Chapter 4 Overall Review of Survey Findings

4-1 Relationship of Geology and Geologic Structure with Mineralization

The Paleozoic formations in the subject area are folded along axis in the WNW-ESE direction, same as that of the extension of the Aktau Range in the north and Karatau Mountains in the south. It is cut by fractures in almost the same directions, forming structural blocks that extend in the same direction as that of the fold structure. These blocks are further divided by fractures in the NE-SW and NW-SE directions into sub-blocks.

Ore deposits and manifestations, mainly of gold, in the area spreading along the fracture zones in the WNW-ESE direction constitute the Karatau ore zone (70 km E-W and 2 km to 4 km N-S) along the northern side of the Karatau granite body (270-274 Ma) and Aktau ore zone (70 km E-W; 2 km to 5 km N-S) which extends along the southern side of the Aktau granite body (293-322 Ma, 260-286 Ma and 265-268 Ma).

Fractures occur in various directions. The WNW-ESE direction is predominant, followed by E-W, NE-SW and NW-SE directions.

Along respective fracture zones, intensive hydrothermal activity is recognized, where quartz veins, quartz veinlet zones and vein-like silicification zones are observed. Accompanying the hydrothermal activity, occurs mineralization of mainly gold accompanied by silver, arsenic, bismuth, lead and copper (Fig.I-3-1). Occurrence of major mineralization is controlled by geologic structure; bonanzas are formed at intersections of fractures in different directions, especially where fractures in the WNW-ESE direction intersect those in the NE-SW and NW-SE directions.

The Karatau ore zone embraces ore deposits and manifestations of gold-silver bearing quartz vein type, such as the Subashi-Sarmich deposit, Biran deposit (these are out of the survey area), Karamechet-Kurai manifestations and Altynsai deposit.

Those pertaining to the Aktau ore zone are gold-silver bearing quartz vein-type manifestations such as, from the west, Bitab, Bashtut, Maulyan and Taulyan, as well as the Akmulla iron-manganese manifestation.

Besides, there are pneumatolytic deposits formed in granite stocks such as the Sartakchi niobium-tantalum manifestation and Lyangar skarn-type tungsten-molybdenum deposit that is related with the Aktau granites.

Among these ore deposits and manifestations located in the subject area, the Altynsai deposit (Au) and the Maulyan manifestation (Au) have been explored by the subject Survey.

1) Altynsai Deposit

The deposit is underlain by slate, siltstone, sandstone, phyllite of Ordovician to Silurian

System and slate, siltstone and sandstone of Lower Silurian System. There are dikes of lamprophyre that intruded in the western part of the district during the late Permian to early Triassic age. Sedimentary and metamorphic rocks in the district are folded as anticlines and synclines trending in the WNW-ESE direction (Figs.II-1-1-1, 2).

The deposit is located in the Karatau ore zone where gold manifestations occur in fractures and silicification zones in the WNW-ESE direction. The Karatau ore zone embraces ore deposits and manifestations of gold-silver bearing quartz vein type, such as the Sarmich deposit, Biran deposit (these are out of the survey area), Kurai manifestations and Altynsai deposit (Figs.II-1-1-1, 2).

The deposit is vein-type deposit consisting of gold bearing quartz veins, controlled by fracture zones with the WNW-ESE trend and those with NW-SE trend intersecting the former, and tourmaline-quartz veins which accompany joints with the N-S trend.

Ore bodies of quartz veins such as the Nos. 1, 2, 5, 8 ("Northwest Vein"), 9 ("Kazanbulak Vein") and 10 ("Berkut Vein") have been confirmed in sedimentary rocks hornfelsed within an area of 2.5 km in length and 500 m to 800 m in width. Tourmaline-quartz veinlet zones with the N-S trend are also developed in the areas where the ore zones occur (Figs.II-1-4-1, 2).

Bonanzas are located at the intersections of the WNW-ESE veins with the NW-SE fractures (Figs.II-1-4-1, 2). The number, width and gold grade of these quartz and tourmaline-quartz veinlets tend to increase in sandstone rather than in slate.

2) Maulyan Manifestation

The manifestation is underlain mainly by siltstone, sandstone, slate and schist of the Lower Silurian System and slate, siltstone, sandstone and schist of the Ordovician System (Fig. II-2-1-1, 2). There is a dike of metadiorite that intruded in the eastern part of this manifestation, near a drillhole MJML-22. The sedimentary rocks are metamorphosed into phyllites and schists through low temperature, medium pressure-type metamorphism, and consist of biotite, muscovite, chlorite, staurolite, etc. These strata are folded along an axis in the WNW-ESE direction and cut by faults in the same directions.

The manifestation is located in the Aktau ore zone where gold manifestations occur in fractures and silicification zones in the WNW-ESE direction. Gold manifestations have been confirmed at Beshbulak, Taulyan and Shur. The Phase II geological survey and Uzbek trenching survey indicated that Beshbulak, Taulyan and Shur manifestations have low Au grade.

So far the surveys confirmed three ore bodies, 1 m to 4 m wide: No.1 ore body, 1,000 m long; No.2 ore body, 400 m long; and No.3 ore body, 200 m long, where gold and silver grades

vary substantially from 1 g/t to 33.4 g/t Au and from 1 g/t to 47.2 g/t Ag (Figs.II-2-1-1, 2).

Bonanzas have a tendency to be located in zones where sub-parallel fracture zones with the WNW-ESE trend converge.

4-2 Characteristics of Mineralization

1) Altynsai Deposit

Component minerals of the quartz veins that occur in fractures zones with the WNW-ESE and NW-SE trends are quartz, pyrite, marcasite, arsenopyrite, chalcopyrite, sphalerite, goethite and lepidocrocite, accompanied by galena, native bismuth, aikinite, wittichenite, scheelite, rutile and electrum. Electrum, grain size of 5-10 μm, observed in polished sections in Phase I occurs in quartz associated with chalcopyrite, native bismuth and wittichenite in a vein-like alignment but exists independently, which is determined to be primary electrum.

The tourmaline-quartz veins with the N-S trend are composed of quartz, tourmaline, pyrite, arsenopyrite, goethite, lepidocrocite accompanied by marcasite and rutile. The Uzbek study indicated occurrence inclusion of wolframite, cassiterite, topaz, beryl and electrum besides these. The veins are interpreted as tourmaline greisen.

Alteration of the host rocks includes silicification, pyritization, tourmalinization, and hornfelsization. The alteration zones are mainly quartz-sericite or sericite-chlorite zones, accompanied by kaolinite and calcite.

Homogenization temperatures of fluid inclusions of quartz veins with the WNW-ESE and NW-SE trends, and the tourmaline-quartz veinlets with the N-S trend generally range between 270°C and 370°C. There was no significant difference observable between them. The quartz veins and tourmaline-quartz veinlets are inferred to have been formed during the similar period of mineralization and under similar temperature ambience. No significant correlation was observed between homogenization temperature and gold grade, nor between homogenization temperature and depth at which drilling samples were taken (Figs.I-4-1, 2).

The occurrence of ore and hornfels zones and the anomalous zones of the Uzbek airborne magnetic survey mostly correspond to each other, which suggests the possible existence of concealed granites at shallow levels (Figs.II-1-4-1, 2). The ore zones are inferred to have been formed by the mineralization originating in the intrusion of granites.

2) Maulyan Manifestation

Main component minerals of the samples collected from gold-bearing quartz veins at the subject manifestation are pyrite, goethite and lepidocrocite, accompanied by minor quantities of arsenopyrite, chalcopyrite, sphalerite and electrum. Electrum is determined to be primary, as a gold grain of approx. 2 mm in diameter is independently observable in quartz.

Alteration of the host rocks includes silicification and pyritization. The alteration zones are mainly quartz-sericite or sericite-chlorite zones, accompanied by calcite and epidote.

Homogenization temperatures of fluid inclusions at the ore zone mostly fall within the range of 250°C-350°C. The homogenization temperatures of quartz samples grading Au 1.2-2.0 g/t were 221°C-281°C, higher than the general temperature range of gold occurrence, 100°C -250 °C (Fig.I-4-1). No significant correlation was observed between homogenization temperature and depth at which drilling samples were taken (Fig.I-4-3).

In light of the occurrence of the Aktau granites, characteristics of the surrounding manifestations, drilling results and homogenization temperatures, gold-bearing quartz veins at the subject manifestation are inferred to have been formed under high temperature ambience in the vicinity of pegmatite-type mineralization, which is considered to lack the conditions required for a high-grade, large-scale gold concentration zone.

4-3 Potential of Ore Deposits

1) Altynsai Deposit

The Phase I, II and Uzbek drilling survey, aimed at the lower extension of the bonanzas confirmed in Adit No. 4 at veins Nos. 1 and 2 (Fig.II-1-1-3), discovered that the mineralization degenerates below the depth of 100 m (600 m above sea level) under the adit (Figs.II-1-2-3, 4). From the facts that the host rock is hornfelsized at the Altynsai ore deposit while the quartz in veins, accompanied by tourmaline and shows high homogenization temperatures of fluid inclusions (250°C-370°C), it is inferred that granitoids are concealed at a shallow level. It may be attributable to denudation of the main portions of the ore body by erosion that ore bodies do not continue into the depth (below 600 m to 650 m above sea level).

The drillhole MJSN-16, aimed at the lower extension of the Northwest Vein (No. 8 vein) as confirmed by the Uzbek trenches, discovered the dominant mineralization (true width 0.98 m; Au 44.8 g/t) 60 m under the surface (Figs.II-1-2-2, 5). But the drillhole MJSN-15, aimed at the lower extension (50 m) of it, only confirmed low-grade gold mineralization (true width 1.06 m; Au 1.8 g/t). From these findings, it was confirmed that gold grade considerably varies though mineralization is continuous.

The Phase I, II and Uzbek drilling survey, aimed to examine mineralization of tourmaline-quartz veinlet zones with the N-S trend and also examine the feasibility of open pit mining, discovered low-grade gold mineralization (Au trace to 23.6 g/t) at various locations; however, the overall average of Au grade did not exceed 0.2 g/t which is insufficient for justifying open pit mining.

