1 Dai-Uul Project (Licence 14048X)

1.1 Project Description

Lotus's Dai-Uul project is located in Mongolia's southern eastern region approximately 300 km from Ulaanbaatar. The project lies within Mongolia's Dornogobi Province and covers an area of 0.83km^2 in gently undulating terrain on the northern periphery of the Gobi desert. This region forms part of the Gobi high plain located at an altitude of 1000 and 1100m ASL, (Figure 1.1).

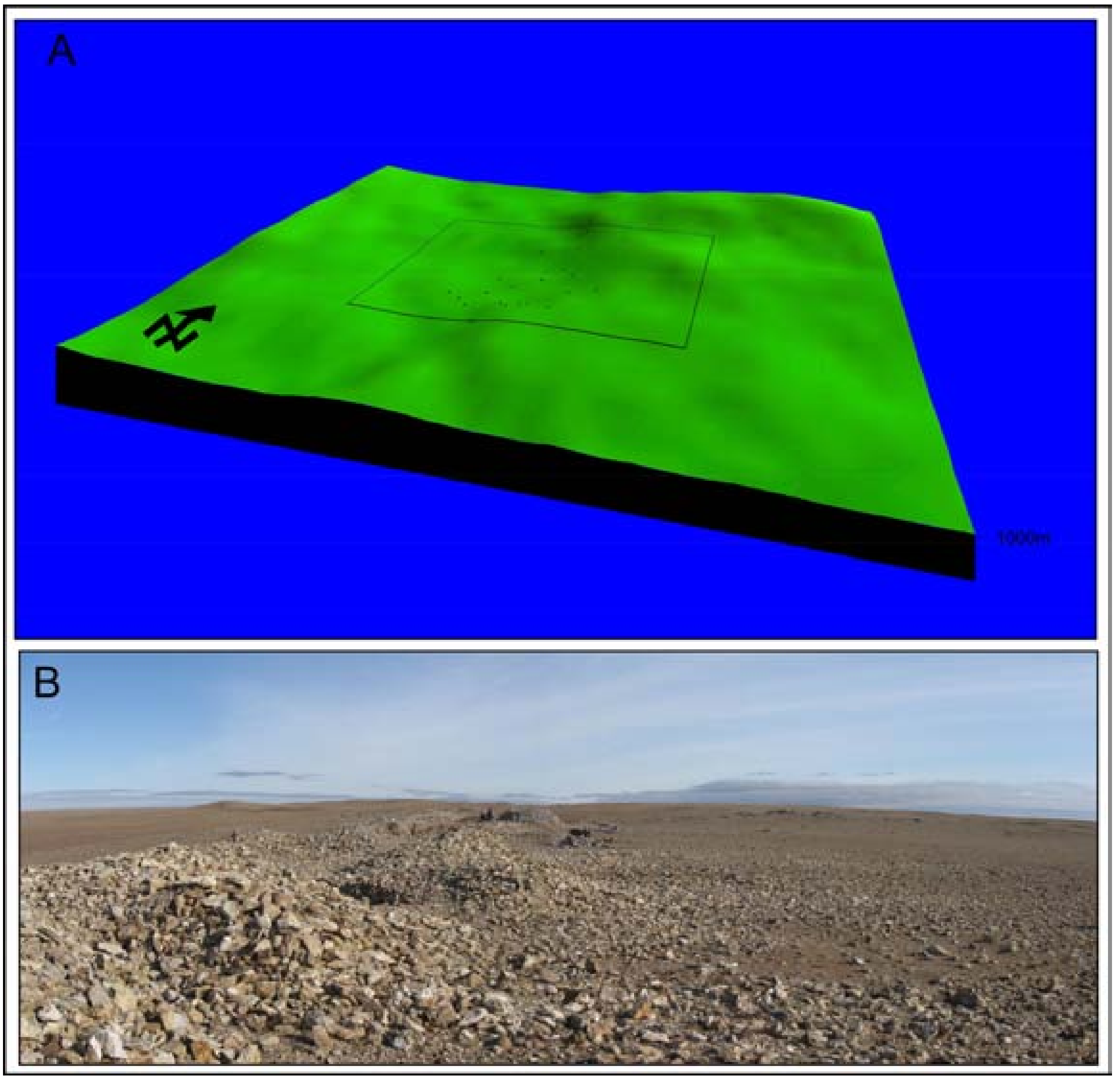

Figure 1.1 Three dimensional view of the Dai-Uul licence area. View of the Dai-Uul area looking north. Waste piles from pilot mining visible on the left of the picture.

