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# ASX/Media Announcement

9 July 2012

# Carbon Energy - Conventional Coal Resource of 1.2 Billion tonnes delineated

## Highlights:

- Larger-than-expected maiden conventional coal resource of 1.2 Billion tonnes (Bt);
- First conversion from Exploration Target of 4-8Bt within 100% owned leases; and
- Planned Exploration Program and Scoping Study in progress to convert further JORC Exploration Targets into Indicated and Inferred Resources.

Carbon Energy (ASX:CNX OTCQX:CNXAY) today announced that a larger-than-expected conventional coal resource of 1.2 billion tonnes (Bt) has been confirmed in its wholly-owned Surat Basin tenements.

Carbon Energy Managing Director, Andrew Dash said the result marked the successful completion of the initial review of existing information aimed at assessing the potential of the company's 1,400 $km^2$ of conventional coal tenements.

"We are very pleased with this initial JORC Resource statement for conventional coal targets which has been confirmed from existing company data and publicly available data," Mr Dash said.

"This initial statement is more than we had anticipated and we are delighted with the result. It also means there could be considerable upside in defining our conventional coal Resource, which will be fantastic news for our shareholders."

This statement is the first step in converting the company's 4 to 8 Bt JORC Exploration Target announced in May 2012 into a Resource and follows the modelling of existing Carbon Energy and public file drill hole information by Moultrie Database and Modelling (MDM) using Gemcom's Minex mine planning system.

In accordance with Joint Ore Reserves Committee (JORC) guidelines, the reported Inferred Coal Resources in the company held tenures are:

| Tenure | Formation | Resource (Mt)[2] |
|---|---|---|
| EPC867[1] | Macalister Seam | 678.2 |
| EPC869 | Macalister Seam | 435.5 |
| EPC1132 | Macalister Seam | 77.2 |
| | **Total:** | **1,190.9** |

[1] EPC867 excludes resources contained within MDL374

[2] Constraints on the Inferred Resources are as follows:

1.) Coal seams not intruded or not outside the tenure boundaries;

2.) Coal thicknesses <0.2m excluded;

3.) The depth range of calculation was from the base of weathering to 500m below natural topography;

4.) Coal seams >50% adb from coal quality or estimated from downhole density logs (in g/cc) excluded from the calculations;

5.) A discount factor varying from 5-20% has been subtracted from the initial calculation for unexpected geological losses. This accounts for unexpected conditions such as seam thinning, splitting, or seams missing in barren zones around faults.

6.) The mine planning package used was Minex and seam structure and thickness contours were generated using standard modelling algorithms and methodologies. Inferred masks were generated from base circles drawn 3,000m between Points of Observation;

7.) Points of observation were defined as those boreholes that had known surveyed positions, detailed lithological logs and coverage of the target coal seams with a suite of downhole geophysical logs that must include density in units of Kg/m3;

This Resource excludes MDL374 as it comprises the company's previously reported 2P syngas reserves of 743PJ by applying the Company's UCG technology (see Appendix A for Coal Tenure Location map). The table also excludes EPC 868, which has insufficient data available at this time to conduct Resource modelling. The resource modelling and constraints are detailed in the attached Model Report by Moultrie Database & Modelling.

Existing mining operations at Wilkie Creek and Kogan Creek to the North of the Company's EPC's currently extract the Macalister seam at thicknesses greater than 10m to produce an export quality thermal coal. This thick Macalister seam is continuous with the >10m thick Macalister seam currently being gasified at Bloodwood Creek.

## Next Steps

Carbon Energy is currently progressing a scoping study to define projects within the Resource and/or Exploration Target areas. The study includes:

- Exploration planning;
- Initial mine planning;
- Infrastructure assessment including rail and port capacity;
- Land access and environmental requirements;
- Coal product marketability; and
- Commercial assessment by project area.

A targeted exploration program will be conducted following the scoping study, and is anticipated to be completed by the end of the December 2012 quarter.

Mr Dash said "This early result of establishing a significant Resource based on currently available data highlights the potential value of our conventional coal leases in the Surat Basin. Over the next 6-9 months we anticipate adding substantial value to these leases through scoping studies and a targeted exploration program."

ENDS

For and on behalf of the Board

Andrew Dash
Managing Director

**For more information please contact Andrew Crook on +61 419 788 431 or refer to our website at www.carbonenergy.com.au**

Competent Person

The estimates of the Coal Resources presented in this Report are considered to be a true reflection of the Coal Resources as at 9 July 2012 and have been carried out in accordance with the principles and guidelines of the Australian Code for Reporting of Coal Resources and Coal Reserves published in September 2004 (JORC Code).

The information in this release is based on information compiled by Mr Mark Biggs who is an employee of Moultrie Database & Geology and is a member of the Australian Institute of Mining and Metallurgy. Mr Biggs has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking to qualify as a Competent Person as defined in the 2004 Edition of the "Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves". Mr Biggs consents to the inclusion in the presentation of the matters based on his information in the form and context in which it appears.

## ABOUT CARBON ENERGY

Carbon Energy is a world leader of advanced coal technology. Our business is transforming stranded coal resources into high-value fuels with lower carbon emissions to meet the increasing global demand for new, low cost, alternative energy sources.

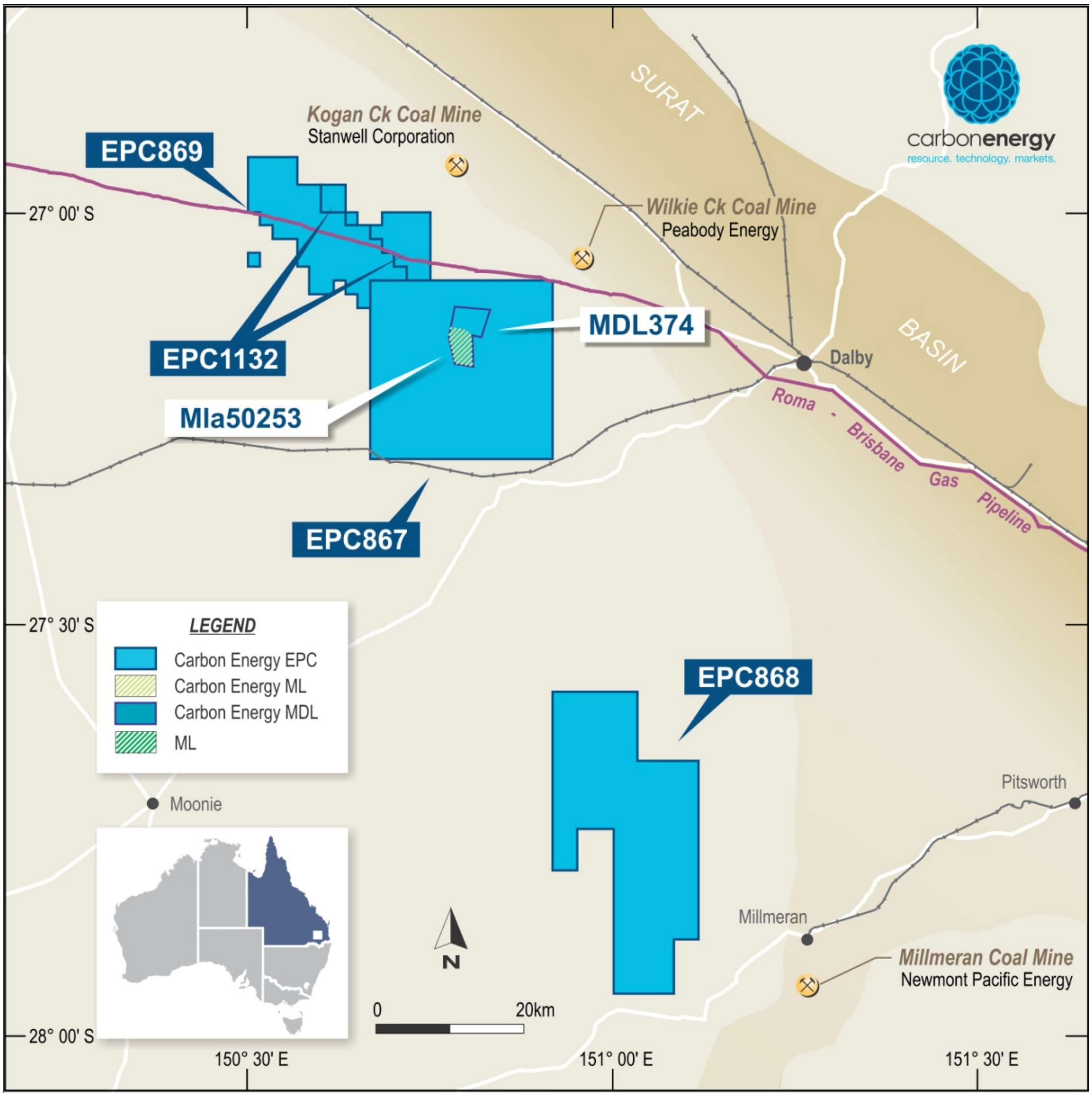
Carbon Energy is headquartered in Brisbane, Australia and listed on the Australian Securities Exchange (ASX). The Company is also quoted on the OTCQX International.

The Company's proprietary technology, keyseam® is an innovation in underground coal gasification (UCG), incorporating a unique site selection methodology and advanced geological and hydrological modelling. Keyseam maximises resource efficiency, extracting up to 20 times more energy from the same resource than coal seam gas, whilst minimising surface disturbance and preserving groundwater quality.

Carbon Energy's technological advantage comes from its association with Australia's premier research agency, CSIRO, which includes world-class geotechnical, hydrological and gasification modelling capabilities.

Carbon Energy is building an international portfolio of coal assets suitable for keyseam and accessible to high-value markets. The Company has resources and rights to coal assets in projects across Australia, Chile and the United States.

# Appendix A – Coal Tenure Location Map



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# Geological Model Report

## Surat Project

## EPC 867, EPC 869 and EPC 1132

## June 2012

**Prepared For:** Carbon Energy Limited

**Prepared By:** Moultrie Database & Modelling

| | |
|---|---|
| Mark Biggs | Principal Geologist |
| Rafwal Descartes | Resource Geologist |
| Du Nguyen | Project Geologist |
| Nadya Puspitasari | Database Geologist |

# Executive Summary

Moultrie Database and Modelling (MDM) has been requested by Carbon Energy Ltd to complete geological modelling for Carbon Energy Ltd EPC's (EPC 867, 868, 869 and 1132) located approximately 240 km west of Brisbane. The four (4) tenures are located near the Bloodwood Creek project (MDL 374), South East Queensland, within the Surat Basin. EPC 868 was excluded from the geological model due to insufficient geophysical data within the tenure area.

The geological model for Surat Project was developed using the Minex software package with the data provided by Carbon Energy Ltd. The primary coal seams targeted by this geological model area are the Macalister Upper, Middle and Lower seams from the Juandah Coal Measures.

A total of one hundred and twenty-two (122) boreholes with collar data were provided and of these, a total of seventy-five (75) collars with LAS files and eight (8) paper geophysical log files were used within the geological model.

Insufficient coal quality data was available to produce a coal quality grid within the model area. Coal quality testing was indeed completed on four (4) Coal Seam Gas wells, on the back of gas desorption results. This sampling mostly consisted of raw ash and analysis moisture testing. Due to this not being a full proximate analysis and because sample depths could not be validated against the seam picks that were used in the model, those results have not been loaded.

To provide a better structural model, the technique within Minex called the "Father and Son" concept was applied to coal seam modelling and the gridding mesh size was set at 50 m x 50 m to cover all boreholes. An exceptionally large scan distance of 35,000m was selected for seam interpolation. As a preliminary interpretation four (4) faults were identified from the contour structure data within the model area. Based on the structure contours, the strike is approximately 110 degrees trending in a northwest – southeast direction and is dipping 1 – 3 degrees to southwest within the tenement area.

Based on the geological structural models generated in Minex software, an initial Inferred Resource for the Macalister Seams was calculated for each EPC (**Table 1)**. A total of 678 million tonnes was reported for EPC 867, 436 million tonnes for EPC 869 and 77 million tonnes for EPC 1132. An additional 293 million tonnes was also calculated within MDL 374.

*Table 1 - Summary of the calculated Inferred Resource Tonnage per EPC*

| Tenure | Formation | Mass<br>1 Mt | Unexpected Geological Loss<br>% Vol | Residual Mass[2]<br>1 Mt |
|---|---|---|---|---|
| **EPC 867[1]** | Macalister Seam | 797.9 | 16 | 678.2 |
| **EPC 869** | Macalister Seam | 515.8 | 18 | 435.5 |
| **EPC 1132** | Macalister Seam | 91.3 | 18 | 77.2 |
| **MDL 374** | Macalister Seam | 307.9 | 5 | 292.5 |

[1] EPC867 excludes resources contained within MDL374

[2] Constraints on the Inferred Resources are as follows:

1.) Coal seams not intruded or not outside the tenure boundaries;

2.) Coal thicknesses <0.2m excluded;

3.) The depth range of calculation was from the base of weathering to 500m below natural topography;

4.) Coal seams >50% adb from coal quality or estimated from downhole density logs (in g/cc) excluded from the calculations;

5.) A discount factor varying from 5-20% has been subtracted from the initial calculation for unexpected geological losses. This accounts for unexpected conditions such as seam thinning, splitting, or seams missing in barren zones around faults.

6.) The mine planning package used was Minex and seam structure and thickness contours were generated using standard modelling algorithms and methodologies. Inferred masks were generated from base circles drawn 3,000m between Points of Observation;

7.) Points of observation were defined as those boreholes that had known surveyed positions, detailed lithological logs and coverage of the target coal seams with a suite of downhole geophysical logs that must include density in units of Kg/m3;

# Disclaimer

***LIMITATIONS***

The views expressed in this Model Report are solely those of Moultrie Database & Modelling (MDM) personnel, unless specifically identified within the report as those of other parties. The report primarily relied on data supplied by Carbon Energy Ltd and that found in the public domain. The information consisted of well reports and interpretation reports. These were compiled by experienced and well-credentialed employees and consultants of Moultrie Group. The material was reviewed for its quality, accuracy and validity and was considered to be acceptable. It is believed that the information received is both reliable and complete and there is no reason to believe that any material facts have been withheld. However, no warranty can be given that this review has taken into account all information, which a more extensive examination might reveal. The opinions and statements in this report are offered in good faith and in the belief that such opinions and statements are not misleading.

To the extent permitted by law, Moultrie Database & Modelling disclaims all liability for loss or damage (whether foreseeable or not and whether indirect or not) suffered by any person acting on the report or arising as a consequence of the information in the Model Report on the potential for coal within EPCs 867, 869 and 1132 – Report No: MDM12-0137_5V5, whether such loss or damages arises in connection with any negligence, default or lack of care on behalf of other parties associated with the preparation of the report.

***INDEPENDENCE***

Neither Moultrie Database & Modelling nor its employees have a direct or indirect financial interest in, or association with Carbon Energy Ltd, the properties and tenements reviewed in this report, apart from standard contractual arrangements for the preparation of this report and other previous independent consulting work. In preparing this report, Moultrie Database & Modelling has been paid a fee for time expended based on its standard hourly or daily rates. The present and past arrangements for services rendered to Carbon Energy Ltd do not in any way compromise the independence of Moultrie Database & Modelling with respect to this review.

***CONSENT***

Moultrie Database & Modelling hereby consents to the inclusion of this Model Report in Carbon Energy Ltd company reports, in both electronic and hard copy format, in the form and context in which it appears. As at the date of the Model Report set out above Moultrie Database & Modelling has not withdrawn consent. Moultrie Database & Modelling was only commissioned to prepare the Model Report and has only authorised issue of this Model Report on the Carbon Energy Ltd exploration tenements specified in the Model Report. It has not been involved in the preparation of, or authorised issue of, any other part of company reports in which this Model Report is included.

This report is to be read as a whole, and sections or parts thereof should therefore not be read or relied upon out of context. This disclaimer must accompany every copy of the report, which is an integral document and must be read in its entirety.

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# Introduction and Scope of Work

The project areas are located approximately 240 km west of Brisbane (***Figure 1***). Moultrie Database & Modelling was commissioned by Carbon Energy Ltd to provide a coal seam model within EPC 867, 868, 869 and 1132. The four tenures are located near Carbon Energy Ltd's Bloodwood Creek Project (MDL 374), South East Queensland within the Surat Basin. The primary focus of this geological model is the Macalister Coal Seams, within the Juandah Coal Measures. EPC 868 was excluded from the geological model due to insufficient down hole density geophysical data within the tenure area.

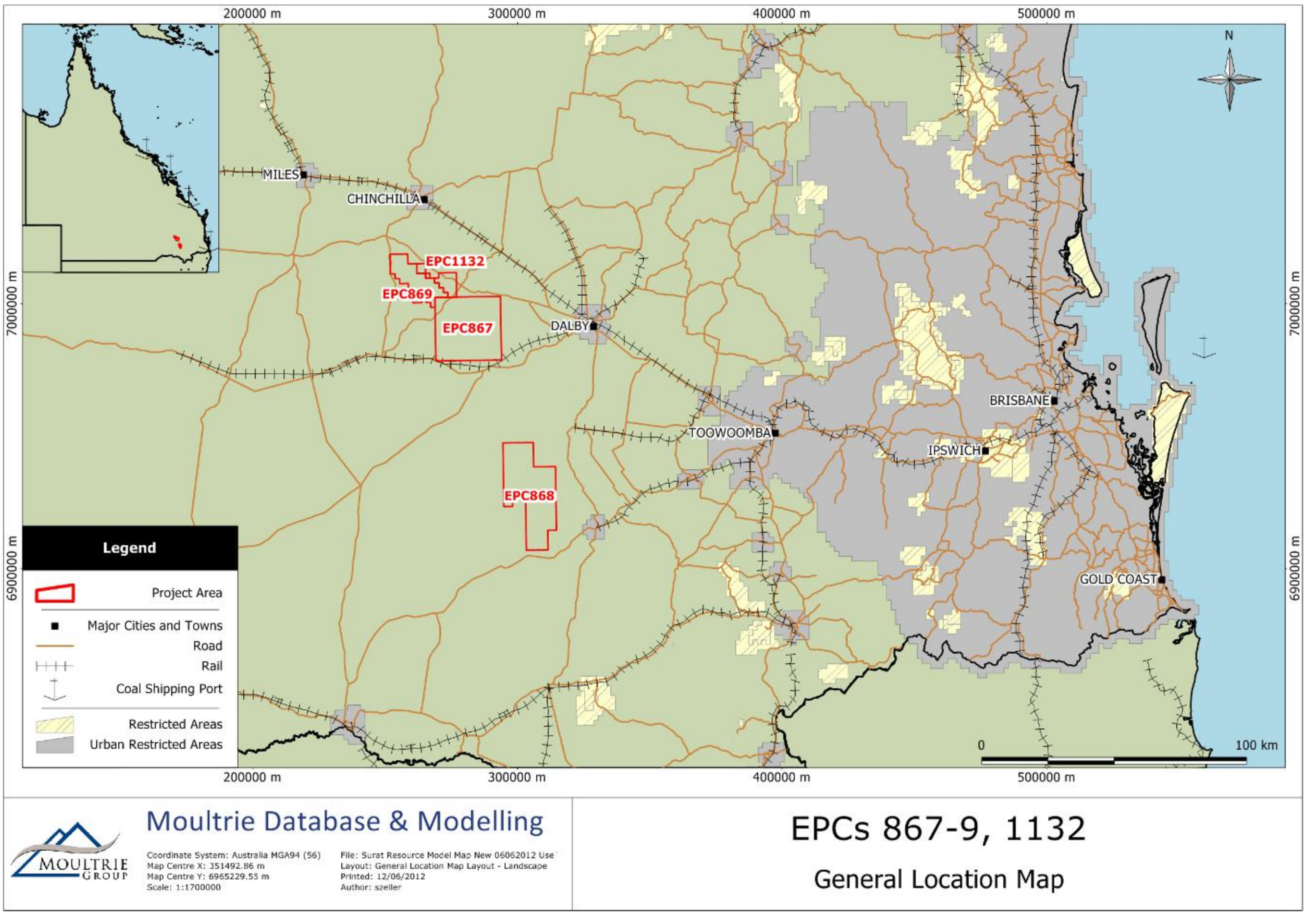



***Figure 1 - Location map of the project area***

*Source:* Queensland Department of Employment, Economic Development and Innovation Website, 2012

## Work Program

The geological modelling program consisted of database management, reviewing, validating and modelling of borehole data for Carbon Energy Ltd.

The Methodology used is outlined below:

- Reviewing and validating of all original borehole surveys (collar), lithological logs, geophysical logs and determining relevant data to be used in developing the geological model;
- Interpretation and seam picking based on image signatures from geophysical logs (minimum parameter used are Gamma and Density);
- Seam correlation and validation of cross sections;
- Determining the appropriate modelling parameters and developing the geological model for seam structure and seam thicknesses in Minex;

## Regional Geology

The project area is underlain by two distinct sedimentary basins, the Surat Basin and the Bowen Basin (***Figure 2***). The primary target is the Juandah Coal Measures within the Walloon Subgroup of the Surat Basin. The underlying Bowen Basin is only located within EPC 867 in the southwest portion. The project areas are located to the northeast of the Surat Basin. The Early Jurassic to Early Cretaceous Surat Basin covers parts of central-southern Queensland and extends into central-northern New South Wales. The Walloon Subgroup, also known as the Walloon Coal Measures, is divided into the Juandah Coal Measures, Tangalooma Sandstone and Taroom Coal Measures (Jones and Patrick, 1981). The Walloon Subgroup has been the target of historical and current coal and coal seam gas exploration activities around the Surat project area. The Surat Basin is bounded by the Kumbarilla Ridge which divides the Surat from the Clarence Moreton Basin to the east; this may affect the coal seam development within the tenure areas.

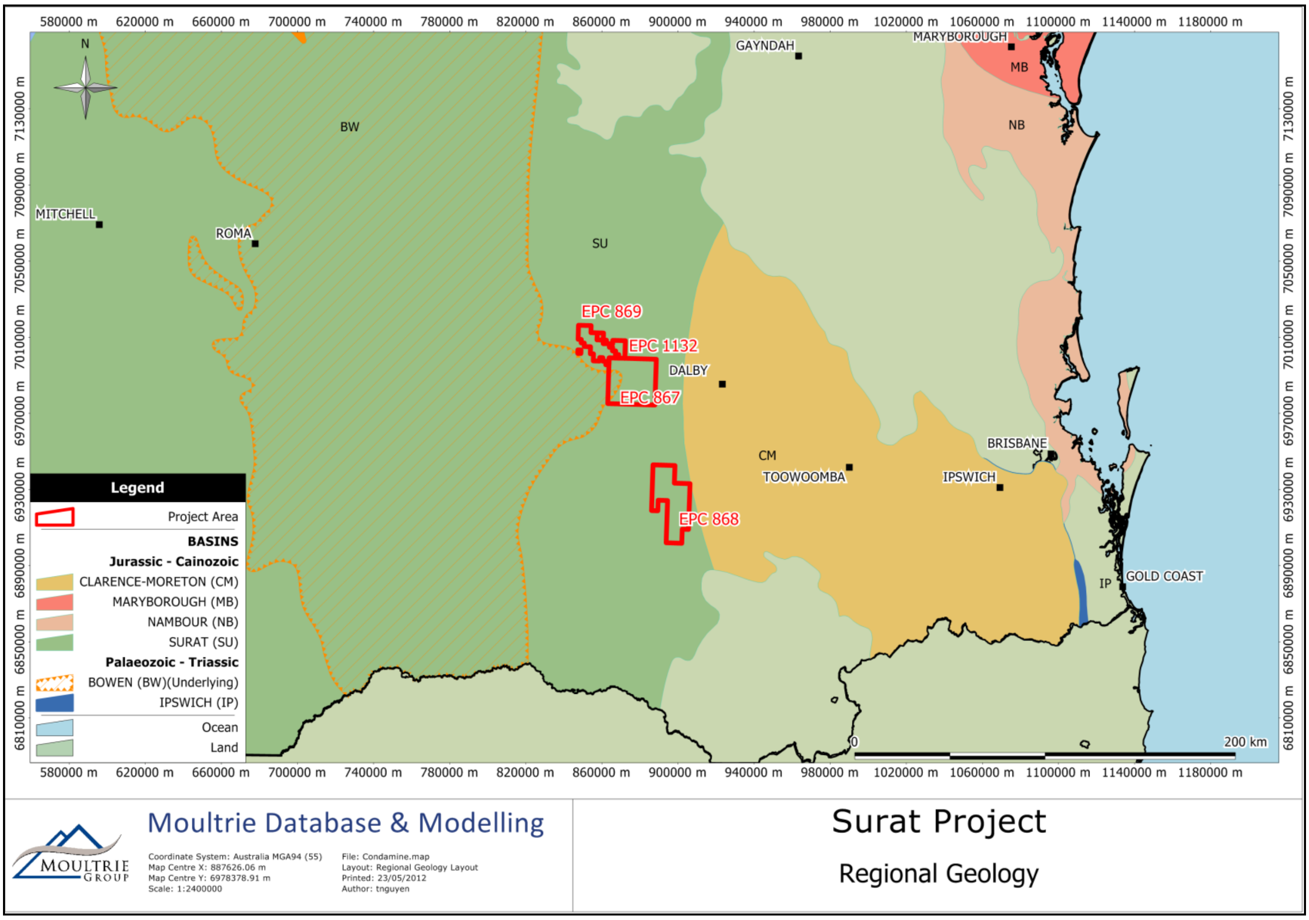



***Figure 2 - Regional Geology Map of Project Area***

***Source:*** Queensland Department of Employment, Economic Development and Innovation Website, 2012

# Data Analysis and Validation

## Topography

The topography data from Geoscience Australia 1:50,000 scale was used to produce the geological model. A grid mesh size of 50m x 50m was setup in Minex to produce the topography grid. ***Figure 6*** represents the topography contours within the geological model area.

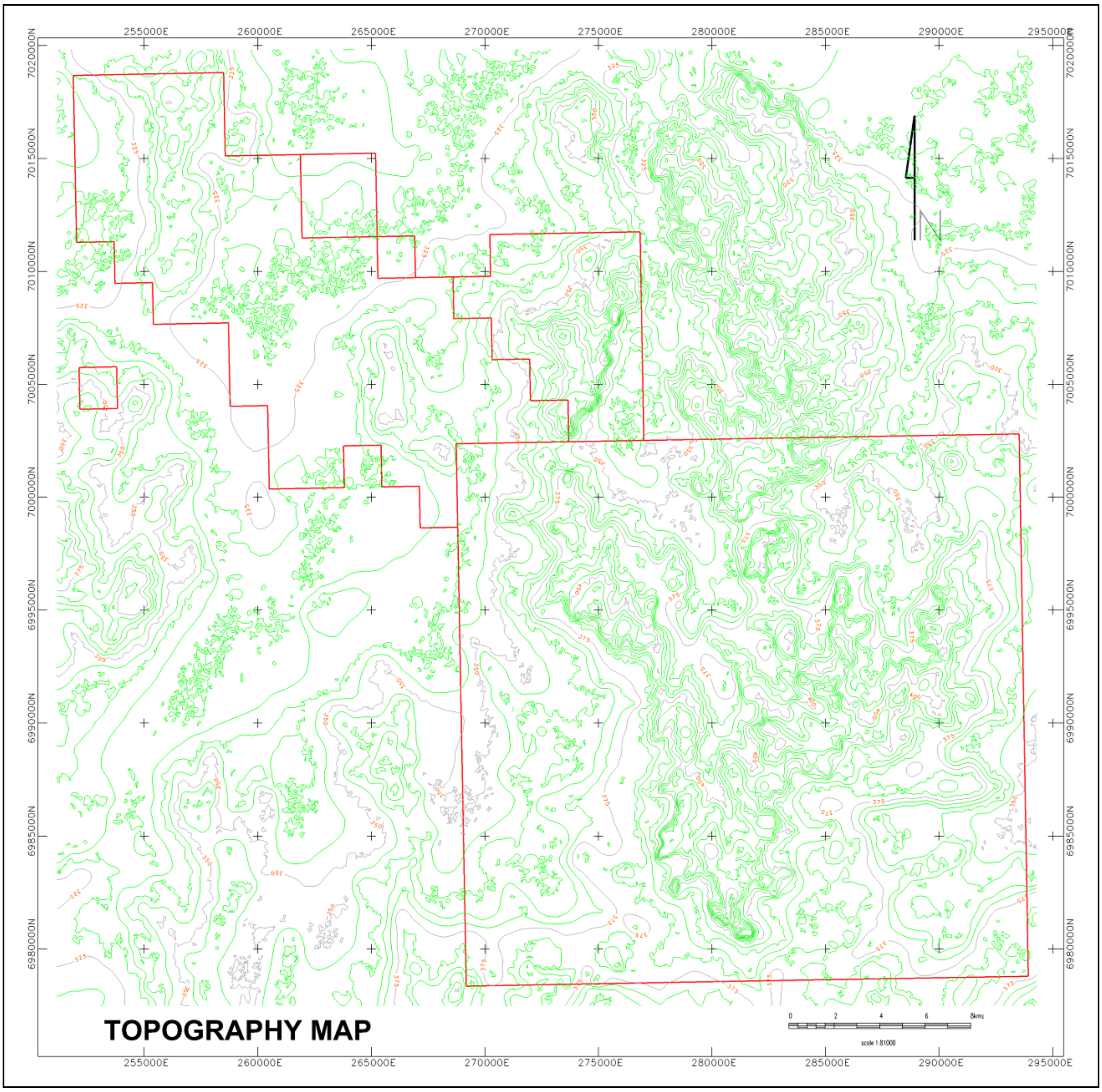



***Figure 3 - Topography Map***

**Source**: Minex model MDM 2012

## Collar Data

A total of one hundred and twenty two (122) boreholes were provided. Of these, twenty-four (24) holes appear to have no decimal place for collar data, so it is assumed that the collar was recorded using a handheld GPS device. This will affect the true borehole position, the accuracy of the model and may place the hole in an undesired zone. The Collar data for all holes are represented in ***Appendix 1***.

The borehole collar is validated by comparing the collar data with topography to attain the discrepancy value, to determine the accuracy of the geological model. ***Figure 4*** indicates that, 24% of the eighty-three (83) boreholes have a discrepancy value less than 3m, 29% have discrepancies between 3m to 7m and 47% have discrepancies greater than 7m. Borehole data from KG056 has the largest discrepancy (24.81m). Based on the discrepancy statistics, 44 boreholes (43% of total boreholes) have acceptable discrepancies.

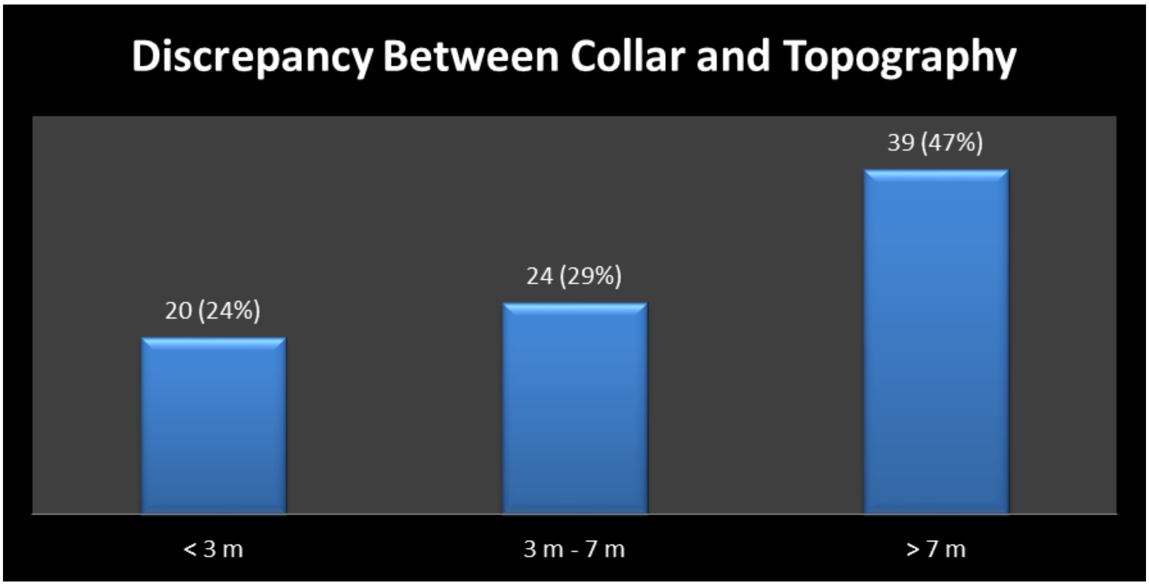



***Figure 4 - Discrepancy statistics between Collar and Topography data***
**Source**: MDM 2012

## Geophysical Logging Data

LAS files from geophysical logs were used to produce a geological model. Geophysical data was first validated using *LAS Certify (www,cwls.com.ca)*, and then used for reconciling the borehole data. Gamma and Density logs are the minimum requirements for validating using geophysical logs, a total of seventy-five (75) LAS files and eight (8) paper geophysical logs files were validated. These logs in combination can determine the continuity of coal correlation in order to develop an accurate geological model.

## Borehole Data

To determine the position of coal seam intervals, coal seams were picked and validated using geophysical data. Insufficient geophysical data were available for validation of several boreholes; these boreholes were excluded from the geological model. The depths from available geophysical and lithological logs were compared, and seam picks for boreholes used are included in **Appendix 2**.

A total of eighty-three (83) holes were used to create the geological model that predictions for the exploration plan have been taken from. These holes were a combination of sixteen (16) coal seam gas wells, twelve (12) coal boreholes, three (3) petroleum wells, and fifty-two (52) wells from private data supplied by Carbon Energy Ltd. A list of boreholes used for modelling and borehole sources are summarised in ***Appendix 3***. A list of all borehole data (with comments) for holes not suitable is included in **Appendix 4**.

## Gas Desorption

Four boreholes with gas desorption data have been used in the geological model area, of which only one borehole (borehole id: 58532) is within the tenure area. Boreholes 58532 and 59464 indicate a relatively low amount of total desorbable gas (<4$m^3$/t), boreholes with red outline (***Figure 5***), 58600 and 61254 have higher gas values (>4$m^3$/t).

