

# **HAINES SURVEYS**

GRAVITY SURVEY SPECIALISTS



**Job No 0525**

## **MILLER'S PROSPECT GRAVITY SURVEY**

**(FRANCIS CREEK)  
Territory Iron Pty Ltd**

**June 2005**

PERTH  
PO BOX 3035  
SHELLEY, WA 6148  
PERTH, AUSTRALIA  
TEL:(08) 9259 0816  
FAX: (08) 9457 5739  
INTER: +618 9245 2025

ADELAIDE  
PO BOX 196  
ALDGATE SA 5154  
ADELAIDE, AUSTRALIA  
TEL (08) 8370 8779  
FAX (08) 8370 8758  
INTER: +618 8370 8779

## **Contents**

<b>Introduction</b>	<b>2</b>
<b>Location Diagrams</b>	<b>3</b>
<b>GPS Observations and Processing</b>	<b>5</b>
<b>Gravity Observations</b>	<b>5</b>
<b>Survey Control</b>	<b>6</b>
<b>Point Numbering and Marking</b>	<b>7</b>
<b>Gravity Processing</b>	<b>8</b>
<b>Results Formats</b>	<b>10</b>
<b>Production Log</b>	<b>11</b>
<b>Repeat Observation Results</b>	<b>12</b>
<b>Plots-</b>	
<b>Station Locations</b>	<b>14</b>
<b>Stations and Bouguer Anomaly Contours</b>	<b>15</b>
<b>Bouguer Anomaly Contours and Zoned Image</b>	<b>16</b>
<b>Bouguer - Elevation Profiles</b>	<b>17</b>
 <b>Processed Results</b>	 <b>24</b>

## **Introduction**

A detail GPS gravity survey designated as Miller's Prospect Gravity Survey has been carried out in an area approximately 42 kilometres north of Pine Creek in Northern Territory, Australia over 11 days from 23 May 2005 to 8 June 2005 on behalf of Territory Iron Pty Ltd. Survey work at Thelma Rose (on separate report) was also carried out during this time.

The proposed Miller's Prospect gravity survey consisted of 180 detail gravity stations in an regular grid comprising 12 trending lines at a bearing of  $73^{\circ}$  from GDA94 grid north with a line spacing of 50 metres and station intervals of 25 metres. The lines of regular length were bounded in the west by GDA94 Zone 52 804325E, in the east by 804975E, in the south by 8512150N and in the north by 8512920N. The line were 475 metres.

During the Survey an extra 138 stations in 14 Lines at a 25m line spacing and a 12.5 and 25m station spacing where proposed in the northern and western section of the original proposed survey.

The completed Miller's Prospect gravity survey comprised of 318 stations in 14 lines 2 gravity stations where omitted in the southern section due to terrain or vegetation. Note; some of the stations may have been slightly offset from their planned position due to vegetation and terrain.

There were 29 observations repeated for quality control purposes, giving a repeat percentage of 9%.

The Bouguer anomaly processing has been performed using a country rock density of 2.67 g/cc.

Figures 1 and 2 overleaf show the location of the survey areas.

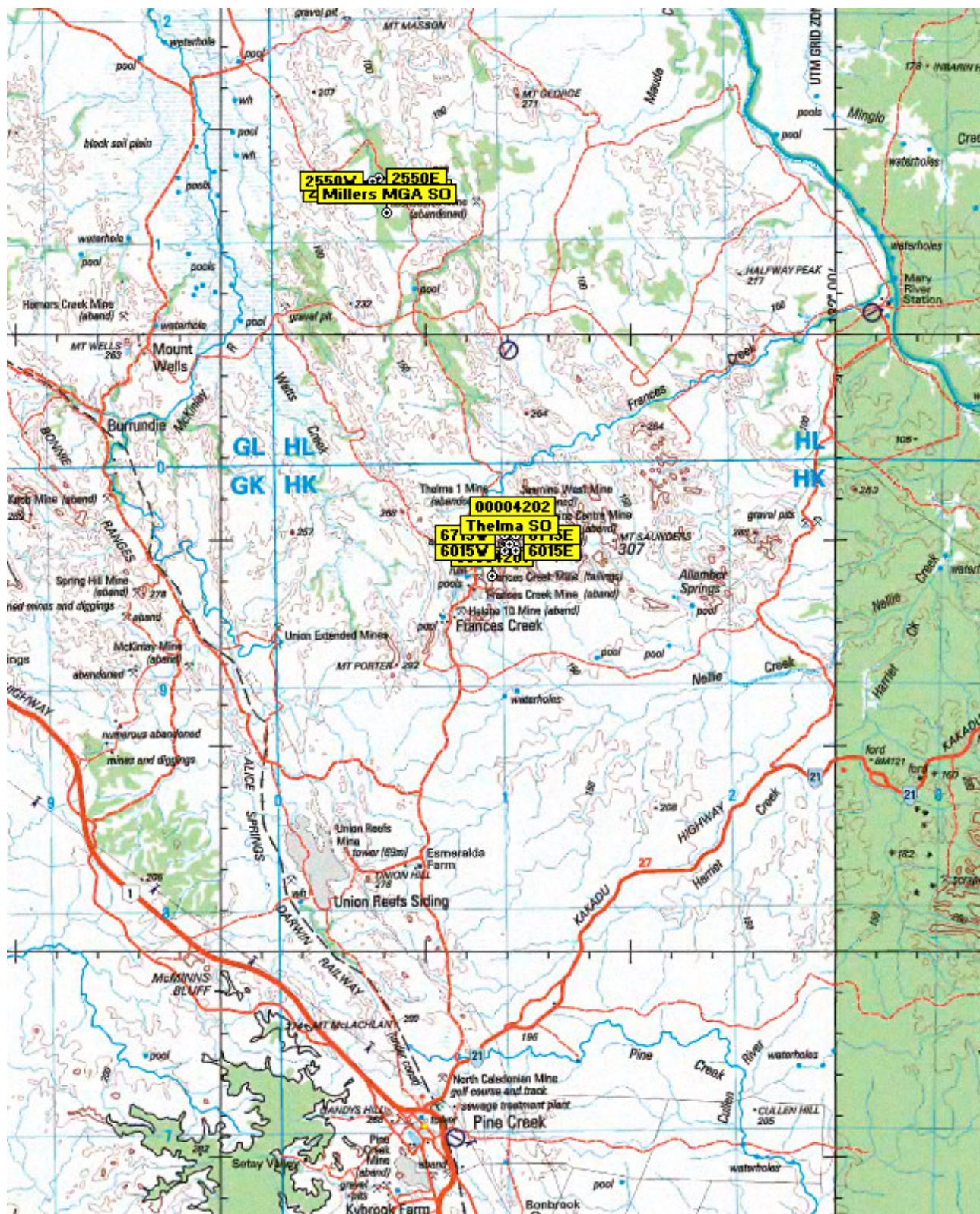


Figure 1. Overall Location Diagram of Francis Creek Gravity Surveys at Miller's Prospect and Thelma Rose (reported separately).



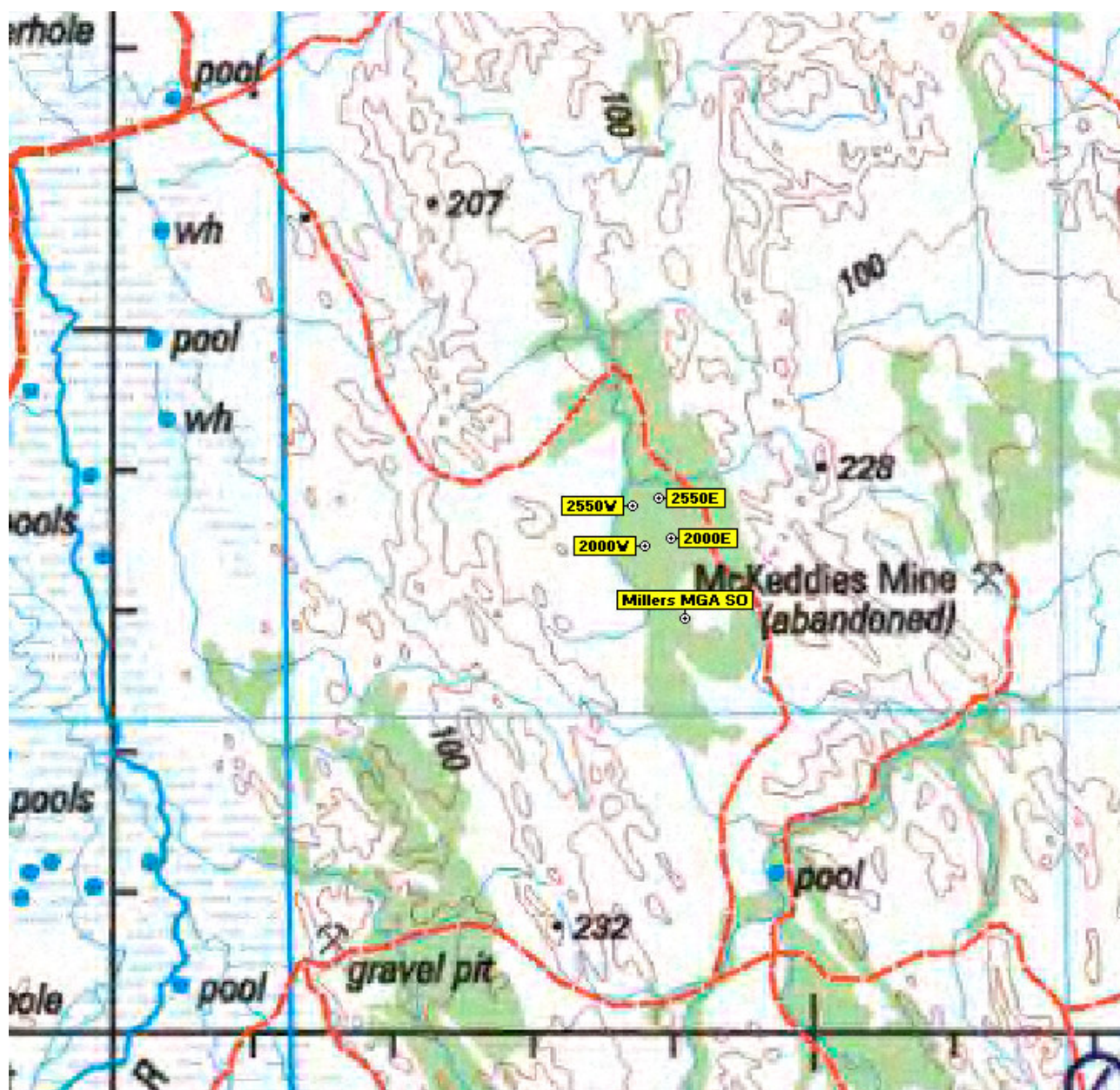


Figure 2. Location Diagram of Miller's Prospect Gravity Survey

## **GPS Observations and Processing**

Carrier phase GPS data has been collected using *Trimble 4000* series geodetic receivers.

Measurements to existing control have been made using Static techniques. All static baselines have been processed to double difference fixed solutions resulting in horizontal and vertical precision of approximately 2 cm.

Measurements for detail gravity observations have been made using Real Time Kinematic (RTK) techniques giving horizontal and vertical precision of at least 5 cm.

Static baseline processing has been done using Trimble GPSurvey Version 2.35 software and RTK processing using Trimble Geomatics Office Version 1.01 software.

The GPS horizontal coordinates are set on the MGA94 datum from which WGS84 Latitude and Longitude is derived and is set on the MGA94 Zone 52.

The GPS ellipsoidal heights (WGS84 datum) have been corrected to orthometric heights (AHD) using the AusGeoid98 geoid model for the control and the gravity stations.

Details of Horizontal and Vertical control are given in the sections below.

## **Gravity Observations**

Gravity measurements have been made using *Scintrex CG3 Autograv* instruments. The instrument number 908475 was used in this project.

Readings of 120 seconds were taken at base station. Readings of 40 seconds were taken at all other gravity survey points.

Base station readings were taken at the beginning of the day and at the end of the day's fieldwork.

The CG3 instrument applies an instrument drift correction to its final gravity reading. Any residual drifts between base station readings are corrected by the gravity post processing software. The instrument also applies Earth Tide Correction to its final gravity reading at each station. The instrument calibration constants are contained in the daily gravity data files.

## **Survey Control**

A base station was established in the survey area. It was placed on a hill central to the project to provide good VHF radio coverage for the RTK system. The base is designated as Base HS 2005.2501. The actual base is marked with a short star picket driven flush with the natural surface. The base is witnessed by a 1m long star picket within 0.3m of the ground mark. Two aluminum tags are attached to the witnessed post. These tags are inscribed "Haines Surveys" and "Gravity HS 2005.2501".

A sub-base was located within 5 minutes drive of the main base to provide a backup base station to the main base in case loop ties to the main base were poor. It is not marked but the approximate coordinates (+/- 10m) listed in the table define it's location.

Horizontal and vertical control has been established using the AUSPOS online GPS processing service provided by Geoscience Australia. This method provides control within the GDA94 Datum to within +/- 5 cm. It largely replaces the need for finding local survey marks or allows accurate control to be established when local marks are not available.

A total of 33.3 hours (at 10 second intervals) of observations were logged over 4 days. The following outlines the Cartesian coordinate precision attained per day.

1 Sigma	sX(m)	sY(m)	sZ(m)	yyyy/mm/dd
2501	0.044	0.033	0.011	2005/05/23
2501	0.142	0.151	0.044	2005/05/23
2501	0.023	0.023	0.008	2005/05/24
2501	0.154	0.203	0.068	2005/05/24
2501	0.025	0.025	0.008	2005/05/25
2501	0.020	0.020	0.007	2005/06/02

Since GDA94 and WGS84 (Global Positioning System Datum ) are virtually equivalent the GDA94 values can be directly input into the GPS processing software for all calculations.

Vertical control has been converted to an Australian Height Datum (AHD) height using the GDA94 height determined from AUSPOS and the AUSGEOID98 gravimetric geoid.

Gravity base HS 2003.4402\* had been tied by multiple loop closures using Australian Geological Survey Base stations 9199.9132 (Darwin NTGS Core Farm) and 8090.0432 (Adelaide River). The values for 9199.9132 and 8090.0432 were obtained from Geoscience Australia in Canberra.

\*Refer to previous report:

Francis Creek - Thelma Gravity Survey; October 2003 (job no. 0342)

Control information (**WGS84 heights have been derived using AusGeoid98**):

### **MILLER'S PROSPECT / THELMA ROSEMARY SURVEY / GRAVITY CONTROL**

Station	WGS 84			MGA94 Zone 52		AHD	Isogal84
	Latitude	Longitude	Height	Easting	Northing	Height	Gravity mgal
HS 2003 4202	-13° 34' 38.48169" S	131° 52' 08.15669" E	291.427	810492.312	8497189.200	241.377	978272.755
HS 2003 4402	-13° 49' 16" S	131° 49' 53" E	350	806109	8470241	300	978279.679
HS 2005 2501	-13° 26' 19.69050" S	131° 48' 50.90820" E	177.199	804734.300	8512597.608	126.787	978281.976

### **Point Numbering and Marking**

An 8 digit point number is used to identify each gravity station. The first 4 digits indicate the line number. The second 4 digits indicate the station number

The first 4 digits form the line number which increases by 50 for each line at a 50m spacing from south-east to north-west, beginning at line 2000. The second 4 digits forms the station number which increases by the distance in metres from the south-western end of each line beginning at 4475 on the extended survey.

The gravity stations have not been marked in the field.



## **Gravity Processing**

The gravity values for this survey are related to the *Australian Gravity Base Station Network* using the *Isogal84 (IGSN 71)* values at known Gravity Stations as provided by DMR.

***Note that all gravity values shown in these surveys are expressed in units of milligals.***

The field gravity observations have been processed using standard formulae and constants to produce a Bouguer Anomaly for each gravity station.

