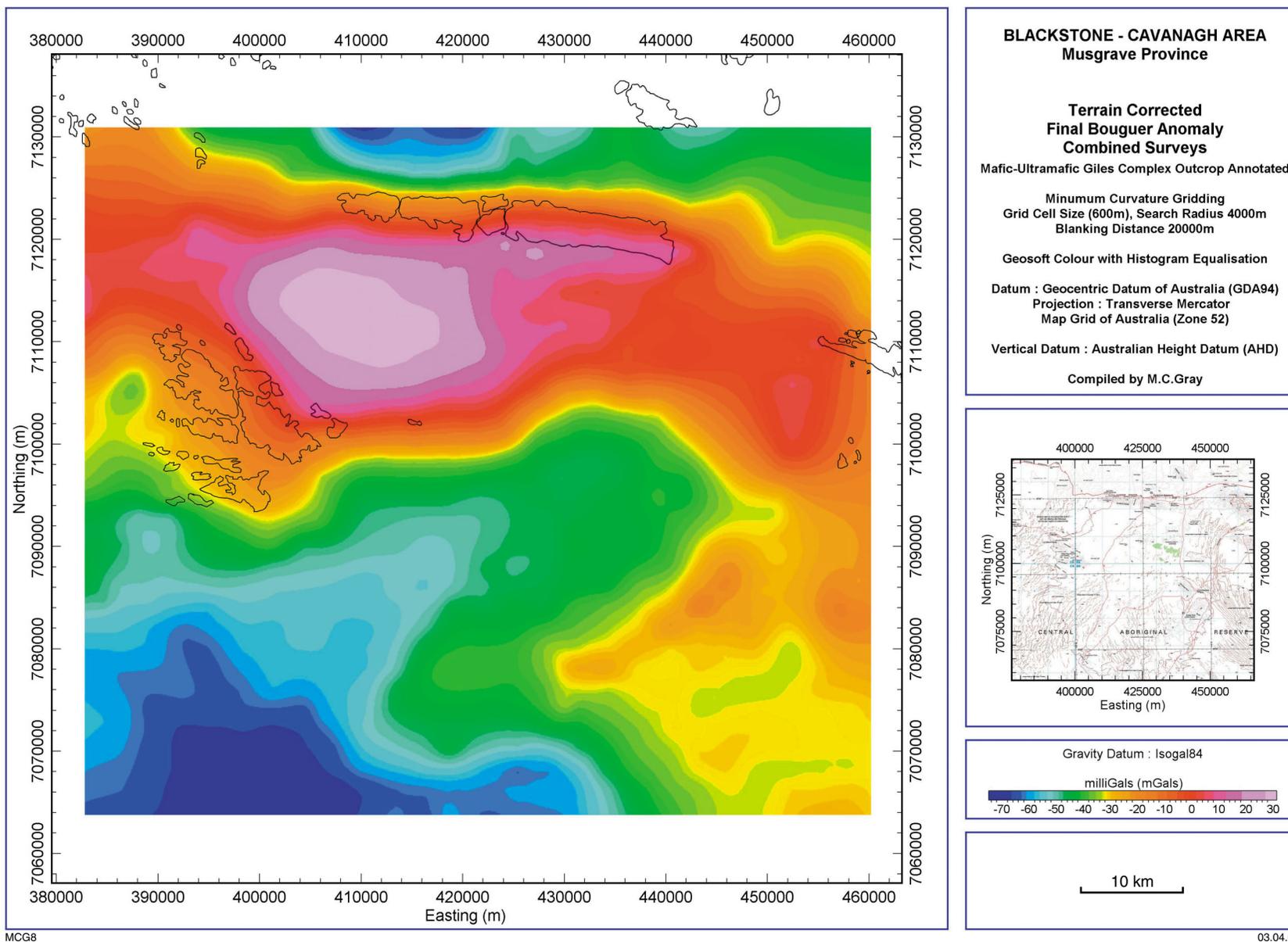
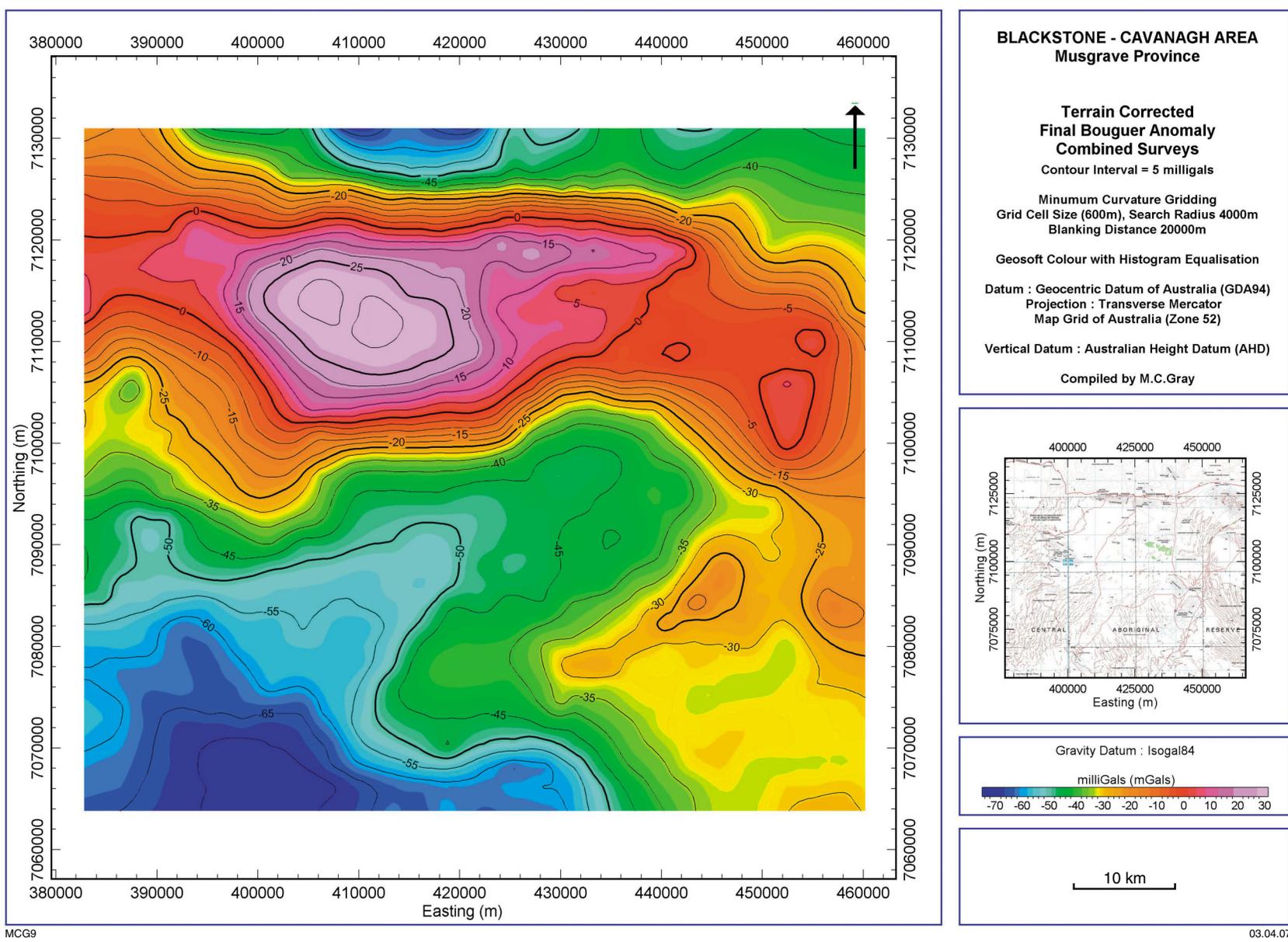