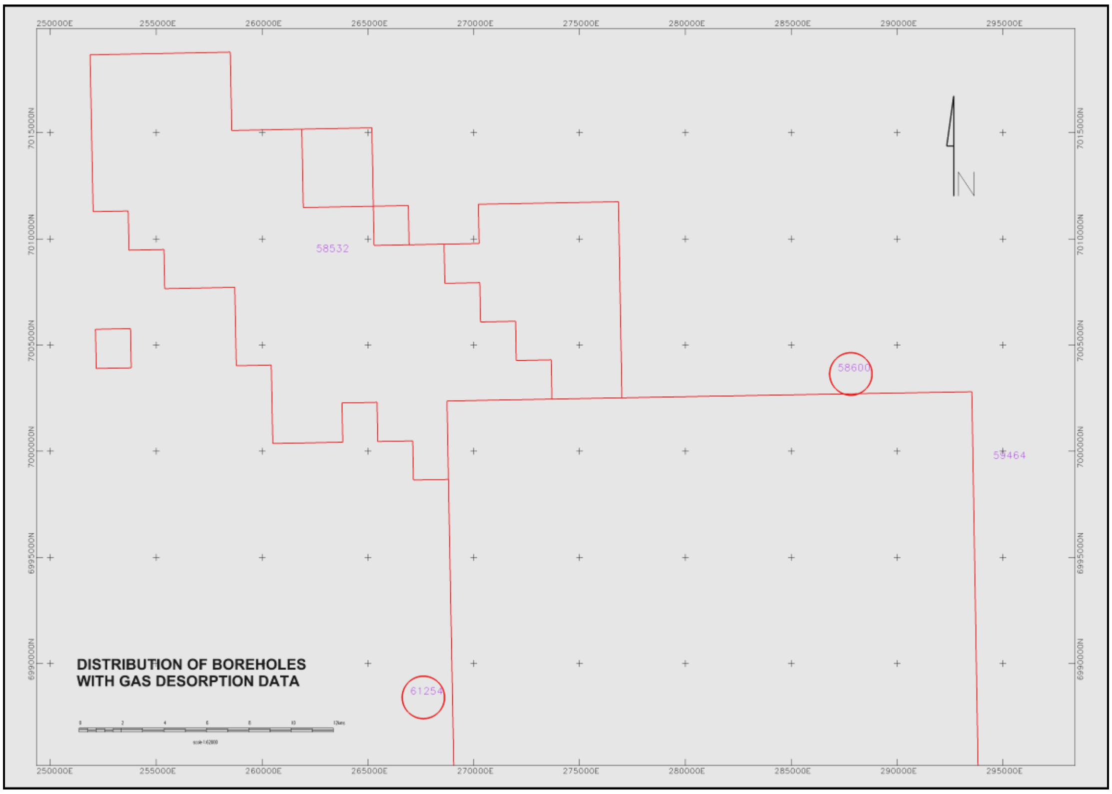



***Figure 5 - Distribution of boreholes with gas desorption data***

**Source**: Minex

## Coal Quality Data

Insufficient coal quality data was available to produce coal quality grids within the model area. Coal quality testing was completed on four (4) Coal Seam Gas wells, associated with gas desorption testing. This sampling mostly consisted of ash and analysis moisture testing. Due to this not being a full proximate analysis and because sample depths could not be validated against seam picks used in the model, coal quality results have not been loaded to the database nor model.

## Seam Pick and Seam Correlation

A total of eighty-three (83) holes were used to create geological model, of which seventy-five (75) had coal intersections. The "father and son" concept in Minex was applied to the twelve coal seam sequences identified; these are represented in ***Table 2***.

*Table 2 - Seam sequence using father and son concept*

| No | SEAM NAME | | DESCRIPTION |
|---|---|---|---|
| | FATHER | SON | |
| 1 | **SBC2** | | Springbok Coal Seam 2 |
| 2 | **SBC1** | | Springbok Coal Seam 1 |
| 3 | | **MAUR** | Upper Macalister Rider Seam |
| 4 | | **MAUU** | Upper Macalister Upper Seam |
| 5 | **MAU** | | Upper Macalister Seam |
| 6 | | **MAMU** | Macalister Middle Upper Seam |
| 7 | **MAM** | | Macalister Middle Seam |
| 8 | **MAL** | | Macalister Lower Seam |
| 9 | | **MALL** | Macalister Lower Lower Seam |
| 10 | **WAM** | | Wambo Seam |
| 11 | | **WAL** | Wambo Lower Seam |
| 12 | | **WALL** | Wambo Lower Lower Seam |

*Source:* ***MDM 2012***

The gamma and density signatures were used for seam picking to define the depth of coal and determine the roof and floor of each coal interval (refer to ***Figure 6***).

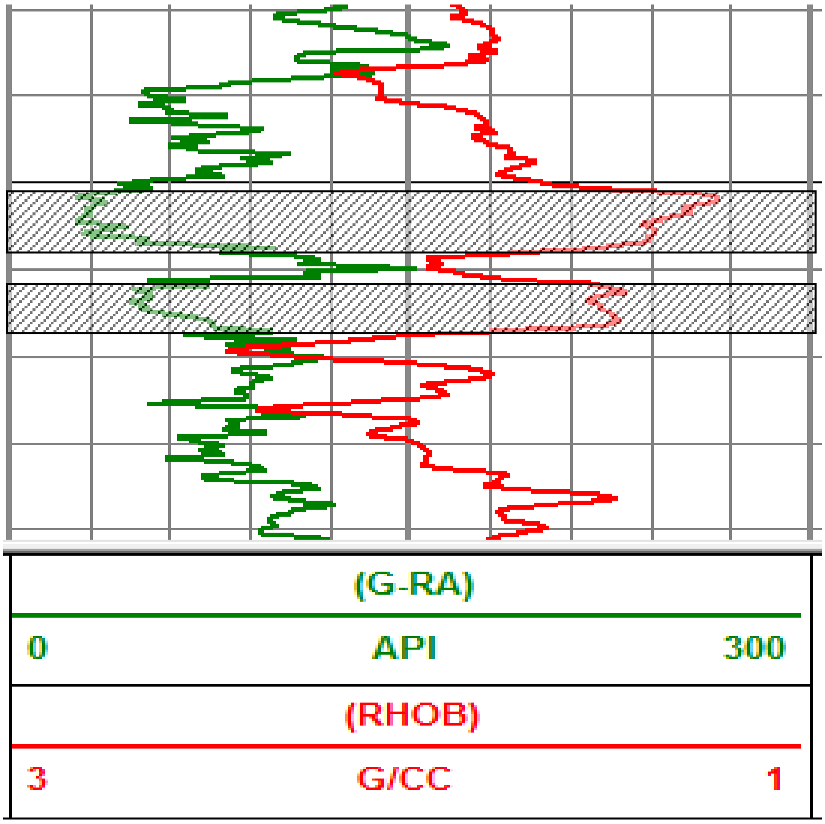



***Figure 6 - Seam picking method applied***
*Source:* MDM 2012

Common characteristics from each coal interval were picked from geophysical logs, coal seam thicknesses, interburden thicknesses and the general trend of coal seam direction when correlating each hole. Represented below in ***Figure 7*** is the cross section with seam correlation and seam continuity.

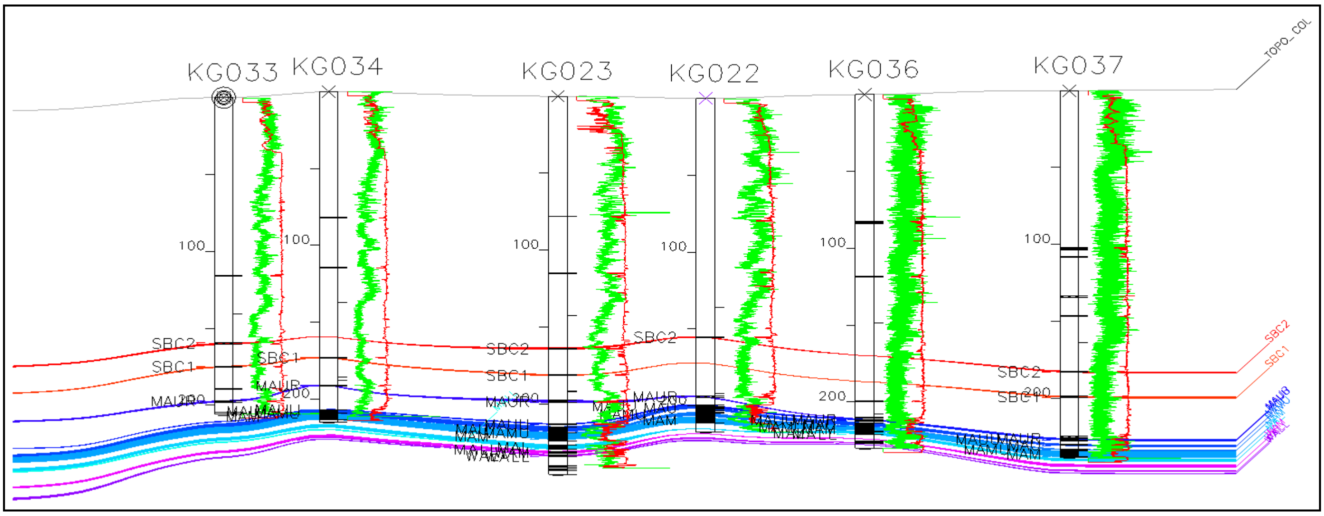



***Figure 7 - Cross section showing the seam correlation of KG borehole series***
***Source: Minex model, MDM 2012***

# Deposit Modelling

Gridded seam models of seam structures (Thickness and Floor) was developed using the Minex software. The project folder has been saved under "**CARBON_0612_RDESC_1**". A step to step modelling process stating parameters for producing the geological model is summarised below.

## Data Preparation

There are four (4) different types of data uploaded into Minex software using the CSV file data type:

1. Collar data (borehole location and final depth);
2. Lithological data;
3. Geophysical logs data (gamma and density);
4. Seam pick data (coal seam interval and seam name);

The four various types of data are saved as **CARBON (B31 - B35)**. Geometry files which is used for EPC boundaries and interpretation of faults have been saved as **CARBON.GM3** and all parameters for modelling saved as **CARBON_PAR.mpf** file.

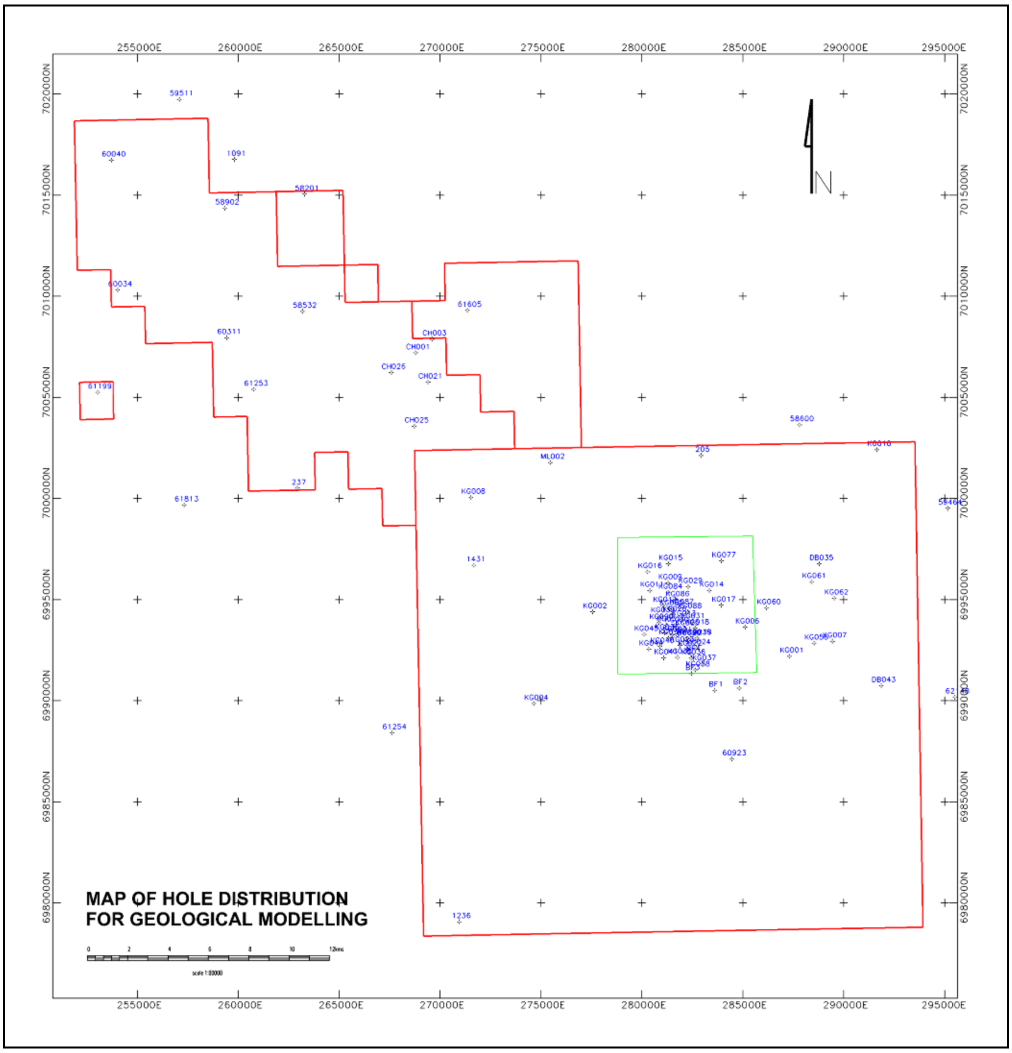



***Figure 8 - Hole distribution map***

**Source**: Minex Model, MDM 2012

Within the geological model there are two (2) areas with different modelling confidence levels (***Figure 8***). Located in the green box, the boreholes are in close proximity providing a good confidence level (errors ±5%). Outside this area the boreholes are spread out over large distances which in turn provide a lower confidence level (errors ±15-20%). The boreholes within the higher confidence area were correlated and common trends were used to validate the surrounding boreholes. The model was generated in a step-wise fashion using parameters derived from the high confidence area to spread out over the entire project area.

## Topography Grid

Within this geological model, a grid mesh size of 100m x 100m has been set to produce preliminary topography using borehole collar (***Figure 9***).

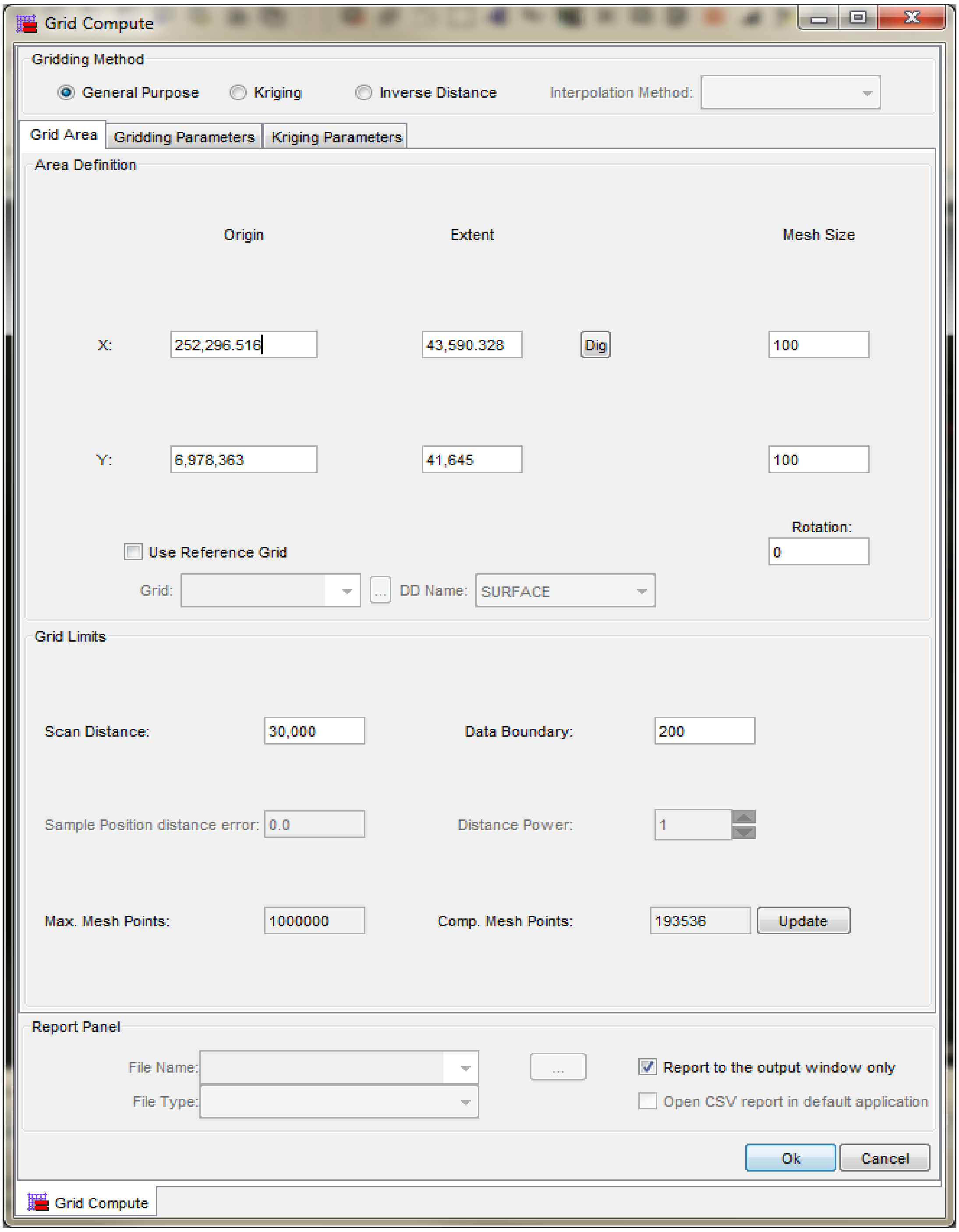
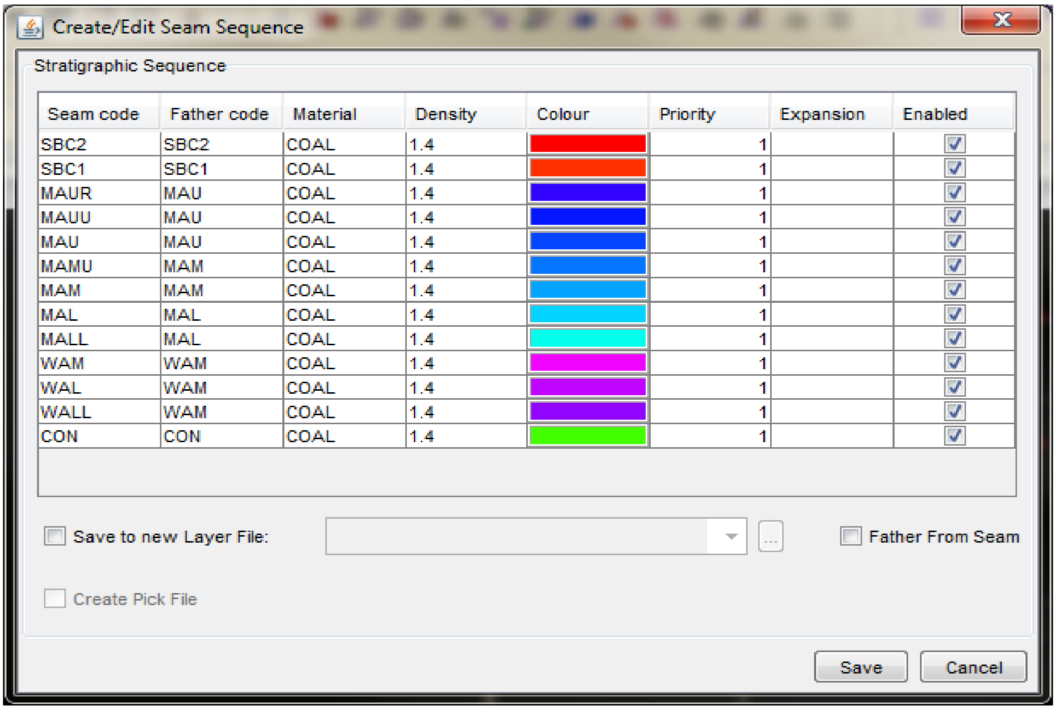



***Figure 9 – General Purpose Grid computing parameters have been used***
**Source**: Minex model, MDM 2012

### Seam Sequence

A total of thirteen (13) seams sequences were setup in Minex, due to insufficient amount of data the Condamine Seam was not modelled. Twelve (12) seam sequences were used to make the geological model, below ***Figure 10*** represents the coal sequences, Condamine Seam shown as CON was not used for gridding based on insufficient data (***Figure 11***).




| Seam code | Father code | Material | Density | Colour | Priority | Expansion | Enabled |
|---|---|---|---|---|---|---|---|
| SBC2 | SBC2 | COAL | 1.4 | | 1 | | ✓ |
| SBC1 | SBC1 | COAL | 1.4 | | 1 | | ✓ |
| MAUR | MAU | COAL | 1.4 | | 1 | | ✓ |
| MAUU | MAU | COAL | 1.4 | | 1 | | ✓ |
| MAU | MAU | COAL | 1.4 | | 1 | | ✓ |
| MAMU | MAM | COAL | 1.4 | | 1 | | ✓ |
| MAM | MAM | COAL | 1.4 | | 1 | | ✓ |
| MAL | MAL | COAL | 1.4 | | 1 | | ✓ |
| MALL | MAL | COAL | 1.4 | | 1 | | ✓ |
| WAM | WAM | COAL | 1.4 | | 1 | | ✓ |
| WAL | WAM | COAL | 1.4 | | 1 | | ✓ |
| WALL | WAM | COAL | 1.4 | | 1 | | ✓ |
| CON | CON | COAL | 1.4 | | 1 | | ✓ |

***Figure 10 - Seam sequence in Minex setup***
**Source:** Minex model, MDM 2012

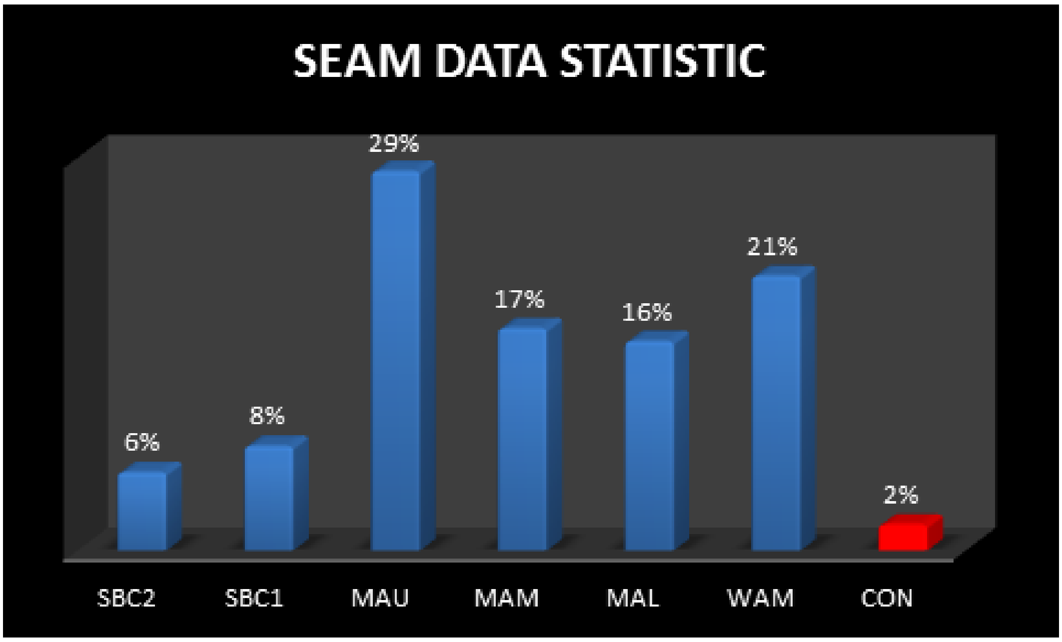



***Figure 11 - Seam borehole data statistic***
**Source:** MDM 2012

## Modelling

Located in the DD Folder, two (2) model seam grid structures have been built and saved. Original data containing the Seam Grid Structures before fault interpretations have been saved in **MODEL_FOR_VALIDATION** and interpreted data have been saved in **STRUCTURE_FAULTNT**. To determine the relationship between coal seams, the father and son concept was setup using the Bore Seam Modelling menu to produce the grids (***Figure 12***).

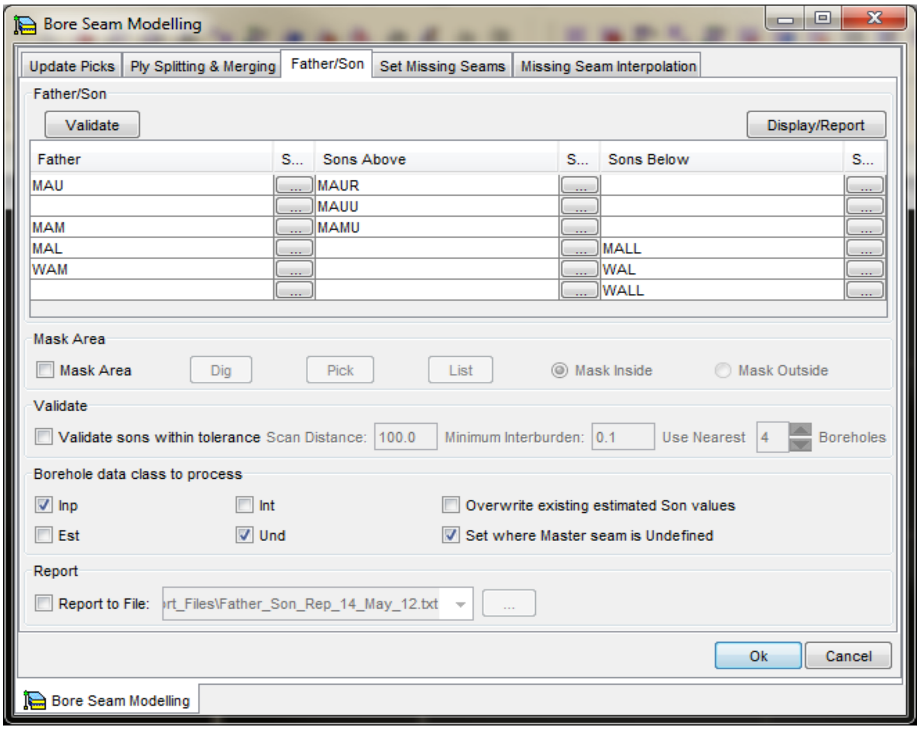



***Figure 12 - Father and Son setup***
**Source:** Minex model, MDM 2012

To maintain seam thickness and coal seam continuity for each borehole, the Set Missing Seams menu has been setup to estimate seams in their relative stratigraphic positions when missing from boreholes (***Figure 13***).

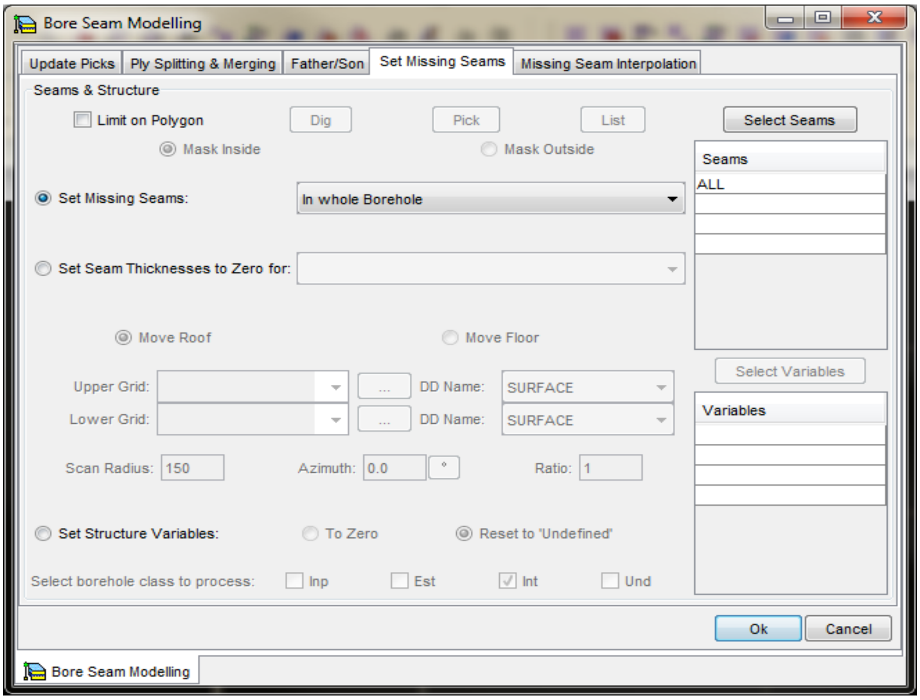



***Figure 13 - Set missing seam setup***

**Source:** Minex model, MDM 2012

For borehole interpolation, a parameter value was set using the Missing Seam Interpolation menu for global scanning distance of 35,000m represented in ***Figure 14***. The purpose of the large scan distance is to ensure all boreholes are treated as relevant to the modelling algorithmand considered with surrounding data.

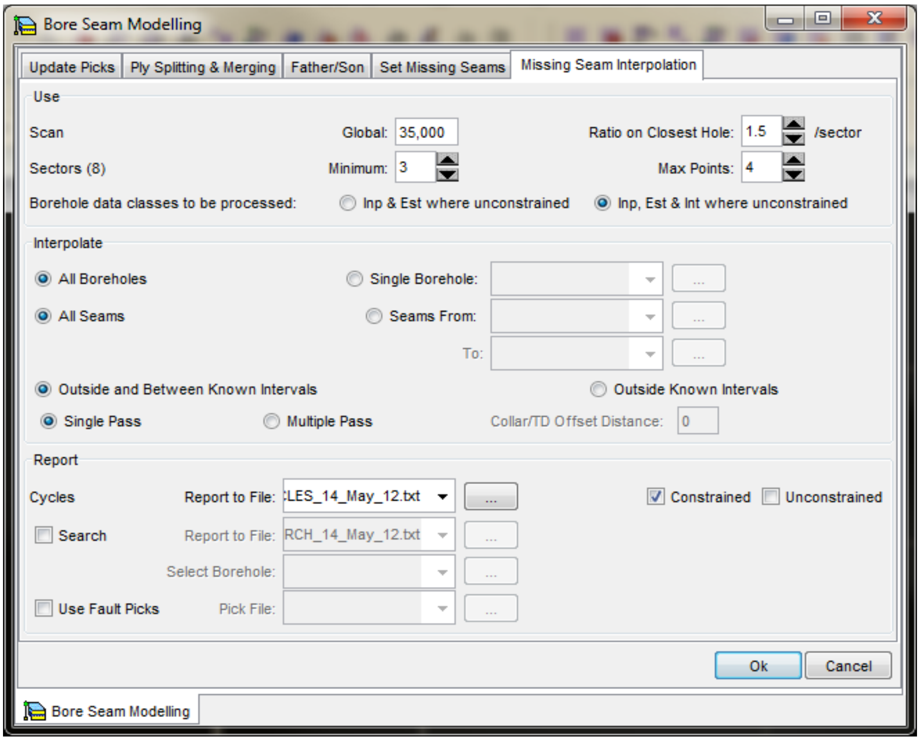



***Figure 14 - Missing seam interpolation setup***

**Source**: Minex model 2012

To create the grid seam structure, all standard parameters for modelling have been set. A 50m x 50m grid mesh size along with the 35,000m global scanning distances had been set for gridding the seam structure. A 5,000m value has been set to expand within the gridding parameter for floor and thickness to create the grid structure (***Figure 15*** & ***Figure 16***).

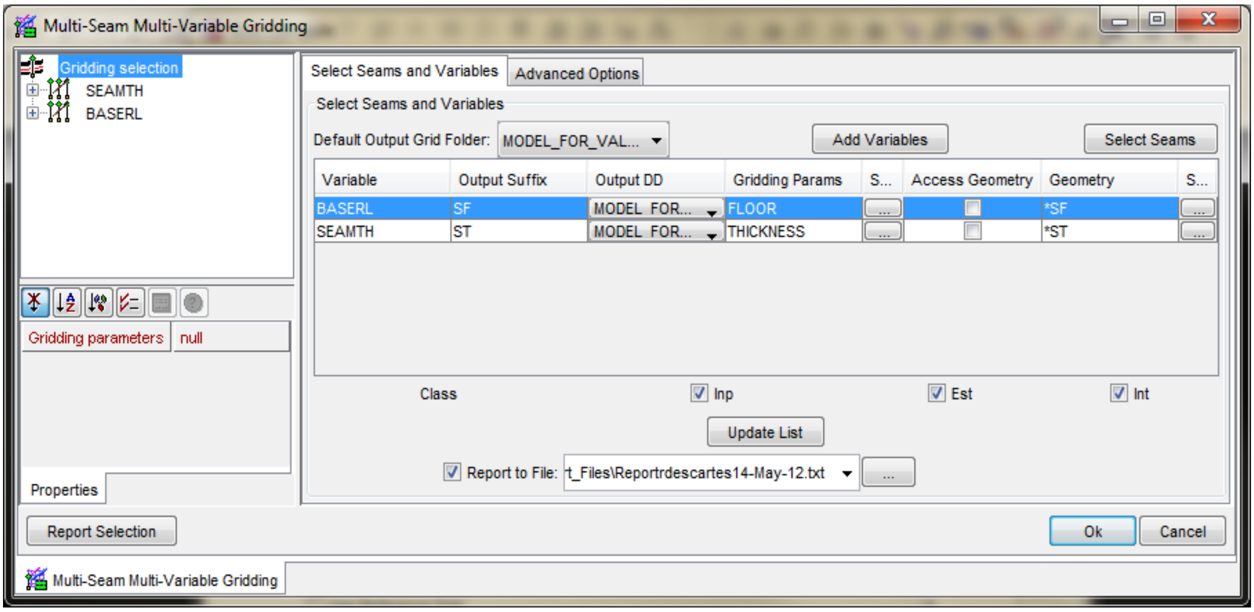



***Figure 15 - Gridding tab***
**Source:** Minex model, MDM 2012

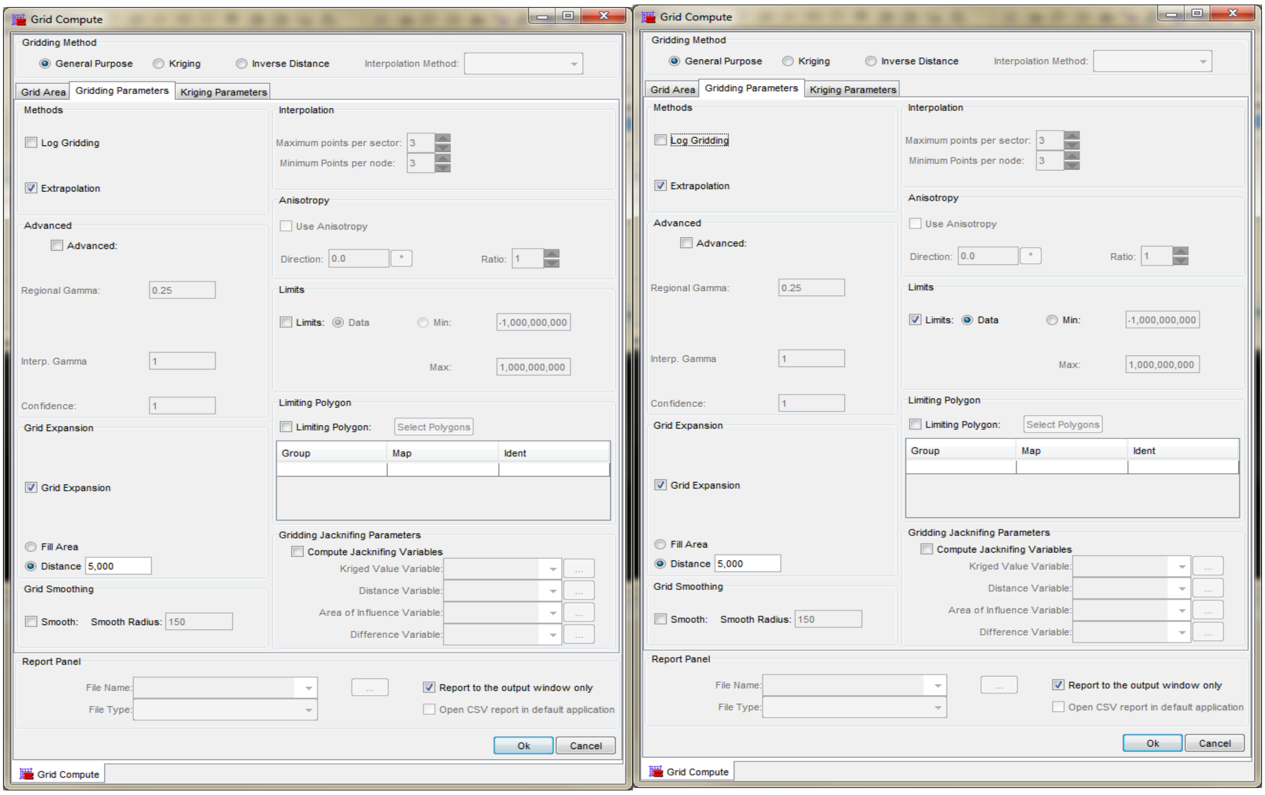



***Figure 16 - Gridding parameter for floor structure (left side) thickness structure (right side)***
**Source:** Minex model 2012

The gridding process produced structure contours for each seam floor and seam thickness. The contours of seam floors can indicate any structural anomalies within the model area. No major anomalies were detected. Based on the structure contours, the strike is approximately 110 degrees trending in a northwest – southeast direction and is dipping 1 – 3 degrees to southwest within the tenement area.