The meter reading as recorded in the raw Scintrex data file is corrected for instrument tilts, meter drift and Earth Tide. Post processing corrections are detailed below.

### Drift

The residual drift between base station readings is calculated for each station reading proportionately by time. This is the drift value shown in the processing output.

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

- $t_n$  = 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  $b_2$

### Obs mgal

This is the observed gravity value in milligals.

$$\text{Obs} = b_g + (r_n - \text{drift}) - b_1$$

- $b_g$  = base stn gravity value (Isogal84)
- $r_n$  = meter reading at each station as shown in the CG3 .dat file
- drift = residual drift correction as shown above
- $b_1$  = base meter reading prior to station reading

### Anom

This is the difference between the observed gravity and the theoretical gravity value at each station. The theoretical value is calculated using the *1967 International Gravity Formula*.

$$\text{Anom} = \text{Obs} - g_{th}$$

Obs = observed gravity as explained above

$$g_{th} = 978031.8 ( 1 + 0.0053024 \sin^2\phi - 0.0000059 \sin^2 2\phi )$$

$\phi$  = WGS84 Latitude

#### Freeair corrn

The freeair correction is calculated using

$$\text{Freeair corrn} = 0.3086 H$$

H = height above sea level (AHD height)

#### Bouguer corrn

$$\text{Bouguer corrn} = -0.04191 \rho H$$

$\rho$  = density (2.67 g/cc used for this survey )

H = height above sea level (AHD height)

#### Bouguer Anom

$$\text{Bouguer Anom} = \text{Anom} + \text{Freeair corrn} + \text{Bouguer corrn}$$

## **Results Formats**

Printed results of the gravity processing (with Bouguer corrections at density 2.67 g/cc) are included in the Appendix of this report (on the digital copy of the report on Compact Disc only, i. e., not printed). The results are also supplied in digital form on Compact Disc with the following files:

ALLCSV.CSV        (survey data)  
 REPEATS.REP     (repeat observations)

A digital copy of this report is also on the Compact Disc in the root Directory.

ALLCOR.XYZ format (in digital hard copy, on Compact Disc – not printed)

This is a *GEOSOF*T compatible XYZ (space delimited columns) file. The data is sorted by Day then Line and Stn number. The column order is as follows:

/	MGA94	ZONE 52	GRID	drift	corr'd	obs	anom	freeair	bouguer	bouguer	height
/	E	N	Line Stn		meter	mgal		corr	corr	anom	(AHD)
/										( 2.67)	

### **ALLCSV.CSV Format**

This is a Comma Separated Variable format file. This format facilitates data import into spreadsheet and database software. Each record (line) contains the following data fields:

Pt Number, Line No, Station No, Date, Day Number, Local Time, WGS Latitude, WGS Longitude, WGS Height, MGA94 East, MGA94 North, AHD Height, Meter reading, Meter reading standard deviation, Earth Tide Correction, drift correction, corrected meter reading, gravity difference (mgal) from base, observed gravity (mgals), gravity anomaly, free-air correction, Bouguer correction (2.67), Bouguer anomaly

\*.DAT (supplied upon request)

These are the raw data files from the *Scintrex CG3* gravimeter. There is a separate file for each day's data for each field party. The files are identified by the Julian day number (001 = Jan 1st) with the prefix G. eg. G142 = day 142 (22<sup>nd</sup> May or 21<sup>st</sup> May in a leap year).

**MILLER'S PROSPECT / THELMA ROSEMARY PRODUCTION LOG**

Date	GPS Day	Observed	Repeats	Comments
23-May-05	143	45	0	commence survey on Miller's Prospect section, set up base 2501
24-May-05	144	56	6	continue survey
25-May-05	145	59	3	continue survey
26-May-05	146	19	9	complete Miller's Prospect section
27-May-05	147	64	0	commence survey on Thelma Rosemary section
28-May-05	148	91	2	continue survey
29-May-05	149	88	2	continue survey
30-May-05	150	78	2	continue survey
31-May-05	151	71	3	continue survey
1-Jun-05	152	51	9	complete Thelma Rosemary section
2-Jun-05	153	70	2	commence survey on Miller's Prospect extra infill
3-Jun-05	154	55	3	continue survey
4-Jun-05	155	20	6	complete survey on Miller's Prospect & control points, CP04, CP09
7-Jun-05	158	N/a	N/a	collect control points at Rum Jungle
8-Jun-05	159	N/a	N/a	collect control points at Rum Jungle
	Total	767	47	

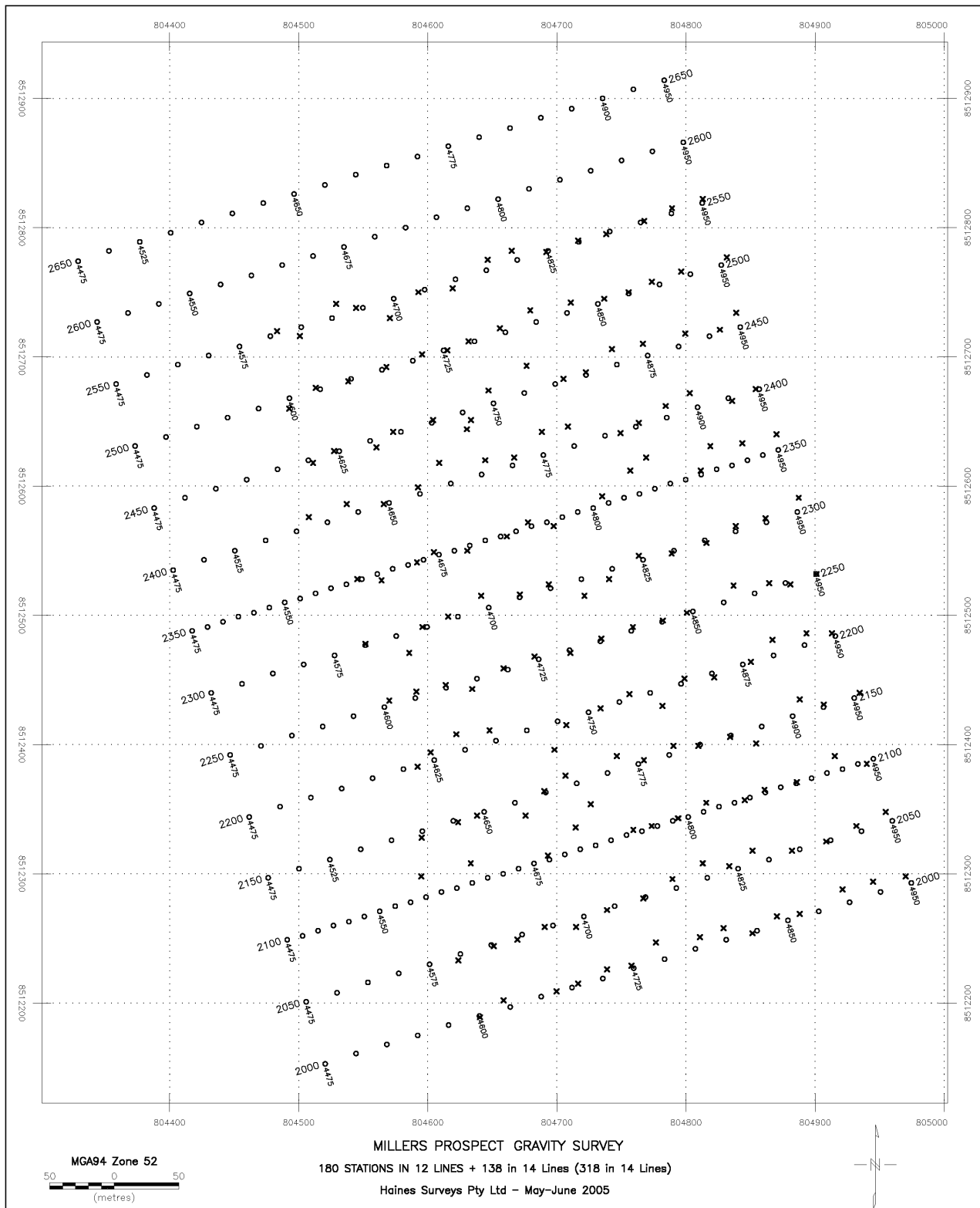
**Repeat Observation Results****MILLER'S PROSPECT GRAVITY SURVEY**

Pt #	Day	E	N	H	G	Bouguer
23504800	D143	804,735.124	8,512,592.229	126.573	978,282.037	-3.795
23504800	D144	804,735.132	8,512,592.462	126.563	978,281.991	-3.843
		-0.008	-0.233	+0.010	+0.046	+0.048
24504725	D143	804,633.401	8,512,650.978	114.786	978,283.690	-4.439
24504725	D144	804,630.165	8,512,644.282	114.913	978,283.727	-4.380
		+3.236	+6.696	-0.127	-0.037	-0.059
22504825	D144	804,782.147	8,512,496.213	124.394	978,282.246	-4.050
22504825	D145	804,782.172	8,512,496.143	124.350	978,282.261	-4.043
		-0.025	+0.070	+0.044	-0.015	-0.007
23504950	D144	804,869.971	8,512,640.350	114.295	978,284.375	-3.854
23504950	D154	804,870.021	8,512,641.073	114.311	978,284.383	-3.842
		-0.050	-0.723	-0.016	-0.008	-0.012
25004775	D144	804,655.796	8,512,722.465	119.486	978,283.363	-3.815
25004775	D153	804,655.818	8,512,722.353	119.487	978,283.371	-3.807
		-0.022	+0.112	-0.001	-0.008	-0.008
20504800	D145	804,812.832	8,512,307.966	121.697	978,283.097	-3.798
20504800	D146	804,813.029	8,512,307.942	121.715	978,283.146	-3.746
		-0.197	+0.024	-0.018	-0.049	-0.052
21004800	D145	804,794.007	8,512,342.888	124.247	978,282.552	-3.829
21004800	D146	804,793.613	8,512,343.227	124.221	978,282.528	-3.858
		+0.394	-0.339	+0.026	+0.024	+0.029
20004600	D146	804,640.509	8,512,188.831	127.462	978,282.201	-3.605
20004600	D154	804,640.288	8,512,188.908	127.496	978,282.193	-3.606
		+0.221	-0.077	-0.034	+0.008	+0.001
21004511	D154	804,521.094	8,512,261.761	116.915	978,284.508	-3.346
21004511	D154	804,521.094	8,512,261.761	116.915	978,284.482	-3.372
		+0.000	+0.000	+0.000	+0.026	+0.026
21004523	D154	804,539.726	8,512,265.170	117.787	978,284.284	-3.397
21004523	D154	804,539.726	8,512,265.170	117.787	978,284.258	-3.423
		+0.000	+0.000	+0.000	+0.026	+0.026
21004535	D154	804,549.093	8,512,269.593	118.422	978,284.186	-3.369
21004535	D154	804,549.093	8,512,269.593	118.422	978,284.179	-3.376
		+0.000	+0.000	+0.000	+0.007	+0.007
21004562	D154	804,571.554	8,512,275.142	119.884	978,283.701	-3.564
21004562	D154	804,571.554	8,512,275.142	119.884	978,283.692	-3.573
		+0.000	+0.000	+0.000	+0.009	+0.009