Figure 12. Final Bouguer anomaly for the combined surveys



MCG9

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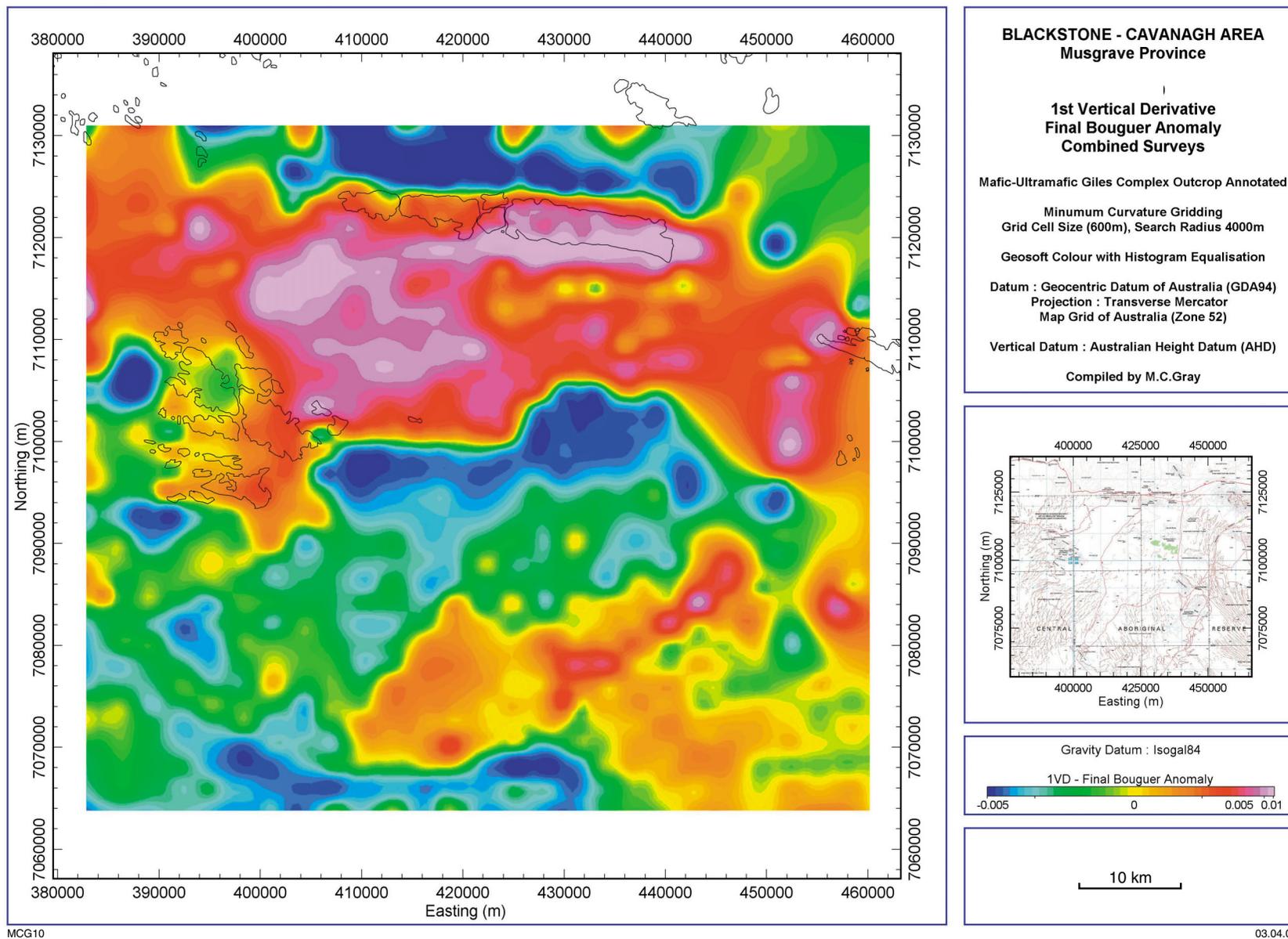
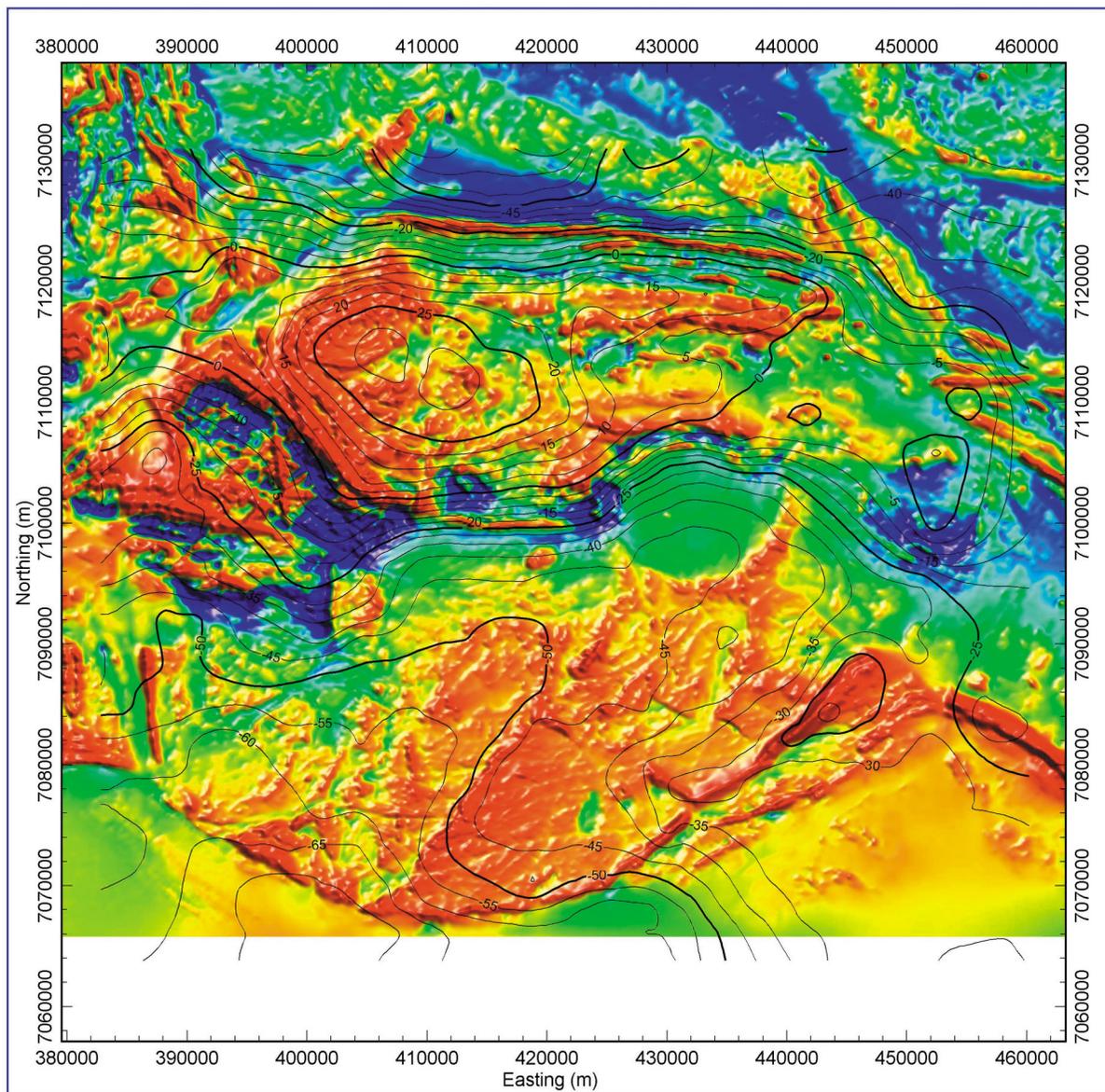


Figure 14. Final Bouguer anomaly for the combined surveys (1st vertical derivative)



MCG11

BLACKSTONE - CAVANAGH AREA
Musgrave Province

Regional Aeromagnetics with Final Bouguer Anomaly Contours

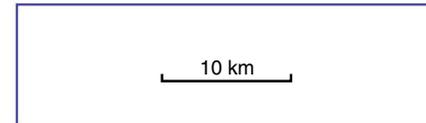
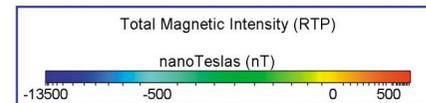
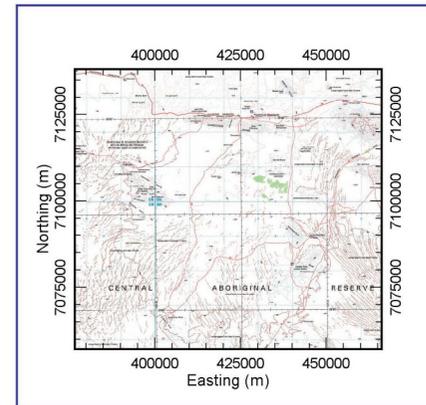
Total Magnetic Intensity
Reduced to the Pole - Grid Cell Size (80m)
Contour Interval = 5 mGals

HSL Colour Interpolation - Histogram Equalisation
Aeromagnetics compiled from
State Government Surveys
Minimum Line Spacing (400m)

Datum : Geocentric Datum of Australia (GDA94)
Projection : Transverse Mercator
Map Grid of Australia (Zone 52)

Vertical Datum : Australian Height Datum (AHD)

