

Tuesday, 2 August 2005

COMPANY ANNOUNCEMENT OFFICE
AUSTRALIAN STOCK EXCHANGE



**PARALANA ORE SYSTEM (EL3258)
WORLD CLASS URANIUM-REE-POLYMETALLIC SYSTEM**

**MT GEE DEPOSIT JORC COMPLIANT RESOURCE
URANIUM (U₃O₈) – 33,200 TONNES
RARE EARTH LANTHANUM-CERIUM – 51,800 TONNES**

**SIGNIFICANT URANIUM POTENTIAL
HIGH GRADE HODGKINSON DEPOSIT
ARMCHAIR AND STREITBERG**

Introduction

Marathon Resources is actively exploring for uranium deposits within South Australia. Its advanced 100% owned uranium-REE-polymetallic project (EL3258) is located in the Mt Painter-Mt Gee area of the North Flinders Ranges, South Australia.

Host to the significant uranium-REE-polymetallic mineralisation are bodies of granitic and haematitic breccia, which extend along northeasterly trending alignment coincident with a prominent tectonic deformation system in the region, the Paralana Fault System. Most of the breccia consists of clasts derived locally from the middle Proterozoic granites known as the Mount Painter Complex. Uranium mineralisation is represented by the primary uranium mineral uraninite, but secondary minerals torbernite and autunite were also identified.

Earlier explorers identified at least seven orebodies and a number of prospects within EL3258 (Figure 1). They form the Paralana Ore System (POS), which extends across the tenement over a distance of 11 – 12 km along the north easterly trend of the Paralana Fault System.

Marathon's study has determined that the Paralana Ore System is associated with a specific basement propagated tectonic deformation system. The orebodies and mineralised zones are structurally controlled and their propagation and locations are confined to specific tectonic features which control mineralised breccia development and distribution, as determined by Marathon's tectogenetic study (see Marathon Prospectus, page 9).

Background

The Paralana Ore System was intensely drilled in the past. Archival database material from an Exoil led consortium of exploration companies ("Exoil") contains 625 drill holes of total length approximately 53,000 meters, drilled between 1968 and 1972. The exploration and evaluation work by Exoil defined a range of 3.8-5.3 million tonnes of uranium mineralisation with a grade range of 1.0kg – 1.2kg U₃O₈ per tonne (2.2lb - 2.8lb) within 5 deposits (Mt Gee, Armchair, Streitberg, Hodgkinson and Radium Ridge) of the Paralana Ore System.

Exoil's estimates of the uranium mineralisation content for each of these deposits are provided in Table 1.

Table 1 Exoil Estimates for Uranium Mineralisation in the POS

Deposit	Tonnes	U₃O₈ tonnes	Grade kg/tonne (ppm)
Mt Gee	2,000,000	2,200	1.1 kg/t (1,100 ppm)
Hodgkinson	220,000	484	2.2 kg/t (2,200 ppm)
Armchair	680,000	680	1.0 kg/t (1,000 ppm)
Streitberg	600,000	600	1.0 kg/t (1,000 ppm)
Radium Ridge	1,730,000	1,211	0.7 kg/t (700 ppm)
Total	5,230,000	5,175	1.0 kg/t (1,000 ppm)

Cut-off grade 0.45 kg/t (450 ppm)

Following Exoil's exploration, the Mt Gee, Armchair and Streitberg deposits were drilled by CRAE (now Rio Tinto) with 68 diamond and RC drill holes of total drilling length 14,531 metres. The CRAE drill holes with symbol PD91 were drilled in 1991, while those with DD 92 in 1992. However, at the completion of exploration CRAE did not calculate a resource and withdrew from the project in 1994.

After CRAE drilling, Goldstream Mining put down 7 holes between 1999 and 2000. More recently Marathon's subsidiary drilled a 636.30 meter long diamond drill hole at the Mt Gee area in 2002 (MTG01, Figure 1). This is the deepest hole within EL3258 as previous exploration focussed on near surface and shallower level mineralisation. Continuous uranium mineralisation along the whole length of the hole is demonstrated, with zones of distinctly elevated uranium contents, including a 124 meters zone of 0.11kg/t U₃O₈ located in the deepest part of the hole. Results of this drilling indicate that potential for uranium-REE-polymetallic mineralisation is not only near surface or at shallow levels, but is open with depth.

Archival Data Integration and Modelling of the Paralana Ore System

The EL3258 archival exploration and drill hole database had never been digitised. In February 2005 Marathon contracted an European consulting group, the Economic Geology Centre at the University of Mining and Metallurgy in Krakow led by Professor Adam Piestrzynski (a member of a number of professional societies including the Polish Geological Society, a Member of the Federation of European Geologists), to review the database, aiming at unification and computerisation of the past exploration data. Based on the digital database generated at the early stage of the project, in particular with the combining of part of the Exoil data (that which was classified as "of high confidence") and all the CRAE drilling data, 3D modelling of the Paralana Ore System was possible.

The computer modelling was conducted in conjunction with Marathon's tectogenetic analysis of the Paralana Ore System. This study provided predictive criteria for interpretation of the POS and its internal structural geometry (including fault network variability), which controls the grade and positioning of mineralised zones, the internal geometry of deposits, and at a larger scale, deposit distribution.

The study also provided sufficient information for the creation of a 3D model of the Mt Gee deposit and for the development of a conceptual exploration and drilling program for the Armchair and Streitberg deposits.

The computer modelling work allowed a JORC compliant resource estimation for the Mt Gee orebody, which has the most advanced and sufficient database (in terms of drilling exploration results). Two cut-off grade values were used: >500 ppm U₃O₈ for higher grade and 300 – 500 ppm for lower grade uranium mineralisation. The latter is consistent with criteria applied in mining of a world-class deposit, the Rossing uranium deposit in Namibia.

MT GEE DEPOSIT – JORC Compliant Resource

33,200 Tonnes of Uranium (U₃O₈) Resource

The Mt Gee deposit is localised within the area of a detailed geophysical gravity survey (Figure 2). The geological and mineralisation model and the resource estimation for the deposit is based on the integrated Exoil and CRAE drilling database. In total 31 Exoil and all CRAE drill holes were satisfactory for the resource calculation. Another 21 positive Exoil holes (>500 ppm) were identified, but were not taken into account in resource estimation because of uncertainty in collar elevations. An example presentation of digitised drill hole data of the host geological sequence is illustrated in Figure 3, and of uranium intervals distribution and content in Figure 4.

The Mt Gee 3D model developed on the basis of the drill hole database is presented in Figure 5. The resource occurs near the surface to the west and continues as a low angle east dipping orebody. The orebody geostatistical model and the kriging method applied determined in total a 33,200 tonne JORC compliant uranium (U₃O₈) inferred resource (Table 2).