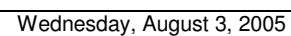


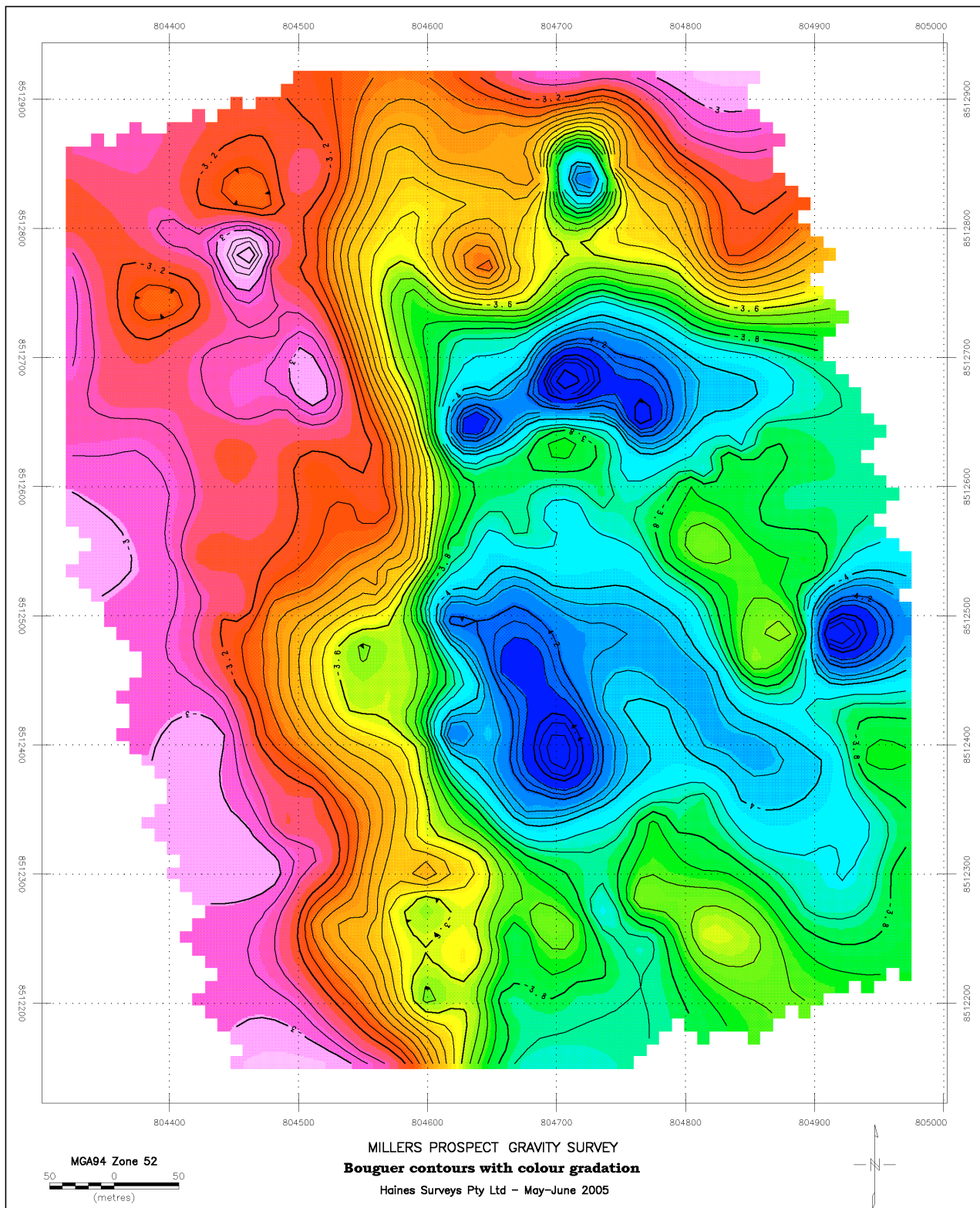
**Plots**

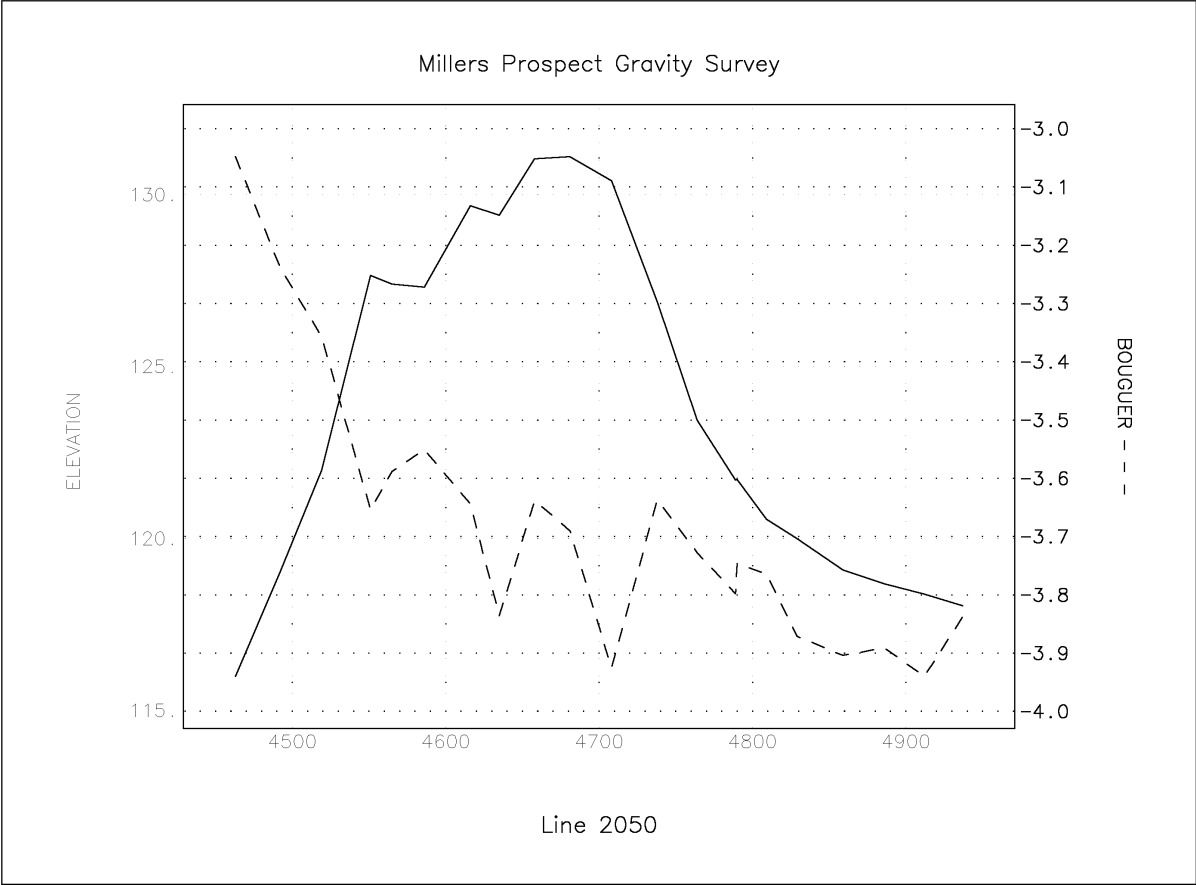
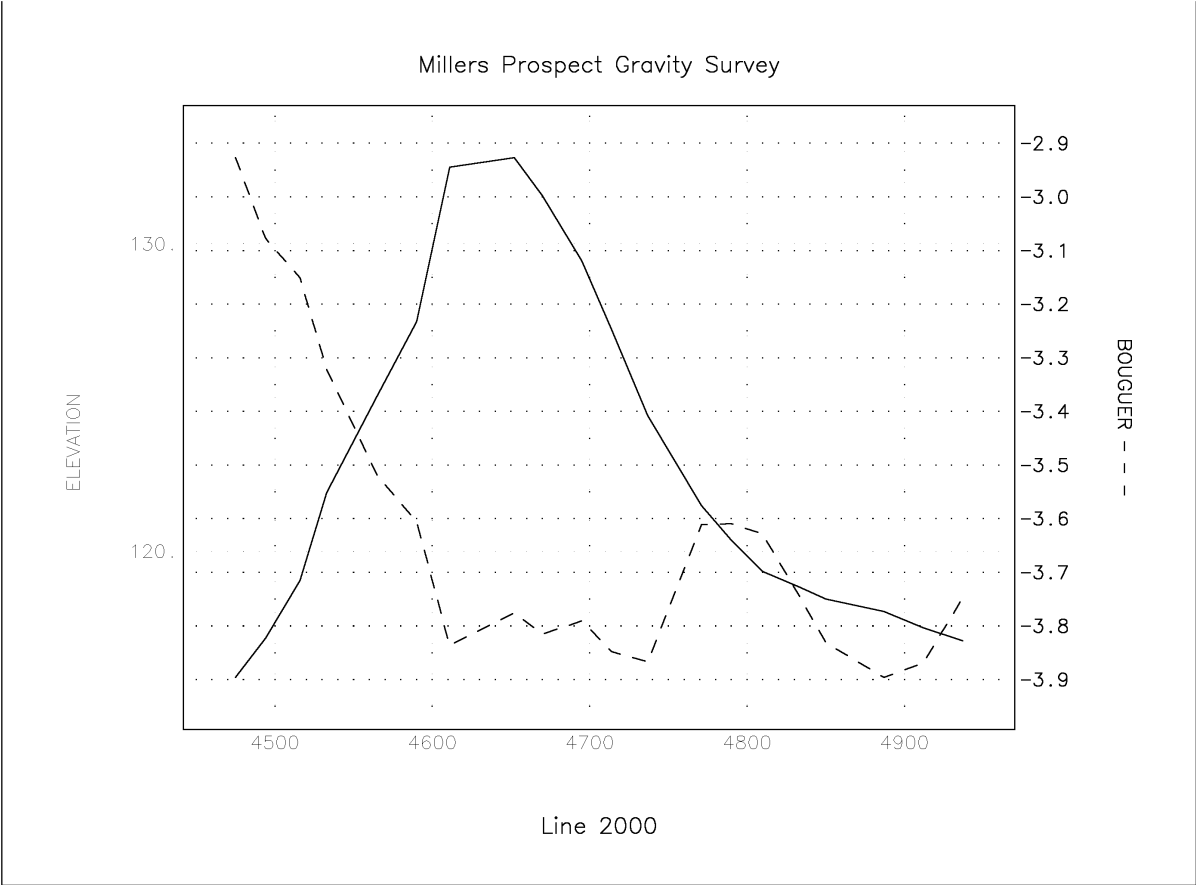
<b>Station Locations</b>	<b>14</b>
<b>Stations and Bouguer Anomaly Contours</b>	<b>15</b>
<b>Bouguer Anomaly Contours and Zoned Image</b>	<b>16</b>
<b>Bouguer - Elevation Profiles</b>	<b>17</b>



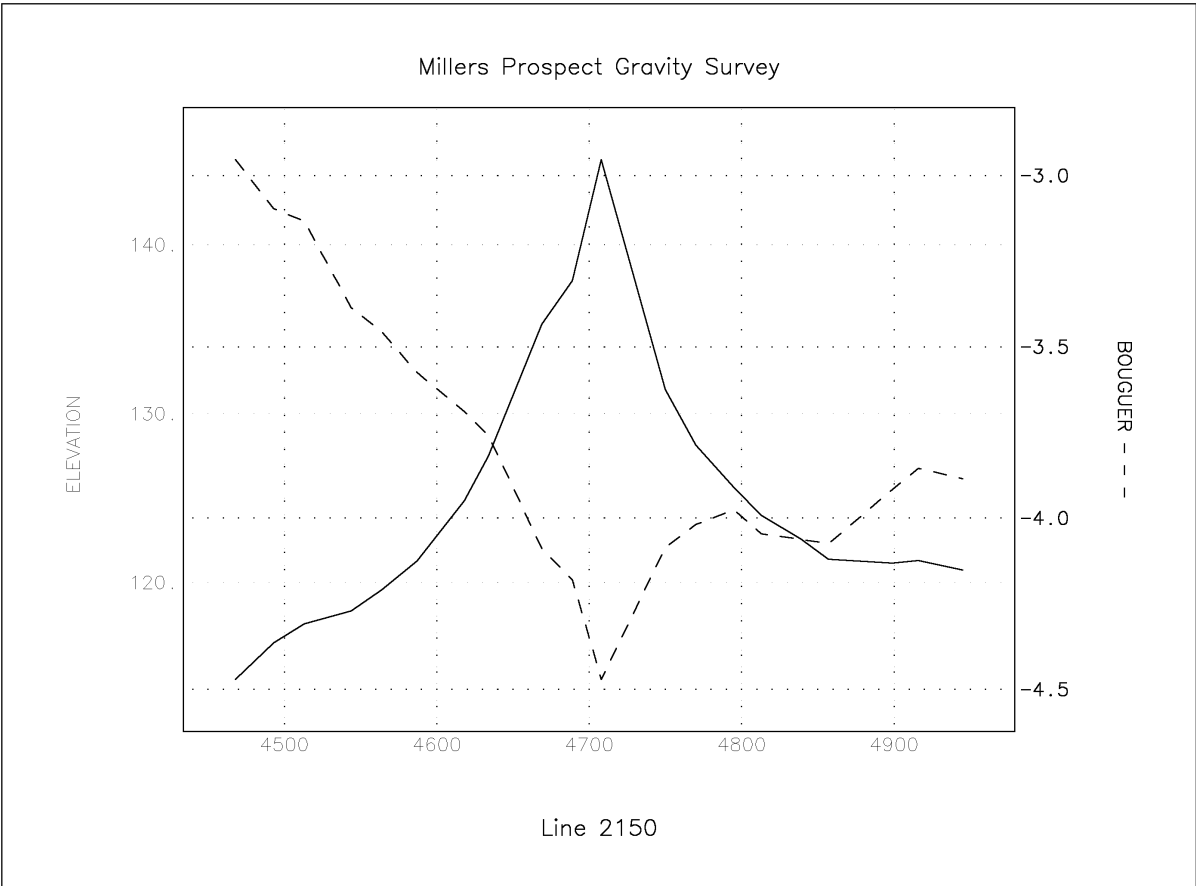
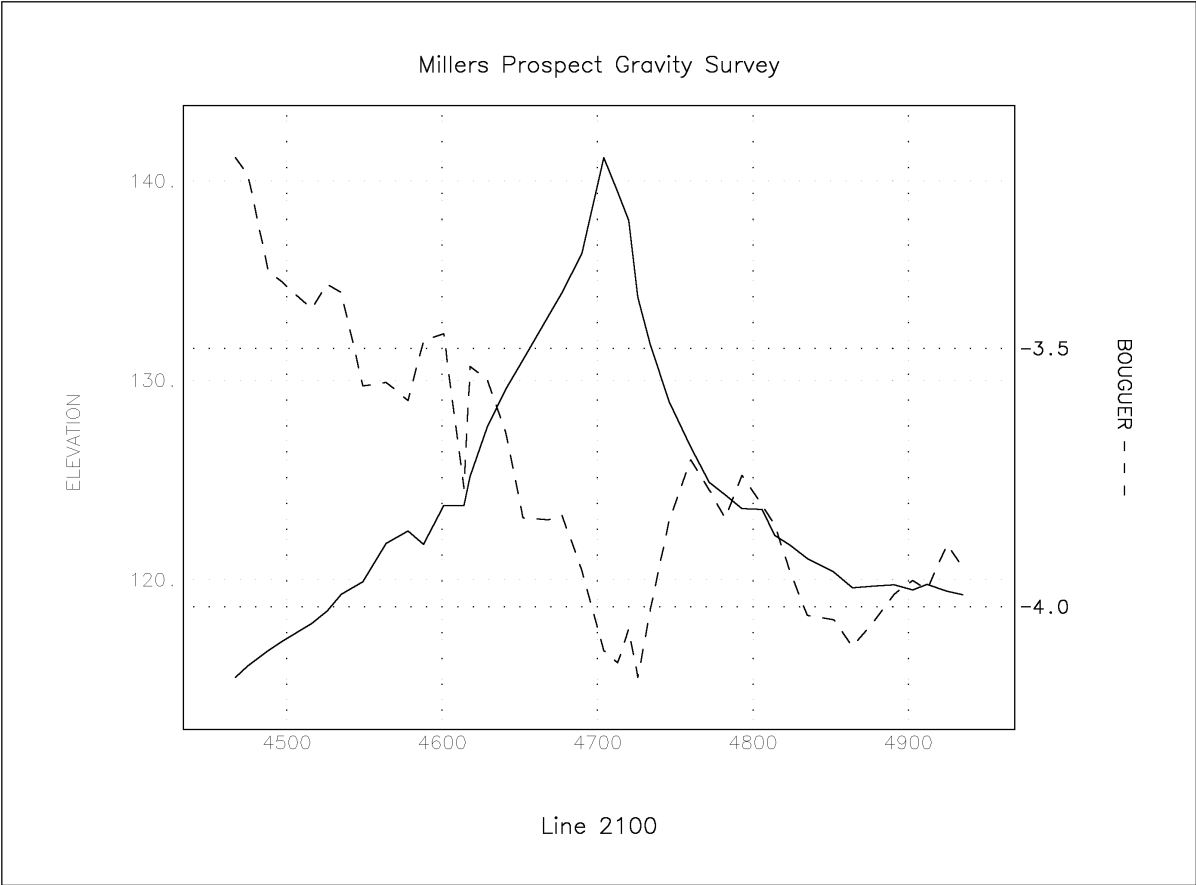
Actual surveyed points on original proposed survey are shown "x", many of which are significantly offset due to rugged terrain and thick vegetation canopy that affected the ability of the GPS equipment to lock onto the satellite signals.