Compiled by M.C.Gray



03.04.07

Figure 15. TMI with final Bouguer anomaly contours for the combined surveys

Appendix A

Gravity processing results

<i>X</i> <i>Easting</i>	<i>Y</i> <i>Northing</i>	<i>Station</i> <i>no.</i>	<i>Latitude</i> <i>(S)</i>	<i>Longitude</i> <i>(E)</i>	<i>Drift</i> <i>(mGal)</i>	<i>Meter</i> <i>reading</i>	<i>Drift corr.</i> <i>meter</i>	<i>Height</i> <i>ellip.</i>	<i>N</i> <i>value</i>	<i>Height</i> <i>geoid</i>	<i>Observed</i> <i>gravity</i>	<i>Free air</i> <i>anomaly</i>	<i>Bouguer</i> <i>anomaly</i>	<i>Terrain</i> <i>corr.</i>	<i>Final Bouguer</i> <i>anomaly</i>
403393	7126695	25	25.9753	128.0349	-0.06	2568.4	2568.34	500.91	0.93	499.98	978888.34	16.80	-38.71	0.05	-38.67
405964	7126825	26	25.9743	128.0606	-0.06	2566.65	2566.59	506.56	0.95	505.61	978886.51	16.78	-39.36	0.06	-39.30
409011	7126979	27	25.9731	128.0910	-0.05	2558.84	2558.79	507.01	0.99	506.02	978878.34	8.82	-47.36	0.06	-47.31
411864	7126877	28	25.9742	128.1195	-0.05	2553.77	2553.72	514.97	1.03	513.94	978873.03	5.88	-51.19	0.07	-51.12
414965	7126543	29	25.9774	128.1505	-0.03	2551.25	2551.22	520.30	1.09	519.21	978870.40	4.65	-53.00	0.05	-52.96
417958	7126916	30	25.9742	128.1804	-0.02	2550.14	2550.12	521.38	1.13	520.25	978869.25	4.04	-53.72	0.05	-53.67
420975	7126558	31	25.9776	128.2105	-0.02	2554.21	2554.19	526.02	1.20	524.82	978873.52	9.48	-48.79	0.04	-48.75
424092	7126466	32	25.9786	128.2417	0.01	2555.11	2555.12	534.93	1.27	533.66	978874.49	13.11	-46.15	0.05	-46.10
426997	7126926	33	25.9746	128.2707	0.01	2553.57	2553.58	537.83	1.33	536.50	978872.87	12.66	-46.91	0.03	-46.88
430121	7127053	34	25.9736	128.3019	0.02	2554.46	2554.48	549.77	1.40	548.38	978873.82	17.34	-43.55	0.03	-43.53
432885	7126990	35	25.9743	128.3295	0.02	2554.43	2554.45	560.84	1.46	559.38	978873.79	20.66	-41.45	0.03	-41.42
435981	7126840	36	25.9758	128.3604	0.08	2555.57	2555.65	564.34	1.54	562.80	978875.04	22.86	-39.63	0.06	-39.58
439168	7127021	37	25.9743	128.3923	0.07	2551.9	2551.97	562.93	1.59	561.34	978871.19	18.66	-43.67	0.06	-43.62
442055	7126979	38	25.9748	128.4211	0.07	2552.49	2552.56	552.34	1.64	550.70	978871.81	15.96	-45.19	0.04	-45.15
387997	7125022	39	25.9893	127.8810	0.05	2600.59	2600.64	491.29	0.83	490.46	978922.18	46.71	-7.75	0.03	-7.72
391002	7125003	40	25.9897	127.9110	0.05	2596.61	2596.66	498.26	0.84	497.42	978918.01	44.66	-10.57	0.05	-10.52
393897	7124971	41	25.9902	127.9399	0.06	2592.75	2592.81	498.27	0.85	497.41	978913.97	40.59	-14.64	0.05	-14.59
397154	7125053	42	25.9897	127.9725	0.09	2592.53	2592.62	495.71	0.88	494.83	978913.77	39.62	-15.32	0.06	-15.26
400004	7124997	43	25.9904	128.0009	0.00	2589.32	2589.32	498.34	0.91	497.43	978910.32	36.92	-18.31	0.04	-18.27
402947	7125008	44	25.9905	128.0303	-0.06	2580.54	2580.48	502.14	0.95	501.19	978901.06	28.81	-26.84	0.04	-26.80
405859	7125074	45	25.9901	128.0594	-0.05	2578.15	2578.10	505.73	0.99	504.74	978898.56	27.44	-28.60	0.05	-28.56
408999	7124996	46	25.9910	128.0908	-0.05	2580.6	2580.55	508.98	0.99	507.99	978901.13	30.95	-25.46	0.08	-25.38
411805	7125315	47	25.9883	128.1188	-0.04	2569.08	2569.04	516.23	1.07	515.16	978889.07	21.29	-35.91	0.18	-35.73
415016	7125026	48	25.9911	128.1509	-0.03	2566.78	2566.75	520.76	1.13	519.63	978886.68	20.07	-37.62	0.15	-37.47
417998	7125122	49	25.9904	128.1807	-0.02	2563.03	2563.01	525.39	1.18	524.21	978882.75	17.62	-40.59	0.13	-40.46
420995	7124997	50	25.9917	128.2106	-0.02	2567.4	2567.38	530.69	1.24	529.45	978887.34	23.73	-35.06	0.07	-34.99
423996	7125004	51	25.9918	128.2406	0.00	2568.93	2568.93	534.76	1.31	533.45	978888.96	26.58	-32.65	0.05	-32.60
426998	7124987	52	25.9921	128.2706	0.01	2567.87	2567.88	545.22	1.37	543.85	978887.86	28.67	-31.72	0.05	-31.67
430001	7124993	53	25.9922	128.3006	0.02	2562.82	2562.84	552.33	1.44	550.89	978882.58	25.55	-35.62	0.04	-35.58
432996	7124997	54	25.9923	128.3305	0.03	2562.35	2562.38	557.88	1.51	556.37	978882.09	26.74	-35.03	0.03	-35.00
435987	7125012	55	25.9923	128.3604	0.04	2563.56	2563.60	559.49	1.57	557.92	978883.37	28.51	-33.44	0.04	-33.41
439060	7124961	56	25.9929	128.3911	0.04	2562.44	2562.48	553.51	1.62	551.89	978882.20	25.43	-35.85	0.06	-35.80
441999	7125029	57	25.9924	128.4205	0.06	2559.58	2559.64	548.06	1.66	546.40	978879.23	20.80	-39.87	0.03	-39.84
387995	7123028	58	26.0073	127.8808	0.05	2606.21	2606.26	491.15	0.80	490.35	978928.07	51.28	-3.17	0.03	-3.14
391307	7122890	59	26.0088	127.9139	0.07	2606.18	2606.25	490.82	0.82	490.00	978928.06	51.05	-3.35	0.04	-3.31
394131	7122991	60	26.0081	127.9421	0.07	2607.96	2608.03	494.47	0.85	493.62	978929.92	54.08	-0.73	0.05	-0.68
397018	7122803	61	26.0100	127.9709	0.08	2604.87	2604.95	492.48	0.89	491.59	978926.70	50.10	-4.48	0.06	-4.43
400085	7123026	62	26.0082	128.0016	0.00	2600.44	2600.44	496.74	0.93	495.81	978921.97	46.81	-8.25	0.04	-8.21
403045	7122960	63	26.0090	128.0312	-0.07	2593.13	2593.06	501.70	0.98	500.72	978914.24	40.53	-15.07	0.02	-15.05

Appendix A (continued)

Gray

<i>X</i> <i>Easting</i>	<i>Y</i> <i>Northing</i>	<i>Station</i> <i>no.</i>	<i>Latitude</i> <i>(S)</i>	<i>Longitude</i> <i>(E)</i>	<i>Drift</i> <i>(mGal)</i>	<i>Meter</i> <i>reading</i>	<i>Drift corr.</i> <i>meter</i>	<i>Height</i> <i>ellip.</i>	<i>N</i> <i>value</i>	<i>Height</i> <i>geoid</i>	<i>Observed</i> <i>gravity</i>	<i>Free air</i> <i>anomaly</i>	<i>Bouguer</i> <i>anomaly</i>	<i>Terrain</i> <i>corr.</i>	<i>Final Bouguer</i> <i>anomaly</i>
405985	7122826	64	26.0104	128.0605	-0.08	2601.55	2601.47	504.20	1.03	504.20	978923.04	50.31	-5.68	0.04	-5.64
408071	7123262	65	26.0066	128.0814	-0.09	2596.16	2596.07	507.13	1.06	507.13	978917.39	45.84	-10.47	0.20	-10.27
413569	7122679	66	26.0122	128.1363	-0.10	2590.3	2590.20	525.61	1.16	525.61	978911.24	44.98	-13.38	0.41	-12.97
415400	7124253	67	25.9981	128.1547	-0.04	2576.92	2576.88	528.87	1.16	527.71	978897.29	32.69	-25.91	0.55	-25.36
417998	7124214	68	25.9986	128.1806	-0.03	2576.21	2576.18	530.21	1.20	529.01	978896.56	32.32	-26.42	0.58	-25.84
421697	7123295	69	26.0071	128.2175	-0.01	2587.2	2587.19	540.45	1.29	539.16	978908.09	46.37	-13.49	0.16	-13.33
424240	7122801	70	26.0117	128.2429	0.00	2593.89	2593.89	550.78	1.35	549.42	978915.11	56.24	-4.77	0.42	-4.35
426962	7123492	71	26.0056	128.2702	0.01	2587.49	2587.50	557.73	1.40	556.33	978908.42	52.11	-9.66	0.23	-9.44
429802	7123308	72	26.0074	128.2985	0.02	2586.33	2586.35	560.46	1.47	558.99	978907.20	51.59	-10.47	0.15	-10.32
432953	7123037	73	26.0100	128.3300	0.03	2586.41	2586.44	567.42	1.54	565.89	978907.30	53.63	-9.20	0.07	-9.14
436019	7122975	74	26.0107	128.3606	0.03	2582.06	2582.09	564.67	1.59	563.07	978902.75	48.16	-14.36	0.03	-14.32
439002	7123000	75	26.0106	128.3904	0.04	2578.6	2578.64	557.45	1.64	555.81	978899.13	42.31	-19.41	0.03	-19.38
441990	7122980	76	26.0109	128.4203	0.06	2570.59	2570.65	546.75	1.68	545.07	978890.76	30.61	-29.91	0.03	-29.88
388001	7121101	77	26.0247	127.8807	0.04	2609.96	2610.00	486.63	0.77	485.87	978931.98	52.58	-1.37	0.03	-1.34
391194	7121039	78	26.0255	127.9126	0.07	2610.4	2610.47	488.82	0.79	488.03	978932.48	53.68	-0.51	0.04	-0.47
393859	7121050	79	26.0256	127.9392	0.07	2619.76	2619.83	489.19	0.83	488.36	978942.29	63.59	9.36	0.03	9.39
396722	7120973	80	26.0265	127.9678	0.08	2616.15	2616.23	490.33	0.87	489.46	978938.51	60.09	5.74	0.05	5.79
400026	7121032	81	26.0262	128.0008	0.01	2610.41	2610.42	495.49	0.93	494.56	978932.42	55.59	0.67	0.04	0.71
402973	7120921	82	26.0274	128.0303	-0.07	2611.54	2611.47	501.67	0.99	500.68	978933.52	58.49	2.90	0.03	2.93
405996	7120988	83	26.0270	128.0605	-0.08	2614.72	2614.64	502.09	1.05	501.04	978936.84	61.95	6.32	0.04	6.36
408987	7120976	84	26.0273	128.0904	-0.09	2615.77	2615.68	508.36	1.10	508.36	978937.93	65.28	8.83	0.04	8.87
411999	7121118	85	26.0262	128.1205	-0.04	2607.85	2607.81	510.23	1.15	509.08	978929.69	57.33	0.81	0.11	0.92
414999	7121005	86	26.0274	128.1505	-0.03	2606.42	2606.39	517.47	1.21	516.26	978928.20	57.97	0.65	0.10	0.75
418006	7121013	87	26.0275	128.1805	-0.03	2602.18	2602.15	527.53	1.26	526.27	978923.77	56.62	-1.81	0.14	-1.68
420994	7120954	88	26.0282	128.2104	-0.01	2604.22	2604.21	539.96	1.32	538.65	978925.92	62.55	2.74	0.13	2.87
424007	7121005	89	26.0279	128.2405	0.00	2604.52	2604.52	551.62	1.37	550.25	978926.24	66.47	5.38	0.08	5.46
426106	7120464	90	26.0329	128.2614	-0.01	2608.85	2608.84	557.20	1.42	555.78	978930.78	72.36	10.65	0.21	10.86
428089	7120619	91	26.0316	128.2813	-0.01	2604.33	2604.32	564.17	1.46	562.71	978926.04	69.85	7.37	0.16	7.53
431770	7120096	92	26.0365	128.3180	-0.03	2604.09	2604.06	571.95	1.53	570.42	978925.76	71.61	8.27	0.27	8.54
434377	7120142	93	26.0362	128.3441	-0.03	2604.87	2604.84	570.83	1.58	569.25	978926.58	72.08	8.88	0.06	8.94
439417	7120521	94	26.0330	128.3945	0.05	2601.28	2601.33	562.94	1.65	561.29	978922.90	66.17	3.85	0.09	3.94
441929	7121186	95	26.0271	128.4196	0.06	2587.78	2587.84	548.01	1.68	546.33	978908.77	47.84	-12.82	0.04	-12.78
387966	7118963	96	26.0440	127.8802	0.03	2615.79	2615.82	484.57	0.72	483.86	978938.09	56.68	2.96	0.05	3.01
391153	7118979	97	26.0441	127.9120	0.02	2618.91	2618.93	487.08	0.75	486.33	978941.35	60.69	6.69	0.04	6.73
394014	7119024	98	26.0439	127.9406	0.02	2620.88	2620.90	490.18	0.80	489.38	978943.41	63.71	9.37	0.03	9.40
396996	7118993	99	26.0444	127.9704	0.02	2620.34	2620.36	491.51	0.85	490.66	978942.83	63.50	9.02	0.04	9.06
399964	7118983	100	26.0447	128.0001	0.01	2620.58	2620.59	499.02	0.92	498.10	978943.08	66.03	10.72	0.03	10.75
403000	7118961	101	26.0451	128.0304	-0.08	2624.43	2624.35	500.75	0.99	499.77	978947.02	70.45	14.95	0.03	14.98
406026	7118983	102	26.0451	128.0607	-0.08	2629.96	2629.88	500.56	1.05	499.51	978952.81	76.16	20.70	0.03	20.73
408994	7118993	103	26.0452	128.0903	-0.10	2625.14	2625.04	507.29	1.11	507.29	978947.75	73.49	17.16	0.03	17.19
411992	7119003	104	26.0453	128.1203	-0.05	2623.56	2623.51	508.61	1.17	507.44	978946.14	71.92	15.58	0.04	15.62
414983	7119000	105	26.0455	128.1502	-0.16	2621.12	2620.96	522.16	1.22	520.99	978943.46	73.40	15.56	0.04	15.60
417997	7118998	106	26.0457	128.1803	-0.02	2621.2	2621.18	523.13	1.28	521.86	978943.70	73.90	15.95	0.04	15.99
421007	7118994	107	26.0459	128.2104	-0.01	2618.83	2618.82	532.83	1.33	531.50	978941.23	74.39	15.38	0.03	15.41