Table 2 Resource at Mt Gee Deposit

Uranium (U₃O₈) (tonnes)	Rare Earth Elements Lanthanum-Cerium (La-Ce) (tonnes, in zones >500 ppm U₃O₈ only)
24,800 t inferred resource including indicated resource 3,760 t (Grade >500 ppm cut off)	51,800 t La-Ce inferred resource
8,400 t inferred resource (Grade 300 – 500 ppm)	
Total 33,200 t U₃O₈	Total 51,800 t La-Ce

Note: 500ppm is equivalent to 0.05% and 0.5 kg/tonne

In summary, the uranium resource with a U₃O₈ cut off grade of >500 ppm (>0.05%) is estimated at about 24,800 tonnes. Mean grade is estimated at 730 ppm (0.073%). This resource includes 3,760 tonnes U₃O₈ classified as indicated resource, located in the western part of the deposit and which was intensely explored by Exoil with very close drill hole spacing and assay sampling points (see Figures 2 & 6B.2 Exoil area). The distribution of grade indicates that in the Exoil drilling area grade is about or exceeds 1000 ppm (0.1% U₃O₈), while it appears to be below 1000 ppm grade in areas with the wider spaced drilling pattern used by CRAE (Figures 6A & 6B). A number of higher grade intersections (>1000 ppm or >0.1%) were recorded in

drill hole data for this area and it is anticipated that the tonnage and average grade of the deposit may increase with closer drill hole spacing and with progress of exploration drilling planned for later this year.

In drill holes adjacent to zones with >500 ppm cut off, lower grade zones of the 300 - 500 ppm are present. These zones have been identified as inferred resource containing in total about 8,400 metric tons U_3O_8 with the mean grade 368 ppm.

Drilling data indicates that a large number of Exoil drill holes stopped within the mineralised zones (see bottom of holes in Figure 4). It is one of the Marathon's exploration goals to re-drill some of these areas to intersect the full thickness of mineralised zones and in this way increase the orebody resource.

The grade distribution data (Figure 6A), thickness of ore zones (up to about 30 m, Figure 7A) and interpreted accumulation U_3O_8 index (up to 90 kg/m² in richer zones, Figure 7B) indicate continuity of mineralisation and resource within the orebody, with further exploration potential open in all directions.

The JORC compliant resource estimation indicates a considerably larger tonnage for the Mt Gee deposit alone (33,200 tonnes of U_3O_8 inferred resource, Table 2) compared to the range 3,800 – 5,300 tonnes of mineralisation calculated by Exoil for five deposits of the Paralana Ore System combined (Mt Gee, Armchair, Streitberg, Hodgkinson and Radium Ridge; see Table 1). Marathon's conclusion is that significantly larger potential of the Paralana Ore System should now be considered over those predicted by these earlier estimates.

51,800 Tonnes of Lanthanum-Cerium (La-Ce) Resource

The mineralogical and assay data obtained from the chemical analysis of drill hole samples indicates that U_3O_8 mineralisation is accompanied by intensive development of the REE, in particular La-Ce. Previous exploration did not focus on mineralisation other than uranium. As a result, in many drill holes assays are incomplete without La-Ce/REE analysis. Marathon's MTG01 drill hole confirms the strong La-Ce enhancement with depth in U_3O_8 rich zones.

Marathon's estimation indicates about 51,800 tonnes of La-Ce JORC compliant inferred resource within the Mt Gee deposit (Table 2). The reliability of these calculations is, however, lower than estimates for uranium, although sufficient to yield an inferred resource. The grade distribution map shows interpreted values up to 1900 ppm (0.19% per tonne) (Figure 8A) and accumulation index up to 210 kg/m² La-Ce (Figure 8B).

In a number of individual drill holes of the POS, the content of these elements is found to be relatively high. For example in drill hole DD92GE46A, the 95.8 – 101.56 metre interval gives 0.37% (3,722 ppm) Ce-La combined grade. Published data indicates up to 1.37% (13,700 ppm) Cerium and an average content of 0.61% (6,100 ppm) in the haematitic breccia near Mt Painter is on record. Further potential of the Paralana Ore System for La-Ce/REE is significant.

Rare earth elements are key ingredients to many new technology applications, such as modern rechargeable batteries and high intensity permanent magnets used in mobile phones, cars and computers. While they have long been applied in lasers and in specialty glass manufacture, their use in hybrid vehicles has dramatically increased the potential market.

China is the largest miner of rare earths, with some 80% of the world's production, providing rare earths concentrates or final refined products. Total world consumption is around 90,000 tonnes. The growth markets for rare earth products are batteries and magnets used in mobile

phones, computers and hybrid cars, with hybrid car technology holding out potential for the most rapid growth. The market for rare earth related products grew rapidly over the past decade. The current price of cerium oxide and lanthanum oxide is about \$US3.50 per kg.

HODGKINSON DEPOSIT - High Grade Uranium Orebody

The Hodgkinson deposit was discovered and drilled by Exoil and mineralisation differs from that in other known deposits of the POS. Uraninite is mostly associated not with haematite, but occurs as fracture fillings in altered microcline within granitic breccia and rebrecciated breccia. Generally, the geological database is poor as the Exoil exploration focused on uranium mineralisation with limited attention to geology and other mineralisation (La-Ce/REE, Mo and Cu) documented in other parts of the Paralana Ore System.

A total of 57 open percussion drill holes have been recorded from the Exoil database, which contains in total 116 drill holes in the Hodgkinson area. Overall, 44 holes are positive with >500 ppm U₃O₈ and another 13 holes with <500 ppm U₃O₈ content. Tectogenetic interpretation of the data indicates that uranium mineralisation is structurally controlled and concentrated within one or two uranium-rich zones. Sometimes, however, up to five uranium-bearing horizons are present. The total thickness of mineralised zones is variable and ranges from several metres up to about 40 meters (Table 3).

Table 3 Selected Drill Hole Intersections, Hodgkinson Deposit.

Drill hole JH72				Drill hole JH15			
depth of top [m]	depth of bottom [m]	thickness	U3O8 (ppm)	depth of top [m]	depth of bottom [m]	thickness	U3O8 (ppm)
67.1	68.6	1.524	650	54.9	56.4	1.524	1400
70.1	71.6	1.524	830	56.4	57.9	1.524	2600
71.6	73.2	1.524	16500	57.9	59.4	1.524	2400
73.2	74.7	1.524	24000	59.4	61.0	1.524	3900
74.7	76.2	1.524	7400	61.0	62.5	1.524	4900
76.2	77.7	1.524	3000	62.5	64.0	1.524	4900
79.2	80.8	1.524	1400	64.0	65.5	1.524	5500
80.8	82.3	1.524	2100	65.5	67.1	1.524	2400
82.3	83.8	1.524	1400	67.1	68.6	1.524	4200
86.9	88.4	1.524	2100	68.6	70.1	1.524	2800
88.4	89.9	1.524	2300	70.1	71.6	1.524	2800
89.9	91.4	1.524	1500	71.6	73.2	1.524	1500
91.4	93.0	1.524	1100	73.2	74.7	1.524	3800
93.0	94.5	1.524	1100	74.7	76.2	1.524	3400
94.5	96.0	1.524	1500	76.2	77.7	1.524	7200
96.0	97.5	1.524	1400	77.7	79.2	1.524	1000
102.1	103.6	1.524	1900	79.2	80.8	1.524	5500
103.6	105.2	1.524	600	80.8	82.3	1.524	3900
105.2	106.7	1.524	600	82.3	83.8	1.524	2600
				83.8	85.3	1.524	2300
				85.3	86.9	1.524	3200
				86.9	88.4	1.524	3100
				88.4	89.9	1.524	2200
				89.9	91.4	1.524	1000
				91.4	93.0	1.524	1300
Total thickness 28.95m				Total thickness 38.10m			

In the early 70's Exoil estimations produced a figure of 220,000 tonnes at a grade of 2.2 kg/t within the Hodgkinson orebody (Table 1). These calculations, together with assay results from individual drill holes, indicate that the uranium mineralisation of this orebody represents the

highest grade intersections found within the Paralana Ore System at this stage. Numerous intersections with grade between 0.5% and 1.0% were recorded. Some spectacular intersections were identified, such as 1.65% U_3O_8 (16,500 ppm) from 71.63 - 73.15 metres and 2.40% U_3O_8 (24,000 ppm) from 73.15 - 74.68 metres in drill hole JH72 and an average grade of 0.37% U_3O_8 (3,757 ppm) within an interval 38.10 metres thick in drill hole JH15 (Table 3).

