SOUTHGOBI RESOURCES LTD ("SGQ")

COAL GEOLOGY AND RESOURCES, ZAG SUUJ DEPOSIT, MONGOLIA

Technical Report

Qualified Person:

Merryl Peterson, Principal Geologist

Effective date of this report: 25 March, 2013

Project No. ADV-MN-00092-B

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

1 EXECUTIVE SUMMARY

This report has been prepared by Runge LLC, trading as Minarco-MineConsult (MMC), at the request of SouthGobi Resources Ltd (SGQ) in accordance with Canadian National Instrument 43-101. The estimate of Resources for Zag Suuj Deposit was last reported in March 2012. This is an update of the Technical Report published in March 2012, incorporating revised Resource Estimates. Prior to March 2012, no estimate of Resources for the Zag Suuj deposit had been reported. Subsequent to the site visit undertaken in 2011, no further work has been completed on site.

This updated estimate is based on the same technical data, geological model, and estimation methodology as the 2012 estimate. Of the 7 seams in the Zag Suuj deposit, the resource estimate for 6 of the seams remains materially unchanged from the 2012 quantities. The total resource estimate for Zag Suuj has increased approximately 27% from the 2012 resource estimate due to anomalies which were identified in respect to how the software package used for the estimate aggregated and reported the resource. This increase in the resource estimate for SGQ is not material within the meaning of NI43-101.

The increase detailed above was identified by MMC when reviewing the technical data for the resource. This review included a reconciliation of MMC *Minescape* and MGBS *Minex* geological models. This reconciliation identified aggregation anomalies which resulted in an increase in the resource estimate that was originally reported.

The Zag Suuj deposit is approximately 150 kilometres east of the SGQ Ovoot Tolgoi Mine. The deposit is located in the southwest corner of the Umnugobi Aimag (South Gobi province), approximately 320 kilometres southwest of the provincial capital of Dalanzadgad, 950 km south of the nation's capital Ulaanbaatar, and approximately 80 kilometres north of the Mongolia-China border.

SouthGobi Resources Ltd (SGQ) holds the Mongolian Exploration Licences XV-013779 and XV-005267 covering the Zag Suuj deposit (also known as Sevrei) in southern Mongolia. SGQ has applied for, and met all the requirements to extend these licences as Pre-Mining Agreements, and expects to receive formal approval in due course.

The Zag Suuj coal deposit occurs in Upper Permian strata, which are generally structurally disturbed with complex faulting and folding. The deposit occurs along the Nariin Sukhait thrust fault.

The Zag Suuj deposit includes 4 major seam groups – the A, B, C and D Seams (from the bottom upwards). All seams split into several plies. Approximately 50% of the Resources are contained in the B3 Seam, which averages 10m in true thickness. All seam groups consist of a number of coal plies of highly variable thickness, separated by stone partings. Interburden between the seam groups is mainly sandstone and conglomerate, whilst partings within the seam groups tend to be dominated by mudstone and carbonaceous mudstone. The seams dip at 20 to 60 degrees southwards, although complex folding is common.

Correlation of these seams with other SGQ deposits to the west has not been undertaken.

The Zag Suuj coal is low to medium volatile bituminous, with average raw ash generally ranging from 22-29% (ad) and calorific value 5600-6100 kcal/kg (ad). Total sulphur is generally 1.0-1.4%. Several of the seams at Zag Suuj have average Free Swelling Index (FSI or CSN) values greater than 5, indicating metallurgical properties. Limited metallurgical testing has been undertaken to date, but it is anticipated that a blend or washed coking coal could be produced from the Deposit.

The Geological model for Zag Suuj has been updated in 2011 after an extensive drilling program. Open pit Resources have been estimated to a depth of 300m, and incorporate all 2011 drilling results. Resources for the Zag Suuj deposit are summarised in Table 1.1.

Table 1.1

Summary of Zag Suuj Resources 10th January 2013

SEAM GROUP	INDICATED (Mt)	INFERRED (Mt)
D	0.0	0
C	0.0	21
B4	8.3	36
B3	10.9	26
B2	2.3	0
B1	0.0	0
A	0.0	1
TOTAL (Mt)	**21.5**	**84**

"Potential coal tonnage" has been estimated where drillhole coverage is insufficient for resource classification under the NI43-101 ruling (Table 1.2). MMC cautions that the potential coal tonnage is conceptual in nature, that there has been insufficient exploration to define a Mineral Resource and that it is uncertain if further exploration will result in the target being delineated as a Mineral Resource.

Table 1.2

Zag Suuj Deposit "Potential Coal Tonnage" 10th January 2013

SEAM GROUP	Tonnage Estimate Range (Mt)	
	From	To
D	9	13
C	6	8
B4	0	0
B3	0	0
B2	2	3
B1	2	3
A	1	1
TOTAL (Mt)	**20**	**29**

Exploration work on the Zag Suuj Deposit is still ongoing. Further drilling downdip will enable the status of the “potential coal tonnage” to be upgraded. The Zag Suuj deposit resource enhances the assets held by SGQ in the Umnugobi Province of Mongolia.

A considerable amount of data has been obtained from the various exploration programs. It is recommended that a single robust data management solution for both exploration and pre-production information be implemented.

Future exploration work should be targeted at infill drilling to increase confidence in the status of the Resource. It is recommended that exploration drilling continue both between existing traverses and down dip of known coal occurrences to continue to develop the Zag Suuj deposit. Future deep drilling should also include allowances for downhole surveying of hole deviation.

Recommendations regarding metallurgy include ongoing efforts to characterize the quality of individual seams and develop an understanding of the spatial variability of coal quality within individual seams. SGQ should also undertake preliminary investigations into coal beneficiation.

2 INTRODUCTION AND TERMS OF REFERENCE

2.1 BACKGROUND AND SOURCES OF INFORMATION

MMC was requested by SouthGobi Resources Ltd (SGQ) to provide a Technical Report that meets the requirements of the Canadian National Instrument 43-101 ("NI 43-101"), for the Zag Suuj deposit in Mongolia.

The estimate of Resources for Zag Suuj Deposit was last reported in March 2012. This is an update of the Technical Report published in March 2012, incorporating revised Resource Estimates.

This report has been prepared in accordance with the guidelines provided in the NI 43-101, Standards of Disclosure for Mineral Projects, dated June 30, 2011. The Qualified Person responsible for this report is Ms Merryl Peterson, Principal Geologist for RungePincockMinarco Limited. This Technical Report relies on technical data collected on the Zag Suuj deposit through to December 2011 by the following entities:

- SGQ in conjunction with Sapphire Geo Ltd (Sapphire);
- Ivanhoe Mines Mongolia Inc (IMMI); and
- McElroy-Bryan Geological Services (MBGS).

Additional data has been gathered from previous Mongolian government studies at Zag Suuj. The author has reviewed and evaluated all geological and technical information currently available, and summarised this information within this technical report prepared in accordance with NI 43-101. The author understands that SGQ has provided the author with all geological, geotechnical, and quality data information.

The Zag Suuj deposit was visited by the author from 5th to 8th December 2011. A number of the drill sites were inspected and coordinates checked. Subsequent to the site visit undertaken in 2011, no further work has been completed on site.

2.2 TERMS OF REFERENCE

The following terms of reference are used in the Technical Report:

- SGQ refers to SouthGobi Resources Ltd;
- MMC refers to Minarco-MineConsult and its representatives; and
- Project refers to the Zag Suuj Deposit or Field, located in Mongolia.

Resource and Reserve definitions are as set forth in the "Canadian Institute of Mining, Metallurgy and Petroleum, CIM Standards on Mineral Resource and Mineral Reserves – Definitions and Guidelines" adopted by CIM Council on November 27, 2010.

2.3 QUALIFIED PERSONS AND RESPONSIBILITIES

The estimation and reporting of Mineral Resources in this Technical Report complies with the requirements of the Canadian NI 43-101 of the Canadian Securities Administrators. Therefore it is suitable for public reporting.

The information in this Technical Report that relates to Mineral Resources is based on information compiled by Ms Merryl Peterson who is a part time employee of RungePincockMinarco Limited and she is a Member and Chartered Professional Geology of the Australasian Institute of Mining & Metallurgy ("AusIMM"). Ms Peterson has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration, as well as the work she has undertaken, to qualify as a Qualified Person as defined by NI 43-101.

2.4 LIMITATIONS AND EXCLUSIONS

This Technical Report has been produced by MMC using information made available to MMC as at the date of this Technical Report and the findings, information and conclusions therein only apply as at this date. MMC has not been engaged to update its Technical Report in relation to any information that may have been provided or changed subsequent to the date of this Technical Report.

MMC has relied upon other reports, opinions or statements of other qualified persons and other experts and the Issuer, for information concerning relevant issues and factors relevant to this Technical Report. The extent of MMC's reliance and the relevant portions/sections of the Technical Report the subject of this reliance are detailed in Section 3 below.The work undertaken for this Technical Report is that required for the preparation of a technical report including reviews of technical information, coupled with such inspections as deemed appropriate by MMC. Inspections were conducted by Ms. Peterson on the 5th to 8th December 2011.

MMC has also specifically excluded any analysis or opinion of the competitive position of the Project compared with other similar and competing coal producers around the world.

Intellectual Property

All copyright and any other intellectual property rights in this Technical Report are retained by and are the property of MMC.

Mining Unknown Factors

The ability of the operator, or any other related business unit, to achieve forward-looking production and economic targets is dependent on numerous factors that are beyond the control of MMC and cannot be fully anticipated by MMC. These factors included site-specific mining and geological conditions, the capabilities of management and employees, availability of funding to properly operate and capitalise the operation, variations in cost elements and market conditions, developing and operating the mine in an efficient manner, etc. Unforeseen changes in legislation and new industry developments could substantially alter the performance of any mining operation.

2.5 CAPABILITY AND INDEPENDENCE

MMC provides advisory services to the mining and finance sectors. Within its core expertise it provides independent technical reviews, resource evaluation, mining engineering and mine valuation services to the resources and financial services industries.

All opinions, findings and conclusions expressed in this Technical Report are those of MMC and its specialist advisors as outlined in Chapter 2.3.

Drafts of this report were provided to SGQ, but only for the purpose of confirming the accuracy of factual material and the reasonableness of assumptions relied upon in this Technical Report.

MMC has been paid, and has agreed to be paid, professional fees based on a fixed fee estimate for its preparation of this Report.

This Technical Report was prepared on behalf of MMC by the signatory to this Technical Report.

3 RELIANCE ON OTHER EXPERTS

MMC in the preparation of this Technical Report has relied on other reports, opinions or statements of other qualified persons and other experts, for information concerning relevant issues and factors relevant to this Technical Report. The extent of MMC's reliance and the relevant portions/sections of the Technical Report which are the subject of this reliance are detailed below.

- **McElroy Bryan Geological Services Pty Ltd**:

  The Geological Model for Zag Suuj on which the Resource Estimation was based was created by Marcos Axelsson of McElroy Bryan Geological Services Pty Ltd (MBGS).

  MMC was not retained to undertake any geological modelling work. The above Geological Model was provided to MMC by SGQ.

  MMC was not retained to audit the above Geological Models and accordingly, MMC has not audited this Geological Model.

  Subject to the matters referred to in Section 12, MMC has relied on the accuracy of the Geological Models supplied to it.

  The MBGS geological models were accompanied by a disclaimer, emphasizing the status of the models:

  The model relating to this data release was created using geological data (largely drill hole data). Where data has been provided to MBGS, MBGS accepts no liability for the accuracy or completeness of the data. This model is a model of the geological data and geological interpretation based on the data available. Due to data densities and geological complexities not all geological changes may be apparent in the model.

  Some known geological features (such as small scale faults) may not be incorporated in the model due to lack of continuation of the feature, limited data to interpret the feature or feature size and modelling parameters. Some modelled geological features may not fully represent the geologist's interpretation due to data or software limitations.

- **SGQ**:

  Verbal and visual geological information, geological data and geological studies were provided to MMC by SGQ staff.

Insofar as this Technical Report refers to matters relating to legal, political, environmental or tax matters (and in particular in respect of the matters set out in paragraphs 4.1, 4.2 and 6), MMC has relied upon information supplied to it for or on behalf of SGQ.

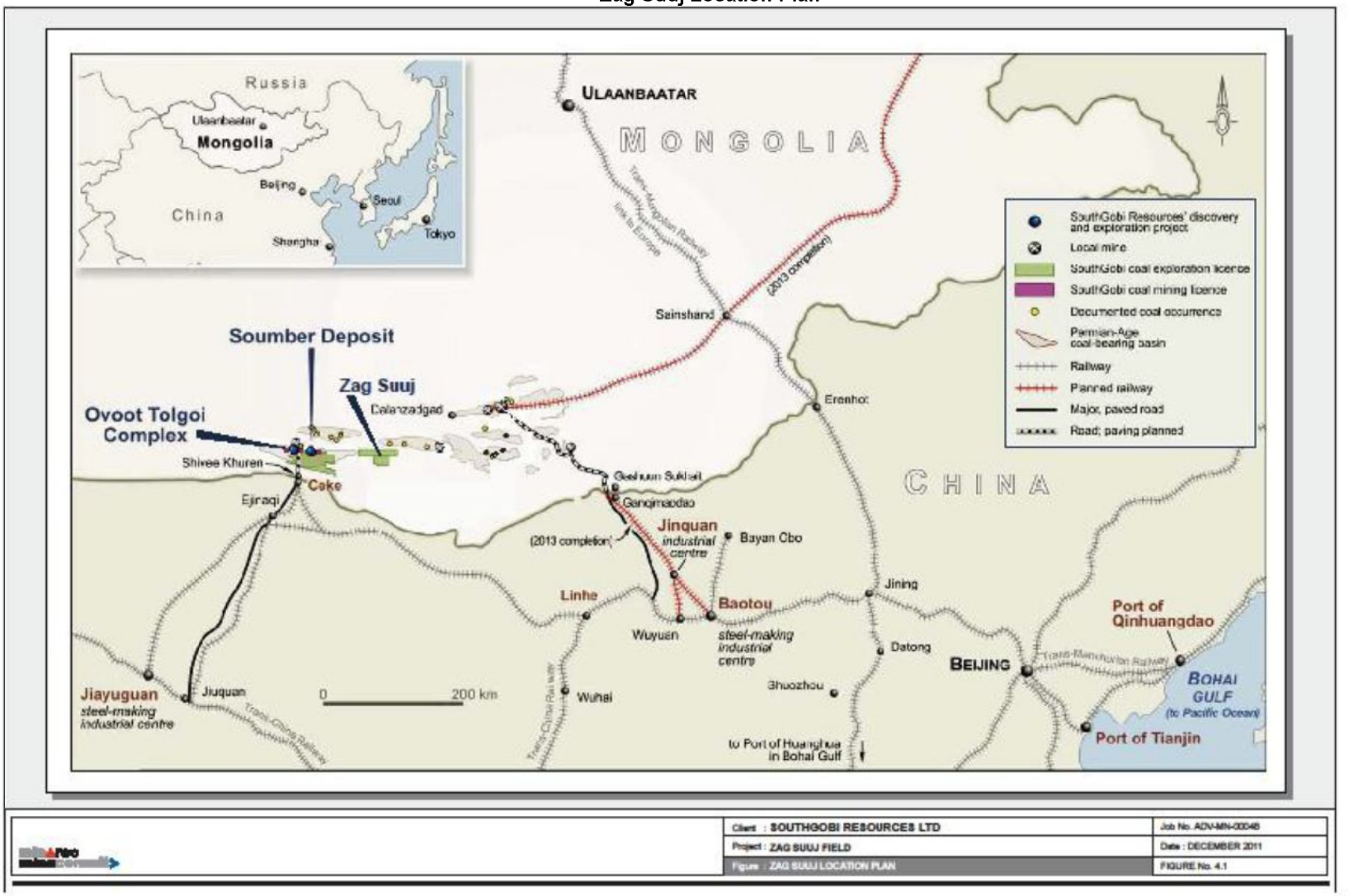
4 PROPERTY DESCRIPTION AND LOCATION

4.1 LOCATION

The Zag Suuj deposit is located in the Noyon and Bayandalai soums (district) in the southwest corner of the Umnugobi Aimag (South Gobi province), approximately 200 kilometres southwest of the provincial capital of Dalanzadgad and 950 km south of the nation's capital Ulaanbaatar (Figure 4.1). Zag Suuj is approximately 150 km east of the SGQ owned and operating Ovoot Tolgoi mine. The mine is approximately 45 kilometres north of the Mongolia-China border and the Ceke border crossing. Ceke, in the People's Republic of China, is the main distribution centre for Ovoot Tolgoi coal.

Figure 4.1

Zag Suuj Location Plan



4.2 OWNERSHIP

Previous work at Zag Suuj was conducted under the property control of Ivanhoe Mines Ltd (IMMI). The coal division of IMMI and all its coal exploration licences were sold to SouthGobi Resources Ltd (SGQ) (formerly Asia Gold Corp. (Asia Gold)) in 2007.

SGQ holds its interest in the Zag Suuj Deposit through its 100% owned subsidiary SouthGobi Sands LLC (SouthGobi), the operating company under SGQ, which is a Mongolian-registered company that holds the licenses and permits to the Zag Suuj Deposit.

The exploration licenses XV-013779 and XV-005267 were initially granted to IMMI on December 28, 2002 (inception date), who transferred them to SouthGobi on February 22, 2007. The Mongolian Mineral Exploration License (MEL) Certificate issued by the Mineral Resources Authority of Mongolia (MRAM) documents that license fees were paid by SGQ and the license kept in good standing. All License documentation reviewed by the author indicates that the MEL was unencumbered when transferred to SGQ.

The coordinates are defined in the document "Certificate of Exploration License" issued by T. Zanashir, Chairman of the Mongolian Office of Geology and Mining Cadastre, a division of MRAM. A copy of the certificate was supplied to MMC by SGQ. MMC has reviewed the License Certificate and the legal reviews, plus made an independent check of the MRAM license database. All show SouthGobi to be the unencumbered owner of the license. MMC is not aware of any other encumbrances on the property.

The Mongolian government grants Exploration Licenses for a period of three years with the right to extend the period twice for three additional years each. Exploration license holders are subject to various environmental protection obligations. Following a successful exploration program, an exploration license holder can apply for a mining license over any portion of the exploration license.

The MELs covering the Zag Suuj Deposit were extended to December 28, 2005, the second term/first renewal was granted and extended to December 28, 2007, and expired on December 28, 2010. The third renewal was granted to December 28, 2011.

Mongolia Mineral Law contains a provision to sign a Pre-Mining Agreement (PMA) with the Mineral Authority of Mongolia (MRAM), which allows the exploration license to be extended by up to three years to perform certain activities, including additional exploration, pre-feasibility studies, and certain development work. SGQ has advised MMC that it has applied for and met all the requirements to receive the PMAs and subsequent exploration license extension, and that SGQ fully expects to receive the formal approval from the MRAM in due course. The obligations for the holder of a PMA are the same as for an exploration license.

Following a successful exploration program, an exploration license holder may apply for a mining license to any portion of the exploration license. A mining license is granted for a period of 30 years, with the right to extend the period twice for 20 additional years with each extension. Under the Mineral Laws of Mongolia

(Article 21) an exploration license holder has the exclusive right to obtain a mining license for any part of the exploration license area.

In order to maintain a Mineral Exploration Licence an annual renewal fee is paid. An annual exploration plan and associated Environment Protection Plan must be submitted and approved, and a minimum exploration activity is required each year. Additionally a report of the exploration activity must be submitted by January 31 of the following year. From discussions with SGQ, MMC understands that SGQ has complied with all these requirements.

Current policy stipulates that any coal extracted and sold during exploitation is subject to a royalty rate of 2.5% and 5% of the sales value for domestic and international sales, respectively. MMC is not aware of any other royalties that may apply to this property.

The Zag Suuj Deposit consists of MELs XV-013779 and XV-005267 (PMAs applied for), with boundary corners at the coordinates shown in Table 4.1, and as shown in Figure 4.2.

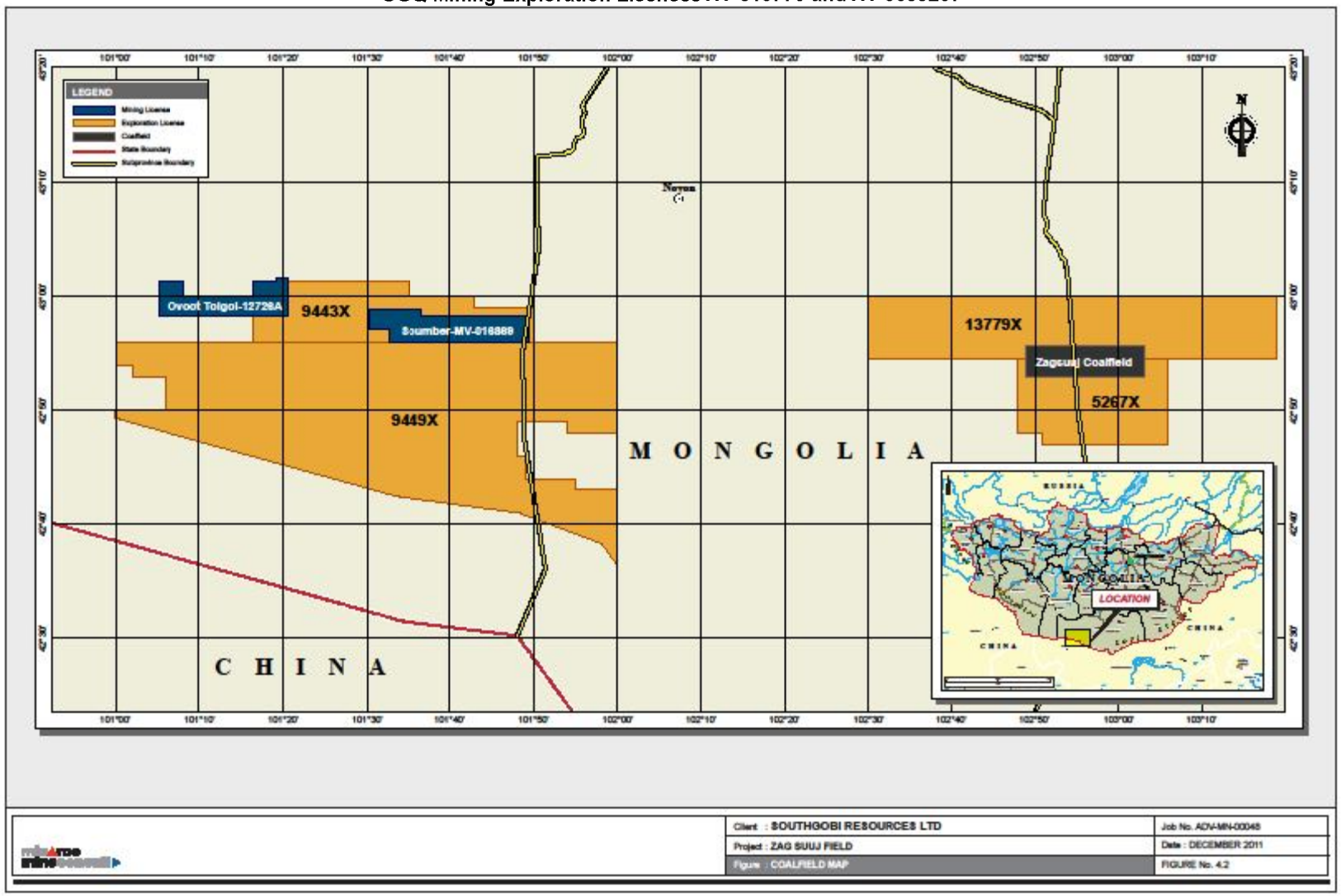
Table 4.1

Zag Suuj Exploration License Description

License Number	Licensee	Inception Date	Expiry Date	License Coordinates			Area Hectares	Mineral Interest
				Corner	Easting	Northing		
XV-013779	SouthGobi Sands, LLC	28-Dec-02	28-Dec-11, PMA applied for	1 2 3 4	103°19'1.06" 102°30'0.95" 102°30'0.89" 103°19'0.95"	42°54'31.24" 42°54'31.27" 43°00'1.27" 43°00'1.33"	67,869	100% Coal
XV-005267	SouthGobi Sands, LLC	28-Dec-02	28-Dec-11, PMA applied for	1 2 3 4 5 6	103°06'1.05" 103°06'1.03" 102°51'0.95" 102°51'0.95" 102°48'0.95" 102°48'0.97"	42°54'31.27" 42°47'1.26" 42°47'1.24" 42°48'1.24" 42°48'1.24" 42°54'31.24"	33,296	100% Coal

Figure 4.2

SGQ Mining Exploration Licences XV-013779 and XV-0055267



4.3 ENVIRONMENTAL LIABILITY AND PERMITTING

Exploration license holders are also subject to various environmental protection obligations. Within 30 days of receipt of a license, the holder must prepare an environmental protection plan (EPP). The EPP should be inclusive of the environmental impact assessment, mitigation and implementation of the measures in terms of environmental protection. The holder is required to notify the local governing body (soum) of annual exploration plans, must update the EPP annually, and must submit a bond consisting of 50% of the estimated cost of any ground reclamation for each year's activities. Upon extension of the exploration license, an updated EPP is required to be submitted.