At the cutoff grade of 2.0 g/t (Au), the total ore reserves of No.1, No.2 and No.8 veins combined are 423,000 t, grading 9.6 g/t Au, or approximately 4.0 t of Au in terms of metal

content (Table II-1-3-1 (4)). While those of No.1, No.2 and No.8 veins are 109,000 t, grading 10.3 g/t Au (1.1 t of Au content), 239,000 t, grading 6.9 g/t Au (1.7 t of Au content) and 75,000 t, grading 17.0 g/t Au (1.3 t of Au content), respectively (Tables II-1-3-1 (1～3)).

The lower portion of No.8 vein remains unexplored, however, big increase of ore reserves can not be expected by further drilling because the mineralization is small in size.

2) Maulyan Manifestation

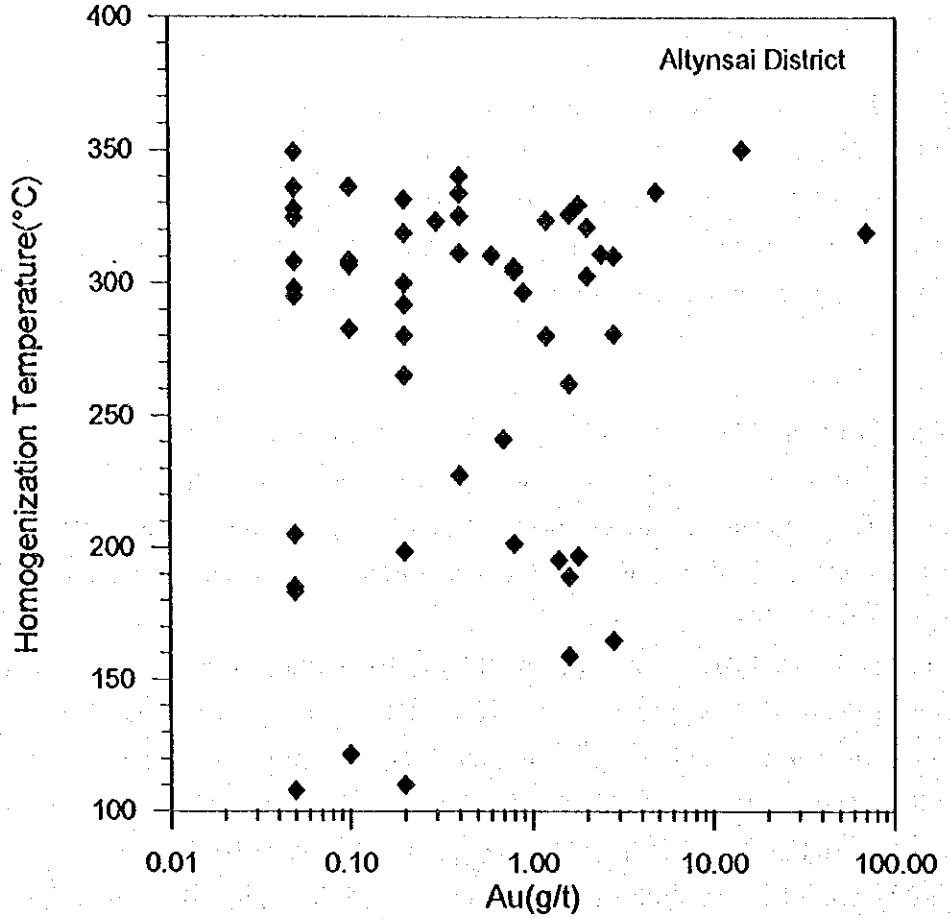
Two drillholes of the Phase II drilling survey and six Uzbek drillholes independently confirmed the continuity of the No.1, No.2 and No.3 ore bodies between 16 m and 135 m under the surface. They, however, only confirmed low-grade gold mineralization (true width 0.2-1.8 m; Au 1.6-8 g/t). From these findings, the near-surface mineralization is inferred to be dominant (Figs.II-2-2-22～24).

Twenty drillholes (MJML-3～22) of the Phase III drilling survey were aimed to examine mineralization of shallow portion of the No.1, No.2 and No.3 ore bodies between 10 m and 15 m under the surface, and also examine the feasibility of open pit mining. Out of the thirteen drillholes, aimed to examine mineralization of lower portion of the No.1 ore body, four drillholes discovered low-grade gold mineralization (true width 0.4-1.9 m; Au 1.7-5.8 g/t) (Figs.II-2-2-9～22). Out of the seven drillholes, aimed to examine mineralization of the No.2 ore body, three drillholes confirmed weak gold mineralization (true width 0.4-1.1 m; Au 1.8-9.6 g/t) (Figs.II-2-2-2～8, 23). However, analyses of ore samples collected from another thirteen drillholes did not indicate Au grade higher than 1.0 g/t.

In light of the occurrence of the Aktau granites, characteristics of the surrounding manifestations, drilling results and homogenization temperatures, gold-bearing quartz veins at the subject manifestation are inferred to have been formed under high temperature ambience, which is considered to lack the conditions required for a high-grade, large-scale gold concentration zone.

At the cutoff grade of 1.0 g/t (Au), the tentative estimation of the total ore reserves of No.1, No.2 and No.3 ore bodies indicated 252,000 t, grading 4.2 g/t Au, or approximately 1.1 t of Au in terms of metal content (Table II-2-3-1 (4)). While those of No.1, No.2 and No.3 ore bodies are 149,000 t, grading 3.8 g/t Au (0.6 t of Au content), 87,000 t, grading 5.0 g/t Au (0.4 t of Au content) and 16,000 t, grading 4.2 g/t Au (0.07 t of Au content), respectively (Tables II-2-3-1 (1～3)).

A certain increase in ore reserves by further exploration may be anticipated but a significant improvement in Au grade is unlikely.



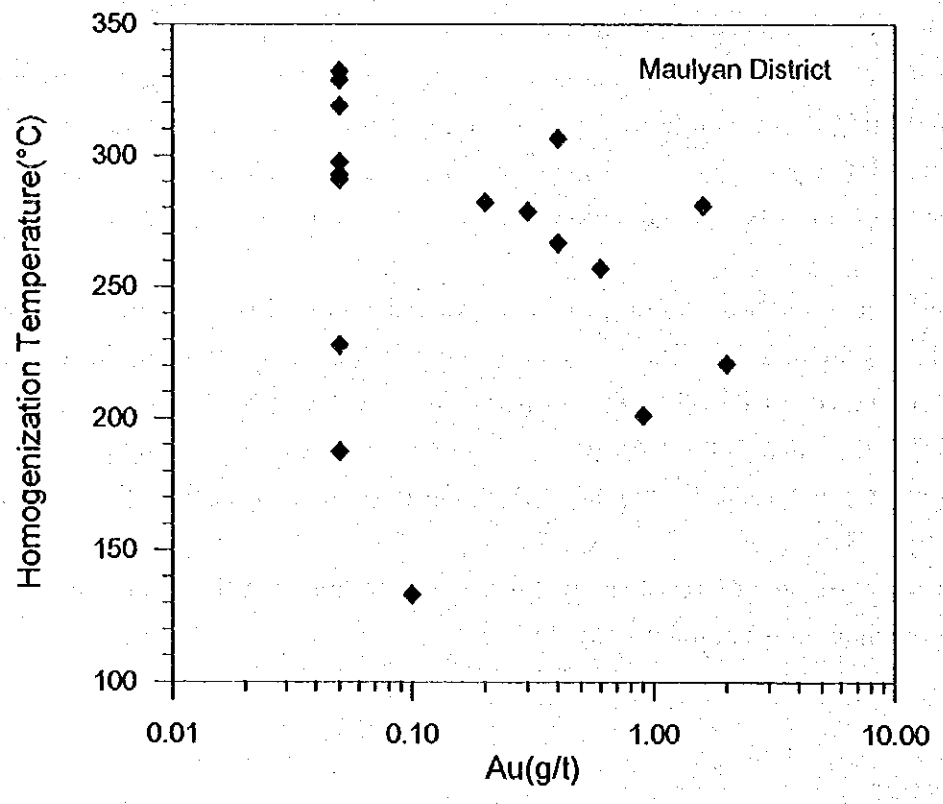


Fig.I-4-1 Correlation Diagram between Au Grade and Homogenization Temperature of Fluid Inclusions