The significant high grade mineralisation potential of the Hodgkinson deposit has been demonstrated in the Exoil database. Marathon's re-assessment, in conjunction with the EGC consultants, is currently underway to validate the deposit size and nature, including structural controls and a tectogenetic model for the mineralisation. A detailed gravity survey similar to that done for the Mt Gee deposit is also planned to be carried out prior to resource drilling.

ARMCHAIR AND STREITBERG DEPOSITS - Advanced Exploration Stage

The Armchair and Streitberg deposits occur within breccia material identified northeast of the Mt Gee deposit (Figure 1). Previous exploration was conducted by both Exoil and CRAE. These two deposits occur in close vicinity and are considered by Marathon as a single advanced exploration area.

Both Armchair and Streitberg areas were drilled by Exoil and from the existing database 44 drill holes and 17 drill holes respectively were identified as having a sufficiently "high level of confidence" for satisfactory application to deposit reassessment. For the Armchair deposit, 25 drill holes were considered positive, with >500 ppm U_3O_8 grade, while for the Streitberg deposit, 10 drill holes were positive. Marathon's analysis of the data indicates that the Exoil's exploration drilling produced a number of intersections with grade well above 0.1% (>1000 ppm).

At Armchair, Exoil estimated 680,000 tonnes of uranium mineralisation averaging 0.1% U_3O_8 (680 tonnes of U_3O_8), and, at Streitberg, 600,000 tonnes at the same average grade (600 tonnes U_3O_8). Later exploration drilling carried out by CRAE at both the Armchair and Streitberg areas concluded without resource calculation.

The Armchair-Streitberg area appears to represent a similar mineralisation style and grade as the Mt Gee orebody. Exploration both by Exoil and CRAE was focused on the near surface potential and, as a result, the bulk of the known mineralisation is located very close to the surface.

The area shows further excellent exploration potential for uranium as well as La-Ce/REE and polymetallic components (Mo, Cu). To supplement and upgrade the geological and mineralisation database generated by Exoil and CRAE, and to prepare for resource assessment based on geostatistics and kriging, additional diamond drilling of the deposit area is required. The locations of five proposed diamond drill holes are shown in Figure 1.

OTHER DEPOSITS

Radium Ridge Deposit – Proven Exploration Potential

The Radium Ridge deposit is located to the northwest of the Mt Gee deposit (Figure 1). Marathon's recent review of the database indicates that within the deposit Exoil drilled at least 79 exploration holes of which 39 contain grades over 500 ppm U_3O_8 with the rest (40 holes) less than 500 ppm.

Current data indicates that uranium mineralisation is mostly concentrated at very shallow levels, near the surface. A total of 1,730,000 tonnes of mineralised material containing 1,211 tonnes U_3O_8 at an average grade of 0.7 kg/t is shown in the Exoil database.

Published data indicates the presence of higher grade mineralised zones. The data includes small tonnage of uranium ore mined out from underground workings, immediately after the discovery of Radium Ridge in the early 20th century. From underground, 300 tons (~300 tonnes) of uranium mineralisation containing 0.5% U_3O_8 , and even higher grade material in the range 0.75 – 1.0% U_3O_8 , was reported.

The Radium Ridge deposit and its extensions are highly prospective and Marathon considers its exploration and drilling a high priority.

East Painter Deposit – Proven Exploration Potential

The East Painter deposit (Figure 1) was explored by the Department of Mines and Energy during the period 1946-1950. Investigation at the East Painter area has shown a broad general relationship between rock structure and the low grade uraniferous breccia masses. According to published data, identified mineralised material contains “probably about 10 million tones low grade uraniferous breccia averaging about 0.31b U_3O_8 per long ton”.

The published data also indicates that exploration included 2,714 ft (827 metres) of adit levels and 7,099 ft (2,164 metres) of diamond drilling, and that only about 10% of the total volume of the breccia body was tested. Higher grade zones, such as 500 tons 0.33% U_3O_8 are on the record, and high grade mineralisation also occurs in small localised veins outside of the breccia zones.

Marathon’s ongoing review of the archival database has identified several drill holes which intersected uranium mineralisation, including three holes (EP8, EP18 & EP21) with >500ppm U_3O_8 and seven (EP9 – EP13, EP19 & EP27) holes with <500 ppm contents.

Further exploration potential exists and Marathon plans to develop an exploration program to drill test the deposit.

CONCLUSION – PROJECT STATUS

In February 2005 Marathon commenced a comprehensive review of the EL3258 database. The results of the work, carried out in conjunction with EGC, indicate that the Paralana Ore System is a world-class uranium-REE-polymetallic system. The system contains seven deposits and a number of exploration prospects widespread along its 11- 12 km extension.

The Mt Gee orebody, with a 33,200 tonnes U_3O_8 inferred resource (including 3,760 tonnes indicated resource) and 51,800 tonnes La-Ce inferred resource, demonstrates the capacity for large scale deposits within the Paralana Ore System.

The Hodgkinson deposit (484 tonnes of mineralisation with an average, grade U_3O_8 of 0.22%, with up to 2.4% U_3O_8 on record) displays significantly higher grade than other POS deposits and shows that high grade mineralisation exists within the Paralana Ore System. Further assessment is being carried out prior to planning of a drilling program.

The Armchair-Streitberg deposit area (1,280 tonnes of mineralisation with an average grade 0.1% of U_3O_8) is classified as highly prospective. The advanced exploration stage requires further drilling which will be conducted in conjunction with drilling of the Mt Gee deposit.

A number of other areas within the POS are classified as displaying significant exploration potential. The Company's exploration strategy is to expand its knowledge of the POS by incorporating these lesser explored areas as well as small historic diggings into its ongoing exploration program.