Appendix A (continued)

<i>X</i> <i>Easting</i>	<i>Y</i> <i>Northing</i>	<i>Station</i> <i>no.</i>	<i>Latitude</i> <i>(S)</i>	<i>Longitude</i> <i>(E)</i>	<i>Drift</i> <i>(mGal)</i>	<i>Meter</i> <i>reading</i>	<i>Drift corr.</i> <i>meter</i>	<i>Height</i> <i>ellip.</i>	<i>N</i> <i>value</i>	<i>Height</i> <i>geoid</i>	<i>Observed</i> <i>gravity</i>	<i>Free air</i> <i>anomaly</i>	<i>Bouguer</i> <i>anomaly</i>	<i>Terrain</i> <i>corr.</i>	<i>Final Bouguer</i> <i>anomaly</i>
423999	7120230	108	26.0349	128.2404	0.00	2619.29	2619.29	541.92	1.38	540.54	978941.71	78.45	18.43	0.12	18.55
427011	7118996	109	26.0462	128.2704	-0.01	2619.67	2619.66	552.74	1.44	551.30	978942.11	81.36	20.15	0.07	20.21
429959	7119034	110	26.0460	128.2999	-0.03	2615.27	2615.24	562.40	1.50	560.90	978937.48	79.70	17.42	0.12	17.55
432974	7119039	111	26.0461	128.3300	-0.03	2612.97	2612.94	564.21	1.55	562.66	978935.06	77.83	15.35	0.05	15.40
435932	7118943	112	26.0471	128.3596	-0.04	2608.59	2608.55	568.94	1.60	567.34	978930.47	74.60	11.61	0.07	11.68
438329	7118345	113	26.0526	128.3835	-0.04	2608.97	2608.93	561.16	1.63	559.53	978930.87	72.20	10.07	0.09	10.16
442010	7118993	114	26.0469	128.4203	0.06	2608.43	2608.49	548.24	1.67	546.57	978930.40	68.14	7.45	0.04	7.50
388051	7117047	115	26.0613	127.8808	0.03	2619.23	2619.26	483.02	0.66	482.36	978941.69	58.59	5.03	0.02	5.05
391016	7116906	116	26.0628	127.9105	0.03	2620.88	2620.91	484.75	0.69	484.06	978943.41	60.72	6.98	0.04	7.01
393986	7116875	117	26.0633	127.9401	-0.09	2618.63	2618.54	488.12	0.75	487.38	978940.93	59.24	5.12	0.06	5.18
397011	7116988	118	26.0625	127.9704	-0.09	2620.26	2620.17	491.01	0.82	490.20	978942.64	61.87	7.44	0.05	7.48
400002	7117000	119	26.0626	128.0003	-0.10	2630.69	2630.59	496.01	0.89	495.12	978953.56	74.30	19.33	0.03	19.36
403002	7116990	120	26.0629	128.0303	-0.10	2635.48	2635.38	497.50	0.97	496.54	978958.58	79.74	24.61	0.02	24.63
405987	7117012	121	26.0629	128.0601	-0.07	2638.39	2638.32	499.09	1.04	498.06	978961.66	83.28	27.98	0.03	28.01
409005	7117000	122	26.0632	128.0903	-0.06	2635.92	2635.86	506.80	1.10	505.70	978959.08	83.04	26.89	0.02	26.92
412003	7117009	123	26.0633	128.1203	-0.05	2633.34	2633.29	511.91	1.16	510.75	978956.38	81.89	25.18	0.03	25.21
414989	7117007	124	26.0635	128.1501	-0.16	2628.71	2628.55	516.43	1.22	515.21	978951.42	78.30	21.09	0.03	21.12
418003	7117015	125	26.0636	128.1802	-0.02	2625.18	2625.16	521.67	1.27	520.40	978947.87	76.34	18.56	0.03	18.59
420987	7117045	126	26.0635	128.2101	0.00	2623.51	2623.51	528.68	1.32	527.36	978946.14	76.76	18.21	0.03	18.24
423987	7117007	127	26.0640	128.2401	-0.16	2615.83	2615.67	534.62	1.37	533.25	978937.92	70.33	11.12	0.03	11.15
426995	7117002	128	26.0642	128.2701	-0.01	2618	2617.99	544.52	1.43	543.09	978940.36	75.79	15.49	0.03	15.52
430003	7116996	129	26.0644	128.3002	-0.01	2612.63	2612.62	548.90	1.48	547.42	978934.73	71.49	10.70	0.03	10.74
433010	7117012	130	26.0644	128.3303	-0.03	2610.07	2610.04	554.08	1.54	552.54	978932.03	70.37	9.01	0.03	9.04
436006	7117005	131	26.0646	128.3602	-0.04	2609.8	2609.76	555.84	1.58	554.26	978931.74	70.59	9.05	0.03	9.07
439041	7117020	132	26.0646	128.3906	-0.04	2610.45	2610.41	551.85	1.62	550.23	978932.41	70.02	8.93	0.03	8.96
441786	7117032	133	26.0646	128.4180	-0.04	2601.05	2601.01	551.12	1.65	549.47	978922.56	59.93	-1.08	0.05	-1.02
387924	7115008	134	26.0797	127.8794	-0.08	2617.05	2616.97	481.37	0.58	480.79	978939.29	54.39	1.00	0.03	1.03
391004	7114979	135	26.0802	127.9102	-0.08	2617.7	2617.62	487.10	0.62	486.47	978939.96	56.78	2.77	0.04	2.80
393997	7115014	136	26.0801	127.9401	-0.09	2619.69	2619.60	488.03	0.69	487.34	978942.05	59.14	5.03	0.03	5.06
397411	7115042	137	26.0801	127.9742	-0.02	2626.58	2626.56	491.02	0.77	490.25	978949.33	67.32	12.88	0.04	12.92
399997	7114995	138	26.0807	128.0001	-0.02	2635.75	2635.73	496.37	0.84	495.53	978958.94	78.52	23.50	0.02	23.52
402999	7115018	139	26.0807	128.0301	-0.02	2640.45	2640.43	496.08	0.92	495.16	978963.87	83.33	28.35	0.03	28.38
406006	7114996	140	26.0811	128.0602	-0.14	2642.92	2642.78	499.31	1.00	498.31	978966.33	86.74	31.41	0.03	31.45
409001	7114995	141	26.0813	128.0901	-0.14	2639.69	2639.55	506.03	1.07	504.96	978962.94	85.39	29.32	0.02	29.34
412017	7115016	142	26.0813	128.1203	-0.15	2638.45	2638.30	511.71	1.14	510.57	978961.63	85.81	29.12	0.02	29.14
415000	7114991	143	26.0817	128.1501	-0.17	2632	2631.83	517.02	1.19	515.83	978954.86	80.63	23.35	0.02	23.37
417997	7115010	144	26.0817	128.1801	-0.01	2630.08	2630.07	521.91	1.24	520.67	978953.01	80.27	22.46	0.03	22.48
421029	7114974	145	26.0822	128.2104	0.00	2624.06	2624.06	528.59	1.29	527.30	978946.72	75.99	17.44	0.04	17.48
423989	7115025	146	26.0819	128.2400	-0.17	2616.31	2616.14	539.64	1.34	538.30	978938.42	71.11	11.34	0.04	11.38
426997	7115020	147	26.0821	128.2700	-0.17	2613.6	2613.43	544.92	1.39	543.53	978935.58	69.87	9.52	0.04	9.56
430008	7114970	148	26.0827	128.3001	-0.01	2606.44	2606.43	550.12	1.45	548.67	978928.24	64.08	3.16	0.03	3.19
433009	7115019	149	26.0824	128.3301	-0.02	2601.65	2601.63	563.54	1.50	562.04	978923.21	63.20	0.79	0.05	0.84
436402	7114881	150	26.0838	128.3641	-0.05	2603.81	2603.76	560.76	1.55	560.76	978925.44	64.93	2.67	0.08	2.75
439002	7114993	151	26.0829	128.3901	-0.05	2603.03	2602.98	544.94	1.58	544.94	978924.63	59.30	-1.21	0.04	-1.17

Appendix A (continued)