As a preliminary interpretation the contour structures were used to estimate the fault lines within the model area. A more comprehensive exploration drilling program with drill holes in close proximity, an accompanying 20-seismic program and geophysics study would produce a more accurate interpretation of faults. Represented in ***Figure 17*** are section lines within model area**.** The correlation and continuity of coal seams are shown as cross sections in ***Figure 18*** and ***Figure 19***. Contours of seam floors **Appendix 4** and thickness contours **Appendix 5** are included.

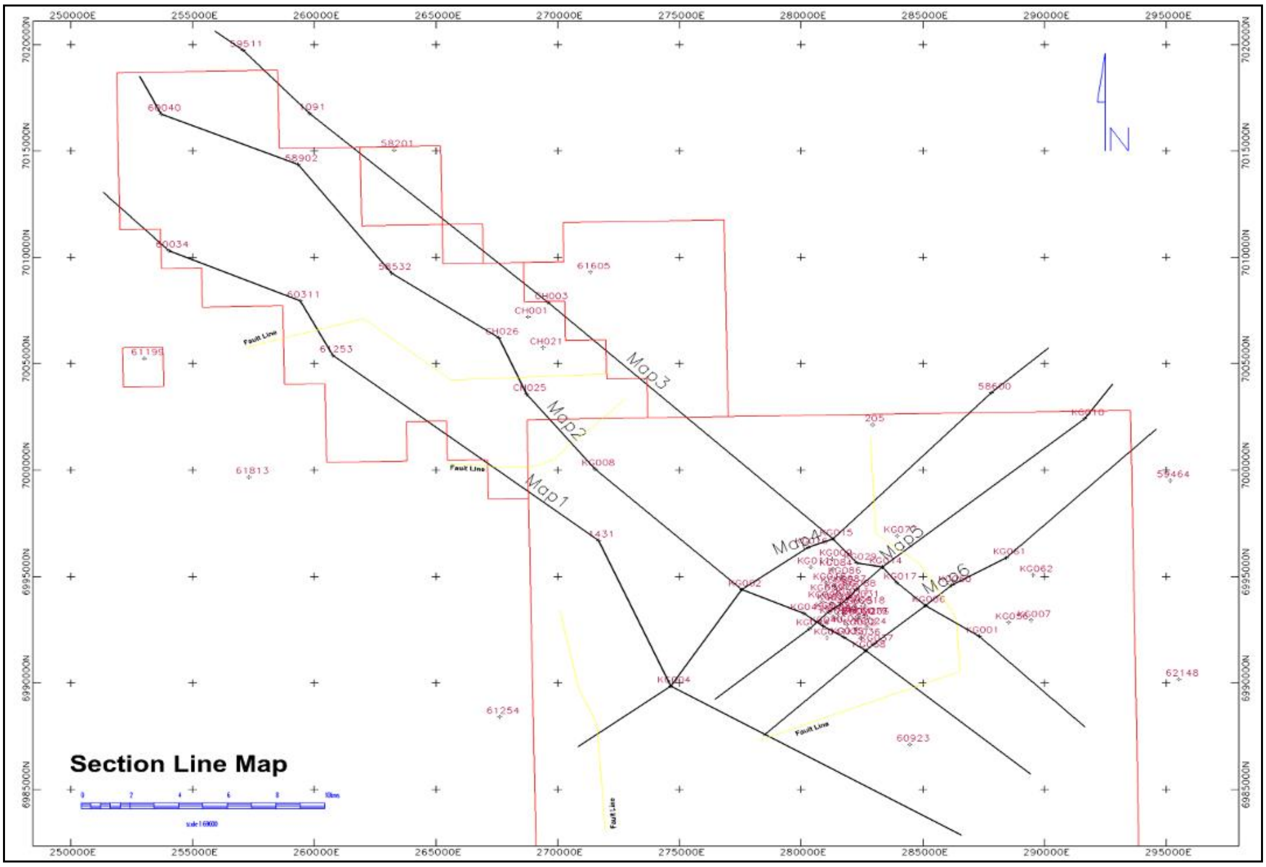



***Figure 17 - Section line Location map***

Source: Minex model 2012

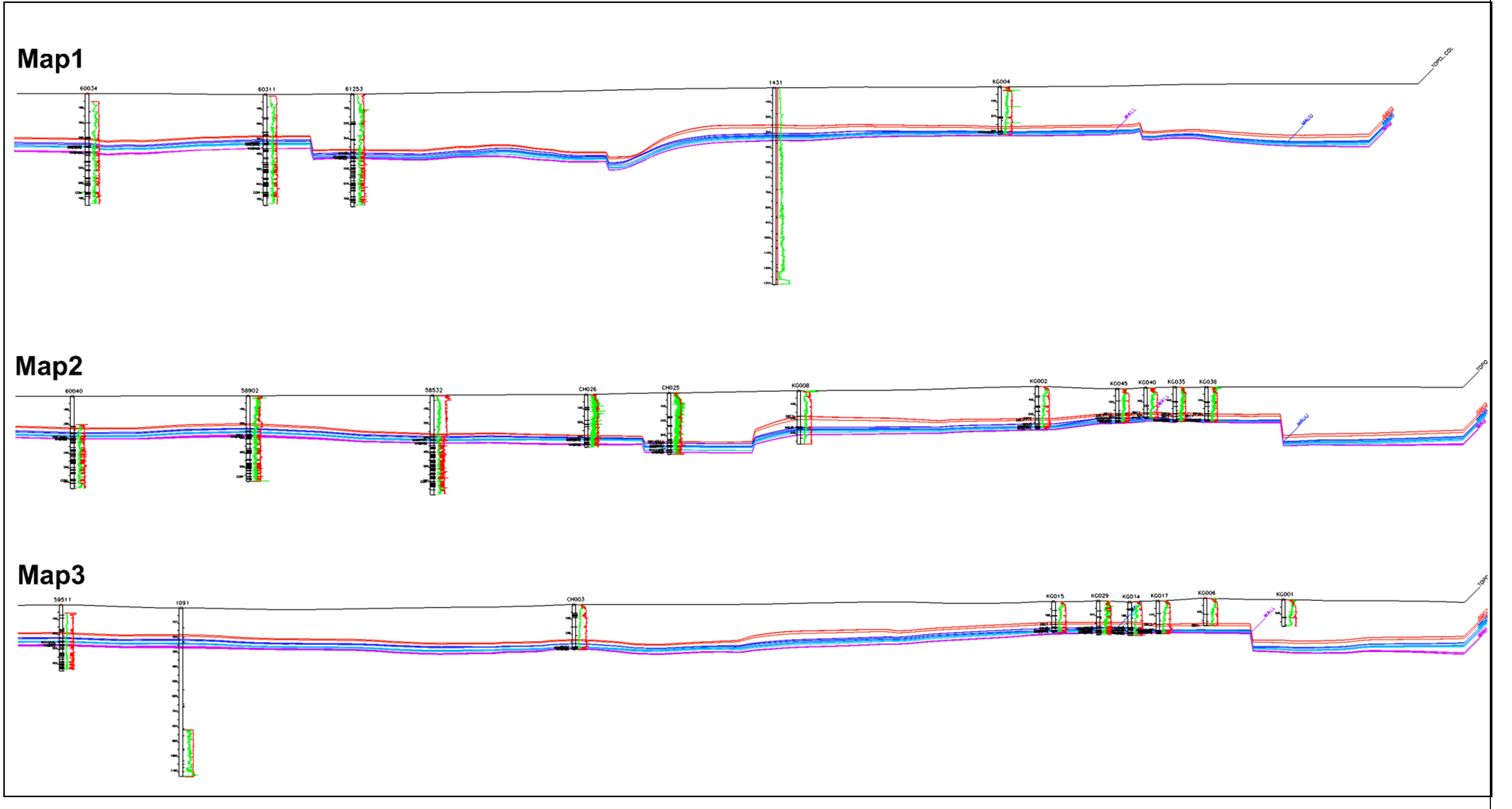



***Figure 18 - Cross sections along strike***

**Source**: Minex model, MDM 2012

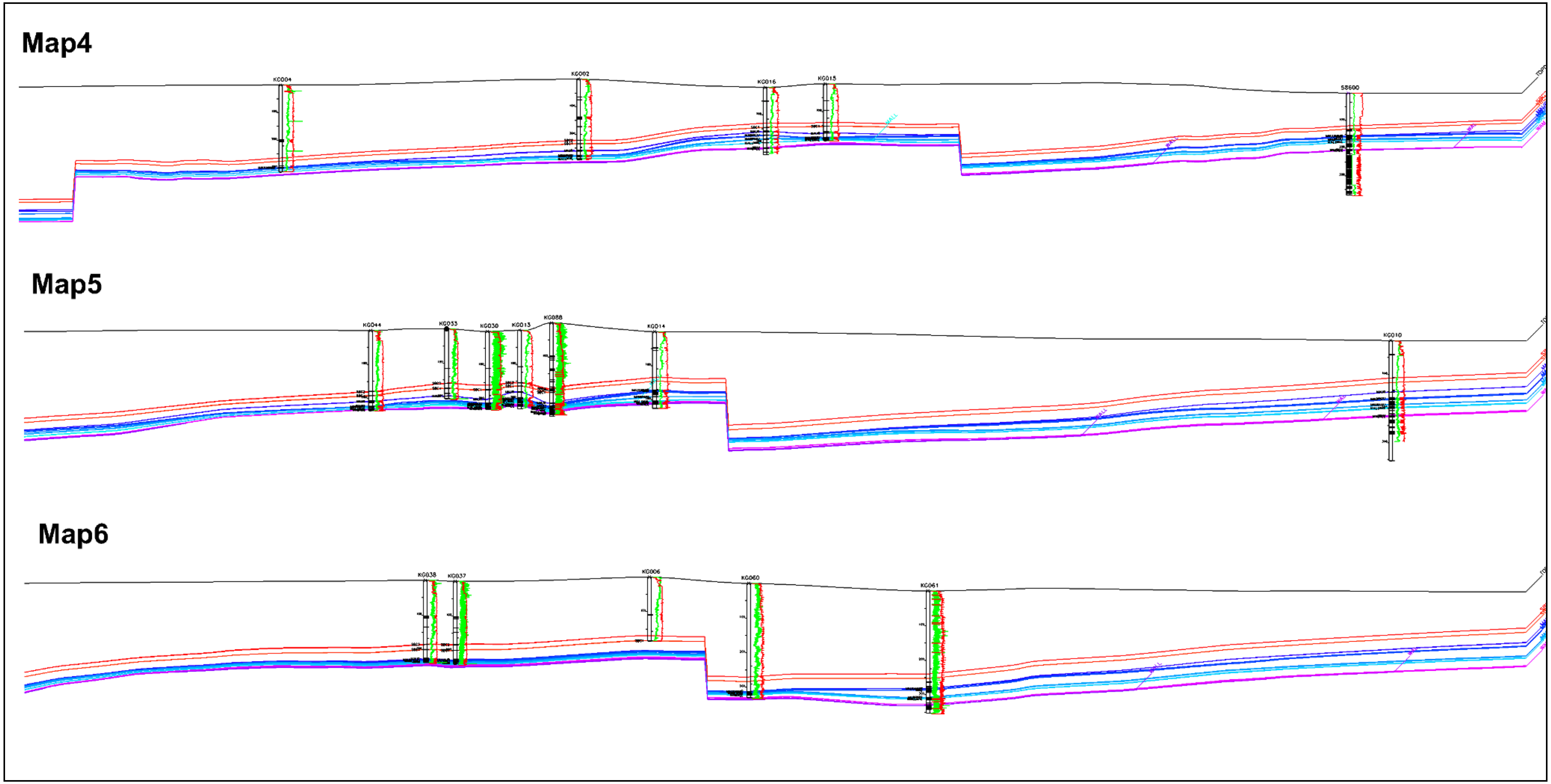



*Figure 19 - Cross sections along cross strike*

**Source**: Minex model, MDM 2012

# Coal Resource

Geophysical data from acceptable boreholes was used to create points of observation for Resource estimation. Minimum requirements for inclusion were Gamma (API) and Density (g/cc). The boreholes meeting the minimum geophysical requirements that had coal intersections were set as Point Of Observation ("POO") for inferred classification. The JORC Code identifies three levels of confidence in the reporting of Resource categories (***Table 3***).

*Table 3 - JORC Code Coal Resource Classification*

| Classification | Coal Resource |
|---|---|
| **Inferred** | Where coal quality and tonnage calculations can be estimated with a low level of confidence. It is considered as inferred calculation from geological evidence and assumed but not verified geologically and/or quality continuity. Inferred Coal Resource may be estimated using data obtained from Points of Observation up to 4 km apart. |
| **Indicated** | Where tonnage calculations, density, shape, physical characteristics and coal quality can be estimated with a reasonable level of confidence. Indicated Coal Resource may be estimated using data obtained from Points of Observation up to 1 km apart. |
| **Measured** | Where tonnage calculations, density, shape, physical characteristics and coal quality can be estimated with a high level of confidence. The sampling locations are spaced within close proximity to confirm geological and quality continuity. Measured Coal Resources may be estimated using data obtained from Points of Observation less than 500 m apart. The distance may be extended if there is sufficient technical justification to do so; for example, if supported by geostatistical analysis. |

Source: JORC website 2012

An Inferred Resource was estimated for the Macalister Seam (Upper, Middle and Lower) within the tenure areas. Calculations were estimated for each EPC and the MDL boundary with an inferred mask of 2000m radius, **Appendix 7**. Inferred tonnages for the Macalister seam are presented for each EPC in **Table 4 to 7**.

The topography grid from Geoscience Australia had been used as the top limit for this calculation. Wet, insitu relative density (RD) was calculated using the average density value from geophysical data (due to some minor correction issues a standard wet density of 1.4 g/cc was used). The calculation also relied on using 0.30m as the minimum coal thickness for this estimate. An unexpected geological loss factor ranging between 15-20% was applied to take into consideration all the uncertainties in continuity, splitting, coalescing, and quality of coal intervals.

*Table 4 – EPC 867 Inferred Resource Estimate[1,2]*

| Formation | Seam | Area | Thickness | Volume | Mass | Unexpected | Residual |
|---|---|---|---|---|---|---|---|
| | | Ha | m | 1,000 M3 | 1,000t | % vol | 1,000t |
| Walloon Coal Measures | MAUR | 4717.50 | 0.89 | 29770.26 | 47037.02 | 15% | 39981.47 |
| Walloon Coal Measures | MAUU | 3607.50 | 0.52 | 14264.85 | 22538.46 | 15% | 19157.69 |
| Walloon Coal Measures | MAU | 10255.00 | 1.88 | 144388.24 | 228133.44 | 15% | 193913.42 |
| Walloon Coal Measures | MAMU | 249.50 | 0.45 | 279.88 | 442.21 | 20% | 353.77 |
| Walloon Coal Measures | MAM | 11212.25 | 2.89 | 232893.66 | 367971.98 | 15% | 312776.19 |
| Walloon Coal Measures | MAL | 10808.25 | 1.08 | 82956.71 | 131071.62 | 15% | 111410.87 |
| Walloon Coal Measures | MALL | 861.75 | 0.60 | 473.71 | 748.46 | 20% | 598.77 |
| | | | | | **797943.19** | | **678192.18** |

*Table 5 – EPC 869 Inferred Resource Estimate[2]*

| Formation | Seam | Area | Thickness | Volume | Mass | Unexpected | Residual |
|---|---|---|---|---|---|---|---|
| | | Ha | m | 1,000 M3 | 1,000t | % vol | 1,000t |
| Walloon Coal Measures | MAM | 6117.00 | 4.74 | 290096.93 | 458353.15 | 15% | 389600.18 |
| Walloon Coal Measures | MAL | 2509.50 | 1.45 | 36338.81 | 57415.32 | 20% | 45932.26 |
| | | | | | **515768.47** | | **435532.44** |

*Table 6 – EPC 1132 Inferred Resource Estimate[2]*

| Formation | Seam | Area | Thickness | Volume | Mass | Unexpected | Residual |
|---|---|---|---|---|---|---|---|
| | | Ha | m | 1,000 M3 | 1,000t | % vol | 1,000t |
| Walloon Coal Measures | MAM | 1460.97 | 3.62 | 52816.82 | 83450.58 | 15% | 70933.00 |
| Walloon Coal Measures | MAL | 595.33 | 0.84 | 4995.74 | 7893.27 | 20% | 6314.62 |
| | | | | | **91343.86** | | **77247.62** |

*Table 7 – MDL 374 Inferred Resource Estimate[2]*

| Formation | Seam | Area | Thickness | Volume | Mass | Unexpected | Residual |
|---|---|---|---|---|---|---|---|
| | | Ha | m | 1,000 M3 | 1,000t | % vol | 1,000t |
| Walloon Coal Measures | MAUR | 2049.67 | 0.59 | 12120.39 | 19150.21 | 5% | 18192.70 |
| Walloon Coal Measures | MAUU | 854.67 | 0.53 | 4531.56 | 7159.86 | 5% | 6801.86 |
| Walloon Coal Measures | MAU | 2636.04 | 1.83 | 48324.96 | 76353.44 | 5% | 72535.77 |
| Walloon Coal Measures | MAMU | 165.03 | 0.51 | 839.35 | 1326.18 | 5% | 1259.87 |
| Walloon Coal Measures | MAM | 2695.05 | 3.37 | 90718.82 | 143335.73 | 5% | 136168.94 |
| Walloon Coal Measures | MAL | 2645.54 | 1.27 | 33643.59 | 53156.88 | 5% | 50499.04 |
| Walloon Coal Measures | MALL | 729.65 | 0.64 | 4666.57 | 7373.18 | 5% | 7004.52 |
| | | | | | **307855.47** | | **292462.69** |

[1] EPC867 excludes resources contained within MDL374

[2] Constraints on the Inferred Resources are as follows:

1.) Coal seams not intruded or not outside the tenure boundaries;
2.) Coal thicknesses <0.2m excluded;
3.) The depth range of calculation was from the base of weathering to 500m below natural topography;
4.) Coal seams >50% adb from coal quality or estimated from downhole density logs (in g/cc) excluded from the calculations;
5.) A discount factor varying from 5-20% has been subtracted from the initial calculation for unexpected geological losses. This accounts for unexpected conditions such as seam thinning, splitting, or seams missing in barren zones around faults.
6.) The mine planning package used was Minex and seam structure and thickness contours were generated using standard modelling algorithms and methodologies. Inferred masks were generated from base circles drawn 3,000m between Points of Observation;
7.) Points of observation were defined as those boreholes that had known surveyed positions, detailed lithological logs and coverage of the target coal seams with a suite of downhole geophysical logs that must include density in units of Kg/m3;

# Conclusion and Recommendations

## Conclusion

The geological model for Surat Project was developed using Minex software package. The project has been saved under CARBON_0612_RDESC_1 on the MDM server at G:\M-DBM\MDBM-Project\Carbon Energy Limited - CNX\Surat Resource Model\Model\CARBON_0612_RDESC_1.The primary coal seams focussed within this geological model area are the Macalister Upper, Middle and Lower seams from the Juandah Coal Measures.

A total of one hundred and twenty-two (122) boreholes with collar information were provided and of these seventy-five (75) boreholes with LAS files and eight (8) Paper geophysical log files were used within the geological model.

As a preliminary interpretation four (4) fault lines were identified from the structure contours within the model area. These contours identified the strike within the tenement area as trending in a northwest – southeast direction fashion; dipping to southwest at low angles. Within Minex, the Father and Son concept was applied to coal seam modelling to account for missing seams. The gridding mesh size was set at 50m x 50m to cover all boreholes; and an all-encompassing scan distance was set at 35,000m for seam interpolation.

Based on the geological structural models generated in Minex software, an initial Inferred Resource for the Macalister Seams was calculated for each EPC. A figure of 678 million tonnes was reported for EPC 867, 436 million tonnes for EPC 869 and 77 million tonnes for EPC 1132. An additional 293 million tonnes was also calculated within MDL 374.

## Recommendations

Recommendations regarding further investigations of the Surat Project area are summarised below:

1. Future planned boreholes should be surveyed, but at the very least their coordinates should be recorded using digital GPS devices, and heights with aneroid barometers;
2. Plan several high resolution 2D-seismic surveys to determine various structures across the project area.
3. Based on the distribution from the borehole data, there are two target areas identified for investigation of the Macalister Seam. The first is east of MDL 374 and the second is south of EPC 869.

# Reference

Jones, G. D. and Patrick, R B (1981). Stratigraphy and Coal Exploration of the Northeast Surat Basin. Coal Geology Journal of the Coal Geology Group, Geological Society of Australia, 1(4), p. 153 – 163.

Carbon Energy Limited, (2008). Carbon Energy Sixteenth Annual Report: http://www.carbonenergy.com.au/IRM/Company/ShowPage.aspx/PDFs/1155-65580144/AnnualReport2008. [Accessed 6th June 2012].

# Appendix 1: - Collar Borehole Data

| NO | BORE ID | X | Y | Z | COMMENTS |
|---|---|---|---|---|---|
| **1** | 191 | 272566.960 | 6979834.560 | 372.850 | |
| **2** | 205 | 282933.830 | 7002127.700 | 384.160 | |
| **3** | 225 | 301929.170 | 6924983.640 | 380.030 | |
| **4** | 236 | 294621.860 | 6934437.630 | 341.890 | |
| **5** | 237 | 262928.300 | 7000501.030 | 321.810 | |
| **6** | 1091 | 259804.950 | 7016761.950 | 320.270 | |
| **7** | 1236 | 270957.970 | 6979065.850 | 369.850 | |
| **8** | 1262 | 298713.910 | 6925669.580 | 365.860 | |
| **9** | 1431 | 271678.990 | 6996692.220 | 354.800 | |
| **10** | 58201 | 263286.890 | 7015042.150 | 308.130 | |
| **11** | 58532 | 263175.760 | 7009250.990 | 319.860 | |
| **12** | 58600 | 287815.850 | 7003638.590 | 331.680 | |
| **13** | 58902 | 259337.650 | 7014357.380 | 316.670 | |
| **14** | 59464 | 295161.040 | 6999508.110 | 352.930 | |
| **15** | 59511 | 257072.890 | 7019737.310 | 341.970 | |
| **16** | 60034 | 254026.120 | 7010306.220 | 316.470 | |
| **17** | 60040 | 253707.500 | 7016730.400 | 313.310 | |
| **18** | 60311 | 259424.700 | 7007950.490 | 309.810 | |
| **19** | 60923 | 284464.350 | 6987108.830 | 383.000 | |
| **20** | 61199 | 253024.330 | 7005246.520 | 337.530 | |
| **21** | 61253 | 260762.680 | 7005390.390 | 312.730 | |
| **22** | 61254 | 267620.850 | 6988405.820 | 345.620 | |
| **23** | 61605 | 271345.390 | 7009296.580 | 343.430 | |
| **24** | 61813 | 257315.530 | 6999673.000 | 330.330 | |
| **25** | 62056 | 313476.400 | 6909674.890 | 400.960 | |
| **26** | 62148 | 295519.290 | 6990173.780 | 344.530 | |
| **27** | 62256 | 314924.630 | 6915442.730 | 409.920 | |
| **28** | BWCM01L | 282224.710 | 6993195.870 | 367.500 | |
| **29** | BWCM03M | 282271.750 | 6993122.080 | 367.530 | |
| **30** | BWCM04L | 282181.990 | 6993181.220 | 367.290 | |
| **31** | BWCM05M | 282310.220 | 6993224.610 | 367.510 | |
| **32** | BWCM06R2 | 282247.540 | 6993197.980 | 366.960 | |
| **33** | BWCM07P | 282212.410 | 6993381.830 | 366.170 | |
| **34** | BWCM08P | 282156.830 | 6993554.470 | 365.820 | |
| **35** | BWCM09M | 282100.230 | 6993731.220 | 366.870 | |
| **36** | BWCM13M | 281703.420 | 6993516.210 | 365.520 | |
| **37** | BWCM14WR | 282316.800 | 6993942.470 | 369.800 | |
| **38** | BWCM15M | 282719.030 | 6993320.080 | 371.870 | |
| **39** | BWCM16M | 282464.020 | 6993012.030 | 370.080 | |
| **40** | BWCM17P | 282195.130 | 6993656.070 | 366.970 | |
| **41** | BWCM18P | 282247.040 | 6993491.970 | 366.530 | |
| **42** | BWCM19P | 282299.060 | 6993330.100 | 367.120 | |
| **43** | BWCM20P | 282340.040 | 6993188.980 | 367.610 | |
| **44** | BWCM21P | 282349.960 | 6993191.950 | 367.720 | |
| **45** | BWCM22WR | 282423.800 | 6993156.240 | 369.540 | |
| **46** | BWCM23L | 282395.610 | 6993048.640 | 369.060 | |
| **47** | BWCM23M | 282404.500 | 6993066.310 | 369.370 | |
| **48** | BWCM23S | 282413.490 | 6993084.460 | 369.260 | |
| **49** | BWCM24M | 282018.040 | 6993169.550 | 367.400 | |
| **50** | BWCM25M | 281940.740 | 6993635.910 | 365.090 | |
| **51** | BWCM26M | 282465.780 | 6993629.140 | 369.360 | |
| **52** | BWCM27M | 282572.690 | 6993143.270 | 371.000 | |
| **53** | BWCM28M | 282202.370 | 6993409.450 | 366.940 | |
| **54** | BWCM28S | 282214.250 | 6993391.810 | 367.190 | |

| | | | | | |
|---|---|---|---|---|---|
| **55** | BWCM28W | 282196.880 | 6993431.790 | 366.960 | |
| **56** | BWCM29M | 282358.760 | 6993363.410 | 368.400 | |
| **57** | BWCM29S | 282365.130 | 6993345.330 | 368.470 | |
| **58** | BWCM29W | 282353.930 | 6993384.930 | 368.420 | |
| **59** | CH001 | 268789.000 | 7007196.000 | 316.000 | Assumed taken by Handheld GPS |
| **60** | CH003 | 269604.000 | 7007877.000 | 344.000 | Assumed taken by Handheld GPS |
| **61** | CH021 | 269403.000 | 7005750.000 | 340.000 | Assumed taken by Handheld GPS |
| **62** | CH025 | 268720.000 | 7003572.000 | 337.000 | Assumed taken by Handheld GPS |
| **63** | CH026 | 267580.000 | 7006219.000 | 326.000 | Assumed taken by Handheld GPS |
| **64** | KG001 | 287315.000 | 6992195.000 | 378.000 | Assumed taken by Handheld GPS |
| **65** | KG002 | 277560.000 | 6994389.000 | 382.000 | Assumed taken by Handheld GPS |
| **66** | KG004 | 274646.000 | 6989852.000 | 361.000 | Assumed taken by Handheld GPS |
| **67** | KG006 | 285109.000 | 6993633.000 | 387.000 | Assumed taken by Handheld GPS |
| **68** | KG007 | 289444.000 | 6992940.000 | 377.000 | Assumed taken by Handheld GPS |
| **69** | KG008 | 271534.000 | 7000048.000 | 352.000 | Assumed taken by Handheld GPS |
| **70** | KG009 | 281292.000 | 6995821.400 | 359.100 | |
| **71** | KG010 | 291645.000 | 7002410.000 | 336.000 | Assumed taken by Handheld GPS |
| **72** | KG011 | 280386.600 | 6995445.300 | 354.300 | |
| **73** | KG012 | 281032.900 | 6994700.600 | 359.100 | |
| **74** | KG013 | 281965.200 | 6994019.200 | 366.200 | |
| **75** | KG014 | 283339.900 | 6995448.100 | 362.000 | |
| **76** | KG015 | 281307.600 | 6996766.800 | 365.000 | |
| **77** | KG016 | 280292.600 | 6996372.600 | 352.400 | |
| **78** | KG017 | 283932.900 | 6994714.100 | 368.600 | |
| **79** | KG018 | 282631.080 | 6993587.700 | 370.010 | |
| **80** | KG019 | 282726.800 | 6993091.600 | 371.700 | |
| **81** | KG020 | 282225.750 | 6993048.620 | 367.380 | |
| **82** | KG021 | 281771.890 | 6993216.860 | 367.910 | |
| **83** | KG022 | 282271.400 | 6992544.000 | 369.700 | |
| **84** | KG023 | 281875.700 | 6992725.300 | 371.100 | |
| **85** | KG024 | 282702.000 | 6992606.400 | 370.100 | |
| **86** | KG025 | 282135.500 | 6993551.500 | 365.200 | |
| **87** | KG026 | 281508.000 | 6994234.300 | 365.200 | |
| **88** | KG029 | 282296.700 | 6995634.700 | 368.900 | |
| **89** | KG030 | 281617.600 | 6993699.900 | 363.100 | |
| **90** | KG031 | 282405.300 | 6993888.300 | 369.900 | |
| **91** | KG032 | 281213.630 | 6993745.380 | 363.900 | |
| **92** | KG033 | 281129.510 | 6993346.750 | 370.200 | |
| **93** | KG034 | 281309.460 | 6993095.390 | 374.200 | |
| **94** | KG035 | 281759.810 | 6992142.510 | 377.700 | |
| **95** | KG036 | 282442.340 | 6992106.790 | 372.300 | |
| **96** | KG037 | 282971.220 | 6991816.070 | 374.800 | |
| **97** | KG038 | 282662.280 | 6991516.390 | 377.700 | |
| **98** | KG039 | 280927.120 | 6994182.560 | 359.400 | |
| **99** | KG040 | 280897.100 | 6992672.670 | 373.600 | |
| **100** | KG041 | 281073.640 | 6992111.370 | 373.000 | |
| **101** | KG043 | 281502.860 | 6993263.060 | 370.300 | |
| **102** | KG044 | 280348.240 | 6992546.450 | 365.800 | |
| **103** | KG045 | 280109.810 | 6993269.770 | 365.900 | |
| **104** | KG056 | 288530.000 | 6992837.000 | 371.000 | Assumed taken by Handheld GPS |
| **105** | KG057A | 288417.000 | 6994255.000 | 357.000 | Assumed taken by Handheld GPS |
| **106** | KG060 | 286178.000 | 6994588.000 | 369.000 | Assumed taken by Handheld GPS |
| **107** | KG061 | 288424.000 | 6995878.000 | 347.000 | Assumed taken by Handheld GPS |
| **108** | KG062 | 289526.000 | 6995068.000 | 373.000 | Assumed taken by Handheld GPS |
| **109** | KG077 | 283947.000 | 6996908.000 | 359.000 | Assumed taken by Handheld GPS |
| **110** | KG084 | 281296.000 | 6995350.000 | 360.000 | Assumed taken by Handheld GPS |
| **111** | KG085 | 281359.000 | 6994549.000 | 368.000 | Assumed taken by Handheld GPS |

| | | | | | |
|---|---|---|---|---|---|
| **112** | KG086 | 281654.000 | 6994984.000 | 364.000 | Assumed taken by Handheld GPS |
| **113** | KG087 | 281861.000 | 6994592.000 | 376.000 | Assumed taken by Handheld GPS |
| **114** | KG088 | 282257.000 | 6994386.000 | 388.000 | Assumed taken by Handheld GPS |
| **115** | KG090 | 280850.000 | 6993853.000 | 358.000 | Assumed taken by Handheld GPS |
| **116** | ML002 | 275464.778 | 7001773.595 | 349.000 | |
| **117** | DB035 | 288783.068 | 6996766.904 | 355.000 | |
| **118** | DB043 | 291865.522 | 6990738.790 | 380.000 | |
| **119** | BF4 | 282477.364 | 6992274.066 | 376.000 | |
| **120** | BF3 | 282448.818 | 6991335.202 | 392.000 | |
| **121** | BF1 | 283609.751 | 6990508.497 | 401.000 | |
| **122** | BF2 | 284817.535 | 6990621.534 | 398.000 | |