The Mongolian Minerals Law (2006) and Mongolian Land Law (2002) govern SGQ's exploration, mining, and land use rights for the Zag Suuj project. Water rights are governed by the Mongolian Water Law, and the Mongolian Minerals Law. These laws allow licence holders to use the land and water in connection with exploration and mining operations, subject to the discretionary authority of Mongolian national, provincial, and regional governmental authorities as granted under Mongolian law.

MMC is not aware of any environmental, permitting, legal, title, taxation, socioeconomic, marketing, political, or other relevant issues that may materially affect the potential mining of coal within the confines of the SGQ exploration license area.

Mineral law regulates licensing, minerals exploration and mining issues in Mongolia and clearly shows initial environmental obligations for exploration and mining activities. Initial environmental obligations relevant to the exploration activities are summarised below. It should be noted however that environmental obligations are not limited to the points below.

Article 38 has a specific section for environmental protection obligations for exploration activities. However, Article 35.2.2 and Article 37 describe the environmental protection activities during minerals exploration. Explorers should submit an Environmental Protection Plan (EPP) for exploration activity to the Soum Governor for its approval, once the Exploration Plan has been approved by MRAM and SSIA. The EPP should be inclusive of environmental impact assessment and mitigation and implementation of the measures in terms of protection. Once the EPP has been approved by the Soum Governor, the Explorer should submit the EPP for Aimag SSIA and deposit 50% of the budget on the EPP to the relevant Soum Bank Account as a guarantee. This is refunded upon 100 percent fulfillment of the environmental obligations on the EPP, including disturbed site rehabilitation. In addition, Article 40 regulates the termination date and extension of the exploration license, and an updated/ renewed EPP is required to extend after the termination date of the exploration license.

5 ACCESSIBILITY, CLIMATE, LOCAL RESOURCES, INFRASTRUCTURE AND PHYSIOGRAPHY

5.1 LOCATION

The Zag Suuj deposit is located in south-central Mongolia, approximately 45 km north of the China border. The deposit is within the administrative unit of the Noyon (western part of deposit) and Bayandalai (eastern part of deposit) Soums, Umnugobi Aimag (South Gobi Province).

Population centres and transportation infrastructure in proximity to the deposit are illustrated in Figure 4.1. The Umnugobi Aimag is the most sparsely populated province in Mongolia with less than one person/km ^{2}.

5.2 CLIMATE AND PHYSIOGRAPHY

The region experiences a continental desert climate. Temperatures range from -30°C in winter to +30°C in the summer. High winds frequently occur throughout the spring. Average annual rainfall is 130mm with most precipitation occurring during the summer months. The weather is acceptable for exploration activities from mid-March through October. The climate allows year-round mining operations.

The Umnugobi Aimag is within the physiographic region of the Gobi Desert. The topography of the deposit varies from flat, gravel-covered plains to moderately hilly terrain. Surface elevation ranges from 1,200 to 1,250m above sea level.

Vegetation is sparse, consisting primarily of small shrubs and grasses. The area currently supports a traditional subsistence economy focused on raising sheep, goats and camels.

5.3 ACCESSIBILITY AND INFRASTRUCTURE

All parts of the property are accessible with four-wheel-drive vehicles.

The Zag Suuj deposit is accessible via the on-site airport at the Ovoot Tolgoi Mine. There are regular chartered aircraft from Ulaanbaatar for personnel access and bringing in supplies. Zag Suuj is approximately 150km east of the Ovoot Tolgoi Mine via unpaved roads. A regular air service is also available from Ulaanbaatar to Dalanzadgad, whilst travel from Dalanzadgad to the property takes approximately seven hours over unpaved roads.

The railroad terminus at Ceke approximately 45 km south of the Ovoot Tolgoi Mine provides connection to the Chinese rail network. Coal trucks travel overland from the Ovoot Tolgoi Mine and neighbouring MAK coalmine to the railroad terminus and coal distribution areas located just south of the Chinese border. In 2010, a two lane paved road was constructed from the mine to Ceke, which is being used by unloaded coal trucks. Zag Suuj coal will be able to use the same distribution network.

Electrical power for the Ovoot Tolgoi Mine camp and shop complexes is supplied by a powerline that runs from China to Gurvantes Soum, supplying electrical power to the area (Figure 4.1). It is expected that

initially diesel generators will be used, but that eventually the Zag Suuj operations will be connected to this powerline.

No surface water is currently available in the immediate area of the Zag Suuj deposit. Water for the Ovoot Tolgoi mine camp and shop complexes is being supplied from water supply wells drilled near each location as part of hydrological investigations. The infrastructure plans include water treatment to allow well water to be used for potable purposes. Until the treatment plant is complete, bottled water is being used for potable purposes. It is expected a similar arrangement will apply to Zag Suuj.

There is sufficient area within the MELs to locate waste disposal without impacting in-place resources, and to site mine facilities including coal handling and processing (wash) plant, if necessary.

6 HISTORY

The first geologic investigations in the Zag Suuj region occurred between 1951 and 1952. This initial geologic investigation led by V.S. Volkhonina (1952), included mapping at a scale of 1:500,000. Further geological investigations were carried out by Russians during the 1960's. In 1968 geological mapping at 1:200,000 scale was carried out.

The exploration licenses XV-013779 and XV-0005267 were initially granted to IMMI on December 28, 2002, who transferred them to SouthGobi on February 22, 2007.

The first drilling program was carried out by South Gobi Sands in 2007. Two holes which both intersected significant thicknesses of coal were drilled. Based on this, SGQ conducted detailed exploration and drilling programs from 2007 to 2011. Drilling details are given in subsequent sections. There has been no production from the property to date.

7 GEOLOGICAL SETTING AND MINERALIZATION

7.1 REGIONAL GEOLOGY

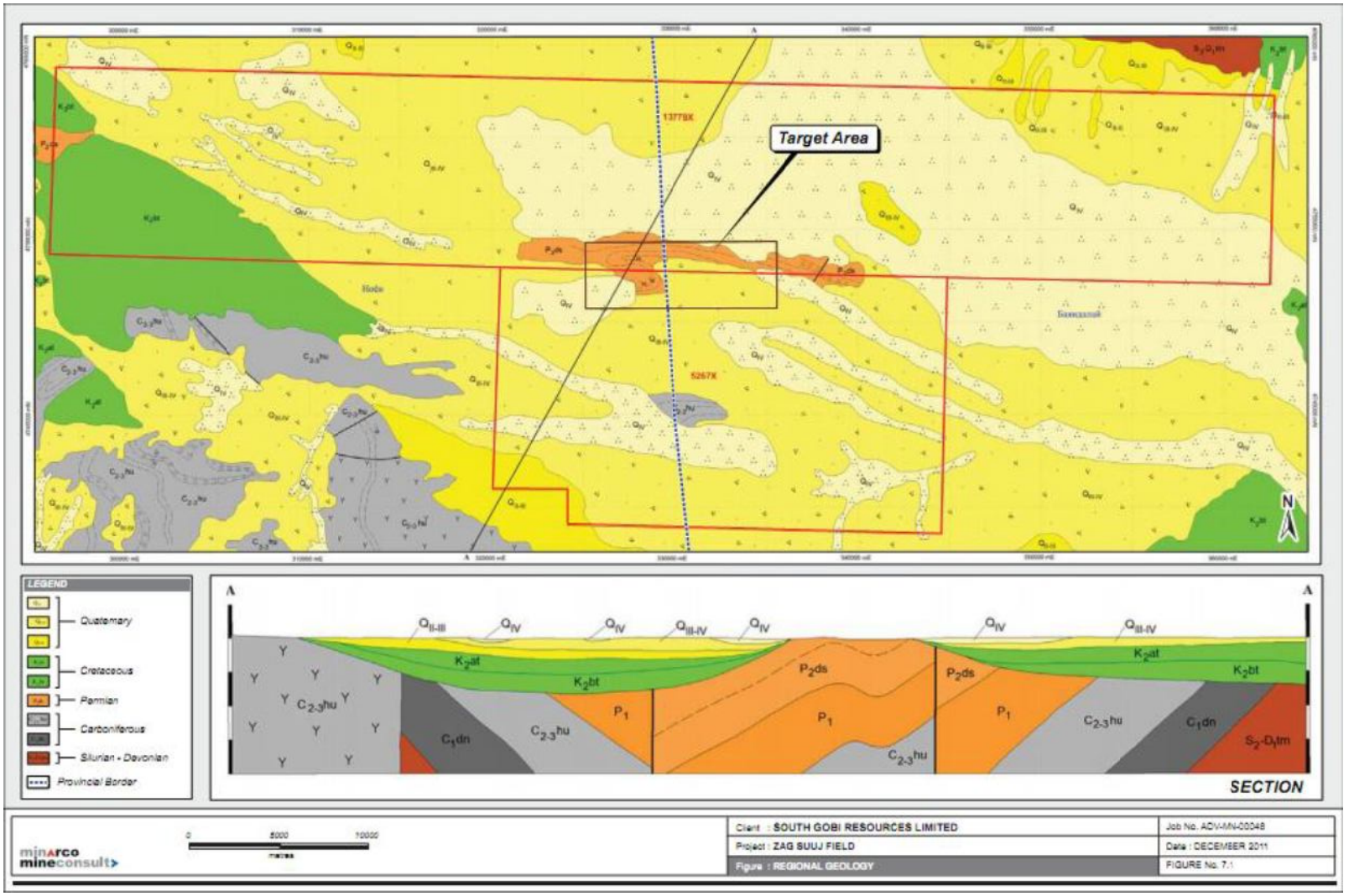
The South Gobi region of Mongolia has a geologic history of continental accretion and Basin and Range style crustal extension followed by compressional folding and faulting. The region is dominated by elongate, east-west trending mountain ranges and intervening basins, which comprise sedimentary rocks of Late Cretaceous to Permian age, overlain by a relatively thin Quaternary gravel layer or thin aeolian deposits. Mountain ranges between the basins comprise mostly crystalline basement rocks dominated by intermediate to high angle faults that show evidence for both compressional and extensional movement.

The basement in the Zag Suuj area is composed of the Silurian-Devonian Tumuurt Formation (S_2-D_1tm), conformably overlain by the Carboniferous Khadanus Formation (C_2-$_3$hu), consisting of rhyolite, andesite porphyry and tuff. Overlying these volcanics is the upper Permian Deliin Shand Formation (P_2ds), consisting of brown to grey sandstone, siltstone, breccia and coal. These older rocks are unconformably overlain by the upper Cretaceous Bortolgoi (K_2bt) and Amgalan Teeg (K_2at) Formations (Figure 7.1).

The coal deposit at Zag Suuj occurs within the Deliin Shand suite, which is estimated to be up to 1,300m thick in the Ovoot Khural Basin (Figure 7.1). The Deliin Shand suite is described as a sedimentary sequence of intercalated claystones, siltstones, sandstones, conglomerates and coal.

Figure 7.1

Regional Geology



7.2 COAL OCCURRENCES

The coal occurrence within the Zag Suuj deposit measures approximately 12 km long east to west and 3 km wide north to south. The exposed sediments mapped in the vicinity of Zag Suuj are thought to have been deposited in the series of geologic sequences of Permian, Triassic, Jurassic, and Quaternary Age as shown in Figure 7.2.

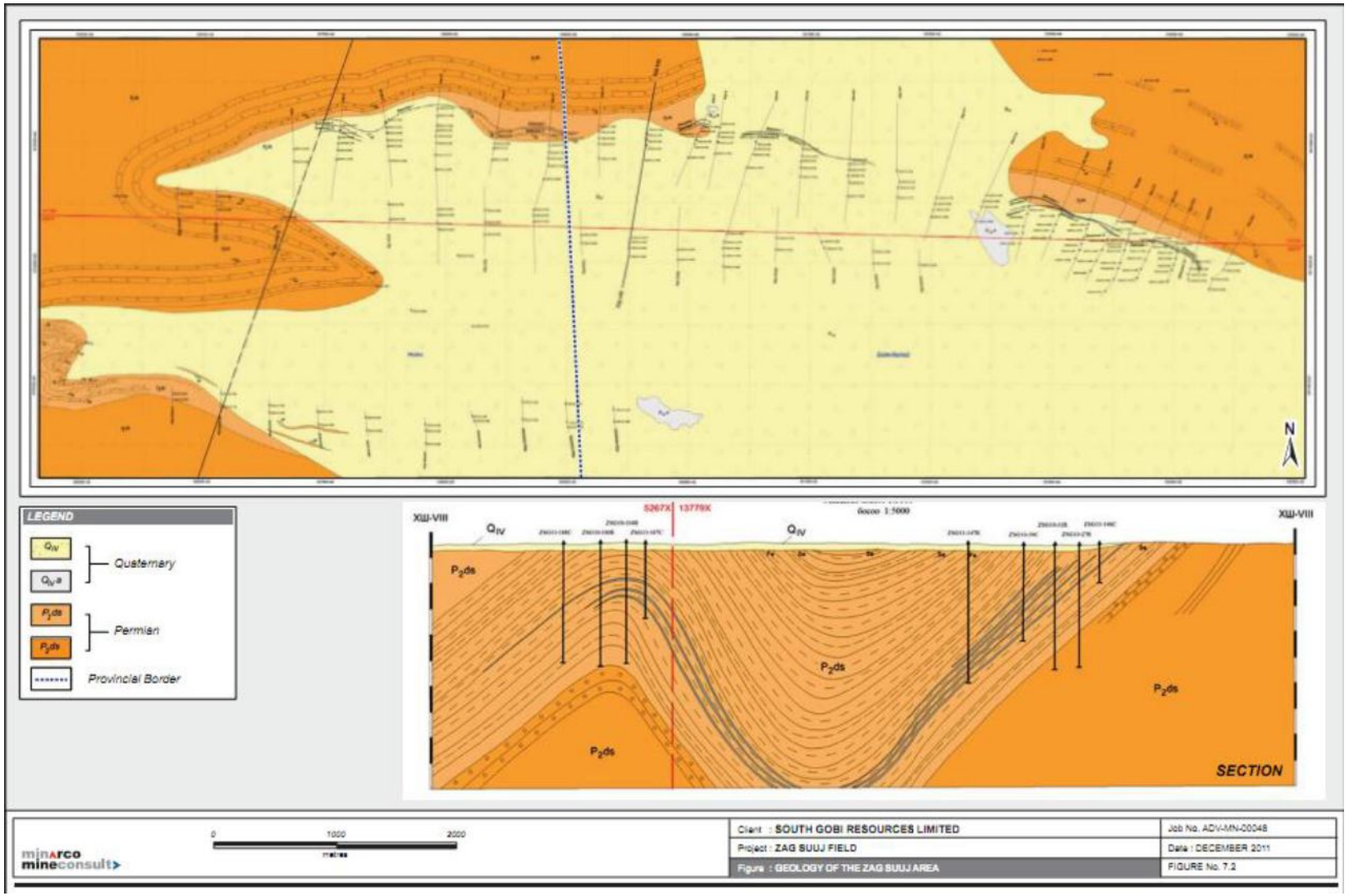
The coal seams of the Zag Suuj Deposit are Upper Permian in age and occur in a similar geologic setting as the Upper Permian coals found at the Ovoot Tolgoi and Nariin Sukhait mines and other coal occurrences in the South Gobi. The coal rank ranges from Low to Medium Volatile Bituminous by ASTM standard D388.

The coal sequence contains many rock partings and interburden of varying thicknesses and it is a multi-seam deposit. The groupings of coal beds often occur close together, so within this report each discrete group will be referred to as a “seam” that is part of a depositional unit that theoretically coalesces at a central depocenter.

Overburden and interburden lithotypes consist of fine to coarse grained sediments that are typically moderately hard to slightly soft. Thin zones containing pyrite and siderite were noted in core logs as being relatively hard compared to the majority of the non-coal rock types.

Figure 7.2

Geology of the Zag Suuj Area



The 2011 exploration program has led to a re-interpretation of the stratigraphy at Zag Suuj, as shown in Table 7.1. Four major seams have been identified, which have been further split into plies based on stone partings within the seams. Seam D has been modelled as a separate seam; however it is likely that it is a repeat of some of the upper seams on the southern flank of the syncline (Figure 7.2).

Table 7.1

Zag Suuj Seam Nomenclature 2011 Geological Model

D	D4	D43		B	B4	B45	B452
		D42					B451
		D41				B44	B442
	D3	D33					B441
		D32				B43	B432
		D31					B431
	D2	D23					B43L
		D22				B42	B422
		D21					B421
	D1	D13				B41	B412
		D12					B411
		D11					B41L
C	C7				B3	B33	
	C6	C62				B32	B322
		C61					B321
	C5	C52				B31	B312
		C51					B311
	C4	C42			B2	B22	
		C41				B21	
	C3	C32			B1	B12	
		C31				B11	
	C2	C22		A	A3	A32	
		C21				A31	
	C1	C12			A2		
		C11			A1		
	CL2	CL2					
		CL1					

Thicknesses reported are based on drill intercepts and represent apparent thickness, as listed in Table 7.2. Detail on individual plies is given in Appendix B.

Table 7.2

Zag Suuj Deposit Summary of Seam Thickness

Seam Group	Coal Thickness (m)	
	Mean	Maximum
D	19.1	39.3
C	22.4	52.4
B4	15.1	52.4
B3	9.9	32.5
B2	5.8	17.8
B1	7.2	15.6
A	4.5	9.3

7.3 STRUCTURAL GEOLOGY

The geologic framework of the Zag Suuj Deposit appears to be of high structural complexity. The geometry of the strata is interpreted to be a shallow structural basin, created by post-depositional compression. The basin structure appears to continue through the adjacent areas to the east.

The coal bearing section structure trends from west to east. The coal seams occur in what is believed to be a localised synclinal structure, with dips generally ranging from 15 to 30 degrees.

8 DEPOSIT TYPES

The definition of Deposit and Geology Types for coal properties is different from that applied to other types of mineral deposits and is outlined by the Geological Survey of Canada (GSC) Paper 88-21.

Criteria applied to coal deposits for the purposes of determination of coal Resources and Reserves include both “Geology Type” as well as “Deposit Type.” For coal deposits this is an important concept because the classification of a coal deposit as a particular type determines the range limiting criteria that may be applied during estimation of Reserves and Resources.

“Geology Type” for coal deposits is a parameter that is specified in Geological Survey of Canada (GSC) Paper 88-21, which is a guideline reference for coal deposits as specified in NI 43-101. Geology Type is a definition of the amount of geological complexity, usually imposed by the structural complexity of the area, and the classification of a coal deposit by Geology Type determines the approach to be used for the Resource/Reserve estimation procedures and the limits to be applied to certain key estimation criteria. The identification of a particular Geology Type for a coal property defines the confidence that can be placed in the extrapolation of data values away from a particular point of reference such as a drill hole.

The classification scheme of GSC Paper 88-21 is similar to many other international coal reserve classification systems but it has one significant difference. This system is designed to accommodate differences in the degree of tectonic deformation of different coal deposits in Canada. The four classes of geologic complexity, from lowest to highest are:

- Low
- Moderate
- Complex
- Severe

Structural geology at Zag Suuj shows evidence of folding and faulting with some steeply inclined limbs. The deposit has been subjected to relatively high level of deformation and seam thicknesses have been substantially modified from their pre-deformation thickness. The deposit is classified as “Complex” based on the criteria that are described in the Geological Survey of Canada Paper 88-21.

“Deposit Type” as defined in GSC Paper 88-21 refers to the extraction method most suited to the coal deposit. There are four categories, which are “surface,” “underground,” “non-conventional,” and “sterilized.”

The Zag Suuj coal sequence, based on the low cumulative stripping ratio and depth of the coal occurrence below ground surface within the MELs, is considered to be a “Surface” deposit type. Very little drilling to date has been done downdip; it is possible if such a drilling program were undertaken that the deposit could be extended with underground potential.

9 EXPLORATION

9.1 INITIAL EXPLORATION

The first geologic investigations in the Zag Suuj region occurred between 1951 and 1952. This initial geologic investigation led by V.S. Volkhonina (1952), included mapping at a scale of 1:500,000. Further geological investigations were carried out by Russians during the 1960's. In 1968 geological mapping at 1:200,000 scale was carried out.

9.2 EXPLORATION 2007-2012

The first drilling program was carried out by South Gobi Sands in 2007. Two holes which both intersected significant thicknesses of coal were drilled. Based on this, SQG conducted detailed exploration and drilling programs from 2007 to 2011. There has been no further exploration work conducted at Zag Suuj since December 2011.

Exploration geology fieldwork, including reconnaissance mapping, trenching, geologist descriptions of drilling returns, geotechnical data, field logs, and database development, was contracted to Sapphire Geo Ltd. (Sapphire) and supervised by SGQ. Drilling was performed by drilling contractors, Tanan Impex Co. Ltd and Major Drilling Mongolia Co. Ltd. Drill hole survey and surface topography were conducted by Mongolian contractor TopCadd Co. Ltd.

As well as the drilling program, 16 trenches in 2009 and 55 trenches in 2010 were dug with the aim of intersecting coal seams at the subcrop. Coal intersections were recorded but due to the inherent inaccuracy were not included in the geological model used to estimate resources. The coal was not sampled for laboratory testing.

10 DRILLING

Drilling to date on Zag Suuj includes a total of 211 exploration holes completed and 45,445m drilled. Drilling has been concentrated in the central area, whilst limited drilling has taken place in the eastern and western part of the field. All holes were drilled from surface to total depth and oriented vertically. The average depth of the holes was 220m, with 155 holes being greater than 200m depth, and a maximum depth drilled of around 300m. Drilling contractors provided truck-mounted drill rigs equipped for wireline coring and reverse circulation drilling. Core rigs were equipped with HQ size coring tools (approximately 63.5mm) and reverse circulation with larger (approximately 110mm) diameter. Drill depths were measured from ground surface and recorded based on the length of the drill string and coring tools at the start and end of each core run.

All core logs were recorded by wellsite geologists and mostly done by Sapphire Geologic Group and ErdGeo Company. These logs contain lithologic descriptions, sample interval identification, and core depths.

Geophysical logs were recorded by Monkarotaj Co Ltd., a geophysical company based in Ulaanbaatar. Natural gamma and density (gamma gamma) logs were obtained through the drill pipe for most holes. Open hole logs were then obtained consisting of gamma, density, resistivity and caliper. The open hole logs varied in depth dependent upon hole conditions. All holes were geophysically logged except where holes caved preventing geophysical logging tools from proceeding further. No verticality logs were run.

Total drilling to date is summarized in Table 10.1.

Table 10.1

Zag Suuj Drilling Summary by Year

Year	Open holes	Cored holes	Total metres	Drilling company	Geophysical company
2007	2	0	500	Tanan Impex	Monkarotaj
2008	11	0	2522	Tanan Impex	Monkarotaj
2009	4	1	922	Tanan Impex	Monkarotaj
2010	112	18	31,647	Tanan Impex	Monkarotaj
2011	29	35	9,854	ErdGeo	Monkarotaj
Total	**157**	**54**	**45,445**		

Hole locations were initially recorded by GPS, however at the end of each program, all holes were surveyed.

11 SAMPLING PREPARATION, ANALYSES AND SECURITY

11.1 INTRODUCTION

Approximately 35% of exploration drill holes have been completed with triple-tube coring equipment that allows coal sampling for laboratory analysis. These core holes are distributed approximately 100-300m apart downdip and 500-600m apart along strike, and cover an area of approximately 5 sq.km.

The procedures described below apply to holes used in the preparation of the Zag Suuj coal quality models.