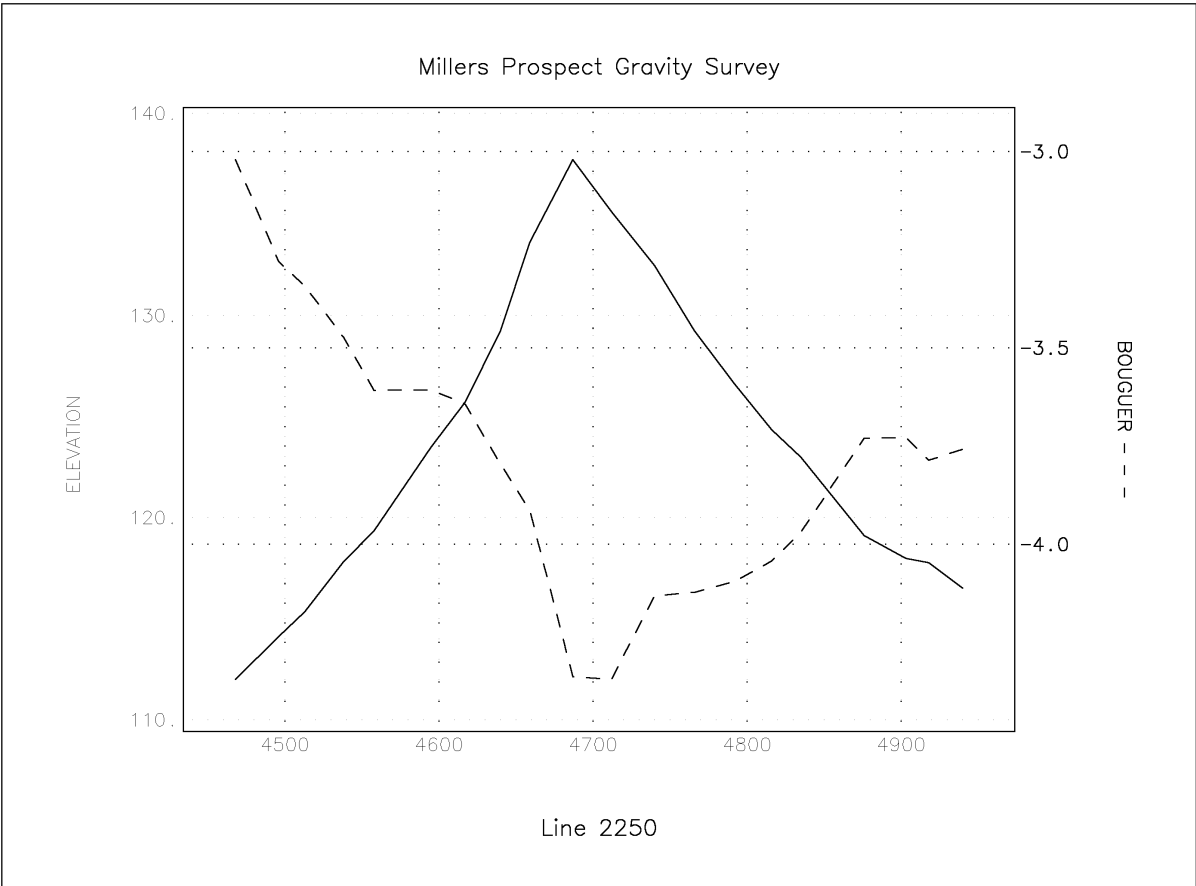
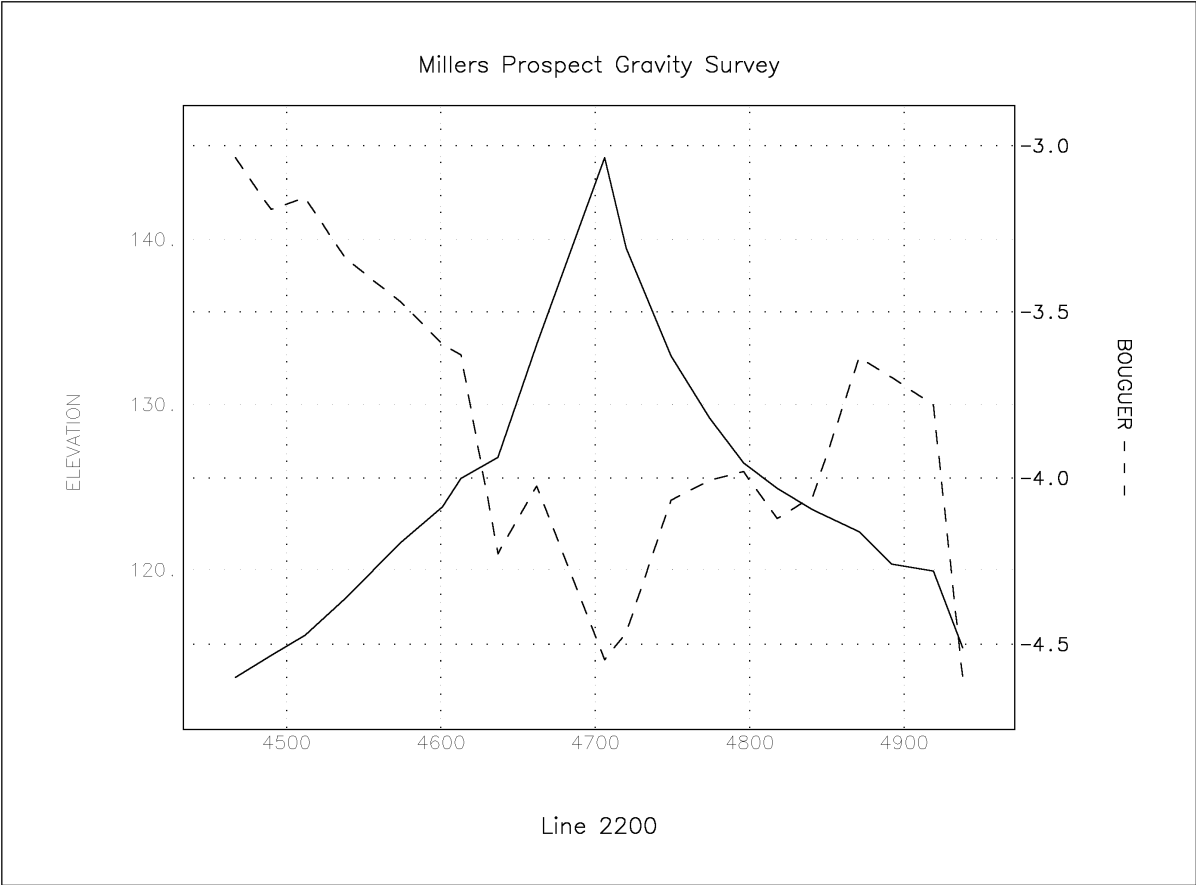


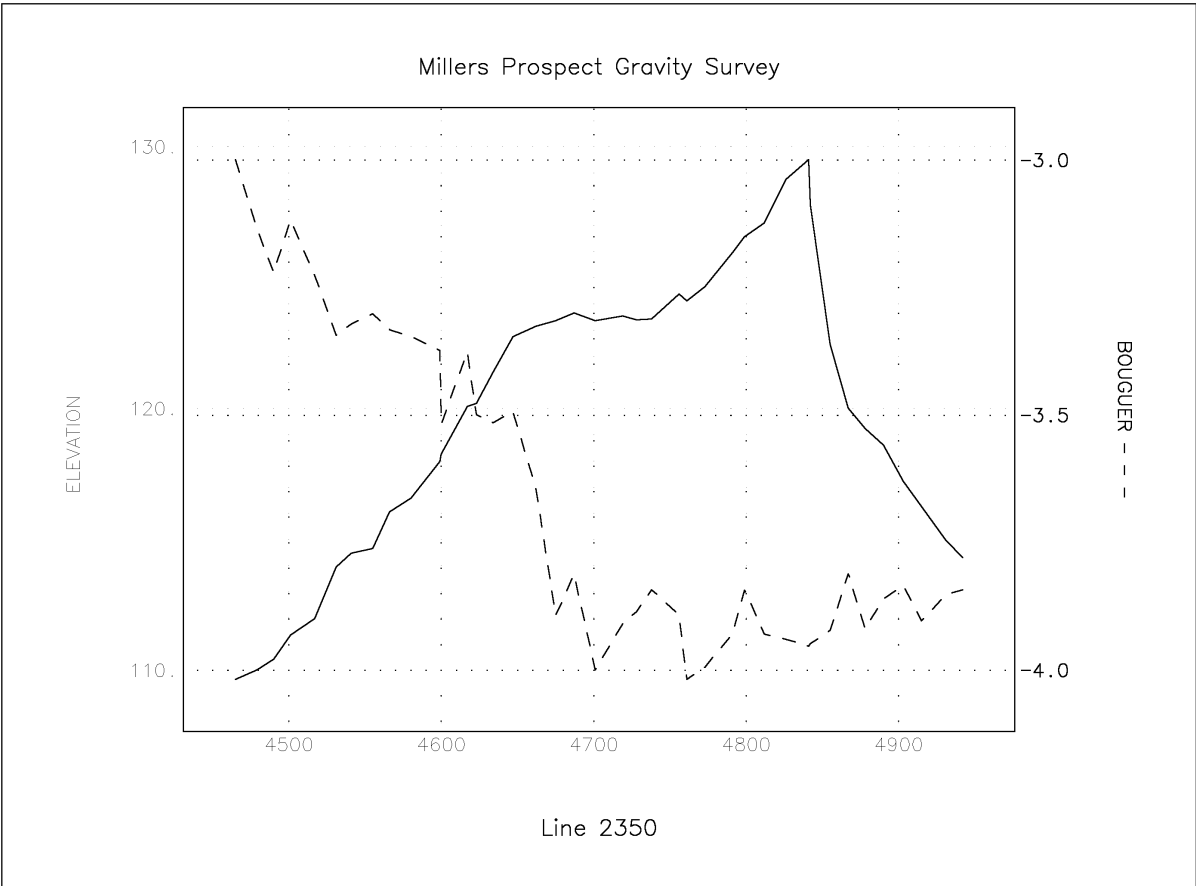
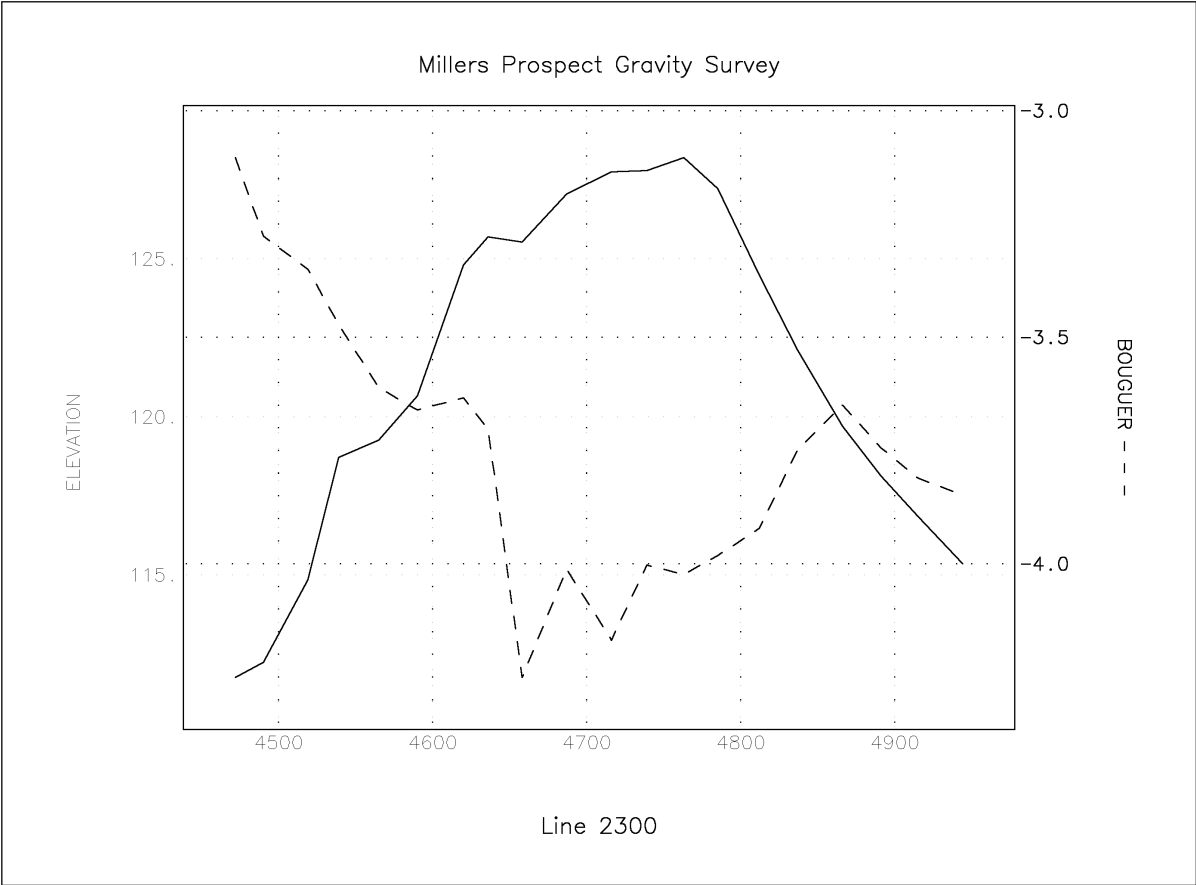


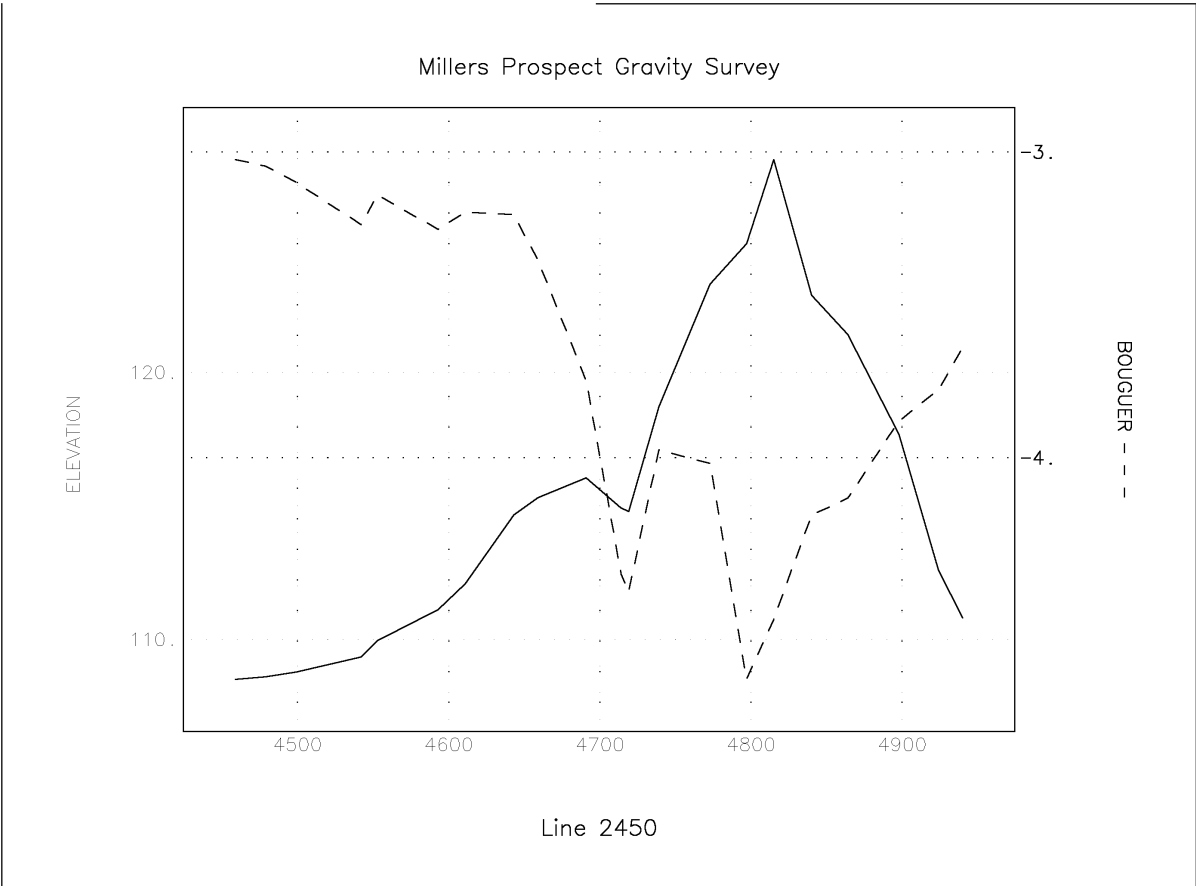
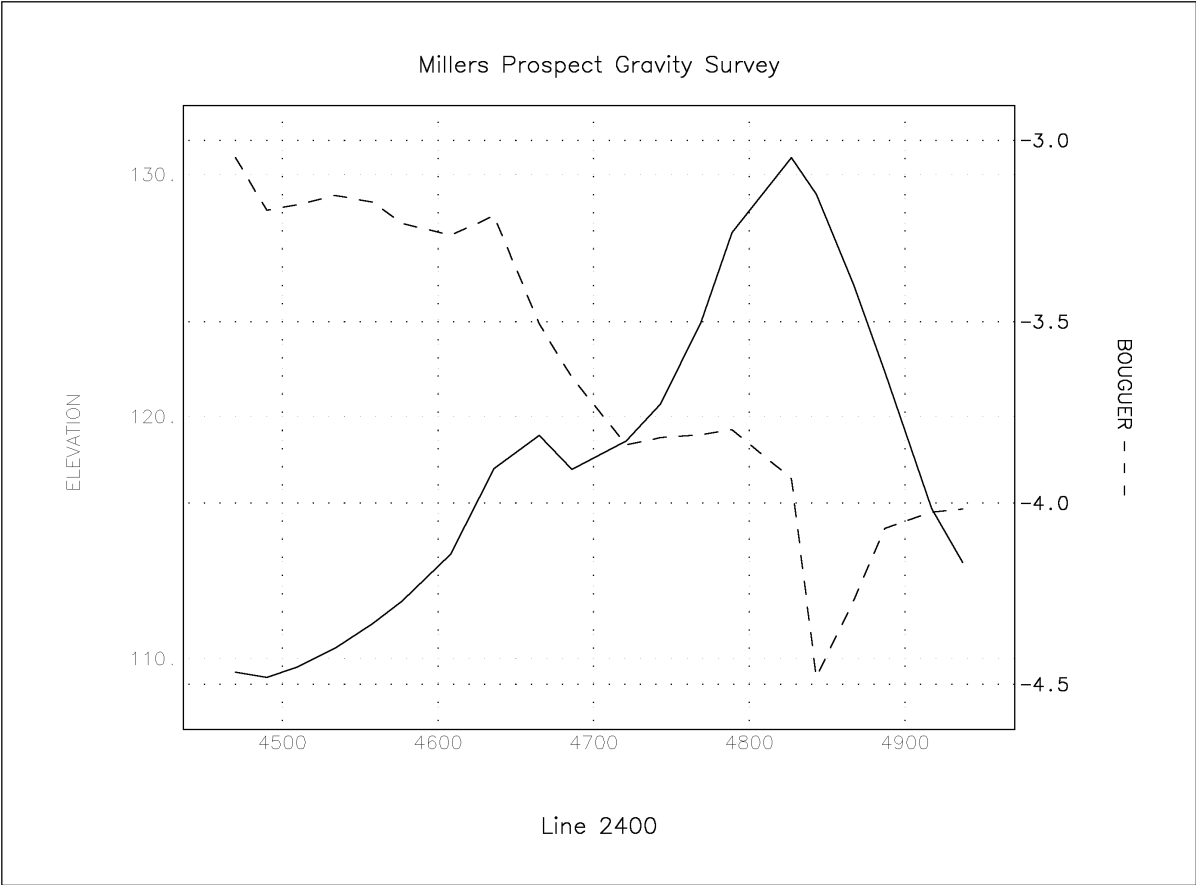