# Appendix 3: - Borehole Data Used

| BORE ID | FROM | TO | THICKNESS | SEAM NAME |
|---|---|---|---|---|
| **58201** | 238.21 | 241.80 | 3.59 | MAM |
| **58201** | 242.73 | 244.22 | 1.49 | MAL |
| **58201** | 250.41 | 252.57 | 2.16 | WAM |
| **58201** | 253.57 | 256.88 | 3.31 | WAL |
| **58201** | 531.40 | 533.89 | 2.49 | CON |
| **58532** | 307.07 | 312.57 | 5.50 | MAM |
| **58532** | 329.17 | 330.87 | 1.70 | WAM |
| **58532** | 332.37 | 333.27 | 0.90 | WAL |
| **58532** | 596.97 | 600.77 | 3.80 | CON |
| **58600** | 155.39 | 159.29 | 3.90 | MAU |
| **58600** | 166.69 | 170.69 | 4.00 | MAM |
| **58600** | 176.84 | 177.54 | 0.70 | MAL |
| **58600** | 205.19 | 205.94 | 0.75 | WAM |
| **58600** | 207.19 | 207.84 | 0.65 | WAL |
| **58902** | 269.32 | 276.62 | 7.30 | WAM |
| **58902** | 281.72 | 282.52 | 0.80 | WAL |
| **58902** | 559.42 | 562.22 | 2.80 | CON |
| **59464** | 165.11 | 166.21 | 1.10 | MAUR |
| **59464** | 168.34 | 169.56 | 1.22 | MAU |
| **59464** | 202.75 | 205.41 | 2.66 | MAM |
| **59464** | 206.95 | 207.75 | 0.80 | MAL |
| **59464** | 228.88 | 230.96 | 2.08 | WAM |
| **59511** | 250.34 | 250.63 | 0.29 | MAL |
| **59511** | 265.22 | 267.52 | 2.30 | WAM |
| **59511** | 272.41 | 274.66 | 2.25 | WAL |
| **60034** | 350.09 | 350.89 | 0.80 | MAM |
| **60034** | 356.59 | 357.19 | 0.60 | MAL |
| **60034** | 383.99 | 391.29 | 7.30 | WAM |
| **60034** | 653.09 | 659.19 | 6.10 | CON |
| **60040** | 279.87 | 281.33 | 1.46 | MAL |
| **60040** | 292.60 | 296.84 | 4.24 | WAM |
| **60040** | 582.84 | 584.77 | 1.93 | CON |
| **60311** | 320.74 | 325.94 | 5.20 | MAM |
| **60311** | 330.24 | 331.44 | 1.20 | MAL |
| **60311** | 356.54 | 357.44 | 0.90 | WAM |
| **60311** | 647.24 | 649.94 | 2.70 | CON |
| **60923** | 416.12 | 422.29 | 6.17 | MAM |
| **60923** | 432.99 | 435.29 | 2.30 | MAL |
| **60923** | 437.42 | 438.42 | 1.00 | WAM |
| **61199** | 463.09 | 466.69 | 3.60 | MAM |
| **61199** | 470.39 | 471.19 | 0.80 | MAL |
| **61199** | 495.29 | 496.89 | 1.60 | WAM |
| **61199** | 772.49 | 773.89 | 1.40 | CON |
| **61253** | 389.38 | 390.58 | 1.20 | MAUR |
| **61253** | 412.51 | 417.96 | 5.45 | MAM |
| **61253** | 419.21 | 422.58 | 3.37 | WAM |
| **61253** | 424.21 | 425.88 | 1.67 | WAL |
| **61254** | 460.06 | 462.96 | 2.90 | MAUR |
| **61254** | 467.56 | 468.36 | 0.80 | MAU |
| **61254** | 483.16 | 483.86 | 0.70 | MAMU |
| **61254** | 500.66 | 506.76 | 6.10 | MAM |
| **61254** | 509.36 | 510.06 | 0.70 | MAL |
| **61254** | 517.66 | 518.26 | 0.60 | WAM |
| **61254** | 733.26 | 736.86 | 3.60 | CON |
| **61605** | 238.49 | 240.33 | 1.84 | MAU |

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|---|---|---|---|---|
| **61605** | 282.81 | 285.30 | 2.49 | MAM |
| **61605** | 316.95 | 320.65 | 3.70 | WAM |
| **61605** | 322.63 | 323.19 | 0.56 | WAL |
| **61605** | 532.76 | 536.23 | 3.47 | CON |
| **61813** | 450.69 | 454.19 | 3.50 | MAM |
| **61813** | 483.41 | 487.02 | 3.61 | WAM |
| **61813** | 494.37 | 495.78 | 1.41 | WAL |
| **62148** | 210.68 | 212.88 | 2.20 | MAU |
| **62148** | 230.98 | 234.98 | 4.00 | MAM |
| **62148** | 240.08 | 241.48 | 1.40 | MAL |
| **62148** | 300.98 | 303.58 | 2.60 | WAM |
| **62148** | 316.68 | 318.58 | 1.90 | WAL |
| **62148** | 539.08 | 544.08 | 5.00 | CON |
| **CH001** | 295.19 | 299.71 | 4.52 | MAM |
| **CH001** | 301.16 | 301.75 | 0.59 | MAL |
| **CH001** | 317.81 | 322.43 | 4.62 | WAM |
| **CH001** | 323.62 | 325.46 | 1.84 | WAL |
| **CH003** | 284.36 | 290.84 | 6.48 | MAM |
| **CH003** | 291.25 | 292.59 | 1.34 | MAL |
| **CH003** | 293.70 | 298.79 | 5.09 | WAM |
| **CH021** | 321.08 | 322.25 | 1.17 | MAU |
| **CH021** | 322.51 | 327.27 | 4.76 | MAM |
| **CH021** | 329.31 | 329.51 | 0.20 | MAL |
| **CH021** | 345.55 | 347.67 | 2.12 | WAM |
| **CH021** | 349.94 | 351.30 | 1.36 | WAL |
| **CH025** | 336.78 | 336.98 | 0.20 | SBC2 |
| **CH025** | 337.76 | 338.60 | 0.84 | SBC1 |
| **CH025** | 347.76 | 348.60 | 0.84 | MAUR |
| **CH025** | 365.62 | 366.64 | 1.02 | MAU |
| **CH025** | 371.16 | 374.84 | 3.68 | MAM |
| **CH025** | 393.04 | 395.68 | 2.64 | MAL |
| **CH025** | 408.84 | 412.26 | 3.42 | WAM |
| **CH025** | 412.56 | 413.32 | 0.76 | WAL |
| **CH026** | 308.38 | 313.38 | 5.00 | MAM |
| **CH026** | 315.50 | 316.92 | 1.42 | MAL |
| **CH026** | 342.48 | 346.46 | 3.98 | WAM |
| **CH026** | 348.30 | 349.20 | 0.90 | WAL |
| **DB035** | 255.39 | 258.20 | 2.81 | MAUR |
| **DB035** | 266.17 | 266.47 | 0.30 | MAUU |
| **DB035** | 270.40 | 273.04 | 2.64 | MAU |
| **DB043** | 277.54 | 278.16 | 0.62 | MAMU |
| **DB043** | 280.35 | 282.10 | 1.75 | MAM |
| **DB043** | 285.13 | 285.75 | 0.62 | MAL |
| **DB043** | 307.06 | 307.51 | 0.45 | WALL |
| **KG002** | 221.22 | 221.58 | 0.36 | SBC2 |
| **KG002** | 233.47 | 233.90 | 0.43 | SBC1 |
| **KG002** | 258.42 | 260.36 | 1.94 | MAUR |
| **KG002** | 276.10 | 277.20 | 1.10 | MAU |
| **KG002** | 277.60 | 281.94 | 4.34 | MAM |
| **KG002** | 287.43 | 288.20 | 0.77 | MAL |
| **KG002** | 288.89 | 289.21 | 0.32 | MALL |
| **KG004** | 299.34 | 300.87 | 1.53 | MAU |
| **KG006** | 183.06 | 183.85 | 0.79 | SBC1 |
| **KG007** | 239.25 | 240.43 | 1.18 | SBC1 |
| **KG007** | 268.36 | 268.81 | 0.45 | MAU |
| **KG008** | 176.59 | 177.87 | 1.28 | SBC2 |
| **KG008** | 254.47 | 255.48 | 1.01 | MAUR |
| **KG009** | 148.24 | 148.77 | 0.53 | SBC1 |

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|---|---|---|---|---|
| **KG009** | 173.33 | 173.63 | 0.30 | MAUR |
| **KG009** | 185.89 | 186.52 | 0.63 | MAUU |
| **KG009** | 186.79 | 187.34 | 0.55 | MAU |
| **KG009** | 188.25 | 191.97 | 3.72 | MAM |
| **KG009** | 192.76 | 193.62 | 0.86 | MAL |
| **KG009** | 195.09 | 196.41 | 1.32 | MALL |
| **KG009** | 208.42 | 209.13 | 0.71 | WAM |
| **KG009** | 211.91 | 212.51 | 0.60 | WAL |
| **KG009** | 213.35 | 214.52 | 1.17 | WALL |
| **KG010** | 151.24 | 151.58 | 0.34 | MAUR |
| **KG010** | 170.68 | 173.97 | 3.29 | MAU |
| **KG010** | 188.18 | 189.32 | 1.14 | MAM |
| **KG010** | 196.94 | 199.34 | 2.40 | MAL |
| **KG010** | 219.67 | 223.45 | 3.78 | WAM |
| **KG011** | 170.37 | 171.91 | 1.54 | MAUR |
| **KG011** | 175.41 | 176.06 | 0.65 | MAUU |
| **KG011** | 194.89 | 199.14 | 4.25 | MAM |
| **KG011** | 199.99 | 200.53 | 0.54 | MAL |
| **KG011** | 212.23 | 213.41 | 1.18 | WAM |
| **KG011** | 215.01 | 216.31 | 1.30 | WAL |
| **KG012** | 149.53 | 150.01 | 0.48 | SBC1 |
| **KG012** | 166.47 | 166.84 | 0.37 | MAUR |
| **KG012** | 183.99 | 185.58 | 1.59 | MAU |
| **KG012** | 186.47 | 190.23 | 3.76 | MAM |
| **KG012** | 198.62 | 199.22 | 0.60 | WAM |
| **KG012** | 201.09 | 201.39 | 0.30 | WAL |
| **KG013** | 153.51 | 154.83 | 1.32 | SBC2 |
| **KG013** | 163.77 | 164.43 | 0.66 | SBC1 |
| **KG013** | 180.70 | 181.36 | 0.66 | MAUR |
| **KG013** | 199.68 | 202.33 | 2.65 | MAU |
| **KG013** | 203.87 | 207.53 | 3.66 | MAM |
| **KG013** | 207.89 | 210.04 | 2.15 | MAL |
| **KG013** | 212.60 | 213.05 | 0.45 | MALL |
| **KG013** | 216.52 | 218.26 | 1.74 | WAM |
| **KG013** | 220.26 | 220.85 | 0.59 | WAL |
| **KG013** | 222.29 | 223.20 | 0.91 | WALL |
| **KG014** | 171.07 | 171.55 | 0.48 | MAUR |
| **KG014** | 171.88 | 174.31 | 2.43 | MAU |
| **KG014** | 174.31 | 177.38 | 3.07 | MAM |
| **KG014** | 179.80 | 180.75 | 0.95 | MAL |
| **KG014** | 208.05 | 210.15 | 2.10 | WAM |
| **KG014** | 211.04 | 211.77 | 0.73 | WAL |
| **KG014** | 212.66 | 213.79 | 1.13 | WALL |
| **KG015** | 153.26 | 153.87 | 0.61 | SBC1 |
| **KG015** | 178.80 | 179.32 | 0.52 | MAUR |
| **KG015** | 193.95 | 196.30 | 2.35 | MAU |
| **KG015** | 196.59 | 199.59 | 3.00 | MAM |
| **KG015** | 202.54 | 203.39 | 0.85 | MAL |
| **KG016** | 144.80 | 145.22 | 0.42 | SBC1 |
| **KG016** | 160.49 | 161.05 | 0.56 | MAUR |
| **KG016** | 173.27 | 174.84 | 1.57 | MAU |
| **KG016** | 186.20 | 187.87 | 1.67 | MAM |
| **KG016** | 200.63 | 201.29 | 0.66 | MAL |
| **KG016** | 218.49 | 218.93 | 0.44 | WAM |
| **KG016** | 221.72 | 222.48 | 0.76 | WAL |
| **KG017** | 157.35 | 157.76 | 0.41 | SBC2 |
| **KG017** | 197.26 | 197.78 | 0.52 | MAUU |
| **KG017** | 198.63 | 200.84 | 2.21 | MAU |

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|---|---|---|---|---|
| **KG017** | 200.84 | 201.75 | 0.91 | MAM |
| **KG017** | 203.49 | 203.87 | 0.38 | MAL |
| **KG017** | 208.90 | 209.93 | 1.03 | WAM |
| **KG017** | 212.89 | 213.91 | 1.02 | WAL |
| **KG018** | 156.48 | 156.87 | 0.39 | SBC2 |
| **KG018** | 203.80 | 204.15 | 0.35 | MAUU |
| **KG019** | 159.07 | 159.89 | 0.82 | SBC2 |
| **KG019** | 206.14 | 206.81 | 0.67 | MAUU |
| **KG019** | 207.13 | 209.74 | 2.61 | MAU |
| **KG019** | 210.43 | 214.05 | 3.62 | MAM |
| **KG019** | 214.90 | 215.83 | 0.93 | MAL |
| **KG020** | 153.52 | 154.16 | 0.64 | SBC2 |
| **KG020** | 199.07 | 199.34 | 0.27 | MAUU |
| **KG020** | 200.27 | 203.32 | 3.05 | MAU |
| **KG020** | 204.69 | 208.30 | 3.61 | MAM |
| **KG020** | 210.57 | 212.09 | 1.52 | MAL |
| **KG020** | 212.58 | 213.03 | 0.45 | MALL |
| **KG020** | 214.44 | 216.09 | 1.65 | WAM |
| **KG020** | 220.37 | 220.81 | 0.44 | WAL |
| **KG020** | 223.53 | 224.00 | 0.47 | WALL |
| **KG021** | 171.62 | 172.41 | 0.79 | SBC1 |
| **KG021** | 203.99 | 204.59 | 0.60 | MAUU |
| **KG021** | 204.88 | 207.15 | 2.27 | MAU |
| **KG021** | 208.30 | 212.20 | 3.90 | MAM |
| **KG021** | 215.41 | 217.67 | 2.26 | MAL |
| **KG021** | 220.07 | 220.82 | 0.75 | WAM |
| **KG022** | 155.23 | 155.49 | 0.26 | SBC2 |
| **KG022** | 193.86 | 194.34 | 0.48 | MAUR |
| **KG022** | 199.34 | 200.32 | 0.98 | MAUU |
| **KG022** | 200.67 | 201.77 | 1.10 | MAU |
| **KG022** | 204.45 | 206.38 | 1.93 | MAMU |
| **KG022** | 207.61 | 210.98 | 3.37 | MAM |
| **KG023** | 163.72 | 164.76 | 1.04 | SBC2 |
| **KG023** | 181.26 | 181.71 | 0.45 | SBC1 |
| **KG023** | 197.78 | 199.30 | 1.52 | MAUR |
| **KG023** | 213.10 | 213.55 | 0.45 | MAUU |
| **KG023** | 215.03 | 218.01 | 2.98 | MAU |
| **KG023** | 218.91 | 223.21 | 4.30 | MAM |
| **KG023** | 226.95 | 229.69 | 2.74 | MAL |
| **KG023** | 231.03 | 232.42 | 1.39 | WAM |
| **KG023** | 233.47 | 234.28 | 0.81 | WAL |
| **KG024** | 158.46 | 158.97 | 0.51 | SBC2 |
| **KG024** | 205.38 | 205.96 | 0.58 | MAUU |
| **KG024** | 207.57 | 210.24 | 2.67 | MAU |
| **KG024** | 211.29 | 213.63 | 2.34 | MAM |
| **KG025** | 150.00 | 150.93 | 0.93 | SBC2 |
| **KG025** | 161.36 | 162.02 | 0.66 | SBC1 |
| **KG025** | 180.92 | 181.59 | 0.67 | MAUR |
| **KG025** | 192.14 | 193.00 | 0.86 | MAUU |
| **KG025** | 193.68 | 196.49 | 2.81 | MAU |
| **KG025** | 197.13 | 197.66 | 0.53 | MAMU |
| **KG025** | 198.27 | 201.38 | 3.11 | MAM |
| **KG025** | 201.88 | 203.46 | 1.58 | MAL |
| **KG025** | 204.71 | 205.17 | 0.46 | MALL |
| **KG025** | 206.94 | 208.84 | 1.90 | WAM |
| **KG025** | 211.34 | 212.23 | 0.89 | WAL |
| **KG025** | 215.80 | 216.43 | 0.63 | WALL |
| **KG026** | 161.40 | 162.06 | 0.66 | SBC1 |

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|---|---|---|---|---|
| **KG026** | 178.23 | 178.95 | 0.72 | MAUR |
| **KG026** | 202.72 | 204.54 | 1.82 | MAU |
| **KG026** | 205.21 | 209.97 | 4.76 | MAM |
| **KG029** | 179.24 | 179.86 | 0.62 | MAUR |
| **KG029** | 183.14 | 185.56 | 2.42 | MAU |
| **KG029** | 194.82 | 195.35 | 0.53 | MAMU |
| **KG029** | 196.10 | 202.29 | 6.19 | MAM |
| **KG029** | 203.14 | 204.42 | 1.28 | MAL |
| **KG029** | 207.17 | 208.28 | 1.11 | MALL |
| **KG029** | 210.48 | 211.60 | 1.12 | WAM |
| **KG029** | 212.83 | 213.83 | 1.00 | WAL |
| **KG029** | 214.06 | 215.33 | 1.27 | WALL |
| **KG030** | 171.36 | 172.02 | 0.66 | SBC1 |
| **KG030** | 199.01 | 200.43 | 1.42 | MAUR |
| **KG030** | 211.46 | 211.89 | 0.43 | MAUU |
| **KG030** | 212.38 | 214.46 | 2.08 | MAU |
| **KG030** | 215.03 | 219.40 | 4.37 | MAM |
| **KG030** | 220.29 | 222.27 | 1.98 | MAL |
| **KG030** | 223.04 | 223.40 | 0.36 | MALL |
| **KG030** | 225.90 | 227.50 | 1.60 | WAM |
| **KG031** | 156.17 | 157.29 | 1.12 | SBC2 |
| **KG031** | 168.73 | 169.28 | 0.55 | SBC1 |
| **KG031** | 202.86 | 203.13 | 0.27 | MAUU |
| **KG031** | 204.53 | 208.02 | 3.49 | MAU |
| **KG031** | 208.60 | 209.04 | 0.44 | MAMU |
| **KG031** | 209.40 | 212.76 | 3.36 | MAM |
| **KG031** | 213.16 | 215.26 | 2.10 | MAL |
| **KG032** | 158.48 | 158.92 | 0.44 | SBC2 |
| **KG032** | 175.55 | 175.91 | 0.36 | SBC1 |
| **KG032** | 197.18 | 197.98 | 0.80 | MAUR |
| **KG032** | 217.07 | 218.71 | 1.64 | MAU |
| **KG032** | 219.28 | 223.56 | 4.28 | MAM |
| **KG032** | 225.54 | 227.14 | 1.60 | MAL |
| **KG032** | 228.01 | 228.37 | 0.36 | MALL |
| **KG033** | 159.55 | 160.40 | 0.85 | SBC2 |
| **KG033** | 174.73 | 175.23 | 0.50 | SBC1 |
| **KG033** | 197.10 | 198.01 | 0.91 | MAUR |
| **KG034** | 172.88 | 173.40 | 0.52 | SBC1 |
| **KG034** | 191.20 | 191.63 | 0.43 | MAUR |
| **KG034** | 206.82 | 209.19 | 2.37 | MAU |
| **KG034** | 209.32 | 213.15 | 3.83 | MAM |
| **KG035** | 184.74 | 186.88 | 2.14 | SBC2 |
| **KG035** | 205.07 | 205.66 | 0.59 | SBC1 |
| **KG035** | 225.74 | 226.05 | 0.31 | MAUR |
| **KG035** | 228.68 | 229.12 | 0.44 | MAUU |
| **KG035** | 230.80 | 232.49 | 1.69 | MAU |
| **KG035** | 233.12 | 237.00 | 3.88 | MAM |
| **KG036** | 211.47 | 212.10 | 0.63 | MAUU |
| **KG036** | 213.74 | 215.61 | 1.87 | MAU |
| **KG036** | 216.29 | 218.73 | 2.44 | MAM |
| **KG036** | 219.52 | 220.99 | 1.47 | MAL |
| **KG037** | 182.55 | 183.17 | 0.62 | SBC2 |
| **KG037** | 198.84 | 199.51 | 0.67 | SBC1 |
| **KG037** | 226.41 | 227.24 | 0.83 | MAUU |
| **KG037** | 230.02 | 230.99 | 0.97 | MAU |
| **KG037** | 233.25 | 233.62 | 0.37 | MAMU |
| **KG037** | 234.60 | 238.13 | 3.53 | MAM |
| **KG038** | 184.89 | 185.90 | 1.01 | SBC2 |

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| **KG038** | 199.67 | 200.41 | 0.74 | SBC1 |
| **KG038** | 226.47 | 227.52 | 1.05 | MAUR |
| **KG038** | 229.02 | 230.05 | 1.03 | MAUU |
| **KG038** | 231.58 | 231.98 | 0.40 | MAU |
| **KG038** | 233.09 | 236.91 | 3.82 | MAM |
| **KG039** | 181.03 | 181.28 | 0.25 | SBC2 |
| **KG039** | 201.20 | 201.63 | 0.43 | SBC1 |
| **KG039** | 208.45 | 208.70 | 0.25 | MAUR |
| **KG039** | 221.85 | 222.49 | 0.64 | MAU |
| **KG039** | 223.59 | 227.23 | 3.64 | MAM |
| **KG039** | 234.68 | 235.65 | 0.97 | MAL |
| **KG039** | 236.35 | 236.90 | 0.55 | MALL |
| **KG040** | 173.63 | 173.80 | 0.17 | SBC2 |
| **KG040** | 182.88 | 183.36 | 0.48 | SBC1 |
| **KG040** | 207.09 | 207.78 | 0.69 | MAUR |
| **KG041** | 171.87 | 173.31 | 1.44 | SBC2 |
| **KG041** | 205.54 | 205.96 | 0.42 | MAUR |
| **KG041** | 211.17 | 211.89 | 0.72 | MAUU |
| **KG041** | 214.42 | 216.45 | 2.03 | MAU |
| **KG041** | 216.48 | 218.46 | 1.98 | MAM |
| **KG043** | 202.06 | 202.77 | 0.71 | MAUU |
| **KG043** | 205.85 | 208.10 | 2.25 | MAU |
| **KG043** | 208.10 | 212.30 | 4.20 | MAM |
| **KG043** | 216.32 | 218.06 | 1.74 | MAL |
| **KG043** | 219.79 | 220.31 | 0.52 | MALL |
| **KG044** | 180.01 | 180.66 | 0.65 | SBC2 |
| **KG044** | 191.55 | 192.54 | 0.99 | SBC1 |
| **KG044** | 208.36 | 209.13 | 0.77 | MAUR |
| **KG044** | 222.72 | 223.61 | 0.89 | MAU |
| **KG044** | 223.83 | 224.94 | 1.11 | MAM |
| **KG044** | 228.86 | 229.74 | 0.88 | MAL |
| **KG044** | 232.48 | 233.45 | 0.97 | WAM |
| **KG045** | 173.94 | 174.99 | 1.05 | SBC2 |
| **KG045** | 185.34 | 186.10 | 0.76 | SBC1 |
| **KG045** | 202.37 | 203.03 | 0.66 | MAUR |
| **KG045** | 204.36 | 204.76 | 0.40 | MAUU |
| **KG045** | 219.28 | 220.11 | 0.83 | MAU |
| **KG045** | 220.32 | 221.64 | 1.32 | MAM |
| **KG045** | 228.83 | 229.78 | 0.95 | MAL |
| **KG056** | 292.34 | 292.84 | 0.50 | MAUU |
| **KG056** | 293.29 | 296.85 | 3.56 | MAU |
| **KG056** | 309.38 | 311.75 | 2.37 | MAM |
| **KG056** | 312.96 | 314.00 | 1.04 | MAL |
| **KG060** | 312.24 | 316.29 | 4.05 | MAU |
| **KG060** | 317.21 | 320.74 | 3.53 | MAM |
| **KG060** | 321.25 | 322.86 | 1.61 | MAL |
| **KG061** | 281.85 | 282.46 | 0.61 | MAUU |
| **KG061** | 286.13 | 286.97 | 0.84 | MAU |
| **KG061** | 306.76 | 308.18 | 1.42 | MAM |
| **KG061** | 311.30 | 311.71 | 0.41 | MAL |
| **KG062** | 242.53 | 242.88 | 0.35 | SBC1 |
| **KG062** | 273.01 | 276.21 | 3.20 | MAU |
| **KG062** | 303.48 | 306.40 | 2.92 | MAM |
| **KG062** | 313.91 | 315.20 | 1.29 | MAL |
| **KG062** | 329.98 | 330.70 | 0.72 | WAM |
| **KG062** | 336.58 | 336.92 | 0.34 | WAL |
| **KG062** | 337.97 | 338.23 | 0.26 | WALL |
| **KG077** | 314.01 | 315.41 | 1.40 | MAU |

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| **KG077** | 316.35 | 319.88 | 3.53 | MAM |
| **KG077** | 322.58 | 324.55 | 1.97 | MAL |
| **KG077** | 342.83 | 343.41 | 0.58 | WAM |
| **KG077** | 347.50 | 348.21 | 0.71 | WAL |
| **KG077** | 349.90 | 350.28 | 0.38 | WALL |
| **KG084** | 164.36 | 164.79 | 0.43 | MAUR |
| **KG084** | 187.32 | 188.27 | 0.95 | MAU |
| **KG084** | 189.28 | 193.21 | 3.93 | MAM |
| **KG084** | 197.08 | 197.68 | 0.60 | MAL |
| **KG084** | 199.27 | 201.05 | 1.78 | MALL |
| **KG084** | 218.75 | 219.16 | 0.41 | WAM |
| **KG084** | 221.55 | 222.74 | 1.19 | WAL |
| **KG085** | 160.94 | 161.71 | 0.77 | SBC1 |
| **KG085** | 184.59 | 185.54 | 0.95 | MAUR |
| **KG085** | 197.52 | 198.06 | 0.54 | MAUU |
| **KG085** | 198.49 | 199.41 | 0.92 | MAU |
| **KG085** | 199.76 | 204.35 | 4.59 | MAM |
| **KG086** | 157.86 | 158.55 | 0.69 | SBC1 |
| **KG086** | 180.11 | 180.53 | 0.42 | MAUR |
| **KG086** | 195.98 | 196.37 | 0.39 | MAUU |
| **KG086** | 198.24 | 201.16 | 2.92 | MAU |
| **KG086** | 201.16 | 205.06 | 3.90 | MAM |
| **KG086** | 205.92 | 208.08 | 2.16 | MAL |
| **KG086** | 209.96 | 210.35 | 0.39 | MALL |
| **KG086** | 217.92 | 219.22 | 1.30 | WAM |
| **KG086** | 219.57 | 220.96 | 1.39 | WAL |
| **KG086** | 224.48 | 225.55 | 1.07 | WALL |
| **KG087** | 161.71 | 163.28 | 1.57 | SBC2 |
| **KG087** | 172.72 | 173.43 | 0.71 | SBC1 |
| **KG087** | 190.80 | 191.04 | 0.24 | MAUR |
| **KG087** | 214.46 | 215.11 | 0.65 | MAUU |
| **KG087** | 216.29 | 218.30 | 2.01 | MAU |
| **KG087** | 219.39 | 223.10 | 3.71 | MAM |
| **KG087** | 223.77 | 225.87 | 2.10 | MAL |
| **KG087** | 227.72 | 228.11 | 0.39 | MALL |
| **KG087** | 231.12 | 233.82 | 2.70 | WAM |
| **KG087** | 235.34 | 236.36 | 1.02 | WAL |
| **KG087** | 237.23 | 238.38 | 1.15 | WALL |
| **KG088** | 193.01 | 194.65 | 1.64 | SBC2 |
| **KG088** | 203.80 | 204.44 | 0.64 | SBC1 |
| **KG088** | 235.87 | 236.21 | 0.34 | MAUR |
| **KG088** | 243.77 | 244.37 | 0.60 | MAUU |
| **KG088** | 245.45 | 250.37 | 4.92 | MAU |
| **KG088** | 250.58 | 255.05 | 4.47 | MAM |
| **KG088** | 255.45 | 258.47 | 3.02 | MAL |
| **KG088** | 261.08 | 261.99 | 0.91 | MALL |
| **KG088** | 263.00 | 266.77 | 3.77 | WAM |
| **KG090** | 161.77 | 162.18 | 0.41 | SBC2 |
| **KG090** | 200.52 | 201.06 | 0.54 | MAUR |
| **KG090** | 225.57 | 226.84 | 1.27 | MAU |
| **KG090** | 227.35 | 231.68 | 4.33 | MAM |
| **KG090** | 234.46 | 236.22 | 1.76 | MAL |
| **KG090** | 236.75 | 237.38 | 0.63 | MALL |
| **KG090** | 248.85 | 249.66 | 0.81 | WAM |
| **KG090** | 258.09 | 259.66 | 1.57 | WALL |
| **ML002** | 254.94 | 255.40 | 0.46 | SBC1 |
| **ML002** | 282.12 | 283.39 | 1.27 | MAU |
| **ML002** | 283.87 | 287.24 | 3.37 | MAM |

| | | | | |
|---|---|---|---|---|
| **ML002** | 289.63 | 290.00 | 0.37 | MAL |
| **ML002** | 323.83 | 325.86 | 2.03 | WAM |
| **ML002** | 329.24 | 329.77 | 0.53 | WAL |

| Reasoning for holes used: | |
|---|---|
| **In the June 2012 Surat Project Model** | **79** |
| **To add to Surat Project Model Update – (~August 2012)** | **54** |
| - LAS not received until the 30th April after correlations had finished. | 31 |
| - Within MDL374 - not the focus of the model | 6 |
| - Predominately other holes belonging to a series within the lease area. At present commonly one hole of a series was chosen where they were clustered together | 17 |
| **Potential for future model** | **21** |
| - Within 5km boundary | 16 |
| - Very close to other boreholes (less than 100m) | 5 |
| **Excluded from the model** | **107** |
| - In EPC868 - not enough data to model | 11 |
| - Part of a cluster, best hole selected and used. | 71 |
| - Did not meet criteria for points of observation – no density | 10 |
| - Outside 5km model buffer | 15 |

# Appendix 3: - Borehole Data Used

| BORE ID | EASTING | NORTHING | ELEVATION | FINAL DEPTH |
|---|---|---|---|---|
| **205** | 282933.830 | 7002127.700 | 384.160 | 1047.6 |
| **1091** | 259804.950 | 7016761.950 | 320.270 | 1131.0 |
| **1431** | 271678.990 | 6996692.220 | 354.800 | 1302.0 |
| **58201** | 263286.890 | 7015042.150 | 308.130 | 581.50 |
| **58532** | 263175.760 | 7009250.990 | 319.860 | 690.03 |
| **58600** | 287815.850 | 7003638.590 | 331.680 | 370.00 |
| **58902** | 259337.650 | 7014357.380 | 316.670 | 593.77 |
| **59464** | 295161.040 | 6999508.110 | 352.930 | 497.50 |
| **59511** | 257072.890 | 7019737.310 | 341.970 | 444.00 |
| **60034** | 254026.120 | 7010306.220 | 316.470 | 740.00 |
| **60040** | 253707.500 | 7016730.400 | 313.310 | 640.00 |
| **60311** | 259424.700 | 7007950.490 | 309.810 | 734.00 |
| **60923** | 284464.350 | 6987108.830 | 383.000 | 750.00 |
| **61199** | 253024.330 | 7005246.520 | 337.530 | 845.00 |
| **61253** | 260762.680 | 7005390.390 | 312.730 | 745.11 |
| **61254** | 267620.850 | 6988405.820 | 345.620 | 845.65 |
| **61605** | 271345.390 | 7009296.580 | 343.430 | 574.00 |
| **61813** | 257315.530 | 6999673.000 | 330.330 | 660.00 |
| **62148** | 295519.290 | 6990173.780 | 344.530 | 597.74 |
| **BWCM23S** | 282413.490 | 6993084.460 | 369.260 | 130.00 |
| **CH001** | 268789.000 | 7007196.000 | 316.000 | 326.50 |
| **CH003** | 269604.000 | 7007877.000 | 344.000 | 302.50 |
| **CH021** | 269403.000 | 7005750.000 | 340.000 | 366.00 |
| **CH025** | 268720.000 | 7003572.000 | 337.000 | 426.00 |
| **CH026** | 267580.000 | 7006219.000 | 326.000 | 366.00 |
| **KG001** | 287315.000 | 6992195.000 | 378.000 | 180.00 |
| **KG002** | 277560.000 | 6994389.000 | 382.000 | 292.00 |
| **KG004** | 274646.000 | 6989852.000 | 361.000 | 315.00 |
| **KG006** | 285109.000 | 6993633.000 | 387.000 | 185.00 |
| **KG007** | 289444.000 | 6992940.000 | 377.000 | 279.50 |
| **KG008** | 271534.000 | 7000048.000 | 352.000 | 370.00 |
| **KG009** | 281292.000 | 6995821.400 | 359.100 | 237.00 |
| **KG010** | 291645.000 | 7002410.000 | 336.000 | 354.00 |
| **KG011** | 280386.600 | 6995445.300 | 354.300 | 217.00 |
| **KG012** | 281032.900 | 6994700.600 | 359.100 | 219.00 |
| **KG013** | 281965.200 | 6994019.200 | 366.200 | 231.00 |
| **KG014** | 283339.900 | 6995448.100 | 362.000 | 225.00 |
| **KG015** | 281307.600 | 6996766.800 | 365.000 | 206.00 |
| **KG016** | 280292.600 | 6996372.600 | 352.400 | 244.00 |
| **KG017** | 283932.900 | 6994714.100 | 368.600 | 220.00 |
| **KG018** | 282631.080 | 6993587.700 | 370.010 | 205.00 |
| **KG019** | 282726.800 | 6993091.600 | 371.700 | 220.00 |
| **KG020** | 282225.750 | 6993048.620 | 367.380 | 225.00 |
| **KG021** | 281771.890 | 6993216.860 | 367.910 | 224.00 |
| **KG022** | 282271.400 | 6992544.000 | 369.700 | 217.00 |
| **KG023** | 281875.700 | 6992725.300 | 371.100 | 246.00 |
| **KG024** | 282702.000 | 6992606.400 | 370.100 | 234.00 |
| **KG025** | 282135.500 | 6993551.500 | 365.200 | 222.00 |
| **KG026** | 281508.000 | 6994234.300 | 365.200 | 212.00 |
| **KG029** | 282296.700 | 6995634.700 | 368.900 | 228.00 |
| **KG030** | 281617.600 | 6993699.900 | 363.100 | 229.00 |
| **KG031** | 282405.300 | 6993888.300 | 369.900 | 217.00 |
| **KG032** | 281213.630 | 6993745.380 | 363.900 | 235.00 |
| **KG033** | 281129.510 | 6993346.750 | 370.200 | 206.00 |

| | | | | |
|---|---|---|---|---|
| **KG034** | 281309.460 | 6993095.390 | 374.200 | 215.00 |
| **KG035** | 281759.810 | 6992142.510 | 377.700 | 239.00 |
| **KG036** | 282442.340 | 6992106.790 | 372.300 | 230.00 |
| **KG037** | 282971.220 | 6991816.070 | 374.800 | 238.50 |
| **KG038** | 282662.280 | 6991516.390 | 377.700 | 237.00 |
| **KG039** | 280927.120 | 6994182.560 | 359.400 | 240.00 |
| **KG040** | 280897.100 | 6992672.670 | 373.600 | 210.00 |
| **KG041** | 281073.640 | 6992111.370 | 373.000 | 218.50 |
| **KG043** | 281502.860 | 6993263.060 | 370.300 | 228.00 |
| **KG044** | 280348.240 | 6992546.450 | 365.800 | 236.00 |
| **KG045** | 280109.810 | 6993269.770 | 365.900 | 233.00 |
| **KG056** | 288530.000 | 6992837.000 | 371.000 | 325.00 |
| **KG060** | 286178.000 | 6994588.000 | 369.000 | 330.00 |
| **KG061** | 288424.000 | 6995878.000 | 347.000 | 352.60 |
| **KG062** | 289526.000 | 6995068.000 | 373.000 | 354.80 |
| **KG077** | 283947.000 | 6996908.000 | 359.000 | 366.00 |
| **KG084** | 281296.000 | 6995350.000 | 360.000 | 223.70 |
| **KG085** | 281359.000 | 6994549.000 | 368.000 | 205.00 |
| **KG086** | 281654.000 | 6994984.000 | 364.000 | 251.00 |
| **KG087** | 281861.000 | 6994592.000 | 376.000 | 250.10 |
| **KG088** | 282257.000 | 6994386.000 | 388.000 | 274.50 |
| **KG090** | 280850.000 | 6993853.000 | 358.000 | 268.40 |
| **ML002** | 275464.778 | 7001773.595 | 349.000 | 352.00 |
| **DB035** | 288783.068 | 6996766.904 | 355.000 | 285.00 |
| **DB043** | 291865.522 | 6990738.790 | 380.000 | 356.00 |
| **BF4** | 282477.364 | 6992274.066 | 376.000 | 100.90 |
| **BF3** | 282448.818 | 6991335.202 | 392.000 | 135.50 |
| **BF1** | 283609.751 | 6990508.497 | 401.000 | 184.00 |
| **BF2** | 284817.535 | 6990621.534 | 398.000 | 101.90 |