Core from the drill hole was logged (i.e., measured and described) by a geologist using standard geological terms to document various attributes. The geologist's core log consists of the measured depths and description of the coal, inter-seam partings, adjacent roof and floor rock, and details of any sample intervals removed for analysis. Core handling was performed promptly and follows a distinct sequence of activities as follows:

- The core is pumped out of the core barrel;
- Excess mud is washed off and the core fitted back together;
- Recovered length is measured and depths are marked;
- Core photos are taken on 0.5 m intervals;
- Lithological logging is completed; and
- Other parameters for sample identification and processing as described in Section 13.

Core recovery in the coal quality holes was 75% overall, and is considered to be reasonable. The measured length of recovered coal core was compared to the geophysical logs, and sample depths adjusted if necessary. All samples used in the geologic model were reconciled to the geophysical log intercept depths.

Incremental samples were identified by Sapphire based on comparison of field geologic and geophysical logs. Physical composite samples were identified following the receipt of the initial analytical results from the increment samples.

All core samples subject to laboratory analyses are of sufficient quality and documentation to support the conclusions of this report. Geophysical logs have been used to confirm the thickness of coal bearing zones.

11.2 CORE SAMPLES

The following procedures apply to holes used in the preparation of the Zag Suuj coal quality models:

- Recovered core was measured to determine an overall recovery (reported in percent) by comparing the recovered core length with the core run length recorded by the driller. Recovered core was also compared to the coal interval thickness determined from the geophysical log suite for validation.

- Recovered coal intervals were sampled using the following criteria:
  - Coal samples were broken out based on lithologic changes. In zones of uniform coal appearance, HQ samples were bagged approximately every 0.60m as per the capacity of the core boxes.
  - In-seam partings, to a maximum cumulative thickness of 0.3m, were included in a coal sample, where the thickness of the adjacent coal beds above and below the parting were both a minimum of twice the parting thickness.
  - A parting was sampled separately if it was between 0.3m thick and 0.5m thick.
- Collected samples were cleaned of mud contamination and placed in individual 6 mm plastic core sleeves and sealed air-tight to prevent loss of moisture and volatiles. The bags were labelled on the outside with the core hole, sample number, and depth interval. Samples were placed in sequence into waxed-cardboard core boxes. Boxes were sealed with tape and in early years, shipped to the SGS[1] Group analytical preparation laboratory in Ulaanbaatar, during the 2008-2011 exploration programs. At the prep lab, the samples were weighed, dried, crushed, split and repackaged for shipment to the SGS Group analytical laboratory in Tianjin, China. In 2011 all sample preparation and analysis was performed by Stewart Mongolia LLC in Ulaanbaatar.
- Laboratory instructions and the shipment manifests were forwarded to the laboratory. All records were compared with contents upon arrival at the analytical laboratory. All samples shipped to the laboratories were accounted for and underwent the specified analysis regimen.

Analytical work was performed by SGS Laboratories Inc. in Tianjin, China from 2008-2010. For the 2011 testing program the Stewart Mongolia LLC laboratory in UlaanbBaatar has been used. Both laboratories currently hold ISO-17025 certification, accredited by the CNAS (China National Accreditation Service for Conformity Assessment), and are certified to ASTM and ISO standards. Stewart employ QA/QC staff to maintain the quality system, conduct internal audits and assist in training and compliance. Global quality procedures and detailed work instructions relevant to each clause in ISO/IEC 17025 have been established to control and monitor all aspects of the company's operations. Sample handling and quality control measures used practices that are considered to be standard in the international coal industry. Coal sampling and analyses were performed to a level adequate for the conclusions reached in this technical report.

As with other coal work, no special security arrangements were made for the shipping and storage of samples. Additional security methods are not commonly employed, as coal is a relatively low-value bulk commodity.

11.3 STATEMENT

In the author's opinion, sample preparation and analysis was performed adequately and securely so as to provide unbiased and accurate results.

[1] Note that SGS Group laboratory is a separate company and independent from SouthGobi Sands

Logging and sampling procedures used at Zag Suuj were established by Norwest at the commencement of exploration programs for the Ovoot Tolgoi Mine. These have been reviewed by the author and are consistent with industry best practice.

12 DATA VERIFICATION

12.1 INTRODUCTION

Data collection, verification and storage at Zag Suuj has been managed by various independent consultants employed by SGQ since the start of the exploration programs. A set of procedures was set up by Norwest and The Americas Group (TAG) in 2005 when exploration at the SGQ license areas commenced. The steps included in these written procedures are described in the preceding sections under drilling, coring, sampling methodology and sample preparation. Norwest and TAG were responsible for the initial training and implementation of these procedures. Sapphire field geologists have been responsible for all exploration programs at Zag Suuj, using the procedures set up by Norwest and TAG.

The author was not able to personally verify that these protocols for the logging of rotary and percussion holes were being followed in any of the field seasons 2007 to 2011 as the author was not present during logging and did not visit while drilling was in progress. The author has reviewed the protocols set up by Norwest for the collection of geological data and considers them reasonable for this style of deposit.

12.2 DATA REVIEW

All geologic, geophysical, and sampling data was entered and maintained on site in an electronic database maintained by Sapphire. All mapping was entered and maintained in electronic format on a CAD-based system. Data entry of all geologic data was managed by Sapphire at the project site.

Several levels of data verification were applied to the field and laboratory data under the supervision of the qualified person. Typical verification included:

- Direct comparison of geologist core log intervals with down-hole geophysical logs;
- Reconciliation of coal sample intervals and recovered coal core to down-hole geophysical logs; and
- Comparison of laboratory coal quality results with geophysical and geologists core logs.

Coal quality data was subjected to a series of statistical analysis to identify any errata in reported values. The electronic geologic database was subjected to a series of checks designed to locate data entry errors or inconsistencies.

12.3 DATABASE VERIFICATION

The data used to estimate resources for Zag Suuj was provided by McElroy Bryan Geological Services (MBGS), including field logs, geophysical logs, quality data, field mapping data and geological interpretations created by SGQ personnel. MBGS has correlated the seams using all this data.

The author has reviewed a subset of the data. Scanned field lithology logs and geophysical logs were provided to MMC. A representative number were checked against the seam picks used to generate the geological model. Drillhole collars were also compared to elevations in the DTM (Digital Terrain Model), and a number of drillhole locations were checked in the field. No material errors were encountered.

MMC believes the data is adequate for the purpose of estimating resources.

13 MINERAL PROCESSING AND METALLURGICAL TESTING

13.1 REGIONAL COAL QUALITY

Composite quality analyses previously performed in 2005 and 2006 on SGQ's Ovoot Tolgoi mining license area indicate the coal rank to be high volatile B to high volatile A bituminous, based on the ASTM D388 standard. Previous Soviet-Mongolian government studies (Dashkhoral et al, 1992) utilized Soviet standards and determined the rank to be of the GJO and IGJO groups, equivalent to high-volatile bituminous coals. High volatile B and A bituminous coals are hard black coals. High volatile B produces between 7212 to 7785 kcal/kg and high volatile A produces greater than 7785 kcal/kg heat output. The Ovoot Tolgoi coal is a mixture of thermal and metallurgical grade coal.

At Ovoot Tolgoi the coal is generally low ash (less than 20 percent, air-dried basis), whilst Free Swelling Index ranges in values from non-coking (less than 2) to coking (greater than 4). Zag Suuj (and Soumber and Biluut) coal tends to be higher in ash, averaging 26%, and lower in calorific value, averaging 6,000 kcal/kg. The rank is low to medium volatile bituminous coal. Several of the seams at Zag Suuj have an average FSI greater than 5, indicating metallurgical properties, however further testing of coking properties is required to confirm their coking potential.

13.2 COAL QUALITY

To date 54 core holes have been used for analysis of coal quality at Zag Suuj.

Cored holes were subjected to the analyses listed below:

- Proximate analysis:
  - Moisture
  - Ash
  - Volatile matter
  - Fixed carbon
- Sulphur
- Thermal value
- Relative density
- Free Swell Index (FSI or CSN)

A summary of the coal quality on a seam by seam basis is given in Table 13.1. Detailed results for individual plies are given in Appendix B.

Based on these analytical results and available composite coal quality data, the coal rank for the Zag Suuj deposit ranges between low to medium volatile bituminous coal, as defined by ASTM Standard D388. The average calorific value for individual seams ranges between 5,600 and 6,100 kCal/kg (ad).

Limited washability testing has been undertaken to date. Calculation of a F1.40 product is given in Table 13.2.

Ash fusion and ash analysis testing has been undertaken on composite samples from 20 holes drilled in 2011 at Zag Suuj , as summarized in Table 13.3 and Table 13.4.

Table 13.1

Zag Suuj - Summary of Drillhole Raw Quality Data

Seam	Total Moisture % ar	Inherent Moisture % ad	Ash % ad	Volatile Matter % ad	Total Sulphur % ad	Calorific Value kcal/kg ad	FSI	Relative Density
D								1.70
C								1.62
B4	7.6	0.5	29.4	22.53	1.00	5,653	5.9	1.56
B3	9.5	1.6	25.2	22.26	1.15	6,131	7.1	1.52
B2	10.4	0.4	22.8	23.32	1.41	6,128	8.0	1.51
B1								1.73
A								1.54

Table 13.2

Zag Suuj F1.40 Proximate Analysis Testing Results

	No. Samples	Yield %	Ash % ad	FSI
Mean		58.9	10.2	7.6
Minimum	40	25.4	6.6	0.0
Maximum		82.0	17.2	9.0

Table 13.3

Zag Suuj - Summary of Ash Analysis Testing Results

	No. samples	SiO_2 %	Al_2O_3 %	Fe_2O_3 %	CaO %	MgO %	Na_2O %	K_2O %	TiO_2 %	Mn_3O_4 %	P_2O_5 %	Cr_2O_3 %
Mean		38.49	19.47	7.07	17.21	4.74	1.02	2.28	0.69	0.11	0.60	0.01
Minimum	40	19.22	8.98	3.86	3.26	1.44	0.35	0.97	0.35	0.04	0.08	0.00
Maximum		57.20	25.05	17.35	35.36	18.62	4.47	4.14	1.00	0.23	2.09	0.02

Table 13.4

Zag Suuj – Summary of Ash Fusion Temperature Results

	No. samples	Ash fusion temperature deg C Reducing atmosphere				Ash fusion temperature deg C Oxidising atmosphere			
		Deformation	Spherical	Hemispherical	Flow	Deformation	Spherical	Hemispherical	Flow
Mean		1256	1282	1293	1302	1297	1315	1325	1336
Minimum	40	1090	1166	1189	1204	1238	1246	1249	1256
Maximum		1394	1415	1418	1451	1385	1464	1476	1490

13.3 METALLURGICAL TESTING

No results of testing of coking properties are available for Zag Suuj samples to date.

13.4 COAL BENEFICIATION

The plan for Zag Suuj coal is that it will all be washed to produce a coking product or blend. Detailed beneficiation studies are planned to be carried out on the coal.

Zag Suuj coal has higher ash content than Ovoot Tolgoi, and since the seams dip at a relatively steep angle there is the possibility that the thinner seams may be affected by dilution from partings during mining, and thus there may be benefit in washing the coal in order to obtain a lower ash content more suitable for potential customers.

An adequate water supply would need to be secured should coal washing be planned at the mine site.

14 MINERAL RESOURCE ESTIMATES

14.1 INTRODUCTION

The classification, estimation, and reporting of Mineral Resources for the Zag Suuj deposit is in accordance with National Instrument 43-101. In addition use has been made of the following referenced documents, the Canadian Institute of Mining, Metallurgy and Petroleum's CIM "Definition Standards For Mineral Resources and Reserves" adopted by CIM Council on 27 November 2010, and the Geological Survey of Canada Paper 88-21 "A Standardized Coal Resource/Reserve Reporting System for Canada" (GSC Paper 88-21) for the Resource estimates summarized in this technical report.

Resources are classified as to the assurance of their existence into one of three categories, Measured, Indicated or Inferred. The category to which a Resource is assigned depends on the level of confidence in the geological information available. GSC Paper 88-21 provides guidance for categorizing various types of coal deposits by levels of assurance. These were considered by the Qualified Person during the classification of the Resources. Additionally, Resources are classified in GSC Paper 88-21 as to the assurance of their existence into one of four categories, using the criteria for coals found in Geology Type "Complex" conditions, as shown in Table 14.1.

The Resource estimations contained within are on a clean basis, i.e., as an in-situ tonnage and not adjusted for mining losses or recovery. However, minimum mineable seam thickness and maximum removable parting thickness are considered; coal intervals not meeting these criteria are not included in the Resources.

Table 14.1

Criteria used to define assurance of existence for coals of complex geology type

	Assurance of Existence Category		
Criteria	**Measured**	**Indicated**	**Inferred**
Cross-section spacing (m)	150	300	600
Minimum # data points per section	3	3	3
Mean data point spacing (m)	100	200	400
Maximum data point spacing (m)	200	400	800

14.2 GEOLOGICAL MODELLING

The author was provided with a geological model for the Zag Suuj deposit by SGQ. This model has been created by McElroy Bryan Geological Services (MBGS) in 2011 using *Minex* software. Table 14.2 shows the seam nomenclature used in the models.

Table 14.2

Zag Suuj Seam Nomenclature

D	D4	D43		B	B4	B45	B452
		D42					B451
		D41				B44	B442
	D3	D33					B441
		D32				B43	B432
		D31					B431
	D2	D23					B43L
		D22				B42	B422
		D21					B421
	D1	D13				B41	B412
		D12					B411
		D11					B41L
C	C7				B3	B33	
	C6	C62				B32	B322
		C61					B321
	C5	C52				B31	B312
		C51					B311
	C4	C42			B2	B22	
		C41				B21	
	C3	C32			B1	B12	
		C31				B11	
	C2	C22		A	A3	A32	
		C21				A31	
	C1	C12			A2		
		C11			A1		
	CL2	CL2					
		CL1					

In order to verify the models, the author recreated the model for the Zag Suuj deposit in *Minescape.* Graphical output – contours and sections - were created from both sets of models and compared. In general comparison was good, allowing for differing modelling techniques. A subset of the drillhole data was also checked against original field lithology and geophysical logs. The drillhole collars were also compared against the topographic model. No material errors were encountered.

Thickness and structure floor contours of the main seam groups are included in Section 19, along with representative cross sections.

14.3 RESOURCE ESTIMATION 2013

Resources have been estimated on 10 January 2013 using the *Minex* model generated by MBGS in November 2011. The Resources have been classified using the existence criteria listed in Table 14.1. Additionally, the presence of raw quality data was taken into consideration in assigning the Resource status.

Other criteria used to limit the Resource are:

- Minimum ply thickness = 0.3m;
- Minimum coal parting = 0.3m;
- Base of weathering as logged by field geologist;
- Surface Resources limited to a depth of 300m (note there is insufficient deep drilling to quote Resources below 300m);
- Volumes converted to tonnages using laboratory air dried relative density analytical results; and
- Resources limited to exploration licence boundary.

GSC Paper 88-21 indicates that 0.6m minimum thickness should be used for Complex coal deposits. MMC interprets this as total seam thickness rather than individual ply thickness. Since the Deposit has been modelled as a ply model, with a number of plies composited to the geological seam, which during mining will be aggregated to a working section, it was felt that the use of 0.3m as a minimum thickness for individual plies was justified.

The Surface Resources depth cutoff of 300m was used, as pit optimisation studies of the Ovoot Tolgoi deposit indicate that mining to such a depth is feasible. There is insufficient deep drilling to quote any potential Underground coal tonnage below 300m.

A summary of Resources is given in Table 14.3, whilst plans showing the Resource polygons are given in Section 19. Of the 7 seams in the Zag Suuj deposit, the resource estimate for 6 of the seams remains materially unchanged from the 2012 quantities. The total resource estimate for Zag Suuj has increased approximately 27% from the 2012 resource estimate due to the differences in how the software used for the estimate aggregated and reported the resources. The increase detailed above was identified by MMC when reviewing the technical data for the resource. This review included a reconciliation of MMC *Minescape* and MGBS *Minex* geological models. This reconciliation identified aggregation anomalies which resulted in an increase in the resource estimate that was originally reported.

Detailed Resource estimates are given in Appendix B.

Table 14.3

Zag Suuj Deposit Summary of Resources to 300m depth 10 January 2013

SEAM GROUP	INDICATED (Mt)	INFERRED (Mt)	Total (Mt)	TM %ar	IM %ad	ASH %ad	TS %ad	CV kcal/kg ad	RD	VM %ad	FC %ad	CSN
D	0.0	0	0.0						1.70			
C	0.0	21	20.7						1.61			
B4	8.3	36	43.9	7.9	0.5	29.2	0.98	5553	1.56	22.3	46.9	5.8
B3	10.9	26	36.8	9.6	1.7	24.8	1.16	6157	1.52	22.4	51.3	7.3
B2	2.3	0	2.7	10.1	0.4	25.3	1.29	5895	1.54	22.3	52.0	7.6
B1	0.0	0	0.0						1.62			
A	0.0	1	1.2						1.51			
TOTAL (Mt)	21.5	84	105.2	9.0	1.1	26.6	1.10	5894	1.54	22.3	49.7	6.7

14.4 "POTENTIAL COAL TONNAGE"

"Potential coal tonnage" has been estimated where drillhole coverage is insufficient for Resource estimation under the NI43-101 ruling. The criteria demand that there are at least three drillholes per section or traverse. For traverse lines where only one or two holes have been drilled to date, this coal has been classified as "potential tonnage" rather than an Inferred Resource. A confidence discount of -30% has then been applied to the figure calculated from the software to obtain the lower limit of the range. In all other respects this coal has been estimated in the same manner as the Resources. This tonnage is summarised in Table 14.4, and its distribution is shown in plans in Section 19. MMC cautions that the potential coal tonnage is conceptual in nature, that there has been insufficient exploration to define a Mineral Resource and that it is uncertain if further exploration will result in the target being delineated as a Mineral Resource.

Table 14.4

Zag Suuj Deposit "Potential Coal Tonnage"

SEAM GROUP	Tonnage Estimate Range (Mt)	
	From	To
D	9	13
C	6	8
B4	0	0
B3	0	0
B2	2	3
B1	2	3
A	1	1
TOTAL (Mt)	20	29

15 ADJACENT PROPERTIES

Zag Suuj deposit is located approximately 150km to the east of SGQ's Ovoot Tolgoi Mine, and 120km east of the Soumber-Biluut-Jargalant coalfield.

The Ovoot Tolgoi Mine owned by SGQ, began pre-development of the Sunset field open pit surface mine in the first quarter of 2008 and first production began in April 2008. Coal sales at the mine gate were initiated in September 2008. The current Sunset field pit design is for surface operations with projected mine depths to 300m. Products are being sold into western Inner Mongolia, and Gansu and Hebei Provinces in China. Construction of the adjacent Sunrise pit commenced in 2011.

There are five different coal series, or packages, consisting of one or more coal seams within a distinct stratigraphic horizon, at Ovoot Tolgoi. Most of the work has focused on identifying Resources within the No. 5 Seam, with additional Resources in the 8, 9, and 10 Seams above this. Structural geology at Ovoot Tolgoi shows evidence of folding and faulting. Individual coal seams however, are still relatively intact. The deposit is classified as "Complex" based on criteria set forth in the Geological Survey of Canada Paper 88-21, (Minarco Mineconsult, 2012).

Mining activities at Soumber-Biluut-Jargalant have not yet commenced.

Correlation of the coal seams at Ovoot Tolgoi with Soumber-Biluut-Jargalant and Zag Suuj has not been undertaken; however it is believed by SGQ that the coal seams are laterally equivalent.

The Qualified Person has been unable to verify the information regarding Ovoot Tolgoi and the information is not necessarily indicative of the mineralisation on the Zag Suuj Deposit.

16 OTHER RELEVANT DATA AND INFORMATION

Currently there are no known mining, metallurgical, infrastructure, environmental, permitting, legal, title, taxation, socio-economic, marketing, political or other relevant factors that would materially affect the Resource estimate.

Sections of this report are derived from information provided to the author by SouthGobi Resources Ltd.

17 INTERPRETATION AND CONCLUSIONS

Exploration to date on MEL XV-013779 and MEL XV-5267 at the Zag Suuj deposit Resource area has delineated 21.5 million tonnes of coal classified as Indicated Resource, plus a further 84 million tonnes of Inferred Resource, and 20-29 million tonnes of "potential coal tonnage". "Potential coal tonnage" has been estimated in areas where there is insufficient drilling to classify the area as a Resource under NI43-101 criteria. Resource estimations and classification have been performed in accordance with National Instrument 43-101.

Reporting of surface Resources has been constrained by the following parameters:

- 0.3m minimum ply thickness;
- 0.3m minimum separable parting thickness;
- Depth of weathering as logged by field geologist;
- 300m base depth limit for surface mine development; and
- MEL XV-13779 and XV-5267 boundaries.

The coal seams of the Zag Suuj deposit have been delineated as "Complex" Geology Type based on the criteria set forth in the Geological Survey of Canada Paper 88-21. The coal seams at Zag Suuj vary in quality both within and between seams but generally are low to medium volatile bituminous in rank.

Exploration work on the Deposit is still ongoing. Further drilling between existing traverse lines may enable the status of the Resource to be upgraded to Measured and Indicated status. The Zag Suuj deposit resource enhances the assets held by SGQ in the Umnugobi Province of Mongolia.

18 RECOMMENDATIONS

Data Management

A considerable amount of data has been obtained from the various exploration programs. It is recommended that a single robust data management solution for both exploration and pre-production information be implemented.

The estimated budget for implementing the data management solution is US$50,000.

Exploration and Drilling

- Exploration drilling should continue both between existing traverses and down dip of known coal occurrences to continue to develop the Zag Suuj deposit; and
- Future deep drilling programs should include allowances for downhole surveying of hole deviation.

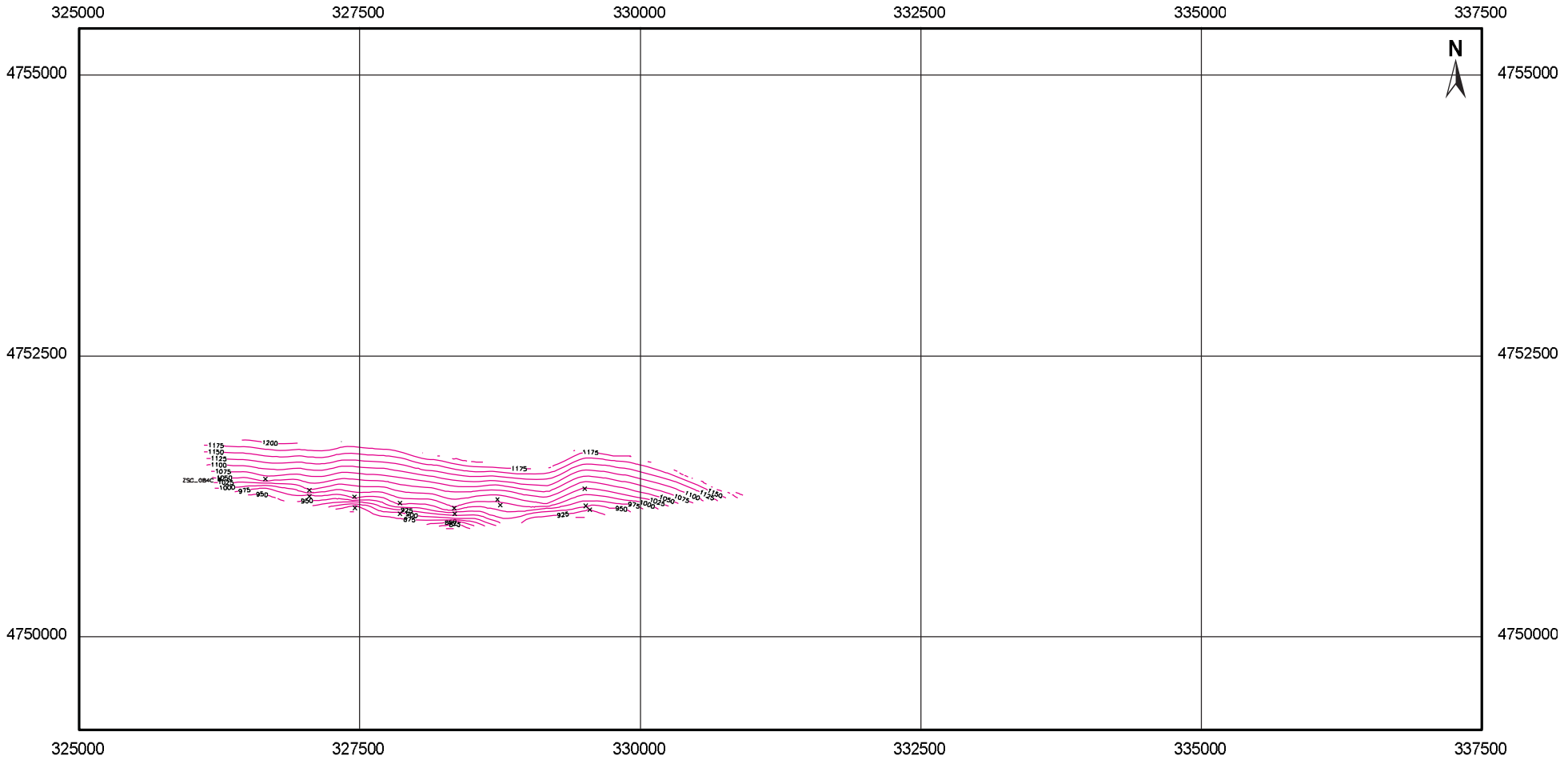
Future exploration work should be targeted at infill drilling to increase confidence in the status of the Resource.