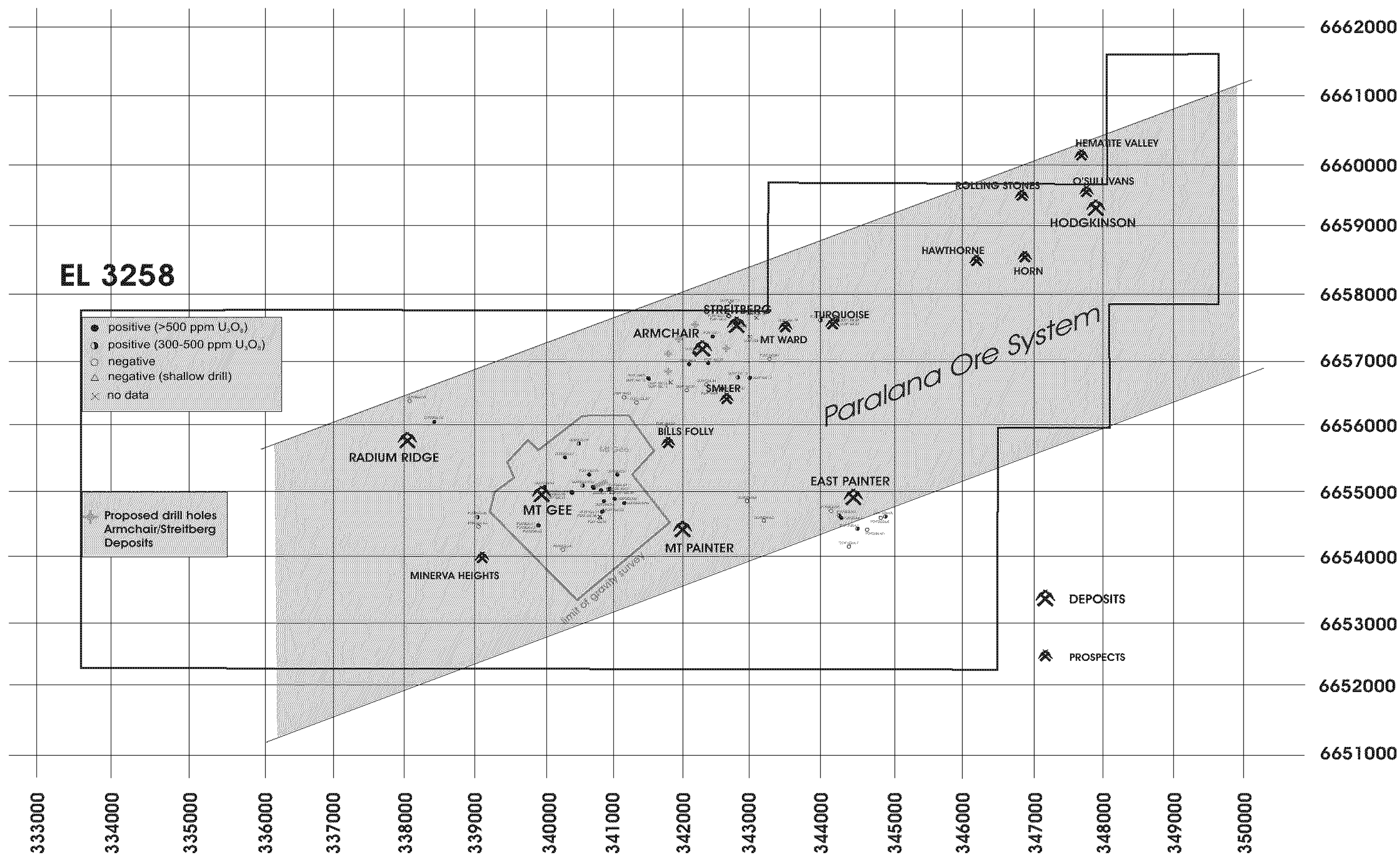
Tectonic deformation style controls the development and mineralisation pattern. The re-assessment of the POS database in its tectogenetic context provided predictive criteria for the interpretation of tectonic features which control positioning and the internal geometry of mineralised zones and, at a larger scale, ore zone and deposit distribution.

The mineralisation occurs predominantly along N-S and WNW-ESE and SW-NE oriented structures, with the overall ore system trend consistent with the northeast orientation of the Parana Fault System. Marathon's exploration model indicates significant further potential in a repetitive pattern of mineralisation both along strike and with depth. Marathon's MTG01 drill hole, which intersected 636 meters of continuous uranium mineralisation, supports this model.

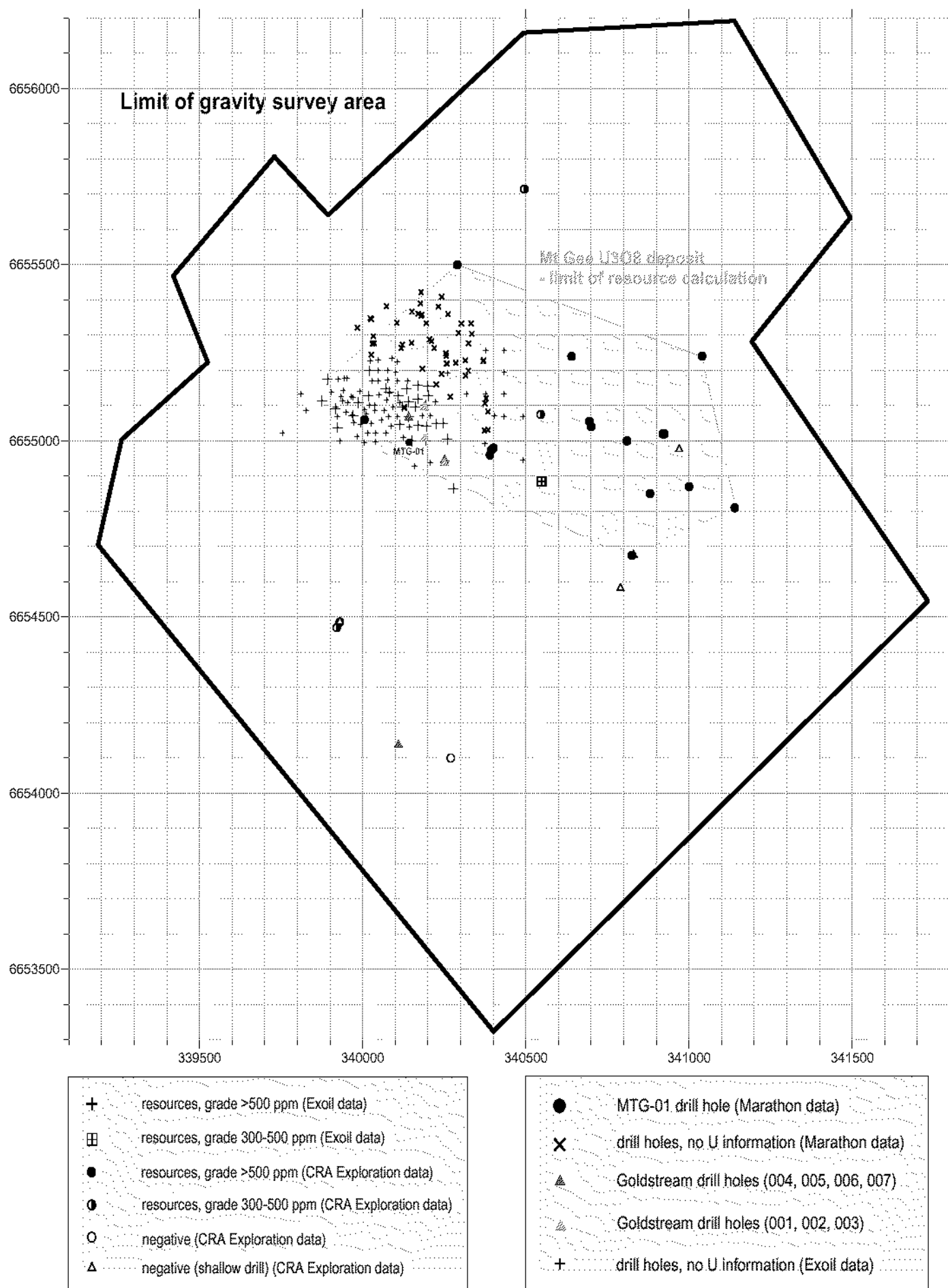
The information in this report has been compiled by Dr Vic W Bogacz, Executive Director of Marathon Resources Ltd, who is a Member of the Australian Institute of Geoscientists and the Polish Geological Society, a Member of the Federation of European Geologists. Dr Bogacz is also a member of the international Society of Geology Applied to Mineral Deposits. Dr Bogacz has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration to qualify as a Competent Person for the purposes of the 2004 Edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves.