# Appendix 4: - List of Data and Comment

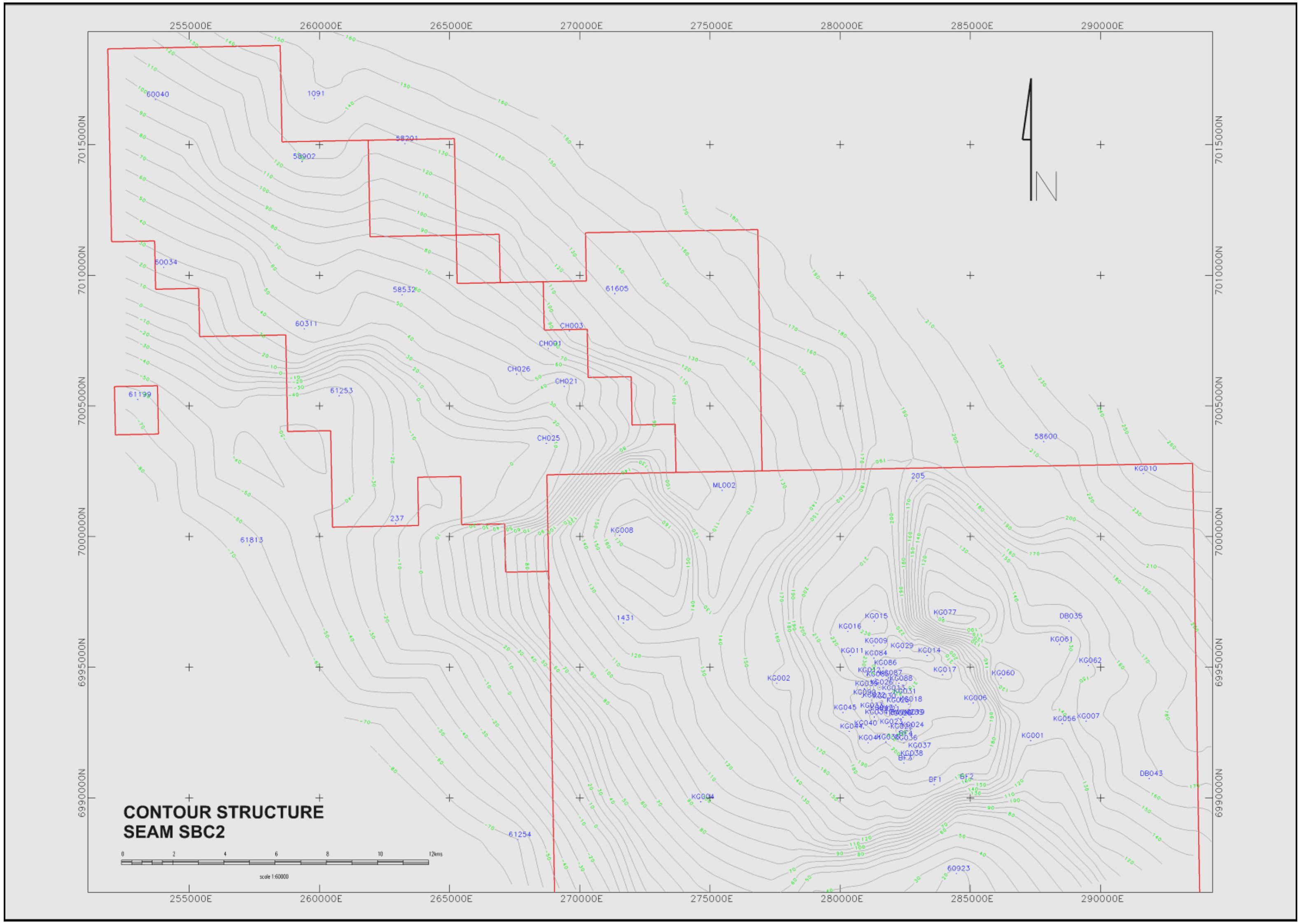
| BORE ID | HOLE USED IN MODEL | EASTING | NORTHING | ELEVATION | FINAL DEPTH | | REMARK |
|---|---|---|---|---|---|---|---|
| | | | | | PROVIDED | USED | |
| **191** | NOT USED | 272566.960 | 6979834.560 | 372.850 | 1342.6 | | Not in target area to be modelled |
| **205** | 205 | 282933.830 | 7002127.700 | 384.160 | 1047.6 | 1047.6 | |
| **225** | NOT USED | 301929.170 | 6924983.640 | 380.030 | 1031.8 | | Not in target area to be modelled |
| **236** | NOT USED | 294621.860 | 6934437.630 | 341.890 | 1226.8 | | Not in target area to be modelled |
| **237** | NOT USED | 262928.300 | 7000501.030 | 321.810 | 1346.3 | | Paper geophysical logging data without density parameter |
| **1091** | 1091 | 259804.950 | 7016761.950 | 320.270 | 1131.0 | 1131.0 | |
| **1236** | NOT USED | 270957.970 | 6979065.850 | 369.850 | 1240.5 | | There is no density parameter for geophysical logging data |
| **1262** | NOT USED | 298713.910 | 6925669.580 | 365.860 | 1075.0 | | Not in target area to be modelled |
| **1431** | 1431 | 271678.990 | 6996692.220 | 354.800 | 1302.0 | 1302.0 | |
| **58201** | 58201 | 263286.890 | 7015042.150 | 308.130 | 581.50 | 581.50 | |
| **58532** | 58532 | 263175.760 | 7009250.990 | 319.860 | 690.03 | 690.03 | |
| **58600** | 58600 | 287815.850 | 7003638.590 | 331.680 | 423.44 | 370.00 | Final depth adjusted with the geophysical logging final depth |
| **58902** | 58902 | 259337.650 | 7014357.380 | 316.670 | 593.77 | 593.77 | |
| **59464** | 59464 | 295161.040 | 6999508.110 | 352.930 | 497.50 | 497.50 | |
| **59511** | 59511 | 257072.890 | 7019737.310 | 341.970 | 444.00 | 444.00 | |
| **60034** | 60034 | 254026.120 | 7010306.220 | 316.470 | 740.00 | 740.00 | |
| **60040** | 60040 | 253707.500 | 7016730.400 | 313.310 | 640.00 | 640.00 | |
| **60311** | 60311 | 259424.700 | 7007950.490 | 309.810 | 734.00 | 734.00 | |
| **60923** | 60923 | 284464.350 | 6987108.830 | 383.000 | 750.00 | 750.00 | |
| **61199** | 61199 | 253024.330 | 7005246.520 | 337.530 | 845.00 | 845.00 | |
| **61253** | 61253 | 260762.680 | 7005390.390 | 312.730 | 745.11 | 745.11 | |
| **61254** | 61254 | 267620.850 | 6988405.820 | 345.620 | 845.65 | 845.65 | |
| **61605** | 61605 | 271345.390 | 7009296.580 | 343.430 | 574.00 | 574.00 | |
| **61813** | 61813 | 257315.530 | 6999673.000 | 330.330 | 872.20 | 660.00 | Final depth adjusted with the geophysical logging final depth |
| **62056** | NOT USED | 313476.400 | 6909674.890 | 400.960 | 263.25 | | Not in target area to be modelled |
| **62148** | 62148 | 295519.290 | 6990173.780 | 344.530 | 597.74 | 597.74 | |
| **62256** | NOT USED | 314924.630 | 6915442.730 | 409.920 | 350.00 | | Not in target area to be modelled |
| **BWCM01L** | NOT USED | 282224.710 | 6993195.870 | 367.500 | 222.00 | | There is no geophysical logging data provided |
| **BWCM03M** | NOT USED | 282271.750 | 6993122.080 | 367.530 | 192.00 | | There is no geophysical logging data provided |
| **BWCM04L** | NOT USED | 282181.990 | 6993181.220 | 367.290 | 222.00 | | There is no geophysical logging data provided |
| **BWCM05M** | NOT USED | 282310.220 | 6993224.610 | 367.510 | 199.00 | | There is no geophysical logging data provided |
| **BWCM06R2** | NOT USED | 282247.540 | 6993197.980 | 366.960 | 237.00 | | There is no geophysical logging data provided |
| **BWCM07P** | NOT USED | 282212.410 | 6993381.830 | 366.170 | 212.00 | | There is no geophysical logging data provided |

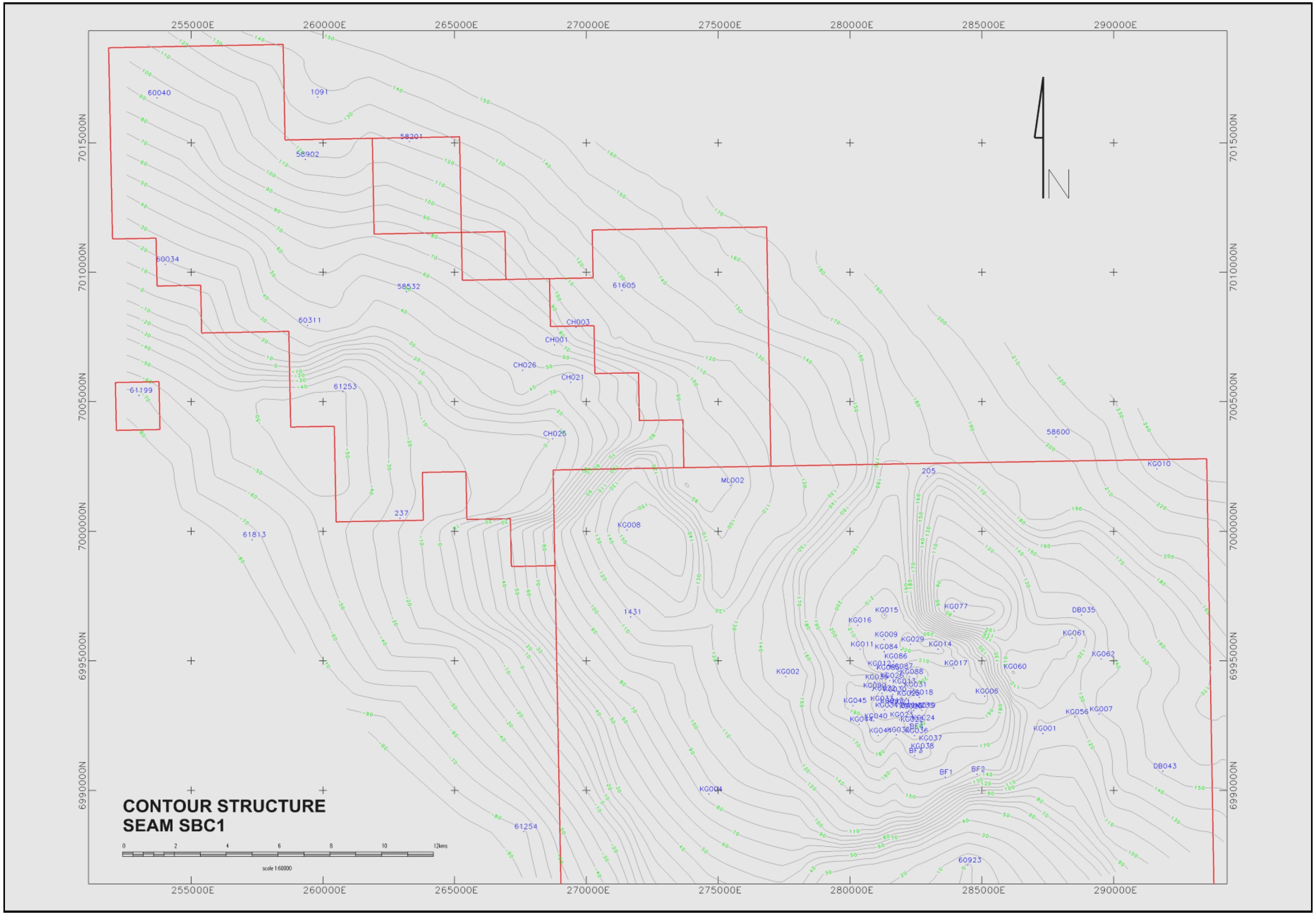
| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **BWCM08P** | NOT USED | 282156.830 | 6993554.470 | 365.820 | 218.00 | | There is no geophysical logging data provided |
| **BWCM09M** | NOT USED | 282100.230 | 6993731.220 | 366.870 | 192.00 | | There is no geophysical logging data provided |
| **BWCM13M** | NOT USED | 281703.420 | 6993516.210 | 365.520 | 221.00 | | There is no geophysical logging data provided |
| **BWCM14WR** | NOT USED | 282316.800 | 6993942.470 | 369.800 | 223.00 | | There is no geophysical logging data provided |
| **BWCM15M** | NOT USED | 282719.030 | 6993320.080 | 371.870 | 217.30 | | There is no geophysical logging data provided |
| **BWCM16M** | NOT USED | 282464.020 | 6993012.030 | 370.080 | 217.00 | | There is no geophysical logging data provided |
| **BWCM17P** | NOT USED | 282195.130 | 6993656.070 | 366.970 | 222.00 | | There is no geophysical logging data provided |
| **BWCM18P** | NOT USED | 282247.040 | 6993491.970 | 366.530 | 216.00 | | There is no geophysical logging data provided |
| **BWCM19P** | NOT USED | 282299.060 | 6993330.100 | 367.120 | 218.00 | | There is no geophysical logging data provided |
| **BWCM20P** | NOT USED | 282340.040 | 6993188.980 | 367.610 | 234.00 | | There is no geophysical logging data provided |
| **BWCM21P** | NOT USED | 282349.960 | 6993191.950 | 367.720 | 222.00 | | There is no geophysical logging data provided |
| **BWCM22WR** | NOT USED | 282423.800 | 6993156.240 | 369.540 | 222.60 | | There is no geophysical logging data provided |
| **BWCM23L** | NOT USED | 282395.610 | 6993048.640 | 369.060 | 232.00 | | There is no geophysical logging data provided |
| **BWCM23M** | NOT USED | 282404.500 | 6993066.310 | 369.370 | 213.00 | | There is no geophysical logging data provided |
| **BWCM23S** | BWCM23S | 282413.490 | 6993084.460 | 369.260 | 153.00 | 130.00 | Final depth adjusted with the geophysical logging final depth |
| **BWCM24M** | NOT USED | 282018.040 | 6993169.550 | 367.400 | 216.00 | | There is no geophysical logging data provided |
| **BWCM25M** | NOT USED | 281940.740 | 6993635.910 | 365.090 | 233.00 | | There is no geophysical logging data provided |
| **BWCM26M** | NOT USED | 282465.780 | 6993629.140 | 369.360 | 218.00 | | There is no geophysical logging data provided |
| **BWCM27M** | NOT USED | 282572.690 | 6993143.270 | 371.000 | 214.00 | | There is no geophysical logging data provided |
| **BWCM28M** | NOT USED | 282202.370 | 6993409.450 | 366.940 | 208.27 | | There is no geophysical logging data provided |
| **BWCM28S** | NOT USED | 282214.250 | 6993391.810 | 367.190 | 149.87 | | There is no geophysical logging data provided |
| **BWCM28W** | NOT USED | 282196.880 | 6993431.790 | 366.960 | 238.20 | | There is no geophysical logging data provided |
| **BWCM29M** | NOT USED | 282358.760 | 6993363.410 | 368.400 | 212.50 | | There is no geophysical logging data provided |
| **BWCM29S** | NOT USED | 282365.130 | 6993345.330 | 368.470 | 143.06 | | There is no geophysical logging data provided |
| **BWCM29W** | NOT USED | 282353.930 | 6993384.930 | 368.420 | 230.80 | | There is no geophysical logging data provided |
| **CH001** | CH001 | 268789.000 | 7007196.000 | 316.000 | 341.00 | 326.50 | Final depth adjusted with the geophysical logging final depth |
| **CH003** | CH003 | 269604.000 | 7007877.000 | 344.000 | 329.00 | 302.50 | Final depth adjusted with the geophysical logging final depth |
| **CH021** | CH021 | 269403.000 | 7005750.000 | 340.000 | 366.00 | 366.00 | |
| **CH025** | CH025 | 268720.000 | 7003572.000 | 337.000 | 426.00 | 426.00 | |
| **CH026** | CH026 | 267580.000 | 7006219.000 | 326.000 | 366.00 | 366.00 | |
| **KG001** | KG001 | 287315.000 | 6992195.000 | 378.000 | 347.00 | 180.00 | Final depth adjusted with the geophysical logging final depth |
| **KG002** | KG002 | 277560.000 | 6994389.000 | 382.000 | 377.00 | 292.00 | Final depth adjusted with the geophysical logging final depth |
| **KG004** | KG004 | 274646.000 | 6989852.000 | 361.000 | 413.00 | 315.00 | Final depth adjusted with the geophysical logging final depth |
| **KG006** | KG006 | 285109.000 | 6993633.000 | 387.000 | 371.00 | 185.00 | Final depth adjusted with the geophysical logging final depth |
| **KG007** | KG007 | 289444.000 | 6992940.000 | 377.000 | 360.00 | 279.50 | Final depth adjusted with the geophysical logging final depth |
| **KG008** | KG008 | 271534.000 | 7000048.000 | 352.000 | 426.00 | 370.00 | Final depth adjusted with the geophysical logging final depth |
| **KG009** | KG009 | 281292.000 | 6995821.400 | 359.100 | 237.00 | 237.00 | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **KG010** | KG010 | 291645.000 | 7002410.000 | 336.000 | 354.00 | 354.00 | |
| **KG011** | KG011 | 280386.600 | 6995445.300 | 354.300 | 240.00 | 217.00 | Final depth adjusted with the geophysical logging final depth |
| **KG012** | KG012 | 281032.900 | 6994700.600 | 359.100 | 219.00 | 219.00 | |
| **KG013** | KG013 | 281965.200 | 6994019.200 | 366.200 | 231.00 | 231.00 | |
| **KG014** | KG014 | 283339.900 | 6995448.100 | 362.000 | 262.00 | 225.00 | Final depth adjusted with the geophysical logging final depth |
| **KG015** | KG015 | 281307.600 | 6996766.800 | 365.000 | 213.00 | 206.00 | Final depth adjusted with the geophysical logging final depth |
| **KG016** | KG016 | 280292.600 | 6996372.600 | 352.400 | 244.00 | 244.00 | |
| **KG017** | KG017 | 283932.900 | 6994714.100 | 368.600 | 237.00 | 220.00 | Final depth adjusted with the geophysical logging final depth |
| **KG018** | KG018 | 282631.080 | 6993587.700 | 370.010 | 228.00 | 205.00 | Final depth adjusted with the geophysical logging final depth |
| **KG019** | KG019 | 282726.800 | 6993091.600 | 371.700 | 228.00 | 220.00 | Final depth adjusted with the geophysical logging final depth |
| **KG020** | KG020 | 282225.750 | 6993048.620 | 367.380 | 227.00 | 225.00 | Final depth adjusted with the geophysical logging final depth |
| **KG021** | KG021 | 281771.890 | 6993216.860 | 367.910 | 228.00 | 224.00 | Final depth adjusted with the geophysical logging final depth |
| **KG022** | KG022 | 282271.400 | 6992544.000 | 369.700 | 222.00 | 217.00 | Final depth adjusted with the geophysical logging final depth |
| **KG023** | KG023 | 281875.700 | 6992725.300 | 371.100 | 246.00 | 246.00 | |
| **KG024** | KG024 | 282702.000 | 6992606.400 | 370.100 | 234.00 | 234.00 | |
| **KG025** | KG025 | 282135.500 | 6993551.500 | 365.200 | 222.00 | 222.00 | |
| **KG026** | KG026 | 281508.000 | 6994234.300 | 365.200 | 228.00 | 212.00 | Final depth adjusted with the geophysical logging final depth |
| **KG029** | KG029 | 282296.700 | 6995634.700 | 368.900 | 228.00 | 228.00 | |
| **KG030** | KG030 | 281617.600 | 6993699.900 | 363.100 | 246.00 | 229.00 | Final depth adjusted with the geophysical logging final depth |
| **KG031** | KG031 | 282405.300 | 6993888.300 | 369.900 | 231.00 | 217.00 | Final depth adjusted with the geophysical logging final depth |
| **KG032** | KG032 | 281213.630 | 6993745.380 | 363.900 | 240.00 | 235.00 | Final depth adjusted with the geophysical logging final depth |
| **KG033** | KG033 | 281129.510 | 6993346.750 | 370.200 | 228.00 | 206.00 | Final depth adjusted with the geophysical logging final depth |
| **KG034** | KG034 | 281309.460 | 6993095.390 | 374.200 | 228.00 | 215.00 | Final depth adjusted with the geophysical logging final depth |
| **KG035** | KG035 | 281759.810 | 6992142.510 | 377.700 | 252.00 | 239.00 | Final depth adjusted with the geophysical logging final depth |
| **KG036** | KG036 | 282442.340 | 6992106.790 | 372.300 | 234.00 | 230.00 | Final depth adjusted with the geophysical logging final depth |
| **KG037** | KG037 | 282971.220 | 6991816.070 | 374.800 | 252.00 | 238.50 | Final depth adjusted with the geophysical logging final depth |
| **KG038** | KG038 | 282662.280 | 6991516.390 | 377.700 | 252.00 | 237.00 | Final depth adjusted with the geophysical logging final depth |
| **KG039** | KG039 | 280927.120 | 6994182.560 | 359.400 | 246.00 | 240.00 | Final depth adjusted with the geophysical logging final depth |
| **KG040** | KG040 | 280897.100 | 6992672.670 | 373.600 | 240.00 | 210.00 | Final depth adjusted with the geophysical logging final depth |
| **KG041** | KG041 | 281073.640 | 6992111.370 | 373.000 | 228.00 | 218.50 | Final depth adjusted with the geophysical logging final depth |
| **KG043** | KG043 | 281502.860 | 6993263.060 | 370.300 | 228.00 | 228.00 | |
| **KG044** | KG044 | 280348.240 | 6992546.450 | 365.800 | 246.00 | 236.00 | Final depth adjusted with the geophysical logging final depth |
| **KG045** | KG045 | 280109.810 | 6993269.770 | 365.900 | 236.00 | 233.00 | Final depth adjusted with the geophysical logging final depth |
| **KG056** | KG056 | 288530.000 | 6992837.000 | 371.000 | 335.50 | 325.00 | Final depth adjusted with the geophysical logging final depth |
| **KG057A** | NOT USED | 288417.000 | 6994255.000 | 357.000 | 353.80 | | There is no density parameter for geophysical logging data |
| **KG060** | KG060 | 286178.000 | 6994588.000 | 369.000 | 340.60 | 330.00 | Final depth adjusted with the geophysical logging final depth |
| **KG061** | KG061 | 288424.000 | 6995878.000 | 347.000 | 352.60 | 352.60 | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **KG062** | KG062 | 289526.000 | 6995068.000 | 373.000 | 354.80 | 354.80 | |
| **KG077** | KG077 | 283947.000 | 6996908.000 | 359.000 | 366.00 | 366.00 | |
| **KG084** | KG084 | 281296.000 | 6995350.000 | 360.000 | 227.73 | 223.70 | Final depth adjusted with the geophysical logging final depth |
| **KG085** | KG085 | 281359.000 | 6994549.000 | 368.000 | 218.60 | 205.00 | Final depth adjusted with the geophysical logging final depth |
| **KG086** | KG086 | 281654.000 | 6994984.000 | 364.000 | 251.00 | 251.00 | |
| **KG087** | KG087 | 281861.000 | 6994592.000 | 376.000 | 250.10 | 250.10 | |
| **KG088** | KG088 | 282257.000 | 6994386.000 | 388.000 | 274.50 | 274.50 | |
| **KG090** | KG090 | 280850.000 | 6993853.000 | 358.000 | 268.40 | 268.40 | |
| **ML002** | ML002 | 275464.778 | 7001773.595 | 349.000 | 352.00 | 352.00 | Geophysical logging data using paper |
| **DB035** | DB035 | 288783.068 | 6996766.904 | 355.000 | 285.00 | 285.00 | Geophysical logging data using paper |
| **DB043** | DB043 | 291865.522 | 6990738.790 | 380.000 | 356.00 | 356.00 | Geophysical logging data using paper |
| **BF4** | BF4 | 282477.364 | 6992274.066 | 376.000 | 100.90 | 100.90 | Geophysical logging data using paper |
| **BF3** | BF3 | 282448.818 | 6991335.202 | 392.000 | 135.50 | 135.50 | Geophysical logging data using paper |
| **BF1** | BF1 | 283609.751 | 6990508.497 | 401.000 | 184.00 | 184.00 | Geophysical logging data using paper |
| **BF2** | BF2 | 284817.535 | 6990621.534 | 398.000 | 101.90 | 101.90 | Geophysical logging data using paper |

# Appendix 5: - Structure Contours (Source: Minex)

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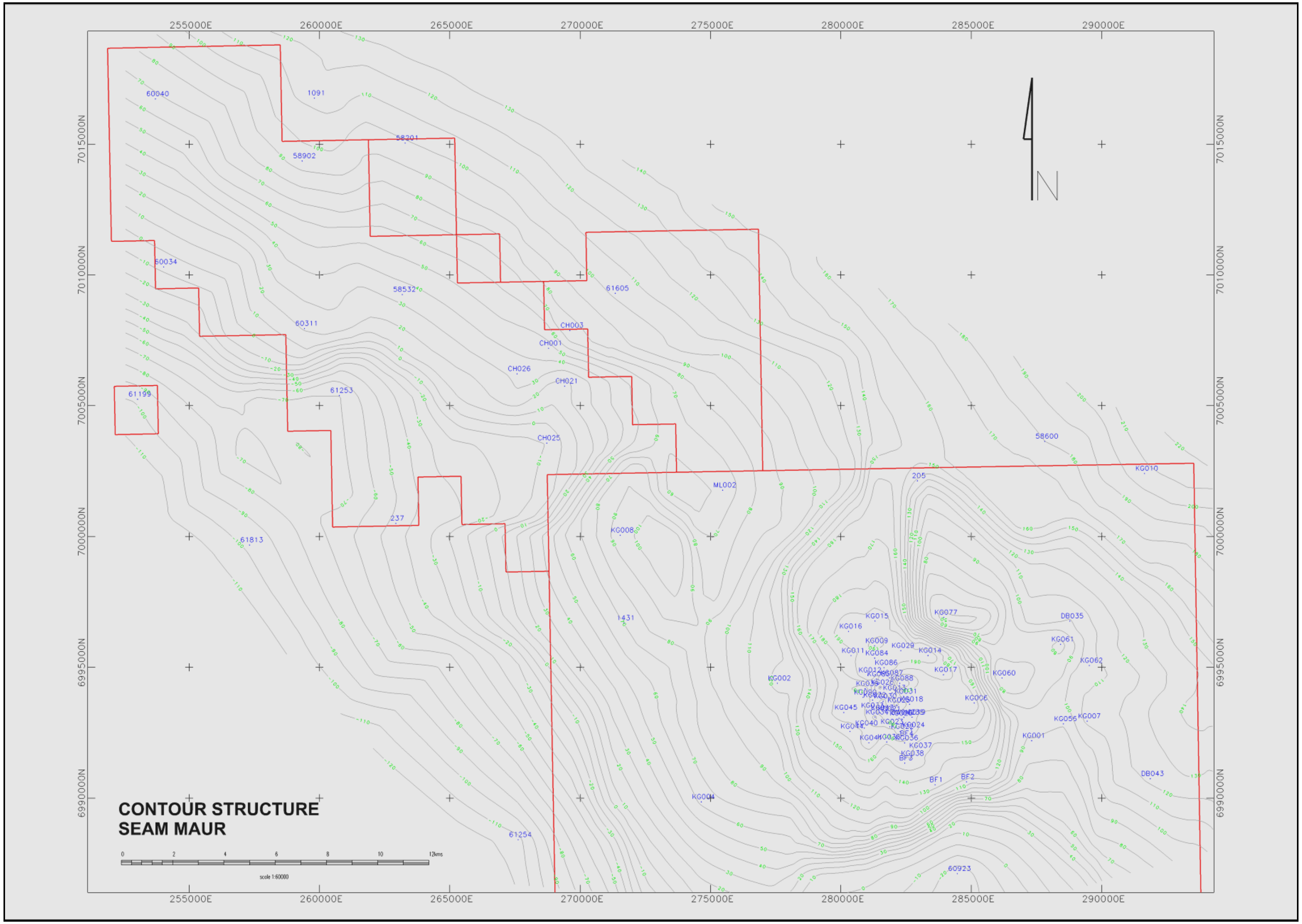
260000E
265000E
270000E
275000E
280000E
285000E
290000E
7015000N
7010000N
7005000N
7000000N
6995000N
6990000N
N
scale 1:60000


CONTOUR STRUCTURE
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N
255000E
260000E
265000E
270000E
275000E
280000E
285000E
290000E
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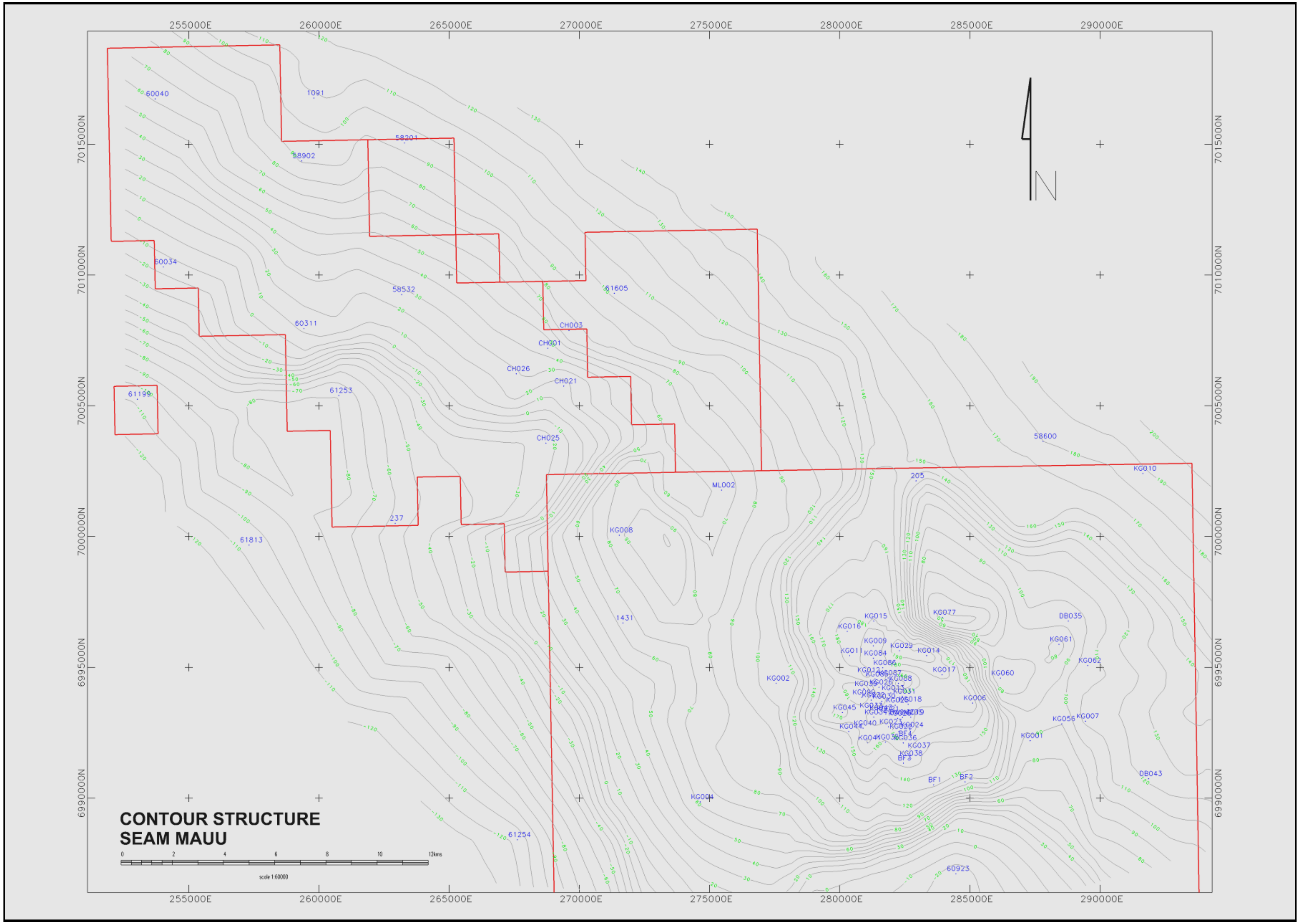
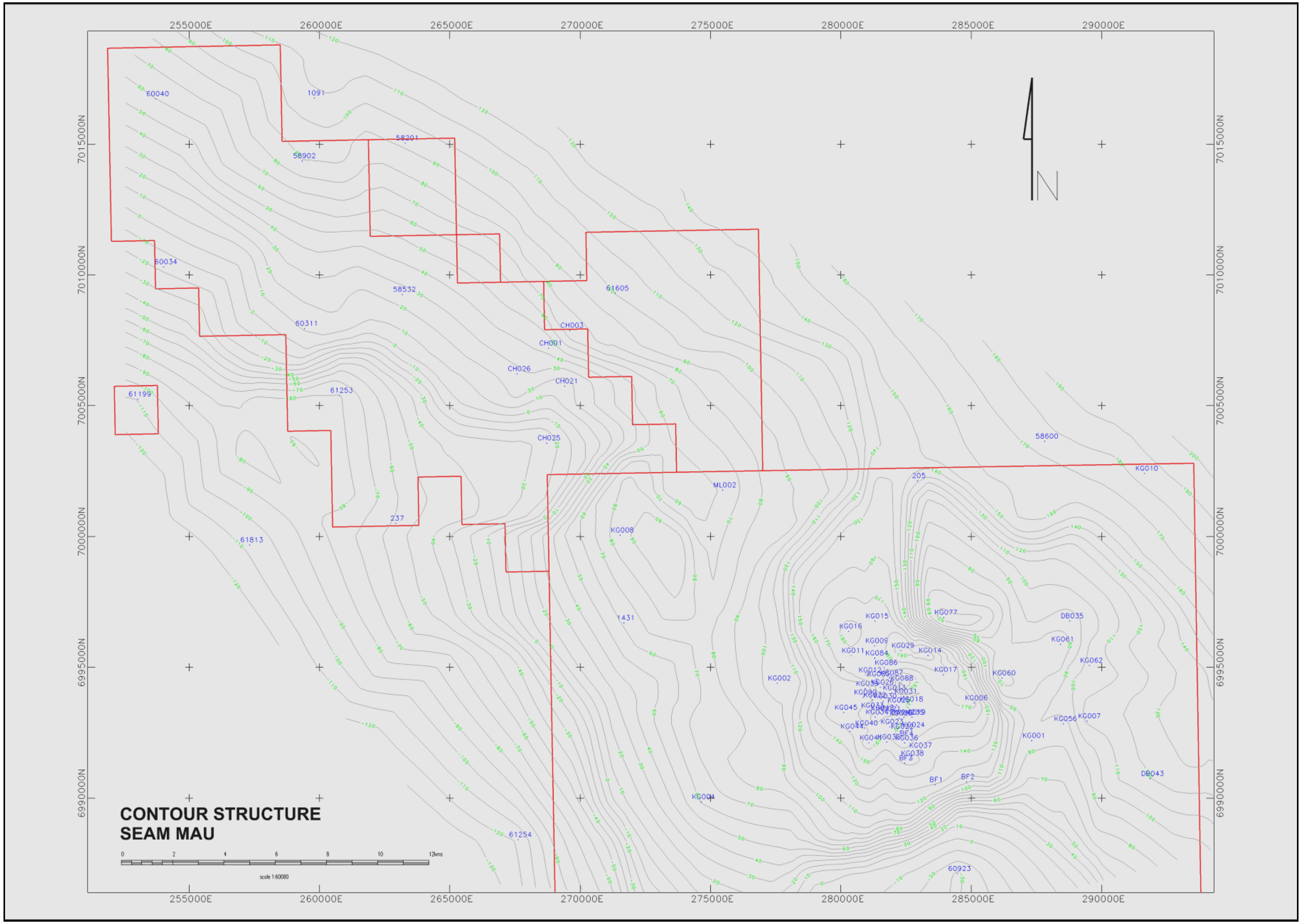
7000000N
6995000N
6990000N