Metallurgy

- SGQ should continue to characterize the quality of individual seams on the property and develop an understanding of the spatial variability of coal quality within individual seams; and
- SGQ should undertake preliminary investigations into coal beneficiation.

19 ILLUSTRATIONS

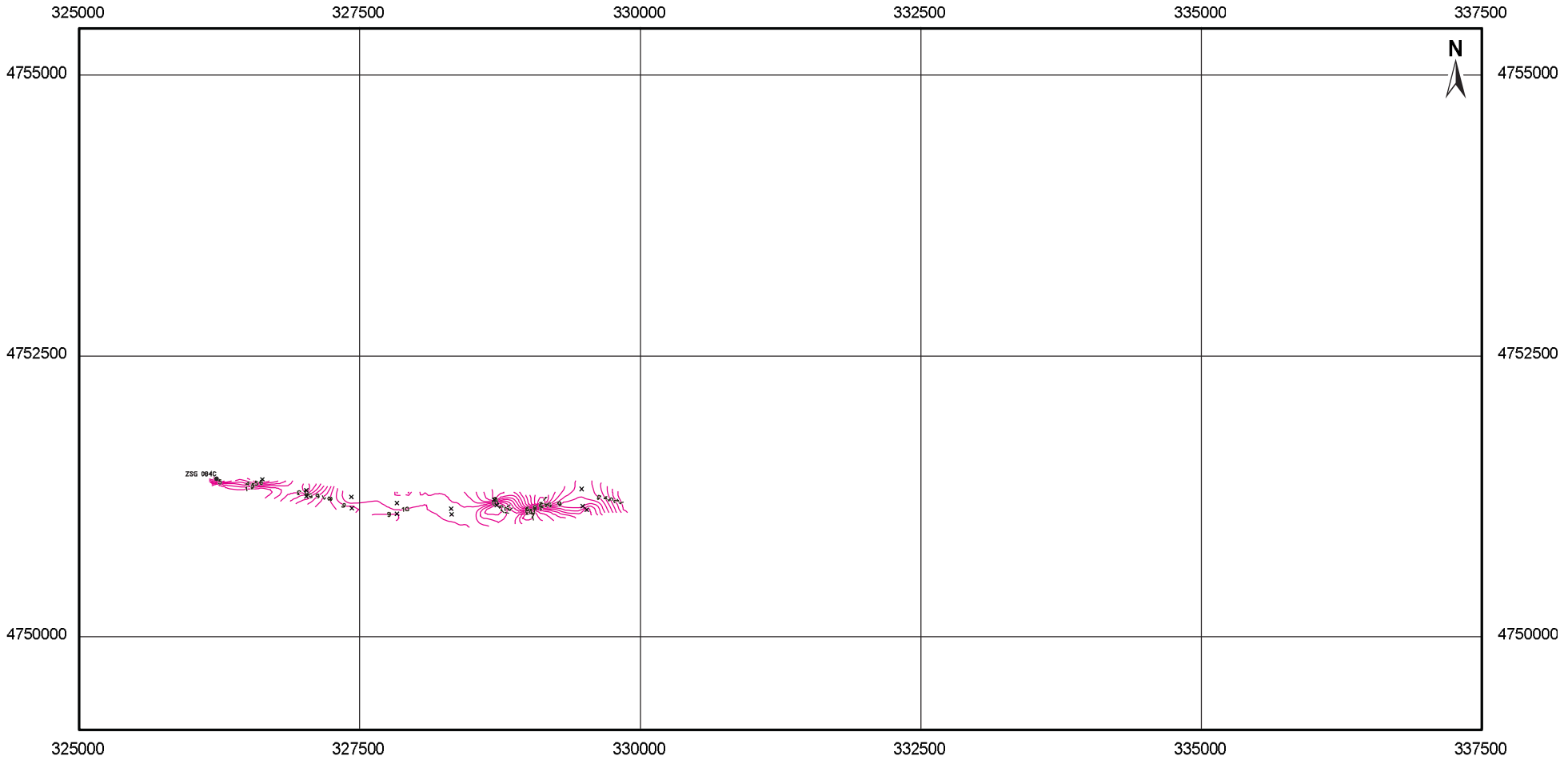
List of Illustrations



0 1250 2500
metres

minarco mineconsult

Client : **SOUTHGOBI RESOURCES LTD**	Job No. ADV-MN-00092-B
Project : **SGQ PROJECT**	Date : March 2013
Figure : **D SEAM FLOOR STRUCTURE**	FIGURE No. 1

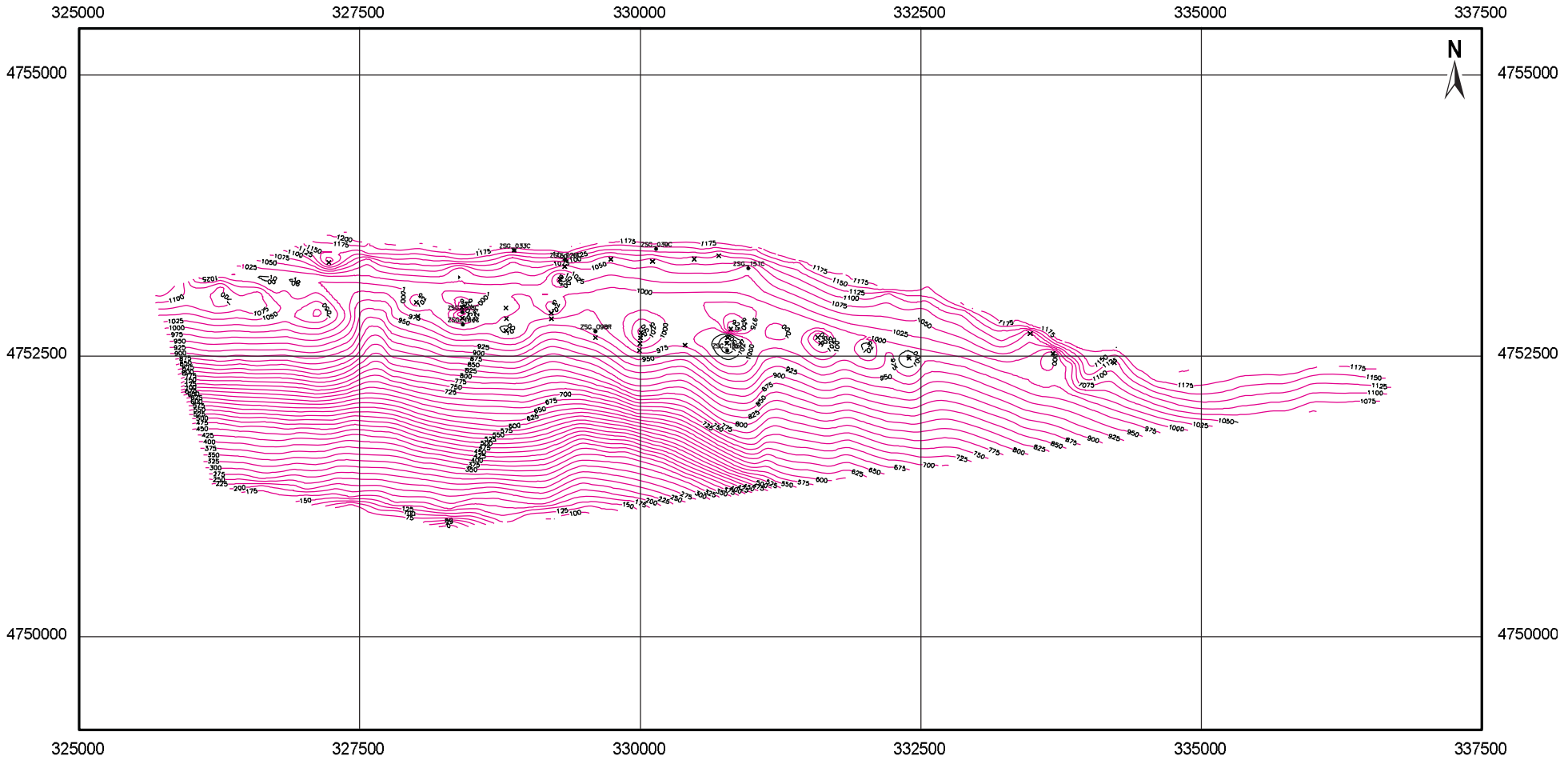


0 1250 2500

metres

minarco mineconsult

Client : **SOUTHGOBI RESOURCES LTD**	Job No. ADV-MN-00092-B
Project : **SGQ PROJECT**	Date : March 2013
Figure : **D SEAM THICKNESS**	FIGURE No. 2



LEGEND

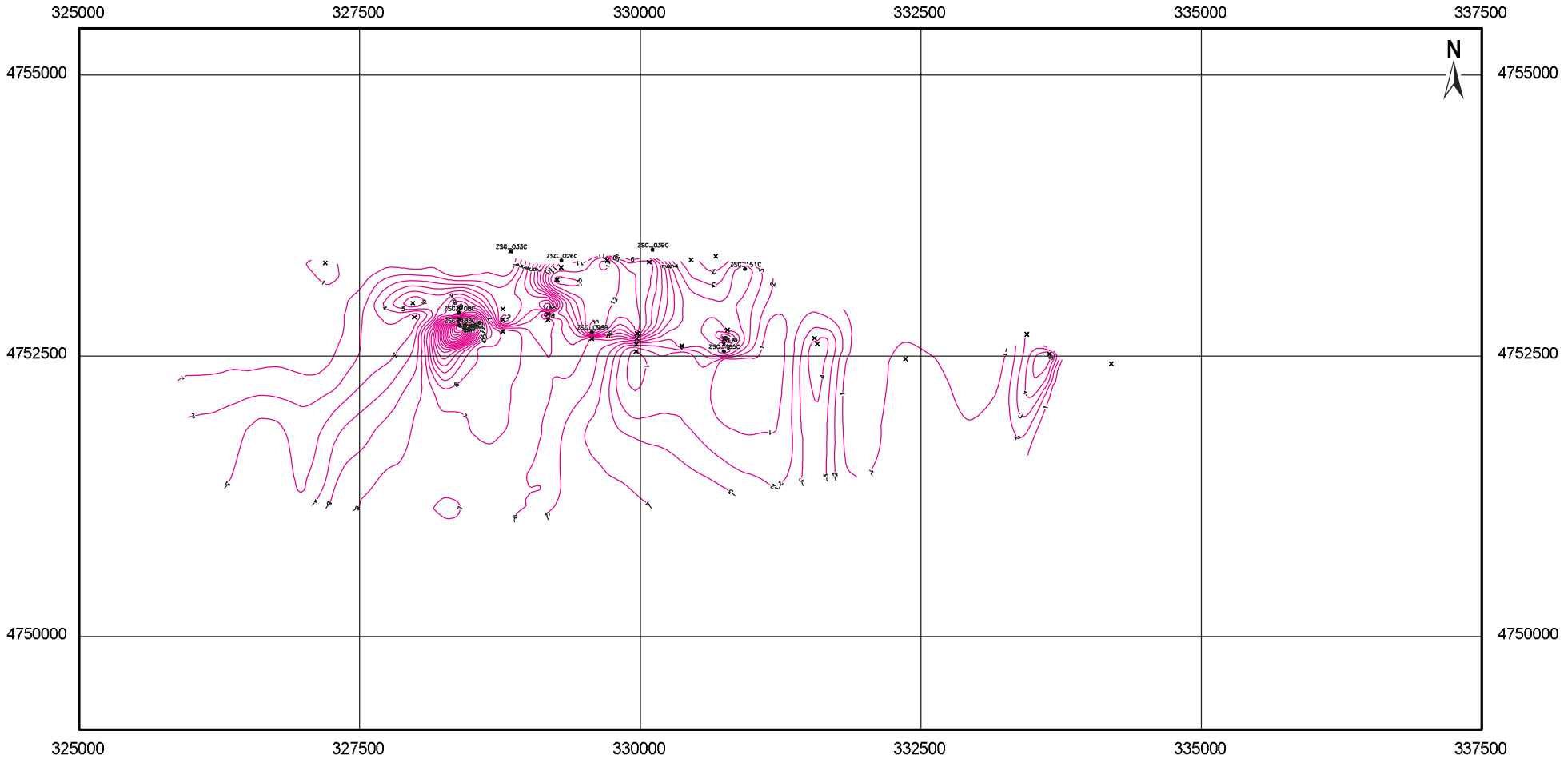
- Mining Lease
- Structure Contours
- Open Holes
- Quality Holes

0 1250 2500

metres

minarco mineconsult

Client : **SOUTHGOBI RESOURCES LTD**	Job No. ADV-MN-00092-B
Project : **SGQ PROJECT**	Date : March 2013
Figure : **C SEAM FLOOR STRUCTURE**	FIGURE No. 3

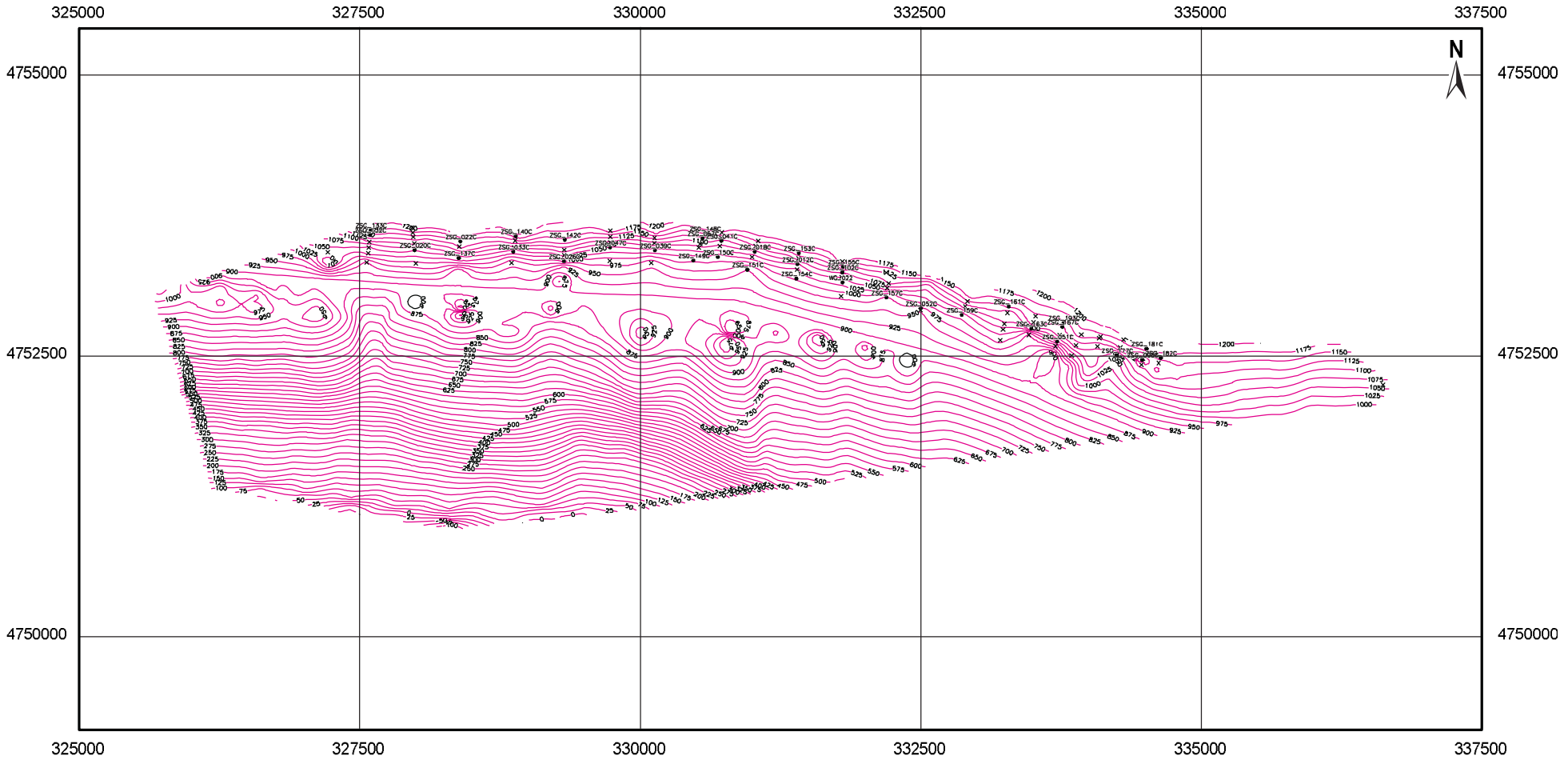


0 1250 2500

metres

minarco mineconsult

Client : **SOUTHGOBI RESOURCES LTD**	Job No. ADV-MN-00092-B
Project : **SGQ PROJECT**	Date : March 2013
Figure : **C SEAM THICKNESS**	FIGURE No. 4



LEGEND

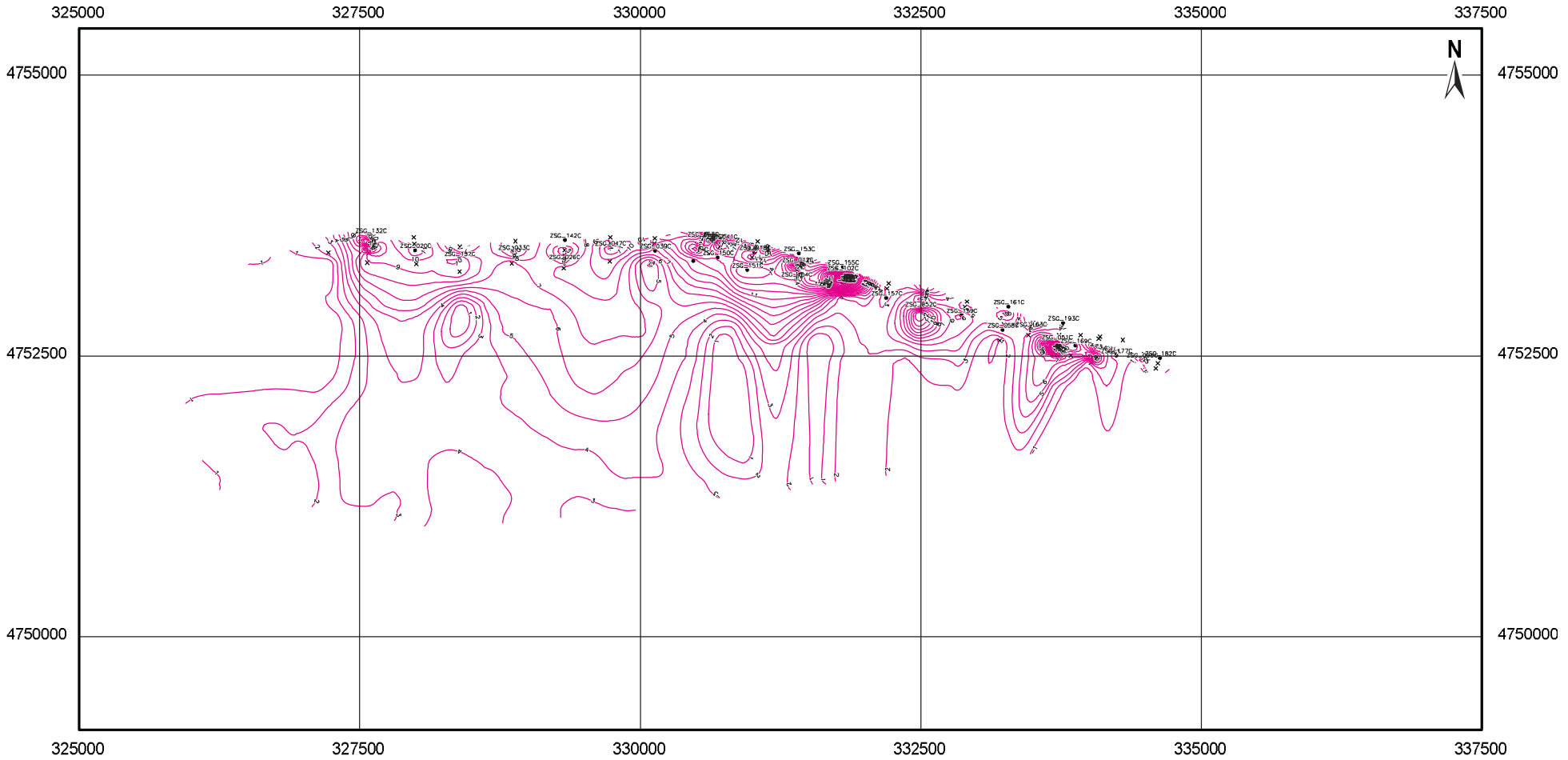
- Mining Lease
- Structure Contours
- Open Holes
- ZSG_136R Quality Holes

0 1250 2500

metres

minarco mineconsult

Client : **SOUTHGOBI RESOURCES LTD**	Job No. ADV-MN-00092-B
Project : **SGQ PROJECT**	Date : March 2013
Figure : **B3 SEAM FLOOR STRUCTURE**	FIGURE No. 5



LEGEND

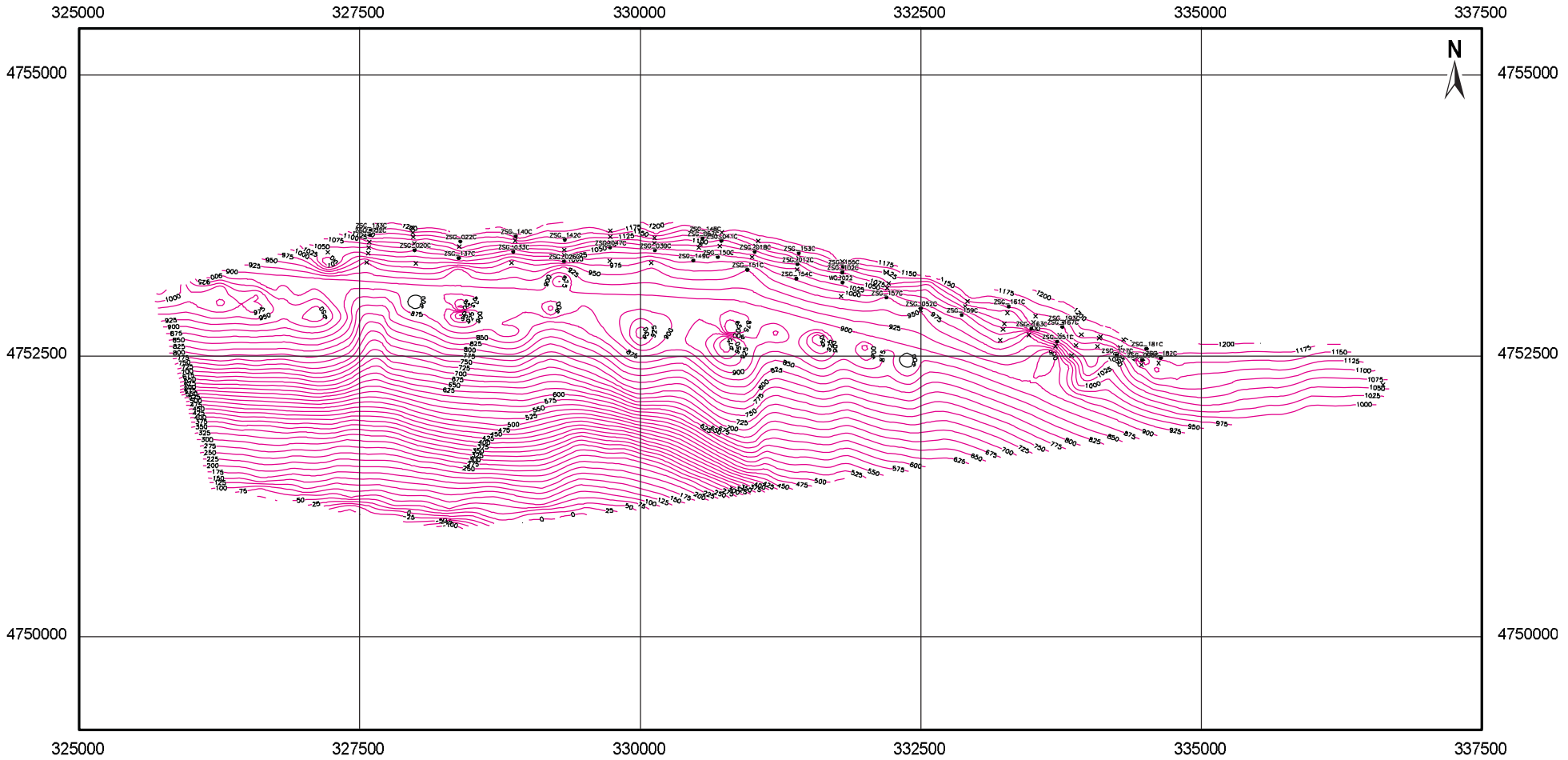
- Mining Lease
- Thickness Contours
- Open Holes
- ZSG_136R Quality Holes