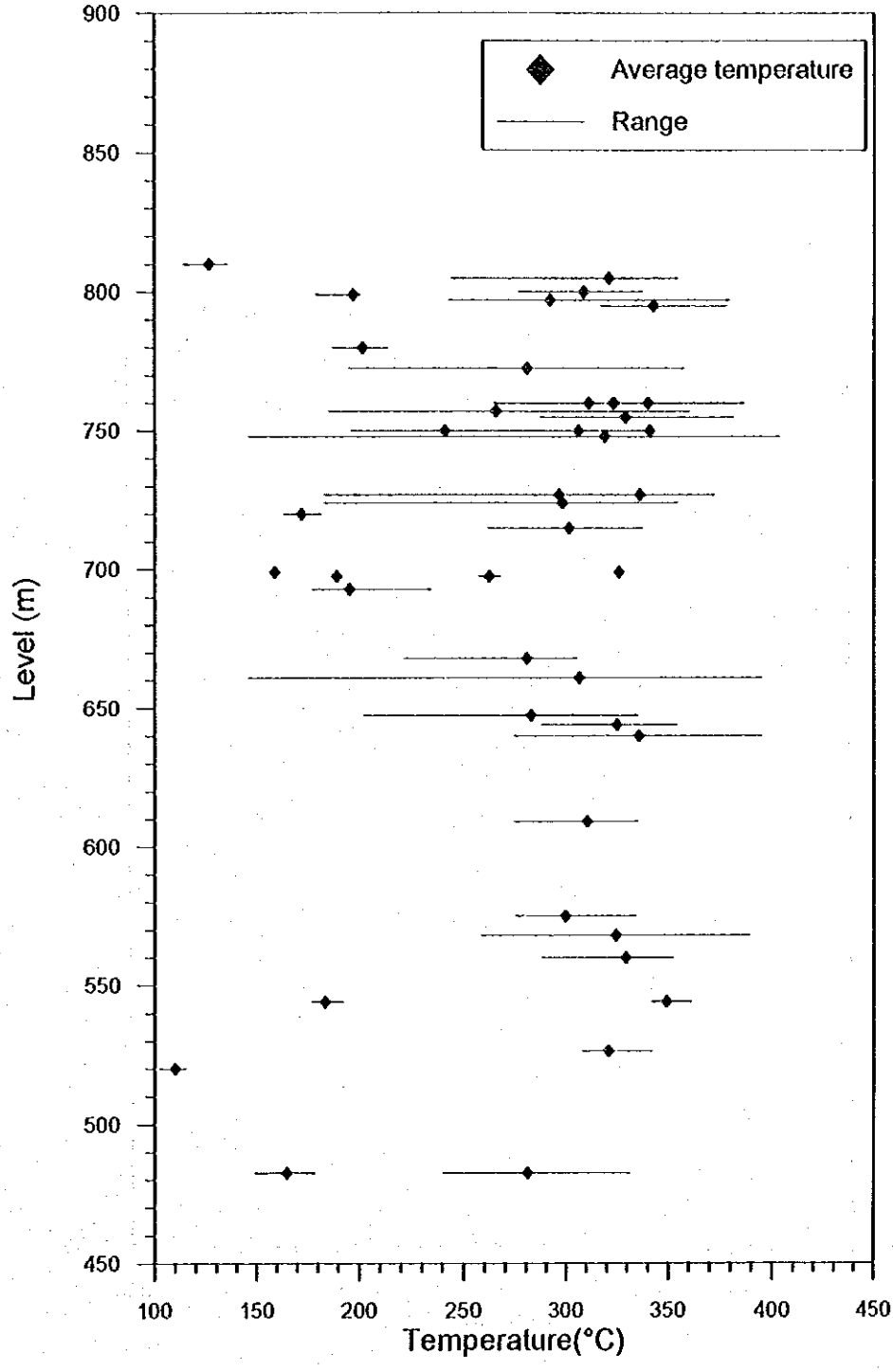


Fig. I-4-2 Correlation Diagram between the Elevation and Homogenization Temperature of Fluid Inclusions(Altynsai District)

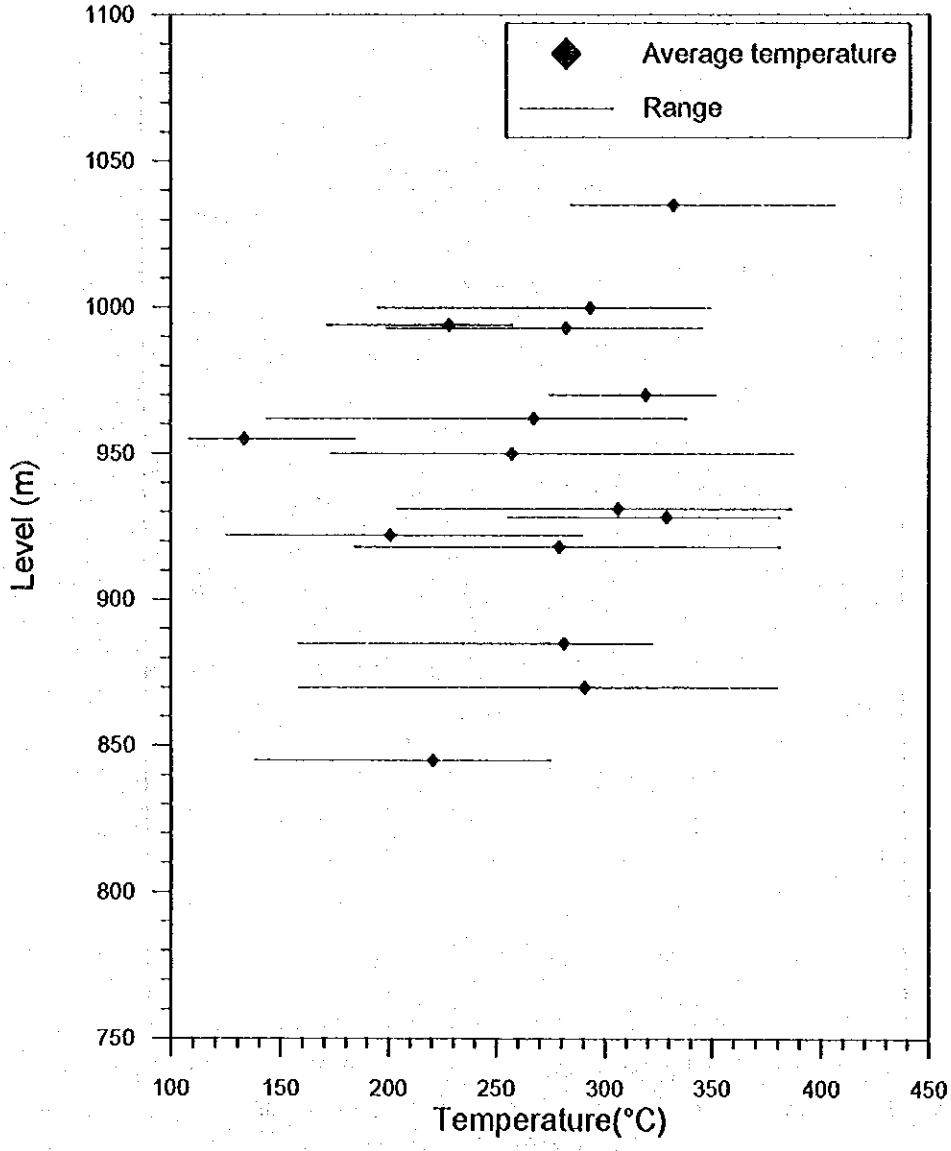


Fig. I-4-3 Correlation between the Elevation and Homogenization Temperature of Fluid Inclusions(Maulyan District)

Chapter 5 Conclusions and Recommendations

5-1 Conclusions

1) Altynsai Deposit

(1) Geology and ore deposit

- The Altynsai deposit is underlain by sediments of Ordovician-Silurian System and late Permian to early Triassic lamprophyre, and represents a fold structure along the axis in the WNW-ESE direction. The sedimentary rocks are metamorphosed into phyllites and schists through low temperature, medium pressure-type metamorphism, and consist of biotite, muscovite, chlorite, staurolite, etc.
- The deposit is vein-type deposit consisting of quartz veins accompanied with fracture zones of the WNW-ESE trend and those of NW-SE trend intersecting the former, and tourmaline-quartz veins accompanied with joints of the N-S trend.

(2) Ore zone

- The deposit is located in the Karatau ore zone, 70 km E-W and 2 km to 4 km N-S, where gold manifestations occur in fractures and silicification zones in the WNW-ESE direction. The Karatau ore zone embraces ore deposits and manifestations of gold-silver bearing quartz vein type, such as the Sarmich deposit, Biran deposit (these are out of the survey area), Kurai manifestations and Altynsai deposit.
- Ore bodies of quartz veins such as the Nos. 1, 2, 5, 8 ("Northwest Vein"), 9 ("Kazanbulak Vein") and 10 ("Berkut Vein") have been confirmed in hornfelsed sedimentary rocks within an area of 2.5 km in length and 500 m to 800 m in width. Tourmaline-quartz veinlet zones with the N-S trend are also developed in the areas where the ore zones occur.
- Bonanzas are located at the intersections of the WNW-ESE veins with the NW-SE fractures and tourmaline-quartz veinlets are concentrated.

(3) Size and continuity of ore deposit

- The Phase I, II and Uzbek drilling surveys, aimed at the lower extension of the bonanzas confirmed in Adit No. 4 at veins Nos. 1 and 2, discovered that the mineralization degenerates below the depth of 100 m (600 m above sea level) under the adit. This is presumably attributable to denudation of the main portions of the ore body by erosion.
- The drillhole MJSN-16, aimed at the lower extension of the Northwest Vein (No. 8 vein) as confirmed by the Uzbek trenches, discovered the dominant mineralization (true width 0.98 m; Au 44.8 g/t) 60 m under the surface. But the drillhole MJSN-15, aimed at the lower extension (50 m) of it, only confirmed low-grade gold mineralization (true width 1.06 m; Au 1.8 g/t). From these findings, it was confirmed that gold grade considerably

varies though mineralization is continuous. The lower portion of No.8 vein remains unexplored, however, big increase of ore reserves can not be expected by further drilling because the mineralization is small in size.

- The Phase I, II and Uzbek drilling surveys, aimed to examine mineralization of tourmaline-quartz veinlet zones with the N-S trend and also examine the feasibility of open pit mining, discovered low-grade gold mineralization (Au trace to 23.6 g/t) at various locations; however, the overall average of Au grade did not exceed 0.2 g/t which is insufficient for justifying open pit mining.

(4) Mineralization

- Component minerals of the quartz veins that occur in fractures zones with the WNW-ESE and NW-SE trends are pyrite, marcasite, arsenopyrite, chalcopyrite, sphalerite, goethite, lepidocrocite, galena, native bismuth, aikinite, wittichenite, scheelite, etc., while gold occurs as electrum. The tourmaline-quartz veins with the N-S trend are accompanied with pyrite, arsenopyrite, goethite, lepidocrocite, etc.
- Homogenization temperatures of fluid inclusions of quartz veins with the WNW-ESE and NW-SE trends and the tourmaline-quartz veinlets with the N-S trend generally range between 270°C and 370°C. There was no significant difference observable between them. The quartz veins and tourmaline-quartz veinlets are inferred to have been formed during the similar period of mineralization and under similar temperature ambience. No significant correlation was observed between homogenization temperature and gold grade, nor between homogenization temperature and depth at which drilling samples were taken.
- The occurrence of ore and hornfels zones and the anomalous zones of the Uzbek airborne magnetic survey mostly correspond to each other, which suggests the possible existence of concealed granites at shallow levels. The ore zones are inferred to have been formed by the mineralization originating in the intrusion of granites.
- The mineralization of the subject ore deposit represents continuity but has variable grade.

(5) Ore reserves

- At the cutoff grade of 2.0 g/t (Au), the total ore reserves of No.1, No.2 and No.8 veins combined are 423,000 t, grading 9.6 g/t Au, or approximately 4.0 t of Au in terms of metal content. While those of No.1, No.2 and No.8 veins are 109,000 t, grading 10.3 g/t Au (1.1 t of Au content), 239,000 t, grading 6.9 g/t Au (1.7 t of Au content) and 75,000 t, grading 17.0 g/t Au (1.3 t of Au content), respectively.

