

2. Subjects and guiding principles for the future programme

Remarkable zinc mineralization has been revealed in the southwest of the drilled area and margins of this zone to the southwest and southeast are still open. The drilling grid should be extended to these directions to delineate the mineralized zone.

For the evaluation purpose of the mineralized zones detected in MJZK-1, 9 and 10, an interval of grid for drilling should be reduced over the area which covers these three holes.

No work has been conducted in Area B of geochemical anomalies. Yet, the above mentioned schemes over the Area A should be carried out before proceeding to the Area B.

Table 4-1 List of Polished Sections

Cov:covelline, Py:pyrite, Sp:sphalerite

| No. Hole | Depth | Main Constituents | Accessory | Notes |
|-------------|---------|--------------------|-------------|---|
| P1 MJZK-3, | 17.70m | Sp(1~0.1mm) | Py | Sphalerite rarely includes pyrite specks. |
| P2 MJZK-3, | 23.75m | Sp(1~0.1mm) | Py(rare) | |
| P3 MJZK-3, | 32.80m | Sp(1~0.1mm) | Py | Sphalerite specks along beddings. |
| P4 MJZK-3, | 53.35m | Py(>1mm) | | Idiomorphic pyrites along bedding planes. |
| P5 MJZK-5, | 26.80m | Sp(>0.1mm) | Py | Idiomorphic pyrites in sphalerites. |
| P6 MJZK-6, | 73.70m | | Sp, Py, Cov | Idiomorphic covelline in sphalerite. |
| P7 MJZK-6, | 98.40m | Sp(>1mm) | Cov | Covelline replaces spalerite. |
| P8 MJZK-6, | 190.20m | Py(>0.1mm) | Sp | Sphalerites with large dolomite crystals. |
| P9 MJZK-7, | 67.10m | Sp(>1mm) | | |
| P10 MJZK-7, | 82.00m | Sp(>0.1mm) | Py(rare) | Sphalerite veining. |
| P11 MJZK-7, | 126.00m | Sp(pure, >0.1mm) | Py(rare) | Sphalerite veining. |
| P12 MJZK-7, | 134.60m | Sp(>0.1mm) | | |
| P13 MJZK-7, | 169.60m | Py(>0.1mm) | | Pyrites along bedding. |
| P14 MJZK-9, | 144.85m | Sp(pure, variable) | Py(rare) | Sphalerite vein. |

Table 4-1 List of Polished Sections(cont.)

| No. Hole | Depth | Main Constituents | Accessory | Notes |
|--------------|---------|-------------------|-----------|-----------------------------|
| P15 MJZK-10, | 53.35m | Sp(pure, >0.1mm) | | Sphalerites along beddings. |
| P16 MJZK-10, | 54.45m | Sp(>0.1mm) | Cov(rare) | Sphalerites along beddings. |
| P17 MJZK-10, | 83.30m | Sp(>0.1mm) | Cov(rare) | |
| P18 MJZK-10, | 165.60m | Sp(>0.1mm) | Py(rare) | |
| P19 MJZK-11, | 168.30m | Sp(<1mm) | Cov(rare) | |
| P20 MJZK-11, | 177.75m | Py(1~0.1mm) | | Pyrite impregnation. |
| P21 MJZK-11, | 173.90m | Sp(pure, >0.1mm) | | Vein forming sphalerites. |
| P22 MJZK-11, | 179.70m | Py(>0.1mm) | | Pyrite impregnation. |
| P23 MJZK-11, | 190.90m | | Py, Sp | |
| P24 MJZK-12, | 151.00m | Sp(>0.1mm) | Py(rare) | Vein forming sphalerites. |
| P25 MJZK-12, | 162.70m | Sp(1~0.1mm) | | |

Table 4-2 List of Thin Sections

| No. | Hole | Depth | Name | Notes |
|-----|---------|--------------|---|--|
| S5 | MJZK-5 | 26.80m(P5) | Sphalerite in dolomite with quartz. | Sphalerite is associated with coarser dolomite crystals. |
| S6 | MJZK-6 | 73.70m(P6) | Hematite-melilite-quartz vein in dolomite | |
| S7 | MJZK-6 | 98.40m(P7) | Melilite with quartz | |
| S8 | MJZK-6 | 190.20m(P8) | Sphalerite-bearing dolomite | Aggregates of dolomite, quartz, and sphalerite are associated with coarser dolomite crystals. Sphalerite with coarse dolomite. |
| S9 | MJZK-7 | 67.10m(P9) | Sphalerite-bearing dolomite | ditto |
| S10 | MJZK-7 | 82.00m(P10) | ditto | |
| S11 | MJZK-7 | 126.00m(P11) | Sphalerite-bearing phlogopite dolomite | |
| S13 | MJZK-7 | 169.60m(P13) | Sphalerite-bearing dolomite | Quartz grains exist in coarser dolomite. |
| S16 | MJZK-10 | 54.45m(P16) | Phlogopite dolomite | Phlogopite along bedding of fine-grained matrix. |
| S24 | MJZK-12 | 151.00m(P24) | Sphalerite-bearing dolomite | Large crystals of dolomite. |
| S25 | MJZK-25 | 162.70m(P25) | Sphalerite-bearing phlogopite dolomite | Sphalerite, phlogopite and dolomite in fine-grained matrix. |
| S31 | MJZK-3 | 12.20m | Smithsonite-sphalerite in dolomite | Carbonate rims around sphalerite. |
| S32 | MJZK-3 | 82.70m | Phlogopite dolomite | Few quartz. |
| S33 | MJZK-3 | 121.00m | ditto | ditto. Banding due to grain sizes. |
| S34 | MJZK-3 | 190.50m | Muscovite dolomite | With iron stains. |
| S41 | MJZK-4 | 27.60m | Melilite dolomite | ditto. |
| S42 | MJZK-4 | 60.70m | Muscovite dolomite | Banded. |
| S43 | MJZK-4 | 104.90m | Melilite dolomite | Medium-grained dolomite with iron stains. |

Table 4-2 List of Thin Sections(cont.)

| | | | | |
|------|---------|---------|-----------------------------------|---|
| S51 | MJZK-5 | 86.10m | Muscovite dolomite | Fine-grained. |
| S52 | MJZK-5 | 111.80m | Muscovite dolomite | Coarse-grained. |
| S53 | MJZK-5 | 119.15m | Phlogopite dolomite | Coarser facies penetrate finer facies. |
| S54 | MJZK-5 | 125.00m | Muscovite dolomite | Fine-grained. |
| S55 | MJZK-5 | 138.15m | Quartz-bearing muscovite dolomite | |
| S61 | MJZK-6 | 48.50m | Dolomite | Stained coarser facies. |
| S62 | MJZK-6 | 73.00m | Dolomite | Fine-grained. |
| S63 | MJZK-6 | 90.70m | Muscovite dolomite | Stained coarser dolomite crystals. |
| S64 | MJZK-6 | 107.20m | Melilite dolomite | |
| S71 | MJZK-7 | 131.25m | Muscovite dolomite | |
| S72 | MJZK-7 | 132.10m | Dolomite | Bedded. |
| S73 | MJZK-7 | 139.00m | Muscovite dolomite | With few quartz. |
| S74 | MJZK-7 | 141.00m | Dolomite | Banded. |
| S81 | MJZK-8 | 29.65m | Sericite dolomite | |
| S82 | MJZK-8 | 35.50m | Sericite dolomite | Banded. |
| S83 | MJZK-8 | 37.20m | Sericite dolomite | With hematite |
| S84 | MJZK-8 | 45.75m | Sericite schist | With iron bands. |
| S85 | MJZK-8 | 46.75m | Hematite-bearing dolomite | |
| S86 | MJZK-8 | 121.20m | Dolomite | |
| S87 | MJZK-8 | 143.00m | Dolomite | With few muscovite and iron minerals. |
| S88 | MJZK-8 | 147.30m | Dolomite | ditto. Mosaic texture. |
| S121 | MJZK-12 | 153.85m | Sphalerite-bearing dolomite | Sphalerite is associated with coarser dolomite. |

Table 5 Chemical Assays

| Hole No. | Depth in m. | %Zn (MINEX) | Au g/t | Ag g/t | Cu % | Pb % | Zn % | Co % | V % | In ppm |
|--------------|--------------|----------------|-----------|-----------|---------|---------|---------|---------|--------|-----------|
| MJZK-1 | 17.00- 18.00 | 0.30 | <0.07 | <0.5 | 0.03 | 0.02 | 0.33 | 0.004 | 0.03 | <10 |
| | 23.80- 24.80 | 4.68 | <0.07 | <0.5 | <0.01 | <0.01 | 4.35 | 0.004 | <0.01 | <10 |
| | 24.80- 25.90 | 10.05 | <0.07 | <0.5 | <0.01 | <0.01 | 10.40 | 0.005 | <0.01 | <10 |
| | 25.90- 26.10 | 11.93 | <0.07 | 1.5 | <0.01 | <0.01 | 11.50 | 0.004 | <0.01 | <10 |
| | 26.10- 27.10 | 3.08 | <0.07 | <0.5 | <0.01 | <0.01 | 3.00 | 0.003 | <0.01 | <10 |
| | 27.10- 28.10 | 0.40 | <0.07 | <0.5 | <0.01 | <0.01 | 0.44 | 0.003 | <0.01 | <10 |
| | 28.10- 29.10 | 7.82 | <0.07 | <0.5 | <0.01 | <0.01 | 7.86 | 0.004 | <0.01 | <10 |
| | 29.10- 30.10 | 0.80 | <0.07 | <0.5 | <0.01 | <0.01 | 0.80 | 0.003 | <0.01 | <10 |
| | 30.10- 31.10 | 4.57 | <0.07 | <0.5 | <0.01 | <0.01 | 3.97 | 0.003 | <0.01 | <10 |
| | 31.10- 32.10 | 14.90 | <0.07 | <0.5 | <0.01 | <0.01 | 12.60 | 0.005 | <0.01 | <10 |
| | 32.10- 33.10 | 4.17 | <0.07 | <0.5 | <0.01 | <0.01 | 4.17 | 0.003 | <0.01 | <10 |
| | 33.10- 34.30 | 1.09 | <0.07 | <0.5 | <0.01 | <0.01 | 1.00 | 0.004 | <0.01 | <10 |
| | 34.30- 35.30 | 3.99 | <0.07 | 0.5 | <0.01 | <0.01 | 3.87 | 0.004 | <0.01 | <10 |
| | 35.30- 36.30 | 3.98 | <0.07 | <0.5 | <0.01 | <0.01 | 4.39 | 0.003 | <0.01 | <10 |
| | 36.30- 37.40 | 1.39 | <0.07 | <0.5 | <0.01 | <0.01 | 1.27 | 0.003 | <0.01 | <10 |
| | 38.40- 39.40 | 4.18 | <0.07 | <0.5 | <0.01 | <0.01 | 3.36 | 0.004 | <0.01 | <10 |
| | 40.40- 41.40 | 7.56 | <0.07 | <0.5 | <0.01 | <0.01 | 6.12 | 0.004 | <0.01 | <10 |
| | 41.40- 42.40 | 8.13 | <0.07 | <0.5 | <0.01 | <0.01 | 5.89 | 0.004 | <0.01 | <10 |
| | 42.40- 43.40 | 1.10 | <0.07 | <0.5 | <0.01 | <0.01 | 0.77 | 0.003 | <0.01 | <10 |
| | 43.40- 44.40 | 9.04 | <0.07 | <0.5 | <0.01 | <0.01 | 6.93 | 0.004 | <0.01 | <10 |
| | 44.40- 45.40 | 8.12 | <0.07 | <0.5 | <0.01 | 0.01 | 3.77 | 0.005 | <0.01 | <10 |
| | 45.40- 46.40 | 10.44 | <0.07 | <0.5 | <0.01 | <0.01 | 10.40 | 0.005 | <0.01 | <10 |
| | 46.40- 47.40 | 15.84 | <0.07 | <0.5 | <0.01 | <0.01 | 14.80 | 0.004 | <0.01 | <10 |
| | 47.40- 48.40 | 21.88 | <0.07 | <0.5 | <0.01 | <0.01 | 12.50 | 0.004 | <0.01 | <10 |
| | 48.40- 49.40 | 4.45 | <0.07 | <0.5 | <0.01 | <0.01 | 3.11 | 0.003 | <0.01 | <10 |
| | 49.40- 50.40 | 5.93 | <0.07 | <0.5 | <0.01 | <0.01 | 3.97 | 0.003 | <0.01 | <10 |
| | 50.40- 51.40 | 2.88 | <0.07 | <0.5 | <0.01 | <0.01 | 1.65 | 0.003 | <0.01 | <10 |
| 51.40- 52.40 | 1.58 | <0.07 | <0.5 | <0.01 | <0.01 | 1.04 | 0.003 | <0.01 | <10 | |
| 52.40- 53.40 | 7.99 | <0.07 | <0.5 | <0.01 | <0.01 | 5.87 | 0.003 | <0.01 | <10 | |
| 53.40- 54.40 | 8.21 | <0.07 | <0.5 | <0.01 | <0.01 | 5.93 | 0.004 | <0.01 | <10 | |
| 54.40- 55.40 | 8.96 | <0.07 | <0.5 | <0.01 | <0.01 | 7.08 | 0.004 | <0.01 | <10 | |