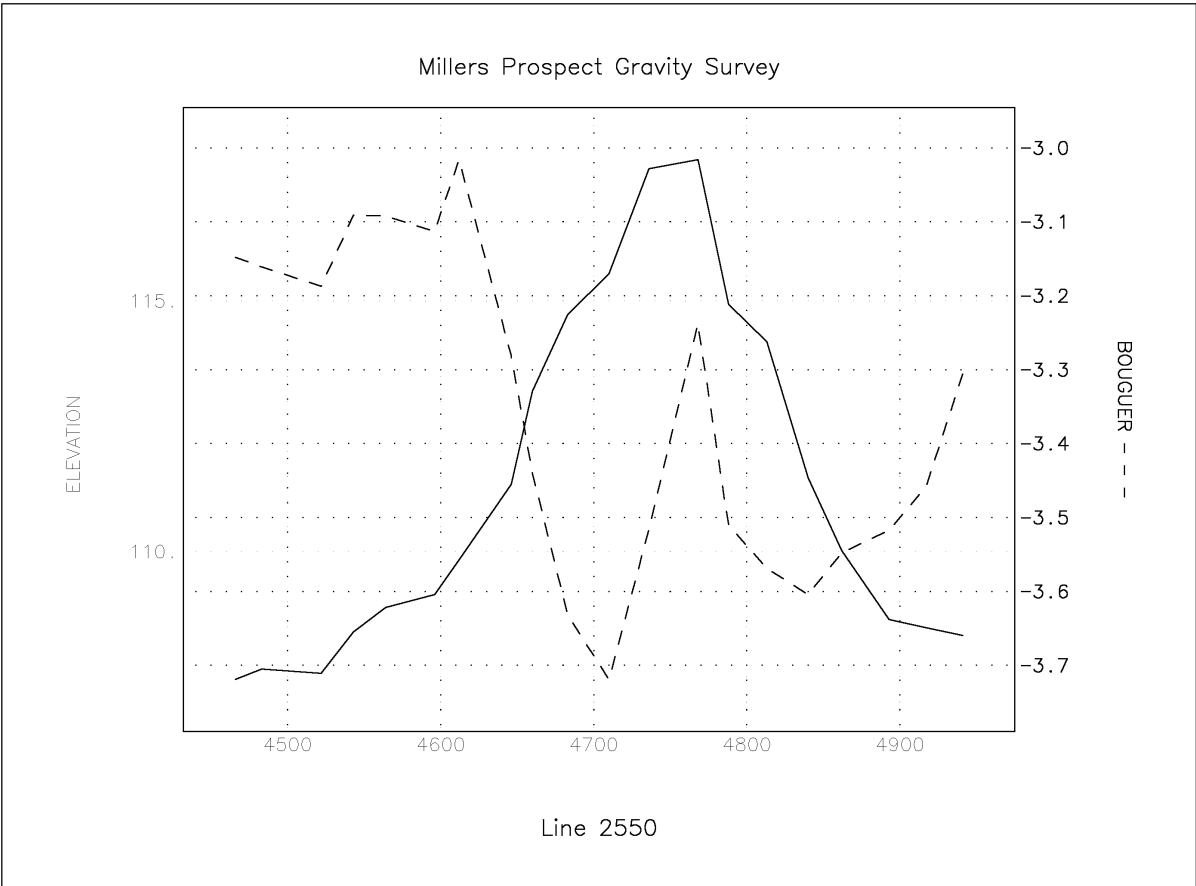
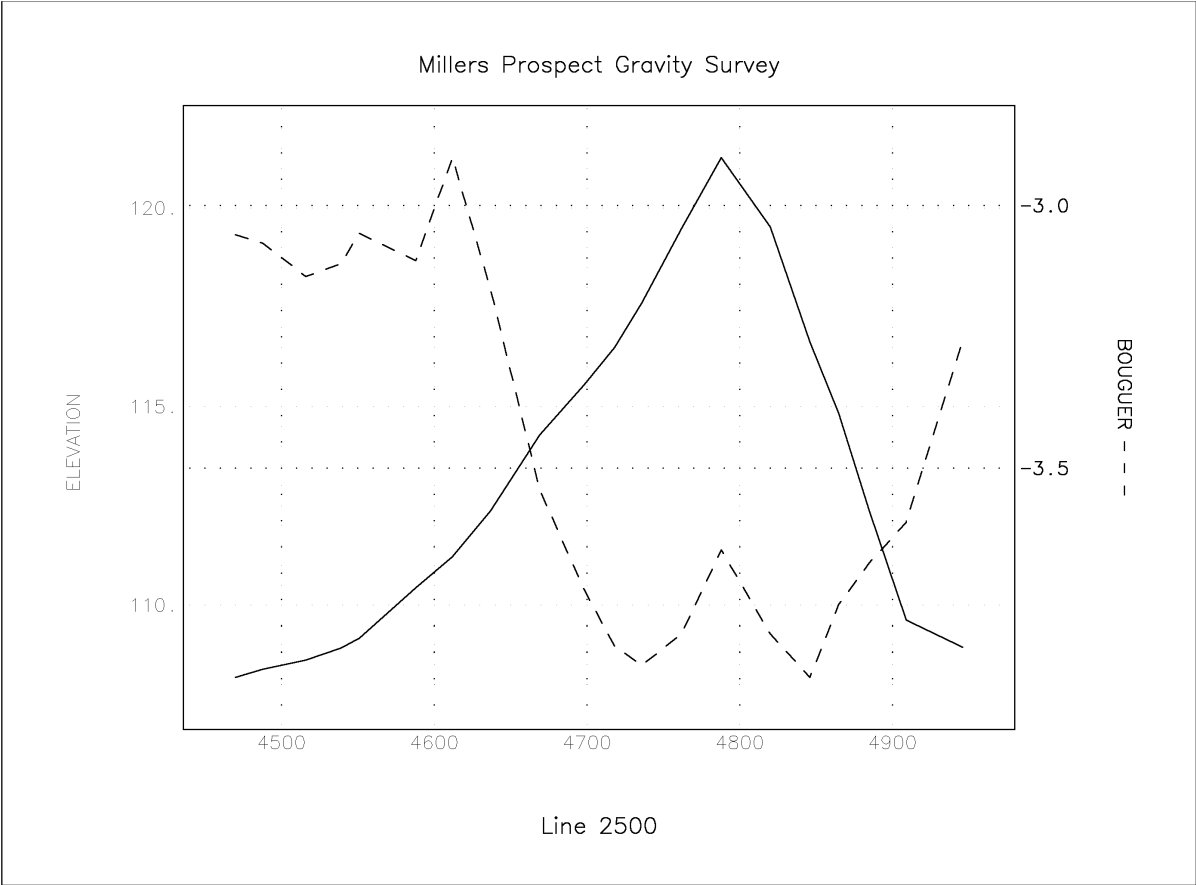




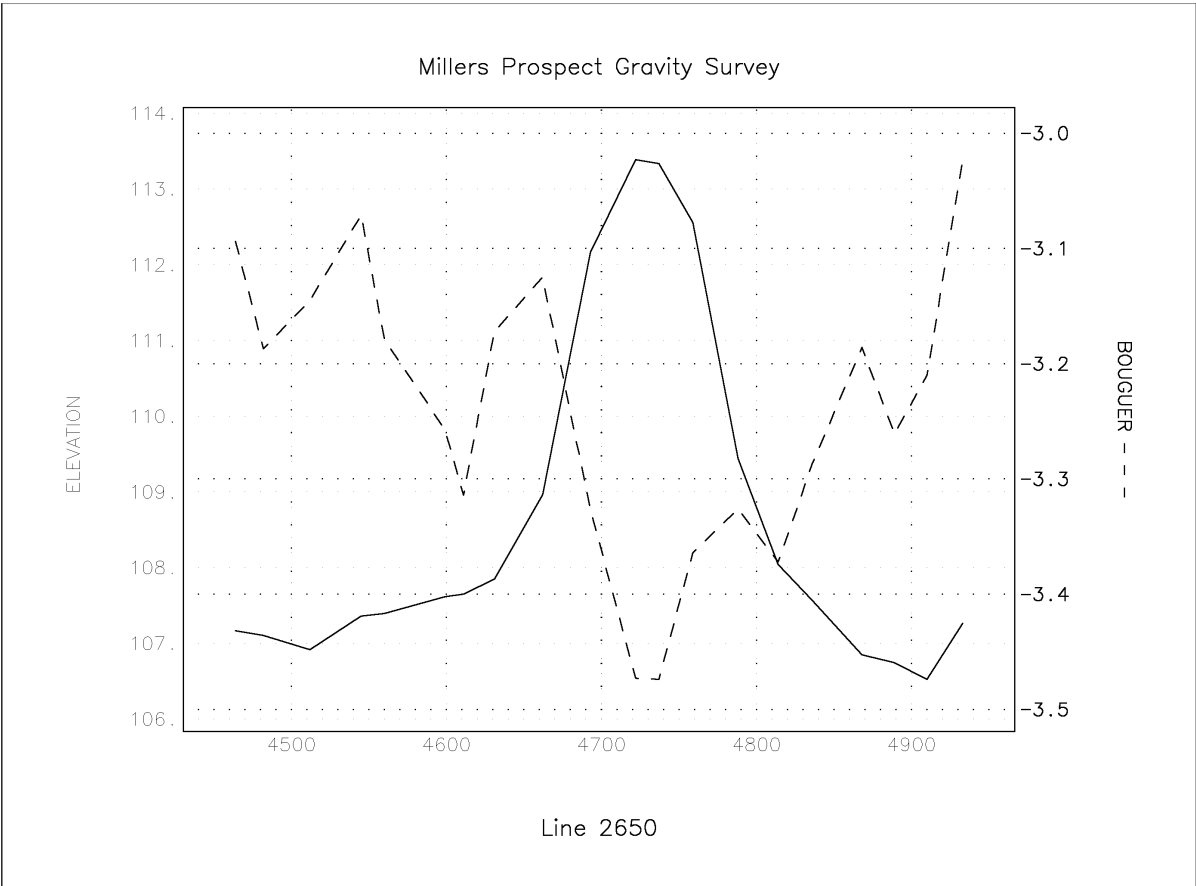
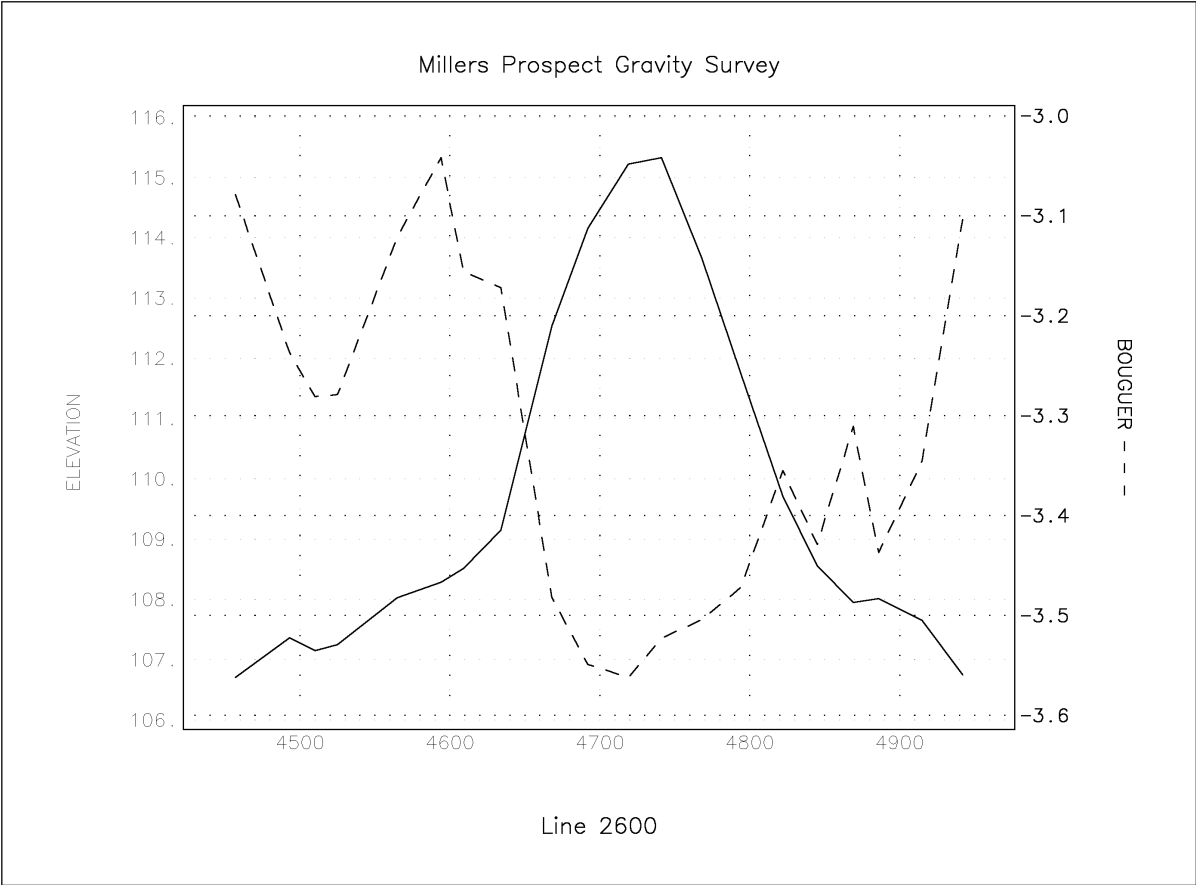