2) Maulyan Manifestation

(1) Geology

- The Maulyan manifestation is underlain by sediments of Ordovician-Silurian System and a dike of metadiorite that intruded in the eastern part of the subject manifestation. The sedimentary rocks are metamorphosed into phyllites and schists through low temperature, medium pressure-type metamorphism, and consists of biotite, muscovite, chlorite, staurolite, etc.
- These strata are folded along an axis in the WNW-ESE direction and cut by faults in the same directions.

(2) Ore Zone

- The manifestation is located in the Aktau ore zone, 70 km E-W and 2 km to 5 km N-S, where gold manifestations occur in fractures and silicification zones in the WNW-ESE direction. Gold manifestations have been confirmed at Beshbulak, Taulyan and Shur.

(3) Size and continuity of ore manifestation

- The extent of the Maulyan manifestation on the surface is 1 m to 4 m wide and 1,000 m long (No.1 ore body), 400 m long (No.2 ore body) and 200 m long (No.3 ore body). The gold grade varies from 1 g/t to 33.4 g/t.
- Two drillholes of the Phase II drilling survey and six Uzbek drillholes independently confirmed the continuity of the No.1, No.2 and No.3 ore bodies between 16 m and 135 m under the surface. They, however, only confirmed low-grade gold mineralization (true width 0.2-1.8 m; Au 1.6-8 g/t). From these findings, the near-surface mineralization is inferred to be dominant.
- Twenty drillholes of the Phase III drilling survey were aimed to examine mineralization of shallow portion of the No.1, No.2 and No.3 ore bodies, between 10 m and 15 m under the surface, and also examine the feasibility of open pit mining. Among the thirteen drillholes aimed to examine mineralization of lower portion of the No.1 ore body, four drillholes discovered low-grade gold mineralization (true width 0.4-1.9 m; Au 1.7-5.8 g/t). Among the seven drillholes aimed to examine mineralization of the No.2 ore body, three drillholes confirmed weak gold mineralization (true width 0.4-1.1 m; Au 1.8-9.6 g/t). However, analyses of ore samples collected from another thirteen drillholes did not indicate Au grade higher than 1.0 g/t.

(4) Mineralization

- Samples collected from gold-bearing quartz veins at the Maulyan manifestation are accompanied by ore minerals such as pyrite, goethite, lepidocrocite, arsenopyrite, chalcopyrite and sphalerite, while gold occurs as electrum.
- Homogenization temperatures of fluid inclusions at the ore zone mostly fall within the

range of 250°C-350°C. The homogenization temperatures of quartz samples grading Au 1.2-2.0 g/t were 221°C-281°C, higher than the general temperature range of gold occurrence, 100 °C -250 °C . No significant correlation was observed between homogenization temperature and depth at which drilling samples were taken.

- In light of the occurrence of the Aktau granites, characteristics of the surrounding manifestations, drilling results and homogenization temperatures, gold-bearing quartz veins at the subject manifestation are inferred to have been formed under high temperature ambience, which is considered to lack the conditions required for a high-grade, large-scale gold concentration zone.

(5) Ore reserves

- At the cutoff grade of 1.0 g/t (Au), the tentative estimation of the total ore reserves of No.1, No.2 and No.3 ore bodies indicated 252,000 t, grading 4.2 g/t Au, or approximately 1.1 t of Au in terms of metal content. While those of No.1, No.2 and No.3 ore bodies are 149,000 t, grading 3.8 g/t Au (0.6 t of Au content), 87,000 t, grading 5.0 g/t Au (0.4 t of Au content) and 16,000 t, grading 4.2 g/t Au (0.07 t of Au content), respectively.

5-2 Recommendations

1) Altynsai Deposit

(1) Ore reserves estimates of No.1, No.2 and No.8 veins added up to 423,000 t, grading 9.6 g/t Au, or approximately 4.0 t of Au in terms of metal content. The lower portion of No.8 vein remains unexplored, except the shallow portions surveyed by the Phase III and Uzbek drilling surveys. In order to verify the deep mineralization, it is advisable to continue the drilling survey by the Uzbek side.

(2) All the ore bodies of No.1, No.2 and No.8 veins are small in size, however, have dominant mineralization (Au grade higher than 10 g/t) in the upper portions. There is the possibility that the Altynsai deposit could be developed as a small-scale mine by tunnel mining, though it depends on the results of future drilling and tunneling surveys by the Uzbek side.

2) Maulyan Manifestation

(1) Tentative calculation indicated that the total ore reserves of No.1, No.2 and No.3 ore bodies combined are 252,000 t, grading 4.2 g/t Au, or approximately 1.1 t of Au in terms of metal content. A certain increase in ore reserves by further exploration may be anticipated but a significant improvement in Au grade is unlikely.

(2) All the ore bodies in the subject manifestation are small in size and have variable and

low overall grade (Au grade less than 5 g/t). At present, there is little possibility that the Maulyan manifestation could be developed as a large-scale deposit. For developing the manifestation as a small-scale mine, discovery of considerably high grade ore is necessary by the future drilling and tunneling surveys by the Uzbek side.

PART II SPECIFIC INFORMATION

Chapter 1 Altynsai District

1-1 Outline of Geology and Ore Deposits of Altynsai District

The Altynsai district is located in a hilly zone, alt. 650m to 850 m in altitude, in the eastern most part of the Karatau Mountains, some 105 km west-northwest of Samarkand. The district is accessible from Samarkand by car in about 2 hours (road distance 155 km).

The district is underlain by slate, siltstone, sandstone and phyllite of Ordovician to Silurian System and slate, siltstone and sandstone of Lower Silurian System and lamprophyre dikes from late Permian to early Triassic time (Figs.II-1-1-1, 2).

Sedimentary and metamorphic rocks in the district are folded in anticlines and synclines with the WNW-ESE trend. There are many fracture zones with the WNW-ESE and NW-SE trends and numerous joints with the N-S trend.

Geologically, the Altynsai district belongs to the Karatau ore zone, together with the Sarmich deposit and Kurai and Karamechet manifestations to the west (Fig. I-3-1). Among ore deposits in the district, the best known is the Altynsai deposit. The Altynsai deposit is vein type deposit consisting of gold bearing quartz veins, controlled by fracture zones with the WNW-ESE trend and those with NW-SE trend intersecting the former, and tourmaline-quartz veins accompanying joints with the N-S trend.

Discovered in 1938, the Altynsai deposit was investigated between 1952 and 1976 by geological survey, electric survey, magnetic survey, two prospecting adits, drilling survey (8 drillholes) and extensive trenching survey. The prospecting was later suspended to reinforce exploration of the Sarmich deposit to the west but was resumed in 1995. Currently, trenching, drilling and tunneling surveys are ongoing. More than 20 ore zones have so far been ascertained, which include the veins Nos. 1, 2, 8 ("Northwest Vein"), 9 ("Kazanbulak Vein") and 10 ("Berkut Vein"). Among these veins, Nos. 1, 2 and 8 veins have been mainly explored.

Extension of the Nos. 1 and 2 echelon veins, having the WNW-ESE trend, reaches 1,300 m, along which ancient stopes excavated up to an approximate depth of 30m remain over 470m (Figs.II-1-2-3, 4). Although gold grades of the surface level of the No.1 and No.2 veins are unclear because of the ancient mining of bonanzas, the following grades have been obtained at the Adit No.4 (+698.89m level), 25m to 35m under the surface (Fig.II-1-1-3):

No.1 vein: Extension 135 m; average width 2.29 m; Au 15.7 g/t, Ag 5.7 g/t

No.2 vein: Extension 55 m; average width 4.28 m; Au 4.5 g/t, Ag 2.1 g/t

Ancient stopes remain in a surface portion of the No. 8 vein, as well (Fig.II-1-1-4). The vein has been prospected to about 100 m under the surface by two drillholes of the Phase III, eleven drillholes of the Uzbek side, a 25 m exploration shaft and a 35 m prospecting drift

(Fig. II-1-2-5). By these explorations, high-grade gold mineralization has been found in the west of ancient stopes.

Numerous joints trending in the N-S direction and dipping 45° to 80° westward developed within an area of 2.5 km long and 500 m to 800 m wide which includes the Nos. 1, 2, 8 and 10 veins (Figs.II-1-4-1, 2). Tourmaline-quartz veinlets, 0.1 cm to 25 cm wide, occur in the joints. Gold grade of the veinlets is generally 1 g/t or lower, rarely reaching 20 g/t. The veinlets zone mostly coincides with the biotite-muscovite hornfels zone. The occurrence of ore and hornfels zones, and the anomalous zones of the Uzbek airborne magnetic survey mostly correspond to each other, which suggests the possible existence of concealed granites aligned in the WNW-ESE direction at shallow levels.

Component minerals in quartz veins occurring in fracture zone with the WNW-ESE trends are mainly quartz, pyrite, marcasite, arsenopyrite, chalcopyrite, sphalerite, goethite and lepidocrocite, accompanied by galena, native bismuth, aikinite, wittichenite, scheelite, tourmaline, rutile and electrum. Electrum identified in the polished sections is 5-10 μm in grain size and occurs in quartz, associated with chalcopyrite and native bismuth in vein-like alignment but exists independently without contact with these minerals.

In the tourmaline-quartz veins accompanying the joints with the N-S trend, main component minerals are quartz, tourmaline, pyrite and arsenopyrite. The Uzbek studies indicate that wolframite, cassiterite, topaz, beryl and native gold are included, which has not been verified by the subject survey.

1-2 Drilling Survey

1-2-1 Purpose of the survey

Drilling survey aimed at verifying and describing stratigraphy and occurrence of ore deposits, and sampling and confirming the ore reserves was carried out in the Altynsai deposit.

1-2-2 Methods of the survey

1) Survey work

With the personnel and equipment arranged by the Samarkandgeology, drilling work at 2 drillholes totaling 170.0 m was performed. Locations of the respective drillholes are shown in Fig.II-1-2-1.

The one drilling machine was used, Russian-made SKB-41, capable of drilling 300 m with a 76 mm dia. and 500 m with a 59 mm dia.

The drilling operation was generally performed in two 12-hour shifts with one foreman and one operator per unit.

A bulldozer was used for the transportation of the drilling rig and supplies for the

respective drill sites, road construction, drill site leveling and preparations.

Wireline methods were employed for the drilling operation in an effort to improve core recovery and work progress.