Table 5 Chemical Assays(cont.)

| Hole No. | Depth in m. | %Zn (MINEX) | Au g/t | Ag g/t | Cu % | Pb % | Zn % | Co % | V % | In ppm |
|---------------|---------------|----------------|-----------|-----------|---------|---------|---------|---------|--------|-----------|
| MJZK-2 | 5.00- 11.00 | 0.59 | <0.07 | <0.5 | 0.03 | 0.02 | 0.49 | 0.020 | 0.03 | <10 |
| | 11.00- 14.40 | 3.76 | <0.07 | <0.5 | 0.02 | 0.01 | 3.66 | 0.015 | 0.02 | <10 |
| | 14.40- 15.40 | 21.72 | <0.07 | <0.5 | 0.02 | <0.01 | 19.40 | 0.007 | 0.01 | <10 |
| | 15.40- 16.40 | 1.29 | <0.07 | <0.5 | <0.01 | <0.01 | 1.19 | 0.003 | <0.01 | <10 |
| MJZK-4 | 26.20- 27.20 | 3.08 | <0.07 | <0.5 | <0.01 | <0.01 | 3.07 | 0.003 | <0.01 | <10 |
| | 27.20- 28.20 | 12.94 | <0.07 | <0.5 | <0.01 | <0.01 | 10.10 | 0.004 | <0.01 | <10 |
| | 28.20- 29.20 | 12.10 | <0.07 | <0.5 | <0.01 | <0.01 | 31.60 | 0.003 | <0.01 | <10 |
| | 29.20- 30.20 | 4.41 | <0.07 | <0.5 | <0.01 | <0.01 | 3.69 | 0.003 | <0.01 | <10 |
| | 44.10- 45.10 | 0.40 | <0.07 | <0.5 | <0.01 | <0.01 | 0.36 | 0.003 | <0.01 | <10 |
| | 45.10- 46.10 | 4.48 | <0.07 | <0.5 | <0.01 | <0.01 | 3.73 | 0.003 | <0.01 | <10 |
| | 46.10- 47.10 | 8.47 | <0.07 | <0.5 | <0.01 | <0.01 | 7.40 | 0.003 | <0.01 | <10 |
| | 47.10- 48.10 | 1.19 | <0.07 | <0.5 | <0.01 | <0.01 | 1.07 | 0.003 | <0.01 | <10 |
| | 78.10- 79.10 | 1.39 | <0.07 | <0.5 | <0.01 | <0.01 | 1.12 | 0.003 | <0.01 | <10 |
| | 79.10- 80.10 | 6.94 | <0.07 | <0.5 | <0.01 | <0.01 | 6.60 | 0.002 | <0.01 | <10 |
| | 80.10- 81.10 | 1.89 | <0.07 | <0.5 | <0.01 | <0.01 | 1.76 | 0.002 | <0.01 | <10 |
| | 107.10-108.10 | 0.30 | <0.07 | <0.5 | <0.01 | <0.01 | 0.18 | 0.002 | <0.01 | <10 |
| MJZK-6 | 108.10-109.10 | 4.77 | <0.07 | <0.5 | <0.01 | <0.01 | 4.28 | 0.002 | <0.01 | <10 |
| | 109.10-110.10 | 1.39 | <0.07 | <0.5 | <0.01 | <0.01 | 1.31 | 0.003 | <0.01 | <10 |
| | 67.00- 68.00 | 0.79 | <0.07 | <0.5 | <0.01 | <0.01 | 0.70 | 0.003 | <0.01 | <10 |
| | 68.00- 69.00 | 9.37 | <0.07 | <0.5 | <0.01 | <0.01 | 7.47 | 0.004 | <0.01 | <10 |
| | 69.00- 70.00 | 6.53 | <0.07 | <0.5 | <0.01 | <0.01 | 3.55 | 0.003 | <0.01 | <10 |
| | 96.00- 97.00 | 0.09 | <0.07 | <0.5 | <0.01 | <0.01 | 0.17 | 0.003 | <0.01 | <10 |
| | 97.00- 98.00 | 9.85 | <0.07 | 5.3 | 0.01 | <0.01 | 9.40 | 0.004 | <0.01 | <10 |
| | 98.00- 99.00 | 7.54 | <0.07 | <0.5 | <0.01 | <0.01 | 5.74 | 0.004 | <0.01 | <10 |
| | 104.00-105.00 | 3.48 | <0.07 | <0.5 | 0.01 | <0.01 | 2.10 | 0.003 | <0.01 | <10 |
| | 105.00-106.00 | 10.26 | <0.07 | <0.5 | 0.01 | <0.01 | 9.43 | 0.003 | <0.01 | <10 |
| | 106.00-107.00 | 8.97 | <0.07 | <0.5 | 0.01 | <0.01 | 7.04 | 0.003 | <0.01 | <10 |
| | 107.00-108.00 | 4.91 | <0.07 | <0.5 | <0.01 | <0.01 | 3.08 | 0.003 | <0.01 | <10 |
| 110.00-111.00 | 1.28 | <0.07 | <0.5 | <0.01 | <0.01 | 0.82 | 0.003 | <0.01 | <10 | |
| 111.00-112.00 | 9.40 | <0.07 | <0.5 | <0.01 | <0.01 | 6.13 | 0.003 | <0.01 | <10 | |
| 112.00-113.00 | 4.96 | <0.07 | <0.5 | <0.01 | <0.01 | 3.26 | 0.004 | <0.01 | <10 | |

Table 5 Chemical Assays(cont.)

| Hole No. | Depth in m. | %Zn (MINEX) | Au g/t | Ag g/t | Cu % | Pb % | Zn % | Co % | V % | In ppm |
|----------|---------------|----------------|-----------|-----------|---------|---------|---------|---------|--------|-----------|
| MJZK-7 | 119.10-120.10 | 3.00 | <0.07 | <0.5 | 0.01 | <0.01 | 2.67 | 0.003 | <0.01 | <10 |
| | 120.10-121.10 | 15.75 | <0.07 | <0.5 | 0.02 | <0.01 | 13.80 | 0.003 | <0.01 | <10 |
| | 121.10-122.10 | 3.56 | <0.07 | <0.5 | 0.01 | <0.01 | 3.46 | 0.003 | <0.01 | <10 |
| | 122.10-123.10 | 0.20 | <0.07 | <0.5 | <0.01 | <0.01 | 0.11 | 0.002 | <0.01 | <10 |
| MJZK-8 | 93.10-94.10 | 0.60 | <0.07 | <0.5 | <0.01 | <0.01 | 0.44 | 0.002 | <0.01 | <10 |
| | 94.10-95.10 | 3.47 | <0.07 | <0.5 | <0.01 | <0.01 | 3.49 | 0.002 | <0.01 | <10 |
| | 95.10-96.10 | 0.20 | <0.07 | <0.5 | <0.01 | <0.01 | 0.13 | 0.002 | <0.01 | <10 |
| | 143.00-144.00 | 1.69 | <0.07 | <0.5 | 0.01 | <0.01 | 1.48 | 0.003 | <0.01 | <10 |
| | 144.00-145.00 | 4.46 | <0.07 | <0.5 | 0.01 | <0.01 | 3.76 | 0.003 | <0.01 | <10 |
| | 145.00-146.00 | 0.79 | <0.07 | <0.5 | 0.01 | <0.01 | 0.80 | 0.003 | <0.01 | <10 |
| | 149.00-150.00 | 1.49 | <0.07 | <0.5 | 0.01 | <0.01 | 1.25 | 0.003 | <0.01 | <10 |
| | 150.00-151.00 | 3.58 | <0.07 | <0.5 | 0.01 | <0.01 | 3.23 | 0.003 | <0.01 | <10 |
| | 151.00-152.00 | 3.68 | <0.07 | <0.5 | 0.01 | <0.01 | 3.79 | 0.003 | <0.01 | <10 |
| | 152.00-153.00 | 4.16 | <0.07 | <0.5 | 0.01 | <0.01 | 3.70 | 0.003 | <0.01 | <10 |
| | 153.00-154.00 | 0.30 | <0.07 | <0.5 | 0.01 | <0.01 | 0.18 | 0.003 | <0.01 | <10 |
| | 180.00-181.00 | 0.50 | <0.07 | <0.5 | <0.01 | <0.01 | 0.44 | 0.002 | <0.01 | <10 |
| | 181.00-182.00 | 3.28 | <0.07 | <0.5 | <0.01 | <0.01 | 3.09 | 0.003 | <0.01 | <10 |
| | 182.00-183.00 | 0.60 | <0.07 | <0.5 | <0.01 | <0.01 | 0.47 | 0.003 | <0.01 | <10 |
| | 189.00-190.00 | 0.99 | <0.07 | <0.5 | <0.01 | <0.01 | 0.82 | 0.003 | <0.01 | <10 |
| | 190.00-191.00 | 4.05 | <0.07 | <0.5 | 0.01 | <0.01 | 3.71 | 0.003 | <0.01 | <10 |
| | 191.00-192.00 | 2.77 | <0.07 | <0.5 | 0.01 | <0.01 | 2.35 | 0.003 | <0.01 | <10 |
| | 192.00-193.00 | 1.89 | <0.07 | <0.5 | <0.01 | <0.01 | 1.80 | 0.003 | <0.01 | <10 |

Assayed for Au, Ag, Cu, Pb, Zn, Co, V, and In by Chemex Labs Ltd., Vancouver, CANADA

Diagram:

Geological Columns

Legend for mineralization

Py

pyrites

Zn

zinc minerals

I

sulphides

I

decomposed or secondary

Hole No. : MJZK-1
 Line : 19 Elevation : 1,170 m
 Point : 475 Bearing :
 Depth : 201 m Inclination : Vertical

| Depth (m) | Lithology | | | | Zone | Mineralization | | Assay Results | | | | |
|--------------|-----------|------------|------|--|-----------|------------------------------|----|---------------|-----------|------------|------|------|
| | Logging | Horizon | Rock | Remarks | | Py | Zn | from (m) | to (m) | run (m) | % Zn | |
| 5 | | Cenozoic | | Surface soil | Weathered | | | | | | | |
| 10 | | | | | | | | | | | | |
| 15 | | | | Clay beds. | | | | | | | | |
| | | | | Sand beds. | | | | | | | | |
| 20 | | | | | | | | | 18.00 | 18.84 | 0.84 | 0.5 |
| | | | | | | | | | | 19.69 | 0.85 | 0.4 |
| | | | | | | | | | | 20.53 | 0.84 | 0.7 |
| | | | | | | | | | | 21.38 | 0.85 | 0.7 |
| | | | | | | | | | | 22.22 | 0.84 | 12.6 |
| | | | | | | | | | | 22.80 | 0.58 | 14.2 |
| 25 | | Upper Roan | | Light-gray, massive, rich in voids. | Oxidized | | | | | | | |
| | | | | | | | | | | 23.30 | 0.50 | 7.0 |
| | | | | | | | | | | 23.80 | 0.50 | 6.0 |
| | | | | | | | | | | 24.80 | 1.00 | 5.8 |
| | | | | | | | | | | 25.90 | 1.10 | 12.8 |
| | | | | | | | | | | 26.10 | 0.20 | 12.4 |
| | | | | | | | | | | 27.10 | 1.00 | 4.2 |
| | | | | | | | | | | 28.10 | 1.00 | 0.6 |
| 30 | | | | | | | | | | 29.10 | 1.00 | 8.8 |
| | | | | | | | | | | 30.10 | 1.00 | 1.2 |
| | | | | | | | | | | 31.10 | 1.00 | 0.5 |
| | | | | | | Stained in reddish brown. | | | | 32.10 | 1.00 | 12.4 |
| | | | | | | | | | | 33.10 | 1.00 | 6.0 |
| | | | | | | | | | | 34.30 | 1.20 | 1.0 |
| 35 | | | | | | | | | | 35.30 | 1.00 | 5.1 |
| | | | | | | | | 36.30 | 1.00 | 6.3 | | |
| | | | | | | | | 37.40 | 1.10 | 1.5 | | |
| | | | | | | | | 38.40 | 1.00 | 0.4 | | |
| | | | | | | | | 39.40 | 1.00 | 4.8 | | |
| 40 | | | | | | | | 40.40 | 1.00 | 1.2 | | |