# PROCESSED RESULTS

## MILLERS PROSPECT GRAVITY SURVEY

/	MGA94	ZONE 52	GRID	drift	corr'd	obs	anom	freeair	bouguer	bouguer	height
/	E	N	Line	Stn	meter	mgal		corn	corn	anom	(AHD)
/										(2.67)	
/D143											
/	804734.3	8512597.6	0	2501	+0.000	3043.730	978281.976	-28.751	39.126	-14.187	-3.812 126.787
/	804734.3	8512597.6	0	2501	+0.005	3043.730	978281.976	-28.751	39.126	-14.187	-3.812 126.787
/	804734.3	8512597.6	0	2501	+0.185	3043.725	978281.976	-28.751	39.126	-14.187	-3.812 126.787
/	804734.3	8512597.6	0	2501	+0.005	3043.540	978281.976	-28.751	39.126	-14.187	-3.812 126.787
	804545.3	8512528.1	2350	4600	+0.049	3045.924	978284.175	-26.578	36.406	-13.201	-3.373 117.972
	804564.2	8512526.8	2350	4625	+0.041	3045.506	978283.757	-26.997	37.059	-13.438	-3.376 120.086
	804591.6	8512540.7	2350	4650	+0.040	3044.860	978283.111	-27.637	37.879	-13.735	-3.493 122.745
	804604.8	8512549.0	2350	4675	+0.038	3044.628	978282.879	-27.866	38.004	-13.780	-3.643 123.150
	804630.5	8512550.5	2350	4700	+0.037	3044.357	978282.608	-28.137	38.162	-13.838	-3.812 123.663
	804661.1	8512560.8	2350	4725	+0.035	3044.280	978282.531	-28.210	38.125	-13.824	-3.909 123.542
	804677.7	8512572.1	2350	4750	+0.026	3044.366	978282.617	-28.119	38.088	-13.811	-3.842 123.423
	804697.4	8512569.3	2350	4775	+0.023	3044.128	978282.379	-28.358	38.386	-13.919	-3.892 124.386
	804735.1	8512592.2	2350	4800	+0.021	3043.786	978282.037	-28.692	39.060	-14.163	-3.795 126.573
	804508.0	8512576.3	2400	4600	+0.051	3047.151	978285.402	-25.334	34.680	-12.575	-3.229 112.378
	804537.2	8512585.6	2400	4625	+0.055	3046.735	978284.986	-25.746	35.275	-12.791	-3.262 114.307
	804565.9	8512586.2	2400	4650	+0.060	3046.090	978284.341	-26.391	36.370	-13.188	-3.208 117.855
	804592.3	8512598.6	2400	4675	+0.061	3045.521	978283.772	-26.955	36.789	-13.340	-3.506 119.212
	804608.9	8512618.4	2400	4700	+0.062	3045.642	978283.893	-26.827	36.355	-13.183	-3.654 117.807
	804644.4	8512620.2	2400	4725	+0.064	3045.224	978283.475	-27.244	36.718	-13.314	-3.840 118.983
	804667.0	8512621.5	2400	4750	+0.066	3044.941	978283.192	-27.526	37.193	-13.486	-3.820 120.522
	804688.3	8512642.0	2400	4775	+0.077	3044.277	978282.528	-28.183	38.235	-13.864	-3.812 123.898
	804708.5	8512645.6	2400	4800	+0.085	3043.560	978281.811	-28.898	39.380	-14.279	-3.798 127.609
	804749.2	8512640.8	2400	4825	+0.094	3042.819	978281.070	-29.641	40.332	-14.625	-3.933 130.694
	804763.4	8512648.7	2400	4850	+0.099	3042.564	978280.815	-29.893	39.869	-14.457	-4.481 129.192
	804784.4	8512661.6	2400	4875	+0.101	3043.511	978281.762	-28.941	38.709	-14.036	-4.268 125.434
	804802.8	8512671.6	2400	4900	+0.105	3044.410	978282.661	-28.038	37.604	-13.635	-4.070 121.852
	804835.8	8512665.6	2400	4925	+0.109	3045.569	978283.820	-26.881	35.859	-13.003	-4.025 116.200
	804854.1	8512675.2	2400	4950	+0.111	3046.011	978284.262	-26.436	35.172	-12.754	-4.017 113.974
	804511.2	8512617.6	2450	4600	+0.169	3047.359	978285.610	-25.110	34.292	-12.434	-3.253 111.120
	804527.5	8512626.7	2450	4625	+0.168	3047.223	978285.474	-25.243	34.588	-12.542	-3.197 112.079
	804633.4	8512651.0	2450	4725	+0.149	3045.439	978283.690	-27.018	35.423	-12.845	-4.439 114.786
	804647.0	8512674.3	2450	4750	+0.145	3045.125	978283.376	-27.323	36.631	-13.283	-3.974 118.702
	804676.5	8512692.9	2450	4775	+0.142	3044.167	978282.418	-28.274	38.053	-13.798	-4.019 123.307
	804705.0	8512683.0	2450	4800	+0.127	3043.167	978281.418	-29.277	38.519	-13.967	-4.725 124.820
	804722.5	8512687.7	2450	4825	+0.124	3042.744	978280.995	-29.699	39.488	-14.318	-4.529 127.958
	804742.6	8512705.5	2450	4850	+0.122	3044.077	978282.328	-28.359	37.921	-13.750	-4.188 122.881
	804766.6	8512709.5	2450	4875	+0.120	3044.420	978282.671	-28.014	37.468	-13.586	-4.132 121.413
	804799.5	8512717.5	2450	4900	+0.119	3045.404	978283.655	-27.027	36.317	-13.169	-3.879 117.682
	804826.1	8512721.3	2450	4925	+0.116	3046.506	978284.757	-25.924	34.745	-12.599	-3.777 112.590
	804838.8	8512734.1	2450	4950	+0.114	3046.989	978285.240	-25.436	34.195	-12.399	-3.641 110.806
	804492.7	8512660.3	2500	4600	+0.172	3047.627	978285.878	-24.827	34.079	-12.357	-3.105 110.432
	804513.1	8512676.1	2500	4625	+0.174	3047.664	978285.915	-24.784	34.320	-12.444	-2.909 111.211
	804538.3	8512681.3	2500	4650	+0.176	3047.181	978285.432	-25.265	34.680	-12.575	-3.160 112.380
	804568.0	8512692.5	2500	4675	+0.177	3046.422	978284.673	-26.020	35.267	-12.788	-3.540 114.282
	804595.7	8512702.5	2500	4700	+0.180	3045.980	978284.231	-26.458	35.657	-12.929	-3.730 115.545
/D144											
/	804734.3	8512597.6	0	2501	+0.000	3043.620	978281.976	-28.751	39.126	-14.187	-3.812 126.787
/	804734.3	8512597.6	0	2501	-0.005	3043.620	978281.976	-28.751	39.126	-14.187	-3.812 126.787
/	804734.3	8512597.6	0	2501	+0.015	3043.625	978281.976	-28.751	39.126	-14.187	-3.812 126.787
/	804734.3	8512597.6	0	2501	+0.005	3043.610	978281.976	-28.751	39.126	-14.187	-3.812 126.787
	804570.2	8512433.7	2250	4600	+0.014	3044.539	978282.890	-27.898	38.110	-13.819	-3.607 123.494
	804591.2	8512440.6	2250	4625	+0.014	3044.064	978282.415	-28.370	38.794	-14.067	-3.643 125.710
	804613.8	8512446.4	2250	4650	+0.014	3043.214	978281.565	-29.218	39.885	-14.462	-3.796 129.244
	804634.5	8512443.4	2250	4675	+0.014	3042.239	978280.590	-30.194	41.232	-14.951	-3.913 133.610
	804658.7	8512459.0	2250	4700	+0.014	3041.004	978279.355	-31.423	42.495	-15.409	-4.337 137.704
	804682.7	8512467.6	2250	4725	+0.014	3041.499	978279.850	-30.925	41.702	-15.121	-4.344 135.133
	804710.5	8512470.7	2250	4750	+0.014	3042.234	978280.585	-30.189	40.881	-14.824	-4.131 132.473
	804734.4	8512482.5	2250	4775	+0.014	3042.879	978281.230	-29.539	39.877	-14.460	-4.122 129.219
	804758.9	8512490.8	2250	4800	+0.014	3043.414	978281.765	-29.001	39.075	-14.169	-4.095 126.619

804782.1	8512496.2	2250	4825	+0.015	3043.895	978282.246	-28.518	38.388	-13.920	-4.050	124.394
804800.6	8512502.2	2250	4850	+0.015	3044.250	978282.601	-28.161	37.953	-13.762	-3.969	122.985
804551.8	8512478.2	2300	4600	+0.013	3045.023	978283.374	-27.398	37.239	-13.503	-3.661	120.672
804585.6	8512470.8	2300	4625	+0.013	3044.238	978282.589	-28.185	38.518	-13.967	-3.634	124.815
804595.9	8512490.9	2300	4650	+0.013	3043.988	978282.339	-28.428	38.788	-14.065	-3.704	125.691
804615.8	8512499.4	2300	4675	+0.013	3043.468	978281.819	-28.944	38.741	-14.048	-4.251	125.537
804641.3	8512515.3	2300	4700	+0.013	3043.403	978281.754	-29.003	39.209	-14.217	-4.012	127.055
804671.4	8512515.9	2300	4725	+0.013	3043.108	978281.459	-29.298	39.425	-14.296	-4.169	127.755
804693.7	8512523.9	2300	4750	+0.012	3043.262	978281.613	-29.141	39.439	-14.301	-4.003	127.800
804740.4	8512527.9	2300	4800	+0.011	3043.396	978281.747	-29.005	39.259	-14.236	-3.982	127.218
804788.9	8512547.9	2300	4850	+0.010	3044.630	978282.981	-27.764	37.678	-13.662	-3.748	122.094
804815.8	8512556.1	2300	4875	+0.010	3045.195	978283.546	-27.196	36.940	-13.395	-3.650	119.702
804838.5	8512569.0	2300	4900	+0.010	3045.405	978283.756	-26.981	36.456	-13.219	-3.744	118.132
804861.7	8512575.1	2300	4925	+0.009	3045.589	978283.940	-26.795	36.059	-13.075	-3.811	116.846
804887.3	8512590.8	2300	4950	+0.009	3045.839	978284.190	-26.539	35.598	-12.908	-3.849	115.354
804756.9	8512611.7	2350	4825	+0.009	3043.104	978281.455	-29.266	39.736	-14.408	-3.939	128.761
804735.1	8512592.5	2350	4800	+0.015	3043.640	978281.991	-28.738	39.057	-14.162	-3.843	126.563
804769.2	8512622.4	2350	4850	+0.009	3042.939	978281.290	-29.428	39.967	-14.492	-3.953	129.510
804811.3	8512612.3	2350	4875	+0.009	3044.994	978283.345	-27.376	36.802	-13.344	-3.919	119.254
804818.8	8512630.7	2350	4900	+0.009	3045.174	978283.525	-27.189	36.601	-13.272	-3.860	118.602
804843.6	8512633.2	2350	4925	+0.009	3045.589	978283.940	-26.773	35.880	-13.010	-3.903	116.267
804870.0	8512640.4	2350	4950	+0.009	3046.024	978284.375	-26.335	35.271	-12.790	-3.854	114.295
804560.2	8512630.0	2450	4650	+0.002	3046.607	978284.958	-25.758	35.384	-12.831	-3.204	114.661
804573.3	8512641.6	2450	4675	+0.002	3046.327	978284.678	-26.033	35.583	-12.903	-3.353	115.306
804604.1	8512651.2	2450	4700	+0.002	3045.782	978284.133	-26.575	35.812	-12.986	-3.748	116.048
804630.2	8512644.3	2450	4725	+0.001	3045.376	978283.727	-26.983	35.462	-12.859	-4.380	114.913
804615.2	8512704.6	2500	4725	+0.002	3045.587	978283.938	-26.750	35.946	-13.034	-3.838	116.481
804631.7	8512712.5	2500	4750	+0.002	3045.327	978283.678	-27.007	36.292	-13.160	-3.875	117.601
804655.8	8512722.5	2500	4775	+0.002	3045.012	978283.363	-27.318	36.873	-13.370	-3.815	119.486
804679.4	8512736.0	2500	4800	+0.002	3044.817	978283.168	-27.508	37.423	-13.570	-3.655	121.268
804710.9	8512741.5	2500	4825	+0.003	3044.998	978283.349	-27.325	36.884	-13.374	-3.815	119.521
804736.6	8512745.2	2500	4850	+0.003	3045.483	978283.834	-26.838	35.991	-13.051	-3.898	116.628
804755.5	8512750.5	2500	4875	+0.003	3045.973	978284.324	-26.346	35.437	-12.850	-3.759	114.832
804773.6	8512758.1	2500	4900	+0.003	3046.533	978284.884	-25.784	34.679	-12.575	-3.680	112.374
804796.2	8512765.6	2500	4925	+0.003	3047.148	978285.499	-25.166	33.830	-12.267	-3.603	109.623
804831.5	8512777.1	2500	4950	+0.003	3047.623	978285.974	-24.686	33.619	-12.190	-3.258	108.939
804500.8	8512715.9	2550	4625	+0.007	3047.712	978286.063	-24.621	33.896	-12.291	-3.016	109.838
804529.0	8512741.2	2550	4650	+0.007	3047.142	978285.493	-25.182	34.359	-12.459	-3.281	111.339
804544.5	8512738.1	2550	4675	+0.005	3046.620	978284.971	-25.705	34.931	-12.666	-3.440	113.193
804570.6	8512730.0	2550	4700	+0.005	3046.130	978284.481	-26.198	35.404	-12.838	-3.632	114.724
804592.8	8512750.3	2550	4725	+0.005	3045.875	978284.226	-26.445	35.655	-12.929	-3.719	115.539
804619.1	8512753.4	2550	4750	+0.004	3045.664	978284.015	-26.655	36.302	-13.163	-3.516	117.634
804691.7	8512781.4	2550	4825	+0.004	3046.279	978284.630	-26.029	35.238	-12.777	-3.569	114.186
804716.5	8512790.3	2550	4850	+0.004	3046.774	978285.125	-25.531	34.400	-12.474	-3.604	111.472
804738.3	8512795.3	2550	4875	+0.004	3047.114	978285.465	-25.189	33.952	-12.311	-3.548	110.020
804767.7	8512805.0	2550	4900	+0.003	3047.413	978285.764	-24.886	33.527	-12.157	-3.517	108.641
804789.2	8512815.1	2550	4925	+0.003	3047.498	978285.849	-24.797	33.477	-12.139	-3.459	108.480
804813.0	8512822.4	2550	4950	+0.003	3047.678	978286.029	-24.615	33.431	-12.122	-3.306	108.330

/D145

/ 804734.3	8512597.6	0	2501	+0.000	3043.650	978281.976	-28.751	39.126	-14.187	-3.812	126.787
/ 804734.3	8512597.6	0	2501	-0.005	3043.650	978281.976	-28.751	39.126	-14.187	-3.812	126.787
/ 804734.3	8512597.6	0	2501	-0.005	3043.655	978281.976	-28.751	39.126	-14.187	-3.812	126.787
/ 804734.3	8512597.6	0	2501	+0.010	3043.660	978281.976	-28.751	39.126	-14.187	-3.812	126.787
804699.6	8512209.4	2000	4650	-0.005	3042.650	978280.971	-29.899	40.984	-14.861	-3.776	132.805
804716.5	8512214.8	2000	4675	-0.005	3042.850	978281.171	-29.697	40.605	-14.723	-3.815	131.577
804738.9	8512225.7	2000	4700	-0.005	3043.290	978281.611	-29.253	39.946	-14.485	-3.791	129.442
804757.8	8512228.8	2000	4725	-0.005	3043.670	978281.991	-28.871	39.259	-14.235	-3.848	127.215
804776.6	8512247.2	2000	4750	-0.005	3044.195	978282.516	-28.340	38.394	-13.922	-3.867	124.414
804810.8	8512250.9	2000	4775	-0.005	3045.025	978283.346	-27.508	37.491	-13.594	-3.611	121.488
804829.1	8512257.5	2000	4800	-0.005	3045.245	978283.566	-27.286	37.146	-13.469	-3.609	120.369
804851.4	8512254.0	2000	4825	-0.005	3045.430	978283.751	-27.102	36.827	-13.354	-3.629	119.335
804870.5	8512267.4	2000	4850	-0.005	3045.410	978283.731	-27.117	36.671	-13.297	-3.743	118.831
804888.2	8512269.0	2000	4875	-0.004	3045.396	978283.717	-27.130	36.553	-13.254	-3.831	118.449
804921.1	8512287.7	2000	4900	-0.004	3045.406	978283.727	-27.113	36.426	-13.208	-3.896	118.035
804944.9	8512293.8	2000	4925	-0.004	3045.536	978283.857	-26.981	36.260	-13.148	-3.869	117.499
804970.1	8512298.2	2000	4950	-0.004	3045.736	978284.057	-26.779	36.133	-13.102	-3.748	117.086
804812.8	8512308.0	2050	4800	-0.004	3044.776	978283.097	-27.736	37.556	-13.618	-3.798	121.697
804833.4	8512305.9	2050	4825	-0.004	3045.036	978283.357	-27.477	37.202	-13.490	-3.764	120.552