The region is sparsely populated with moderate to well developed infrastructure. The nearest town, Airag, is located some 35 km to the west of the project area and has a population of approximately 2000 people, basic facilities and accommodation. The nearest high voltage power-line and a siding of the Trans-Mongolian railway is also located at Airag. Currently access to the project area is via unsealed roads accessible all year around.

Interest in the Dai-Uul area is largely based on the systematic geological work conducted by state geological teams between 1950 and 1990, which resulted in the first detailed geological maps for the region. It was not until the discovery of the Bor-Ondor fluorspar deposit (currently the largest fluorspar mine in Mongolia) in 1956 by the State Agency, that the area was recognised for its mineral wealth and occurrences of fluorspar mineralisation. Bor-Ondor mine is located approximately 25km to the northwest of the Dai-Uul area.

1.2 Project Status

Small-scale pilot mining via trenching (which is permitted during the exploration period) has been undertaken at the project. The average daily production of fluorite mineralisation (hand-sorted) was about 4 tonnes. A total of 400t of ore was permitted to be extracted under the exploration licence agreement.

The Dai-Uul exploration license (No. 14048X) was transferred to the joint venture company called Lotus Dai-Uul LLC on 23 April 2009 in which the company initially had a 51% interest. On 12th of January 2010 Lotus Dai-Uul LLC acquired the remaining 49% in the joint venture which is now incorporated in Lotus Minerals Mongolia LLC. Lotus Minerals Mongolia LLC is currently compiling documentation required to convert the exploration licence to a mining licence.

1.3 Exploration and Fluorspar Discovery

Regional systematic geological work was carried out from the early 1950s by joint Russian and Mongolian geological teams. This work included the Dai-Uul region. It led to the discovery of the Bor-Ondor deposit which was first discovered in 1956. Further deposits were discovered in the region and include the Saikhan Gashuun deposit, the Bor Khujir and Tsagaan Undur deposits in 1965 respectively. The push for reconnaissance work, exploring, mining, processing and exporting fluorspar mineral, at the time, was part of the country's strategic and commercial strategy.

More detailed exploration work was carried out in the Bor-Ondor area between 1976 through to the 1990s. Exploration mapping at 1:50,000 scale together with hydro-geological and topographic mapping occurred between 1976 and1982.

Between 1970-1987 aerial geophysical surveys were carried out covering the entire Bor-Ondor region at 1:25,000 scale. During 1986-1990 several geological campaigns were conducted in the area which led to further discoveries including the Dai-Uul deposit.

Within the licence area previous exploration work was undertaken between 1986-1990 including trenching, drilling, sampling, assaying, and 1:2,000 scale topographic mapping.

Table 1 below gives details of the amount of the exploration work carried out at the Dai-Uul fluorspar deposit, License No 14048X.

Assaying was carried out in the Central Laboratory of Russian Geological Expedition in Ulaanbaatar, Mongolia. The "Irkutskgeology", Irkutsk, Russian laboratory conducted foreign monitoring and testing.

CSA was able to survey several historic drill hole collars during its field visit and reference the geological maps and cross sections provided by Lotus. The surveyed field data points show acceptable variation given the surveying accuracy of the instrument used (Garmin CSX60).

Table 1: Tabulation of historic exploration work completed in the Dai-Uul tenement area.

No	***Type of Work***	***Unit of measurement***	***Amount of Work Done***
1	Exploration work route	t/km	56,6
2	Trenching	m	11 trenches for total 581.9m
3	Drilling	t/m	22 DD holes for total of 3,533.0m
4	Geochemical sampling	Sample	87
5	Rock chip sampling	Sample	201
6	Core sampling	Sample	83

1.3.1 Drilling, Sampling and Assaying

All historic drilling was NQ diameter (~4.5 cm diameter) core drilling and was conducted by the joint Russian-Mongolian geological teams between 1984 and 1989. Drill core from the historic drilling was not available for inspection. Historic drilling was conducted on approximately 50 m spaced drill centres along 80 to 100 m spaced drilling traverses that were orientated approximately perpendicular to the strike of the inferred mineralisation. The holes were angled at about -60° toward the west-dipping mineralisation. The records indicate that the drill holes were surveyed with single-shot down-hole cameras. Surface projection of the drill hole trace suggest that the drill holes did not deviate significantly from the target position.