255000E
260000E
265000E
270000E
275000E
280000E
285000E
290000E
7015000N
7010000N
7005000N
7000000N
6995000N
6990000N
N
60040
1091
58201
58902
60034
58532
61605
60311
CH003
CH001
CH026
CH021
61199
61253
CH025
ML002
205
KG010
58600
237
KG008
61813
1431
KG002
DB035
KG004
DB043
61254
60923
CONTOUR STRUCTURE
SEAM MAUU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265000E
270000E
275000E
280000E
285000E
290000E
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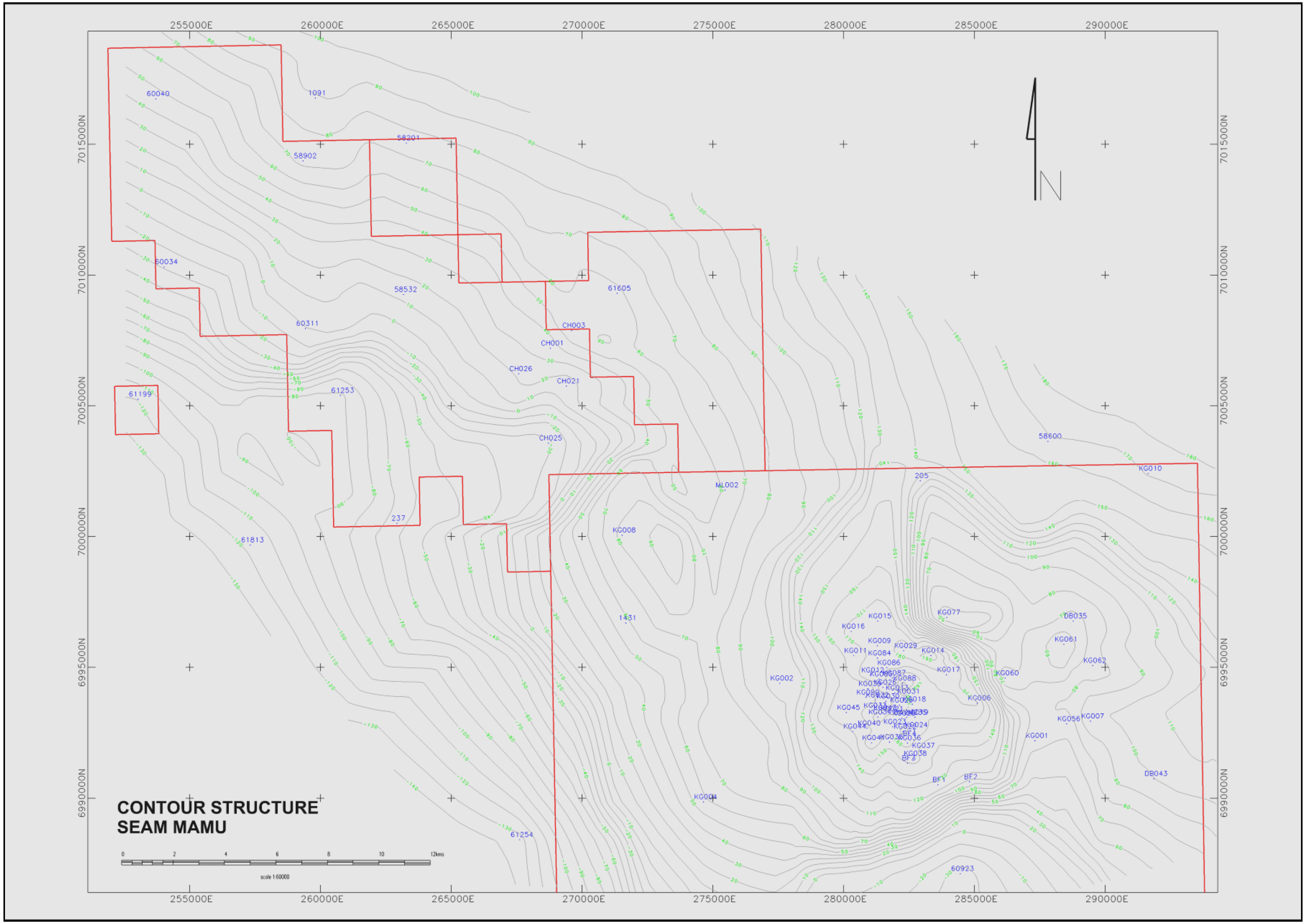
4
6
8
10
12kms


CONTOUR STRUCTURE
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265000E
270000E
275000E
280000E
285000E
290000E
7015000N
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7005000N
7000000N
6995000N
6990000N
N
60040
1091
58902
58201
60034
58532
61605
60311
CH003
CH001
CH026
CH021
61253
61199
CH025
58600
205
ML002
KG010
237
KG008
61813
1431
KG015
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DB035
KG016
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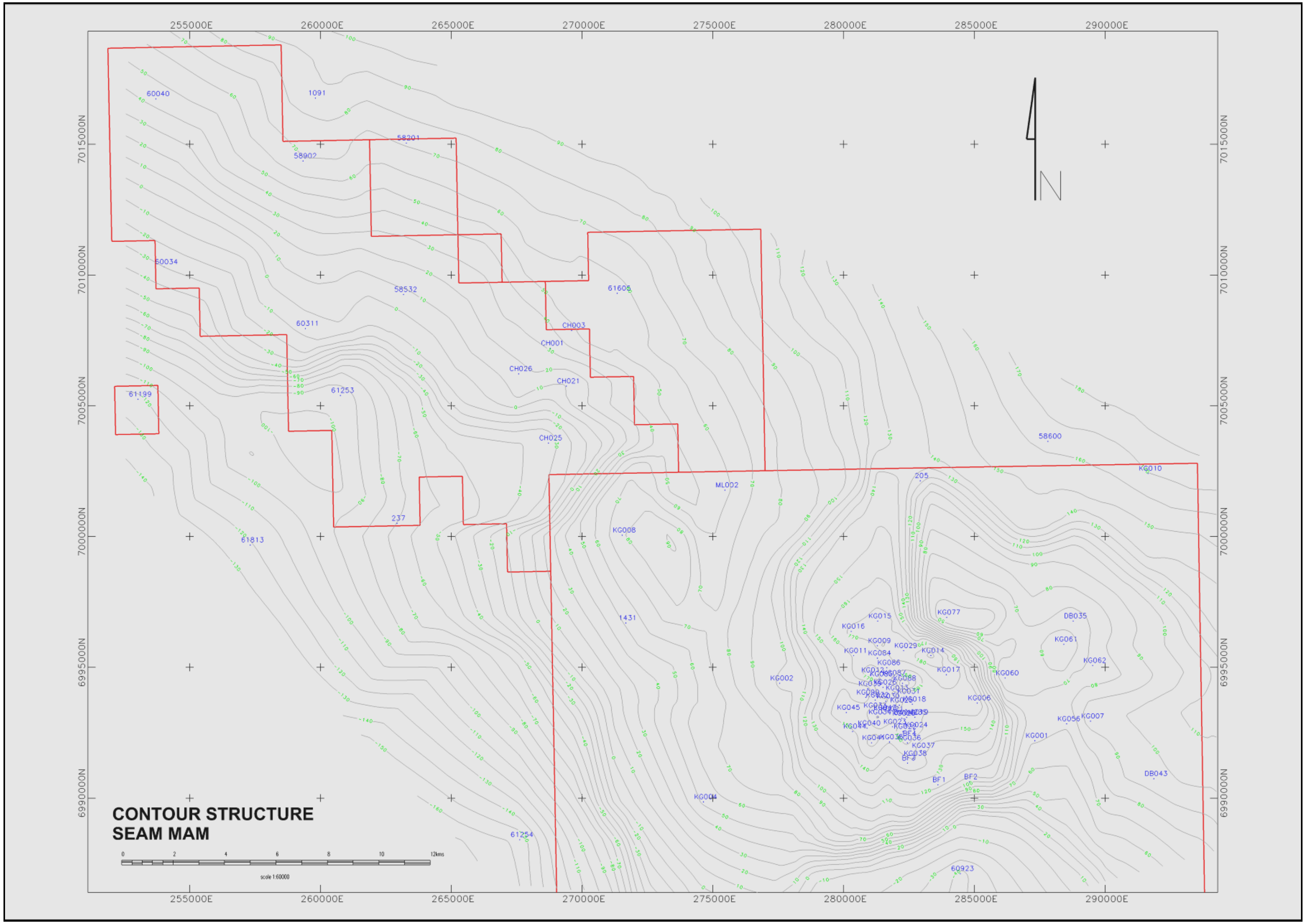
BF1
scale 1:60000


CONTOUR STRUCTURE
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265000E
270000E
275000E
280000E
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290000E
7015000N
7010000N
7005000N
7000000N
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6990000N
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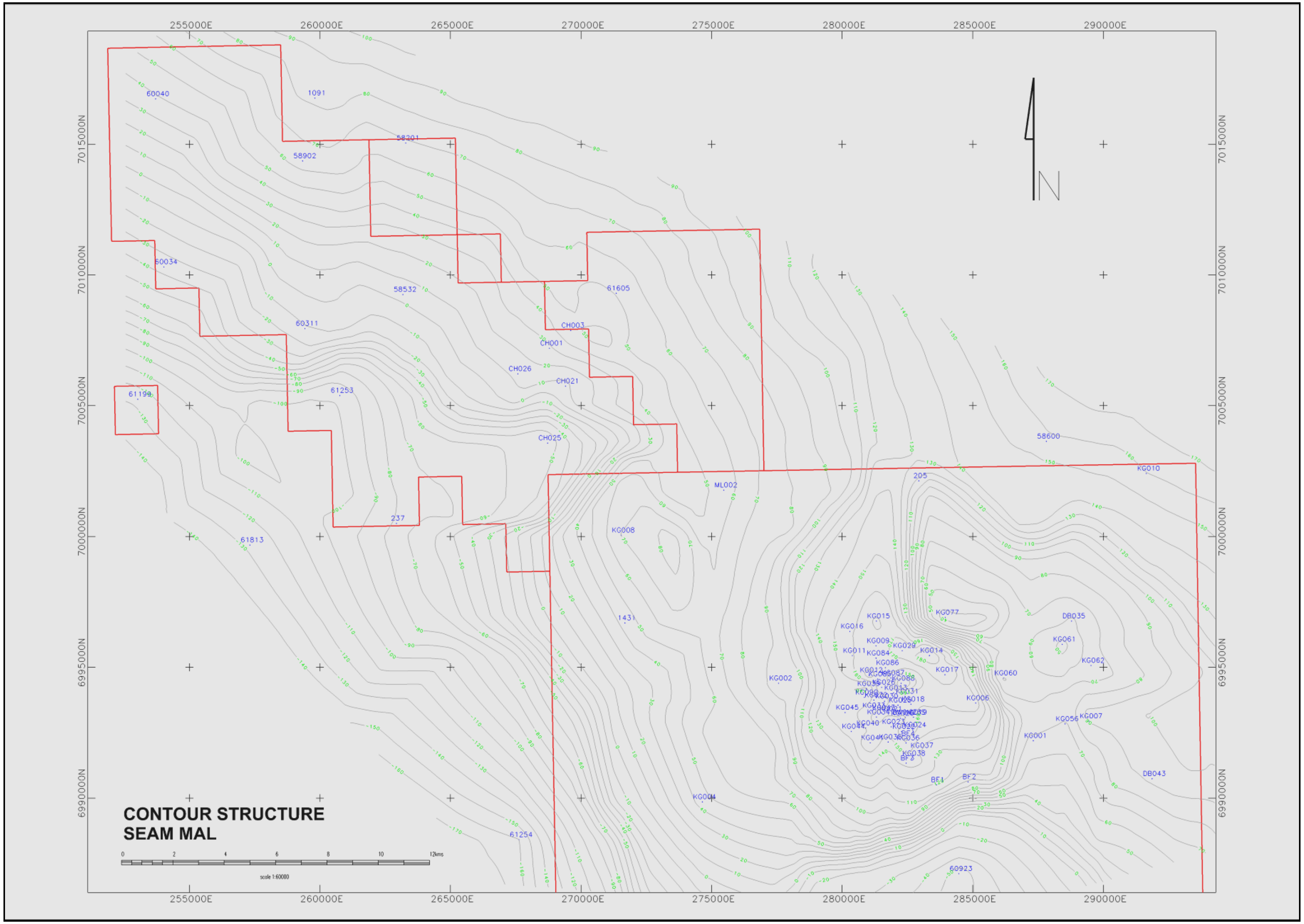
scale 1:60000


CONTOUR STRUCTURE
SEAM MAL
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260000E
265000E
270000E
275000E
280000E
285000E
290000E
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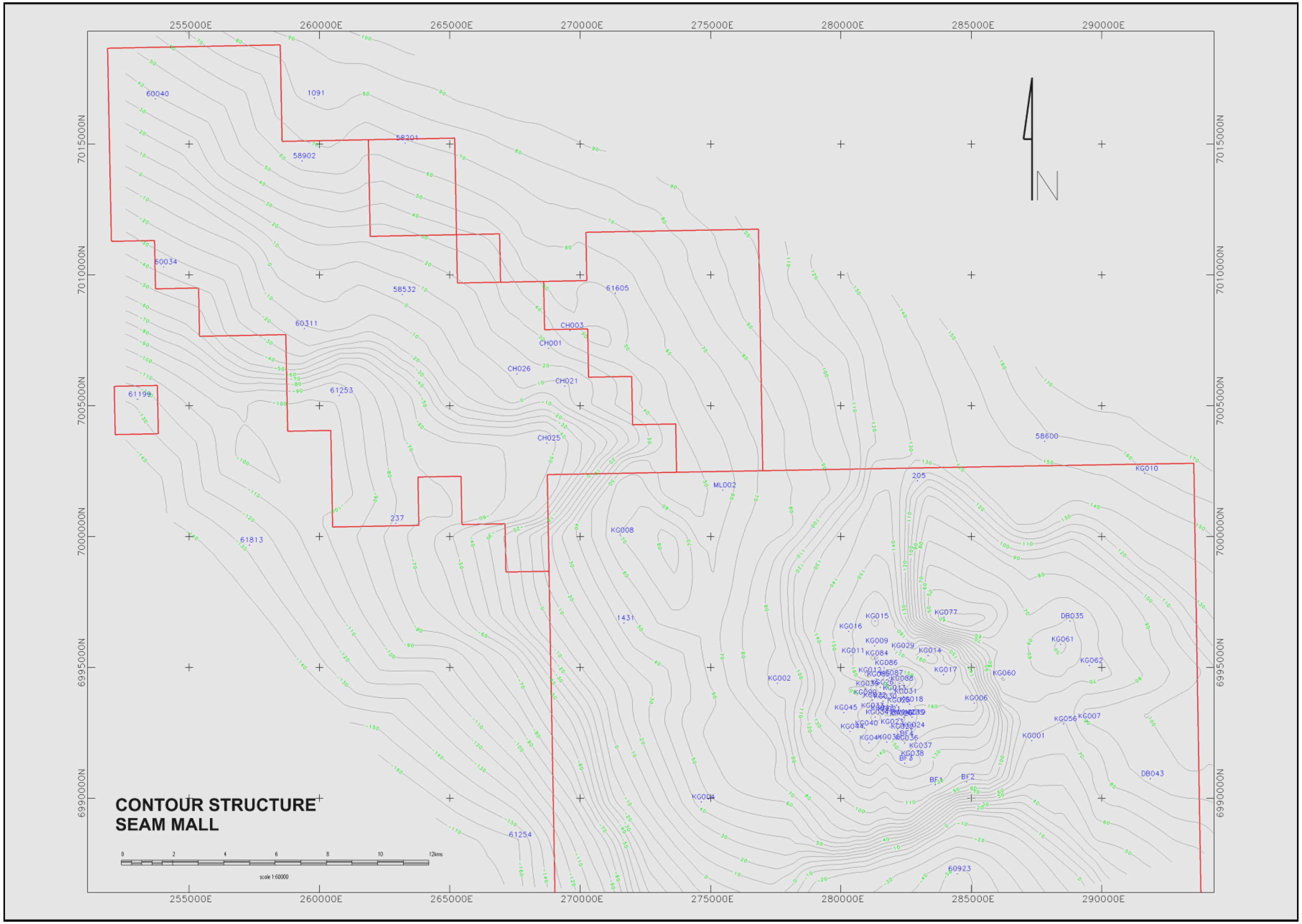
scale 1:60000


CONTOUR STRUCTURE
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265000E
270000E
275000E
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285000E
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6995000N
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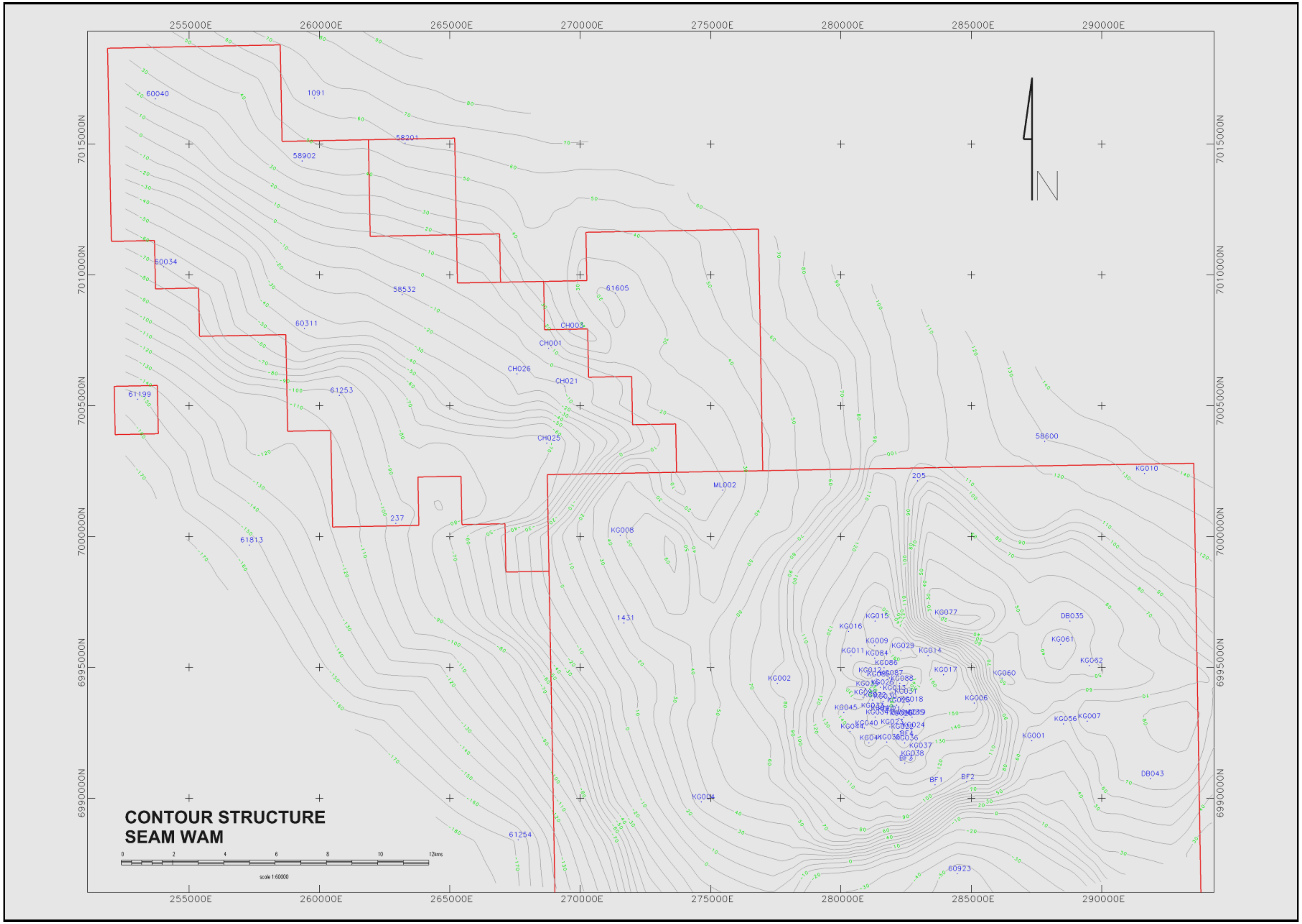
CONTOUR STRUCTURE
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260000E
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275000E
280000E
285000E
290000E
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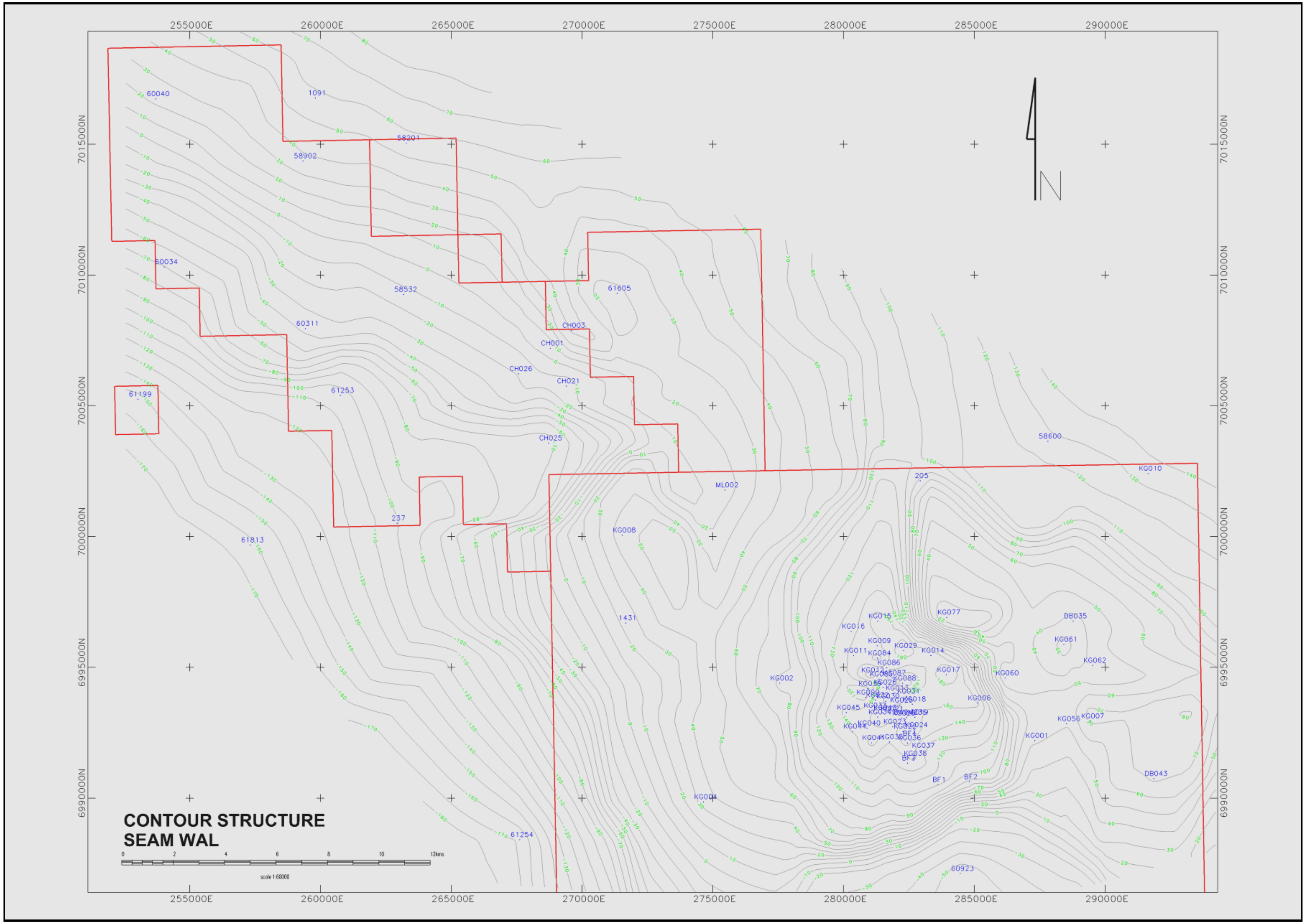
7000000N
6995000N
6990000N


CONTOUR STRUCTURE
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265000E
270000E
275000E
280000E
285000E
290000E
7015000N
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6995000N
6990000N
N
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61199
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KG010
205
ML002
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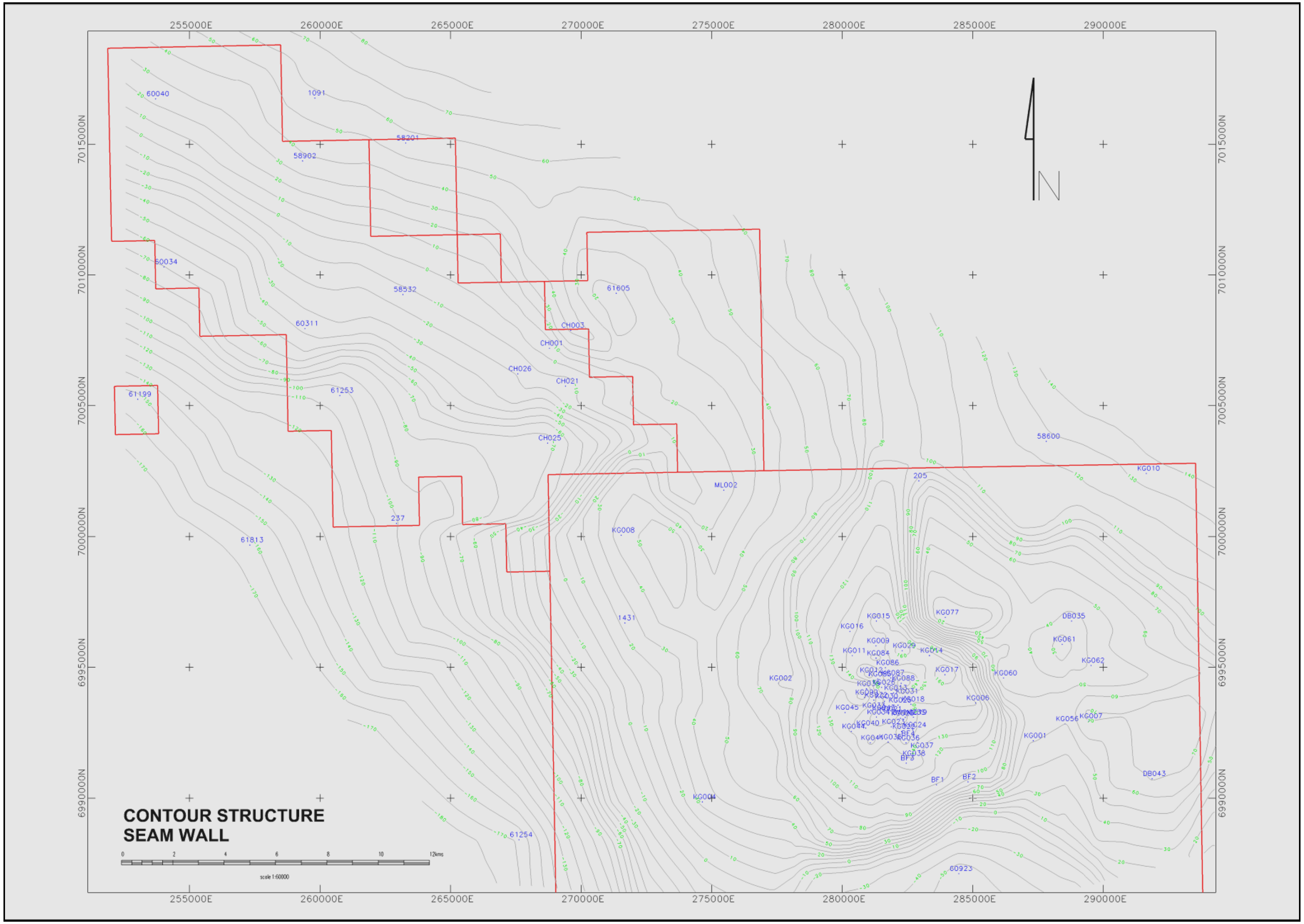
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265000E
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285000E
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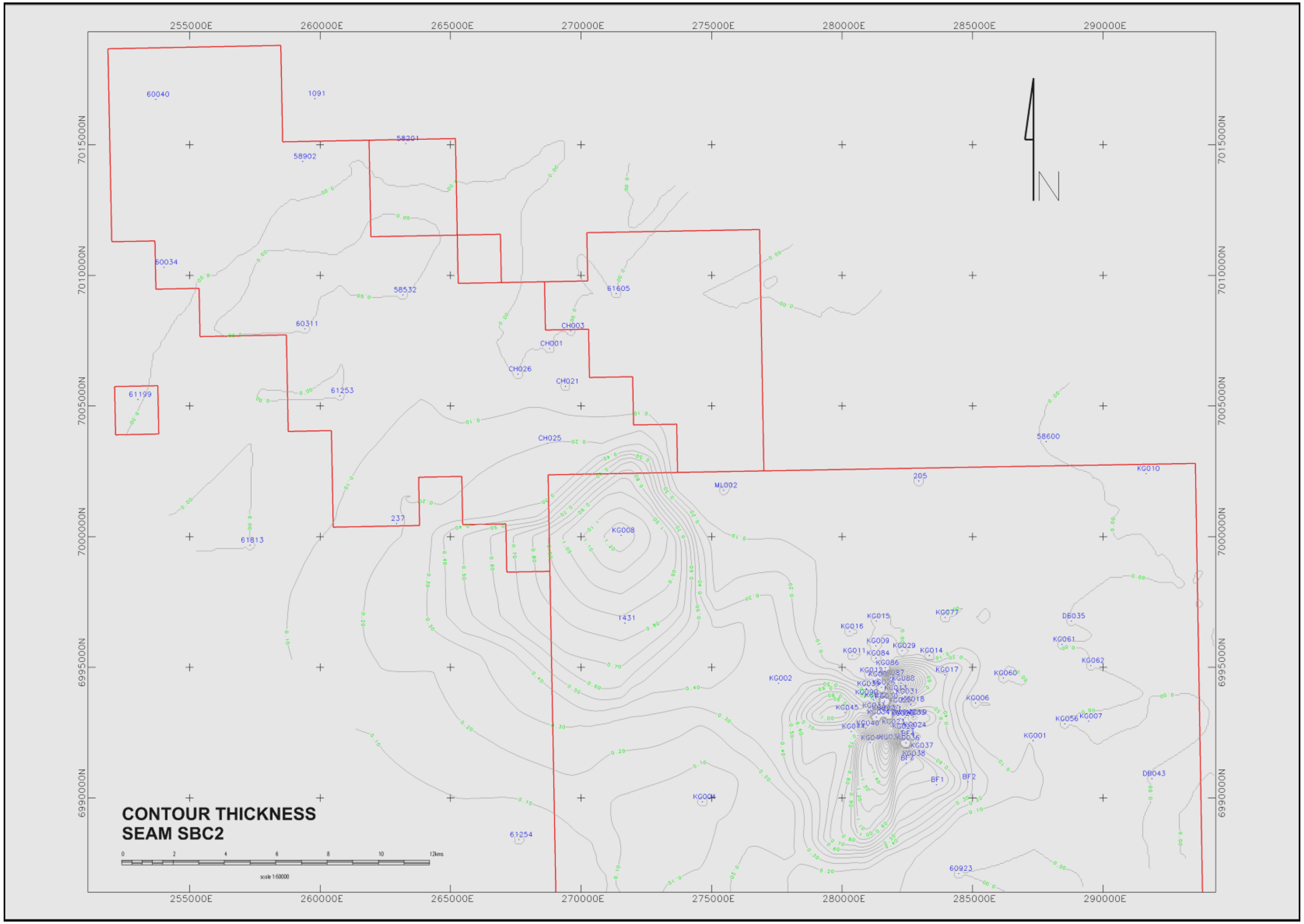
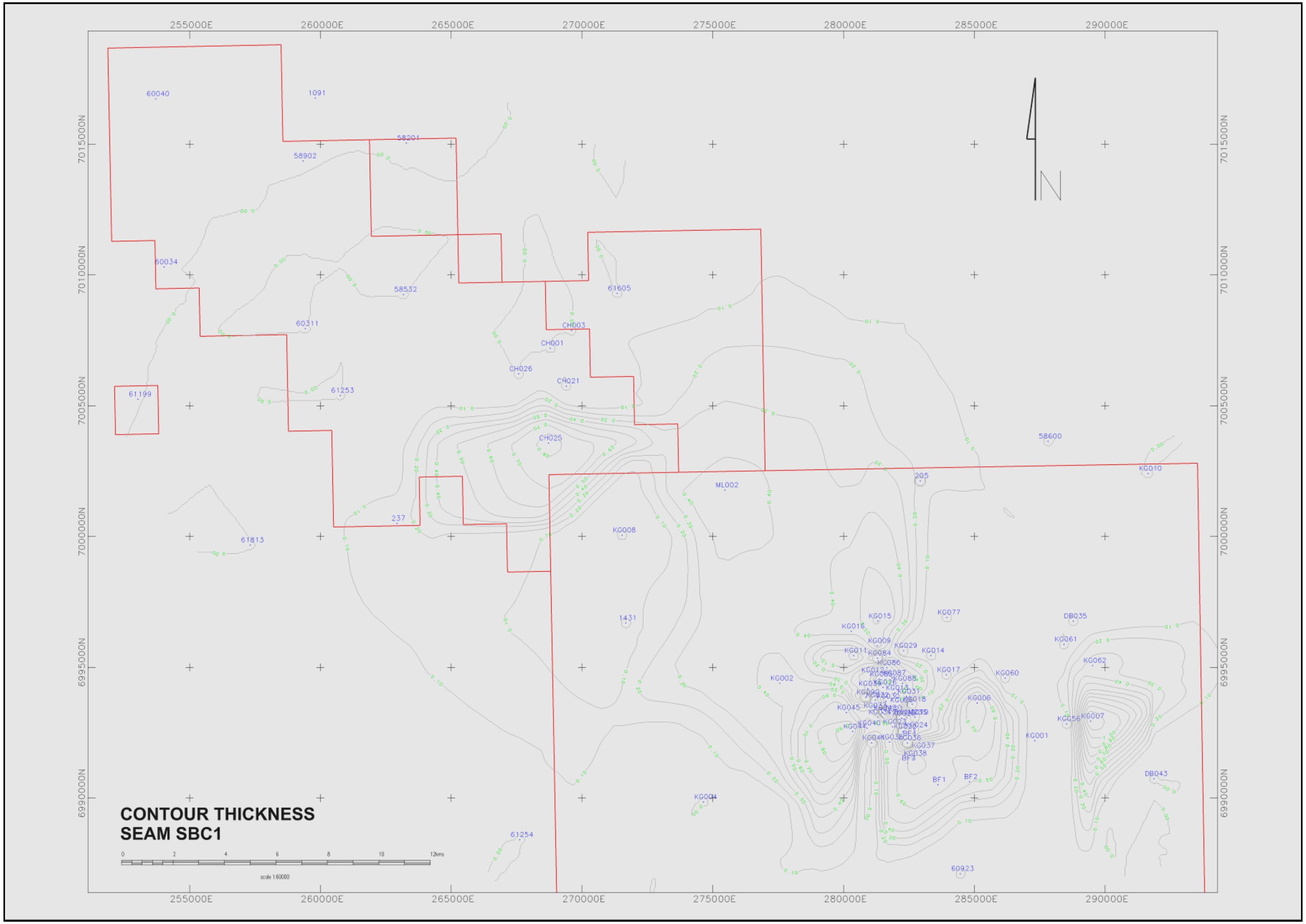
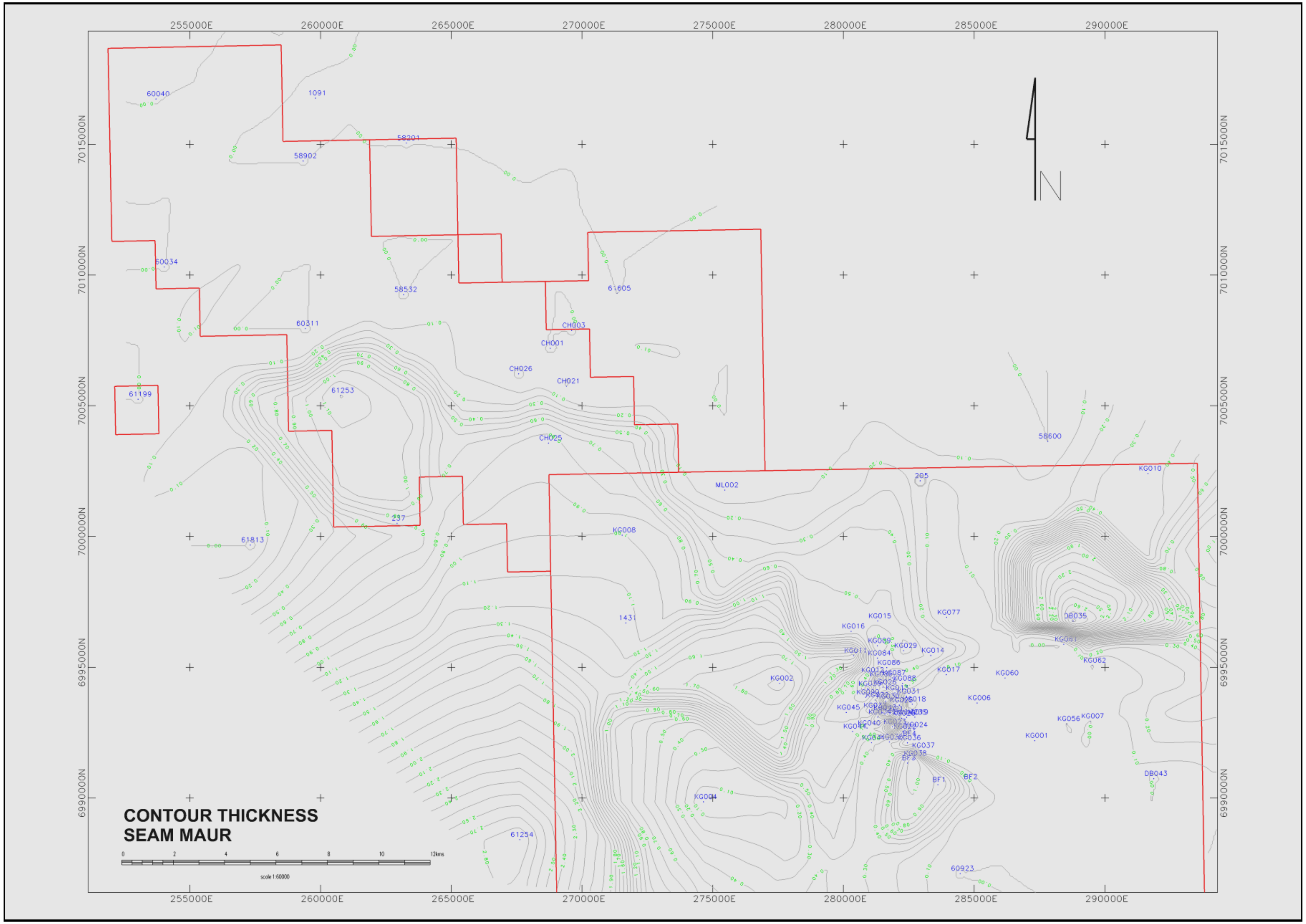
7010000N
7005000N
7000000N
6995000N
6990000N
N