<i>X</i> <i>Easting</i>	<i>Y</i> <i>Northing</i>	<i>Station</i> <i>no.</i>	<i>Latitude</i> <i>(S)</i>	<i>Longitude</i> <i>(E)</i>	<i>Drift</i> <i>(mGal)</i>	<i>Meter</i> <i>reading</i>	<i>Drift corr.</i> <i>meter</i>	<i>Height</i> <i>ellip.</i>	<i>N</i> <i>value</i>	<i>Height</i> <i>geoid</i>	<i>Observed</i> <i>gravity</i>	<i>Free air</i> <i>anomaly</i>	<i>Bouguer</i> <i>anomaly</i>	<i>Terrain</i> <i>corr.</i>	<i>Final Bouguer</i> <i>anomaly</i>
441948	7115062	152	26.0824	128.4195	-0.04	2597.08	2597.04	556.41	1.65	554.76	978918.40	56.14	-5.46	0.07	-5.39
387983	7112959	153	26.0982	127.8798	-0.08	2612.97	2612.89	479.81	0.49	479.32	978935.02	48.35	-4.88	0.04	-4.83
391060	7112930	154	26.0987	127.9106	-0.18	2615.24	2615.06	484.70	0.54	484.16	978937.29	52.07	-1.69	0.07	-1.62
394121	7112811	155	26.1000	127.9412	-0.18	2617.25	2617.07	489.62	0.60	489.02	978939.39	55.59	1.29	0.08	1.37
396999	7112989	156	26.0986	127.9700	-0.03	2623.51	2623.48	494.50	0.68	493.81	978946.11	63.88	9.05	0.04	9.09
399998	7113002	157	26.0987	127.9999	-0.04	2636.15	2636.11	496.19	0.77	495.42	978959.34	77.60	22.59	0.04	22.62
402991	7113002	158	26.0989	128.0299	-0.04	2641.73	2641.69	496.60	0.86	495.74	978965.19	83.54	28.49	0.03	28.52
405995	7113932	159	26.0991	128.0600	-0.03	2642.65	2642.62	500.94	0.97	499.97	978966.16	86.39	30.88	0.02	30.90
408995	7113001	160	26.0993	128.0899	-0.03	2640.75	2640.73	505.57	1.02	504.56	978964.17	85.21	29.19	0.02	29.21
412019	7113000	161	26.0995	128.1201	-0.02	2641.47	2641.45	513.04	1.08	511.96	978964.93	88.24	31.39	0.02	31.41
415003	7112998	162	26.0997	128.1500	-0.17	2638.99	2638.82	515.69	1.14	514.55	978962.17	86.27	29.14	0.02	29.16
418029	7112973	163	26.1001	128.1802	-0.18	2635.22	2635.04	521.96	1.19	520.77	978958.22	84.20	26.38	0.03	26.40
424000	7112998	165	26.1002	128.2400	-0.17	2613.44	2613.27	548.91	1.29	547.62	978935.41	69.67	8.86	0.03	8.89
426984	7112982	166	26.1005	128.2698	-0.17	2609.81	2609.64	557.00	1.34	555.67	978931.61	68.33	6.63	0.05	6.68
429991	7112987	167	26.1006	128.2999	-0.01	2610.68	2610.67	556.15	1.39	554.76	978932.68	69.12	7.52	0.03	7.55
433001	7112992	168	26.1007	128.3300	-0.02	2606.08	2606.06	573.82	1.44	572.38	978927.85	69.72	6.17	0.06	6.22
436000	7113007	169	26.1007	128.3600	-0.06	2605.38	2605.32	564.49	1.48	564.49	978927.09	66.52	3.84	0.09	3.93
439021	7113010	170	26.1008	128.3902	-0.05	2605.47	2605.42	542.82	1.53	542.82	978927.19	59.92	-0.35	0.03	-0.32
442125	7113124	171	26.0999	128.4212	-0.05	2604.65	2604.60	545.18	1.58	545.18	978926.33	59.86	-0.67	0.10	-0.58
388199	7110956	172	26.1163	127.8818	-0.06	2608.56	2608.50	478.14	0.39	477.75	978930.41	41.96	-11.08	0.06	-11.03
390986	7111689	173	26.1099	127.9097	-0.05	2611.89	2611.84	488.55	0.47	488.08	978933.91	49.11	-5.09	0.07	-5.01
393994	7111027	174	26.1161	127.9398	-0.05	2612.75	2612.70	494.13	0.51	493.62	978934.81	51.27	-3.54	0.08	-3.46
396994	7111007	175	26.1165	127.9698	-0.03	2618.8	2618.77	499.16	0.59	498.57	978941.17	59.13	3.77	0.10	3.88
399996	7111008	176	26.1167	127.9998	-0.05	2629.83	2629.78	500.66	0.68	499.98	978952.71	71.10	15.58	0.04	15.62
402997	7110997	177	26.1170	128.0298	-0.07	2637.78	2637.71	503.35	0.72	502.63	978961.02	80.20	24.39	0.02	24.41
406000	7110997	178	26.1172	128.0598	-0.08	2641.51	2641.43	505.02	0.86	504.16	978964.91	84.55	28.57	0.03	28.60
409019	7111019	179	26.1172	128.0900	-0.09	2642	2641.91	509.15	0.94	508.21	978965.42	86.31	29.88	0.02	29.90
412005	7111039	180	26.1172	128.1199	-0.02	2642.11	2642.09	513.26	1.00	512.25	978965.61	87.74	30.86	0.02	30.88
415006	7110993	181	26.1178	128.1499	-0.18	2639.89	2639.71	517.55	1.06	517.55	978963.11	86.84	29.37	0.03	29.40
418017	7110979	182	26.1181	128.1800	-0.18	2636.42	2636.24	524.01	1.11	522.90	978959.48	84.83	26.77	0.03	26.80
420913	7111030	183	26.1178	128.2090	-0.18	2628.48	2628.30	534.03	1.16	532.87	978951.16	79.61	20.45	0.04	20.49
424806	7111186	184	26.1166	128.2479	-0.02	2615.59	2615.57	548.47	1.23	547.24	978937.82	70.79	10.03	0.04	10.07
427006	7111021	185	26.1182	128.2699	-0.02	2613.87	2613.85	552.18	1.25	550.93	978936.02	70.02	8.84	0.04	8.89
429990	7110982	186	26.1187	128.2997	-0.02	2612.1	2612.08	557.93	1.30	556.63	978934.16	69.89	8.08	0.03	8.11
433007	7110998	187	26.1187	128.3299	-0.02	2609.45	2609.43	572.58	1.36	571.22	978931.39	71.61	8.19	0.07	8.25
436064	7110914	188	26.1196	128.3605	-0.06	2604.54	2604.48	559.23	1.40	559.23	978926.21	62.66	0.57	0.06	0.63
439006	7111017	189	26.1188	128.3899	-0.05	2604.03	2603.98	545.59	1.46	545.59	978925.68	57.98	-2.60	0.04	-2.56
442028	7110953	190	26.1195	128.4201	-0.05	2607.81	2607.76	534.86	1.51	534.86	978929.64	58.59	-0.80	0.04	-0.76
388035	7109016	191	26.1338	127.8800	-0.06	2599.47	2599.41	476.57	0.27	476.30	978920.89	30.74	-22.15	0.05	-22.09
390265	7108814	192	26.1358	127.9023	-0.07	2603.25	2603.18	484.01	0.30	483.71	978924.84	36.83	-16.88	0.26	-16.62
394144	7109068	193	26.1338	127.9411	-0.05	2605.78	2605.73	506.39	0.40	505.99	978927.51	46.53	-9.65	0.55	-9.11
396999	7108991	194	26.1347	127.9696	-0.03	2610.37	2610.34	507.00	0.48	506.52	978932.34	51.45	-4.79	0.07	-4.72
400007	7108981	195	26.1350	127.9997	-0.05	2622.28	2622.23	507.97	0.57	507.40	978944.79	64.16	7.82	0.05	7.88
402986	7109015	196	26.1349	128.0295	-0.07	2632.88	2632.81	508.10	0.67	507.43	978955.89	75.26	18.92	0.03	18.95

Appendix A (continued)