According to Lotus' historic report translations, it was routine practise to submit continuous full core samples of 1 to 1,5m length across the identified interval of mineralisation for analysis. Assay sheets and cross section show that samples were analysed for fluorspar, calcite, silica, copper, lead, zinc, molybdenum. arsenic, tungsten and barium. Most of the samples were assayed at the Central Geological Laboratory in Ulaanbaatar.

1.4 Project Geology

The Dai-Uul project lies within the Idermeg terrane which is interpreted to represent a remnant of rock formations accumulated in a passive continental margin environment, which was amalgamated with other continental fragments during the closure of the Palaeo-Asian Ocean, which existed between the continents of Siberia and Sino-Korea during the Palaeozoic and Mesozoic era. The geology of the Dai-Uul area is dominated by the contact zone between Triassic granite to the east and Jurassic-Cretaceous meta-volcanic rocks to the west (Figure 1.2).

The Dai-Uul project area was mapped at 1:2,000 scale. The area is dominated by two rock types in structural contact. The Triassic rocks consist of medium to coarse-grained, granophyric k-feldspars-dominated intrusive rock of granitic composition. These rocks cover the western half of the project area (Figure 1.2). Quaternary deposits accumulate up to 10 m thick in the low-lying areas valley and cover approximately 50% to 55% of the project area.