For the surface soil drilling, single diamond and metallic bits of 76 mm dia. were used. After drilling reaches the rock, casing pipes of 73 mm dia. were inserted and installed. The drilling operation was continued with the diamond bits of 59 mm dia. as the final diameter. Mud water was not prepared at the drilling site but at the mud water plant of the Altynkazgan Expedition's base and transported to the drilling site by 2 m^3 and 4 m^3 tank trucks.

The drilling work lasted for 67 days from July 7 to September 11, 1999. The drilling lengths and core recoveries by drillhole are tabulated in Table II-1-2-1. The drilling efficiency, working time, consumption of drilling articles and bits are respectively shown in Table II-1-2-2 through II-1-2-5. The main equipment used, results of work, progress record and results of hole deviation measurement by drillhole are respectively shown in Appendices 3-1 through 3-4.

2) Drilling operation

The drilling operation is outlined in Table II-1-2-6.

1-2-3 Results of the drilling survey

The survey findings are shown in the geological cross sections (Fig.II-1-2-2).

1) MJSN-15 (Direction N 30° W; inclination -75°; drilling length 110.0 m) (Exploration Line L-7)

The drilling was aimed to examine the lower extension of dominant mineralization that was intersected under the No. 8 vein by MJSN-16.

(1) Geology: The drillhole is made from the mouth to the bottom, of a slate of the middle formation of Ordovician to Silurian System.

(2) Mineralization: As seen in Fig.II-1-2-2, the drilling intersected at various locations of gold mineralization (Au trace - 12.4 g/t) in quartz veins and veinlets accompanied by pyrite and arsenopyrite. However, No. 8 vein is zone of quartz veins that includes low-grade mineralization (true width 1.30 m; Au 1.8 g/t),

The major mineralization showings are indicated in Table II-1-2-7.

2) MJSN-16 (Direction N30° W; inclination -75°; drilling length 60.0 m) (Exploration Line L-7)

The drilling was aimed at the lower extension of a bonanza of the No.8 vein confirmed

by the Uzbek trenches.

(1) Geology: From the mouth to the bottom, the drillhole is made of slate of the middle formation of Ordovician to Silurian System.

(2) Mineralization: As seen in Fig.II-1-2-2, the drilling revealed dominant gold mineralization (true width 0.98 m; Au 44.8 g/t) accompanied by quartz veins-veinlets, between 49.80 m and 51.00 m in depth, which corresponds to the No. 8 vein. At the drillhole, many quartz veins and veinlets containing pyrite and arsenopyrite were seen, accompanied by low-grade gold mineralization (Au trace – 2.8 g/t) at various locations.

The major mineralization showings are shown in Table II-1-2-7.

1-3 Ore Reserves Estimation of the Altynsai Deposit

The ore bodies in the Altynsai deposit, of which ore reserves estimation was made, have varied shapes, sizes and grade distribution, as the survey findings indicate. Therefore, tentative calculation was made for rough estimation of ore reserves and grade.

1-3-1 Calculation method

(1) Ore vein of estimation

Among the ore veins with the WNW-ESE trend occurring in sediments of Ordovician-Silurian System, Nos. 1, 2 and 8 veins constitute the subject ore veins of this estimation.

(2) Definition of ore zone

Among the ore bodies confirmed by the trenching, drilling and tunneling surveys, the estimation is limited to those which have the horizontal width more than 1m and Au grade higher than 2 g/t.

(3) Definition of ore block

Ore reserves between trenches and ore zones confirmed by drillholes are correspond to possible ore reserves (Uzbek's C2 ore reserves) (Figs.II-1-3-1～3). While ore reserves expected below the possible ore reserves correspond to potential ore reserves (Fig.II-1-3-3).

The extent of possible ore block is defined by straight lines of max. 30 m in strike and max. 20 m perpendicularly from the center point of respective ore zones caught by the trenching, drilling and tunneling surveys. In case no ore zone is confirmed by trenching or drilling at an extension of an ore body, the extent of ore block is limited only up to the median point. The potential ore blocks are set at the lower extension of possible ore blocks.

(4) Specific gravity

For specific gravities of the ore, those of No. 1 vein and No.2 vein ore (both 2.7) as determined by the Altynkazgan Geological Party of the Zarafshan Expedition were applied.

(5) Ore reserves by ore block

Ore reserves of respective blocks are calculated by the following formula:

$$V = L \times H \times HT \times SG$$

where, L: Length (m) of ore body
H: Height (m) of ore body
HT: Horizontal thickness (m) of ore body
SG: Specific gravity (2.7)

(6) Grade of ore block

For the grade of an ore block, the length-weighted average (by the sampling length) of the ore-zone grade was applied. For the grade of a potential ore block, grade of an upper ore block was applied. However, the existence possibility of ore is assumed to be 75 %.

1-3-2 Results of estimation

Results of the tentative calculation are exhibited in Figs.II-1-3-1～3, while the ore reserves estimation is tabulated in Table II-1-3-1 (1～4).

At the cutoff grade of 2.0 g/t (Au), the total ore reserves of No.1, No.2 and No.8 veins combined are 423,000 t, grading 9.6 g/t Au, or approximately 4.0 t of Au in terms of metal content. While those of No.1, No.2 and No.8 veins are 109,000 t, grading 10.3 g/t Au (1.1 t of Au content), 239,000 t, grading 6.9 g/t Au (1.7 t of Au content) and 75,000 t, grading 17.0 g/t Au (1.3 t of Au content), respectively.

1-4 Summary and Considerations

The district is underlain by sediments of Ordovician to Silurian System and late Permian to early Triassic lamprophyre dikes. Sedimentary rocks and metamorphic rocks in the district are folded in anticlines and synclines trending in the WNW-ESE direction (Figs.II-1-1-1, 2).

The District is located in the Karatau ore zone, 70km E-W and 2 km to 4 km N-S, where gold manifestations occur in fractures and silicification zones in the WNW-ESE direction. The Karatau ore zone embraces ore deposits and manifestations of gold-silver bearing quartz vein type, such as the Sarmich deposit, Biran deposit (these are out of the survey area), Kurai manifestations and Altynsai deposit (Fig.I-3-1).

Altynsai deposit is vein-type deposit consisting of gold bearing quartz veins, controlled by fracture zones with the WNW-ESE trend and those with NW-SE trend intersecting the former, and tourmaline-quartz veins which accompany joints with the N-S trend.

In an area, 2.5 km long and 500 m to 800 m wide, ore bodies of quartz veins such as the Nos. 1, 2, 8 ("Northwest Vein"), 9 ("Kazanbulak Vein") and 10 ("Berkut Vein") have been

confirmed in hornfelsed sedimentary rocks. Tourmaline-quartz veinlet zones with the N-S trend are also developed in the areas where the ore zones occur (Figs.II-1-4-1, 2).

Bonanzas in veins trending in the WNW-ESE direction (the veins Nos. 1, 2 and 8) occur at the intersections of a fracture of the same trend with fractures in the NW-SE direction (Figs.II-1-1-3, 4). The number, width and gold grade of N-S trending tourmaline-quartz veins increase in sandstone rather than in slate.

Homogenization temperatures of fluid inclusions of quartz veins with the WNW-ESE and NW-SE trends, and the tourmaline-quartz veinlets with the N-S trend generally range between 270°C and 370°C. There was no significant difference observable between them. The quartz veins and tourmaline-quartz veinlets are inferred to have been formed during the similar period of mineralization and under similar temperature ambience. No significant correlation was observed between homogenization temperature and gold grade, nor between homogenization temperature and depth at which drilling samples were taken (Figs.I-4-1, 2).

The occurrence of ore and hornfels zone and the anomalous zones of the Uzbek airborne magnetic survey mostly correspond to each other, which suggests the possible existence of concealed granites at shallow levels (Figs.II-1-4-1, 2). The ore zones are inferred to have been formed by the mineralization originating in the intrusion of granites.

The Phase I, II and Uzbek drilling surveys, aimed at the lower extension of the bonanzas confirmed in Adit No. 4 at veins Nos. 1 and 2, discovered that the mineralization degenerates below the depth of 100 m (600 m above sea level) under the adit (Figs.II-1-2-3, 4). This is presumably attributable to denudation of the main portions of the ore body by erosion.

The drillhole MJSN-16, aimed at the lower extension of the Northwest Vein (No. 8 vein) as confirmed by the Uzbek trenches, discovered the dominant mineralization (true width 0.98 m; Au 44.8 g/t) 60 m under the surface (Figs.II-1-2-2, 5). But the drillhole MJSN-15, aimed at the lower extension (50 m) of it, only confirmed low-grade gold mineralization (true width 1.06 m; Au 1.8 g/t). From these findings, it was confirmed that gold grade considerably varies though mineralization is continuous.

The Phase I, II and Uzbek drilling surveys aimed to examine mineralization of tourmaline-quartz veinlet zones with the N-S trend and also examine the feasibility of open pit mining, discovered low-grade gold mineralization (Au trace to 23.6 g/t) at various locations; however, the overall average of Au grade did not exceed 0.2 g/t which is insufficient for justifying open pit mining.

The tentative calculation indicated the total ore reserves of No.1, No.2 and No.8 veins combined are 423,000 t, grading 9.6 g/t Au, or approximately 4.0 t of Au in terms of metal content (Table II-1-3-1 (4)). While those of No.1, No.2 and No.8 veins are 109,000 t, grading 10.3 g/t Au (1.1 t of Au content), 239,000 t, grading 6.9 g/t Au (1.7 t of Au content)

and 75,000 t, grading 17.0 g/t Au (1.3 t of Au content), respectively (Figs.II-1-3-1～3) (Tables II-1-3-1 (1～3)).

The lower portion of No.8 vein remains unexplored, however, big increase of ore reserves can not be expected by further drilling because the mineralization is small in size.