| Depth (m) | Lithology | | | Zone | Mineralization | | Assay Results | | | | | | | | | | |
|--------------|-----------------|------------|----------|--|----------------|--|--|-------------|-----------|------------|------|--|--|--|-------|------|------|
| | Logging | Horizon | Rock | | Remarks | Py | Zn | from (m) | to (m) | run (m) | % Zn | | | | | | |
| 45 | [Brick pattern] | Upper Roan | Dolomite | Pinkish-gray, stained with decomposed pyrites. | Oxidized | T T T T T T T T T T T T T T | T T T T T T T T T T T T T T | | 41.40 | 1.00 | 5.2 | | | | | | |
| | | | | | | | | | | | | | | | 42.40 | 1.00 | 4.8 |
| | | | | | | | | | | | | | | | 43.40 | 1.00 | 0.6 |
| | | | | | | | | | | | | | | | 44.40 | 1.00 | 8.4 |
| | | | | | | | | | | | | | | | 45.40 | 1.00 | 7.8 |
| | | | | | | | | | | | | | | | 46.40 | 1.00 | 11.8 |
| | | | | | | | | | | | | | | | 47.40 | 1.00 | 13.8 |
| | | | | | | | | | | | | | | | 48.40 | 1.00 | 15.6 |
| | | | | | | | | | | | | | | | 49.40 | 1.00 | 4.0 |
| 50 | | | | | | | | | | | | | | | 50.40 | 1.00 | 5.4 |
| | | | | | | | | | | | | | | | 51.40 | 1.00 | 2.1 |
| | | | | | | | | | | | | | | | 52.40 | 1.00 | 1.0 |
| | | | | | | | | | | | | | | | 53.40 | 1.00 | 7.6 |
| 55 | | | | | | | | | | | | | | | 54.40 | 1.00 | 7.8 |
| | | | | | | | | 55.40 | 1.00 | 1.0 | | | | | | | |
| | | | | | | | | 56.40 | 1.00 | 1.8 | | | | | | | |
| | | | | | | | | 57.40 | 1.00 | 4.6 | | | | | | | |
| | | | | | | | | 58.40 | 1.00 | 1.3 | | | | | | | |
| 60 | | | | Argillaceous intercalation at an angle of 45°. | | | | | | | | | | | | | |
| 65 | | | | ditto, at an angle of 15°. | | | | | | | | | | | | | |
| 70 | | | | | | | | | | | | | | | | | |
| 75 | | | | Light-gray to white | | | | | | | | | | | | | |
| 80 | | | | Bedding at an angle of 25°. | Primary | | | | | | | | | | | | |
| 85 | | | | Bedding at an angle of 10°. | | | | | | | | | | | | | |
| 90 | | | | Bedding at an angle of 20°. | | | | | | | | | | | | | |

| Depth (m) | Lithology | | | Zone | Minerali- zation | | Assay Results | | | | |
|--------------|--------------|--------------|----------|---|---------------------|----|---------------|-------------|-----------|------------|------|
| | Logg- ing | Hori- zon | Rock | | Remarks | Py | Zn | from (m) | to (m) | run (m) | % Zn |
| 95 | Upper Roan | Dolomite | Dolomite | Pyrite dissemination and stringers. | Primary | I | | | | | |
| 100 | | | | Saccaroidal. Disseminated pyrites. Sphalerite specks. | | I | I | | | | |
| 105 | | | | Pyrite stringers. | | I | | | | | |
| 110 | | | | Pyrite impregnation. | | I | | | | | |
| 115 | | | | | | I | | | | | |
| 120 | | | | Pyrite stringers. | | I | | | | | |
| 125 | | | | Specks of pyrites. | | I | | | | | |
| 130 | | | | Specks of pyrites. | | I | | | | | |
| 135 | | | | | | I | | | | | |
| 140 | | | | Banding at an angle of 10°. | | I | | | | | |

| Depth (m) | Lithology | | | Zone | Mineralization | | Assay Results | | | | | |
|--------------|-----------------------|--------------|----------|--|----------------|----|---------------|-------------|-----------|------------|------|--|
| | Logg- ing | Hori- zon | Rock | | Remarks | Py | Zn | from (m) | to (m) | run (m) | % Zn | |
| 145 | [Brick pattern] | Upper Roan | Dolomite | Sphalerite specks and stringers. | Primary | I | I | | | | | |
| 150 | | | | Clayey veinlets at 5°. | | | | | | | | |
| | | | | Saccaroidal. | | | | | | | | |
| 155 | | | | Banded at an angle of 15°. | | | | | | | | |
| 160 | | | | Specks of pyrite. Sphalerite stringers. | | | | | | | | |
| | | | | Banded with an angle of 15°. | | | | | | | | |
| 165 | | | | | | | | | | | | |
| 170 | | | | | | | | | | | | |
| 175 | | | | Pyrite stringers. | | | | | | | | |
| 180 | | | | | | | | | | | | |
| 185 | Sphalerite stringers. | | | | | | | | | | | |
| | Pyrite stringers. | | | | | | | | | | | |
| 190 | Sphalerite stringers. | | | | | | | | | | | |

| Depth (m) | Lithology | | | Zone | Mineralization | | Assay Results | | | | |
|--------------|-----------------|------------|----------|---|----------------|----|---------------|-------------|-----------|------------|------|
| | Logging | Horizon | Rock | | Remarks | Py | Zn | from (m) | to (m) | run (m) | % Zn |
| 195 | [Brick pattern] | Upper Roan | Dolomite | Sphalerite stringers. White saccaroidal. | Primary | H | | | | | |
| 200 | | | | Pyrite specks. Banded at 20°. Pyrite specks. Sphalerite stringers. | | | | | | | |

Hole No. : MJZK-2
 Line : 20 Elevation : 1,170 m
 Point : 475 Bearing :
 Depth : 201 m Inclination : Vertical

| Depth (m) | Lithology | | | | Zone | Mineralization | | Assay Results | | | |
|--------------|------------------|------------|----------|---|-----------|----------------|-------|---------------|-----------|------------|------|
| | Logging | Horizon | Rock | Remarks | | Py | Zn | from (m) | to (m) | run (m) | % Zn |
| 5 | [Vertical lines] | Cenozoic | | Surface soil | Weathered | | | | | | |
| 10 | | | | Clay beds. | | | | 11.00 | | | |
| 15 | | | | Sand beds. | | | | 14.40 | 14.40 | 3.40 | 5.0 |
| 15 | | | | | | | 14.40 | 15.40 | 1.00 | 25.0 | |
| 20 | [Brick pattern] | Upper Roan | Dolomite | Banded, light-gray with reddish-brown staining. | Oxidized | | | | 16.40 | 1.00 | 3.0 |
| | | | | | | | | 17.20 | 0.80 | 2.9 | |
| | | | | | | | | 18.20 | 1.00 | 3.3 | |
| | | | | | | | | 19.20 | 1.00 | 2.0 | |
| | | | | | | | | 20.20 | 1.00 | 2.9 | |
| | | | | | | | | 21.20 | 1.00 | 4.4 | |
| | | | | | | | | 22.20 | 1.00 | 1.5 | |
| | | | | | | | | 23.20 | 1.00 | 1.8 | |
| | | | | | | | | 24.20 | 1.00 | 4.1 | |
| 25 | | | | | | | | 25.20 | 1.00 | 3.9 | |
| | | | | | | | | 26.20 | 1.00 | 3.1 | |
| | | | | | | | | 27.20 | 1.00 | 4.5 | |
| | | | | | | | | 28.20 | 1.00 | 4.3 | |
| | | | | | | | | 29.20 | 1.00 | 3.0 | |
| | | | | | | | | 30.20 | 1.00 | 1.5 | |
| | | | | | | | | 31.20 | 1.00 | 1.3 | |
| | | | | | | | | 32.20 | 1.00 | 1.4 | |
| | | 33.20 | 1.00 | 0.4 | | | | | | | |
| | | 34.20 | 1.00 | 0.4 | | | | | | | |
| 35 | | 35.20 | 1.00 | 2.0 | | | | | | | |
| | | 36.20 | 1.00 | 4.2 | | | | | | | |
| | | 37.20 | 1.00 | 4.4 | | | | | | | |
| | | 38.20 | 1.00 | 0.5 | | | | | | | |
| | | 39.20 | 1.00 | 0.2 | | | | | | | |
| 40 | | 40.20 | 1.00 | 0.4 | | | | | | | |

| Depth (m) | Lithology | | | Zone | Mineralization | | Assay Results | | | | | | |
|--------------|-----------------|--------------|----------|---------------------|----------------|--|---------------|-------------|-----------|------------|-------|------|-----|
| | Logg- ing | Hori- zon | Rock | | Remarks | Py | Zn | from (m) | to (m) | run (m) | % Zn | | |
| | [Brick pattern] | Upper Roan | Dolomite | Decomposed pyrites. | Oxidized | I | 40.20 | 41.20 | 1.00 | 1.8 | | | |
| | | | | | | | | 42.20 | 1.00 | 3.7 | | | |
| | | | | | | | | 43.20 | 1.00 | 1.8 | | | |
| | | | | | | | | 44.20 | 1.00 | 0.7 | | | |
| 45 | | | | | | White, saccaroidal | | | | | | | |
| 50 | | | | | | | | | | | | | |
| 55 | | | | | | Faintly banded at an angle of 10°. | | | | | | | |
| 60 | | | | | | | | | | | | | |
| 65 | | | | | | Slightly banded. | | | | | | | |
| 70 | | | | | | Banded at an angle of 10°. | | | | | | | |
| 75 | | | | | | Pyrite impregnation. Banded at 10°. Sphalerite veinlets. | Non-oxidized | I | | | | | |
| | | | | | | | | | | 76.20 | 77.20 | 1.00 | 0.4 |
| | | | | | | | | | | | 78.20 | 1.00 | 0.2 |
| | | | | | | | | | | | 79.20 | 1.00 | nil |
| | | | | | | | | | | | 80.20 | 1.00 | 0.2 |
| 80 | | | | | | Cavernous with a banded structure. | | | | | 81.20 | 1.00 | 2.6 |
| | | | | | | | | | | | 82.20 | 1.00 | 0.4 |
| | | | | | | | | | | | 83.20 | 1.00 | 0.3 |
| | | | | | | | | | | | 84.20 | 1.00 | 0.3 |
| 85 | | | | | | | Oxidized | | | | 85.20 | 1.00 | 2.3 |
| | | | | | | | | 86.20 | 1.00 | 2.0 | | | |
| | | | | | | | | 87.20 | 1.00 | 0.4 | | | |
| | | | | | | | | 88.20 | 1.00 | 1.0 | | | |
| | | | | | | | | 89.20 | 1.00 | 2.5 | | | |
| 90 | | | | | | | | 90.20 | 1.00 | 1.7 | | | |