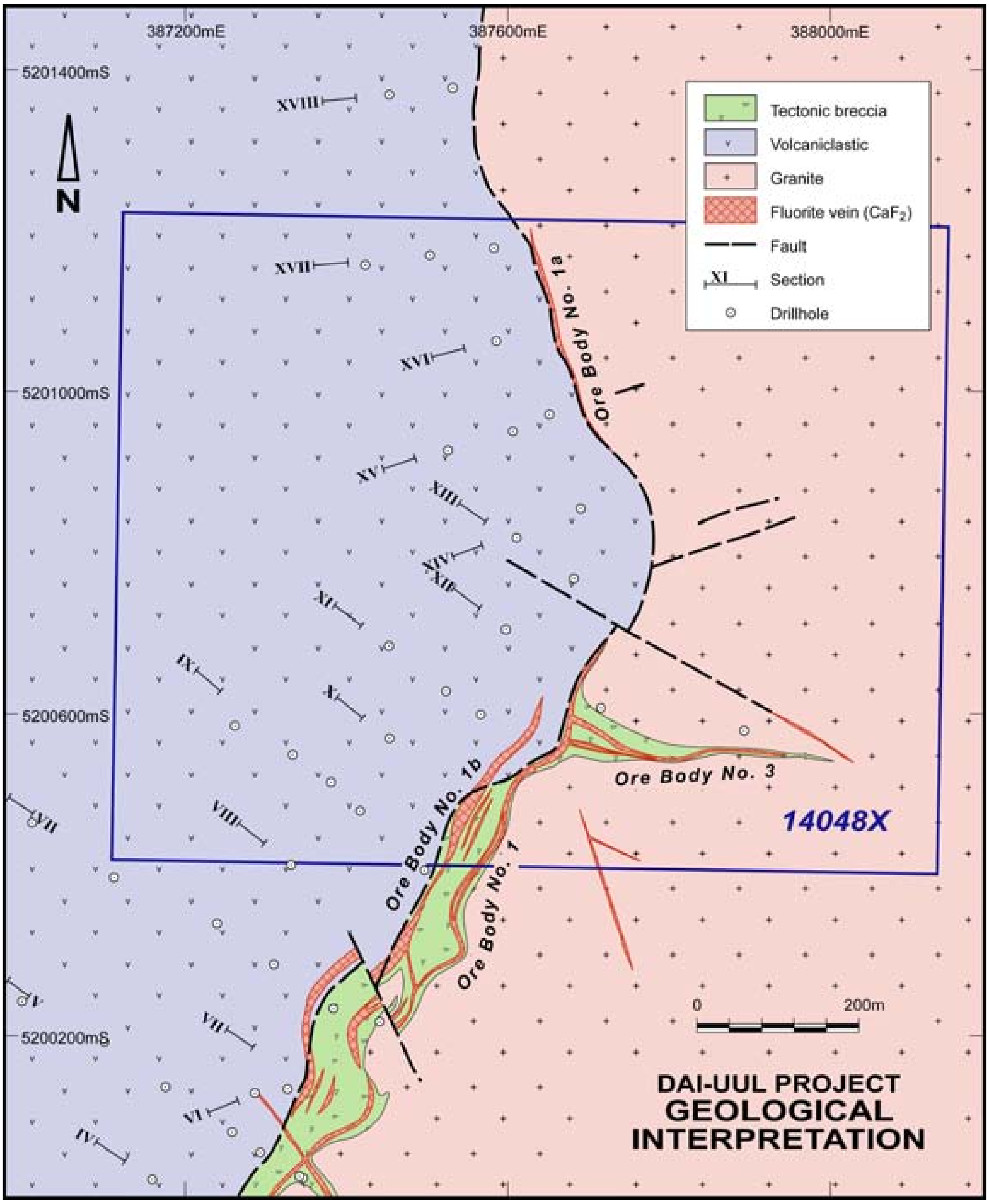

Figure 1.2 Dai-Uul project area - geology and identified fluorspar vein systems.

The Triassic granites were moved via west-dipping reverse faults onto Jurassic to Lower Cretaceous volcaniclastic rocks which dominate the eastern part of the tenement area. A fault-related breccia, hosted by the contact zone, shows evidence of intense mechanical reworking and hydrothermal overprinting, strong silicification and poly-phase deformation. The clasts spectrum is made up of the adjacent wall rocks. The fault zone, including the marginal brecciation can be up to 40 m wide. At a regional scale it strikes north northwest, however it shows minor inflections along strike at a prospect scale (Figure 1.2). The faulting post-dates the formation of adjacent rock types and is inferred to be post-Early Cretaceous in age.

The Jurassic-Cretaceous volcanic rocks are interpreted to be epiclastic rocks that formed in a sub-aerial environment derived from volcanic eruptions or the reworking of extruded volcanic material. The volcanic rocks consist of partly welded, but mostly light green, fine-grained volcanic material with minor plagioclase phenocrysts in a glass matrix.

The host rocks are partially weathered to a depth of about 35m below surface. Oxidation occurs as partially weather feldspars and iron oxides on joint and fracture surfaces.