Table II-1-2-1 Quantity of Drilling Works and Core Recovery in the Altynsai District

Hole No.	Planned Length(m)	Drilling length (m)	Length of core (m)	Core recovery (%)
MJSN-15	110.00	110.00	89.10	81.0
MJSN-16	60.00	60.00	48.40	80.7
Total	170.00	170.00	137.50	80.9

Table II-1-2-2 Efficiency of Each Drillhole in the Altynsai District

Hole No.	Drilling Machine	Working Period	Drilling Length (m)	Core		Working Day			Efficiency		
				Length (m)	Recovery (%)	Drilling* (day*)	Others (day)	Total** (day**)	m/day*	m/day**	m/working Period
MJSN-15	SKB-41	Aug. 3,'99 ↓ Sept.11,99	110.00	89.10	81.0	12.4	19.2	31.6	8.87	3.48	2.76
MJSN-16	SKB-41	July 7,'99 ↓ Aug. 4,'99	60.00	48.40	80.7	5.0	8.1	13.1	12.00	4.58	2.11
Total			170.00	137.50	80.9	17.4	27.3	44.7	9.77	3.80	2.49

* includes drilling and out drilling

** includes drilling, out drilling, recovery from accident, preparation, dismount/mobilization and others.

Table II-1-2-3 Working Time of Diamond Drilling in the Altynsai District

Hole No.	Working Period		Number of Works		Working						
	Period	(day)	Foreman (man)	Worker (man)	Drilling (hour)	Out Drilling (hour)	Recovery from Accident (hour)	Preparation (hour)	Dismount/ Mobilization (hour)	Others (hour)	Total (hour)
MJSN-15	Aug. 3,'99 ↓ Sept.11,'99	39.84	109	80	177.0	120.0	536.0	21.0	15.0	27.0	896.0
MJSN-16	July 7,'99 ↓ Aug. 4,'99	28.50	78	60	93.0	28.0	95.0	18.0	12.0	153.0	399.0
Total	—	68.34	187	140	270.0	148.0	631.0	39.0	27.0	180.0	1,295.0

Table II-1-2-4 Consumable Drilling Articles in the Altynsai District

Item	Specification	Unit	Quantity				
			MJSN-15	MJSN-16			Total
Bentonite		kg					0
Clear mud		kg					0
Nl mud water		m^3	73	27.4			100.4
C. M. C.		kg					0
UNIFLOK		kg					0
Clay		kg					0
Diamond bit	93mm	pc					0
Diamond bit	76mm	pc					0
Diamond bit	59mm	pc	21	9			30
Diamond single bit	59mm	pc					0
Diamond reamer	76mm	pc					0
Diamond reamer	59mm	pc	1	1			2
Metal crown	112mm	pc					0
Metal crown	93mm	pc					0
Metal crown	76mm	pc	1	1			2
Metal shue	89mm	pc					0
Metal shue	73mm	pc	1	1			2
Core box			18	7			25

Table II-1-2-5 Drilling Length of Bits in the Altynsai District

Size	Number of bits (pcs)	Drilling Meterage by Drillhole (m)				Total	Efficiency
		MJSN-15	MJSN-16				m/bit
Metal bits	1	3.00				3.00	3.00
(φ76mm)	1		3.50			3.50	3.50
Sub total	2	3.00	3.50			6.50	3.25
Diamond bits							
(φ76mm)							
Sub total	0	0.00	0.00			0.00	
Diamond bits	21	107.00				107.00	5.10
(φ59mm)	9		56.50			56.50	6.28
Sub total	30	107.00	56.50			163.50	5.45
Grand total	32	110.00	60.00			170.00	5.31

Table II-1-2-6 Results of Drilling Works in the Altynsai District

Item		MJSN-15	MJSN-16					Grand total
Period of drilling								
Started date		Aug. 3,'99	July 7,'99					
Finished date		Sept.11,'99	Aug. 4,'99					
Total day		39.84	28.5					
Drilling machine		SKB-41	SKB-41					
Direction		N30° W	N30° W					
Inclination		-75°	-75°					
Drilling length (m)		110.00	60.00					170.00
Length of core (m)		89.10	48.40					137.5
Core recovery (%)		81.0	80.7					80.9
Bit	φ93mm	-	-					
	φ76mm	3.00m	3.50m					
	φ59mm	107.00m	56.50m					
Casing	φ89mm	-	-					
	φ73mm	3.00m	3.50m					
Drilling (day)*		31.6	13.1					44.7
Drilling (day)**		39.8	28.5					68.3
Efficiency (m/day)*		3.48	4.58					3.80
Efficiency (m/day)**		2.76	2.11					2.49

* working days

** including no working days for recovery from accident and others

Table II-1-2-7 Major Mineralization Zones Revealed by Drillings in the Altynsai District

Hole No.	Depth (m)	True width (m)	Au (g/t)	Ag (g/t)	Remarkas
MJSN-15	29.00～31.00 (2.00)	0.71	12.4	6.5	N-S Veinlets
	32.70～33.90 (1.20)	0.42	1.6	4.8	N-S Veinlets
	44.60～46.15 (1.55)	1.27	1.0	0.2	E-W Vein
	69.20～71.10 (1.90)	0.67	2.0	1.6	N-S Veinlets
	87.00～87.85 (0.85)	0.70	0.7	3.2	No.8 Vein
	90.20～91.50 (1.30)	1.06	1.8	<1	No.8 Vein
MJSN-16	12.40～13.50 (1.10)	0.39	1.2	<1	N-S Veinlets
	43.90～49.80 (5.90)	4.83	1.9	<1	No.8 Vein
	49.80～51.00 (1.20)	0.98	44.8	6.8	No.8 Vein
	51.00～51.80 (0.80)	0.66	1.8	<1	No.8 Vein

Table Ⅱ-1-3-1(1) Ore Reserves Calculation of Altynsai Deposit (No. 1 Ore Body)

Ore Body	Ore Block	Area			Horizontal Thickness	Volume (m^3)	Specific Gravity	Existence Possibility	Tonnage (t)	Grade		Metal Content		Note
		Length(m)	Height(m)	Area(m^2)						Au(g/t)	Ag(g/t)	Au(kg)	Ag(kg)	
No. 1	Ⅰ-1	88	max.18	1,096	3.03	3,321	2.70	1.00	8,966	15.8	5.9	141.7	52.9	Above AT-4
	Ⅰ-2	127	84	10,306	2.36	24,322	2.70	1.00	65,670	11.8	5.1	774.9	334.9	Below AT-4
	Ⅱ	52	22	1,124	1.01	1,135	2.70	1.00	3,065	5.8	7.5	17.8	23.0	Below AT-4
	Ⅲ-1	47	max.14	314	1.26	396	2.70	1.00	1,068	7.7	6.1	8.2	6.5	Above AT-4
	Ⅲ-2	62	90	5,274	1.10	5,801	2.70	1.00	15,664	5.8	6.4	90.8	100.2	Below AT-4
	Ⅳ	54	max.58	2,891	1.82	5,262	2.70	1.00	14,206	5.8	5.0	82.4	71.0	Hanging wall side vein
Total				21,005	1.92	40,237	2.70	1.00	108,640	10.3	5.4	1,115.8	588.6	

Table Ⅱ-1-3-1(2) Ore Reserves Calculation of Altynsai Deposit (No. 2 Ore Body)

Ore Body	Ore Block	Area			Horizontal Thickness	Volume (m^3)	Specific Gravity	Existence Possibility	Tonnage (t)	Grade		Metal Conter		Note
		Length(m)	Height(m)	Area(m^2)						Au(g/t)	Ag(g/t)	Au(kg)	Ag(kg)	
No. 2	Ⅰ-1	73	25	1,748	4.19	7,324	2.70	1.00	19,775	5.3	0.5	104.8	9.9	Above AT-4
	Ⅰ-2	125	76	9,141	3.34	30,531	2.70	1.00	82,434	5.8	1.8	478.1	148.4	Below AT-4
	Ⅱ-1	62	20	1,203	0.86	1,035	2.70	1.00	2,793	5.6	0.5	15.6	1.4	Foot wall side vein, above AT-4
	Ⅱ-2	104	100	10,274	1.47	15,103	2.70	1.00	40,778	4.8	2.0	195.7	81.6	Foot wall side vein, below AT-4
	Ⅲ	190	max.35	7,997	1.27	10,156	2.70	1.00	27,422	9.2	2.9	252.3	79.5	Surface to +762.05m
	Ⅳ	56	60	3,437	1.19	4,090	2.70	0.75	8,282	6.9	1.8	57.1	14.9	Foot wall side vein
	Ⅴ	177	85	15,080	1.89	28,501	2.70	0.75	57,715	9.5	0.6	548.3	34.6	Foot wall side vein
Total				48,880	1.98	96,740	2.70	0.92	239,198	6.9	1.5	1,652.0	370.3	

Table Ⅱ-1-3-1(3) Ore Reserves Calculation of Altynsai Deposit (No. 8 Ore Body)

Ore Body	Ore Block	Area			Horizontal Thickness	Volume (m^3)	Specific Gravity	Existence Possibility	Tonnage (t)	Grade		Metal Conter		Note
		Length(m)	Height(m)	Area(m^2)						Au(g/t)	Ag(g/t)	Au(kg)	Ag(kg)	
No. 8	Ⅰ	max.35	max.26	869	0.60	521	2.70	1.00	1,408	4.0	2.9	5.6	4.1	Above AT-4
	Ⅱ-1	74	max.43	2,940	1.37	4,028	2.70	1.00	10,875	20.9	5.7	227.3	62.0	Below AT-4
	Ⅱ-2	74	97	7,151	1.32	9,439	2.70	1.00	25,486	23.0	3.6	586.2	91.8	
	Ⅱ-3	74	50	3,690	1.32	4,871	2.70	0.75	9,863	23.0	3.6	226.9	35.5	
	Ⅲ-1	36	max.26	768	1.28	983	2.70	1.00	2,654	6.9	2.4	18.3	6.4	
	Ⅲ-2	36	36	1,280	0.77	986	2.70	1.00	2,661	14.4	2.4	38.3	6.4	
	Ⅲ-3	36	116	4,220	0.77	3,249	2.70	0.75	6,580	14.4	2.4	94.8	15.8	
	Ⅳ-1	15	13	211	0.60	127	2.70	1.00	342	6.0	1.2	2.1	0.4	
	Ⅳ-2	max.73	max.55	1,858	1.55	2,880	2.70	1.00	7,776	5.7	0.7	44.3	5.4	
	Ⅴ	50	70	3,445	1.09	3,755	2.70	0.75	7,604	4.8	1.3	36.5	9.9	Foot wall side vein
Total				26,432	1.17	30,839	2.70	0.90	75,249	17.0	3.2	1,280.2	237.6	

