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GRAVITY SURVEY CENTRAL HIGHLANDS AREAS, TASMANIA
for
GREAT SOUTHLAND MINERALS
199 Macquarie Street, HOBART
Period from February to May 2007





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The Crew:

A combined GPS and gravity survey was carried out during the months of April to early May by surveyors Brian Rau , Todd Sandercock and George Gamtcheff of Solo Geophysics & Co.



GPS EQUIPMENT:

Leica 1200 dual frequency RTK for survey applications
Garmin GPS60 for local activities
Radio Link 4W/25W UHF 467.075MHz frequency
Equipment owned by Solo and maintained and upgraded by manufacturer.
RTK survey resolution was better than 0.05m for horizontal and vertical measurements as satellite availability was usually resolved better than 0.03m. The data is not recorded when a vertical error of 0.05m is exceeded. Tasmania satellite availability limits useful survey periods in dense vegetation.

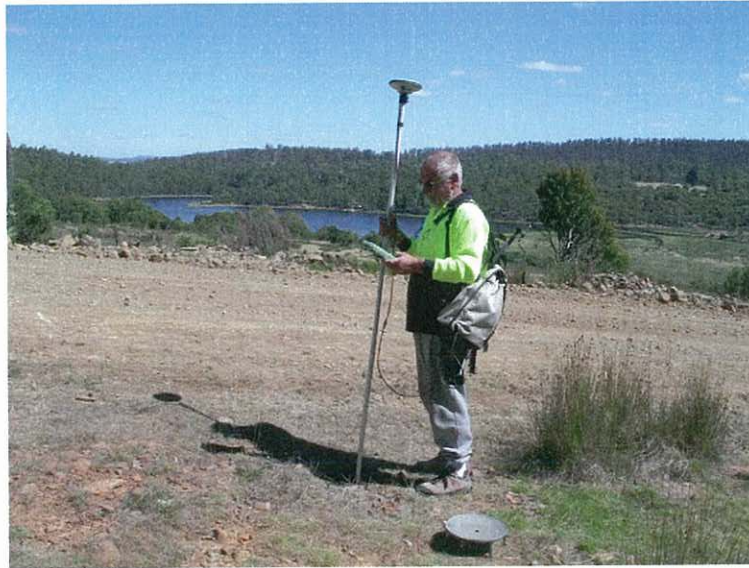
RTK-Base station:



GPS radio repeater to fill in difficult RTK communication areas.



Rover:



GRAVITY METER:

LaCoste & Romberg Model G #556



Meter calibration table:

Calibration table for conversion from instrument divisions to milligals for Tasmanian surveys.

Instrument Range	Value in milligals	Factor for interval
3700	3749.18	1.01388
3800	3850.57	1.01390

Equipment owned by Solo and maintained by manufacture to specification.
Instrument returned from routine service to Austin Texas November 2005.
Meter daily variations closely follow Longmans tidal calculations.

Time Zone:

The survey commenced in February during daylight saving and EST daylight saving times were used until 12th April. Normal EST was used again from 6th May until end of survey. Tidal changes are calculated by Longman formulae on UTM time plus 10 hours.

OPTICAL LEVEL and 5m staff:

In areas of dense cover where RTK GPS unable to resolve a solution for an accurate elevation, levels were carried optically from the nearest GPS elevation.