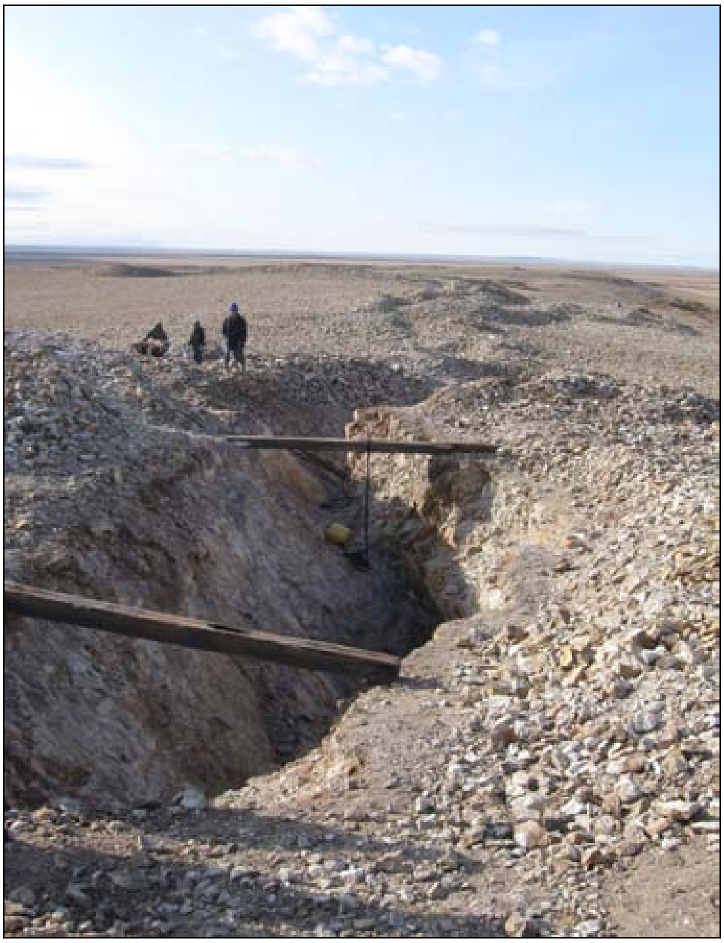

Figure 1.3 Pilot mining of fluorspar at Dai-Uul. Under the exploration licence the company can extract 400t of mineralisation. Miners extract high grade vein type mineralisation using compressor driven jack hammers, buckets and winches. The vein dips about 55° to the west (photo looking S).

Mineralisation is closely associated with rocks in proximity to the contact zone. The mineralised rocks, formed during the deformation event that juxtaposed the above described lithologies, leading to moderately west-dipping fluorspar mineralisation veins and deformation related fluorspar-filled breccia matrix style of mineralisation (Figure 1.3).

Radiometric age determinations on mineralisation in the district (Bor-Ondor, Lkhamsuren and Hamasaki, 1998) indicates that mineralisation occurred in the early to middle Cretaceous. This age of mineralisation correlates with a period of crustal collision tectonic and magmatism n the regions during the Early and Late Cretaceous (Sengor and Natal'in, 1996, Yakubchuk, 2004).

1.5 Fluorspar Mineralisation

At Dai-Uul fluorspar mineralisation is structurally-controlled and is interpreted to fall within the fluorspar-quartz-dominated epithermal fluorspar category of deposits of Lkhamsuren and Hamasaki (1998). The deposit is morphologically dominated by vein and breccia systems that formed along the contact zone between Triassic granite and Jurassic-Cretaceous volcanic rocks.

Two texturally different styles of fluorspar mineralisation can be recognised from core drilling. Type one, comprises up to several meters wide massive fluorspar-filled veins, and type two can be described as an hydraulic breccia supported by a network of fluorspar veins (Figure 1.4). The dominant gangue mineral is quartz. Weak base metal mineralisation is associated with both styles of mineralisation.