0 1250 2500

metres

minarco mineconsult

Client : **SOUTHGOBI RESOURCES LTD**	Job No. ADV-MN-00092-B
Project : **SGQ PROJECT**	Date : March 2013
Figure : **B4 SEAM THICKNESS**	FIGURE No. 6



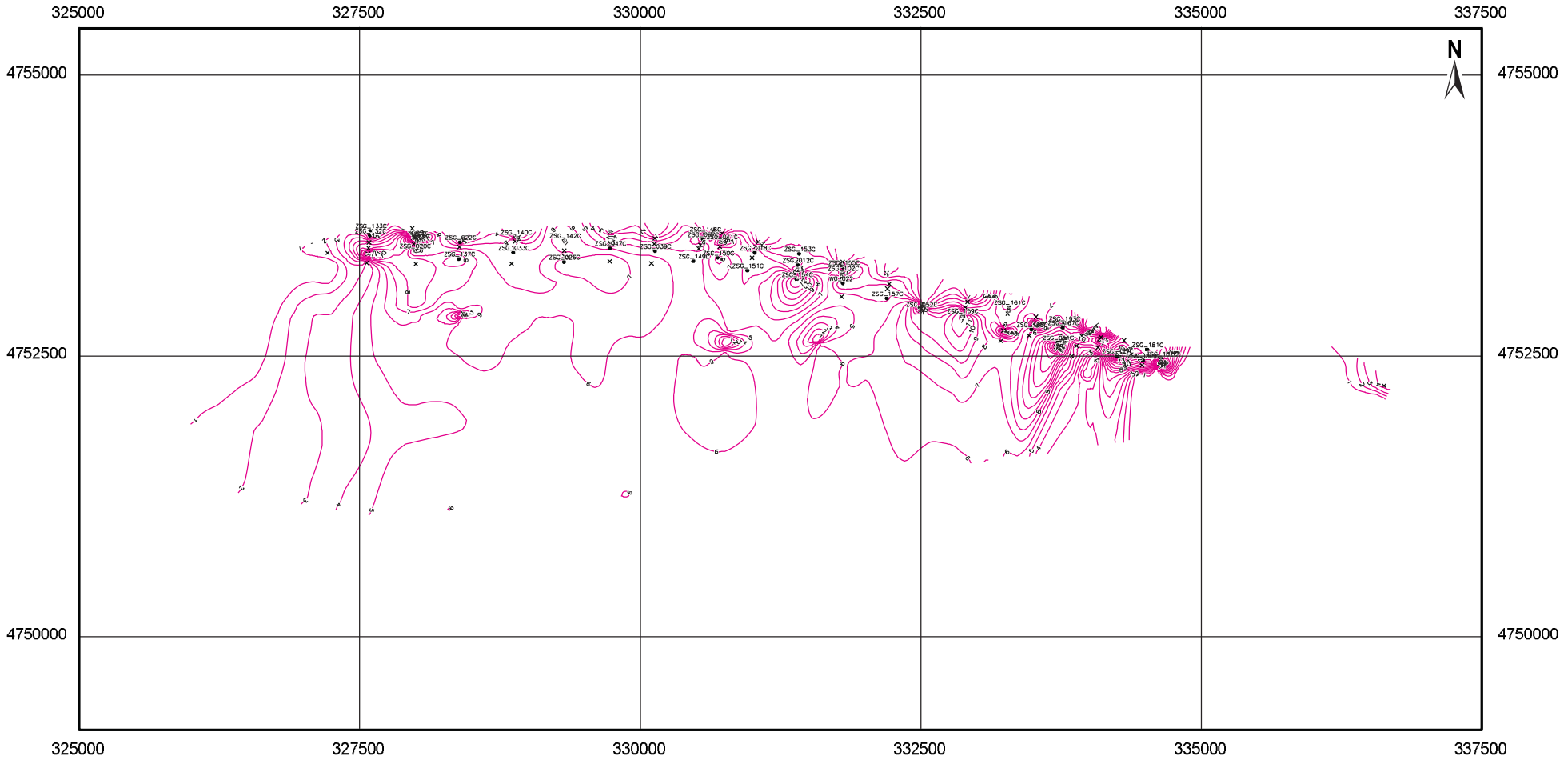
LEGEND

- Mining Lease
- Structure Contours
- Open Holes
- ZSG_136R Quality Holes

0 1250 2500
metres

minarco mineconsult

Client : **SOUTH GOBI RESOURCES LIMITED**	Job No. ADV-MN-00092-B
Project : **SGQ PROJECT**	Date : March 2013
Figure : **B3 SEAM FLOOR STRUCTURE**	FIGURE No. 7



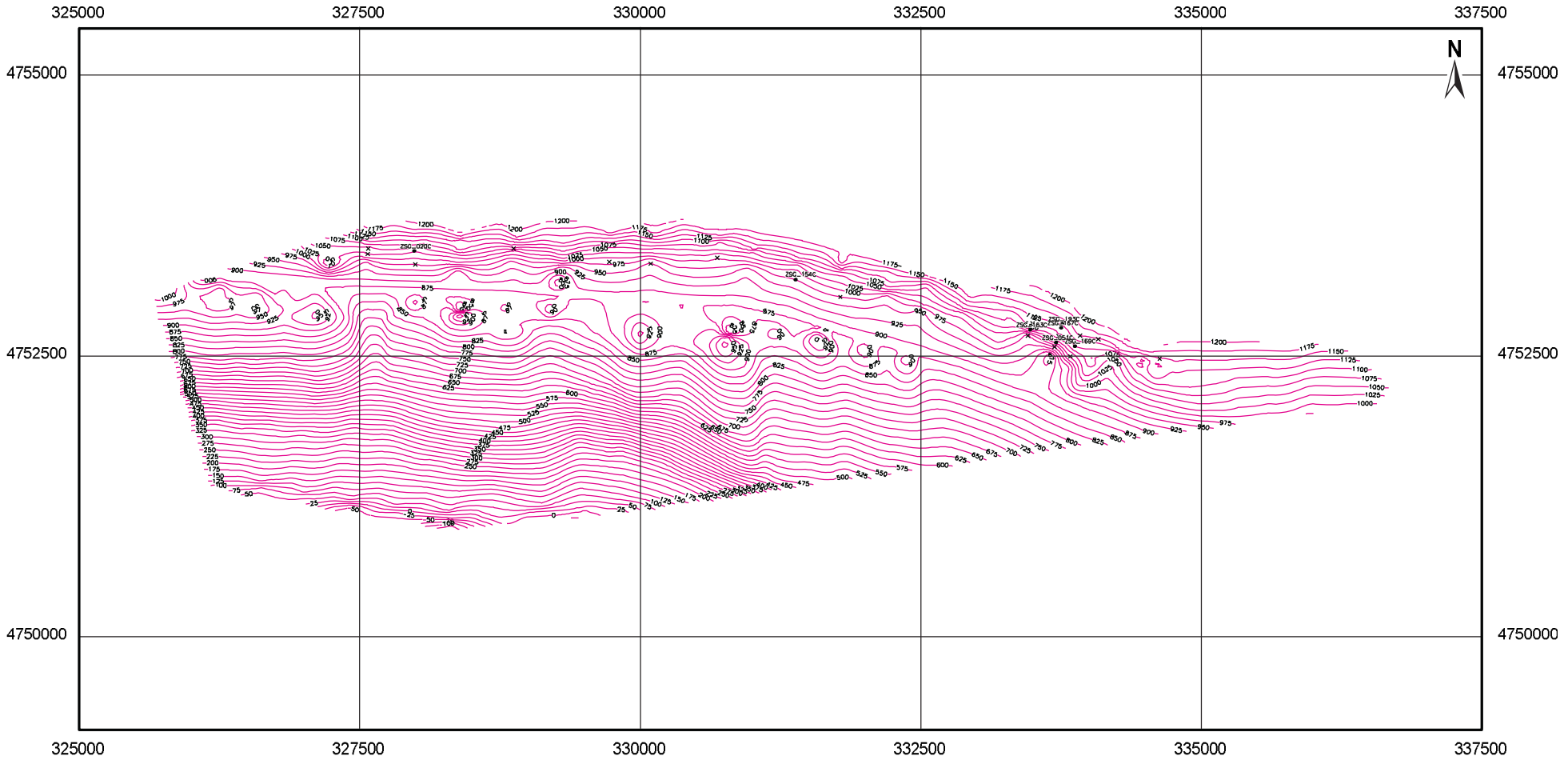
LEGEND

- Mining Lease
- Thickness Contours
- Open Holes
- ZSG_136R Quality Holes

0 1250 2500
metres

minarco mineconsult

Client : **SOUTH GOBI RESOURCES LIMITED**	Job No. ADV-MN-00092-B
Project : **SGQ PROJECT**	Date : March 2013
Figure : **B3 SEAM THICKNESS**	FIGURE No. 8



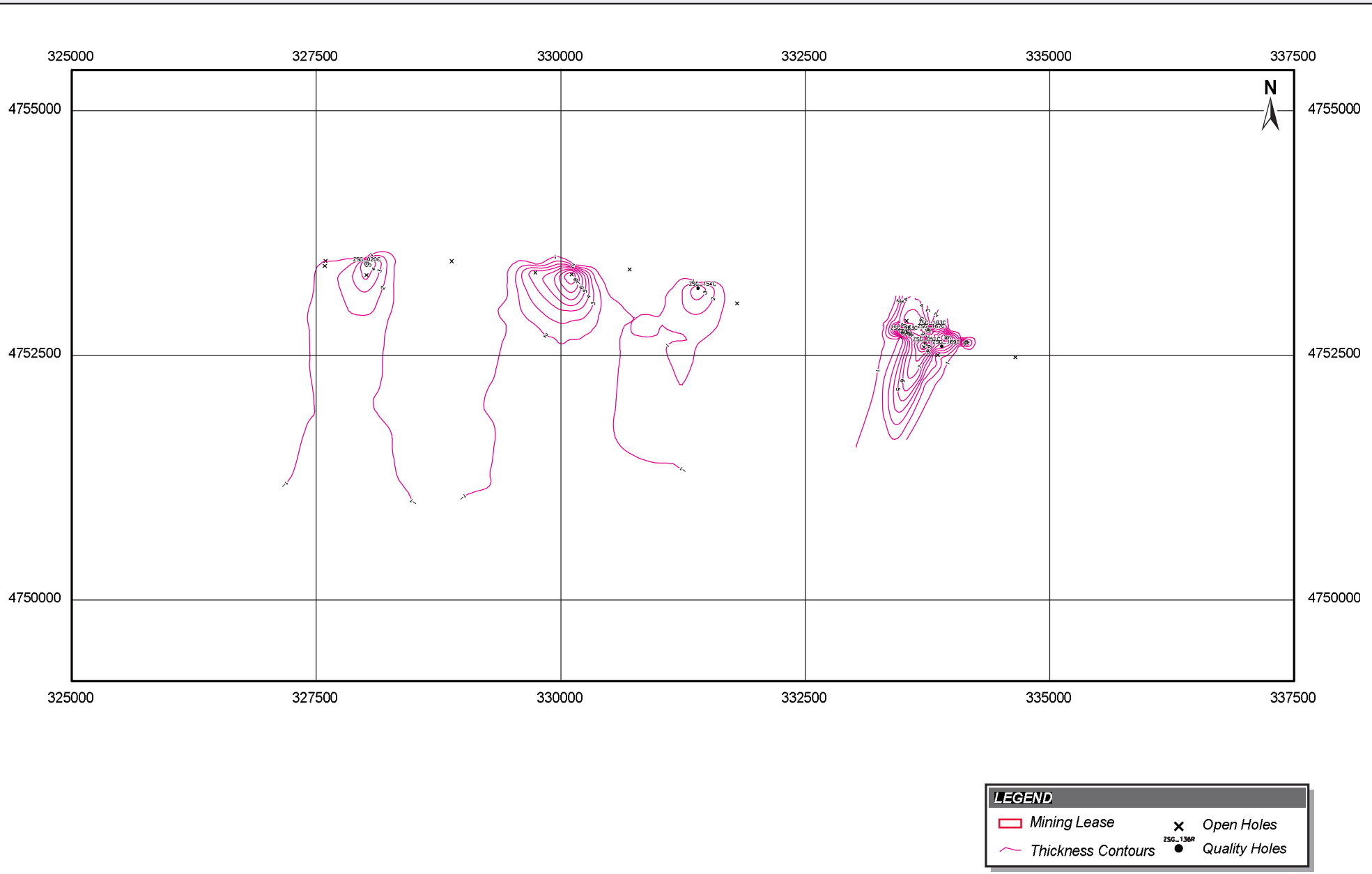
LEGEND

- Mining Lease
- Structure Contours
- Open Holes
- Quality Holes

0 1250 2500
metres

minarco mineconsult

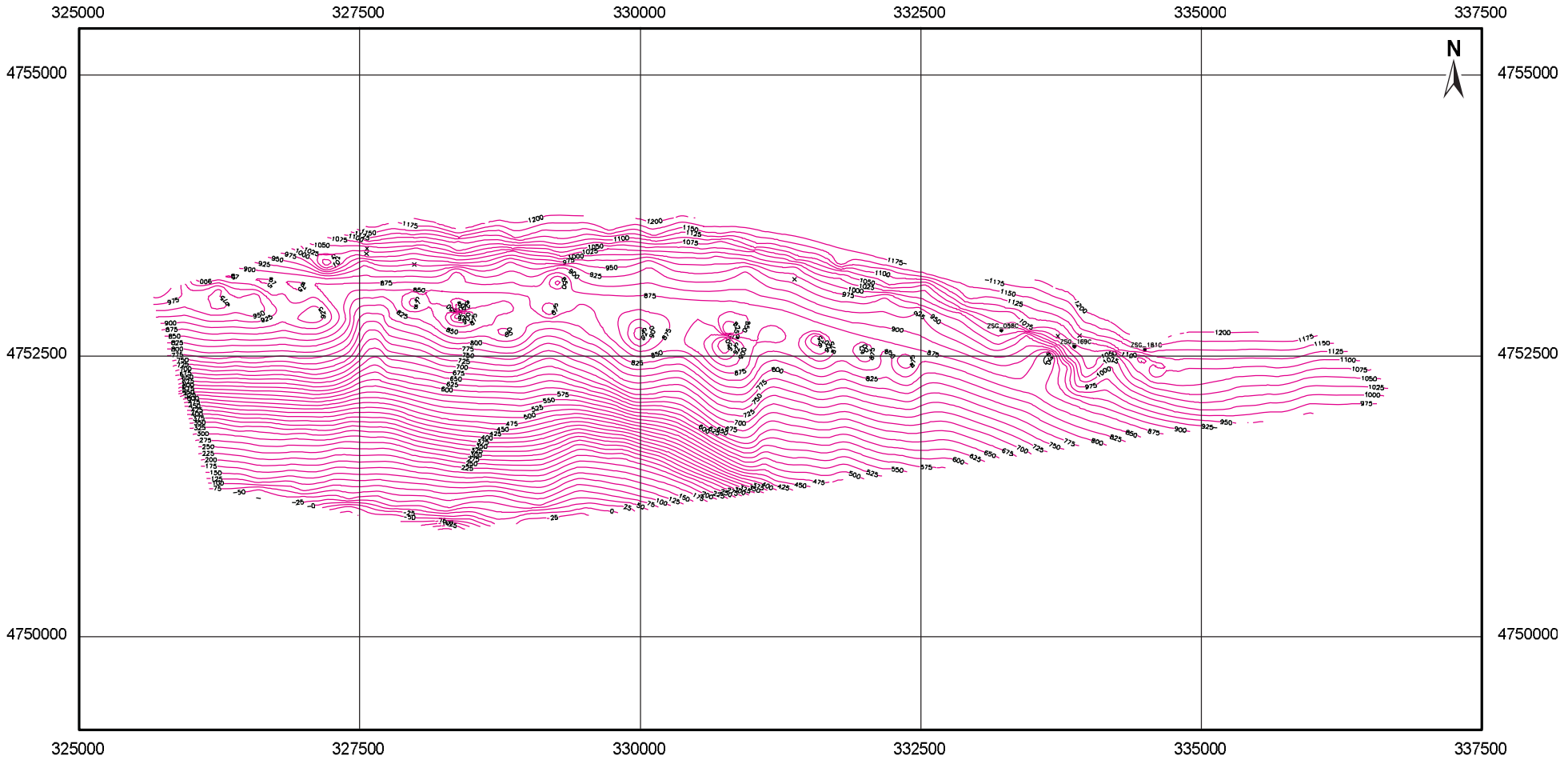
Client : **SOUTH GOBI RESOURCES LIMITED**	Job No. ADV-MN-00092-B
Project : **SGS PROJECT**	Date : March 2013
Figure : **B2 SEAM FLOOR STRUCTURE**	FIGURE No. 9



0 1250 2500
metres

minarco mineconsult

Client : **SOUTHGOBI RESOURCES LTD**	Job No. ADV-MN-00092-B
Project : **SGS PROJECT**	Date : March 2013
Figure : **B2 SEAM THICKNESS**	FIGURE No. 10



LEGEND

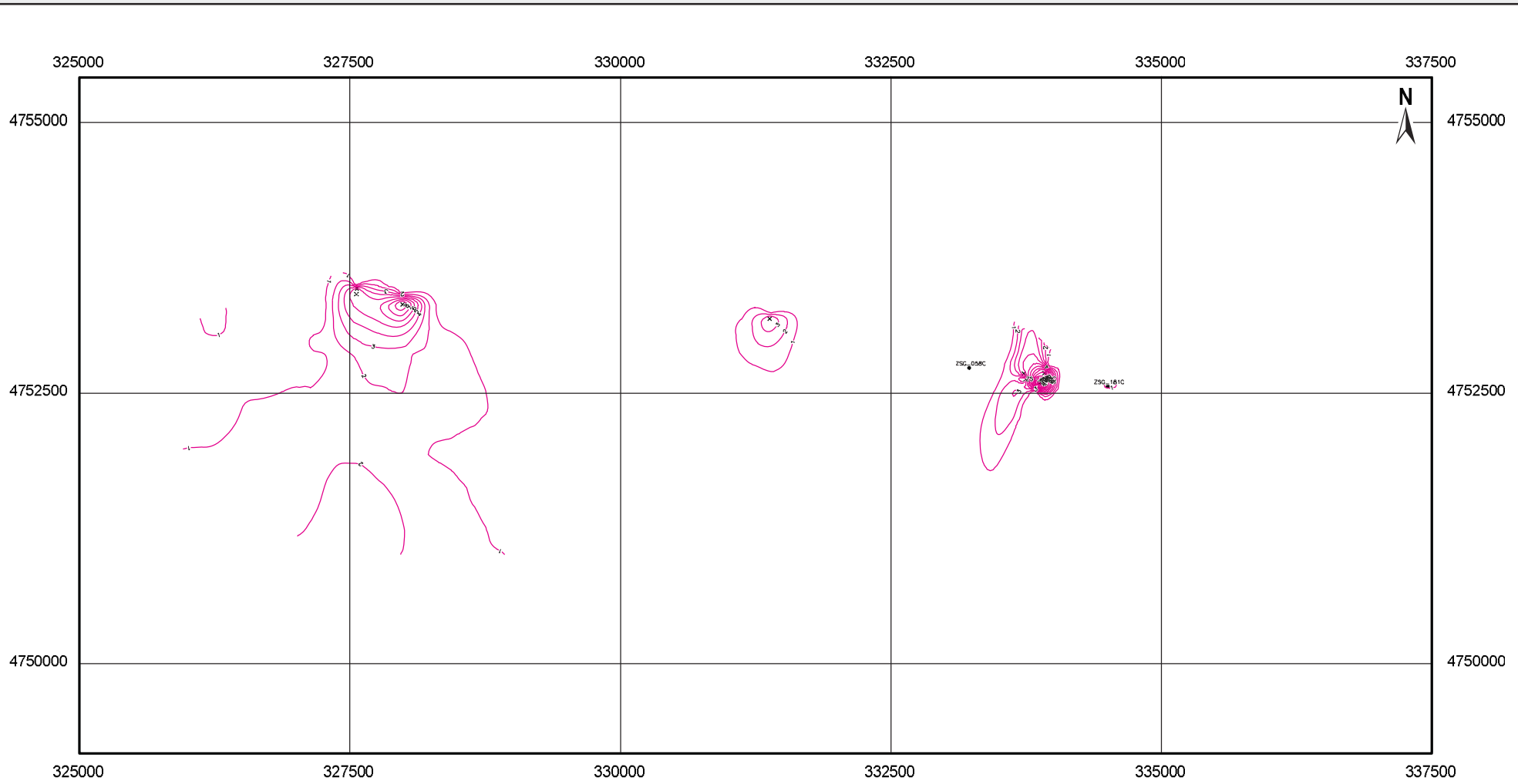
- Mining Lease
- Structure Contours
- Open Holes
- Quality Holes

0 1250 2500

metres

minarco mineconsult

Client : **SOUTHGOBI RESOURCES LTD**	Job No. ADV-MN-00092-B
Project : **SGQ PROJECT**	Date : March 2013
Figure : **B1 SEAM FLOOR STRUCTURE**	FIGURE No. 11