Contact	Dr John Santich Chief Executive Officer	Dr Vic W Bogacz Executive Director (Technical)
Company Code	MTN	
Telephone	(08) 8366 2500	
Facsimile	(08) 8362 5955	
Web	www.marathonresources.com.au	

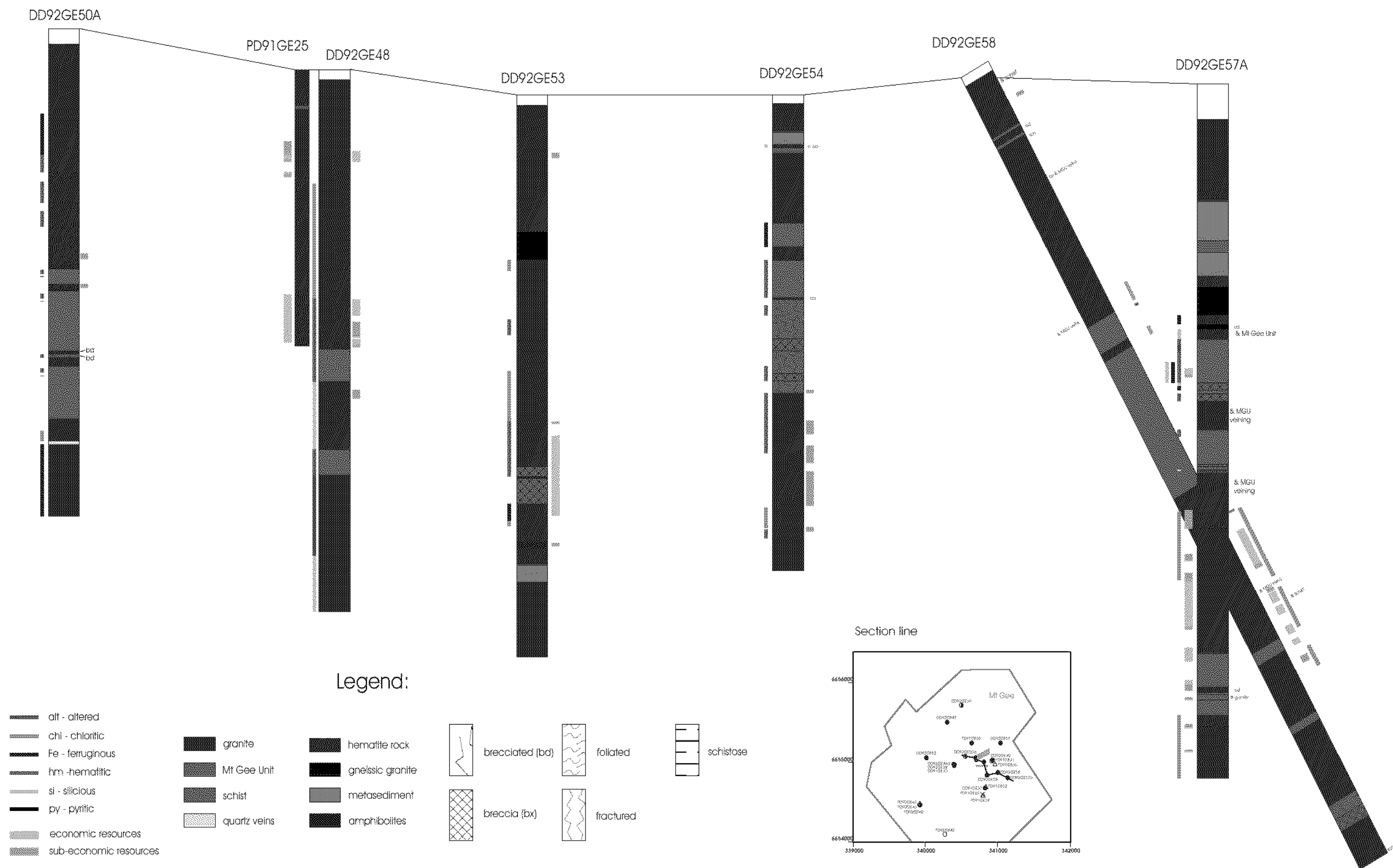
Figure 1. Location Plan EL 3258. Paralana Ore System Deposits and Prospects



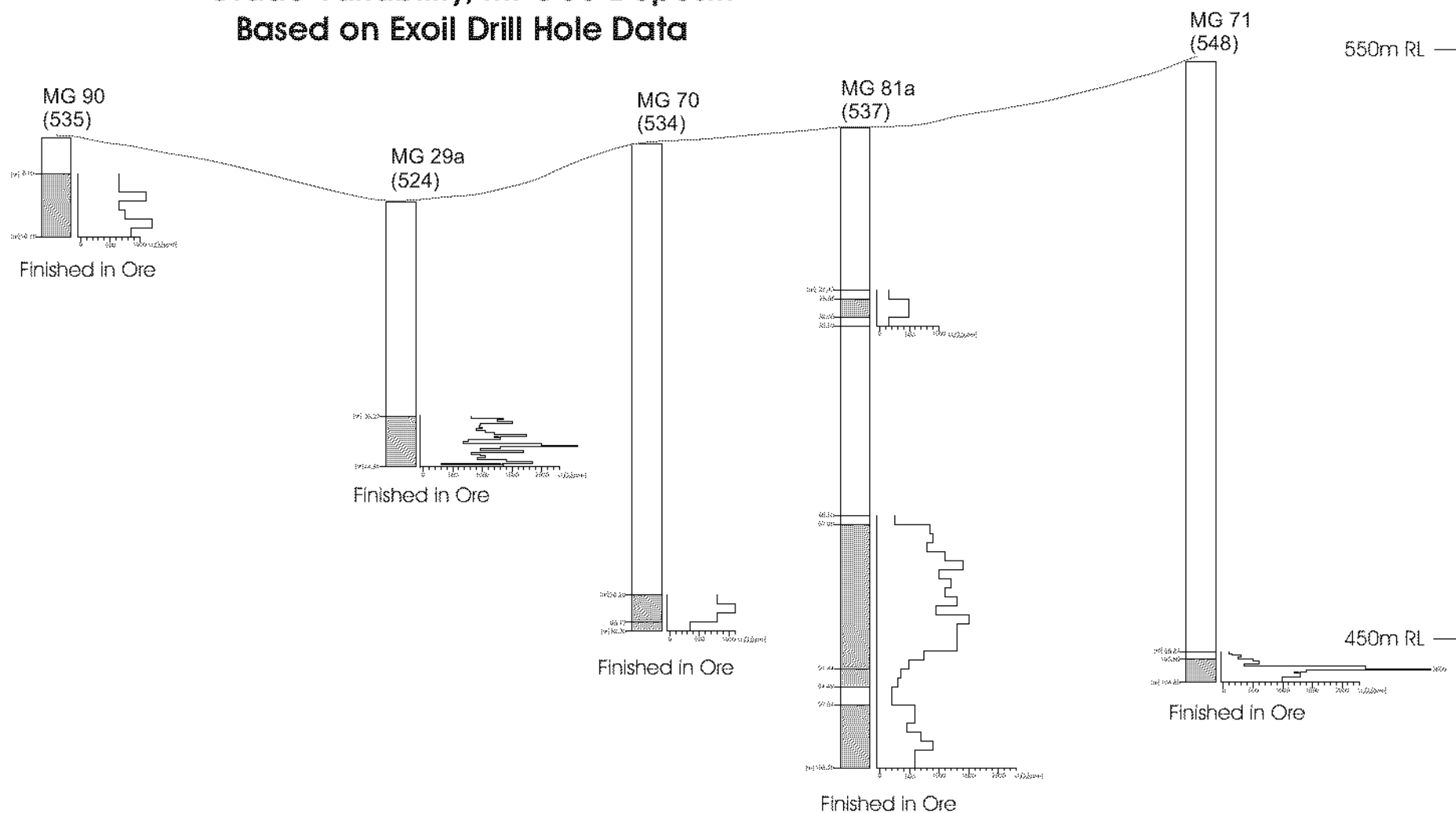
**Figure 2. Detailed Gravity Survey Area, Exploration Drill Hole Locations
Mt Gee Deposit**