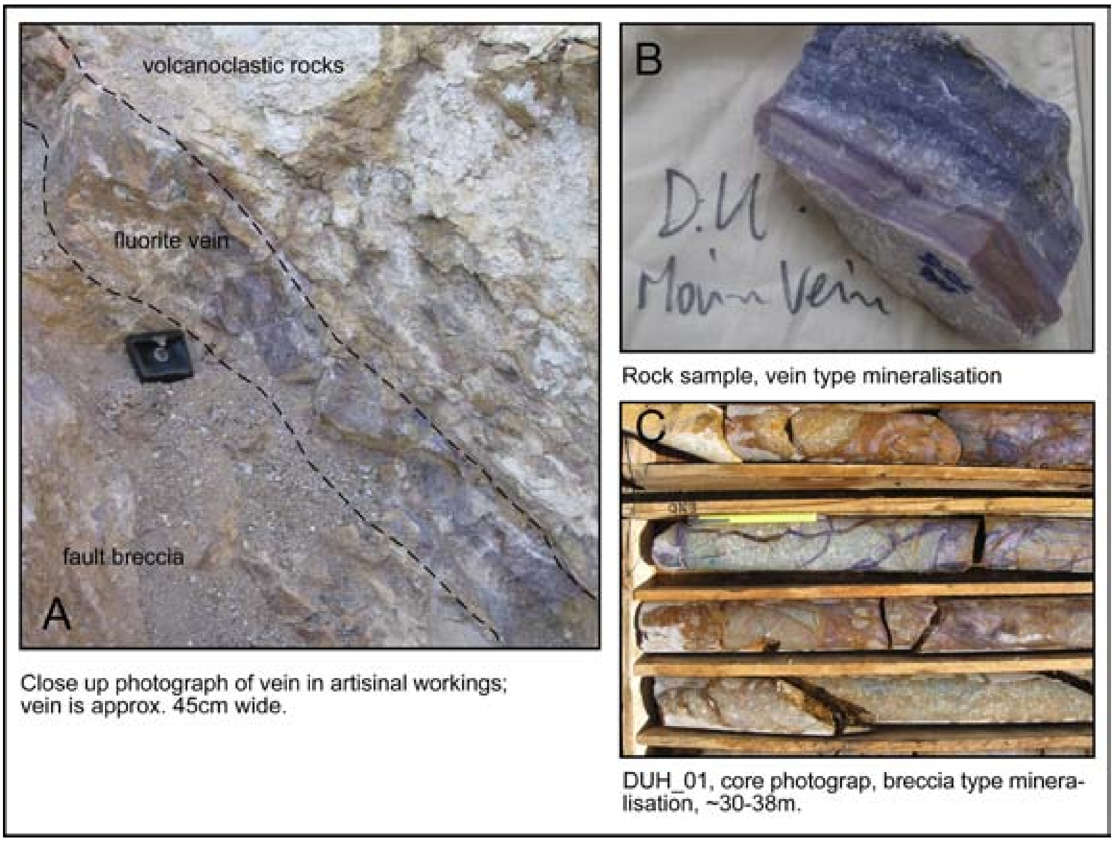

Figure 1.4 Examples of exposed "in ground" mineralisation and core samples from recent diamond drilling at Dai-Uul.

The fluorspar vein system at Dai-Uul has been intersected in drilling and in surface trenches. At least one, of the veins occurs at surface. Based on recent drilling, single veins can attain a width of at least 1.5 m. Strike continuity of veins from historic sections is inferred to be up to 200 meters with a down dip range of a up to 200m. It is likely that in structural setting vein arrays consisting of veins with shorter dimensions exist giving the impression of laterally continuous veins.

The veins have sharp boundaries with the adjacent host rocks and are dominated by fluorspar mineralisation with minor inter-grown quartz. Quartz occurs as chalcedonic or fine-grained crystals. Fluorspar is generally coarse-grained to massive laminated and colloform. It occurs in different colours ranging from violet to dark violet and bluish-green. The veins tend to be very high grade ranging from 60% to 95% CaF_2. CSA's own check samples selected from the exposed veins confirm the tenor of mineralisation indicated above (Table 2). The veins appear to contain low levels of impurities and confirm the high quality of mineralisation suitable for chemical grade concentrate.

Table 2: Tabulation of check sample results from the Dai-Uul project.

SAMPLE NO.	Element	As	Ba	Cu	Fe	P	Pb	S	Zn	**CaF_2**	$CaCO_3$	SiO_2
	Unit	PPM	PPM	PPM	%	PPM	PPM	PPM	PPM	%	%	%
	LDL	5	2	1	0.01	10	2	0.01	1	1	1	1
	UDL	10000	2000	10000	10.00	5000	10000	10.00	10000	100	100	100
LO-DU-001		<5	1140	<1	0.65	247	<2	0.08	7	67.85	0.75	22.59
LO-DU-002		<5	349	2	0.42	31	<2	0.07	<1	60.28	0.67	32.97
LO-DU-003		<5	>2000	<1	0.06	216	<2	0.14	<1	65.86	1.71	12.57
LO-DU-004		<5	1505	<1	0.12	643	<2	0.12	19	92.16	0.83	3.77