<i>X</i> <i>Easting</i>	<i>Y</i> <i>Northing</i>	<i>Station</i> <i>no.</i>	<i>Latitude</i> <i>(S)</i>	<i>Longitude</i> <i>(E)</i>	<i>Drift</i> <i>(mGal)</i>	<i>Meter</i> <i>reading</i>	<i>Drift corr.</i> <i>meter</i>	<i>Height</i> <i>ellip.</i>	<i>N</i> <i>value</i>	<i>Height</i> <i>geoid</i>	<i>Observed</i> <i>gravity</i>	<i>Free air</i> <i>anomaly</i>	<i>Bouguer</i> <i>anomaly</i>	<i>Terrain</i> <i>corr.</i>	<i>Final Bouguer</i> <i>anomaly</i>
406005	7109004	197	26.1352	128.0597	-0.08	2639.93	2639.85	510.80	0.75	510.05	978963.26	83.43	26.79	0.02	26.82
409003	7109003	198	26.1354	128.0897	-0.09	2640.88	2640.79	515.42	0.83	514.59	978964.24	85.80	28.66	0.02	28.68
412002	7109001	199	26.1356	128.1197	-0.01	2641.54	2641.53	516.01	0.90	515.11	978965.02	86.72	29.52	0.02	29.54
414961	7108977	200	26.1360	128.1493	-0.13	2639.03	2638.90	521.21	0.95	520.26	978962.26	85.52	27.75	0.03	27.79
417901	7108940	201	26.1365	128.1787	-0.10	2636.87	2636.77	524.79	1.00	523.79	978960.04	84.35	26.19	0.03	26.22
420981	7109037	202	26.1358	128.2095	-0.09	2632.57	2632.48	531.19	1.06	530.13	978955.54	81.86	23.00	0.03	23.03
436021	7109286	207	26.1343	128.3600	-0.06	2598.33	2598.27	575.08	1.33	575.08	978919.70	60.00	-3.86	0.13	-3.73
438958	7109012	208	26.1369	128.3894	-0.05	2606.08	2606.03	553.78	1.37	553.78	978927.83	61.37	-0.12	0.05	-0.07
387994	7107056	210	26.1515	127.8794	-0.07	2590.18	2590.11	476.47	0.15	476.32	978911.15	19.75	-33.14	0.05	-33.09
390998	7107247	211	26.1500	127.9095	-0.07	2599.15	2599.08	490.72	0.21	490.50	978920.54	33.62	-20.84	0.11	-20.73
397001	7106997	213	26.1527	127.9695	-0.04	2605.13	2605.09	515.45	0.36	515.09	978926.85	47.32	-9.87	0.15	-9.72
400078	7107243	214	26.1507	128.0003	-0.06	2615.91	2615.85	519.15	0.47	518.68	978938.12	59.84	2.25	0.16	2.41
403023	7107010	215	26.1530	128.0298	-0.06	2627.52	2627.46	515.30	0.54	514.76	978950.27	70.62	13.47	0.04	13.50
406018	7106999	216	26.1533	128.0597	-0.06	2634.04	2633.98	514.25	0.63	513.62	978957.11	77.09	20.06	0.03	20.08
409009	7106987	217	26.1536	128.0896	-0.09	2637.1	2637.01	518.56	0.70	517.86	978960.28	81.54	24.04	0.02	24.07
411998	7106997	218	26.1537	128.1195	-0.01	2638.74	2638.73	519.59	0.77	518.82	978962.09	83.64	26.03	0.03	26.06
414985	7107005	219	26.1538	128.1494	-0.12	2636.27	2636.15	524.91	0.83	524.08	978959.38	82.55	24.36	0.03	24.38
418020	7107014	220	26.1539	128.1798	-0.10	2631.87	2631.77	526.75	0.88	525.86	978954.79	78.51	20.12	0.03	20.14
420979	7106999	221	26.1542	128.2094	-0.08	2626.15	2626.07	532.39	0.93	531.46	978948.82	74.24	15.23	0.03	15.26
423978	7106795	222	26.1562	128.2394	-0.06	2618.11	2618.05	545.14	0.96	545.14	978940.41	69.91	9.38	0.05	9.43
426995	7106813	223	26.1562	128.2696	-0.06	2608.35	2608.29	558.83	1.01	558.83	978930.19	63.91	1.86	0.05	1.91
430045	7106785	224	26.1566	128.3001	-0.06	2598.13	2598.07	567.17	1.07	567.17	978919.49	56.69	-6.28	0.03	-6.25
433076	7106989	225	26.1549	128.3304	-0.06	2597.01	2596.95	572.44	1.14	572.44	978918.31	56.33	-7.23	0.04	-7.19
436004	7106993	226	26.1550	128.3597	-0.05	2601.12	2601.07	568.74	1.20	567.54	978922.68	59.17	-3.84	0.08	-3.76
438991	7107007	227	26.1550	128.3896	-0.05	2603.53	2603.48	551.86	1.26	550.59	978925.21	56.47	-4.66	0.05	-4.61
387977	7104995	229	26.1701	127.8791	0.08	2588.38	2588.46	476.87	0.01	476.86	978909.41	16.84	-36.11	0.05	-36.06
391006	7105010	230	26.1702	127.9094	0.08	2598.31	2598.39	488.28	0.06	488.21	978919.82	30.75	-23.46	0.12	-23.33
393624	7104832	231	26.1720	127.9355	0.10	2598.38	2598.48	505.75	0.12	505.64	978919.91	36.09	-20.05	0.35	-19.70
397147	7105403	232	26.1671	127.9708	-0.04	2600.55	2600.51	526.74	0.26	526.48	978922.04	45.01	-13.45	0.30	-13.15
400688	7104932	233	26.1716	128.0062	-0.08	2611.14	2611.06	532.20	0.33	531.88	978933.10	57.40	-1.66	0.12	-1.54
403003	7105005	234	26.1711	128.0294	-0.07	2621.89	2621.82	524.68	0.40	524.28	978944.37	66.36	8.14	0.05	8.20
406005	7104994	235	26.1714	128.0594	-0.06	2629.48	2629.42	520.17	0.49	519.68	978952.34	72.89	15.19	0.04	15.22
409002	7105004	236	26.1715	128.0894	-0.10	2631.14	2631.04	522.59	0.56	522.03	978954.03	75.30	17.34	0.03	17.37
411989	7105014	237	26.1716	128.1193	0.00	2629.11	2629.11	528.82	0.56	528.26	978952.00	75.19	16.53	0.02	16.55
414993	7104990	238	26.1720	128.1494	-0.12	2627.37	2627.25	530.64	0.69	529.95	978950.06	73.74	14.90	0.02	14.92
418032	7105054	239	26.1716	128.1798	-0.11	2621.74	2621.63	535.54	0.75	534.79	978944.17	69.37	9.99	0.02	10.02
420978	7105028	240	26.1720	128.2093	-0.08	2620.75	2620.67	536.40	0.79	535.61	978943.17	68.59	9.12	0.03	9.15
423960	7105001	241	26.1724	128.2391	-0.07	2614.91	2614.84	542.90	0.84	542.90	978937.13	64.77	4.49	0.04	4.53
426970	7105018	242	26.1724	128.2692	-0.07	2602.68	2602.61	557.64	0.89	557.64	978924.32	56.51	-5.41	0.03	-5.37
430016	7104991	243	26.1728	128.2997	-0.06	2583.06	2583.00	571.66	0.95	570.71	978903.76	39.96	-23.40	0.04	-23.37
432969	7104995	244	26.1729	128.3292	-0.06	2579.18	2579.12	578.44	1.01	577.43	978899.70	37.96	-26.15	0.04	-26.11
435985	7104999	245	26.1730	128.3594	-0.05	2589.93	2589.88	562.56	1.08	561.49	978910.96	44.30	-18.05	0.04	-18.01
439110	7104981	246	26.1733	128.3907	-0.05	2590.9	2590.85	554.07	1.15	552.92	978911.98	42.65	-18.74	0.03	-18.71
388008	7103013	248	26.1880	127.8792	0.07	2592.29	2592.36	483.55	-0.13	483.68	978913.51	21.77	-31.94	0.06	-31.88

Appendix A (continued)

Gray

<i>X</i> <i>Easting</i>	<i>Y</i> <i>Northing</i>	<i>Station</i> <i>no.</i>	<i>Latitude</i> <i>(S)</i>	<i>Longitude</i> <i>(E)</i>	<i>Drift</i> <i>(mGal)</i>	<i>Meter</i> <i>reading</i>	<i>Drift corr.</i> <i>meter</i>	<i>Height</i> <i>ellip.</i>	<i>N</i> <i>value</i>	<i>Height</i> <i>geoid</i>	<i>Observed</i> <i>gravity</i>	<i>Free air</i> <i>anomaly</i>	<i>Bouguer</i> <i>anomaly</i>	<i>Terrain</i> <i>corr.</i>	<i>Final Bouguer</i> <i>anomaly</i>
391188	7102940	249	26.1889	127.9110	0.11	2597.76	2597.87	490.59	-0.08	490.67	978919.27	29.62	-24.86	0.08	-24.78
394001	7102997	250	26.1886	127.9392	0.10	2597.92	2598.02	504.67	-0.01	504.68	978919.44	34.13	-21.91	0.28	-21.62
402998	7103034	253	26.1889	128.0292	-0.09	2615.92	2615.83	536.31	0.25	536.06	978938.10	62.45	2.93	0.10	3.03
405778	7103098	254	26.1885	128.0570	-0.09	2622.52	2622.43	537.97	0.33	537.64	978945.00	69.87	10.18	0.08	10.25
409002	7103000	255	26.1896	128.0893	0.00	2621.18	2621.18	532.36	0.41	531.96	978943.70	66.74	7.67	0.04	7.72
411990	7103020	256	26.1896	128.1192	-0.02	2617.27	2617.25	533.94	0.48	533.47	978939.58	63.08	3.85	0.02	3.87
415038	7103030	257	26.1897	128.1497	-0.02	2616.08	2616.06	536.62	0.54	536.08	978938.33	62.63	3.11	0.02	3.13
421001	7103023	259	26.1901	128.2094	-0.07	2611.95	2611.88	545.49	0.64	544.85	978933.96	60.93	0.44	0.03	0.47
423971	7103007	260	26.1904	128.2391	-0.07	2605.22	2605.15	547.19	0.69	547.19	978926.91	54.59	-6.17	0.03	-6.14
426982	7103003	261	26.1906	128.2692	-0.07	2584.73	2584.66	561.37	0.74	560.62	978905.51	37.33	-24.92	0.04	-24.88
429989	7103008	262	26.1907	128.2993	-0.06	2571.27	2571.21	589.35	0.81	588.54	978891.41	31.83	-33.52	0.09	-33.42
432995	7103002	263	26.1909	128.3294	-0.06	2569.31	2569.25	584.42	0.88	583.54	978889.36	28.22	-36.57	0.05	-36.52
435994	7103017	264	26.1909	128.3594	-0.05	2574.21	2574.16	569.83	0.95	568.88	978894.49	28.83	-34.34	0.04	-34.30
439013	7103020	265	26.1910	128.3896	-0.05	2577.75	2577.70	562.11	1.03	561.09	978898.20	30.13	-32.17	0.04	-32.14
388007	7100997	267	26.2062	127.8790	0.07	2594.35	2594.42	482.14	-0.29	482.43	978915.66	22.22	-31.35	0.05	-31.30
390993	7101000	268	26.2064	127.9089	0.11	2593.15	2593.26	490.10	-0.23	490.33	978914.45	23.44	-31.01	0.05	-30.96
393884	7100935	269	26.2072	127.9378	0.12	2597.55	2597.67	503.85	-0.17	504.02	978919.06	32.22	-23.74	0.45	-23.29
398189	7100815	270	26.2086	127.9809	0.13	2603.46	2603.59	519.35	-0.06	519.41	978925.27	43.07	-14.60	0.26	-14.34
403990	7101778	272	26.2003	128.0390	-0.09	2612.39	2612.30	537.07	0.18	536.89	978934.39	58.19	-1.43	0.09	-1.33
405953	7100995	273	26.2075	128.0586	0.02	2602.41	2602.43	535.84	0.17	535.67	978924.05	46.96	-12.52	0.05	-12.47
408996	7101006	274	26.2076	128.0891	0.01	2605.91	2605.92	537.52	0.24	537.28	978927.71	51.11	-8.55	0.05	-8.50
411975	7101015	275	26.2077	128.1189	-0.01	2603.97	2603.96	535.76	0.31	535.45	978925.66	48.48	-10.98	0.03	-10.95
414998	7100991	276	26.2081	128.1491	-0.03	2602.06	2602.03	544.12	0.37	543.75	978923.63	48.98	-11.39	0.02	-11.37
418000	7101033	277	26.2079	128.1792	-0.05	2600.89	2600.84	544.20	0.43	543.77	978922.39	47.76	-12.62	0.03	-12.59
421015	7100996	278	26.2084	128.2094	-0.06	2598.92	2598.86	549.21	0.48	548.73	978920.31	47.18	-13.75	0.02	-13.72
423971	7100981	279	26.2087	128.2390	-0.07	2595.13	2595.06	549.82	0.53	549.82	978916.34	43.52	-17.53	0.03	-17.50
427024	7101020	280	26.2085	128.2695	-0.07	2576.18	2576.11	559.32	0.60	558.72	978896.55	26.50	-35.54	0.03	-35.50
429990	7101026	281	26.2086	128.2992	-0.06	2568	2567.94	577.85	0.66	577.19	978887.98	23.62	-40.47	0.04	-40.43
433017	7101019	282	26.2088	128.3295	-0.06	2566.93	2566.87	576.07	0.74	575.34	978886.86	21.91	-41.97	0.04	-41.93
435987	7101068	283	26.2085	128.3592	-0.05	2568.72	2568.67	574.02	0.82	573.20	978888.74	23.15	-40.50	0.05	-40.45
438876	7101082	284	26.2085	128.3882	-0.04	2574.27	2574.23	559.58	0.90	558.68	978894.55	24.49	-37.55	0.04	-37.51
388002	7099014	286	26.2241	127.8788	0.06	2592.28	2592.34	484.16	-0.44	484.60	978913.48	19.43	-34.37	0.05	-34.32
390995	7099006	287	26.2244	127.9088	0.05	2595.31	2595.36	490.40	-0.39	490.79	978916.65	24.49	-30.00	0.13	-29.87
393986	7098987	288	26.2248	127.9387	0.04	2596.16	2596.20	499.38	-0.32	499.71	978917.53	28.10	-27.39	0.08	-27.31
396997	7099000	289	26.2249	127.9688	0.04	2599.72	2599.76	507.70	-0.24	507.94	978921.26	34.36	-22.04	0.09	-21.95
400009	7098990	290	26.2252	127.9990	0.04	2603.96	2604.00	516.01	-0.17	516.18	978925.70	41.32	-16.00	0.12	-15.88
406041	7099002	292	26.2255	128.0594	0.16	2598.69	2598.85	528.51	-0.01	528.52	978920.30	39.71	-18.98	0.04	-18.94
408960	7099012	293	26.2256	128.0886	0.17	2588.16	2588.33	536.37	0.07	536.31	978909.28	31.08	-28.47	0.03	-28.44
412018	7098967	294	26.2262	128.1192	-0.02	2584.09	2584.07	546.24	0.02	546.22	978904.84	29.66	-30.99	0.03	-30.96
415023	7098998	295	26.2261	128.1493	-0.02	2584.19	2584.17	550.22	0.20	550.02	978904.95	30.95	-30.13	0.03	-30.09
418008	7098984	296	26.2264	128.1792	-0.02	2582.54	2582.52	556.81	0.26	556.56	978903.22	31.21	-30.59	0.04	-30.55
421019	7099058	297	26.2259	128.2093	-0.03	2582.98	2582.95	556.10	0.32	555.78	978903.68	31.47	-30.24	0.04	-30.21
423992	7098987	298	26.2267	128.2391	-0.03	2578.03	2578.00	555.77	0.37	555.39	978898.49	26.11	-35.56	0.03	-35.53
426990	7099004	299	26.2267	128.2691	-0.03	2571.46	2571.43	554.89	0.44	554.45	978891.61	18.93	-42.63	0.04	-42.60