# Appendix 6: - Thickness Contours (Source: Minex)




CONTOUR THICKNESS
SEAM SBC1


CONTOUR THICKNESS
SEAM MAUR
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260000E
265000E
270000E
275000E
280000E
285000E
290000E
7015000N
7010000N
7005000N
7000000N
6995000N
6990000N
N
60040
1091
58201
58902
60034
58532
61605
60311
CH003
CH001
CH026
CH021
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58600
KG010
205
ML002
237
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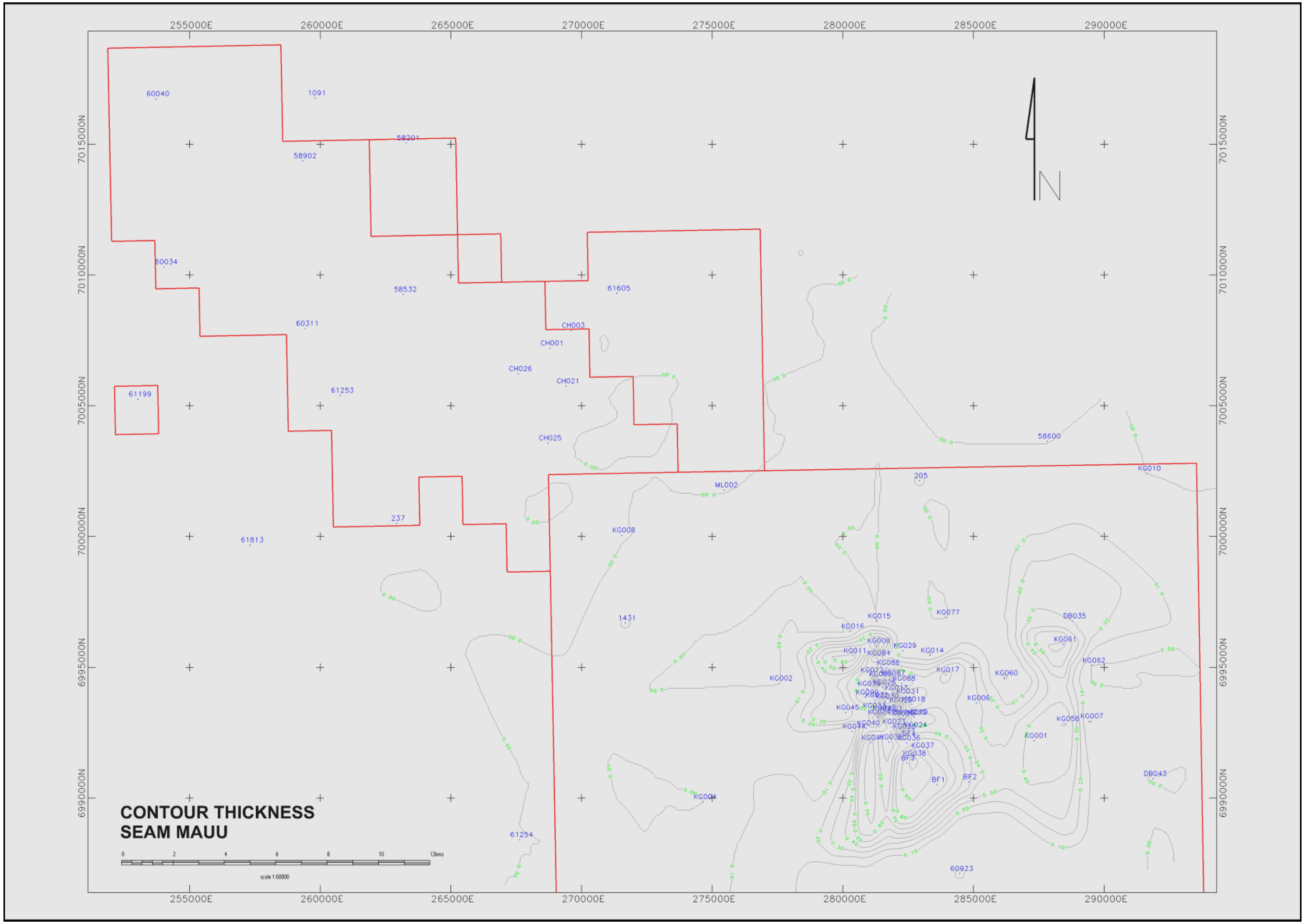
KG008
1431
DB035
DB043
61254
60923


CONTOUR THICKNESS
SEAM MAUU
255000E
260000E
265000E
270000E
275000E
280000E
285000E
290000E
7015000N
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6995000N
6990000N
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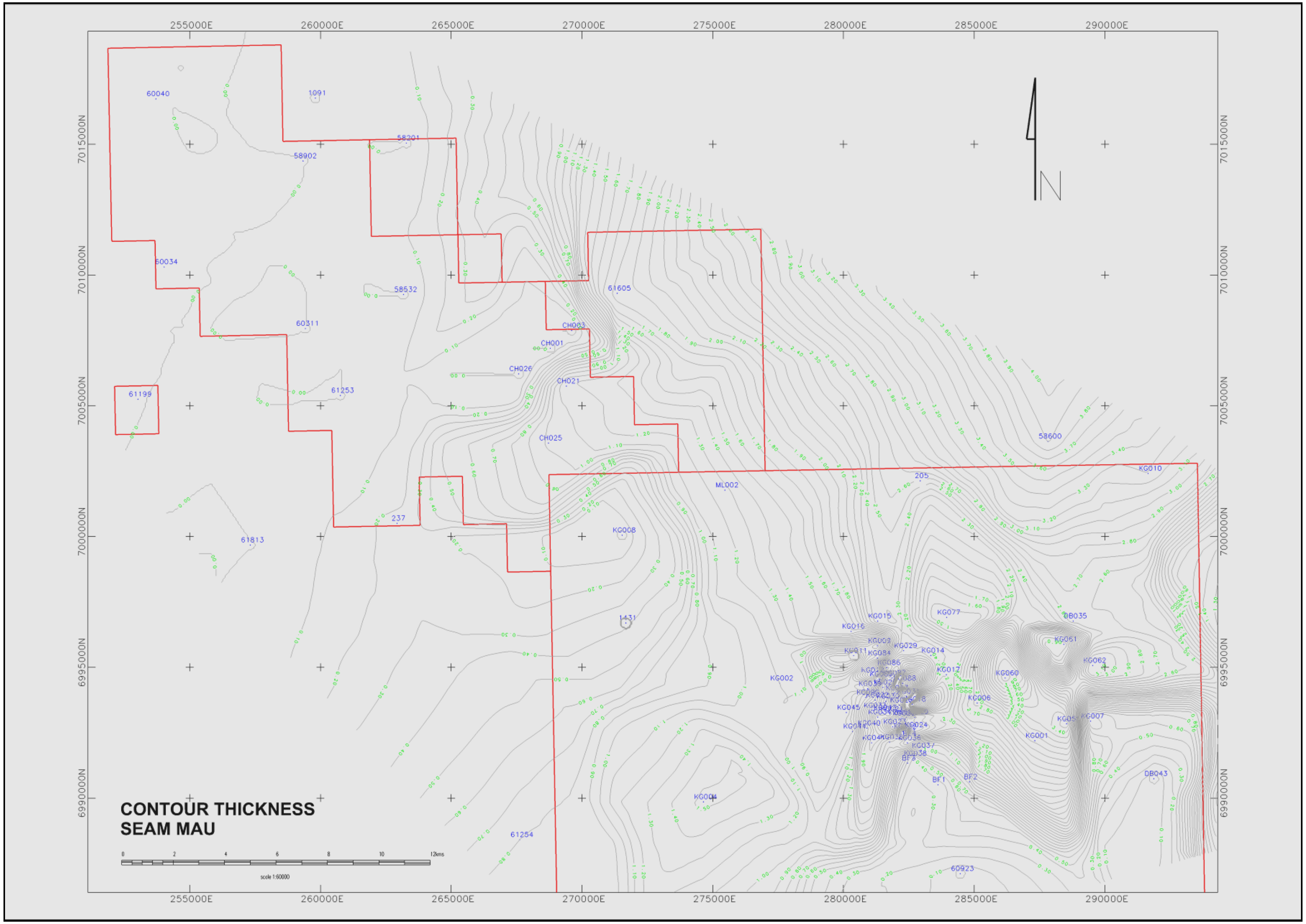
CONTOUR THICKNESS
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265000E
270000E
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285000E
290000E
7015000N
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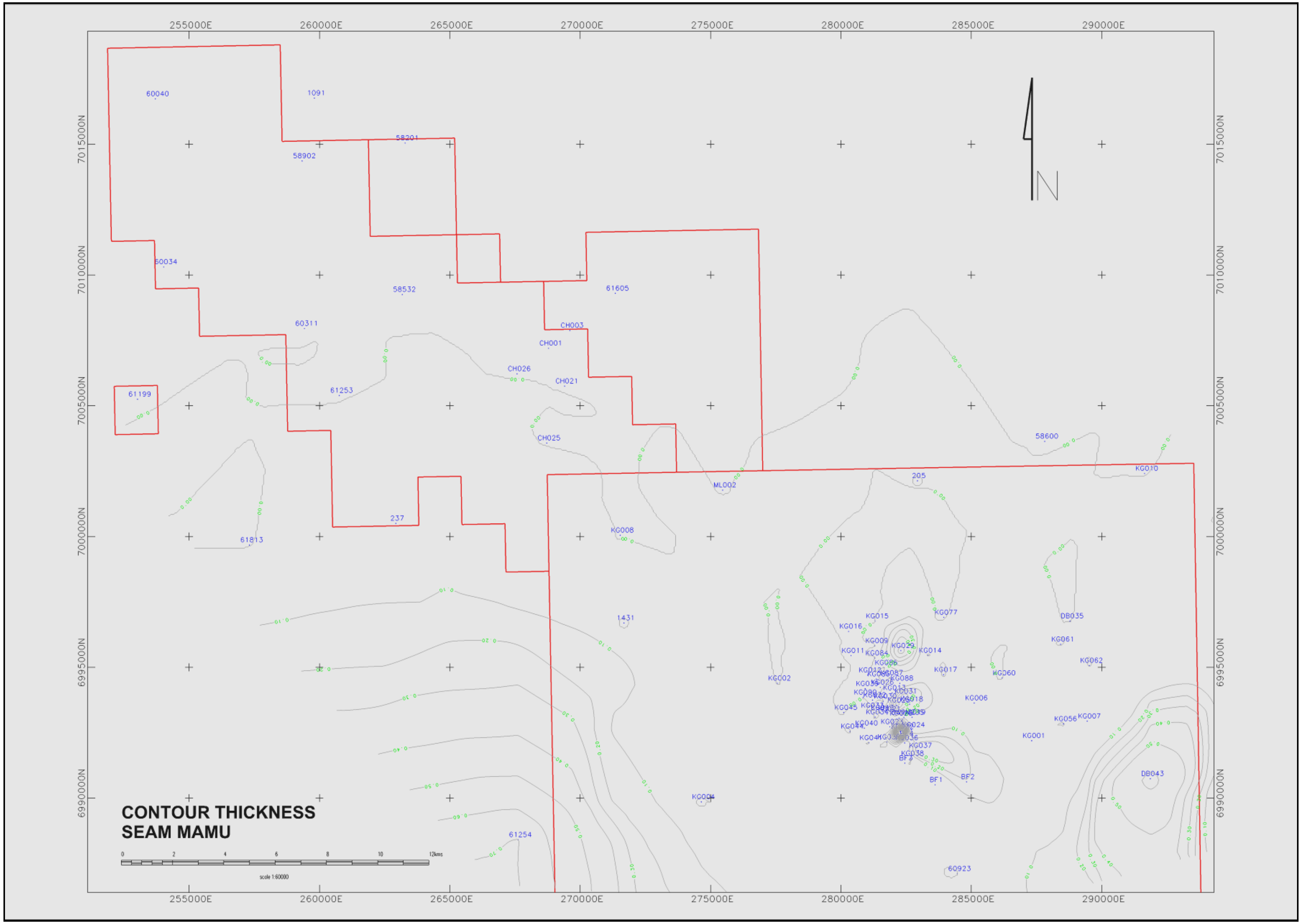
6995000N
6990000N
N


CONTOUR THICKNESS
SEAM MAMU
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260000E
265000E
270000E
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280000E
285000E
290000E
7015000N
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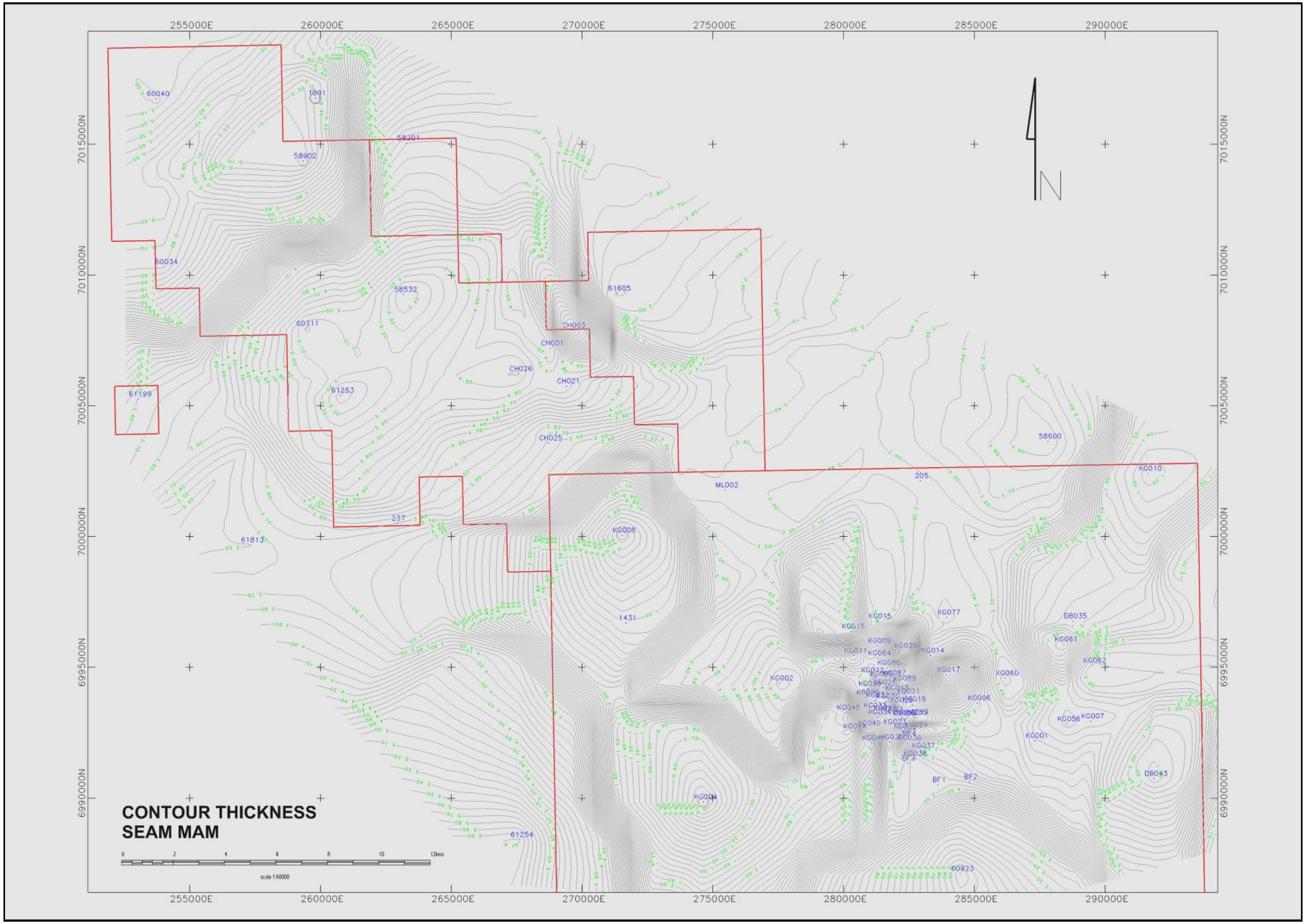
6995000N
6990000N
N


CONTOUR THICKNESS
SEAM MAM
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260000E
265000E
270000E
275000E
280000E
285000E
290000E
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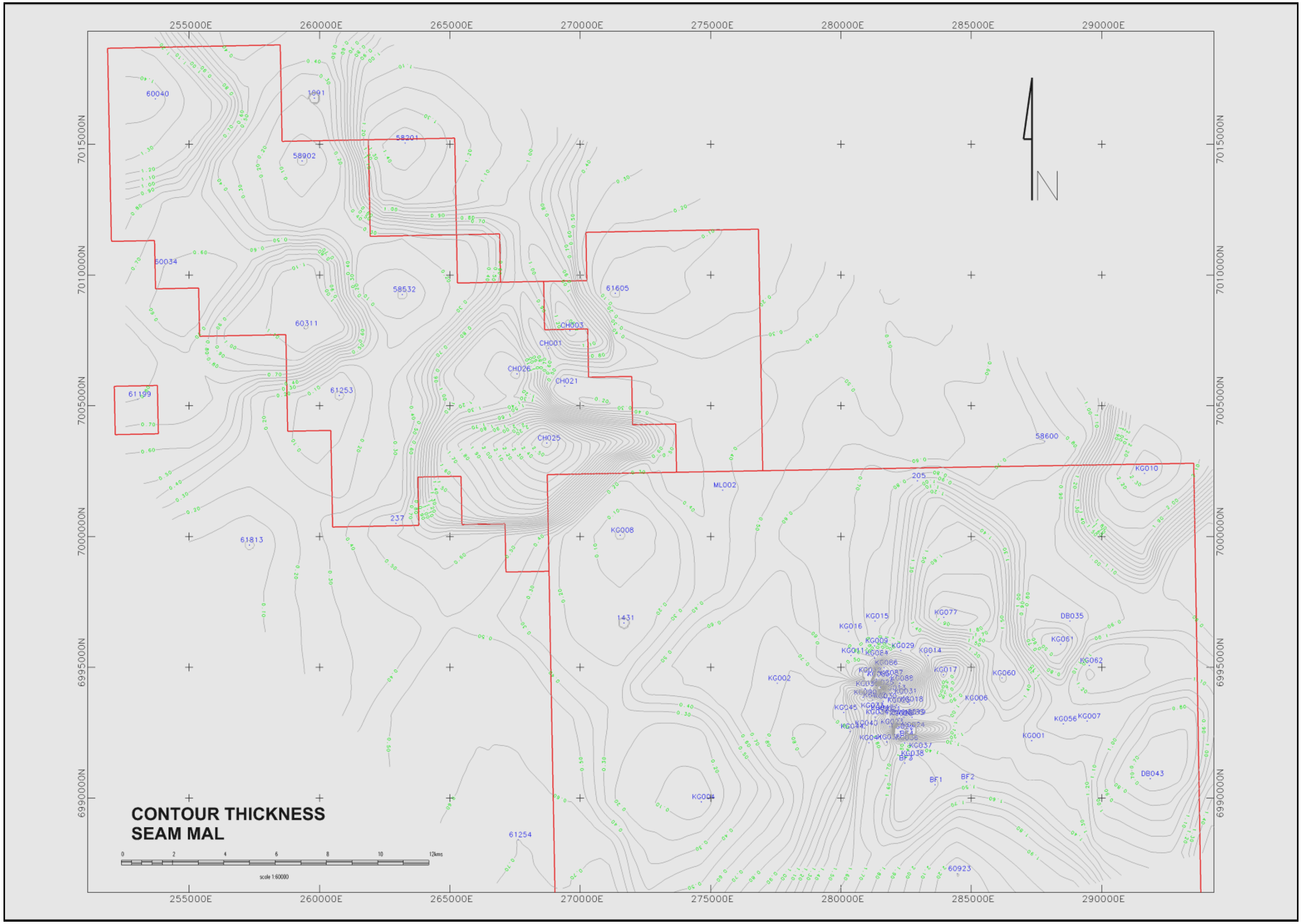
6990000N
scale 1:60000


CONTOUR THICKNESS
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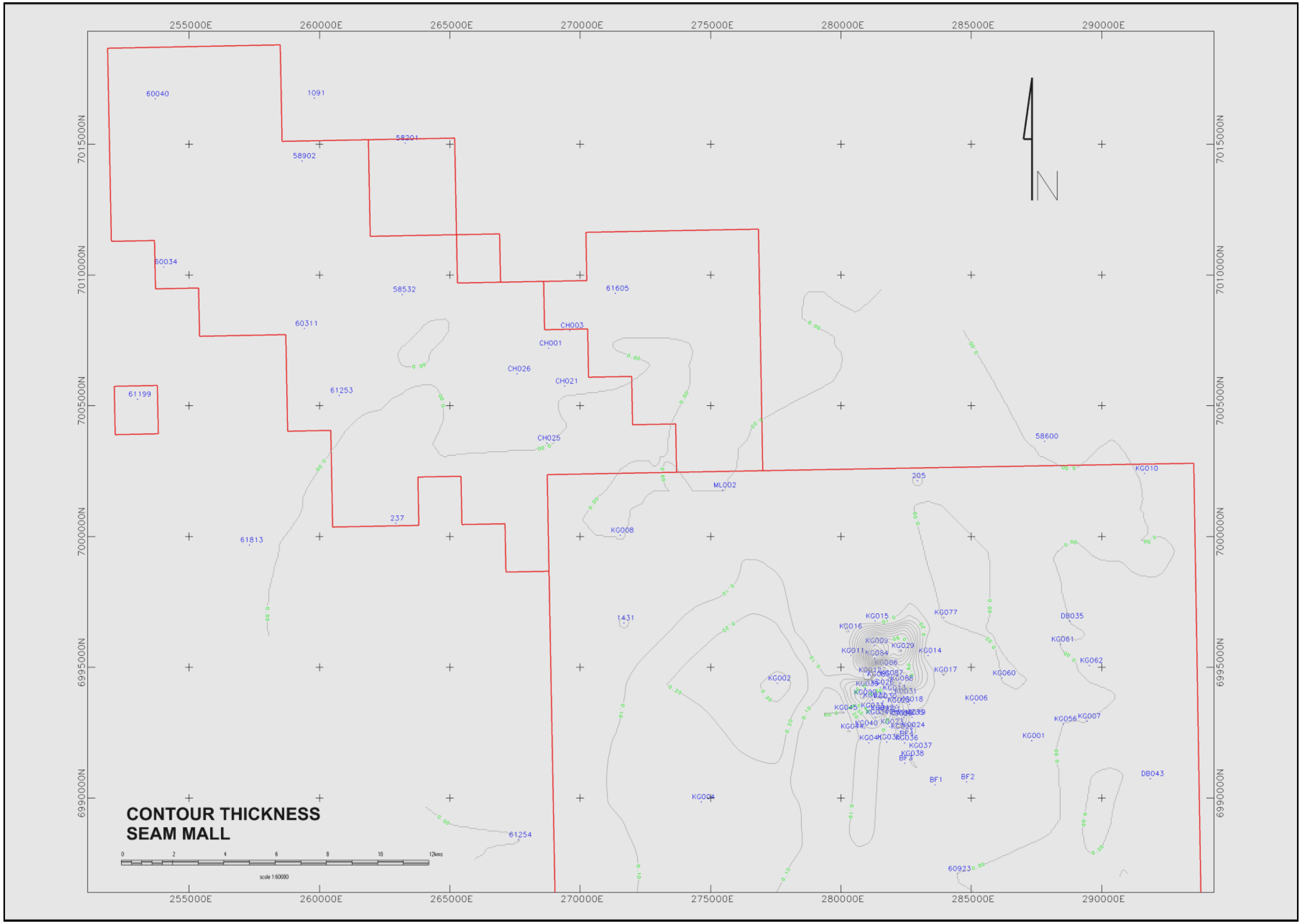
CONTOUR THICKNESS
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260000E
265000E
270000E
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280000E
285000E
290000E
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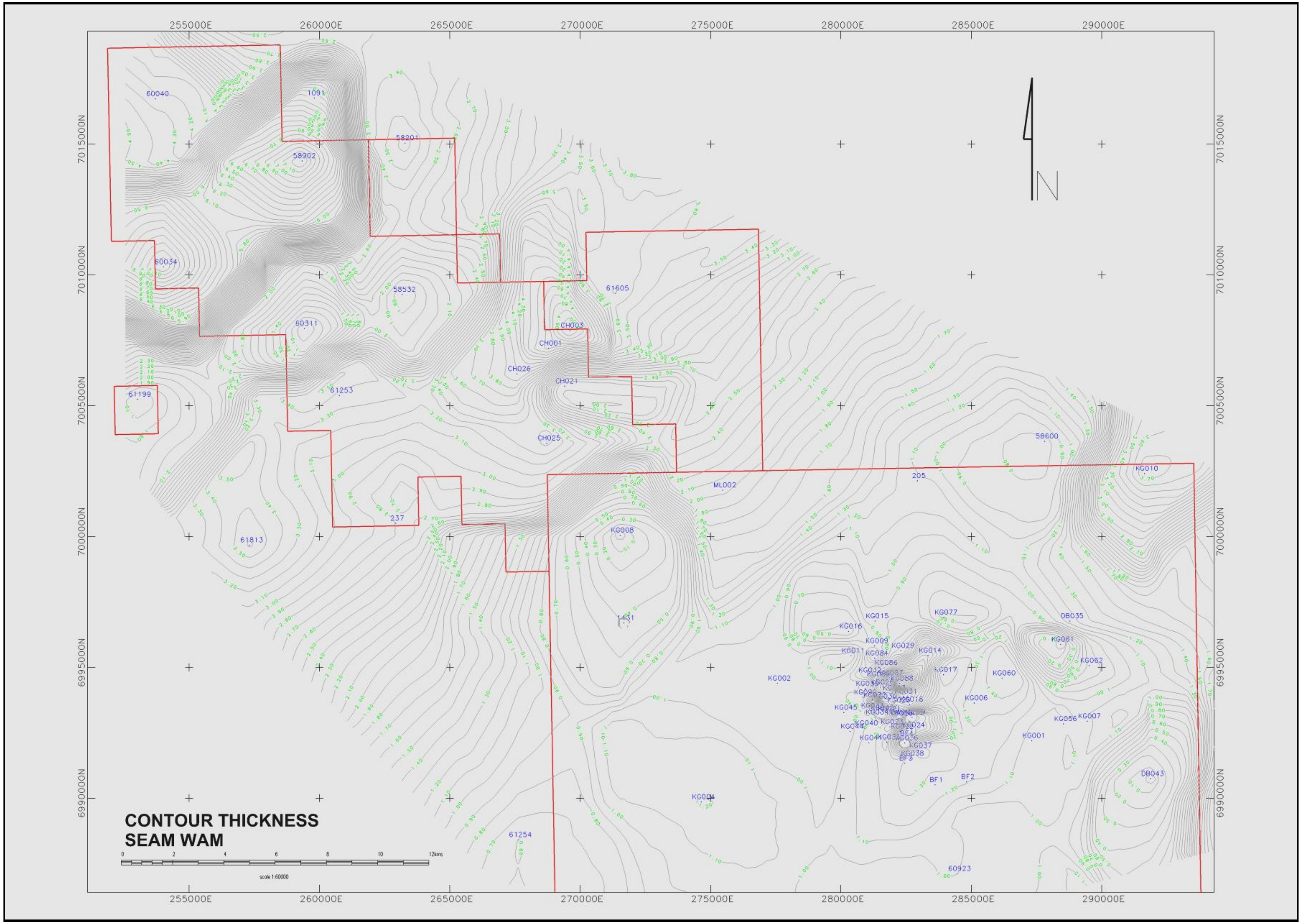
6995000N
6990000N