DD92GE50A



NE



Scale 1:1000

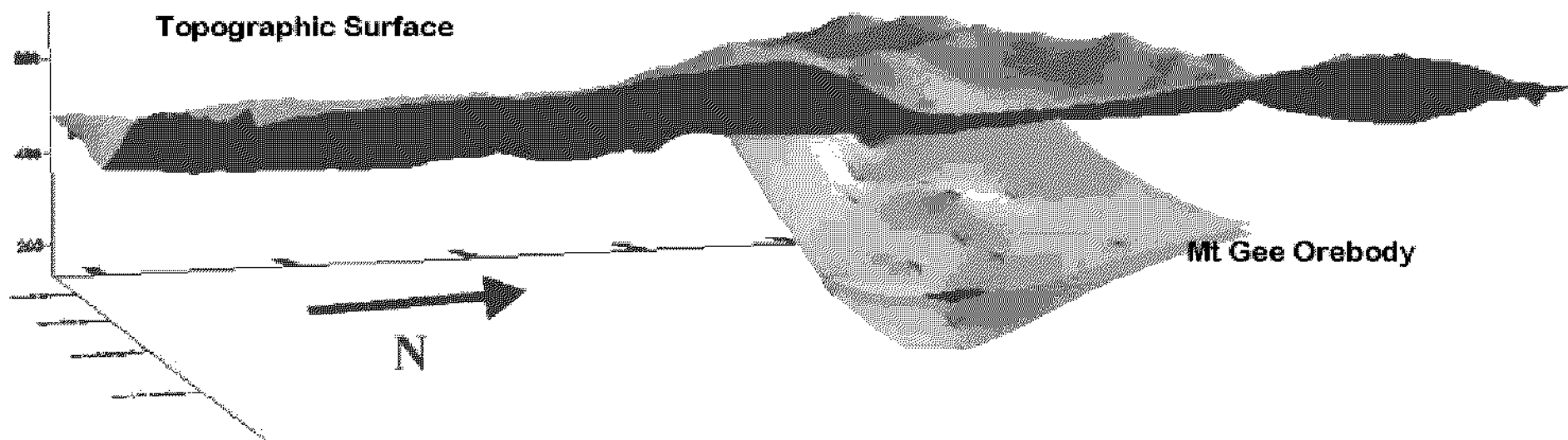


Figure 5. The Mt Gee Ore Body Model

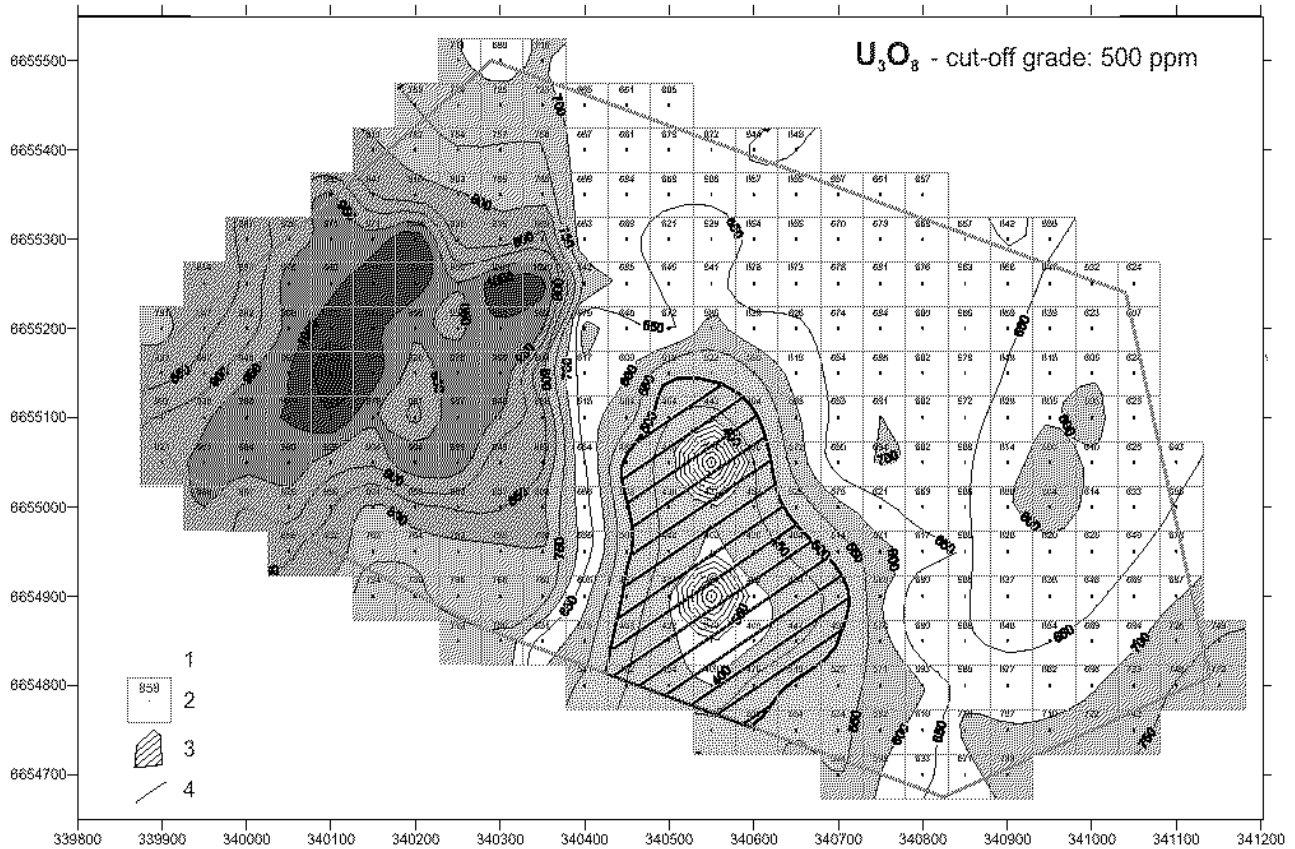


Figure 6A. U_3O_8 content [ppm], resource of $U_3O_8 > 500$ ppm; (block and point kriging: 50x50 m). 1 - limit of the estimation area, 2 - estimation block; mean U_3O_8 content in the block (block kriging, 50x50 m), 3 - area excluded from the resource estimation, 4 - U_3O_8 content contours (point kriging, 50x50 m)