Appendix A (continued)

<i>X</i> <i>Easting</i>	<i>Y</i> <i>Northing</i>	<i>Station</i> <i>no.</i>	<i>Latitude</i> <i>(S)</i>	<i>Longitude</i> <i>(E)</i>	<i>Drift</i> <i>(mGal)</i>	<i>Meter</i> <i>reading</i>	<i>Drift corr.</i> <i>meter</i>	<i>Height</i> <i>ellip.</i>	<i>N</i> <i>value</i>	<i>Height</i> <i>geoid</i>	<i>Observed</i> <i>gravity</i>	<i>Free air</i> <i>anomaly</i>	<i>Bouguer</i> <i>anomaly</i>	<i>Terrain</i> <i>corr.</i>	<i>Final Bouguer</i> <i>anomaly</i>
430000	7098999	300	26.2269	128.2992	-0.03	2566.61	2566.58	570.31	0.51	569.80	978886.53	18.57	-44.70	0.03	-44.67
432995	7098970	301	26.2273	128.3292	-0.04	2564.89	2564.85	572.35	0.59	571.77	978884.73	17.35	-46.14	0.04	-46.10
436027	7098986	302	26.2273	128.3595	-0.04	2568.7	2568.66	560.63	0.68	559.95	978888.72	17.70	-44.48	0.04	-44.44
438957	7098944	303	26.2278	128.3889	-0.04	2575.23	2575.19	549.86	0.76	549.10	978895.56	21.15	-39.82	0.04	-39.78
388031	7096998	305	26.2423	127.8789	0.09	2589.8	2589.89	480.23	-0.61	480.84	978910.91	14.40	-38.99	0.05	-38.94
390935	7097001	306	26.2425	127.9080	0.08	2590.58	2590.66	489.95	-0.56	490.51	978911.72	18.18	-36.28	0.09	-36.20
394043	7097215	307	26.2408	127.9391	0.07	2593.99	2594.06	506.74	-0.47	507.21	978915.29	27.03	-29.29	0.20	-29.09
396994	7097006	308	26.2429	127.9686	0.06	2596.63	2596.69	512.98	-0.42	513.40	978918.04	31.54	-25.47	0.08	-25.39
400027	7097008	309	26.2431	127.9990	0.05	2599.77	2599.82	524.00	-0.34	524.34	978921.32	38.17	-20.05	0.20	-19.85
403019	7096997	310	26.2434	128.0290	0.04	2600.55	2600.59	520.60	-0.26	520.86	978922.13	37.89	-19.94	0.04	-19.90
406021	7096964	311	26.2439	128.0590	0.04	2587.26	2587.30	524.22	-0.19	524.42	978908.20	25.02	-33.21	0.03	-33.18
409000	7096985	312	26.2439	128.0888	0.03	2579.59	2579.62	532.95	-0.12	533.06	978900.15	19.64	-39.54	0.03	-39.51
412001	7097028	313	26.2437	128.1189	0.00	2575.78	2575.78	545.36	-0.04	545.40	978896.13	19.45	-41.11	0.03	-41.07
414995	7096971	314	26.2444	128.1489	0.00	2573.27	2573.27	558.17	0.02	558.15	978893.51	20.70	-41.27	0.04	-41.23
417983	7096968	315	26.2446	128.1788	0.00	2570.55	2570.55	573.18	0.08	573.10	978890.66	22.45	-41.19	0.05	-41.14
421007	7096953	316	26.2449	128.2090	0.00	2569.73	2569.73	570.46	0.15	570.32	978889.80	20.71	-42.61	0.05	-42.56
424015	7096983	317	26.2448	128.2392	0.00	2569.92	2569.92	562.65	0.21	562.44	978890.00	18.48	-43.97	0.04	-43.92
426831	7097032	318	26.2445	128.2674	0.00	2568.76	2568.76	565.06	0.28	564.78	978888.78	18.02	-44.69	0.07	-44.63
429846	7096949	319	26.2454	128.2975	0.00	2565	2565.00	570.57	0.35	570.22	978884.84	15.69	-47.63	0.04	-47.58
432987	7096999	320	26.2451	128.3290	0.00	2566.52	2566.52	568.27	0.44	567.83	978886.43	16.57	-46.48	0.04	-46.44
435897	7097025	321	26.2450	128.3581	0.00	2566.42	2566.42	575.11	0.53	574.58	978886.33	18.55	-45.25	0.10	-45.15
438990	7096984	322	26.2455	128.3891	0.00	2574.62	2574.62	547.70	0.63	547.07	978894.92	18.62	-42.13	0.04	-42.09
442002	7097009	323	26.2454	128.4193	0.00	2577.38	2577.38	537.94	0.74	537.20	978897.81	18.47	-41.18	0.04	-41.14
387961	7095170	324	26.2588	127.8780	0.09	2587.91	2588.00	480.72	-0.76	481.48	978908.94	11.44	-42.02	0.04	-41.98
390819	7094818	325	26.2622	127.9066	0.10	2591.81	2591.91	485.68	-0.74	486.42	978913.03	16.81	-37.20	0.08	-37.12
394041	7095166	326	26.2593	127.9389	0.12	2591.24	2591.36	507.82	-0.65	508.47	978912.46	23.25	-33.20	0.26	-32.94
396937	7094635	327	26.2643	127.9679	0.12	2595.18	2595.30	507.29	-0.63	507.91	978916.59	26.86	-29.54	0.35	-29.19
399927	7095102	328	26.2603	127.9979	0.14	2596.96	2597.10	526.82	-0.51	527.33	978918.47	35.01	-23.54	0.14	-23.40
402994	7094981	329	26.2616	128.0286	0.14	2594.91	2595.05	519.67	-0.45	520.12	978916.32	30.55	-27.20	0.04	-27.17
405929	7095003	330	26.2616	128.0579	0.15	2585.15	2585.30	532.32	-0.37	532.69	978906.11	24.22	-34.93	0.03	-34.90
409001	7095014	331	26.2617	128.0887	0.02	2577.18	2577.20	530.46	-0.30	530.76	978897.62	15.12	-43.81	0.04	-43.77
412050	7094913	332	26.2628	128.1192	0.00	2573.62	2573.62	540.72	-0.23	540.95	978893.87	14.44	-45.62	0.06	-45.56
415007	7095010	333	26.2621	128.1488	0.00	2572.15	2572.15	549.42	-0.16	549.58	978892.33	15.61	-45.41	0.04	-45.37
418005	7094996	334	26.2624	128.1789	0.00	2567.49	2567.49	574.73	-0.09	574.82	978887.45	18.50	-45.32	0.05	-45.27
420961	7095026	335	26.2623	128.2085	0.00	2566.2	2566.20	572.21	-0.02	572.23	978886.10	16.35	-47.18	0.06	-47.12
424031	7095011	336	26.2626	128.2392	0.00	2565.18	2565.18	579.70	0.05	579.65	978885.03	17.56	-46.80	0.05	-46.75
426950	7095061	337	26.2623	128.2684	0.00	2567.32	2567.32	576.18	0.13	576.05	978887.27	18.71	-45.26	0.04	-45.21
429991	7095078	338	26.2623	128.2989	0.00	2567.11	2567.11	571.21	0.21	571.00	978887.05	16.93	-46.47	0.04	-46.43
433016	7094983	339	26.2633	128.3292	0.00	2565.97	2565.97	583.62	0.30	583.32	978885.86	19.47	-45.30	0.09	-45.21
436003	7094998	340	26.2633	128.3591	0.00	2571.8	2571.80	558.43	0.40	558.03	978891.97	17.77	-44.19	0.05	-44.13
439011	7094980	341	26.2636	128.3892	0.00	2576.92	2576.92	548.66	0.50	548.16	978897.33	20.07	-40.79	0.09	-40.71
442009	7095005	342	26.2635	128.4192	0.00	2577.28	2577.28	537.04	0.60	536.44	978897.71	16.83	-42.73	0.06	-42.66
388045	7093121	343	26.2773	127.8787	0.07	2581.95	2582.02	479.73	-0.93	480.66	978902.67	3.60	-49.77	0.05	-49.73
391024	7093025	344	26.2784	127.9085	0.07	2581.48	2581.55	486.37	-0.89	487.26	978902.17	5.06	-49.04	0.06	-48.98