LEGEND

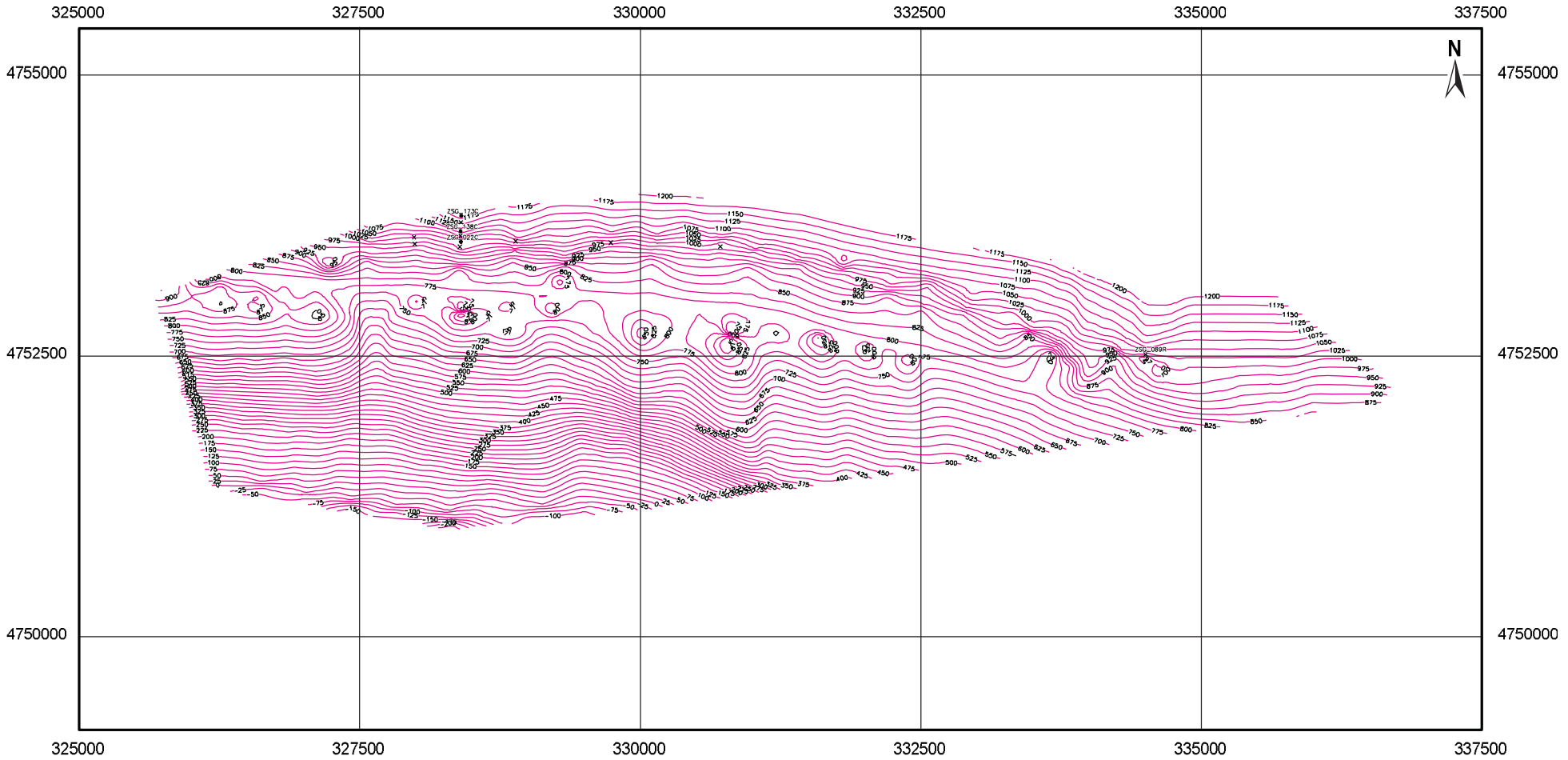
- Mining Lease
- Thickness Contours
- Open Holes
- ZSG_136R Quality Holes

0 1250 2500

metres

minarco mineconsult

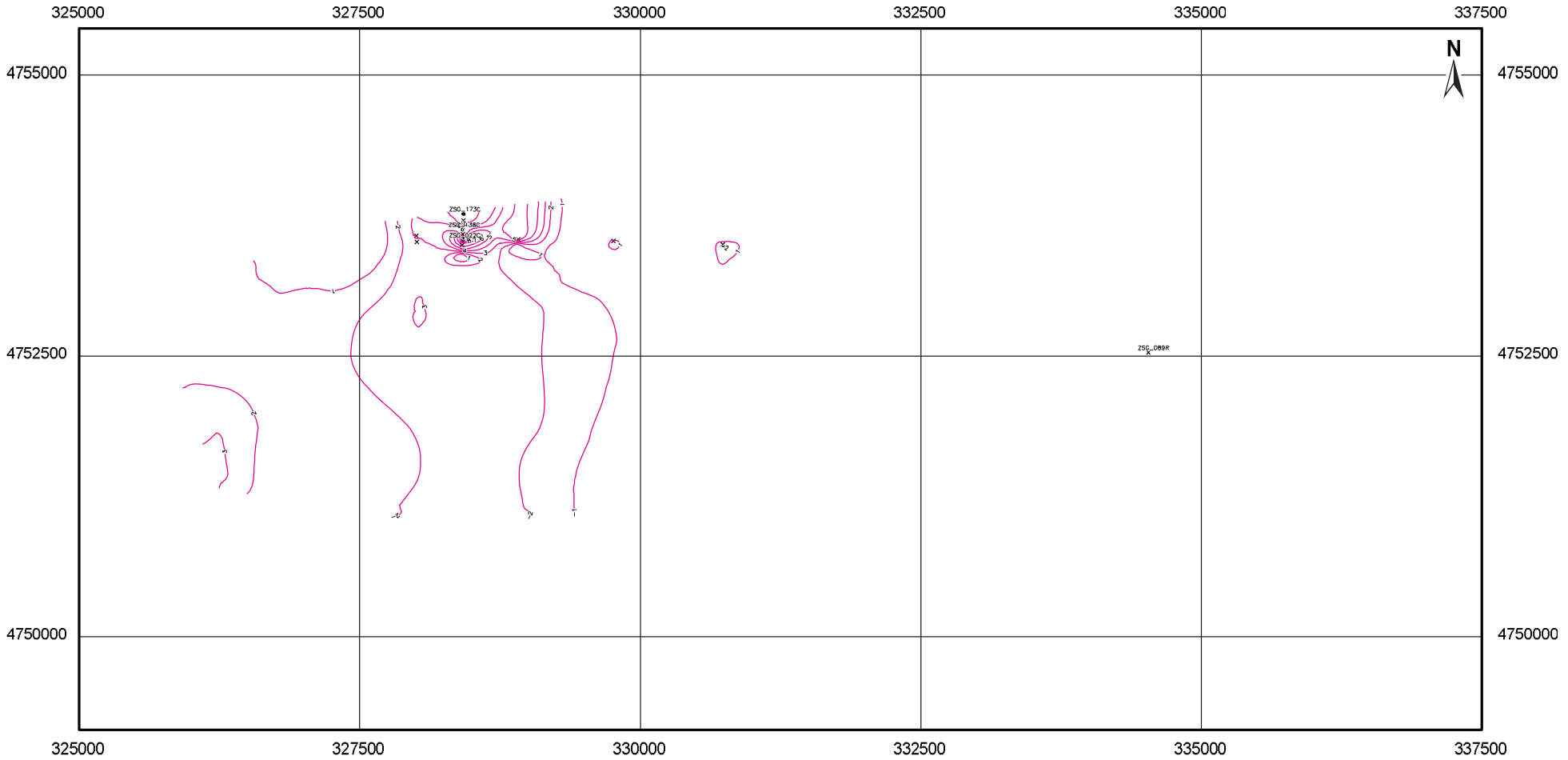
Client : **SOUTHGOBI RESOURCES LTD**	Job No. ADV-MN-00092-B
Project : **SGQ PROJECT**	Date : March 2013
Figure : **B1 SEAM THICKNESS**	FIGURE No. 12



0 1250 2500
metres

minarco mineconsult

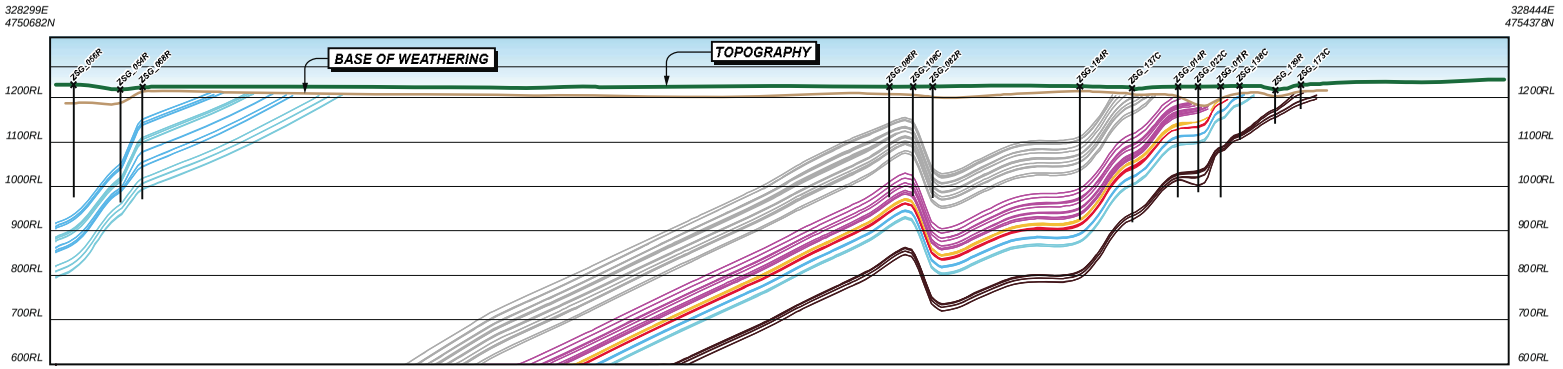
Client : **SOUTHGOBI RESOURCES LTD**	Job No. ADV-MN-00092-B
Project : **SGQ PROJECT**	Date : March 2013
Figure : **A SEAM FLOOR STRUCTURE**	FIGURE No. 13



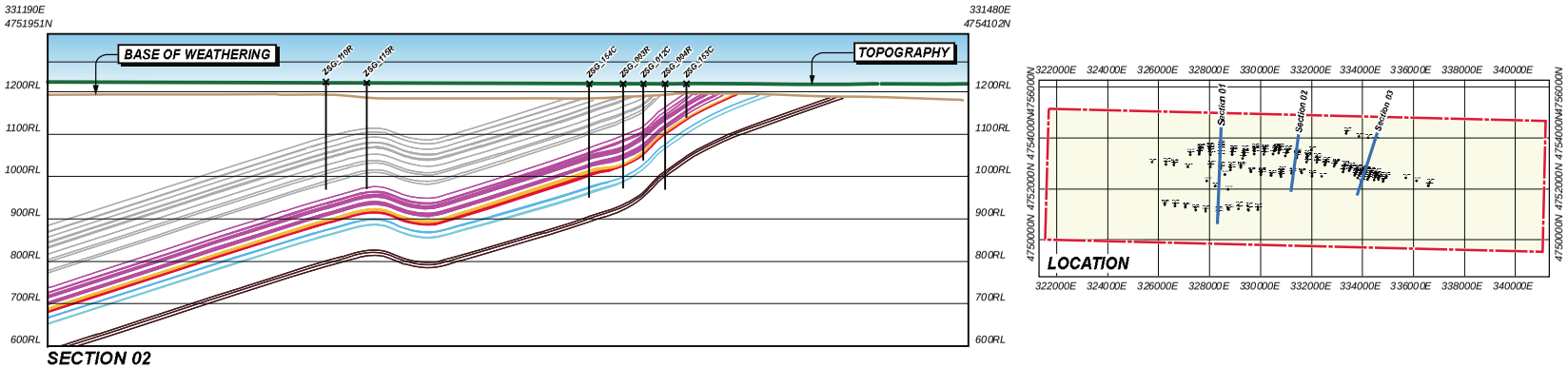
0 1250 2500
metres

minarco mineconsult

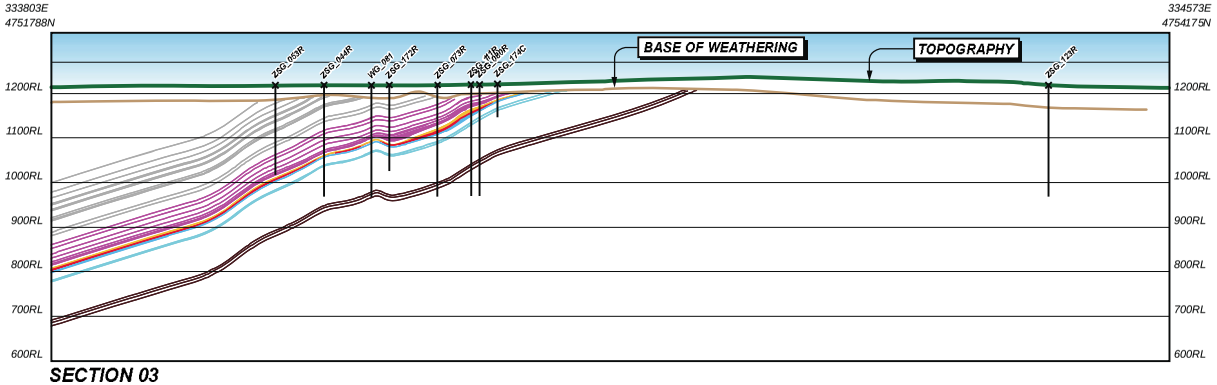
Client : **SOUTHGOBI RESOURCES LTD**	Job No. ADV-MN-00092-B
Project : **SGQ PROJECT**	Date : March 2013
Figure : **A SEAM THICKNESS**	FIGURE No. 14



SECTION 01



SECTION 02



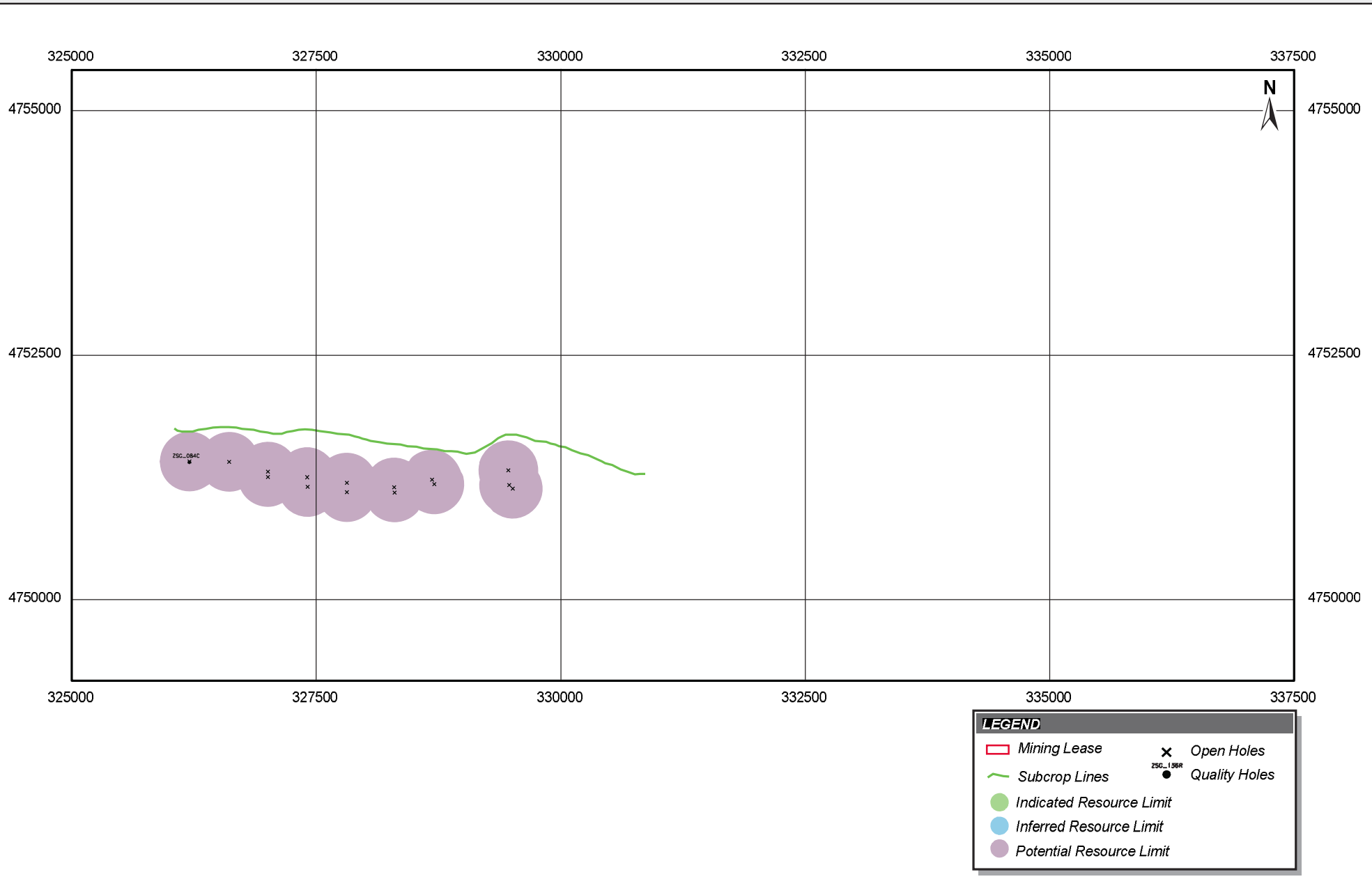
SECTION 03

LEGEND

- Seam D43
- Seam D42
- Seam D41
- Seam D33
- Seam D32
- Seam D31
- Seam D23
- Seam D22
- Seam D21
- Seam D13
- Seam D12
- Seam D11
- Seam C7
- Seam C62
- Seam C61
- Seam C52
- Seam C51
- Seam C42
- Seam C41
- Seam C32
- Seam C31
- Seam C22
- Seam C21
- Seam C12
- Seam C11
- Seam CL2
- Seam CL1
- Seam B452
- Seam B451
- Seam B442
- Seam B441
- Seam B432
- Seam B431
- Seam B43L2
- Seam B43L1
- Seam B422
- Seam B421
- Seam B412
- Seam B411
- Seam B41L
- Seam B33
- Seam B322
- Seam B321
- Seam B312
- Seam B311
- Seam B22
- Seam B21
- Seam B12
- Seam B11
- Seam A32
- Seam A31
- Seam A2
- Seam A1

minarco mineconsult

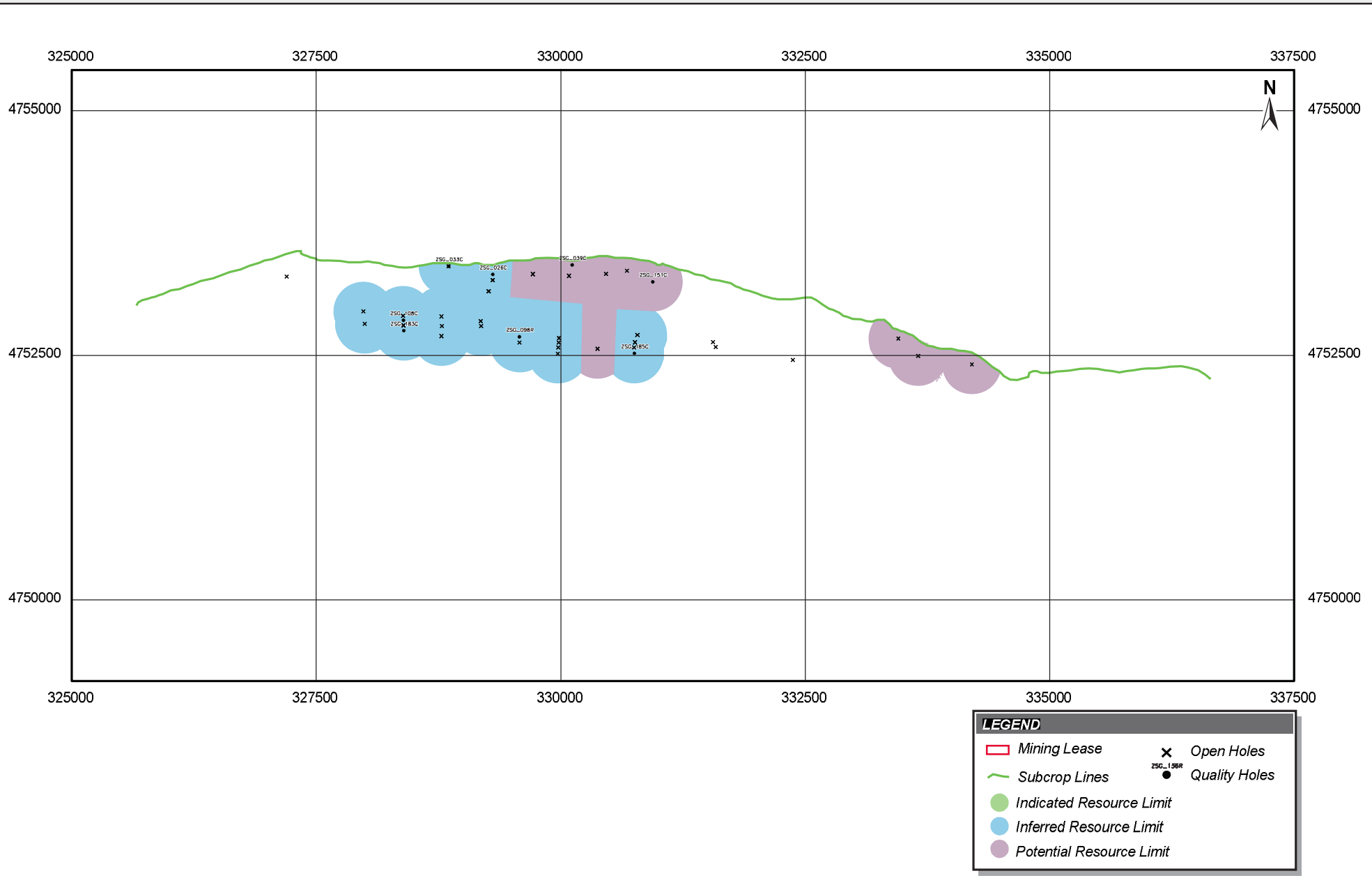
Client : **SOUTHGOBI RESOURCES LTD**	Job No. ADV-MN-00092-B
Project : **SGQ PROJECT**	Date : March 2013
Figure : **TYPICAL CROSS SECTIONS**	FIGURE No. 15



0 1250 2500
metres

minarco mineconsult

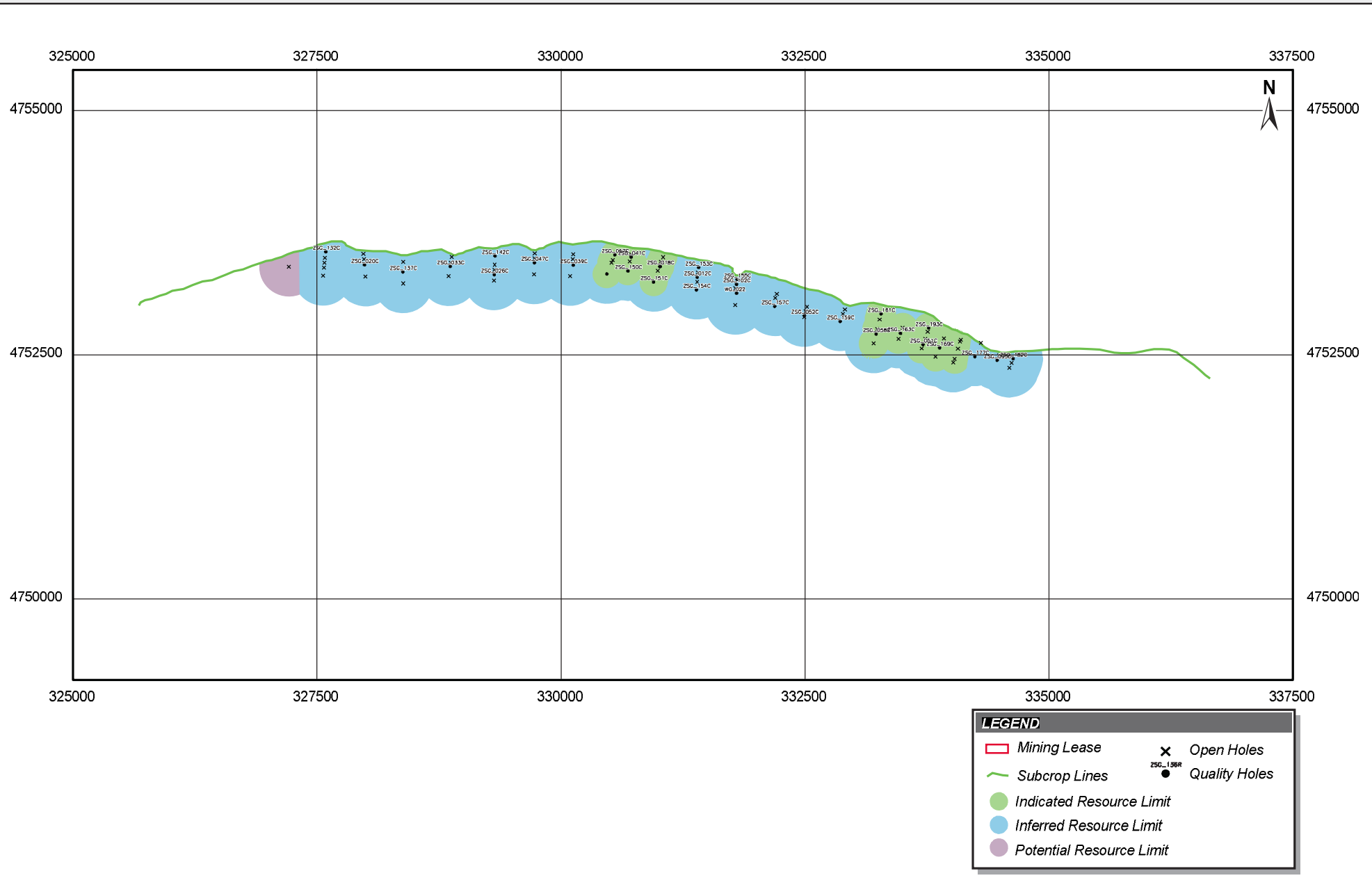
Client : **SOUTHGOBI RESOURCES LTD**	Job No. ADV-MN-00092-B
Project : **SGQ PROJECT**	Date : March 2013
Figure : **D SEAM RESOURCE POLYGONS**	FIGURE No. 16