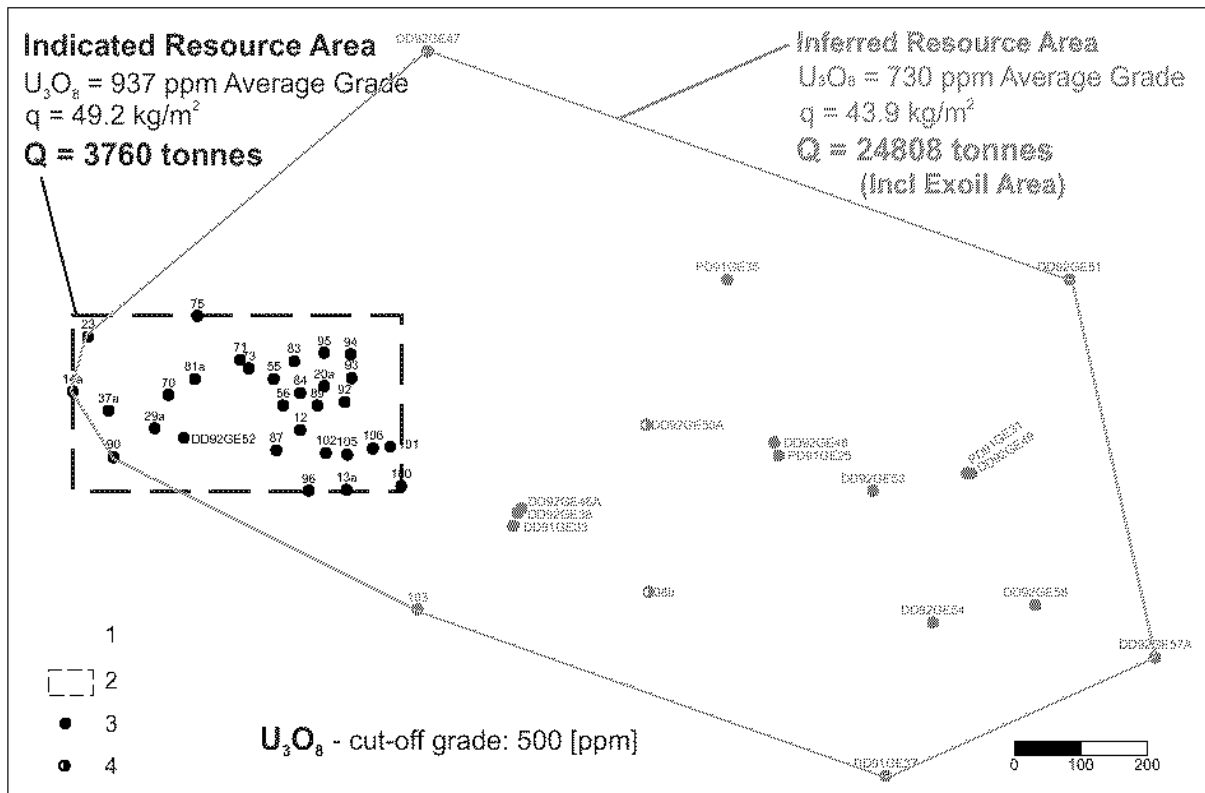
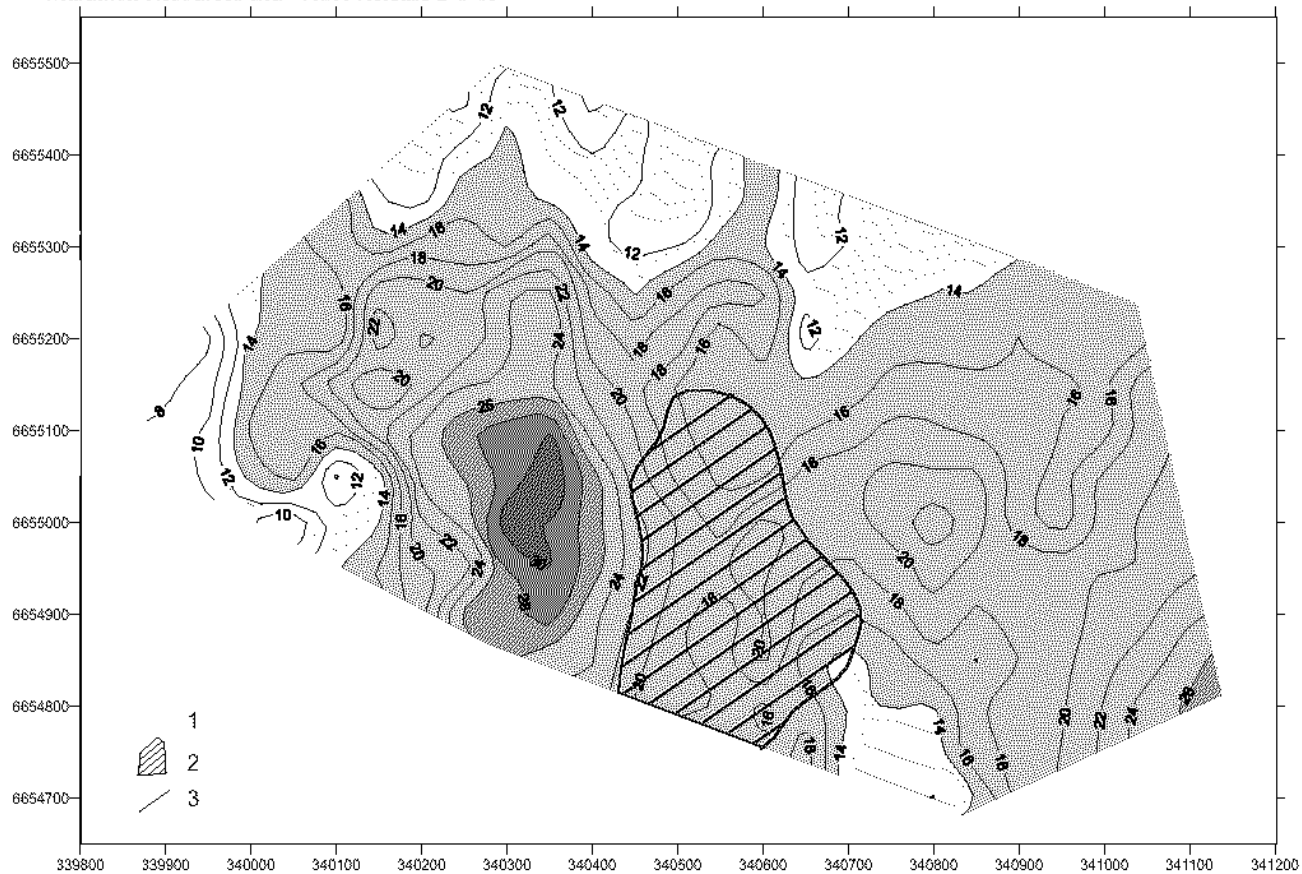


Figure 6B. Mt Gee deposit, U_3O_8 parameters and resources.