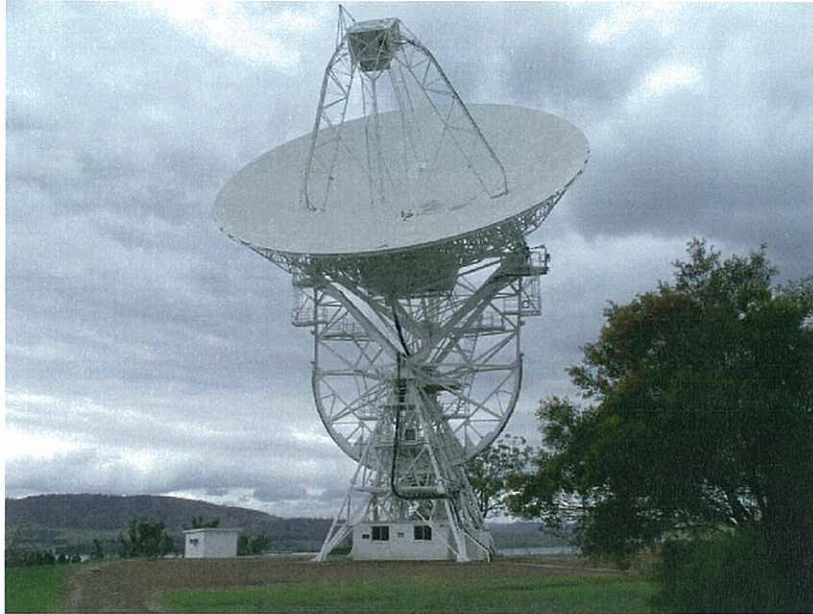
Sokisha B1 engineers optical level used.



GRAVITY SURVEY CONTROL STATIONS:

Mt. Pleasant GRAVITY BASE HOBART:

(Tie from radio telescope base to a new airport base, as could not locate old airport bases due to terminal reconstruction)



Main control base site location:



Gravity Hut: as seen in background, meter on marker.



Ground marker located:

Gravity Base (on plaque) 9699.9160 RM1 (file ID is 199699.916)

Value Isogal65 980436.970 mGals

Value Isogal84 980423.706 mGals

AMG66 Zone55 535927E 5260737N (ht approx 73m by Garmin GPS)

Gravity tie Mount Pleasant to Airport:

CLIENT: Great Southland Minerals

AREA: Hobart, Tasmania

GRID: Hobart Base Tie

MKPEAST =xxxxxx.xx MKPNORTH=xxxxxx.xx

BASE # 01;GRAVITY:9802093.800;EAST=xxxxxx ;NORTH=xxxxxx :Bronte house

BASE # 02;GRAVITY:9802095.200;EAST=457742 ;NORTH=5334623 :Bronte

BASE # 08;GRAVITY:9804369.700;EAST=535927 ;NORTH=5260737 :radio telescope

BASE # 09;GRAVITY:9804483.100;EAST=541258 ;NORTH=5256804 :airport car park

LAST BASE

LOOP:02;METER:556;DATE:090207;OPERATOR:B.

LINE L

LINE L

000000.00	0000000009.	3961.40	1111	000.00	42	0.041	09	3961.44	
541258.00	5256804.00	3961.40	1112	***.**	42	0.041	900001	3961.44	980448.31 airport
541258.00	5256804.00	3961.40	1124	***.**	42	0.036	900001	3961.44	980448.31 airport
535927.00	5260737.00	3950.22	1301	***.**	42	0.007	900017	3950.23	980436.97 telescope
541258.00	5256804.00	3961.40	1321	***.**	42	0.002	900001	3961.40	980448.30 airport
535927.00	5260737.00	3950.23	1344	***.**	42	-.007	900017	3950.22	980436.97 telescope
541258.00	5256804.00	3961.41	1402	***.**	42	-.012	900001	3961.40	980448.31 airport
999999.99	0000000009.	3961.41	1403	000.00	42	-.012	09	3961.40	

New Hobart Airport Base:



Meter location viewed north on new control station east end Hobart airport car park (outside terminal security and if less than 7 minutes no parking fee required)



Airport new base close up:

Value: Isogal65 980448.310 mGals

Location: AGD66 Zone55 541258E 5256804N Elevn 9.00m approx. by Garmin GPS

BASE CONTROLS CENTRAL HIGHLANDS:



Solo Base 100032 East side Bronte Park

(tied to Hobart control)