Table Ⅱ-1-3-1(4) Ore Reserves Calculation of Altynsai Deposit (Total)

Ore Body	Area Area(m^2)	Horizontal Thickness	Volume (m^3)	Specific Gravity	Existence Possibility	Tonnage (t)	Grade Au(g/t)	Grade Ag(g/t)	Metal Content Au(kg)	Metal Content Ag(kg)
No. 1	21,005	1.92	40,237	2.70	1.00	108,640	10.3	5.4	1,115.8	588.6
No. 2	48,880	1.98	96,740	2.70	0.92	239,198	6.9	1.5	1,652.0	370.3
No. 8	26,432	1.17	30,839	2.70	0.90	75,249	17.0	3.2	1,280.2	237.6
Total	96,317	1.74	167,816	2.70	0.93	423,087	9.6	2.8	4,048.0	1,196.5

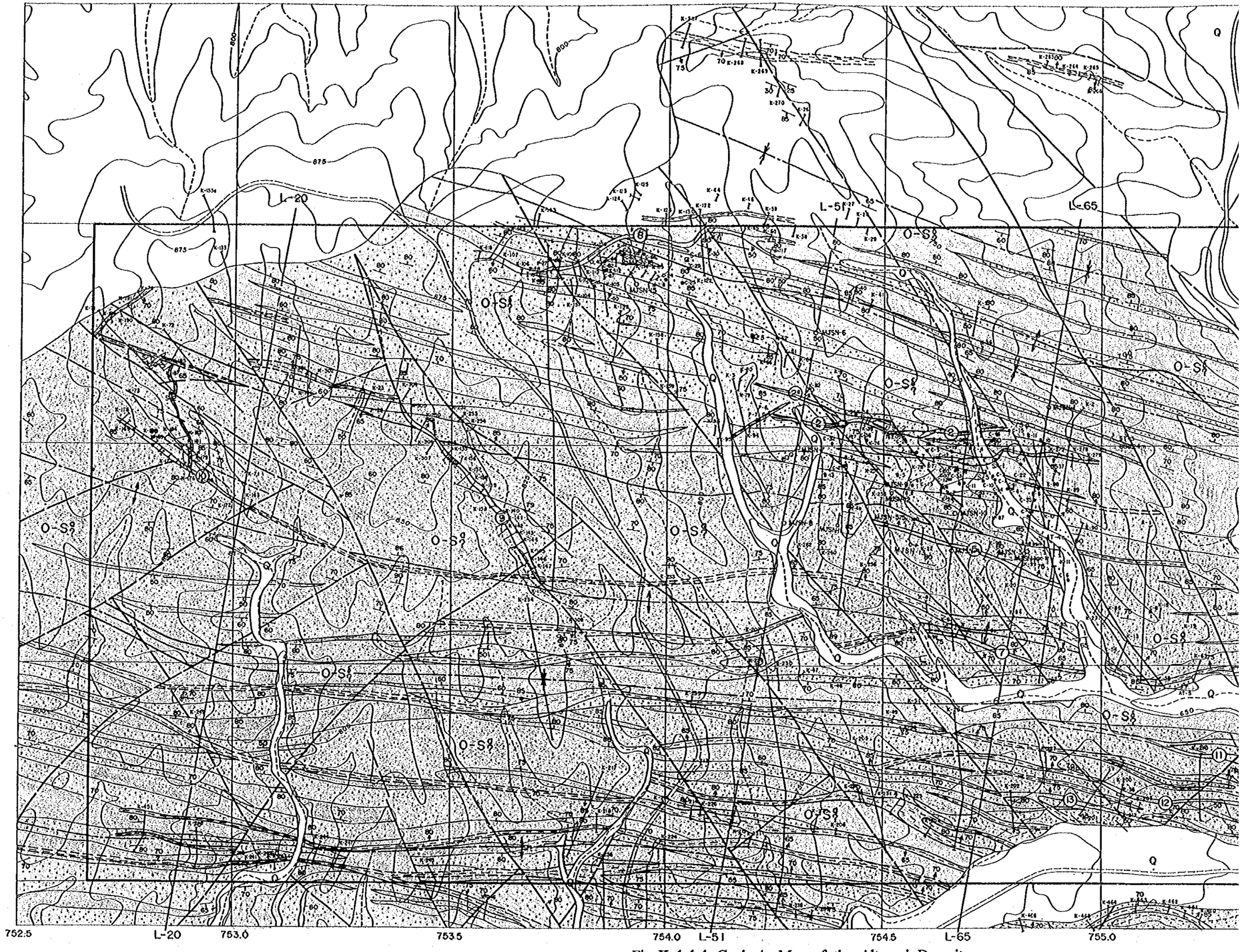