0 1250 2500
metres

minarco mineconsult

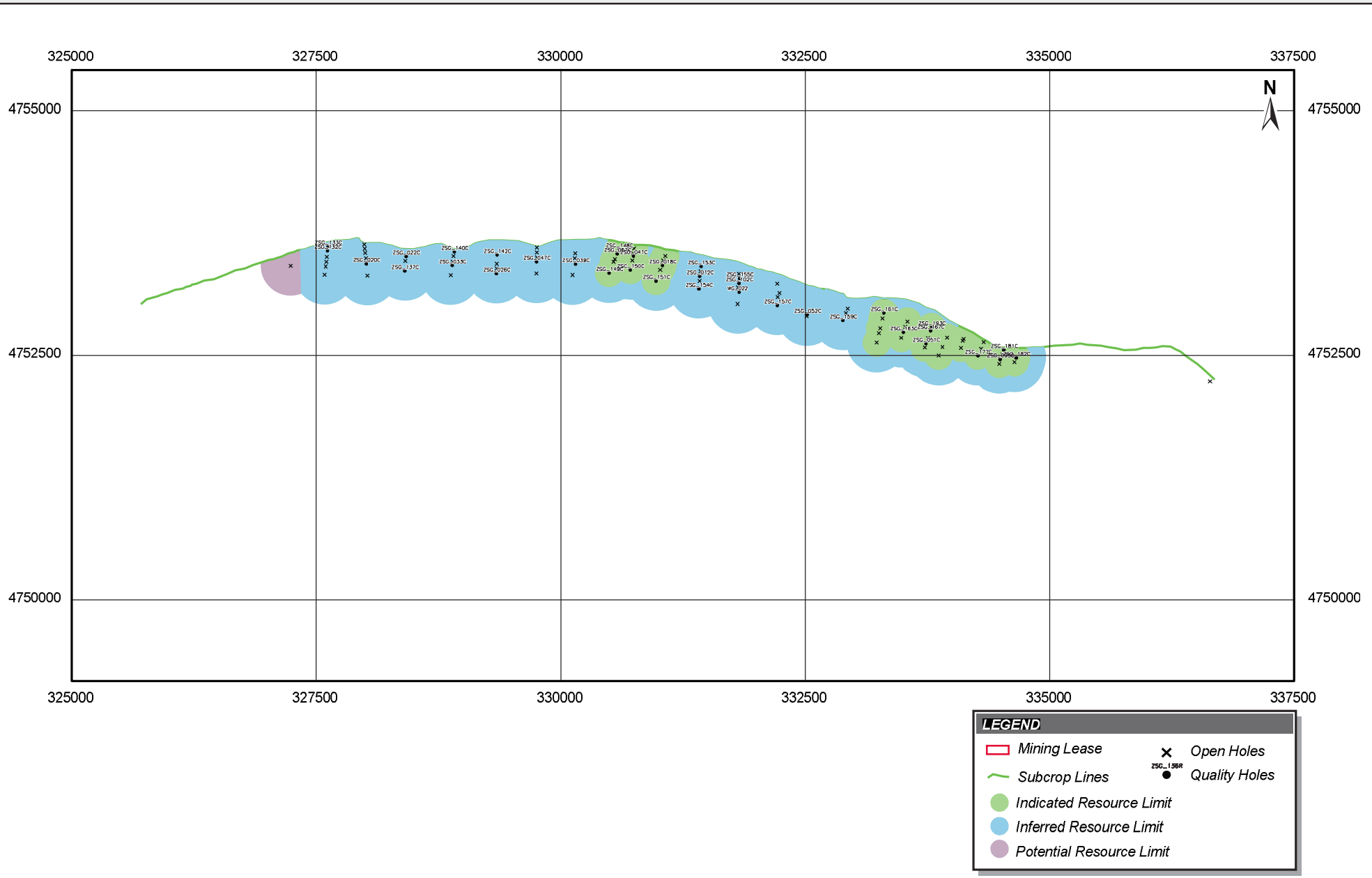
Client : **SOUTHGOBI RESOURCES LTD**	Job No. ADV-MN-00092-B
Project : **SGQ PROJECT**	Date : March 2013
Figure : **C SEAM RESOURCE POLYGONS**	FIGURE No. 17



0 1250 2500
metres

minarco mineconsult

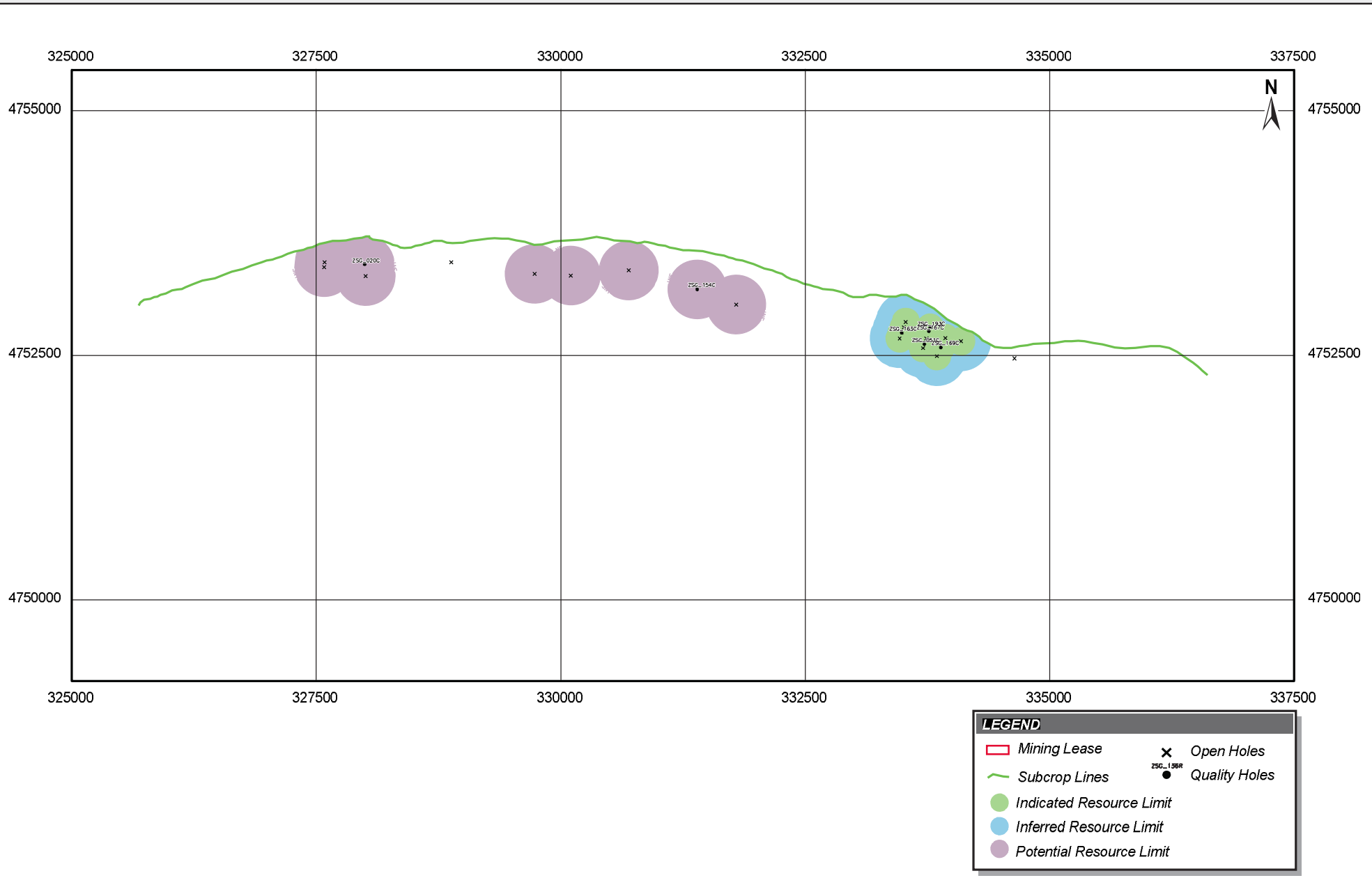
Client : **SOUTHGOBI RESOURCES LTD**	Job No. ADV-MN-00092-B
Project : **SGQ PROJECT**	Date : March 2013
Figure : **B4 SEAM RESOURCE POLYGONS**	FIGURE No. 18



0 1250 2500
metres

minarco mineconsult

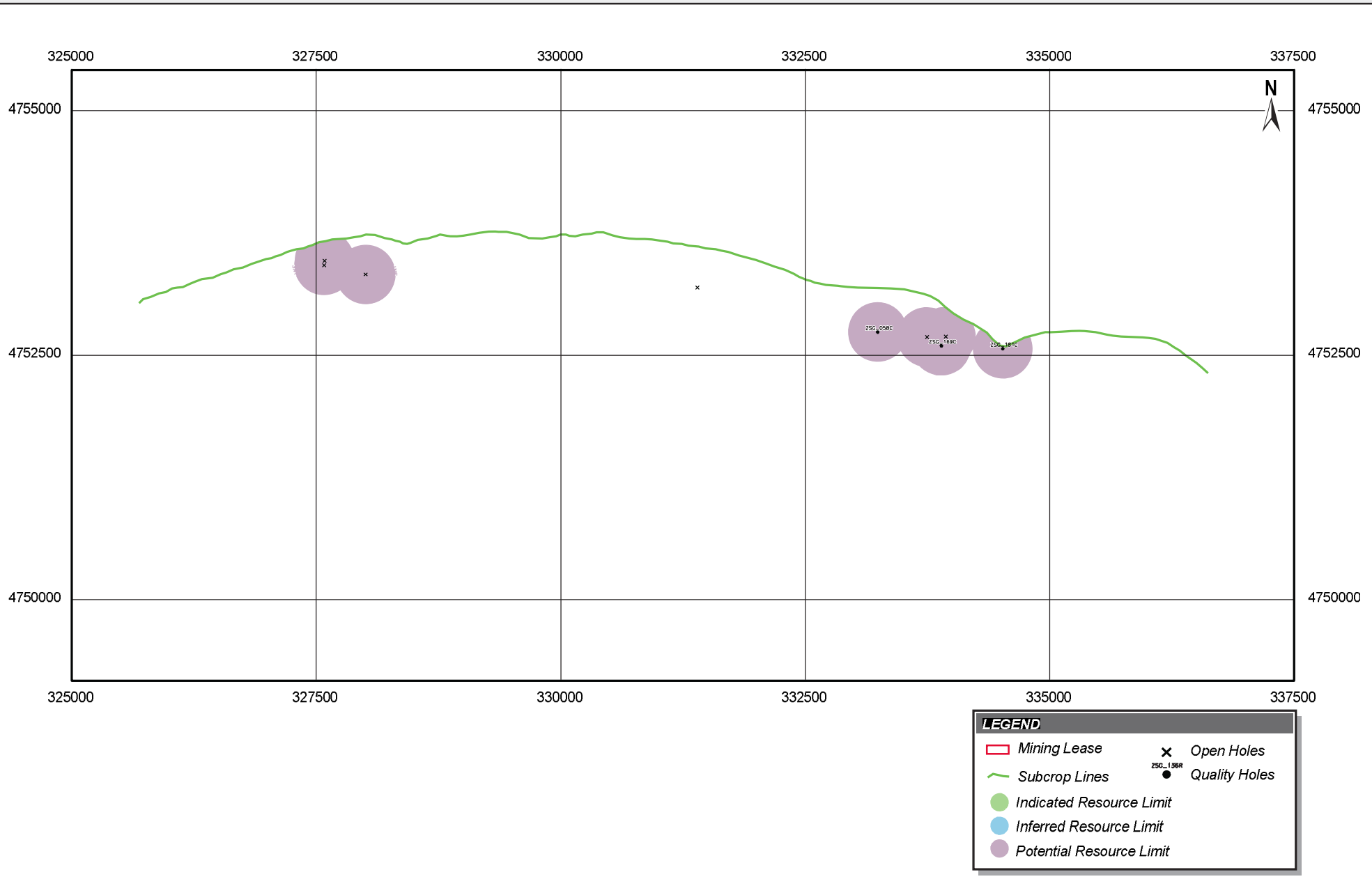
Client : **SOUTHGOBI RESOURCES LTD**	Job No. ADV-MN-00092-B
Project : **SGQ PROJECT**	Date : March 2013
Figure : **B3 SEAM RESOURCE POLYGONS**	FIGURE No. 19



0 1250 2500
metres

minarco mineconsult

Client : **SOUTHGOBI RESOURCES LTD**	Job No. ADV-MN-00092-B
Project : **SGQ PROJECT**	Date : March 2013
Figure : **B2 SEAM RESOURCE POLYGONS**	FIGURE No. 20

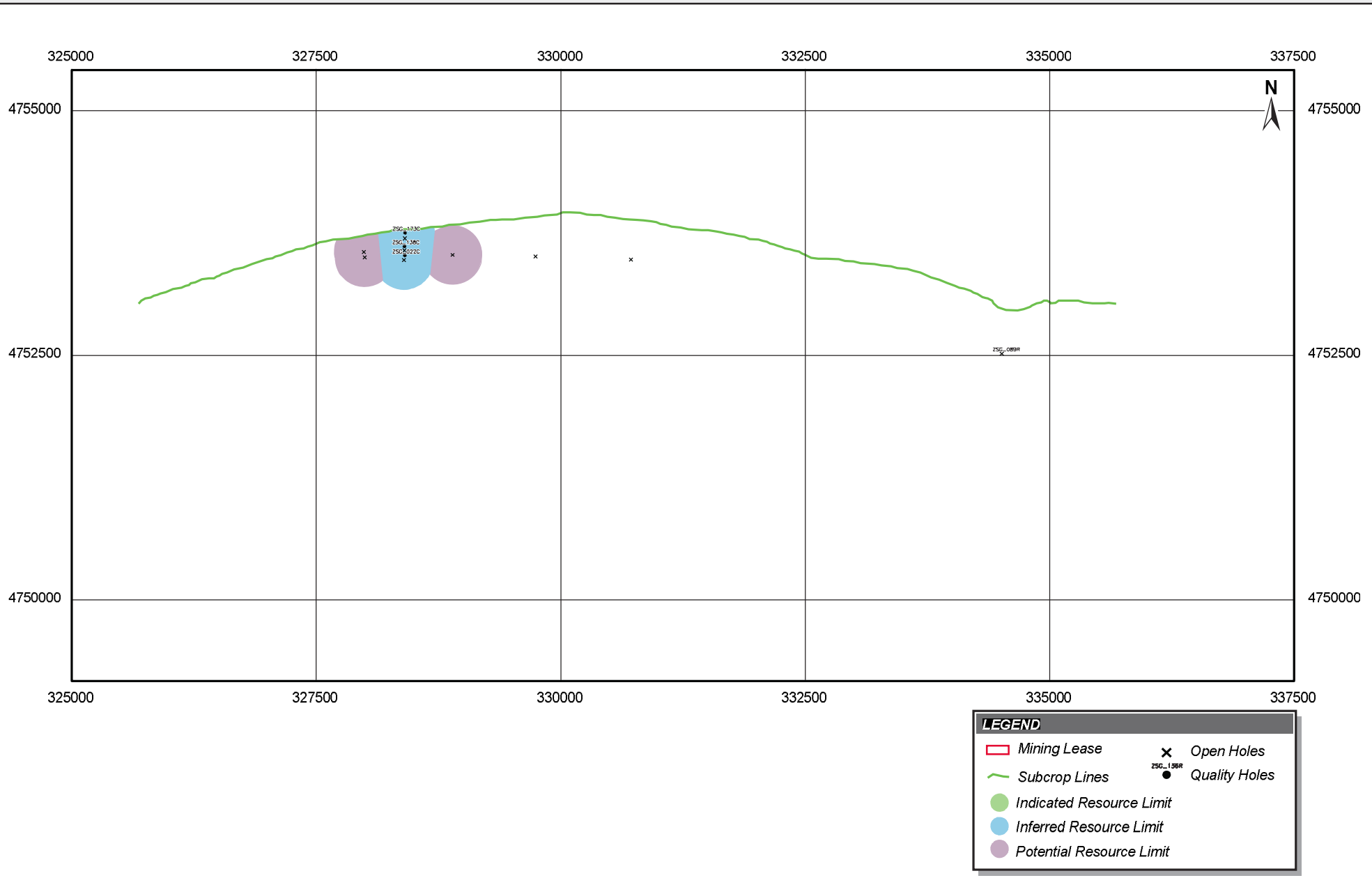


0 1250 2500

metres

minarco mineconsult

Client : **SOUTHGOBI RESOURCES LTD**	Job No. ADV-MN-00092-B
Project : **SGQ PROJECT**	Date : March 2013
Figure : **B1 SEAM RESOURCE POLYGONS**	FIGURE No. 21



Client : **SOUTHGOBI RESOURCES LTD**	Job No. ADV-MN-00092-B
Project : **SGQ PROJECT**	Date : March 2013
Figure : **A SEAM RESOURCE POLYGONS**	FIGURE No. 22

minarco mineconsult

20 REFERENCES

Canadian Securities Administrators, 2001. National Instrument 43-101 Standards of Disclosure for Mineral Projects. Policy Document.

Canadian Securities Administrators, 2001. Companion Policy 43-101CP. Policy Document.

Canadian Securities Administrators, 2001. Technical Report Form 43-101F1. Policy Document.

CIM Standing Committee on Reserve Definitions, October 2004. CIM Standards on Mineral Resources and Reserves - Definitions and Guidelines. CIM Bulletin, v. 93, no. 1044, pp. 53-61.

CIM Standing Committee on Reserve Definitions, October 2004. Exploration Best Practices Guidelines: Included in CIM Standards on Mineral Resources and Reserves – Definitions and Guidelines. CIM Bulletin, v. 93, no. 1044, pp. 53-61.

Hughes, J.D., Klatzel-Mudry, L., and Nikols, D.J. 1989. A Standardized Coal Resource/Reserve Reporting System For Canada", Geological Survey of Canada Paper 88-21.

McElroy Bryan Geological Services, November 2011. Zag Suuj Model Version ZS_1111, Release Date 4th November 2011.

Minarco Mineconsult., 2012, Report Coal Geology and Resources, Zag Suuj Deposit, Mongolia, Technical Report 19 March 2012

Minarco Mineconsult, 2012, Coal Geology and Resources and Reserves, Ovoot Tolgoi Deposit, Mongolia, Technical Report 19 March 2012

N. Purevdorj, Y. Dashdondov, H. Battugs et al "Report on the Results of 2007-2011 exploration of Zagsuuj Hard coal deposit in Noyon and Bayandalai Soums of Umnugobi Aimag (resource estimation as of Nov 1, 2011), 2011 Ulaan Baatar.

21 DATE AND SIGNATURE PAGE

The effective date of publication of this technical report is 25 March 2013

Dated at Brisbane, Australia, this 25 March 2013

ORIGINAL SIGNED BY AUTHOR

_____

Merryl Peterson
Principal Geologist RungePincockMinarco Limited

Following is a signed and dated Certificate of Qualifications of the person involved in preparing this report.

CERTIFICATE OF QUALIFICATIONS

I, Merryl Peterson, am working as a Principal Geologist at RungePincockMinarco Limited, of Level 12, 333 Ann Street, Brisbane QLD, Australia. Minarco-MineConsult is a trading name of RungePincockMinarco Limited. This certificate applies to the Technical Report on the Resource Estimate for the Zag Suuj Deposit, Mongolia, prepared for SouthGobi Resources Ltd, dated 25 March 2013 (the "Technical Report"), do hereby certify that:

1. I am a registered member and Chartered Professional Geology of the Australasian Institute of Mining and Metallurgy (AIMM).

2. I am a graduate of University of Western Australia and hold an Honours Degree in Geology.

3. I have been continuously and actively engaged in the assessment, development, and operation of mineral projects since my graduation from university in 1972.

4. I am a Qualified Person for the purposes of the National Instrument 43-101 of the Canadian Securities Administrators ("Ni 43-101").

5. I inspected the Zag Suuj Deposit between the dates 5th to 8th December 2011.

6. I am responsible for the preparation or the supervision and final editing of all portions of the Technical Report.

7. I have had no prior involvement with the properties that are the subject of the Technical Report.

8. To the best of my knowledge, information and belief, the technical report contains all scientific and technical information that is required to be disclosed to make the technical report not misleading. I am not aware of any material fact or material change with respect to the subject matter of the Technical Report that is not reflected in the Technical Report, the omission to disclose which makes the Technical Report misleading.

9. I am independent of SouthGobi Resources Ltd in accordance with the application of Section 1.5 of NI 43-101.

10. I have read NI 43-101 and Form 43-101F1 and the Technical Report has been prepared in compliance with that instrument and form.

11. I consent to the filing of the Technical Report with any stock exchange or any other regulatory authority and any publication by them for regulatory purposes, including electronic publication in the public company files on their website and accessible by the public, of the Technical Report.