| Depth (m) | Lithology | | | Zone | Minerali- zation | | Assay Results | | | | | | |
|--------------|-----------------|--------------|----------------------------|------|---------------------|---|---------------|-------------|-----------|------------|--------|------|-----|
| | Logg- ing | Hori- zon | Rock | | Remarks | Py | Zn | from (m) | to (m) | run (m) | % Zn | | |
| | [Brick pattern] | Upper Roan | Dolomite | | Oxi. | | | 90.20 | 91.20 | 1.00 | 1.1 | | |
| | | | | | | | | | | 92.20 | 1.00 | 0.5 | |
| 95 | | | | | | Pyrite and sphalerite stringers. | | I | I | | 93.20 | 1.00 | 0.6 |
| | | | | | | | | | | | 94.20 | 1.00 | 0.3 |
| | | | | | | | | | I | | 95.20 | 1.00 | 0.3 |
| | | | | | | | | | | | 96.20 | 1.00 | 1.5 |
| | | | | | | Sphalerite veinlets with pyrite impregnation. Pyrite-sphalerite dissemination. | | I | I | | 97.20 | 1.00 | 2.6 |
| | | | | | | | | | | | 98.20 | 1.00 | 0.7 |
| 100 | | | | | | | | | I | | 99.20 | 1.00 | 0.3 |
| | | | | | | | | | | | 100.20 | 1.00 | 0.7 |
| | | | | | | | | | I | | 101.20 | 1.00 | 0.9 |
| | | | | | | | | | | | 102.20 | 1.00 | 1.0 |
| | | | | | | | | | | | 103.20 | 1.00 | 0.1 |
| | | | | | | | | | | | 104.20 | 1.00 | 0.1 |
| 105 | | | | | | Sphalerite veinlets. | | I | I | | 105.20 | 1.00 | 1.1 |
| | | | | | | | | | | | 106.20 | 1.00 | 0.6 |
| 110 | | | | | | Sphalerite veinlets. | | I | I | | | | |
| 115 | | | | | | Sphalerite veinlets. | | | I | | | | |
| 120 | | | | | | Faintly banded. | | | | | | | |
| 125 | | | | | | Light-gray, massive. | | | | | | | |
| 130 | | | | | | | | | | | | | |
| 135 | | | Massive. Faint banding. | | | | | | | | | | |
| 140 | | | | | | | | | | | | | |

| Depth (m) | Lithology | | | Zone | Minerali- zation | | Assay Results | | | | | | |
|--------------|-----------------|--------------|----------|--------------------------------------|---------------------|----|---------------|-------------|-----------|------------|------|--|--|
| | Logg- ing | Hori- zon | Rock | | Remarks | Py | Zn | from (m) | to (m) | run (m) | % Zn | | |
| 145 | [Brick pattern] | Upper Roan | Dolomite | Fine-grained, saccaroidal. | Primary | | | | | | | | |
| 150 | | | | | | | | | | | | | |
| 155 | | | | Rich in voids. | | | | | | | | | |
| 160 | | | | Pyrite specks. | | I | | | | | | | |
| 165 | | | | | | | | | | | | | |
| 170 | | | | Pyrite specks. | | I | | | | | | | |
| 175 | | | | Faint banding at an angle of 25°. | | | | | | | | | |
| 180 | | | | Faint banding at 15°. | | | | | | | | | |
| 185 | | | | | | | | | | | | | |
| 190 | | | | Light-gray, compact. | | I | | | | | | | |

| Depth (m) | Lithology | | | | Zone | Mineralization | | Assay Results | | | |
|--------------|-----------------|------------|----------|--|------|----------------|----|---------------|-----------|------------|------|
| | Logging | Horizon | Rock | Remarks | | Py | Zn | from (m) | to (m) | run (m) | % Zn |
| 195 | [Brick pattern] | Upper Roan | Dolomite | Light - gray, fine - grained. | | I | | | | | |
| 200 | | | | Pyrite aggregates. Saccaroidal. Banded at 15°. White, banded. | | | | | | | |

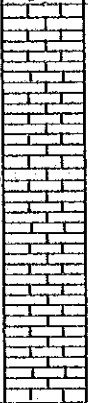
Hole No. : MJZK-3
 Line : 20 Elevation : 1,170 m
 Point : 575 Bearing :
 Depth : 201 m Inclination : Vertical

| Depth (m) | Lithology | | | Zone | Mineralization | | Assay Results | | | | | |
|-----------|-----------|---------------------|------|--|----------------|----|---------------|----------|--------|---------|------|--|
| | Logging | Horizon | Rock | | Remarks | Py | Zn | from (m) | to (m) | run (m) | % Zn | |
| 0 | | Cenozoic | | Surface soil | Weathered | | | | | | | |
| 5 | | | | Sand beds | | | | | | | | |
| 10 | | Upper Roan Dolomite | | Porous, banded with an angle of 10°. Sphalerite stringers. Penetrated by recrystallized dolomite veins. Sphalerite stringers. Pyrite-sphalerite stringers. Sphalerite stringers. Banded at an angle of 20°. | Oxidized | | I | | | | | |
| 15 | | | | | Primary | | I | | | | | |
| 20 | | | | | | | I | I | | | | |
| 25 | | | | | | | I | I | | | | |
| 30 | | | | | | | I | I | | | | |
| 35 | | | | | | | I | I | | | | |
| 40 | | | | | | I | I | | | | | |
| | | | | Specks of pyrite. | | | | | | | | |
| | | | | Recrystallized dolomite patches predominate. | | | | | | | | |

| Depth (m) | Lithology | | | Zone | Mineralization | | Assay Results | | | | | |
|--------------|-----------------|--------------|----------|---|----------------|----|---------------|-------------|-----------|------------|------|--|
| | Logg- ing | Hori- zon | Rock | | Remarks | Py | Zn | from (m) | to (m) | run (m) | % Zn | |
| 45 | [Brick pattern] | Upper Roan | Dolomite | Fine-grained, saccaroidal. Faintly banded with an angle of 15°. | Primary | I | | | | | | |
| 50 | | | | Pyrite impregnation. | | I | | | | | | |
| 55 | | | | Micaceous - argillaceous banding at an angle of 10°. | | | | | | | | |
| 60 | | | | Pyrite specks and stringers associated with recrystallized dolomite patches. | | I | | | | | | |
| 65 | | | | | | | | I | | | | |
| 70 | | | | Porous along recrystallized dolomite veinings. | | | | | | | | |
| 75 | | | | Specks of pyrite. | | I | | | | | | |
| 80 | | | | Decomposed pyrite specks and stringers. | | I | | | | | | |
| 85 | | | | Faint banding with an angle of 15°. | | | | | | | | |
| 90 | | | | Faint banding at an angle of 10°. | | I | | | | | | |

| Depth (m) | Lithology | | | Zone | Mineralization | | Assay Results | | | | | |
|--------------|--------------|--------------|------|--|----------------|----|---------------|-------------|-----------|------------|------|--|
| | Logg- ing | Hori- zon | Rock | | Remarks | Py | Zn | from (m) | to (m) | run (m) | % Zn | |
| 95 | Upper. Roan | Dolomite | | Porous along recrystallized dolomite patches and veins. | Primary | | | | | | | |
| 100 | | | | Pyrite impregnation. Decomposed pyrite veinlets and impregnation. | | | | | | | | |
| 105 | | | | Stained along recrystallized dolomite veinlets. | | | | | | | | |
| 110 | | | | Argillaceous bandings at an angle of 10°. | | | | | | | | |
| 115 | | | | Decomposed pyrite impregnation. | | | | | | | | |
| 120 | | | | Pyrite impregnation and stringers. | | | | | | | | |
| 125 | | | | Argillaceous banding at an angle of 20°. | | | | | | | | |
| 130 | | | | Pyrite impregnation along recrystallized dolomite veining. | | | | | | | | |
| 135 | | | | Fine-grained, saccaroidal. | | | | | | | | |
| 140 | | | | | | | | | | | | |

| Depth (m) | Lithology | | | Zone | Mineralization | | Assay Results | | | |
|--------------|-----------------|------------|------------------------------------|--|----------------|----|---------------|-------------|-----------|------------|
| | Logging | Horizon | Rock | | Remarks | Py | Zn | from (m) | to (m) | run (m) |
| 145 | [Brick pattern] | Upper Roan | Dolomite | Stained along recrystallized dolomite patches and veinlets. Impregnated pyrites were decomposed. | Primary | I | | | | |
| 150 | | | | Pyrite impregnation and stringers. | | | | | | |
| 155 | | | | Argillaceous banding with an angle of 20°. | | | | | | |
| 160 | | | | Compact, saccaroidal. | | | | | | |
| 165 | | | | Pale-gray dolomite. | | | | | | |
| 170 | | | | Specks of pyrite. Pyrite impregnation along recrystallized dolomite patches. | | | | | | |
| 175 | | | | | | | | | | |
| 180 | | | | Light-gray dolomite. | | | | | | |
| 185 | | | | | | | | | | |
| 190 | | | | [Triangle pattern] | | | | | Weathered | |
| | | | Fault clay with dolomite fragments | | | | | | | |
| | | | Fault clay | | | | | | | |


| Depth (m) | Lithology | | | | Zone | Minerali- zation | | Assay Results | | | |
|--------------|---|--------------|----------|----------------------------------|---------|---------------------|----|---------------|-----------|------------|------|
| | Logg- ing | Hori- zon | Rock | Remarks | | Py | Zn | from (m) | to (m) | run (m) | % Zn |
| 195 |  | Upper Roan | Dolomite | Light-gray saccaroidal dolomite. | Primary | | | | | | |
| 200 | | | | Saccaroidal compact dolomite. | | | | | | | |

Hole No. : MJZK-4
 Line : 19 Elevation : 1,169 m
 Point : 575 Bearing :
 Depth : 201 m Inclination : Vertical

| Depth (m) | Lithology | | | | Zone | Mineralization | | Assay Results | | | |
|--------------|-----------|------------------------|------|--|-----------|----------------|-------|---------------|-----------|------------|------|
| | Logging | Horizon | Rock | Remarks | | Py | Zn | from (m) | to (m) | run (m) | % Zn |
| 5 | | Cenozoic | | Surface soil | Weathered | | | | | | |
| 10 | | | | | | | | | | | |
| 15 | | Upper Roan Dolomite | | Cavity at 12.2 to 12.7 m. Brick-brown staining. | Oxidized | | | 13.20 | 14.20 | 1.00 | 0.6 |
| | | | | Banding at an angle of 5°. | | | | | 15.20 | 1.00 | 4.2 |
| | | | | Decomposed pyrite specks. | | | | | 16.20 | 1.00 | 0.3 |
| | | | | Rich in voids. | | | | | 17.20 | 1.00 | 1.3 |
| | | | | Porous and cemented with brick-brown dull crusts. | | | | | 18.20 | 1.00 | 0.3 |
| | | | | Light-gray dolomite. | | | | | 19.20 | 1.00 | 0.9 |
| | | | | Decomposed pyrites. | | | | | 20.20 | 1.00 | 1.4 |
| | | | | Porous and cemented by recrystallized dolomite veins with brownish crusts. | | | | | 21.20 | 1.00 | 0.8 |
| | | | | | | | | | 22.20 | 1.00 | 0.8 |
| | | | | | | | | | 23.20 | 1.00 | 1.0 |
| | | | | | | | | | 24.20 | 1.00 | 0.6 |
| | | | | | | | | | 25.20 | 1.00 | 0.8 |
| | | | | | | | | | 26.20 | 1.00 | 3.0 |
| | | | | | | | | | 27.20 | 1.00 | 3.7 |
| | | | | | | | | | 28.20 | 1.00 | 13.7 |
| | | | | | | | | | 29.20 | 1.00 | 12.1 |
| | | | | | | | | | 30.20 | 1.00 | 3.0 |
| | | | | | | | 31.20 | 1.00 | 1.0 | | |
| | | | | | | | 32.20 | 1.00 | 0.5 | | |
| | | | | | | | 33.20 | 1.00 | 1.3 | | |
| | | | | | | | 34.20 | 1.00 | 1.5 | | |
| | | | | | | | 35.10 | 0.90 | 2.6 | | |
| | | | | | | | 36.10 | 1.00 | 3.0 | | |
| | | | | | | | 37.10 | 1.00 | 0.2 | | |
| | | | | | | | 38.10 | 1.00 | 0.2 | | |
| | | | | | | | 39.10 | 1.00 | 0.6 | | |
| 40 | | | | | | | 40.10 | 1.00 | 0.9 | | |