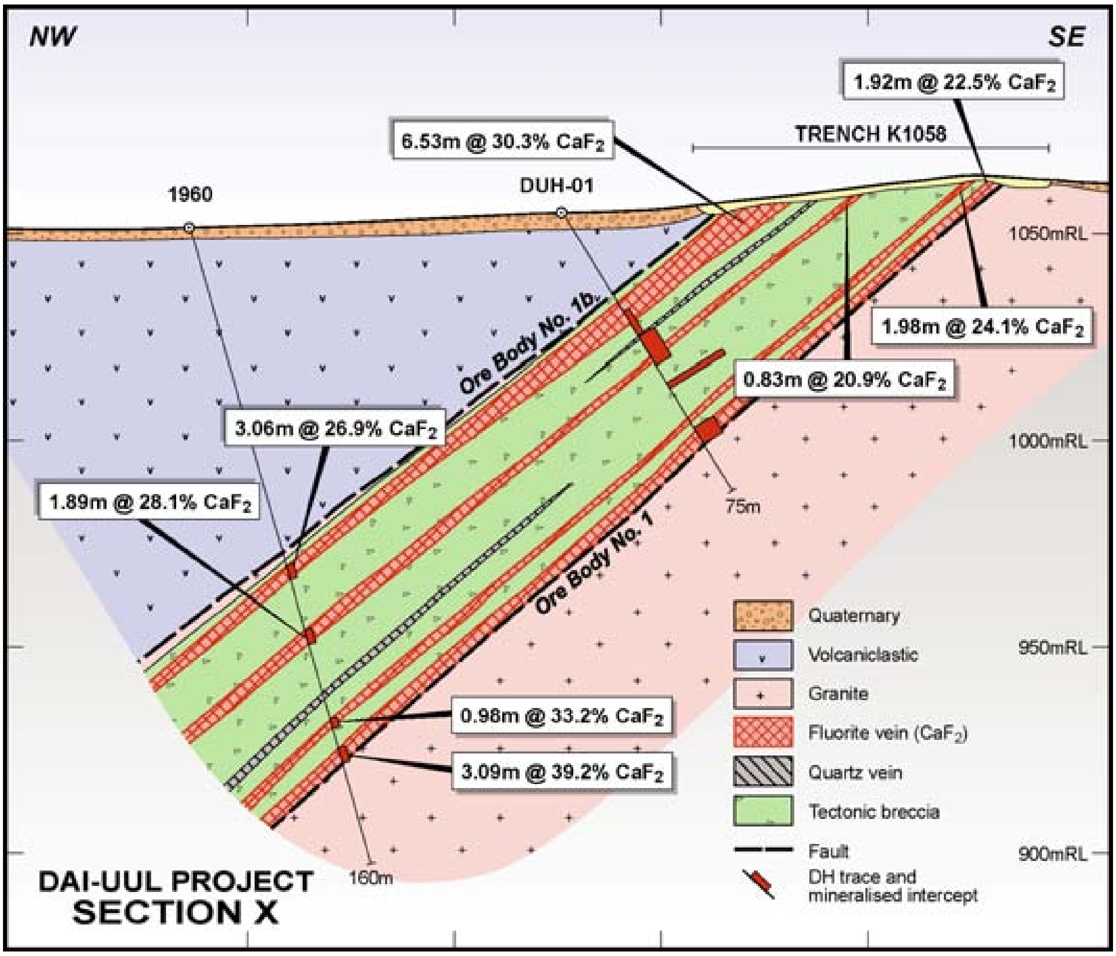

Figure 1.5 Historic cross section No X, showing recent test drill hole DUH-01 projected onto the section. Histograms (red) indicate qualitatively location and relative tenor of mineralisation.

The breccia style of mineralisation was not observed in outcrop, however it was intersected in diamond drilling and occurred over two intervals that are separated by an interval of weakly mineralised rock. The breccia style mineralisation resembles morphologically what can be described as mosaic breccia texture (Taylor, 2003) and contains highly angular to sub-angular host rock clasts supported by a network of fluorspar-filled veins or matrix. The veins/matrix consist of laminated or interlayer fluorspar-quartz mineralisation possibly reflecting progressive changes in the ore fluid composition, fluid changes due to wall rock interaction or repeated pulses of mineralising fluids. Cross cutting relationships suggest that mineralisation occurred over a period of time leading to several generations of veins in the same system.

The breccia style mineralisation occurs as two separable west northwest-dipping mineralisation lenses. The outlines of these two lenses are contact parallel and appear to be thickest in the centre and appear to be thinning up and down-dip. The two bodies range in width from about 1m to a maximum of 15m (Figure 1.5) and are separated by a zone of sporadic fluorspar veins which ranges in width between 20 and 30m. The breccia zones have been intersected laterally by historic drilling over a strike length of about 800 m. Lotus' exploration tenement covers approximately 340m of the two breccia lenses. The two lenses are interpreted to extend to a depth of about 200m down-dip.

The overall geometry is irregular. The mineralised bodies appear to be thickest in an area down dip, where a relative shallowing in the fault zone is observed. This suggests that not only the localisation of the mineralisation but also the geometry of the mineralisation is controlled by the geometry of the reverse fault. A shallowing in the fault plane is interpreted to give way to dilation zones which are commonly zones of ore-fluid entrapment.