804851.4	8512318.0	2050	4850	-0.004	3045.036	978283.357	-27.472	37.028	-13.427	-3.871	119.988
804882.0	8512318.3	2050	4875	-0.004	3045.181	978283.502	-27.327	36.748	-13.325	-3.904	119.081
804931.8	8512337.3	2050	4925	-0.004	3045.276	978283.597	-27.225	36.531	-13.246	-3.940	118.376
804954.6	8512348.3	2050	4950	-0.004	3045.441	978283.762	-27.056	36.425	-13.208	-3.838	118.034
804794.0	8512342.9	2100	4800	-0.004	3044.231	978282.552	-28.268	38.343	-13.903	-3.829	124.247
804815.7	8512354.7	2100	4825	-0.004	3044.396	978282.717	-28.099	38.116	-13.821	-3.804	123.512
804845.5	8512357.1	2100	4850	-0.004	3044.666	978282.987	-27.828	37.356	-13.545	-4.017	121.050
804860.8	8512365.1	2100	4875	-0.003	3044.787	978283.108	-27.704	37.149	-13.470	-4.025	120.378
804885.9	8512370.7	2100	4900	-0.003	3044.922	978283.243	-27.567	36.929	-13.391	-4.028	119.667
804915.3	8512390.9	2100	4925	-0.003	3044.957	978283.278	-27.524	36.959	-13.401	-3.967	119.762
804595.2	8512327.8	2150	4600	-0.002	3045.078	978283.399	-27.428	37.422	-13.569	-3.575	121.264
804623.5	8512340.1	2150	4625	-0.002	3044.258	978282.579	-28.243	38.522	-13.968	-3.689	124.829
804638.3	8512344.6	2150	4650	-0.002	3043.663	978281.984	-28.836	39.342	-14.266	-3.760	127.485
804675.7	8512345.2	2150	4675	-0.002	3041.798	978280.119	-30.701	41.751	-15.139	-4.089	135.292
804690.1	8512363.8	2150	4700	-0.002	3041.193	978279.514	-31.299	42.546	-15.427	-4.181	137.867
804706.7	8512376.3	2150	4725	-0.002	3039.488	978277.809	-32.999	44.757	-16.229	-4.471	145.034
804746.3	8512391.0	2150	4750	-0.002	3042.548	978280.869	-29.934	40.553	-14.705	-4.085	131.410
804767.4	8512387.8	2150	4775	-0.003	3043.262	978281.583	-29.221	39.539	-14.337	-4.019	128.123
804790.2	8512398.8	2150	4800	-0.003	3043.797	978282.118	-28.682	38.761	-14.055	-3.976	125.602
804809.5	8512398.8	2150	4825	-0.003	3044.047	978282.368	-28.432	38.259	-13.873	-4.046	123.976
804854.4	8512401.4	2150	4875	-0.003	3044.527	978282.848	-27.950	37.458	-13.582	-4.075	121.381
804888.0	8512435.3	2150	4900	-0.003	3044.722	978283.043	-27.743	37.382	-13.555	-3.916	121.134
804906.8	8512431.2	2150	4925	-0.003	3044.752	978283.073	-27.714	37.433	-13.573	-3.855	121.298
804934.4	8512439.7	2150	4950	-0.003	3044.827	978283.148	-27.636	37.262	-13.511	-3.885	120.746
804592.0	8512382.8	2200	4600	-0.002	3044.538	978282.859	-27.947	38.203	-13.852	-3.597	123.793
804602.1	8512393.8	2200	4625	-0.002	3044.163	978282.484	-28.318	38.735	-14.045	-3.629	125.518
804622.1	8512407.6	2200	4650	-0.001	3043.309	978281.630	-29.167	39.126	-14.187	-4.228	126.787
804647.8	8512410.8	2200	4675	-0.001	3042.164	978280.485	-30.311	41.241	-14.954	-4.024	133.639
804698.1	8512396.3	2200	4700	-0.001	3039.424	978277.745	-33.056	44.728	-16.219	-4.547	144.938
804707.4	8512415.3	2200	4725	-0.001	3040.574	978278.895	-31.899	43.040	-15.606	-4.466	139.468
804733.8	8512427.9	2200	4750	-0.001	3042.249	978280.570	-30.219	41.030	-14.878	-4.067	132.955
804756.1	8512439.4	2200	4775	-0.001	3043.049	978281.370	-29.415	39.862	-14.454	-4.007	129.171
804781.6	8512429.7	2200	4800	-0.001	3043.614	978281.935	-28.853	39.022	-14.150	-3.981	126.449
804798.9	8512451.3	2200	4825	-0.001	3043.764	978282.085	-28.695	38.553	-13.980	-4.122	124.930
804821.9	8512452.4	2200	4850	-0.001	3044.089	978282.410	-28.370	38.147	-13.832	-4.055	123.613
804850.3	8512464.3	2200	4875	-0.001	3044.764	978283.085	-27.690	37.737	-13.683	-3.637	122.283
804867.0	8512481.3	2200	4900	-0.001	3045.079	978283.400	-27.369	37.138	-13.467	-3.697	120.345
804893.3	8512486.1	2200	4925	-0.001	3045.079	978283.400	-27.367	37.006	-13.418	-3.780	119.915
804913.0	8512486.0	2200	4950	-0.001	3045.174	978283.495	-27.272	35.570	-12.898	-4.600	115.263
804782.2	8512496.1	2250	4825	-0.005	3043.940	978282.261	-28.503	38.374	-13.915	-4.043	124.350
804836.8	8512523.3	2250	4875	+0.000	3045.275	978283.596	-27.158	36.756	-13.328	-3.730	119.106
804864.4	8512524.6	2250	4900	+0.000	3045.495	978283.816	-26.937	36.412	-13.203	-3.728	117.992
804880.9	8512524.2	2250	4925	+0.000	3045.480	978283.801	-26.952	36.345	-13.179	-3.786	117.775
804901.0	8512531.6	2250	4950	+0.000	3045.755	978284.076	-26.674	35.953	-13.037	-3.758	116.502
804721.3	8512514.9	2300	4775	+0.000	3043.195	978281.516	-29.241	39.563	-14.346	-4.024	128.202
804763.5	8512545.5	2300	4825	+0.000	3044.015	978282.336	-28.410	38.419	-13.931	-3.922	124.493
/D146											
/ 804734.3	8512597.6	0	2501	+0.000	3043.705	978281.976	-28.751	39.126	-14.187	-3.812	126.787
/ 804734.3	8512597.6	0	2501	+0.005	3043.705	978281.976	-28.751	39.126	-14.187	-3.812	126.787
/ 804734.3	8512597.6	0	2501	+0.310	3043.700	978281.976	-28.751	39.126	-14.187	-3.812	126.787
/ 804734.3	8512597.6	0	2501	-0.010	3043.390	978281.976	-28.751	39.126	-14.187	-3.812	126.787
804640.5	8512188.8	2000	4600	+0.120	3043.925	978282.201	-28.677	39.335	-14.263	-3.605	127.462
804658.7	8512201.5	2000	4625	+0.168	3042.698	978280.974	-29.899	40.890	-14.827	-3.836	132.500
804623.6	8512232.7	2050	4600	+0.117	3043.992	978282.268	-28.594	39.289	-14.247	-3.551	127.315
804651.0	8512244.3	2050	4625	+0.114	3043.429	978281.705	-29.152	40.019	-14.511	-3.644	129.679
804669.3	8512249.3	2050	4650	+0.095	3043.290	978281.566	-29.289	39.933	-14.480	-3.836	129.399
804690.5	8512258.9	2050	4675	+0.091	3043.161	978281.437	-29.415	40.441	-14.664	-3.638	131.047
804714.9	8512258.8	2050	4700	+0.088	3043.098	978281.374	-29.478	40.458	-14.670	-3.690	131.103
804738.8	8512272.4	2050	4725	+0.075	3042.995	978281.271	-29.576	40.243	-14.592	-3.925	130.406
804766.9	8512280.9	2050	4750	+0.072	3043.977	978282.253	-28.590	39.148	-14.195	-3.637	126.857
804789.5	8512295.9	2050	4775	+0.070	3044.555	978282.831	-28.007	38.091	-13.812	-3.728	123.432
804813.0	8512307.9	2050	4800	+0.065	3044.870	978283.146	-27.687	37.561	-13.620	-3.746	121.715
804908.7	8512324.8	2050	4900	+0.061	3045.316	978283.592	-27.234	36.623	-13.280	-3.891	118.674
804594.9	8512298.4	2100	4600	+0.173	3045.418	978283.694	-27.144	37.291	-13.522	-3.374	120.840
804633.3	8512308.1	2100	4625	+0.184	3044.404	978282.680	-28.154	38.624	-14.005	-3.535	125.159
804693.0	8512313.7	2100	4675	+0.233	3042.303	978280.579	-30.253	41.464	-15.035	-3.823	134.363
804714.5	8512336.0	2100	4700	+0.239	3040.894	978279.170	-31.653	43.499	-15.773	-3.927	140.955
804726.3	8512353.7	2100	4725	+0.246	3041.351	978279.627	-31.190	42.588	-15.442	-4.044	138.003

804759.2	8512334.3	2100	4750	+0.250	3043.355	978281.631	-29.193	39.783	-14.425	-3.835	128.913
804773.4	8512337.1	2100	4775	+0.256	3043.916	978282.192	-28.631	39.087	-14.173	-3.716	126.660
804793.6	8512343.2	2100	4800	+0.017	3044.252	978282.528	-28.292	38.335	-13.900	-3.858	124.221
804834.1	8512406.3	2150	4850	+0.037	3044.352	978282.628	-28.169	37.821	-13.714	-4.062	122.558
804646.5	8512774.6	2550	4775	+0.294	3045.974	978284.250	-26.412	36.358	-13.184	-3.238	117.816
804665.0	8512782.1	2550	4800	+0.291	3046.266	978284.542	-26.117	35.468	-12.861	-3.510	114.931
/D153											
/ 804734.3	8512597.6	0	2501	+0.000	3043.795	978281.976	-28.751	39.126	-14.187	-3.812	126.787
/ 804734.3	8512597.6	0	2501	+0.110	3043.795	978281.976	-28.751	39.126	-14.187	-3.812	126.787
/ 804734.3	8512597.6	0	2501	-0.010	3043.685	978281.976	-28.751	39.126	-14.187	-3.812	126.787
804431.1	8512491.5	2350	4488	+0.103	3047.813	978285.994	-24.773	33.949	-12.310	-3.134	110.010
804441.1	8512495.3	2350	4501	+0.103	3047.643	978285.824	-24.942	34.078	-12.357	-3.220	110.428
804450.5	8512505.0	2350	4514	+0.102	3047.562	978285.743	-25.019	34.362	-12.460	-3.117	111.349
804466.8	8512504.4	2350	4527	+0.101	3047.331	978285.512	-25.250	34.554	-12.529	-3.226	111.969
804481.9	8512503.7	2350	4540	+0.100	3046.825	978285.006	-25.756	35.165	-12.751	-3.343	113.949
804490.5	8512510.4	2350	4552	+0.099	3046.739	978284.920	-25.840	35.329	-12.811	-3.321	114.482
804502.7	8512518.6	2350	4564	+0.098	3046.723	978284.904	-25.853	35.381	-12.829	-3.301	114.651
804515.1	8512516.2	2350	4576	+0.097	3046.417	978284.598	-26.160	35.814	-12.986	-3.332	116.052
804527.4	8512523.1	2350	4588	+0.096	3046.296	978284.477	-26.278	35.978	-13.046	-3.346	116.583
804407.2	8512537.3	2400	4475	+0.089	3047.994	978286.175	-24.575	33.774	-12.247	-3.048	109.444
804425.2	8512546.7	2400	4500	+0.089	3047.889	978286.070	-24.677	33.706	-12.222	-3.193	109.221
804444.2	8512549.7	2400	4525	+0.090	3047.820	978286.001	-24.745	33.835	-12.269	-3.178	109.640
804466.5	8512564.6	2400	4550	+0.091	3047.686	978285.867	-24.873	34.078	-12.357	-3.152	110.427
804487.9	8512576.1	2400	4575	+0.092	3047.462	978285.643	-25.093	34.394	-12.472	-3.170	111.453
804379.5	8512589.8	2450	4475	+0.087	3048.182	978286.363	-24.368	33.484	-12.142	-3.025	108.504
804399.3	8512594.7	2450	4500	+0.086	3048.141	978286.322	-24.407	33.513	-12.152	-3.046	108.598
804419.0	8512598.7	2450	4525	+0.085	3048.050	978286.231	-24.497	33.570	-12.173	-3.099	108.782
804472.0	8512611.0	2450	4575	+0.083	3047.773	978285.954	-24.769	33.934	-12.304	-3.140	109.960
804378.0	8512633.8	2500	4475	+0.079	3048.199	978286.380	-24.335	33.384	-12.105	-3.056	108.178
804398.8	8512625.8	2500	4500	+0.080	3048.145	978286.326	-24.392	33.448	-12.128	-3.072	108.385
804423.0	8512644.4	2500	4525	+0.080	3048.030	978286.211	-24.500	33.519	-12.154	-3.135	108.617
804444.0	8512654.3	2500	4550	+0.081	3047.991	978286.172	-24.535	33.611	-12.188	-3.111	108.916
804453.4	8512664.6	2500	4575	+0.082	3047.997	978286.178	-24.525	33.687	-12.215	-3.053	109.162
804655.8	8512722.4	2500	4775	+0.005	3045.190	978283.371	-27.310	36.874	-13.371	-3.807	119.487
804358.6	8512681.3	2550	4475	+0.078	3048.233	978286.414	-24.284	33.159	-12.024	-3.148	107.450
804372.1	8512697.7	2550	4500	+0.077	3048.172	978286.353	-24.338	33.224	-12.047	-3.161	107.661
804404.9	8512721.9	2550	4525	+0.076	3048.156	978286.337	-24.345	33.196	-12.037	-3.187	107.569
804432.4	8512705.9	2550	4550	+0.075	3048.095	978286.276	-24.412	33.451	-12.129	-3.091	108.395
804453.0	8512707.7	2550	4575	+0.072	3047.997	978286.178	-24.509	33.601	-12.184	-3.092	108.882
804483.3	8512720.3	2550	4600	+0.056	3047.921	978286.102	-24.581	33.681	-12.213	-3.113	109.140
804337.7	8512719.8	2600	4475	+0.019	3048.434	978286.615	-24.068	32.929	-11.940	-3.079	106.706
804372.6	8512729.0	2600	4500	+0.018	3048.143	978286.324	-24.356	33.133	-12.014	-3.237	107.365
804386.1	8512742.2	2600	4525	+0.017	3048.137	978286.318	-24.357	33.066	-11.990	-3.281	107.150
804402.1	8512741.4	2600	4550	+0.015	3048.120	978286.301	-24.374	33.097	-12.001	-3.279	107.248
804436.1	8512766.3	2600	4575	+0.014	3048.114	978286.295	-24.371	33.338	-12.089	-3.121	108.031
804480.8	8512771.2	2600	4625	+0.012	3047.982	978286.163	-24.501	33.487	-12.143	-3.156	108.513
804505.9	8512775.2	2600	4650	+0.009	3047.839	978286.020	-24.642	33.684	-12.214	-3.172	109.152
804541.4	8512776.4	2600	4675	+0.009	3046.864	978285.045	-25.617	34.727	-12.592	-3.482	112.530
804562.8	8512786.2	2600	4700	+0.008	3046.473	978284.654	-26.004	35.229	-12.774	-3.549	114.158
804585.1	8512807.1	2600	4725	+0.007	3046.242	978284.423	-26.227	35.559	-12.894	-3.562	115.226
804608.1	8512808.0	2600	4750	+0.050	3046.260	978284.441	-26.209	35.591	-12.906	-3.523	115.331
804631.9	8512819.9	2600	4775	+0.049	3046.604	978284.785	-25.860	35.075	-12.718	-3.504	113.659
804657.9	8512825.5	2600	4800	+0.048	3047.008	978285.189	-25.454	34.488	-12.505	-3.472	111.756
804684.0	8512836.2	2600	4825	+0.047	3047.522	978285.703	-24.936	33.858	-12.277	-3.355	109.715
804747.0	8512847.6	2600	4900	+0.045	3047.770	978285.951	-24.684	33.334	-12.087	-3.437	108.016
804773.0	8512861.6	2600	4925	+0.044	3047.929	978286.110	-24.519	33.220	-12.046	-3.345	107.647
804798.4	8512871.0	2600	4950	+0.043	3048.343	978286.524	-24.102	32.943	-11.945	-3.104	106.751
804325.8	8512782.7	2650	4475	+0.020	3048.305	978286.486	-24.174	33.072	-11.992	-3.094	107.168
804342.3	8512791.1	2650	4500	+0.021	3048.221	978286.402	-24.255	33.053	-11.985	-3.187	107.106
804369.5	8512802.2	2650	4525	+0.022	3048.297	978286.478	-24.175	32.994	-11.964	-3.145	106.914
804404.3	8512801.9	2650	4550	+0.023	3048.283	978286.464	-24.189	33.131	-12.014	-3.071	107.360
804418.1	8512809.8	2650	4575	+0.025	3048.165	978286.346	-24.304	33.142	-12.018	-3.179	107.396
804455.8	8512817.5	2650	4600	+0.026	3048.041	978286.222	-24.425	33.210	-12.042	-3.257	107.615
804467.8	8512820.1	2650	4625	+0.031	3047.976	978286.157	-24.489	33.220	-12.046	-3.314	107.649
804486.8	8512825.8	2650	4650	+0.032	3048.077	978286.258	-24.386	33.282	-12.068	-3.172	107.848
804513.4	8512844.0	2650	4675	+0.033	3047.898	978286.079	-24.558	33.626	-12.193	-3.125	108.964
804544.2	8512849.4	2650	4700	+0.034	3047.064	978285.245	-25.390	34.614	-12.551	-3.327	112.163
804573.0	8512855.6	2650	4725	+0.035	3046.675	978284.856	-25.776	34.991	-12.688	-3.473	113.386