| Depth (m) | Lithology | | | Zone | Minerali- zation | | Assay Results | | | | |
|--------------|---------------------|--------------|----------|---|---------------------|----|---------------|-------------|-----------|------------|------|
| | Logg- ing | Hori- zon | Rock | | Remarks | Py | Zn | from (m) | to (m) | run (m) | % Zn |
| 45 | [Brickwork pattern] | Upper Roan | Dolomite | Fractures, filled with boxworks and brick- brown crusts. | Oxidized | | | 40.10 | 41.10 | 1.00 | 1.4 |
| | | | | | | | | 42.10 | 1.00 | 3.5 | |
| | | | | | | | | 43.10 | 1.00 | 3.5 | |
| | | | | | | | | 44.10 | 1.00 | 1.6 | |
| | | | | | | | | 45.10 | 1.00 | 1.3 | |
| | | | | | | | | 46.10 | 1.00 | 5.5 | |
| | | | | | | | | 47.10 | 1.00 | 9.5 | |
| | | | | | | | | 48.10 | 1.00 | 0.9 | |
| | | | | | | | | 49.10 | 1.00 | 2.1 | |
| | | | | | | | | 50.10 | 1.00 | 1.0 | |
| 55 | [Brickwork pattern] | Upper Roan | Dolomite | Argillaceous rapid banding between 52.5 and 70.5 m at an angle of 5 to 15°. | Oxidized | | | | | | |
| | | | | Decomposed pyrite stringers. | | | | | | | |
| 60 | [Brickwork pattern] | Upper Roan | Dolomite | Decomposed pyrite stringers. | Oxidized | | | | | | |
| | | | | | | | | | | | |
| 75 | [Brickwork pattern] | Upper Roan | Dolomite | Light-gray, saccaroidal dolomite. | Oxidized | | | | | | |
| | | | | | | | | | | | |
| 80 | [Brickwork pattern] | Upper Roan | Dolomite | Vuggy bandings of recrystallized dolomite, stained with brick- brown crusts. | Oxidized | | | 78.10 | 79.10 | 1.00 | 1.6 |
| | | | | 80.10 | | | | 1.00 | 10.7 | | |
| | | | | 81.10 | | | | 1.00 | 2.0 | | |
| | | | | 82.10 | | | | 1.00 | 0.1 | | |
| | | | | 83.10 | | | | 1.00 | 1.5 | | |
| 85 | [Brickwork pattern] | Upper Roan | Dolomite | Drusy and filled with brownish boxworks and crusts. | Oxidized | | | 84.10 | 1.00 | 3.8 | |
| | | | | 85.10 | | | | 1.00 | 0.1 | | |
| 90 | [Brickwork pattern] | Upper Roan | Dolomite | Fine-grained saccaroidal dolomite. | Oxidized | | | | | | |

| Depth (m) | Lithology | | | Zone | Mineralization | | Assay Results | | | |
|--------------|--|---------------|----------|---|----------------|--|---------------|-------------|-----------|------------|
| | Logg- ing | Hori- zon | Rock | | Remarks | Py | Zn | from (m) | to (m) | run (m) |
| 145 | [Brick pattern] | Upper Roan | Dolomite | Faint banding with an angle of 10°. | Primary | | | | | |
| | | | | Fine-grained, saccaroidal dolomite. | | | | | | |
| 150 | | | | Stained with recrystallized dolomite veins and patches. | | | | | | |
| 155 | | | | Pyrite specks, associated with recrystallized dolomite veins. | | | | | | |
| 160 | | | | Argillaceous banding at an angle of 15°. | | | | | | |
| 165 | | | | Decomposed pyrite stringers. | | | | | | |
| | | | | Speckled with recrystallized dolomite patches and veins. | | | | | | |
| 170 | | | | Decomposed pyrite stringers. | | | | | | |
| 175 | | | | Banding at an angle of 10°. | | | | | | |
| 180 | | | | Compact, saccaroidal. | | | | | | |
| 185 | Banding at an angle of 20°. | | | | | | | | | |
| 190 | Prevailing veins of recrystallized dolomite. | | | | | | | | | |

| Depth (m) | Lithology | | | | Zone | Mineralization | | Assay Results | | | |
|--------------|---|--------------|----------|-------------------------------------|---------|----------------|----|---------------|-----------|------------|------|
| | Logg- ing | Hori- zon | Rock | Remarks | | Py | Zn | from (m) | to (m) | run (m) | % Zn |
| 195 |  | Upper Roan | Dolomite | Specks of decomposed pyrite. | Primary | ----- | | | | | |
| 200 | | | | Fine-grained, saccaroidal dolomite. | | | | | | | |

Hole No. : MJZK-5
 Line : 18 Elevation : 1,169 m
 Point : 575 Bearing :
 Depth : 201 m Inclination : Vertical

| Depth (m) | Lithology | | | | Zone | Minerali- zation | | Assay Results | | | | |
|--------------|--------------|------------------------|-----------------------------|--|-----------|---------------------|----|---------------|-----------|------------|------|-----|
| | Logg- ing | Hori- zon | Rock | Remarks | | Py | Zn | from (m) | to (m) | run (m) | % Zn | |
| 5 | | Cenozoic | | Surface soil | Weathered | | | | | | | |
| | | | | | | | | | 4.00 | | | |
| | | | | | | | | | | 8.00 | 4.00 | 1.3 |
| 10 | | | | Pebble-bearing clay beds. | | | | | | 10.10 | 2.10 | 2.2 |
| | | Upper Roan Dolomite | | Saccaroidal dolomite. Stained in brown. | Oxidized | | | | | | | |
| 15 | | | | Decomposed pyrites. | | | | | | | | |
| | | | | Drusy white dolomite. | | | | | | | | |
| 20 | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| 25 | | | | Sphalerite patches and stringers. | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| 30 | | | Banded with an angle of 5°. | Primary | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| 35 | | | | | | | | | | | | |
| 40 | | | | | | | | | | | | |

| Depth (m) | Lithology | | | Zone | Mineralization | | Assay Results | | | | |
|--------------|--|---------------|----------|---|----------------|----|---------------|-------------|-----------|------------|------|
| | Logg- ing | Hori- zon | Rock | | Remarks | Py | Zn | from (m) | to (m) | run (m) | % Zn |
| | [Brick pattern] | Upper Roan | Dolomite | Pyrite specks. Banding with an angle of 10°. | Primary | I | | | | | |
| 45 | | | | Pyrite specks and stringers. | | I | | | | | |
| 50 | | | | | | I | | | | | |
| 55 | | | | Light-gray, fine- grained, saccaroidal dolomite. | | | | | | | |
| 60 | | | | Banding at an angle of 5°. | | | | | | | |
| 65 | | | | | | | | | | | |
| 70 | | | | Minute specks of pyrite. | | | | | | | |
| 75 | | | | Saccaroidal dolomite, banded with an angle of 5°. | | | | | | | |
| 80 | | | | Banding at an angle of 10°. Pyrite patches. | | | | I | | | |
| 85 | | | | | | | | I | | | |
| 90 | Chlorite-sericite veinlets at 86.0 to 86.4 m. Argillaceous banding at an angle of 10°. | | | | T | | | | | | |

| Depth (m) | Lithology | | | Zone | Mineralization | | Assay Results | | | | |
|--------------|---|--------------|----------|---|----------------|----|---------------|-------------|-----------|------------|------|
| | Logg- ing | Hori- zon | Rock | | Remarks | Py | Zn | from (m) | to (m) | run (m) | % Zn |
| 95 | [Brick pattern] | Upper Roan | Dolomite | Argillaceous banding at an angle of 15°. | Primary | I | | | | | |
| | | | | Specks of pyrite. | | I | | | | | |
| | | | | Saccaroidal dolomite. | | I | | | | | |
| 100 | | | | Faint banding with an angle of 10°. | | | | | | | |
| 105 | | | | Compact, saccaroidal. | | | | | | | |
| | | | | Banding with an angle of 20°. | | | | | | | |
| 110 | | | | Cemented fault-breccia, at 111.3 to 111.9 m. | | | | | | | |
| 115 | | | | | | | | | | | |
| 120 | | | | Chlorite bandings at 119.1 to 121.5 m. Pyrite specks and stringers. | | I | | | | | |
| 125 | | | | Argillaceous banding with an angle of 15°. Pyrite stringers. | | I | | | | | |
| 130 | | | | | | | | | | | |
| 135 | Chlorite bandings at 131.6 to 133.0 m with an angle of 20°. | | | | | | | | | | |
| | Pyrite specks and stringers. | I | | | | | | | | | |
| 140 | Gray argillaceous banding at an angle of 20°. | | | | | | | | | | |

| Depth (m) | Lithology | | | Zone | Mineralization | | Assay Results | | | |
|--------------|------------|----------|------|---|----------------|----|---------------|-------------|-----------|------------|
| | Logging | Horizon | Rock | | Remarks | Py | Zn | from (m) | to (m) | run (m) |
| 145 | Upper Roan | Dolomite | | Fine-grained, saccaroidal dolomite. | Primary | I | | | | |
| 150 | | | | Argillaceous banding with an angle of 20°. | | | | | | |
| 155 | | | | Argillaceous banding with an angle of 15°. | | | | | | |
| 160 | | | | Pyrite stringers. | | | | | | |
| 165 | | | | Specks of pyrite. | | | | | | |
| 170 | | | | Pyrite specks and stringers. | | | | | | |
| 175 | | | | Argillaceous banding with an angle of 15°. | | | | | | |
| 180 | | | | Faint banding with an angle of 20°. | | | | | | |
| 185 | | | | Pyrite stringers at 15°. | | | | | | |
| 190 | | | | Porous recrystallized dolomite between 179.2 to 180.8 m. Decomposed pyrite specks. | | | | | | |
| 190 | | | | Banded with an angle of 10°. | | | | | | |
| 190 | | | | Pyrite stringers. | | | | | | |

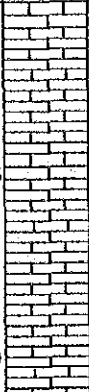
Hole No. : MJZK-6
 Line : 18 Elevation : 1,170 m
 Point : 475 Bearing :
 Depth : 201 m Inclination : Vertical

| Depth (m) | Lithology | | | | Zone | Mineralization | | Assay Results | | | |
|--------------|-----------|---------|------|---|-----------|----------------|----|---------------|-----------|------------|------|
| | Logging | Horizon | Rock | Remarks | | Py | Zn | from (m) | to (m) | run (m) | % Zn |
| 0 | | | | Surface soil | Weathered | | | | | | |
| 5 | | | | | | | | | | | |
| 10 | | | | Clay beds. | | | | | | | |
| 15 | | | | Sand beds. | | | | | | | |
| 20 | | | | | | | | | | | |
| 25 | | | | | | | | | | | |
| 30 | | | | | | | | | | | |
| 35 | | | | Light-gray dolomite, fine-grained, banded with an angle of 10°. | Oxidized | | | | | | |
| 40 | | | | | | | | | | | |

| Depth (m) | Lithology | | | Zone | Mineralization | | Assay Results | | | | | | | | | | | | | |
|--------------|--------------|--------------|----------|--|----------------|----|---------------|-------------|-----------|------------|------|--|-------|--|------|-----|-------|-------|------|-----|
| | Logg- ing | Hori- zon | Rock | | Remarks | Py | Zn | from (m) | to (m) | run (m) | % Zn | | | | | | | | | |
| 45 | | Upper Roan | Dolomite | Grayey sericite-dolomite, banded with an angle of 30°. | Oxidized | | | | | | | | | | | | | | | |
| | | | | Cavity at 45.1 to 45.7. | | | | | | | | | | | | | | | | |
| 50 | | | | Brecciated and cemented at 47.6 to 48.9 and 49.4 to 50.2 m. | | | | | | | | | 50.00 | 51.00 | 1.00 | 0.1 | | | | |
| | | | | Cavity at 51.1 to 53.0 m. Assays are of brownish fallen sands. | | | | | | | | | | 51.30 | 0.30 | 3.5 | | | | |
| | | | | Cavity at 53.4 to 53.7 m. | | | | | | | | | | 53.00 | 1.70 | 3.6 | | | | |
| | | | | | | | | | | | | | | 54.00 | 1.00 | 0.4 | | | | |
| 55 | | | | | | | | | | | | | | | | | | | | |
| 60 | | | | | | | | | | | | | | | | | | | | |
| 65 | | | | | | | | | | | | | | Drusy, stained in reddish brown to yellowish brown. | | | 63.00 | 64.00 | 1.00 | 0.5 |
| | | | | | | | | | | | | | | | | | | 65.00 | 1.00 | 3.2 |
| | | | | | | | | | | | | | | | | | | 66.00 | 1.00 | 1.9 |
| | | | | | | | | | | | | | | | | | | 67.00 | 1.00 | 0.6 |
| | | | | | | | | | | | | | | | | | | 68.00 | 1.00 | 1.0 |
| | | | | | | | | | | | | | | | | | | 69.00 | 1.00 | 6.8 |
| 70 | | | | | | | | | | | | | | Drusy, filled with box-works and brick-brown staining. | | | | 70.00 | 1.00 | 3.8 |
| | | | | | | | | | | | | | | | | | | 71.00 | 1.00 | 2.8 |
| | | | | | | | | | | | | | | | | | | 72.00 | 1.00 | 2.2 |
| | | | | | | | | | | | | | | | | | | 73.00 | 1.00 | 2.7 |
| | | | | | | | | | | | | | | Sphalerite veinlet at 73.7 m. | | | | 74.00 | 1.00 | 0.2 |
| 75 | | | | | | | | | | | | | | Drusy with orange-brown staining. | | | | 75.00 | 1.00 | 0.7 |
| | | | | | | | | 76.00 | 1.00 | 1.0 | | | | | | | | | | |
| | | | | | | | | 77.00 | 1.00 | 1.9 | | | | | | | | | | |
| | | | | | | | | 78.00 | 1.00 | 0.5 | | | | | | | | | | |
| | | | | | | | | 79.00 | 1.00 | 0.9 | | | | | | | | | | |
| 80 | | | | Contorted staining bands and veinlets in brown. | | | | 80.00 | 1.00 | 1.8 | | | | | | | | | | |
| | | | | | | | | 81.00 | 1.00 | 0.9 | | | | | | | | | | |
| | | | | | | | | 82.00 | 1.00 | 1.4 | | | | | | | | | | |
| | | | | | | | | 83.00 | 1.00 | 0.6 | | | | | | | | | | |
| | | | | | | | | 84.00 | 1.00 | 0.9 | | | | | | | | | | |
| 85 | | | | Stained in orange to yellowish brown. | | | | 85.00 | 1.00 | 0.8 | | | | | | | | | | |
| | | | | | | | | 86.00 | 1.00 | 1.6 | | | | | | | | | | |
| | | | | | | | | 87.00 | 1.00 | 0.1 | | | | | | | | | | |
| | | | | | | | | 88.00 | 1.00 | 0.8 | | | | | | | | | | |
| | | | | | | | | 89.00 | 1.00 | 1.4 | | | | | | | | | | |
| 90 | | | | Drusy and stained. | | | | 90.00 | 1.00 | 1.7 | | | | | | | | | | |