Historic analyses indicate that the grade of the mineralisation across the entire breccia interval falls within a range of 20 to 40% CaF_2. The grades reflect dilution through host rock fragments. This mineralisation type requires beneficiation to upgrade it to metallurgical or chemical grade ore.

Both styles of mineralisation occur spatially together. Re-logging of recent drilling and correlation of these observations with historic data suggest that the breccia type mineralisation dominates volumetrically. It appears the breccia lenses occur near the footwall and hanging wall of the fault breccia zone. The vein-style mineralisation occurs at various depth levels within the fault breccia envelope (Figure 1.5).

The textural features (veins and breccias) correspond with textural descriptions for mineralisation in Mongolia and elsewhere in the world (Peters, 1958). Following the review of historic and recent data CSA is of the view that Dai- Uul represents a typical hydrothermal vein type deposit.

1.6 Dai-Uul Historical Estimates

There are currently no Mineral Resources reported in accordance with the 2004 JORC Code within Lotus's Dai-Uul licence area.

At the Dai-Uul deposit, a global estimate for the entire mineralised system (including the mineralisation outside the licence area) prepared by the State Agency in 1990, based on four mineralised bodies (N0. 1, 1a, 1b and 3), reported 6.89Mt with an average grade ranging from 23% to 34% CaF_2 (category B and C1 and C2 under the GKZ reporting system). This estimate was conducted using the sectional polygonal estimation method.

1.7 Work Undertaken by Lotus

Lotus has obtained numerous State Agency reports and maps relating to its Dai-Uul licence area and is currently translating, compiling and spatially referencing the information within a digital database.

In 2008, the geological team of Lotus completed the following exploration work in the Dai-Uul license area.

The company contracted a local surveyor to prepare a topographic map of the area; record tracks and drainage systems and record and survey all historic drill hole collars, trenches and tenement boundaries.

In addition, the company completed a 4 hole diamond drill programme for a total of 320m of NQ diameter (~4.6cm) core drilling; collected a total of 28 "grab" samples from recent core drilling and trenches. These samples were designed to verify the results from previous geochemical analysis undertaken in by the joint Mongolian and Russian geological team in the late 1980s.

Lotus analysed the samples from its 2009 sampling programmes for fluorspar only. CSA has been advised by Lotus that these samples were prepared and analysed at the Central Scientific Research Laboratory, located in Ulaanbaatar. Quality assurance and quality control (QAQC) procedures were implemented during the analysis by sending 6 duplicate sample pulps to an independent laboratory located in Ulaanbaatar.

Lotus has compiled all its data in excel tables and spatial information in MapInfo® and ArcGIS®. Company geologists compiled a comprehensive report detailing historical work and data, integrating new data with historic data and completed an updated resource estimate along the lines of the historic estimate. The original report was written in Mongolian. A pre-submission English translation of the draft report was provided to CSA.

1.7.1 Lotus Internal Resource Estimation

Following the completion of four additional diamond drill holes undertaken during 2009, Lotus updated this estimate during late 2009. The updated estimate is based on the original assay data from trenches and drill holes. The recent drilling was used to verify the geological model and conduct check-sampling of the mineralised intervals, however assay results from the recent drilling were not included into the estimation. A cut-off grade of 15% CaF_2, with a minimum thickness for mineralisation of 1m and a maximum thickness of internal dilution was applied, and a density of 2.46t/m^3 assigned to convert volumes to tonnage estimates.

A total of 2.53Mt of potential "reserves" with an average grade of 32.6% CaF_2 is reported from the mineralised bodies (within the licence area only) and classified as category B and C1 and C2 (Explored) under the GKZ reporting system.

Based on the above parameters Lotus re-estimated the mineral potential to a maximum depth of 20m below surface and arrived at a potential mineral inventory of about 297k tonnes of ore. Based on this estimate the company intends to establish a small scale mining operation.

The Dai-Uul estimates do not currently meet the minimum standard outlined in the 2004 JORC Code. Further exploration and verification work is required prior to determining the fluorspar potential with a higher level of confidence at the Dai-Uul licence area.

The above work was completed by the company in order to comply with the State Agency's requirement for the application for mining licence status.

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