Appendix A (continued)

Gray

<i>X Easting</i>	<i>Y Northing</i>	<i>Station no.</i>	<i>Latitude (S)</i>	<i>Longitude (E)</i>	<i>Drift (mGal)</i>	<i>Meter reading</i>	<i>Drift corr. meter</i>	<i>Height ellip.</i>	<i>N value</i>	<i>Height geoid</i>	<i>Observed gravity</i>	<i>Free air anomaly</i>	<i>Bouguer anomaly</i>	<i>Terrain corr.</i>	<i>Final Bouguer anomaly</i>
393976	7092972	345	26.2791	127.9381	0.06	2587.01	2587.07	494.04	-0.84	494.88	978907.96	13.14	-41.81	0.07	-41.73
396985	7093063	346	26.2785	127.9682	0.05	2590.06	2590.11	503.53	-0.76	504.29	978911.15	19.28	-36.71	0.05	-36.67
400003	7092998	347	26.2793	127.9985	0.05	2594.07	2594.12	511.44	-0.70	512.14	978915.35	25.84	-31.03	0.05	-30.98
403001	7092999	348	26.2795	128.0285	0.04	2589.71	2589.75	524.18	-0.63	524.81	978910.77	25.17	-33.11	0.03	-33.07
405898	7092854	349	26.2810	128.0575	0.03	2582.8	2582.83	539.77	-0.57	540.34	978903.52	22.60	-37.40	0.04	-37.36
408843	7093074	350	26.2792	128.0870	0.02	2574.86	2574.88	541.39	-0.47	541.86	978895.19	14.87	-45.30	0.05	-45.25

NOTE: All gravity units are given in milliGals (mGals)

Appendix B

GPS and gravity control points for the Blackstone gravity survey

Station	WGS84			GDA 94 Zone 52			Isogal84 Gravity (mGal)
	Latitude (S)	Longitude (E)	Height ^(a) (m)	Easting	Northing	Height ^(b) (m)	
DME 9001	26°13'52.5049"	128°04'16.8672"	529.27	407243	7098373	529.30	978909.44
6491.9084	26°01'09.0697"	128°22'59.4672"	561.36	438279	7122046	559.73	978915.23

NOTES: (a) Ellipsoidal height
(b) Geoid height derived using AusGeoid98

Appendix C

Repeat-station gravity results and summary statistics^(a)

Station no.	Julian day	Latitude (S)	Longitude (E)	Height ^(b) (m)	Obs. gravity reading 1	Obs. gravity reading 2	Obs. gravity difference
348	217	26°16'46.0783"	128°01'42.5350"	524.62	978910.7736	978910.7819	-0.0083
310	218	26°14'36.1409"	128°01'44.2427"	520.79	978922.1273	978922.3128	+0.084
310	219	26°14'36.1409"	128°01'44.2427"	520.79	978921.9203	978922.3485	-0.4282
255	220	26°11'22.4858"	128°05'21.4312"	531.96	978943.4886	978943.5934	-0.1048
139	221	26°04'50.5698"	128°01'48.3826"	495.16	978963.886	978963.876	+0.011
230	219/221	26°10'12.6366"	127°54'33.7182"	488.28	978919.738	978919.665	+0.073
43	222	25°59'25.3358"	128°00'03.3338"	497.43	978910.3200	978910.4143	-0.094
145	223	26°04'55.9448"	128°12'37.3112"	528.59	978946.7154	978946.6001	+0.1152
275	227	26°12'27.7104"	128°07'08.0207"	535.45	978925.6681	978925.4586	+0.21
237	220/227	26°10'17.8137"	128°05'21.4312"	528.26	978952.0060	978951.8384	+0.167
181	228	26°07'04.0454"	128°08'59.6046"	517.55	978963.2997	978963.1111	+0.1886
174	221/228	26°07'04.0454"	128°08'59.6046"	493.62	978934.8665	978934.7512	+0.1153
237	227/230	26°10'17.8137"	128°05'21.4312"	528.26	978951.8384	978951.8803	-0.0446
237	232	26°10'17.8137"	128°05'21.4312"	528.26	978951.9117	978951.9851	-0.0733
89	233	26°01'40.4918"	128°14'25.7962"	551.62	978926.2443	978926.4119	+0.1676

NOTES: (a) Results based on GDA94, MGA52
(b) Geoid height derived using AusGeoid98

Summary statistics	dObsg
Mean	0.03
Standard error	0.04
Median	0.07
Standard deviation	0.16
Sample variance	0.03
Range	0.64
Minimum	-0.43
Maximum	0.21
Sum	0.38
Count	15

Appendix D

Daily repeat GPS observation results and summary statistics

Station no.	Julian day	Time	Latitude (S)	Longitude (E)	Height (m)	Latitude difference (")	Longitude difference (")	Height difference (AHD)
5000	217	Pre	26°13'51.9908"	128°04'15.9872"	529.167			
5000	217	Post	26°13'51.9911"	128°04'15.9870"	529.157	+0.0003	-0.0002	-0.01
5000	219	Pre	26°13'51.9886"	128°04'15.9902"	529.15			
5000	219	Post	26°13'51.9925"	128°04'15.9886"	529.23	+0.0039	-0.0016	-0.08
5000	220	Pre	26°13'51.9941"	128°04'15.9920"	529.313			
5000	220	Post	26°13'51.9921"	128°04'15.9867"	529.309	-0.0020	+0.0053	+0.004
5000	221	Pre	26°13'51.9924"	128°04'15.9869"	529.12			
5000	221	Post	26°13'51.9924"	128°04'15.9869"	529.11	-0.0012	-0.0039	+0.01
5000	222	Pre	26°13'51.9915"	128°04'15.9913"	529.120			
5000	222	Post	26°13'52.0107"	128°04'15.9722"	529.122	+0.0192	+0.0191	-0.002
5000	223	Pre	26°13'52.0106"	128°04'15.9713"	529.092			
5000	223	Post	26°13'51.9966"	128°04'15.9893"	529.094	-0.014	-0.018	-0.002
5000	227	Pre	26°13'51.9929"	128°04'15.9691"	529.099			
5000	227	Post	26°13'51.9733"	128°04'15.9910"	529.115	-0.0196	-0.0219	-0.016
5000	228	Post	26°13'51.9788"	128°04'15.9814"	529.11			
5000	227	Post	26°13'51.9998"	128°04'15.9776"	529.13	0.0210	0.0038	-0.017
5000	229	Pre	26°13'52.0004"	128°04'15.9778"	529.079			
5000	229	Post	26°13'51.9807"	128°04'15.9830"	529.091	-0.0197	-0.0052	-0.012
5000	230	Post	26°13'51.9676"	128°04'15.9985"	529.126	-	-	-
5000	232	Post	26°13'51.9676"	128°04'15.9985"	529.121	-	-	-
5000	233	Pre	26°13'51.9676"	128°04'15.9986"	529.138			
5000	233	Post	26°13'52.0152"	128°04'15.9690"	529.143	+0.0476	+0.0296	-0.005

NOTES:	<i>Summary statistics</i>	<i>dAHD</i>
	Mean	-0.01
	Standard error	0.01
	Median	-0.01
	Standard deviation	0.03
	Sample variance	0.0
	Range	0.09
	Minimum	-0.08
	Maximum	0.01
	Sum	-0.13
	Count	10

Appendix E

Digital data summary

<i>File name</i>	<i>Description</i>
<i>Blackstone_Gravity_06.csv</i>	Gravity processing results as comma separated ASCII data
<i>Blackstone_Survey_BA.ers</i>	Blackstone Gravity Survey — Final Bouguer anomaly — ER Mapper grid format
<i>Blackstone_Survey_BA.ecw</i>	Blackstone Gravity Survey — Final Bouguer anomaly — ECW image format
<i>Blackstone_Survey_BA_cont.ecw</i>	Blackstone Gravity Survey — Final Bouguer anomaly (contoured) — ECW image format
<i>Blackstone_Survey_BA_1vd.ers</i>	Blackstone Gravity Survey — 1VD - Final Bouguer anomaly — ER Mapper grid format
<i>Blackstone_Survey_BA_1vd.ecw</i>	Blackstone Gravity Survey — 1VD - Final Bouguer anomaly — ECW image format
<i>Blackstone_Survey_TMI_BA_cont.ecw</i>	Blackstone Gravity Survey — TMI and Final Bouguer anomaly (contoured) — ECW image format
<i>Blackstone_Combin_BA.ers</i>	Blackstone Combined Gravity — Final Bouguer anomaly — ER Mapper grid format
<i>Blackstone_Combin_BA.ecw</i>	Blackstone Combined Gravity — Final Bouguer anomaly — ECW image format
<i>Blackstone_Combin_BA_cont.ecw</i>	Blackstone Combined Gravity — Final Bouguer anomaly (contoured) — ECW image format
<i>Blackstone_Combin_BA_1vd.ers</i>	Blackstone Combined Gravity — 1VD - Final Bouguer anomaly — ER Mapper grid format
<i>Blackstone_Combin_BA_1vd.ecw</i>	Blackstone Combined Gravity — 1VD - Final Bouguer anomaly — ECW image format
<i>Blackstone_Combin_TMI_BA_cont.ecw</i>	Blackstone Combined Gravity — TMI and Final Bouguer anomaly (contoured) — ECW image format

NOTE: (a) All located data in GDA94, MGA Zone 52

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