| Depth (m) | Lithology | | | Zone | Mineralization | | Assay Results | | | | |
|--------------|-----------------|------------|----------|---|----------------|----|---------------|-------------|-----------------|------------|----------|
| | Logging | Horizon | Rock | | Remarks | Py | Zn | from (m) | to (m) | run (m) | % Zn |
| 95 | [Brick pattern] | Upper Roan | Dolomite | Light-gray dolomite. Slightly stained. Staining stringers. | Oxidized | I | I | 90.00 | 91.00 | 1.00 | 0.7 |
| | | | | | | | | | 92.00 | 1.00 | 1.0 |
| | | | | | | | | | 93.00 | 1.00 | 0.4 |
| | | | | | | | | | 94.00 | 1.00 | 1.0 |
| | | | | | | | | | 95.00 | 1.00 | 0.6 |
| | | | | | | | | | 96.00 | 1.00 | 1.0 |
| | | | | | | | | | 97.00 | 1.00 | 0.2 |
| | | | | | | | | | 98.00 | 1.00 | 5.5 |
| | | | | | | | | | 99.00 | 1.00 | 0.4 |
| | | | | | | | | 105 | [Brick pattern] | Upper Roan | Dolomite |
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| 110 | [Brick pattern] | Upper Roan | Dolomite | Staining stringers. Secondary zinc veinlets. Contorted staining bands. | Oxidized | I | I | | | | |
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| 115 | [Brick pattern] | Upper Roan | Dolomite | Gossanous fillings of yellowish brown to reddish brown. | Oxidized | I | I | | | | |
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| 120 | [Brick pattern] | Upper Roan | Dolomite | Light-gray, fine- grained, saccaroidal. Banded with an angle of 5°. | Primary | I | I | | | | |
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| 135 | [Brick pattern] | Upper Roan | Dolomite | Slightly stained in pale orange-brown. | Primary | I | I | | | | |
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| 140 | [Brick pattern] | Upper Roan | Dolomite | | | | | | | | |
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| Depth (m) | Lithology | | | | Zone | Mineralization | | Assay Results | | | | | | |
|--------------|-----------------|------------|----------|--|---------|----------------|----|--|-----------|------------|------|--|--|--|
| | Logging | Horizon | Rock | Remarks | | Py | Zn | from (m) | to (m) | run (m) | % Zn | | | |
| 145 | [Brick pattern] | Upper Roan | Dolomite | Pyrite stringers. ditto. | Primary | I | | | | | | | | |
| | | | | | | | | | | | | | | |
| 150 | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | |
| 155 | | | | | | | | Banded with an angle of 10°. | | I | | | | |
| | | | | | | | | | | | | | | |
| 160 | | | | | | | | Porous recrystallized dolomite vein at 157.2 to 158.2 m. | | | | | | |
| | | | | | | | | | | | | | | |
| 165 | | | | | | | | Light-gray, fine- grained, saccaroidal. | | | | | | |
| | | | | | | | | | | | | | | |
| 170 | | | | Light-gray, fine- grained, banded and saccaroidal. | | | | | | | | | | |
| | | | | | | | | | | | | | | |
| 175 | | | | Specks of pyrite. | | I | | | | | | | | |
| | | | | | | | | | | | | | | |
| 180 | | | | Banded with an angle of 20°. | | | | | | | | | | |
| | | | | | | | | | | | | | | |
| 185 | | | | Decomposed pyrite patches and stringers. | | I | | | | | | | | |
| | | | | | | | | | | | | | | |
| 190 | | | | Banded with an angle of 10°. Pyrite specks and patches. | | I | | | | | | | | |

| Depth (m) | Lithology | | | Zone | Minerali- zation | | Assay Results | | | | | | |
|--------------|---|--------------|----------|---|---------------------|----|---------------|-------------|-----------|------------|------|--|--|
| | Logg- ing | Hori- zon | Rock | | Remarks | Py | Zn | from (m) | to (m) | run (m) | % Zn | | |
| |  | Upper Roan | Dolomite | Pyrite-sphalerite veinlet of 1 cm wide at 190.1 m. | Primary | I | I | 190.00 | 191.00 | 1.00 | 0.7 | | |
| 195 | | | | Pyrite-sphalerite veinlet of 0.3 cm wide at 194.0 m. | | | | | | | | | |
| | | | | Pyrite stringers. | | | | | | | | | |
| 200 | | | | Chlorite phyllite at 200.3 to 200.5 m with an angle of 10°. | | | | | | | | | |

Hole No. : MJZK-7
 Line : 17 Elevation : 1,170 m
 Point : 475 Bearing :
 Depth : 201 m Inclination : Vertical

| Depth (m) | Lithology | | | | Zone | Minerali- zation | | Assay Results | | | | |
|--------------|--------------|--------------|------|--------------|-----------|---------------------|----|---------------|-----------|------------|------|--|
| | Logg- ing | Hori- zon | Rock | Remarks | | Py | Zn | from (m) | to (m) | run (m) | % Zn | |
| 5 | | | | Surface soil | | | | | | | | |
| 10 | | | | | | | | | | | | |
| 15 | | | | | | | | | | | | |
| 20 | | Cenozoic | | | Weathered | | | | | | | |
| 25 | | | | | | | | | | | | |
| 30 | | | | | | | | | | | | |
| 35 | | | | | | | | | | | | |
| 40 | | | | | | Light-gray dolomite | | | | | | |







| Depth (m) | Lithology | | | Zone | Minerali- zation | | Assay Results | | | | | |
|--------------|--------------|--------------|------|------|---------------------|----|---------------|-------------|-----------|------------|------|--|
| | Logg- ing | Hori- zon | Rock | | Remarks | Py | Zn | from (m) | to (m) | run (m) | % Zn | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| 45 | | | | | Oxidized | | | | | | | |
| | | | | | | | | | | | | |
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| 50 | | | | | | | | | | | | |
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| 65 | | | | | | | | | | | | |
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| 85 | | | | | | | | | | | | |
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| 90 | | | | | | | | | | | | |

| Depth (m) | Lithology | | | Zone | Mineralization | | Assay Results | | | |
|--------------|-----------------|------------|----------|--|----------------|----|---------------|-------------|-----------|------------|
| | Logging | Horizon | Rock | | Remarks | Py | Zn | from (m) | to (m) | run (m) |
| 95 | [Brick pattern] | Upper Roan | Dolomite | Sphalerite veinlets. Speckled with recrystallized dolomite patches. | Non-oxidized | I | 90.10 | 91.10 | 1.00 | 3.2 |
| | | | | | | | | 92.10 | 1.00 | 1.9 |
| 100 | [Brick pattern] | Upper Roan | Dolomite | Argillaceous banding with an angle of 20°. Speckled with recrystallized dolomite patches. | Oxidized | I | | | | |
| 105 | [Brick pattern] | Upper Roan | Dolomite | Fine-grained, faintly banded dolomite. Speckled with recrystallized dolomite patches. | | | | | | |
| 110 | [Brick pattern] | Upper Roan | Dolomite | Stained in yellowish-brown along pores of recrystallized dolomite veins at 110.5 to 110.7 m. | Oxidized | I | 109.10 | 110.10 | 1.00 | 0.2 |
| | [Brick pattern] | Upper Roan | Dolomite | | | | | | 111.10 | 1.00 |
| | [Brick pattern] | Upper Roan | Dolomite | | Oxidized | I | | 112.10 | 1.00 | 0.1 |
| 115 | [Brick pattern] | Upper Roan | Dolomite | Speckled with recrystallized porous dolomite patches. Pores are stained with brick-brown crusts between 119.3 and 122.0 m. | | | | | | |
| 120 | [Brick pattern] | Upper Roan | Dolomite | | Oxidized | I | 118.10 | 119.10 | 1.00 | 0.2 |
| | [Brick pattern] | Upper Roan | Dolomite | | | | | | 120.10 | 1.00 |
| | [Brick pattern] | Upper Roan | Dolomite | | Oxidized | I | | 121.10 | 1.00 | 16.4 |
| | [Brick pattern] | Upper Roan | Dolomite | | | | | | 122.10 | 1.00 |
| 125 | [Brick pattern] | Upper Roan | Dolomite | Sphalerite stringers. | Oxidized | I | | 123.10 | 1.00 | 0.1 |
| | [Brick pattern] | Upper Roan | Dolomite | | | | | | 124.10 | 1.00 |
| | [Brick pattern] | Upper Roan | Dolomite | | Oxidized | I | | 125.10 | 1.00 | 0.2 |
| | [Brick pattern] | Upper Roan | Dolomite | | | | | | 126.10 | 1.00 |
| | [Brick pattern] | Upper Roan | Dolomite | Faintly banded. Sphalerite veinlets. | Oxidized | I | | 127.10 | 1.00 | 1.8 |
| | [Brick pattern] | Upper Roan | Dolomite | | | | | | 128.10 | 1.00 |
| 130 | [Brick pattern] | Upper Roan | Dolomite | Argillaceous banding with an angle of 15°. | Primary | I | | 129.10 | 1.00 | 0.6 |
| | [Brick pattern] | Upper Roan | Dolomite | | | | | | | |
| 135 | [Brick pattern] | Upper Roan | Dolomite | | Primary | I | | | | |
| 140 | [Brick pattern] | Upper Roan | Dolomite | Recrystallized dolomite veins predominate. | | | | | | |

| Depth (m) | Lithology | | | | Zone | Mineralization | | Assay Results | | | |
|--------------|---|------------|----------|---|---------|----------------|----|---------------|-----------|------------|------|
| | Logging | Horizon | Rock | Remarks | | Py | Zn | from (m) | to (m) | run (m) | % Zn |
| 145 | [Brick pattern] | Upper Roan | Dolomite | Argillaceous banding at 10°. | Primary | I | | | | | |
| | | | | Pyrite stringers. | | | | | | | |
| 150 | | | | Fine-grained, sacca- roidal. | | | | | | | |
| 155 | | | | | | | | | | | |
| 160 | | | | Speckled with recrystal- lized dolomite patches. | | | | | | | |
| | | | | Banded with an angle of 20°. | | | | | | | |
| 165 | | | | | | | | | | | |
| | | | | Argillaceous banding with an angle of 15°. | | | | | | | |
| 170 | | | | | | | | | | | |
| | | | | Pyrite specks. | | | | | | | |
| 175 | | | | | | | | | | | |
| | Speckled with recrystal- lized dolomite patches. | | | | | | | | | | |
| 180 | | | | | | | | | | | |
| | Argillaceous banding with an angle of 20°. | | | | | | | | | | |
| 185 | | | | | | | | | | | |
| 190 | | | | | | | | | | | |
| | | | | Speckled with recrystal- lized dolomite patches. | | | | | | | |

| Depth (m) | Lithology | | | | Zone | Mineralization | | Assay Results | | | |
|--------------|-----------------|--------------|----------|--|---------|----------------|----|---------------|-----------|------------|------|
| | Logg- ing | Hori- zon | Rock | Remarks | | Py | Zn | from (m) | to (m) | run (m) | % Zn |
| 195 | [Brick pattern] | Upper Roan | Dolomite | Speckled with recrystallized dolomite patches. | Primary | ----- | | | | | |
| 200 | | | | Decomposed pyrite impregnation. | | | | | | | |