1 - Resource area, 2 - Exoil area, 3 - Drill holes with >500ppm U_3O_8 content, 4 - Drill holes with 300-500 ppm U_3O_8 content, q - accumulation index U_3O_8 kg/m², Q - resources.



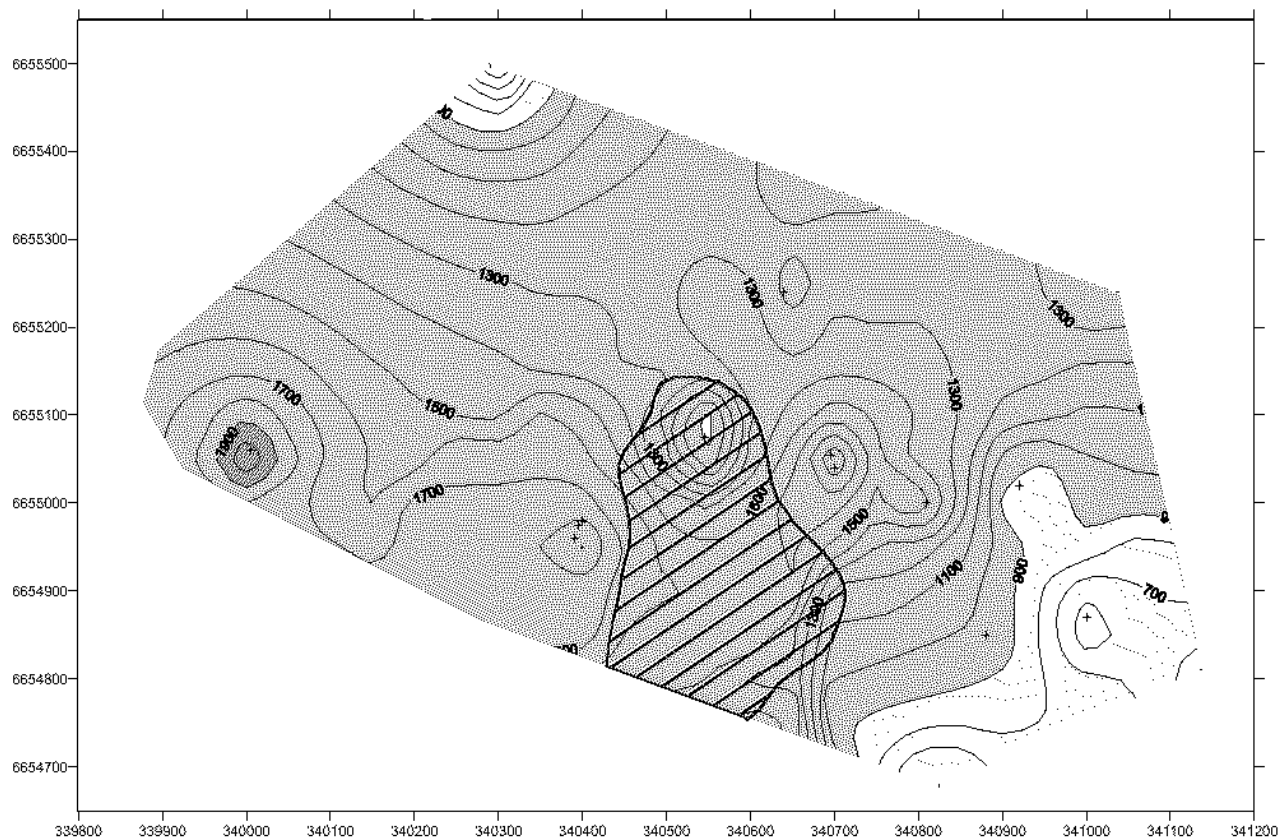


Figure 8A. La+Ce content [ppm].

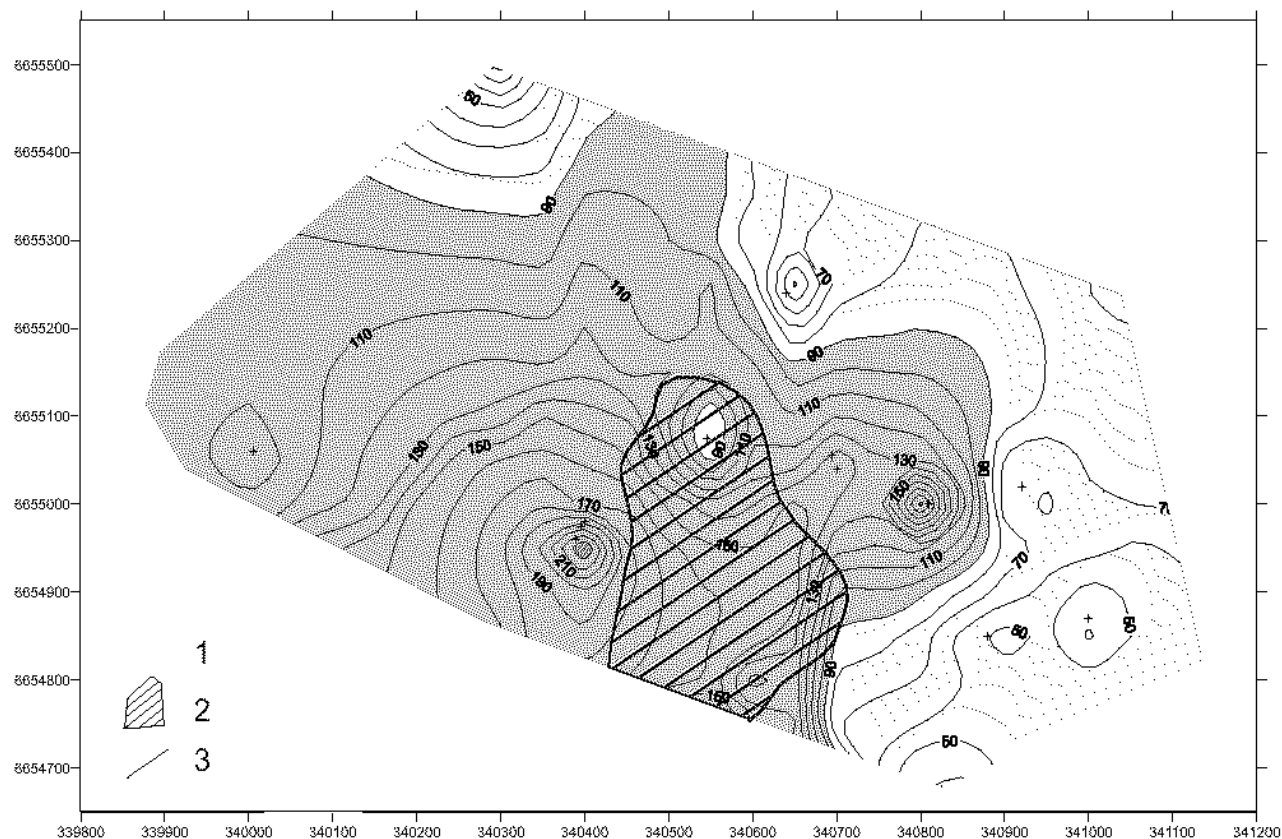


Figure 8B. Accumulation index La+Ce kg/m² within U₃O₈ >500 ppm limit (point kriging: 50x50 m).

1 – limit of estimation area, 2 – area excluded from the resource estimation, 3 – accumulation index contour lines (point kriging, 50x50 m)