Fig. II-1-1-1 Geologic Map of the Altynsai Deposit

Fig. II-1-1-1 Geologic Map of the Altynsai Deposit

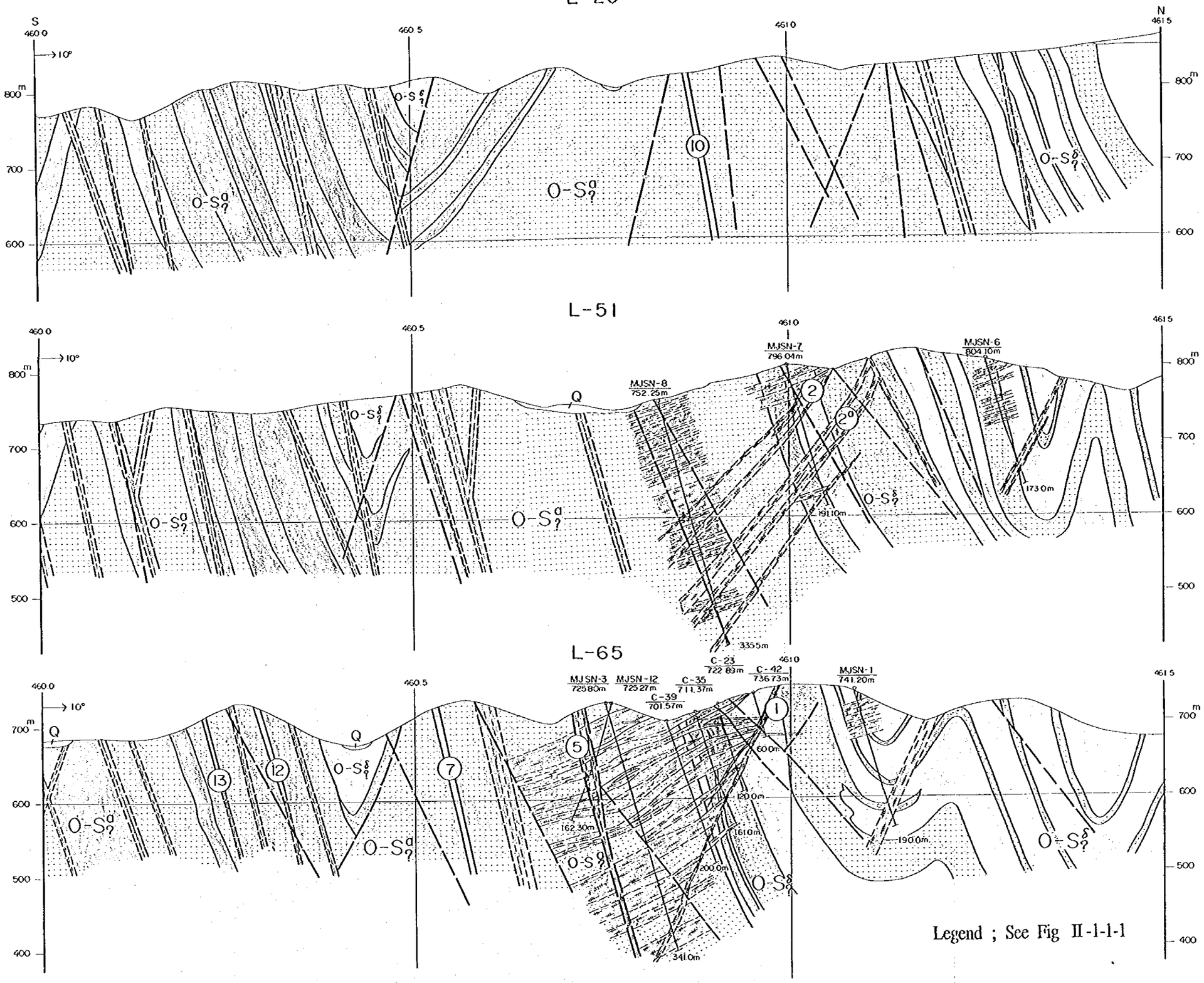


Fig. II-1-1-2 Geologic Cross Section of the Altynsai Deposit

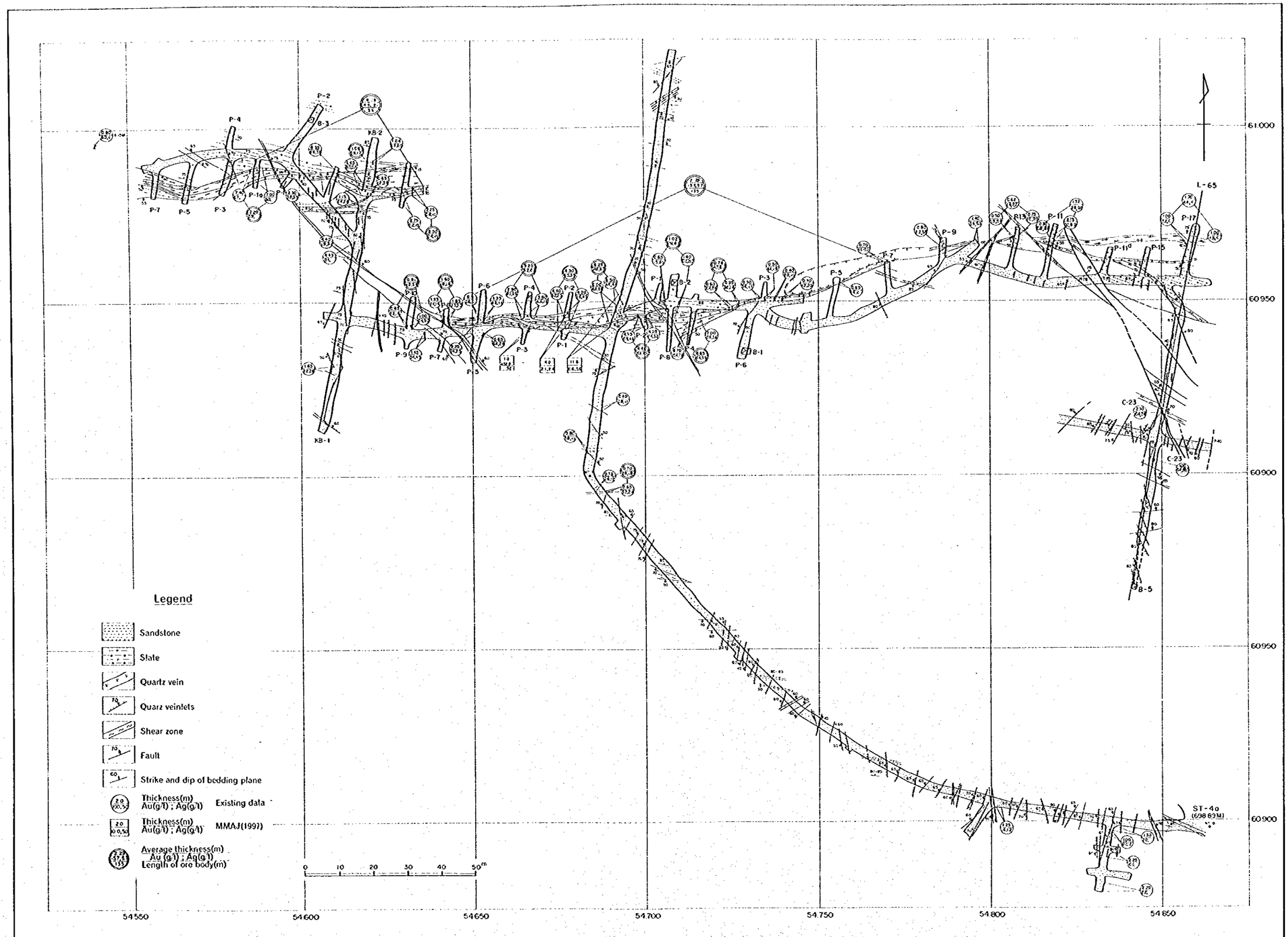


Fig. II-1-1-3 Geologic Map of the Adit No.4 (+698.89m Level) of the Altynsai Deposit

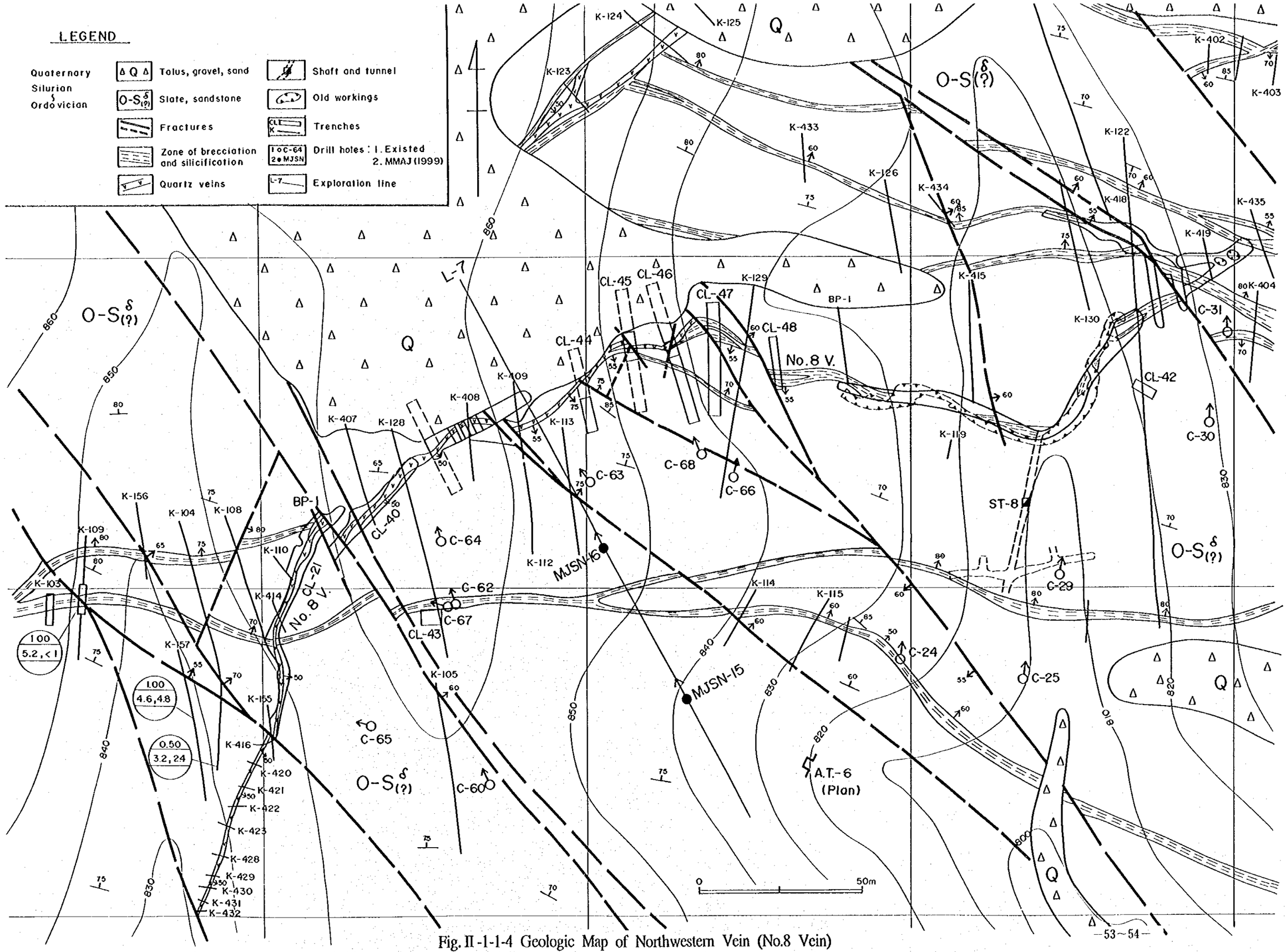


Fig. II-1-1-4 Geologic Map of Northwestern Vein (No.8 Vein)

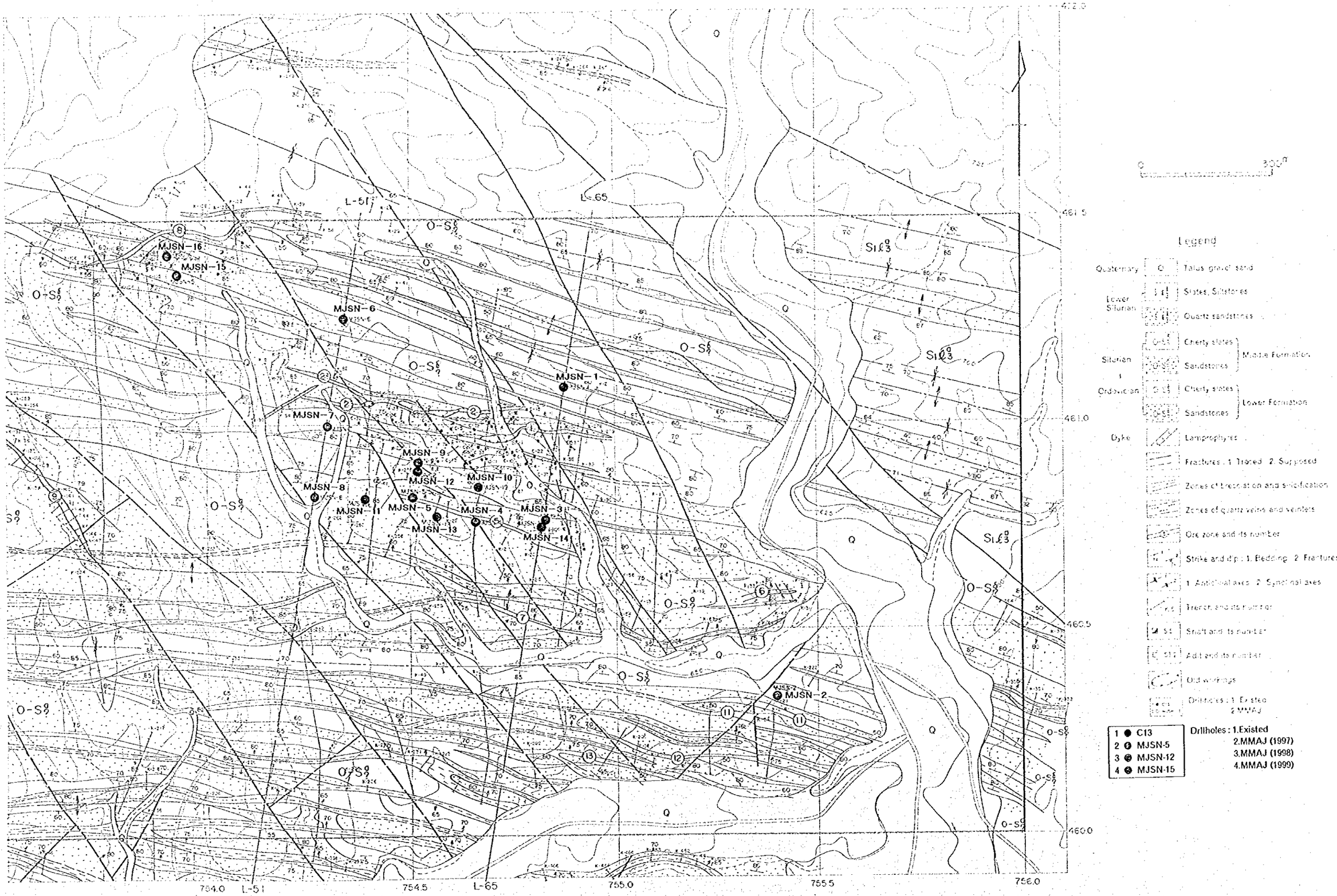


Fig. II-1-2-1 Location Map of the Drillholes in the Altynsai District