Hole No. : MJZK-8
 Line : 17 Elevation : 1,172 m
 Point : 375 Bearing :
 Depth : 201 m Inclination : Vertical

| Depth (m) | Lithology | | | | Zone | Minerali- zation | | Assay Results | | | | |
|--------------|---|--------------|---------|--------------|-----------|--------------------------------------|----------|---------------|-----------|------------|------|--|
| | Logg- ing | Hori- zon | Rock | Remarks | | Py | Zn | from (m) | to (m) | run (m) | % Zn | |
| 0 | | | | Surface soil | Weathered | | | | | | | |
| 5 | | Cenozoic | | | | | | | | | | |
| 10 | | | | | | | | | | | | |
| 15 | | | | | | | | | | | | |
| 20 | | | | | | | | | | | | |
| 25 | | | | | | | | | | | | |
| 30 |  | | Mwashia | | | Pale greenish-gray talcose phyllite. | Oxidized | | | | | |
| 32 |  | | | | | Dolomite/phyllite | | | | | | |
| 34 |  | | | | | Phyllitic with an angle of 55°. | | | | | | |
| 36 |  | | | Alt. | | Dolomite/phyllite | | | | | | |
| 38 |  | | | | | Pale greenish-gray. | | | | | | |
| 40 |  | | | | | | | | | | | |

| Depth (m) | Lithology | | | Zone | Mineralization | | Assay Results | | | | | | | | |
|-----------|---------------------|---------|--|---|----------------|--------|--|--------------|--------|----------|----------|--------|--------|--------|------|
| | Logging | Horizon | Rock | | Remarks | Py | Zn | from (m) | to (m) | run (m) | % Zn | | | | |
| 95 | Upper Roan Dolomite | | | Stained in brick-brown to dark-brown along recrystallized dolomite veins. | Non-oxidized | I-I | | | | | | | | | |
| | | | | | | | 93.10 | 94.10 | 1.00 | 0.2 | | | | | |
| | | | | | | | | 95.10 | 1.00 | 5.0 | | | | | |
| | | | | | | | 96.10 | 1.00 | 0.2 | | | | | | |
| 100 | | | | | | | Banded with recrystallized dolomite veins at an angle of 30°. | Non-oxidized | I-I | | | | | | |
| 105 | | | | | | | Argillaceous banding with an angle of 25°. | | | Oxidized | | | | | |
| 110 | | | | | | | | | | | Oxidized | | | | |
| 115 | | | | | | | Brecciated and cemented fault with an angle of 35°, stained in brown to khaki at 113.3 to 114.3 m. | Oxidized | | | | | 112.10 | 113.10 | 1.00 |
| | | | | | | | | | | | | | 114.10 | 1.00 | 2.0 |
| | | | | | | | | | | | | 115.10 | 1.00 | 1.9 | |
| | | | | | | | | | | | | 116.10 | 1.00 | 0.2 | |
| 120 | | | | | | | Vuggy micro-banding of recrystallized dolomite with an angle of 20°. | Non-oxidized | | I-I | | | | | |
| 125 | | | | | | | Stained in brick-brown, pale-brown to khaki along recrystallized dolomite patches and veinlets. | | | | Oxidized | | 125.00 | 126.00 | 1.00 |
| 130 | | | | | | | | Oxidized | | | | | | 127.00 | 1.00 |
| | | | | | | | | | | | | | 128.00 | 1.00 | 0.2 |
| | | | | | | | | Oxidized | | | | | 129.00 | 1.00 | 0.8 |
| | | | | | | | | | | | | | 130.00 | 1.00 | 0.1 |
| | | | | | | | | Oxidized | | | | | 131.00 | 1.00 | 1.5 |
| | | | | | | | | | | | | | 132.00 | 1.00 | 0.2 |
| | | | | | | | | Oxidized | | | | | 133.00 | 1.00 | 1.6 |
| | | | | | | 134.00 | 1.00 | | | | 0.2 | | | | |
| 135 | | | White saccaroidal dolomite. | Oxidized | | | 135.00 | 1.00 | | | 0.8 | | | | |
| | | | | | | | | | | | | | | | |
| | | | Banded with an angle of 15°. | Oxidized | I-I | | | | | | | | | | |
| | | | Stained along recrystallized dolomite patches. | | | | | 138.00 | 139.00 | | 1.00 | 0.2 | | | |
| 140 | | | | | | | | 140.00 | 1.00 | | 1.2 | | | | |

| Depth (m) | Lithology | | | Zone | Minerali- zation | | Assay Results | | | | | |
|--------------|-----------------|--------------|----------|---|---------------------|----|---------------|-------------|-----------|------------|------|-----|
| | Logg- ing | Hori- zon | Rock | | Remarks | Py | Zn | from (m) | to (m) | run (m) | % Zn | |
| 195 | [Brick pattern] | Upper Roan | Dolomite | Stained in brick-brown. | Oxidized | T | T | 190.00 | 191.00 | 1.00 | 6.2 | |
| | | | | | | | | | | 192.00 | 1.00 | 5.6 |
| | | | | | | | | | | 193.00 | 1.00 | 2.1 |
| | | | | | | | | | | 194.00 | 1.00 | 1.4 |
| | | | | | | | | | | 195.00 | 1.00 | 0.2 |
| 200 | | | | Argillaceous banding with an angle of 20°. | | | | | | | | |


Hole No. : MJZK-9
 Line : 18 Elevation : 1,173 m
 Point : 375 Bearing :
 Depth : 201 m Inclination : Vertical

| Depth (m) | Lithology | | | | Zone | Mineralization | | Assay Results | | | |
|--------------|-----------|--------------|------------------------------------|---|-----------|----------------|----|---------------|-----------|------------|------|
| | Logging | Horizon | Rock | Remarks | | Py | Zn | from (m) | to (m) | run (m) | % Zn |
| 0 | | | | Surface soil | Weathered | | | | | | |
| 5 | | | | Sand beds | | | | | | | |
| 10 | | | | Clay beds | | | | | | | |
| 15 | | Cenozoic | | | Weathered | | | | | | |
| 20 | | | | | | | | | | | |
| 25 | | | | | | | | | | | |
| 30 | | | | | | | | | | | |
| 35 | | Mwashia | Phyllite | White to pale-gray, foliated with an angle of 10° to 40°. | Oxidized | | | | | | |
| 35 | | | Dol. | Gray, banded. | | | | | | | |
| 35 | | Alter-nation | Dolomite/phyllite with iron bands. | | | | | | | | |
| 40 | | Upper Roan | Dolomite | Phyllite-intercalations in places. | | | | | | | |

| Depth (m) | Lithology | | | Remarks | Zone | Mineralization | | Assay Results | | | | |
|--------------|--------------|--------------|----------|--|--------------|----------------|----|---------------|-----------|------------|------|--|
| | Logg- ing | Hori- zon | Rock | | | Py | Zn | from (m) | to (m) | run (m) | % Zn | |
| | | | | Cavity at 41.7 to 42.0 m. | Oxidized | | | | | | | |
| 45 | | | | Decomposed pyrite. | | | | | | | | |
| | | | | Intercalation of phyllite at 47.2 to 47.6 m. | | | | | | | | |
| 50 | | | | Banded with an angle of 30°. | | | | | | | | |
| 55 | | | | Intercalations of thin phyllite between 51.6 and 55.0 m. | | | | | | | | |
| 60 | | | | Rapid banding of vuggy recrystallized veinlets of dolomite. | | | | | | | | |
| 65 | | Upper Roan | Dolomite | Gray saccaroidal dolomite. | Non-oxidized | | | | | | | |
| 70 | | | | Argillaceous intercala- tion with an angle of 30°. | | | | | | | | |
| | | | | Porous veinlets of recrystallized dolomite. | | | | | | | | |
| 75 | | | | Sericite-chlorite veinlets at 74.2 to 74.7, 77.7 and 77.8 m. Iron staining. | | | | | | | | |
| 80 | | | | Sericite-chlorite veinlets at 82.5 and 83.3 to 83.5 m. | | | | | | | | |
| 85 | | | | Porous veinlets of recrystallized dolomite, slightly stained in brick- brown. | | | | | | | | |
| 90 | | | | | | | | | | | | |

| Depth (m) | Lithology | | | Zone | Mineralization | | Assay Results | | | | |
|--------------|-----------------|--------------|----------|---|----------------|----|---------------|-------------|-----------|------------|------|
| | Logg- ing | Hori- zon | Rock | | Remarks | Py | Zn | from (m) | to (m) | run (m) | % Zn |
| 95 | [Brick pattern] | Upper Roan | Dolomite | <p>Stained with dull brick-brown crusts along recrystallized dolomite veinlets.</p> <p>Banded with an angle of 20°.</p> <p>Stained in pale-yellowish brown.</p> <p>Stained with brick-brown stringers.</p> <p>Stained veins of recrystallized dolomite, with brick-brown crusts.</p> <p>Brick-brown stringers.</p> <p>Banded with an angle of 25°.</p> <p>Dark-brown to brick-brown stringers.</p> <p>Rich in voids, filled with dull brown crusts.</p> <p>Rich in voids, stained in yellowish to brick-brown.</p> <p>Brick-brown stringers.</p> <p>Porous recrystallized dolomite veins, filled with dull brown crusts.</p> <p>Rich in voids, stained with brick-brown to pale brown crusts.</p> <p>Argillaceous banding with an angle of 20°.</p> | Non-oxi. | T | T | 92.10 | 93.10 | 1.00 | 0.6 |
| | | | | | | | | | 94.10 | 1.00 | 16.4 |
| | | | | | | | | | 95.10 | 1.00 | 5.6 |
| | | | | | | | | | 96.10 | 1.00 | 0.6 |
| | | | | | | | | | 97.10 | 1.00 | 0.8 |
| | | | | | | | | | 98.10 | 1.00 | 4.0 |
| | | | | | | | | | 99.10 | 1.00 | 1.2 |
| | | | | | | | | | 100.10 | 1.00 | 1.1 |
| | | | | | | | | | 101.10 | 1.00 | 4.0 |
| | | | | | | | | | 102.10 | 1.00 | 1.2 |
| | | | | | | | | | 103.10 | 1.00 | 2.2 |
| | | | | | | | | | 104.10 | 1.00 | 4.8 |
| | | | | | | | | | 105.10 | 1.00 | 3.6 |
| | | | | | | | | | 106.10 | 1.00 | 8.0 |
| | | | | | | | | | 107.10 | 1.00 | 8.6 |
| | | | | | | | | | 108.10 | 1.00 | 16.6 |
| | | | | | | | | | 109.10 | 1.00 | 16.2 |
| | | | | | | | | | 110.10 | 1.00 | 4.2 |
| | | | | | | | | | 111.10 | 1.00 | 0.8 |
| | | | | | | | | | 112.10 | 1.00 | 1.7 |
| | | 113.10 | 1.00 | 2.2 | | | | | | | |
| | | 114.10 | 1.00 | 5.6 | | | | | | | |
| | | 115.10 | 1.00 | 1.2 | | | | | | | |
| | | 116.10 | 1.00 | 1.0 | | | | | | | |
| | | 117.10 | 1.00 | 2.1 | | | | | | | |
| | | 118.10 | 1.00 | 2.1 | | | | | | | |
| | | 119.10 | 1.00 | 2.6 | | | | | | | |
| | | 120.00 | 1.00 | 1.6 | | | | | | | |
| | | 121.00 | 1.00 | 4.8 | | | | | | | |
| | | 122.00 | 1.00 | 2.8 | | | | | | | |
| | | 123.00 | 1.00 | 6.8 | | | | | | | |
| | | 124.00 | 1.00 | 14.0 | | | | | | | |
| | | 125.00 | 1.00 | 9.6 | | | | | | | |
| | | 126.00 | 1.00 | 0.9 | | | | | | | |
| | | 127.00 | 1.00 | 3.2 | | | | | | | |
| | | 128.00 | 1.00 | 2.8 | | | | | | | |
| | | 129.00 | 1.00 | 4.0 | | | | | | | |
| | | 130.00 | 1.00 | 6.8 | | | | | | | |
| | | 131.00 | 1.00 | 6.4 | | | | | | | |
| | | 132.00 | 1.00 | 7.6 | | | | | | | |
| | | 133.00 | 1.00 | 7.2 | | | | | | | |
| | | 134.00 | 1.00 | 0.7 | | | | | | | |
| | | 135.00 | 1.00 | 5.6 | | | | | | | |
| | | 136.00 | 1.00 | 2.4 | | | | | | | |
| | | 137.00 | 1.00 | 10.0 | | | | | | | |
| | | 138.00 | 1.00 | 1.2 | | | | | | | |
| | | 139.00 | 1.00 | 4.4 | | | | | | | |
| 140 | | | | | | | 140.00 | 1.00 | 3.2 | | |