804589.8	8512852.5	2650	4750	+0.036	3046.686	978284.867	-25.767	34.975	-12.682	-3.474	113.333
804610.1	8512861.6	2650	4775	+0.036	3046.946	978285.127	-25.503	34.734	-12.595	-3.364	112.554
804633.1	8512885.1	2650	4800	+0.037	3047.587	978285.768	-24.853	33.773	-12.246	-3.326	109.440
804661.5	8512881.3	2650	4825	+0.038	3047.818	978285.999	-24.624	33.342	-12.090	-3.372	108.042
804682.6	8512887.4	2650	4850	+0.039	3047.994	978286.175	-24.445	33.195	-12.037	-3.287	107.567
804711.5	8512901.8	2650	4875	+0.040	3048.230	978286.411	-24.204	32.974	-11.956	-3.186	106.850
804732.7	8512903.0	2650	4900	+0.041	3048.176	978286.357	-24.257	32.941	-11.945	-3.261	106.744
804755.8	8512900.9	2650	4925	+0.041	3048.271	978286.452	-24.163	32.873	-11.920	-3.210	106.523
804775.9	8512913.7	2650	4950	+0.042	3048.307	978286.488	-24.122	33.102	-12.003	-3.023	107.264
/D154											
/ 804734.3	8512597.6	0	2501	+0.000	3043.817	978281.976	-28.751	39.126	-14.187	-3.812	126.787
/ 804734.3	8512597.6	0	2501	+0.211	3043.817	978281.976	-28.751	39.126	-14.187	-3.812	126.787
804529.9	8512158.3	2000	4475	+0.198	3047.008	978285.167	-25.722	35.764	-12.968	-2.927	115.891
804547.8	8512163.7	2000	4500	+0.199	3046.604	978284.763	-26.124	36.159	-13.112	-3.077	117.172
804571.8	8512162.8	2000	4525	+0.201	3046.161	978284.320	-26.568	36.738	-13.321	-3.151	119.048
804585.3	8512175.7	2000	4550	+0.202	3045.422	978283.581	-27.302	37.621	-13.642	-3.322	121.910
804616.6	8512183.7	2000	4575	+0.203	3044.603	978282.762	-28.118	38.590	-13.993	-3.520	125.049
804640.3	8512188.9	2000	4600	+0.204	3044.034	978282.193	-28.685	39.345	-14.267	-3.606	127.496
804504.0	8512201.7	2050	4475	+0.192	3046.852	978285.011	-25.862	35.793	-12.979	-3.048	115.984
804531.3	8512211.0	2050	4500	+0.189	3046.059	978284.218	-26.652	36.734	-13.320	-3.238	119.035
804558.0	8512217.5	2050	4525	+0.186	3045.361	978283.520	-27.347	37.640	-13.649	-3.356	121.971
804594.8	8512205.0	2050	4550	+0.185	3043.950	978282.109	-28.763	39.392	-14.284	-3.654	127.649
804602.9	8512228.2	2050	4575	+0.183	3044.058	978282.217	-28.646	39.314	-14.255	-3.588	127.394
804491.8	8512253.9	2100	4475	+0.171	3046.926	978285.085	-25.769	35.517	-12.879	-3.131	115.092
804500.0	8512256.8	2100	4487	+0.136	3046.776	978284.935	-25.918	35.697	-12.944	-3.165	115.673
804512.3	8512259.3	2100	4499	+0.172	3046.442	978284.601	-26.251	35.933	-13.029	-3.348	116.438
804521.1	8512261.8	2100	4511	+0.139	3046.349	978284.508	-26.343	36.080	-13.083	-3.346	116.915
804521.1	8512261.8	2100	4511	+0.173	3046.323	978284.482	-26.369	36.080	-13.083	-3.372	116.915
804539.7	8512265.2	2100	4523	+0.140	3046.125	978284.284	-26.566	36.349	-13.180	-3.397	117.787
804539.7	8512265.2	2100	4523	+0.174	3046.099	978284.258	-26.592	36.349	-13.180	-3.423	117.787
804549.1	8512269.6	2100	4535	+0.142	3046.027	978284.186	-26.662	36.545	-13.251	-3.369	118.422
804549.1	8512269.6	2100	4535	+0.175	3046.020	978284.179	-26.669	36.545	-13.251	-3.376	118.422
804558.4	8512271.0	2100	4550	+0.144	3045.839	978283.998	-26.850	36.802	-13.345	-3.392	119.255
804571.6	8512275.1	2100	4562	+0.147	3045.542	978283.701	-27.145	36.996	-13.415	-3.564	119.884
804571.6	8512275.1	2100	4562	+0.178	3045.533	978283.692	-27.154	36.996	-13.415	-3.573	119.884
804585.9	8512277.8	2100	4575	+0.179	3045.159	978283.318	-27.527	37.592	-13.631	-3.566	121.816
804599.6	8512282.8	2100	4588	+0.180	3045.000	978283.159	-27.684	37.784	-13.701	-3.601	122.437
804477.9	8512303.2	2150	4475	+0.134	3047.249	978285.408	-25.428	35.259	-12.785	-2.954	114.254
804503.0	8512304.9	2150	4500	+0.132	3046.677	978284.836	-26.000	35.931	-13.029	-3.097	116.432
804522.8	8512309.5	2150	4525	+0.131	3046.421	978284.580	-26.254	36.274	-13.153	-3.133	117.545
804554.4	8512312.2	2150	4550	+0.129	3046.014	978284.173	-26.660	36.513	-13.240	-3.386	118.319
804571.9	8512325.1	2150	4575	+0.127	3045.692	978283.851	-26.977	36.899	-13.380	-3.457	119.569
804465.2	8512341.3	2200	4475	+0.117	3047.307	978285.466	-25.356	35.018	-12.698	-3.036	113.474
804488.7	8512342.5	2200	4500	+0.120	3046.890	978285.049	-25.773	35.427	-12.846	-3.192	114.800
804506.6	8512359.8	2200	4525	+0.122	3046.677	978284.836	-25.979	35.807	-12.984	-3.156	116.030
804530.4	8512371.6	2200	4550	+0.124	3046.054	978284.213	-26.598	36.492	-13.232	-3.338	118.250
804564.6	8512382.3	2200	4575	+0.125	3045.250	978283.409	-27.398	37.541	-13.612	-3.470	121.648
804446.5	8512404.8	2250	4475	+0.115	3047.590	978285.749	-25.050	34.562	-12.532	-3.021	111.995
804476.0	8512403.7	2250	4500	+0.111	3046.916	978285.075	-25.724	35.212	-12.768	-3.280	114.103
804488.5	8512421.6	2250	4525	+0.108	3046.603	978284.762	-26.031	35.594	-12.906	-3.343	115.339
804514.4	8512420.3	2250	4550	+0.107	3045.987	978284.146	-26.647	36.357	-13.183	-3.473	117.812
804535.3	8512422.8	2250	4575	+0.105	3045.550	978283.709	-27.083	36.830	-13.355	-3.608	119.345
804440.7	8512437.7	2300	4475	+0.087	3047.542	978285.701	-25.086	34.488	-12.505	-3.104	111.755
804455.4	8512451.7	2300	4500	+0.090	3047.270	978285.429	-25.353	34.634	-12.558	-3.277	112.229
804481.9	8512463.0	2300	4525	+0.100	3046.680	978284.839	-25.938	35.438	-12.850	-3.350	114.834
804500.5	8512468.8	2300	4550	+0.102	3045.792	978283.951	-26.824	36.635	-13.284	-3.473	118.715
804526.9	8512473.3	2300	4575	+0.104	3045.544	978283.703	-27.070	36.805	-13.346	-3.611	119.264
804546.7	8512525.9	2350	4613	+0.075	3045.815	978283.974	-26.780	36.497	-13.234	-3.517	118.267
804568.7	8512534.5	2350	4633	+0.068	3045.448	978283.607	-27.144	37.096	-13.451	-3.499	120.206
804579.5	8512535.2	2350	4640	+0.066	3045.196	978283.355	-27.395	37.465	-13.585	-3.515	121.404
804617.3	8512552.3	2350	4689	+0.059	3044.429	978282.588	-28.156	38.066	-13.803	-3.893	123.351
804643.2	8512558.5	2350	4713	+0.054	3044.319	978282.478	-28.264	38.068	-13.804	-3.999	123.357
804668.3	8512566.8	2350	4738	+0.042	3044.422	978282.581	-28.157	38.081	-13.808	-3.885	123.398
804700.2	8512576.7	2350	4776	+0.038	3044.143	978282.302	-28.433	38.304	-13.889	-4.018	124.121
804711.3	8512582.2	2350	4789	+0.033	3044.058	978282.217	-28.516	38.471	-13.950	-3.994	124.662
804729.4	8512583.4	2350	4801	+0.030	3043.870	978282.029	-28.703	38.869	-14.094	-3.928	125.954
804749.5	8512590.3	2350	4827	+0.027	3043.642	978281.801	-28.928	39.221	-14.222	-3.929	127.094
804776.2	8512604.5	2350	4851	+0.021	3043.481	978281.640	-29.084	39.435	-14.299	-3.948	127.788

804789.2	8512604.8	2350	4862	+0.018	3044.558	978282.717	-28.007	37.787	-13.702	-3.922	122.446
804803.1	8512602.7	2350	4874	+0.017	3045.147	978283.306	-27.419	37.038	-13.430	-3.811	120.018
804833.1	8512626.5	2350	4913	+0.013	3045.663	978283.822	-26.894	36.177	-13.118	-3.834	117.231
804858.7	8512638.2	2350	4938	+0.012	3046.087	978284.246	-26.465	35.478	-12.864	-3.852	114.963
804870.0	8512641.1	2350	4950	+0.009	3046.224	978284.383	-26.327	35.276	-12.791	-3.842	114.311
804455.9	8512624.1	2450	4550	+0.079	3047.814	978285.973	-24.745	33.744	-12.236	-3.237	109.346
/D155											
/ 804734.3	8512597.6	0	2501	+0.000	3043.535	978281.976	-28.751	39.126	-14.187	-3.812	126.787
/ 804734.3	8512597.6	0	2501	-0.020	3043.535	978281.976	-28.751	39.126	-14.187	-3.812	126.787
804606.2	8512295.0	2100	4604	-0.013	3044.962	978283.403	-27.436	37.577	-13.625	-3.485	121.765
804622.3	8512287.2	2100	4616	-0.012	3044.593	978283.034	-27.808	38.180	-13.844	-3.472	123.719
804632.0	8512298.7	2100	4628	-0.011	3044.289	978282.730	-28.107	38.180	-13.844	-3.771	123.720
804648.0	8512297.9	2100	4640	-0.011	3043.729	978282.170	-28.667	39.390	-14.283	-3.560	127.641
804659.4	8512300.7	2100	4652	-0.010	3043.250	978281.691	-29.145	39.980	-14.497	-3.663	129.552
804669.4	8512306.3	2100	4664	-0.010	3042.795	978281.236	-29.598	40.430	-14.660	-3.828	131.011
804686.6	8512305.8	2100	4676	-0.009	3042.366	978280.807	-30.027	41.098	-14.902	-3.832	133.176
804704.9	8512319.0	2100	4699	-0.009	3041.641	978280.082	-30.747	42.074	-15.256	-3.930	136.339
804719.8	8512318.7	2100	4712	-0.008	3040.537	978278.978	-31.852	43.563	-15.796	-4.085	141.162
804728.5	8512323.4	2100	4724	-0.008	3040.847	978279.288	-31.540	43.035	-15.605	-4.109	139.452
804740.7	8512327.9	2100	4726	-0.008	3041.857	978280.298	-30.528	41.404	-15.013	-4.137	134.167
804746.3	8512334.7	2100	4738	-0.007	3042.453	978280.894	-29.930	40.672	-14.748	-4.005	131.795
804785.1	8512336.9	2100	4787	-0.007	3044.043	978282.484	-28.339	38.538	-13.974	-3.774	124.881
804803.8	8512350.6	2100	4801	-0.005	3044.325	978282.766	-28.051	38.132	-13.827	-3.746	123.565
804823.8	8512353.9	2100	4826	-0.005	3044.490	978282.931	-27.885	37.721	-13.678	-3.842	122.232
804833.3	8512358.6	2100	4838	-0.005	3044.495	978282.936	-27.878	37.567	-13.622	-3.933	121.734
804872.0	8512369.8	2100	4878	-0.004	3044.771	978283.212	-27.598	36.901	-13.381	-4.077	119.576
804896.8	8512378.6	2100	4902	-0.004	3044.836	978283.277	-27.530	36.954	-13.400	-3.976	119.747
804909.1	8512379.8	2100	4914	-0.004	3044.916	978283.357	-27.449	36.869	-13.369	-3.949	119.473
804930.0	8512386.9	2100	4938	-0.003	3044.992	978283.433	-27.371	36.854	-13.363	-3.880	119.423
804941.1	8512385.3	2100	4950	-0.003	3044.982	978283.423	-27.381	36.801	-13.344	-3.924	119.250
804417.7	8512486.5	2350	4475	-0.015	3047.760	978286.201	-24.568	33.839	-12.270	-2.999	109.654
804466.2	8512766.4	2600	4600	-0.018	3047.882	978286.323	-24.343	33.418	-12.118	-3.042	108.289
804708.8	8512833.1	2600	4850	-0.019	3047.416	978285.857	-24.783	33.502	-12.148	-3.429	108.560
804727.5	8512853.5	2600	4875	-0.019	3047.646	978286.087	-24.546	33.314	-12.080	-3.311	107.953