Dated at Brisbane, Australia, this 25 March 2013

_____

Merryl Peterson

22 APPENDIX A – GLOSSARY OF TERMS

The key terms used in this report include:

- **Company** means SouthGobi Resources Ltd "SGQ" or "the Client".
- **concentrate** a powdery product containing higher concentrations of minerals resulting from initial processing of mined ore to remove some waste materials; a concentrate is a semi-finished product, which would still be subject to further processing, such as smelting, to effect recovery of metal
- **contained metal** refers to the amount of pure metal equivalent estimated to be contained in the material based on the metal grade of the material.
- **element** Chemical symbols used in this report

  Au – Gold

  Ag – Silver

  As – Arsenic

  Cu – Copper

  Pb – Lead

  Zn – Zinc
- **exploration** activity to identify the location, volume and quality of a mineral occurrence
- **Exploration Target/Results** includes data and information generated by exploration programmes that may be of use to investors. The reporting of such information is common in the **early** stages of exploration and is usually based on limited surface chip sampling, geochemical and geophysical surveys. Discussion of target size and type must be expressed so that it cannot be misrepresented as an estimate of Mineral Resources or Ore Reserves.
- **exploration right** the licensed right to identify the location, volume and quality of a mineral occurrence
- **flotation** is a separation method for to the recovery of minerals using reagents to create a froth that collects target minerals
- **gangue** is a mining term for waste rock
- **grade** any physical or chemical measurement of the concentration of the material of interest in samples or product. The units of measurement should be stated when figures are reported
- **grind** means to crush, pulverize, or reduce to powder by friction, especially by rubbing between two hard surfaces
- **In situ** means rock or mineralisation in place in the ground
- **In Situ Quantities** Estimates of total in ground tonnes and grade which meet the requirements of the PRC Code or other international codes for reserves but do not meet either NI 43-101 or Joint Ore Reserves Committee's recommendations
- **Indicated Mineral Resource** is that part of a Mineral Resource for which quantity, grade or quality, densities, shape and physical characteristics, can be estimated with a level of confidence sufficient to allow the appropriate application of technical and economic parameters, to support mine planning and evaluation of the economic viability of the deposit. The estimate is based on detailed and reliable exploration and testing information gathered through appropriate techniques from locations such as outcrops, trenches, pits, workings and drill holes that are spaced closely enough for geological and grade continuity to be reasonably assumed.
- **Inferred Mineral Resource** is that part of a Mineral Resource for which quantity and grade or quality can be estimated on the basis of geological evidence and limited sampling and reasonably assumed, but not verified, geological and grade continuity. The estimate is based on limited information and sampling gathered through appropriate techniques from locations such as outcrops, trenches, pits, workings and drill holes.
- **ITR** stands for Independent Technical Review
- **ITRR** stands for Independent Technical Review Report
- **km** stands for kilometre
- **kt** stands for thousand tonnes

• **lb**	stands for pound, a unit of weight equal to 453.592 grams
• **m**	stands for metres
• **Mineral Resource**	is a concentration or occurrence of diamonds, natural solid inorganic material, or natural solid fossilized organic material including base and precious metals, coal, and industrial minerals in or on the Earth's crust in such form and quantity and of such a grade or quality that it has reasonable prospects for economic extraction. The location, quantity, grade, geological characteristics and continuity of a Mineral Resource are known, estimated or interpreted from specific geological evidence and knowledge.
• **Measured Mineral Resource**	is that part of a Mineral Resource for which quantity, grade or quality, densities, shape, and physical characteristics are so well established that they can be estimated with confidence sufficient to allow the appropriate application of technical and economic parameters, to support production planning and evaluation of the economic viability of the deposit. The estimate is based on detailed and reliable exploration, sampling and testing information gathered through appropriate techniques from locations such as outcrops, trenches, pits, workings and drill holes that are spaced closely enough to confirm both geological and grade continuity.
• **metallurgy**	Physical and/or chemical separation of constituents of interest from a larger mass of material. Methods employed to prepare a final marketable product from material as mined. Examples include screening, flotation, magnetic separation, leaching, washing, roasting etc.
• **mine production**	is the total raw production from any particular mine
• **Mineable Quantities**	Estimates of in ground tonnes and grades which are recoverable by mining
• **Mineral Reserve**	is the economically mineable part of a Measured or Indicated Mineral Resource demonstrated by at least a Preliminary Feasibility Study. This Study must include adequate information on mining, processing, metallurgical, economic and other relevant factors that demonstrate, at the time of reporting, that economic extraction can be justified. A Mineral Reserve includes diluting materials and allowances for losses that may occur when the material is mined.
• **mineral right**	for purposes of this report, mineral right includes exploration right, mining right, and leasehold exploration or mining right
• **mineralisation**	any single mineral or combination of minerals occurring in a mass, or deposit, of economic interest. The term is intended to cover all forms in which mineralisation might occur, whether by class of deposit, mode of occurrence, genesis or composition
• **mining rights**	means the rights to mine mineral resources and obtain mineral products in areas where mining activities are licensed
• **MMC**	refers to Minarco-MineConsult
• **mRL**	means metres above sea level
• **Mt**	stands for million tonnes
• **Mtpa**	means million tonnes per annum
• **NI 43-101**	Means National Instrument 43-101
• **OC**	Means open cut mining which is mining from a pit open to surface and usually carried out by stripping of overburden materials
• **ore**	is the portion of a reserve from which a metal or valuable mineral can be extracted profitably under current or immediately foreseeable economic conditions
• **ore processing**	is the process through which physical or chemical properties, such as density, surface reactivity, magnetism and colour, are utilized to separate and capture the useful components of ore, which are then concentrated or purified by means of flotation, magnetic selection, electric selection, physical selection, chemical selection, reselection, and combined methods
• **ore selection**	the process used during mining to separate valuable ore from waste material or barren rock residue
• **ore t**	stands for ore tonne
• **primary mineral deposits**	are mineral deposits formed directly from magmas or hydrothermal processes

• **Probable Ore Reserve**	A 'Probable Mineral Reserve' is the economically mineable part of an Indicated and, in some circumstances, a Measured Mineral Resource demonstrated by at least a Preliminary Feasibility Study. This Study must include adequate information on mining, processing, metallurgical, economic, and other relevant factors that demonstrate, at the time of reporting, that economic extraction can be justified.
• **project**	means a deposit which is in the pre-operating phase of development and, subject to capital investment, feasibility investigations, statutory and management approvals and business considerations, may be commissioned as a mine
• **Proven Ore Reserve**	A 'Proven Mineral Reserve' is the economically mineable part of a Measured Mineral Resource demonstrated by at least a Preliminary Feasibility Study. This Study must include adequate information on mining, processing, metallurgical, economic, and other relevant factors that demonstrate, at the time of reporting, that economic extraction is justified.
• **raw ore**	is ore that has been mined and crushed in an in-pit crusher, but has not been processed further
• **recovery**	The percentage of material of initial interest that is extracted during mining and/or processing. A measure of mining or processing efficiency
• **regolith**	is a geological term for a cover of soil and rock fragments overlying bedrock
• **Qualified Person (QP)**	A "Qualified Person" means an individual who is an engineer or geoscientist with at least five years of experience in mineral exploration, mine development or operation or mineral project assessment, or any combination of these; has experience relevant to the subject matter of the mineral project and the technical report; and is a member or licensee in good standing of a professional association.
• **Resources**	A Mineral Resource is a concentration or occurrence of diamonds, natural solid inorganic material, or natural solid fossilized organic material including base and precious metals, coal, and industrial minerals in or on the Earth's crust in such form and quantity and of such a grade or quality that it has reasonable prospects for economic extraction. The location, quantity, grade, geological characteristics and continuity of a Mineral Resource are known, estimated or interpreted from specific geological evidence and knowledge.
• **RL**	means Reduced Level, an elevation above sea level
• **RMB**	stands for Chinese Renminbi Currency Unit;
• **RMB/t**	stands for Chinese Renminbi per material tonne
• **ROM**	stands for run-of-mine, being material as mined before beneficiation
• **saprolite**	is a geological term for weathered bedrock
• **secondary mineral deposits**	are mineral deposits formed or modified as a result of weathering or erosion of primary mineral deposits
• **shaft**	a vertical excavation from the surface to provide access to the underground mine workings
• **sq.km**	Square Kilometre
• **t**	stands for tonne
• **t/bcm**	stands for tonnes per bank cubic metre (i.e. tonnes in situ) a unit of density
• **tonnage**	An expression of the amount of material of interest irrespective of the units of measurement (which should be stated when figures are reported)
• **tonne**	refers to metric tonne
• **tpa**	stands for tonnes per annum
• **tpd**	stands for tonnes per day
• **UG**	means underground mining which is an opening in the earth accessed via shafts, declines or adits below the land surface to extract minerals
• **upgrade ratio**	is a processing factor meaning ROM Grade% / Product Grade %
• **USD**	stands for United States dollars
• **$**	refers to United States dollar currency Unit

23 APPENDIX B – DETAILED SEAM TABLES

Table B1
Zag Suuj Deposit Coal Seam Characteristics

Seam	No. Holes	Thickness (m)			Interburden (m)
		Mean	Minimum	Maximum	Mean
D43	6	1.7	0.5	4.0	
D42	5	1.9	0.5	2.6	2.3
D41	5	1.9	0.7	3.6	4.4
D33	4	2.4	0.9	5.9	20.9
D32	4	1.5	0.4	2.6	3.3
D31	15	1.4	0.0	6.1	4.1
D23	4	2.1	1.2	3.0	16.3
D22	4	0.6	0.3	1.0	9.7
D21	9	1.3	0.5	2.9	5.3
D13	2	0.5	0.4	0.5	40.0
D12	3	1.1	0.6	1.9	19.8
D11	8	1.8	0.0	5.3	15.2
C7	14	0.6	0.0	2.5	695.0
C62	10	1.3	0.0	4.2	15.4
C61	8	1.9	0.8	3.8	3.2
C6	7	2.4	1.1	4.6	
C52	4	0.9	0.5	1.4	10.0
C51	4	2.0	0.7	4.8	2.0
C5	5	2.9	0.8	4.8	
C42	8	2.5	0.3	5.2	7.7
C41	9	1.3	0.3	3.8	2.3
C4	2	3.9	1.0	6.7	
C32	6	2.0	0.2	5.0	8.7
C31	9	1.1	0.2	2.0	1.8
C22	2	3.1	2.1	4.1	2.4
C21	3	0.8	0.6	1.0	1.2
C2	5	3.2	0.6	6.6	
C12	13	1.9	0.4	3.5	7.5
C11	27	1.2	0.0	5.9	2.6
C1	1	6.6	6.6	6.6	
CL2	5	0.6	0.2	0.8	17.1
CL1	11	0.8	0.1	2.3	6.1
B452	10	0.7	0.0	2.0	51.4
B451	3	1.0	0.5	1.6	1.2
B45	5	1.2	0.5	3.0	
B442	23	0.9	0.2	2.0	7.1
B441	16	0.8	0.1	1.5	2.6
B44	22	1.4	0.2	4.8	

Seam	No. Holes	Thickness (m)			Interburden (m)
		Mean	Minimum	Maximum	Mean
B432	41	2.5	0.2	8.0	5.4
B431	43	2.2	0.2	8.5	1.4
B43	17	5.2	2.2	9.0	
B43L2	5	0.8	0.3	1.7	3.1
B43L1	5	1.0	0.3	2.0	2.3
B43L	16	0.8	0.3	2.1	
B422	16	1.1	0.1	4.6	7.5
B421	12	1.9	0.0	4.6	1.1
B42	48	2.6	0.7	9.5	
B412	8	1.6	0.4	4.8	1.2
B411	23	1.3	0.0	5.0	2.2
B41	61	2.3	0.3	10.5	
B41L	12	1.0	0.3	1.9	4.4
B33	11	1.5	0.7	3.3	
B322	29	2.1	0.4	5.1	0.9
B321	28	2.3	0.0	8.8	1.2
B32	58	4.6	1.3	15.7	
B312	29	2.5	0.0	8.6	2.1
B311	47	1.3	0.0	4.5	1.0
B31	42	3.2	0.4	7.8	
B22	17	3.0	0.5	8.7	6.8
B21	15	2.9	0.6	9.0	1.5
B2	4	5.2	1.0	10.7	
B12	7	4.4	0.9	9.7	17.9
B11	9	2.3	0.0	5.9	1.9
B1	1	5.5	5.5	5.5	
A32	6	1.0	0.2	1.6	52.0
A31	5	1.6	0.0	4.2	2.4
A3	6	2.0	0.3	3.9	
A2	9	1.2	0.7	2.3	5.4
A1	4	0.9	0.4	1.2	7.4

Moisture % ad		Inherent Moisture % ad			Ash % ad			Volatile Matter % ad			Calorific Value kcal/kg ad			Total Sulphur % ad			PSI			Relative density	
Maximum	Mean	Minimum	Maximum	Mean	Minimum	Maximum	Mean	Minimum	Maximum	Mean	Minimum	Maximum	Mean	Minimum	Maximum	Mean	Minimum	Maximum	Mean	Minimum	Maximum
13.0	13.0	0.9	0.9	0.9	53.6	53.6	53.6	13.5	13.5	13.5	3,584	3,584	3,584	0.91	0.91	0.91	1.0	1.0	1.0	1.83	1.83
13.5	13.5	0.7	0.7	0.7	39.8	39.8	39.8	16.8	16.8	16.8	4,971	4,971	4,971	1.21	1.21	1.21	4.9	4.9	4.9	1.63	1.63
17.8	17.8	0.6	0.6	0.6	42.9	42.9	42.9	21.4	21.4	21.4	4,509	4,509	4,509	0.53	0.53	0.53	1.5	1.5	1.5	1.66	1.66
9.8	8.8	0.5	0.6	0.6	28.2	46.6	37.4	19.7	24.1	21.9	4,196	6,125	5,160	0.68	0.82	0.75	2.5	6.4	4.4	1.53	1.71
6.6	6.6	0.4	0.4	0.4	19.1	19.1	19.1	24.7	24.7	24.7	6,759	6,759	6,759	0.95	0.95	0.95	8.3	8.3	8.3	1.49	1.49
14.6	14.6	1.5	1.5	1.5	30.8	30.8	30.8	24.9	24.9	24.9	5,523	5,523	5,523	0.66	0.66	0.66	6.5	6.5	6.5	1.60	1.60
10.0	9.1	0.4	0.6	0.5	18.7	62.5	40.6	15.1	25.6	20.4	2,585	7,095	4,840	0.35	0.83	0.59	1.0	7.0	4.0	1.43	1.94
10.0	10.0	0.5	0.5	0.5	18.4	18.4	18.4	26.0	26.0	26.0	7,032	7,032	7,032	0.96	0.96	0.96	6.4	6.4	6.4	1.46	1.46
7.1	7.1	0.5	0.5	0.5	41.5	41.5	41.5	20.6	20.6	20.6	4,716	4,716	4,716	0.64	0.64	0.64	3.0	3.0	3.0	1.65	1.65
8.1	8.0	0.4	0.5	0.5	14.3	32.3	23.3	26.2	27.7	27.0	5,179	7,337	6,258	0.67	0.90	0.78	1.0	7.0	4.0	1.42	1.59
13.8	13.8	0.5	0.5	0.5	20.3	20.3	20.3	26.6	26.6	26.6	6,714	6,714	6,714	1.10	1.10	1.10	6.0	6.0	6.0	1.49	1.49
13.8	8.9	0.5	0.6	0.5	20.3	67.4	48.0	11.9	26.6	19.5	2,338	6,714	4,000	0.42	1.10	0.87	1.0	6.0	2.7	1.49	2.02
12.7	12.7	0.5	0.5	0.5	31.1	31.1	31.1	23.0	23.0	23.0	5,604	5,604	5,604	0.93	0.93	0.93	4.5	4.5	4.5	1.55	1.55
7.8	5.7	0.4	0.5	0.5	24.4	37.5	31.0	23.0	27.7	25.4	5,270	6,099	5,685	0.85	1.60	1.23	6.0	7.5	6.8	1.52	1.68
7.8	7.8	0.6	0.6	0.6	40.5	40.5	40.5	19.7	19.7	19.7	4,807	4,807	4,807	1.53	1.53	1.53	3.3	3.3	3.3	1.65	1.65
7.8	7.8	0.4	0.4	0.4	27.0	27.0	27.0	24.0	24.0	24.0	6,205	6,205	6,205	0.70	0.70	0.70	6.0	6.0	6.0	1.53	1.53
12.5	7.9	0.4	0.6	0.5	28.1	48.4	38.3	19.6	23.8	22.2	3,328	6,122	4,856	0.55	1.50	0.95	2.5	7.0	4.3	1.49	1.88
27.4	27.4	6.0	6.0	6.0	34.8	34.8	34.8	31.1	31.1	31.1	3,029	3,029	3,029	0.38	0.38	0.38	0.0	0.0	0.0	2.03	2.03
9.7	6.6	0.4	0.6	0.5	28.1	39.2	34.4	19.0	23.7	22.1	4,895	6,036	5,370	1.17	1.69	1.37	2.0	6.0	3.8	1.60	1.68
6.2	6.2	0.4	0.4	0.4	39.1	39.1	39.1	19.3	19.3	19.3	4,933	4,933	4,933	0.66	0.66	0.66	4.5	4.5	4.5	1.62	1.62
9.1	6.2	0.3	1.3	0.6	25.0	61.0	43.2	15.6	27.8	20.7	2,522	6,432	4,491	0.44	1.72	0.91	1.0	7.5	4.1	1.49	2.09
11.6	7.8	0.4	0.7	0.5	28.8	60.5	42.3	15.1	24.8	20.3	2,761	5,660	4,559	0.46	1.39	0.84	1.0	7.5	4.1	1.60	1.97
10.8	8.1	0.4	0.7	0.5	19.8	55.5	35.2	15.6	25.2	22.0	3,327	6,955	5,217	0.44	1.26	0.88	1.0	9.0	5.1	1.43	1.92
13.7	7.9	0.4	4.3	1.0	20.7	64.1	40.3	13.9	27.0	20.9	2,353	6,475	4,555	0.28	1.78	0.92	0.0	6.5	3.6	1.46	2.23
13.1	10.0	0.3	0.7	0.5	20.5	46.0	34.4	17.7	26.6	21.1	4,304	6,172	5,310	1.03	2.49	1.43	2.1	8.0	4.3	1.47	1.73
13.7	6.7	0.4	4.3	0.9	15.8	50.2	35.8	16.6	26.6	20.7	3,797	7,093	5,054	0.49	1.39	0.90	0.0	8.5	4.6	1.42	1.86
6.4	4.0	0.4	0.7	0.6	30.5	41.5	36.0	19.1	19.5	19.3	4,954	5,851	5,403	0.48	1.04	0.76	3.5	7.5	5.5	1.57	1.67
10.4	9.7	0.4	0.6	0.5	45.0	62.8	53.1	15.7	19.5	17.0	2,905	4,293	3,581	0.34	1.52	1.11	1.0	3.5	2.2	1.73	1.95
6.4	6.4	0.4	0.6	0.5	22.5	30.5	26.5	19.1	27.4	23.3	5,851	6,326	6,089	1.04	1.16	1.10	7.5	9.0	8.3	1.55	1.57
11.4	10.7	0.4	1.1	0.8	39.1	49.5	45.1	17.1	19.1	18.0	4,000	5,032	4,368	0.38	1.72	1.08	2.0	5.0	3.1	1.62	1.90
15.0	10.0	0.3	1.9	0.8	18.5	78.1	33.2	10.8	27.5	22.2	1,069	6,665	5,162	0.40	1.45	0.96	0.0	8.3	4.6	1.40	2.24
10.2	7.4	0.4	1.1	0.7	28.6	55.9	38.9	15.3	26.2	20.2	3,365	5,383	4,835	0.35	1.28	0.86	1.4	5.0	2.9	1.57	2.02
10.6	9.8	0.4	0.7	0.6	18.8	59.4	38.4	16.3	25.4	20.4	2,812	6,372	4,815	1.05	1.30	1.19	1.5	8.0	5.0	1.43	1.89
13.6	8.9	0.3	0.8	0.5	15.5	78.4	28.8	12.1	29.9	23.0	796	6,802	5,637	0.31	1.81	1.10	0.0	8.5	6.7	1.43	2.34
14.6	11.9	0.3	1.1	0.6	21.9	55.6	36.7	17.0	28.8	21.6	3,208	6,531	4,969	0.31	1.44	0.98	2.1	8.9	6.1	1.45	1.95
12.2	11.4	0.5	0.9	0.7	18.9	60.0	33.5	21.1	27.8	23.8	2,747	6,805	5,087	0.20	1.23	0.82	1.0	7.1	5.1	1.40	2.00
10.8	7.8	0.4	0.4	0.4	15.8	20.4	18.1	21.2	22.2	21.7	6,765	7,153	6,959	0.91	1.00	0.96	8.0	9.0	8.5	1.43	1.46
17.4	11.0	0.4	3.1	0.9	17.0	43.6	25.9	18.7	29.6	22.6	4,219	7,184	5,815	0.37	1.14	0.82	0.0	8.3	4.9	1.41	1.70
18.5	9.2	0.3	21.9	1.6	12.8	45.1	24.1	17.6	29.4	22.8	4,448	7,199	6,205	0.50	2.07	1.19	0.0	8.8	7.0	1.37	1.72

13.9	10.2	0.3	0.6	0.5	19.2	33.9	24.1	18.6	23.7	21.0	4,983	7,019	6,230	0.83	1.47	1.16	5.5	8.5	7.3	1.41	1.62
8.6	8.2	0.4	0.5	0.5	11.6	32.9	22.3	23.8	24.7	24.3	5,069	7,183	6,126	0.69	0.94	0.81	7.5	9.0	8.3	1.39	1.67
14.1	9.3	0.3	0.4	0.4	16.2	32.7	23.0	21.1	25.2	23.7	5,397	7,091	6,305	0.89	2.35	1.39	5.5	8.5	7.7	1.45	1.68
12.8	12.7	0.4	0.4	0.4	22.2	27.0	24.6	21.1	21.8	21.5	6,012	6,311	6,162	0.87	1.18	1.03	7.9	8.0	8.0	1.50	1.55
14.3	13.8	0.8	1.7	1.2	11.2	57.5	34.3	16.0	23.6	19.8	2,834	6,948	4,891	0.61	1.76	1.19	0.0	2.7	1.4	1.49	1.97
34.8	16.5	0.5	8.3	3.1	22.4	41.1	33.1	20.9	30.7	27.1	1,948	6,184	4,282	0.18	0.72	0.53	0.0	5.8	3.8	1.47	1.91
8.3	6.3	0.4	0.5	0.5	10.4	37.7	24.0	21.0	29.3	25.2	5,144	7,310	6,227	0.73	0.80	0.77	5.1	7.0	6.0	1.34	1.60
11.3	5.5	0.3	1.4	0.8	16.4	49.6	29.2	18.1	25.0	22.5	3,615	7,190	5,753	0.73	1.21	0.92	1.0	8.5	4.2	1.39	1.76
1.9	1.9	0.4	0.4	0.4	26.8	26.8	26.8	22.0	22.0	22.0	6,214	6,214	6,214	0.39	0.39	0.39	0.0	0.0	0.0	1.47	1.47

Zag Suuj Summary of Resources 10th January 2013

GROUPS	SEAM	INDICATED	INFERRED	TM	IM	ASH	TS	CV	RD	VM	FC	CSN
D	D43											
	D42											
	D41											
	D33											
	D32											
	D31											
	D23											
	D22											
	D21											
	D13											
	D12											
	D11											
D Sub-Total		-	-									
C	C7		633,046						1.79			
	C62		1,580,209						1.61			
	C61		1,818,675						1.58			
	C52		683,728						1.67			
	C51		2,113,479						1.69			
	C42		3,332,190						1.55			
	C41		1,672,934						1.54			
	C32		945,905						1.54			
	C31		1,138,760						1.81			
	C22		1,015,899						1.59			
	C21		163,624						1.59			
	C12		2,587,190						1.60			
	C11		2,521,135						1.62			
	CL2		25,431						1.63			
	CL1		492,491						1.63			
C Sub-Total		-	20,724,695						1.61			

	B451	2,616	315,082	9.6	0.4	39.1	1.17	4906.2	1.68	19.0	41.5	2.0
	B442	223,801	1,850,446	8.6	0.5	50.0	0.65	3891.1	1.80	17.0	32.5	2.2
	B441	151,647	781,879	9.5	0.5	44.0	0.91	4477.5	1.69	18.3	37.2	3.2
	B432	1,451,752	8,489,777	7.7	0.5	34.1	0.93	5304.5	1.60	22.2	43.3	4.3
	B431	1,819,085	6,713,025	6.7	0.5	28.6	1.02	5905.0	1.53	22.3	48.6	5.8
B4	B43L2	84,851	318,812	4.6	0.6	41.6	0.79	4839.1	1.68	19.3	38.5	3.9
	B43L1	106,454	337,788	9.2	0.5	45.1	1.10	4395.2	1.74	18.7	35.8	4.0
	B422	566,926	3,063,145	8.5	0.4	26.4	1.02	5923.3	1.52	23.1	50.1	6.5
	B421	1,072,893	5,175,655	6.2	0.5	28.8	1.03	5738.8	1.55	23.0	47.7	5.9
	B412	1,318,153	3,829,187	9.7	0.4	25.4	1.01	5719.0	1.54	23.1	50.7	7.0
	B411	1,437,806	3,662,040	9.6	0.4	24.9	1.04	5751.0	1.55	23.9	50.7	7.2
	B41L	84,961	588,695	0.0	0.0	0.0	0.00		1.60	0.0	0.0	0.0
B4 Sub-Total		8,341,918	35,525,150	7.9	0.5	29.2	0.98	5553.0	1.56	22.3	46.9	5.8
	B33	372,487	471,993						1.49			
	B322	2,955,449	7,095,567	10.4	1.4	24.2	1.14	6103.1	1.52	22.6	51.9	7.0
B3	B321	3,693,823	8,206,064	9.4	1.4	27.2	1.09	5987.3	1.54	21.7	50.0	7.2
	B312	2,389,380	5,990,571	8.8	1.6	23.6	1.23	6311.6	1.50	22.2	52.8	7.5
	B311	1,438,886	4,141,792	9.7	3.0	22.2	1.23	6442.7	1.49	23.7	51.3	7.6
B3 Sub-Total		10,850,025	25,905,987	9.6	1.7	24.8	1.16	6156.5	1.52	22.4	51.3	7.3
B2	B22	1,249,440	138,506	9.9	0.5	26.8	1.15	5739.3	1.55	21.1	51.6	7.1
	B21	1,095,006	212,517	10.3	0.4	23.6	1.44	6071.9	1.53	23.6	52.4	8.1
B2 Sub-Total		2,344,446	351,023	10.1	0.4	25.3	1.29	5894.6	1.54	22.3	52.0	7.6
B1	B12											
	B11											
B1 Sub-Total		-	-									
	A32		299,075						1.60			
A	A31		430,785						1.46			
	A2		351,559						1.52			
	A1		107,612						1.42			
A Sub-Total		-	1,189,031						1.51			
TOTAL		21,536,389	83,695,886									