ID 900014/100032 AMG66 Zone55 457742.78E 5334623.73N 676.00m

Isogal65 980209.52 mGals ObsGrav

CLIENT: Great Southland Minerals

AREA: Hobart

GRID: Highland Bases

BASE # 01;GRAVITY:9802093.800;EAST=xxxxxx ;NORTH=xxxxxxx :Bronte house

BASE # 02;GRAVITY:9802095.200;EAST=457742 ;NORTH=5334623 :Bronte

BASE # 08;GRAVITY:9804369.700;EAST=535927;NORTH=5260737 :radio telescope

BASE # 09;GRAVITY:9804483.100;EAST=541258;NORTH=5256804 :airport car park

LAST BASE

LOOP:01;METER:556;DATE:070207;OPERATOR:B.RAU

LINE Line

000000.00	0000000009.3961.46	1152	000.00	40	-.015	09	3961.44	
541258.00	5256804.00	3961.46	1152	***. **	40	-.015	900001	3961.44 980448.31 airport c/pk
514752.00	5297743.00	3866.49	1321	***. **	40	-.014	900003	3866.48 980352.03 Melton Mobray
500531.00	5307366.00	3827.27	1352	***. **	40	-.013	900004	3827.26 980312.28 Bothwell
494750.00	5320911.00	3784.16	1416	***. **	40	-.011	900005	3784.15 980268.55 Waddamana T/O
491236.00	5338613.00	3691.66	1443	***. **	40	-.010	900006	3691.65 980174.78 Stepps T/O
485143.94	5346832.79	3668.49	1503	918.88	40	-.009	900007	3668.48 980151.29 Open area
492842.35	5344155.67	3648.30	1526	945.36	40	-.009	900008	3648.29 980130.83 Gate Flintstone
473136.82	5352174.04	3629.65	1557	1056.34	40	-.011	900009	3629.64 980111.92 Great Lakes Hotel
472625.89	5361169.62	3628.43	1618	1053.72	40	-.012	900010	3628.42 980110.69 Liawanie
457742.78	5334623.73	3725.94	1724	676.00	40	-.022	900011	3725.92 980209.52 Bronte
457592.57	5331275.16	3730.07	1736	674.23	40	-.022	900012	3730.05 980213.71 ST7614 RM3
455248.00	5316734.00	3800.87	1806	***. **	40	-.028	900013	3800.84 980285.49 Tungatina Mem
459655.00	5308224.00	3833.40	1828	***. **	40	-.035	900014	3833.36 980318.45 Wayatinah Assem
471957.00	5301222.00	3845.04	1850	***. **	40	-.038	900015	3845.00 980330.25 Strickland T/O
475968.00	5296295.00	3878.59	1905	***. **	40	-.042	900016	3878.55 980364.26 Ouse hydrant
500531.00	5307366.00	3827.34	1945	***. **	40	-.054	900004	3827.29 980312.30 Bothwell
514752.00	5297743.00	3866.57	2007	***. **	40	-.057	900003	3866.51 980352.06 Melton Mobray

541258.00 5256804.00 3961.52 2118 *** ** 40 -.071 900001 3961.45 980448.31 airport car park
999999.99 000000009. 3961.52 2119 000.00 40 -.071 09 3961.45

Elevations are RTK surveyed stations, others are Garmin GPS no RTK

Format, east,north,meter reading scale divs, time, elevn, julian day,tidal corn, ID, meter tidal corn,
obs gravity Isogal65

Bronte Park rear of cabin#3 gravity base



Base 100001

Solo cabin#3 local all weather gravity station tied to Bronte Base.
Value Isogal65 980209.38 mGals



**Meter visible in rear doorway, cabin "3 Australia", location Bronte Park village,
third cabin north side from entrance.**

GPS SURVEY CONTROL STATIONS:

Bronte Park Area:



Main Base station ST1084

Location on small rocky knoll 250m east of intersection of (Bronte Park turn off and Derwent Bridge) the Lyell and Marlborough Highways and adjacent and north of turn off to Bronte Lagoon.



**Main Base station ST1084 with Bronte Lagoon in background.
Coordinates GDA94 Zone 55:**