CONTOUR THICKNESS
SEAM WAM
255000E
260000E
265000E
270000E
275000E
280000E
285000E
290000E
7015000N
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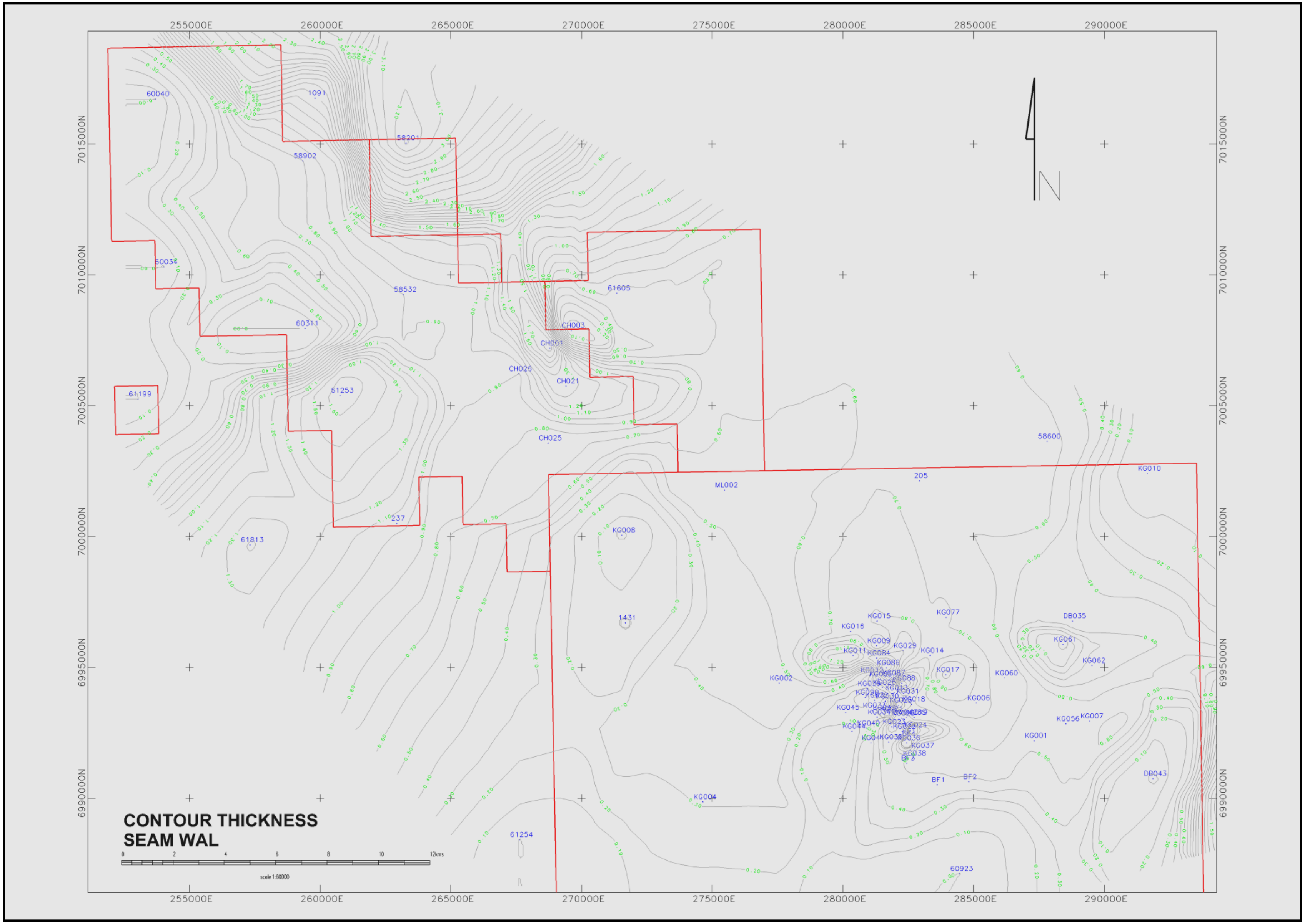
6995000N
6990000N
N


CONTOUR THICKNESS
SEAM WAL
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265000E
270000E
275000E
280000E
285000E
290000E
7015000N
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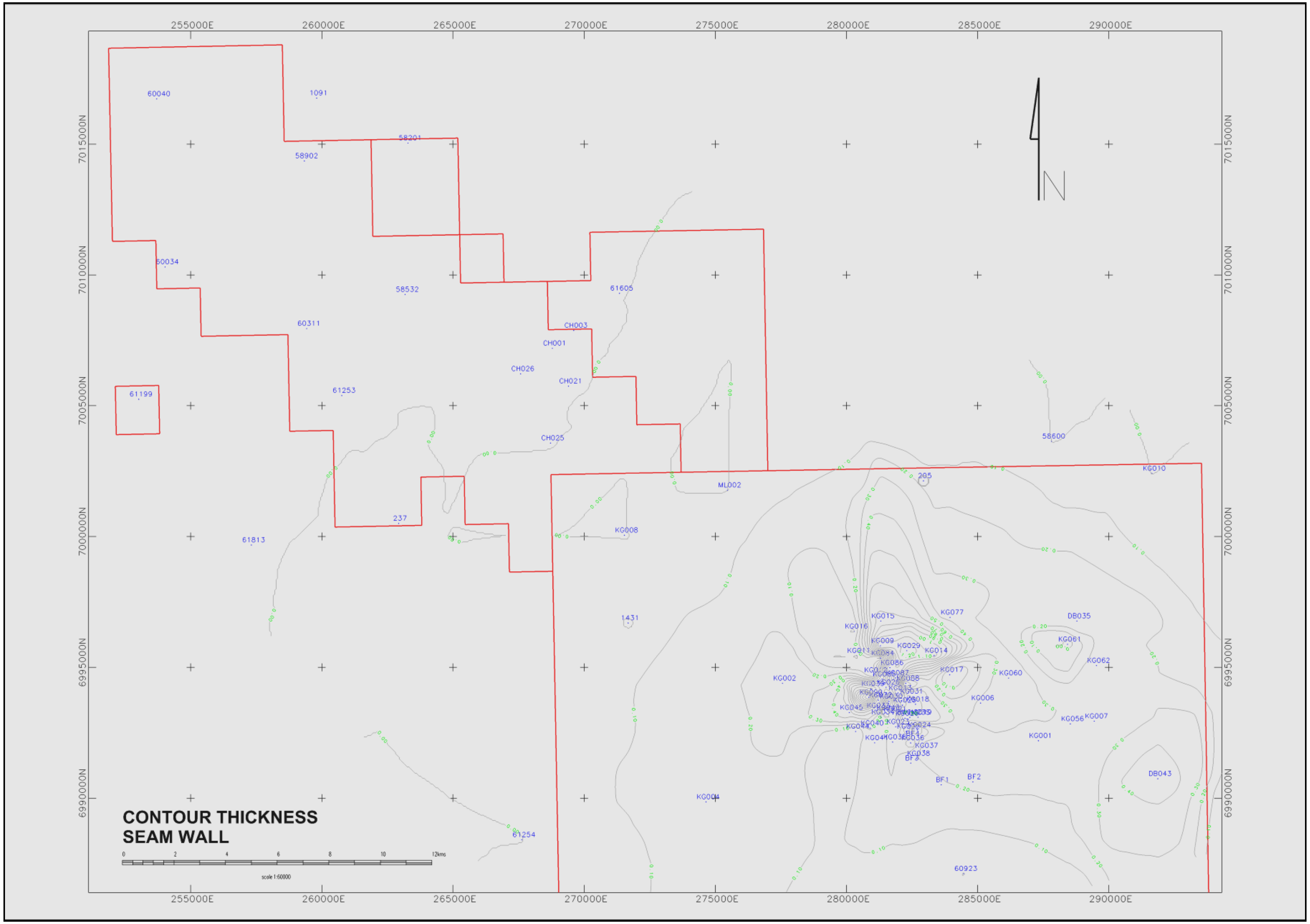
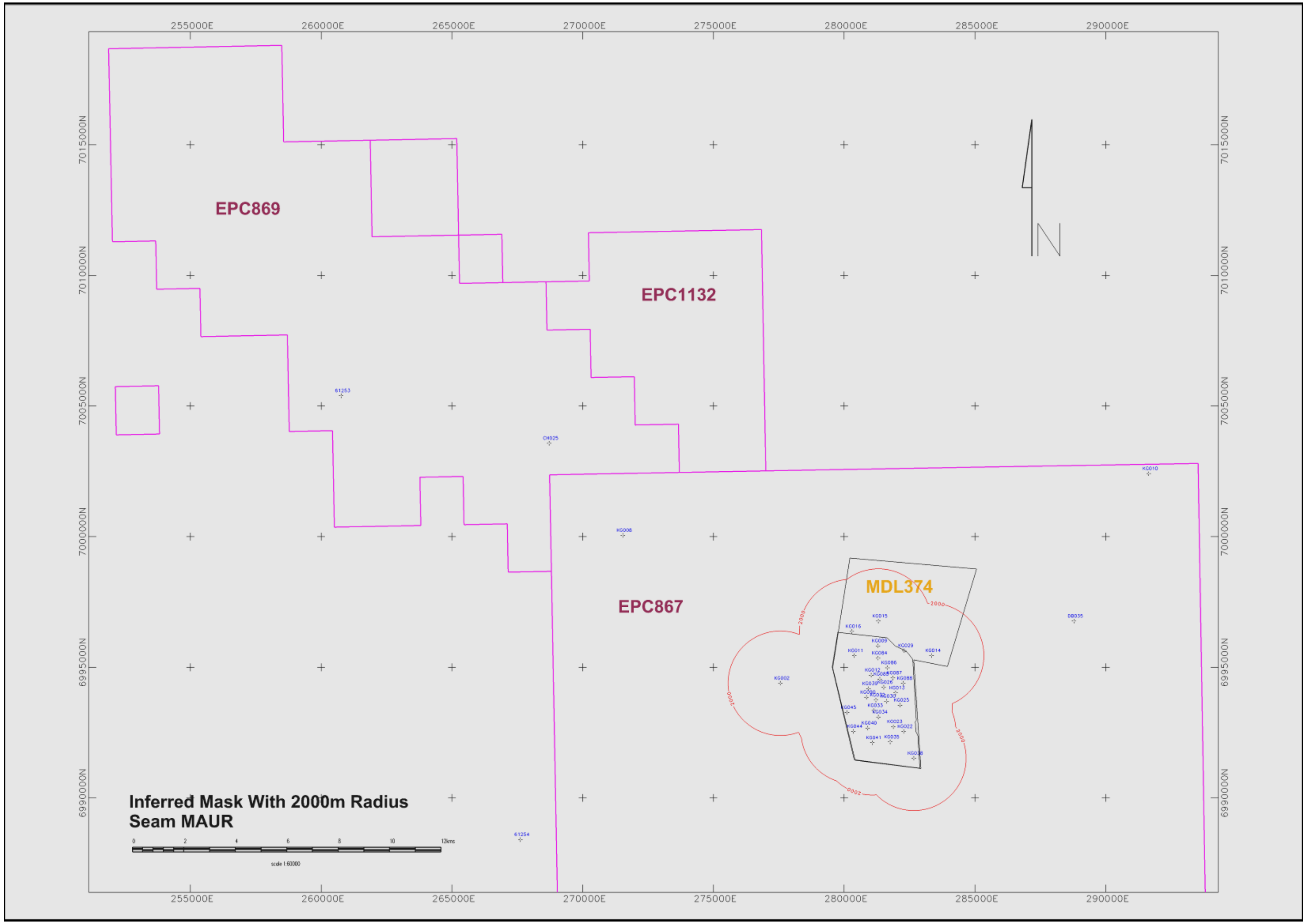
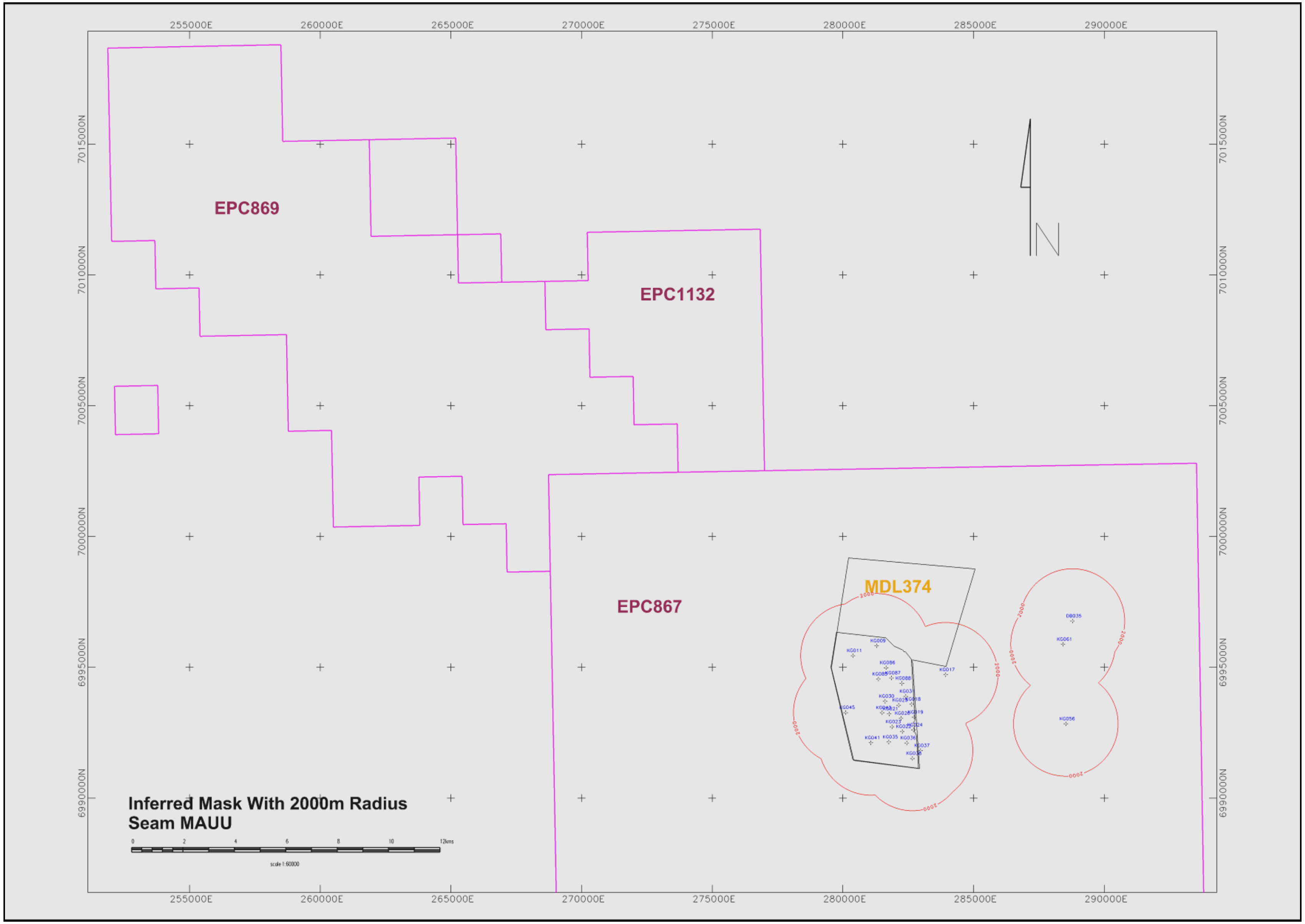
6995000N
6990000N
N


CONTOUR THICKNESS
SEAM WALL
255000E
260000E
265000E
270000E
275000E
280000E
285000E
290000E
7015000N
7010000N
7005000N
7000000N
6995000N
6990000N
N

# Appendix 7: - Mask Area for Macalister Seam (Source: Minex)




EPC869
EPC1132
EPC867
MDL374
N
Inferred Mask With 2000m Radius
Seam MAUU
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260000E
265000E
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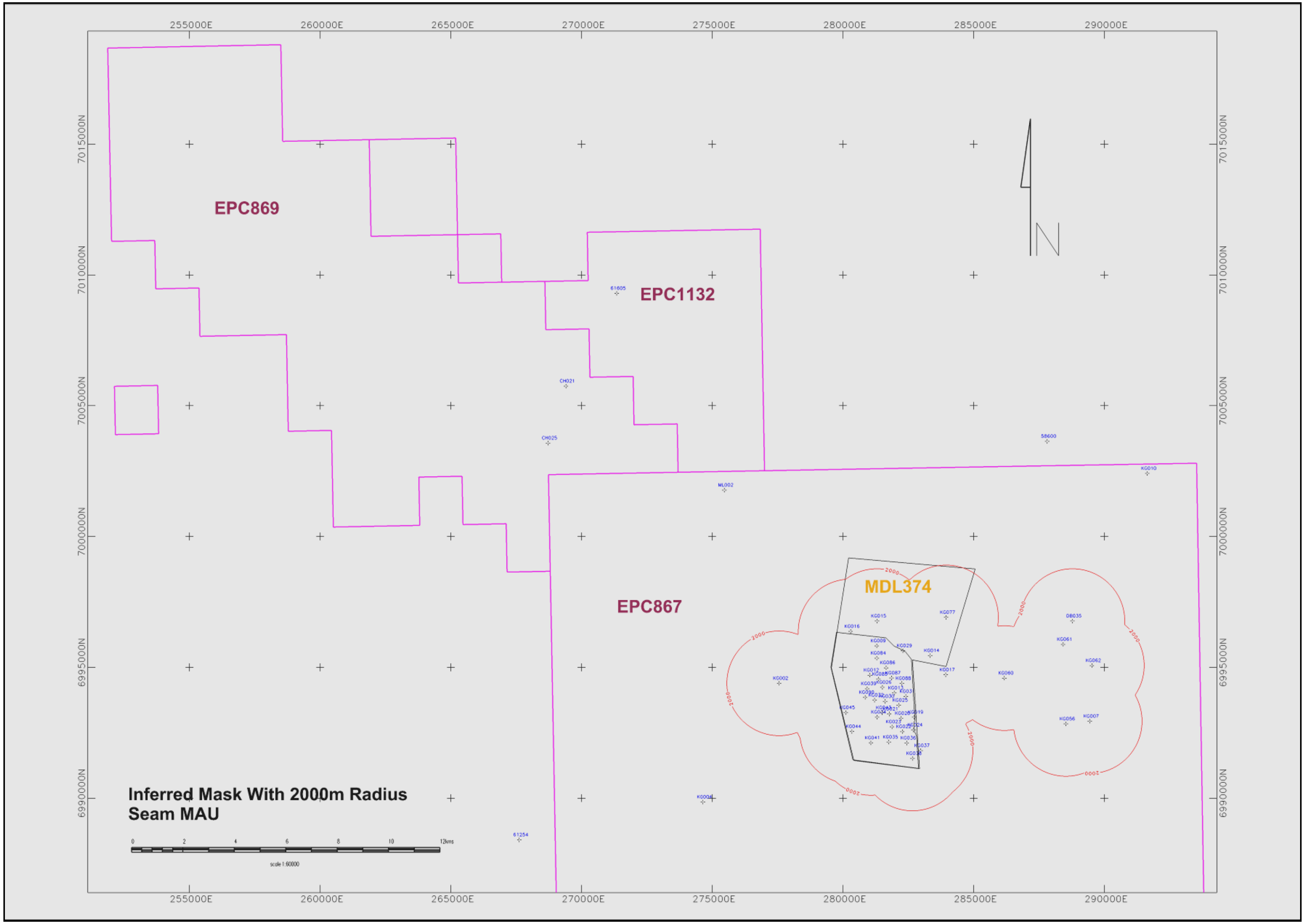
7000000N
6995000N
6990000N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265000E
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275000E
280000E
285000E
290000E
7015000N
7010000N
7005000N
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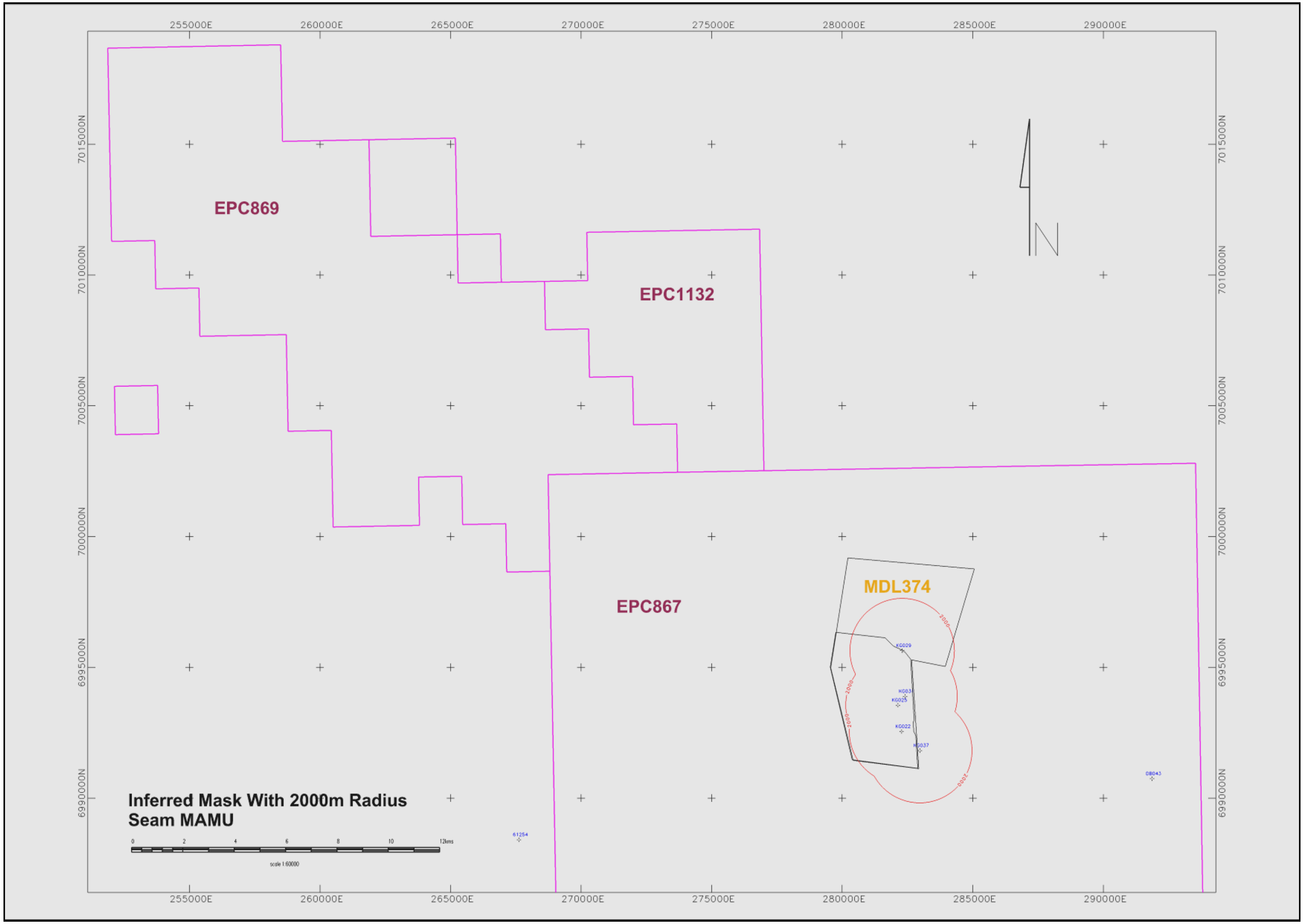
6995000N
6990000N
EPC869
EPC1132
EPC867
MDL374
N
Inferred Mask With 2000m Radius
Seam MAU



EPC869
EPC1132
EPC867
MDL374
Inferred Mask With 2000m Radius
Seam MAMU
255000E
260000E
265000E
270000E
275000E
280000E
285000E
290000E
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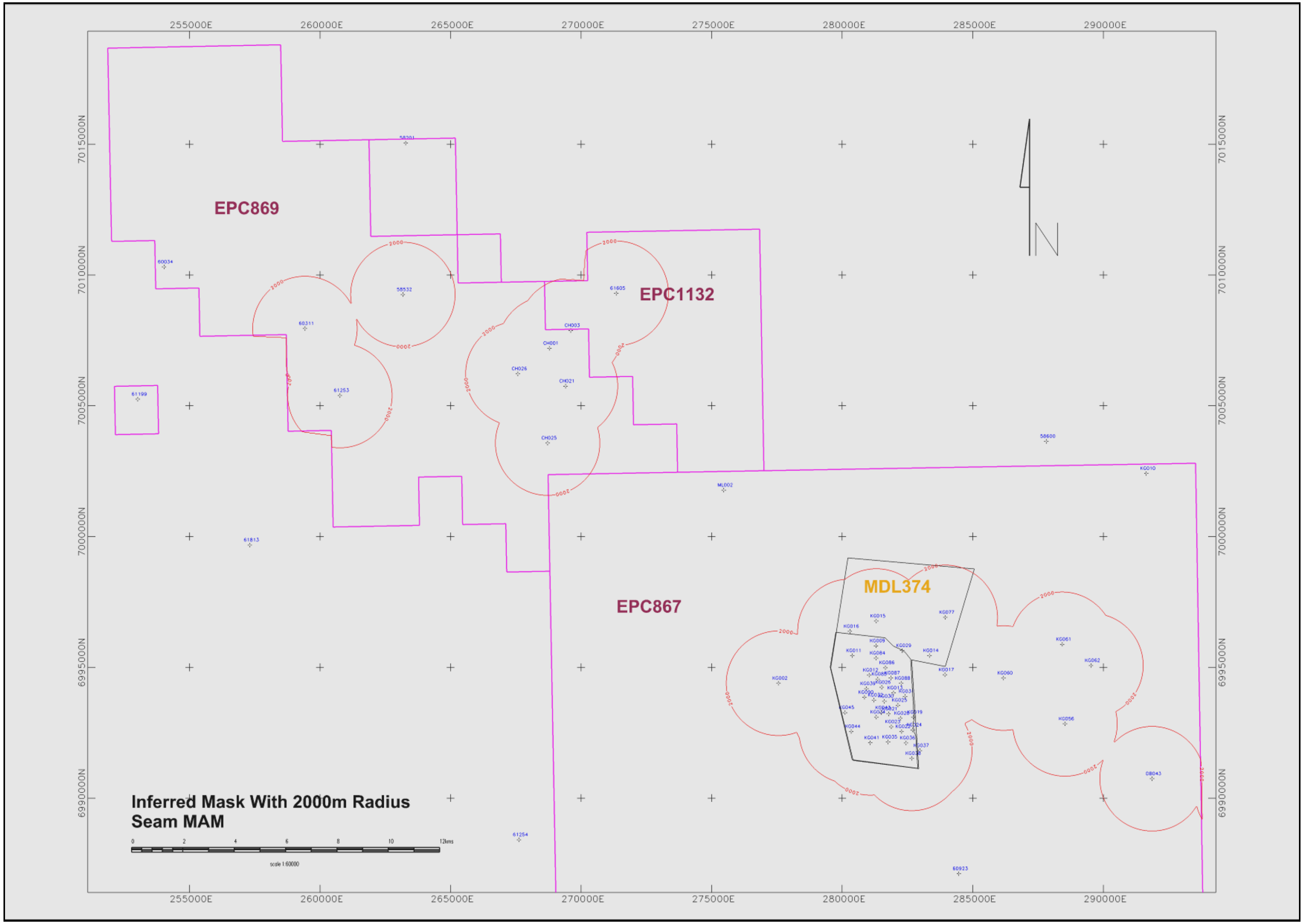
7000000N
6995000N
6990000N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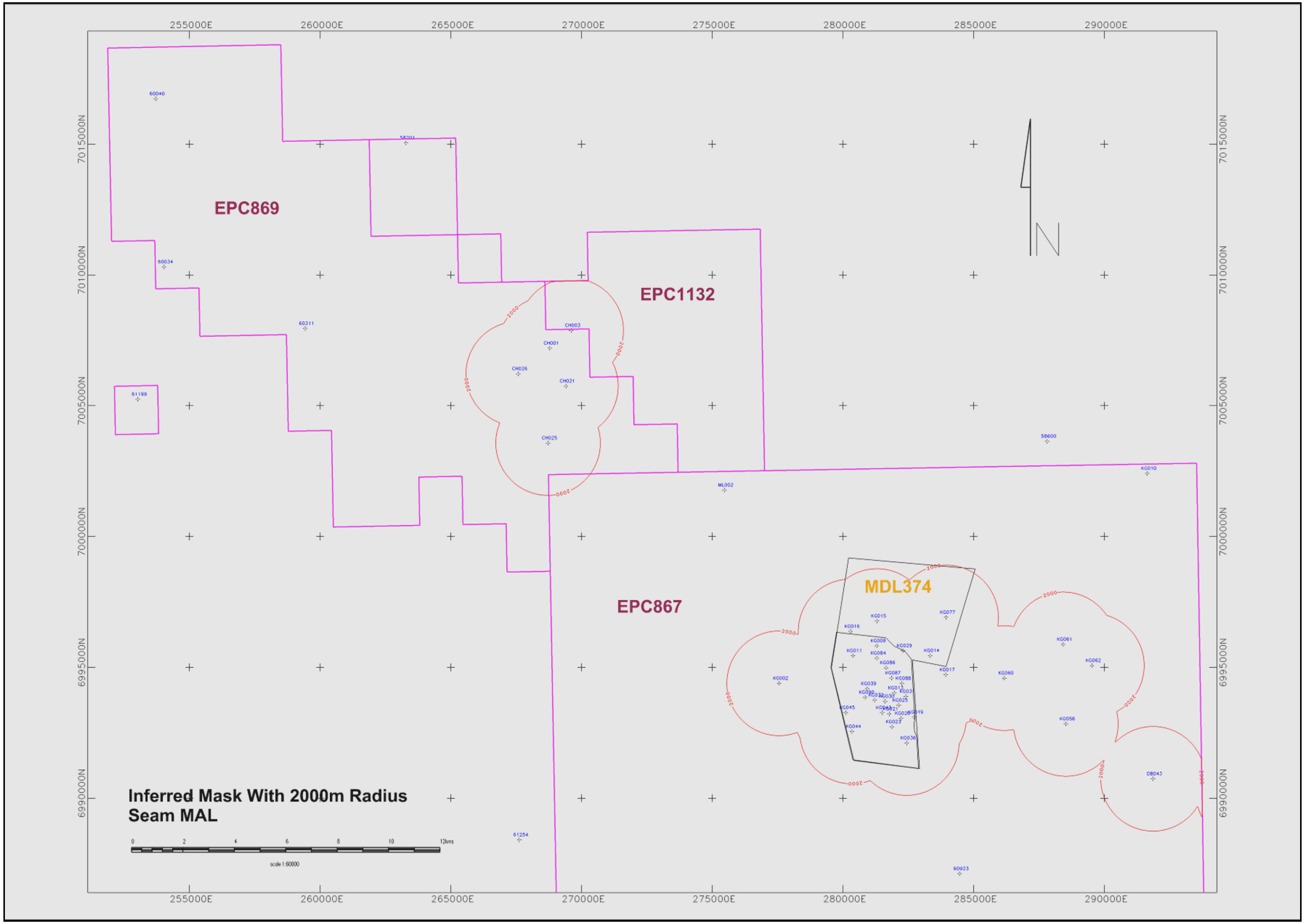
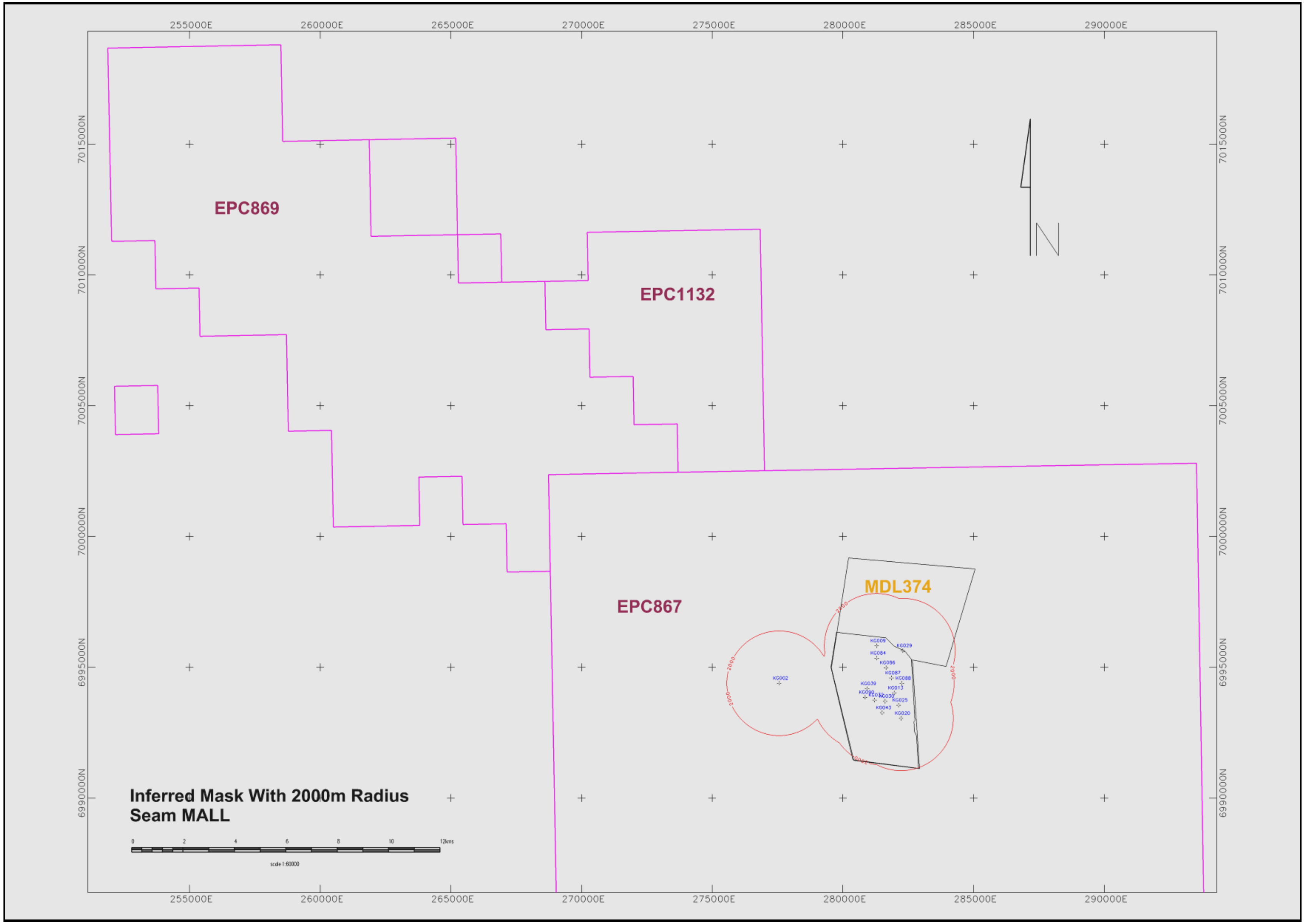
265000E
270000E
275000E
280000E
285000E
290000E
7015000N
7010000N
7005000N
7000000N
6995000N
6990000N
EPC869
EPC1132
EPC867
MDL374
N
Inferred Mask With 2000m Radius
Seam MAM


255000E
260000E
265000E
270000E
275000E
280000E
285000E
290000E
7015000N
7010000N
7005000N
7000000N
6995000N
6990000N
EPC869
EPC1132
EPC867
MDL374
N
Inferred Mask With 2000m Radius
Seam MAL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265000E
270000E
275000E
280000E
285000E
290000E
7015000N
7010000N
7005000N
7000000N
6995000N
6990000N
EPC869
EPC1132
EPC867
MDL374
N
Inferred Mask With 2000m Radius
Seam MALL
scale 1:60000