| Depth (m) | Lithology | | | Remarks | Zone | Mineralization | | Assay Results | | | | | | | |
|-----------|-----------------|------------|----------------------------------|---|----------|----------------|--------|-----------------|------------|---|--|----------|--------|------|--------|
| | Logging | Horizon | Rock | | | Py | Zn | from (m) | to (m) | run (m) | % Zn | | | | |
| 145 | [Brick pattern] | Upper Roan | Dolomite | Stained in brick-brown. | Oxidized | I | I | 140.00 | 141.00 | 1.00 | 3.2 | | | | |
| | | | | | | | | | | | 142.00 | 1.00 | 11.6 | | |
| | | | | | | | | | | | 143.00 | 1.00 | 18.0 | | |
| | | | | | | | | | | | 144.00 | 1.00 | 18.0 | | |
| | | | | | | | | | | Sphalerite patches. | | | 145.00 | 1.00 | 7.2 |
| | | | | | | | | | | Decomposed pyrite specks. | | | 146.00 | 1.00 | 0.5 |
| | | | | | | | | | | Sphalerite patches. | | | 147.00 | 1.00 | 1.2 |
| | | | | | | | | | | Speckled with recrystallized dolomite patches. | | | 148.00 | 1.00 | 0.6 |
| | | | | | | | | | | Decomposed pyrite specks and stringers. | | | 149.00 | 1.00 | 4.1 |
| | | | | | | | | | | | | | 150.00 | 1.00 | 1.3 |
| | | | | | | | | | | | | | 151.00 | 1.00 | 0.5 |
| | | | | | | | | | | | | | 152.00 | 1.00 | 2.5 |
| | | | | | | | | | | | | | 153.00 | 1.00 | 3.4 |
| | | | | 155 | | | | [Brick pattern] | Upper Roan | Dolomite | Speckled with recrystallized dolomite patches and veinlets, stained in brown to brick-brown. | Oxidized | I | I | 154.00 |
| | | | | | 155.00 | 1.00 | 10.8 | | | | | | | | |
| | | | | | 156.00 | 1.00 | 12.0 | | | | | | | | |
| | | | | | 157.00 | 1.00 | 14.0 | | | | | | | | |
| | | | | | 158.00 | 1.00 | 10.3 | | | | | | | | |
| | | | | | 159.00 | 1.00 | 5.8 | | | | | | | | |
| | | | | | 160.00 | 1.00 | 5.1 | | | | | | | | |
| | | | Brick-brown crusts in pores. | | | | 161.00 | | | | 1.00 | | | | 2.6 |
| | | | | | | | 162.00 | | | | 1.00 | | | | 2.3 |
| | | | Stained in brown to brick-brown. | | | | 163.00 | | | | 1.00 | | | | 3.4 |
| 165 | [Brick pattern] | Upper Roan | Dolomite | | Oxidized | I | I | 164.00 | 1.00 | 5.8 | | | | | |
| | | | | | | | | | | | 165.00 | 1.00 | 11.8 | | |
| | | | | | | | | | | | 166.00 | 1.00 | 4.1 | | |
| | | | | | | | | | | | 167.00 | 1.00 | 2.1 | | |
| | | | | | | | | | | Veinlets and patches of dull brown to brick-brown crusts. | | | 168.00 | 1.00 | 5.8 |
| | | | | | | | | | | | | | 169.00 | 1.00 | 13.2 |
| | | | | | | | | | | | | | 170.00 | 1.00 | 8.0 |
| | | | | | | | | | | | | | 171.00 | 1.00 | 0.8 |
| | | | | | | | | | | Stained with brick-brown crusts. | | | 172.00 | 1.00 | 3.0 |
| | | | | | | | | | | | | | 173.00 | 1.00 | 6.4 |
| 175 | [Brick pattern] | Upper Roan | Dolomite | Argillaceous banding with an angle of 15°. | Primary | I | I | | | | | | | | |
| | | | | | | | | | | | | | | | |
| 180 | [Brick pattern] | Upper Roan | Dolomite | Speckled with recrystallized dolomite patches. | Primary | I | I | | | | | | | | |
| | | | | | | | | | | | | | | | |
| 185 | [Brick pattern] | Upper Roan | Dolomite | Specks of pyrite. | Primary | I | I | | | | | | | | |
| | | | | | | | | | | | | | | | |
| 190 | [Brick pattern] | Upper Roan | Dolomite | White saccaroidal, speckled with recrystallized dolomite patches. | Primary | I | I | | | | | | | | |
| | | | | | | | | | | | | | | | |
| 190 | [Brick pattern] | Upper Roan | Dolomite | White, fine-grained saccaroidal dolomite | Primary | I | I | | | | | | | | |
| | | | | | | | | | | | | | | | |

| Depth (m) | Lithology | | | | Zone | Mineralization | | Assay Results | | | |
|--------------|---|------------|----------|--|---------|----------------|----|---------------|-----------|------------|------|
| | Logging | Horizon | Rock | Remarks | | Py | Zn | from (m) | to (m) | run (m) | % Zn |
| 195 |  | Upper Roan | Dolomite | Faint banding with an angle of 25°. | Primary | | | | | | |
| 200 | | | | Compact, saccharoidal, faintly banded and speckled with recrystallized dolomite patches. | | | | | | | |

Hole No. : MJZK-10
 Line : 19 Elevation : 1,172 m
 Point : 375 Bearing :
 Depth : 201 m Inclination : Vertical

| Depth (m) | Lithology | | | Zone | Minerali- zation | | Assay Results | | | | | |
|--------------|--------------|--------------|----------|--|---------------------|----|---------------|-------------|-----------|------------|------|--|
| | Logg- ing | Hori- zon | Rock | | Remarks | Py | Zn | from (m) | to (m) | run (m) | % Zn | |
| 5 | | Cenozoic | | Surface soil | Weathered | | | | | | | |
| | | | | Gravel beds. | | | | | | | | |
| 10 | | Mwashia | Phyllite | Pale-brown, clayey. | | | | | | | | |
| 15 | | | | Brownish gray, mottled in white, yellow, gray, brown, etc. | | | | | | | | |
| 20 | | | | | | | | | | | | |
| 25 | | | | | | | | | | | | |
| 30 | | Upper Roan | Dolomite | Gray dolomite, intercalations of phyllite with an angle of 35°. | Oxidized | H | | | | | | |
| | | | | Banded with iron- staining. | | H | | | | | | |
| 35 | | | | Cavity between 35.1 and 35.5 m. Iron bands at 35.9 to 38.4 m. | | H | | | | | | |
| 40 | | | | | | | H | | | | | |

| Depth (m) | Lithology | | | | Zone | Mineralization | | Assay Results | | | | | |
|--------------|-----------------|--------------|----------|--|----------|----------------|--|---------------|-----------|------------|------|--|--|
| | Logg- ing | Hori- zon | Rock | Remarks | | Py | Zn | from (m) | to (m) | run (m) | % Zn | | |
| 45 | [Brick pattern] | Upper Roan | Dolomite | Decomposed pyrite stringers and iron-bands. | Oxidized | T | | | | | | | |
| | | | | Porous with recrystallized dolomite veins. | | | | | | | | | |
| 50 | | | | Light-gray, banded. | | | | | | | | | |
| | | | | Rapidly banded black dolomite with strata-bound sphalerite veinlets. | | | | | | | | | |
| 55 | | | | | | | | | | | | | |
| | | | | | | | | 52.10 | 53.10 | 1.00 | 3.5 | | |
| | | | | | | | | | 54.10 | 1.00 | 8.7 | | |
| | | | | | | | | | 55.10 | 1.00 | 3.3 | | |
| 60 | | | | | | | Sphalerite stringers, associated with recrystallized dolomite veinlets. | Non-oxidized | H | | | | |
| | | | | | | | Light-gray dolomite, banded with vuggy recrystallized dolomite veinlets. | | | | | | |
| 65 | | | | Argillaceous banding with an angle of 25°. | | | | | | | | | |
| | | | | Banded with recrystallized dolomite stringers. | | | | | | | | | |
| 75 | | | | Cavity at 77.2 to 77.3 m. | | | | | | | | | |
| 80 | | | | Brick-brown stains. | Oxidized | T | | | | | | | |
| | | | | Brick-brown streaks. Sphalerite and willemite. | | | | | | | | | |
| 85 | | | | Brick-brown stringers. | | | | | | | | | |
| 90 | | | | Cavity at 86.8 to 87.3 m. Brick-brown stains. | | | | | | | | | |

| Depth (m) | Lithology | | | Zone | Mineralization | | Assay Results | | | | | | | | | | |
|--------------|---|--------------|------|----------|----------------|--|--|---|-----------|------------|------|--|--|--------|--------|------|-----|
| | Logg- ing | Hori- zon | Rock | | Remarks | Py | Zn | from (m) | to (m) | run (m) | % Zn | | | | | | |
| 145 | [Brickwork pattern] | Upper | Roan | Dolomite | Oxidized | T T T T T T T T T T T T T T | T T T T T T T T T T T T T T | | | | | | | | | | |
| | | | | | | | | Speckled and rich in voids with recrystallized dolomite patches. | | | | | | | | | |
| 150 | | | | | | | | Reddish brown staining. | | | | | | | | | |
| | | | | | | | | Brick-brown stringers and patches. Sphalerite patches at 151.7 m. | | | | | | 151.00 | 152.00 | 1.00 | 4.0 |
| | | | | | | | | Brick-brown stains. | | | | | | | 153.00 | 1.00 | 5.0 |
| | | | | | | | | | | | | | | | 154.00 | 1.00 | 4.2 |
| 155 | | | | | | | | | | | | | | | 155.00 | 1.00 | 3.8 |
| | | | | | | | | Brownish stains of irregular stringers and veinlets. | | | | | | | 156.00 | 1.00 | 0.4 |
| | | | | | | | | | | | | | | | 157.00 | 1.00 | 5.6 |
| | | | | | | | | Brownish staining. | | | | | | | 158.00 | 1.00 | 3.8 |
| | | | | | | | | | | | | | | | 159.00 | 1.00 | 3.2 |
| 160 | | | | | | | | | | | | | | | | | |
| 165 | | | | | | | | | | | | | | | | | |
| | | | | | | | | Reddish-brown staining. | | | | | | | | | |
| | Speckled and porous with recrystallized dolomite patches. | | | | | | | | | | | | | | | | |
| 170 | | | | | Primary | I T T T T T | | | | | | | | | | | |
| | Sphalerite-pyrite streak at 170.0 m with an angle of 20°. | | | | | | | | | | | | | | | | |
| | Light-gray dolomite. | | | | | | | | | | | | | | | | |
| | Pyrite impregnation. | | | | | | | | | | | | | | | | |
| 175 | | | | | | | | | | | | | | | | | |
| | Pyrite patches at 179.7, 181.9 and 182.2 m. | | | | | | | | | | | | | | | | |
| 180 | | | | | | | | | | | | | | | | | |
| | White, saccharoidal. | | | | | | | | | | | | | | | | |
| 185 | | | | | | | | | | | | | | | | | |
| | Pyrite patches. | | | | | | | | | | | | | | | | |
| 190 | | | | | | | | | | | | | | | | | |
| | Pyrite patches and stringers. | | | | | | | | | | | | | | | | |

| Depth (m) | Lithology | | | | Zone | Mineralization | | Assay Results | | | |
|--------------|-----------------|------------|----------|--|---------|----------------|----|---------------|-----------|------------|------|
| | Logging | Horizon | Rock | Remarks | | Py | Zn | from (m) | to (m) | run (m) | % Zn |
| 195 | [Brick pattern] | Upper Roan | Dolomite | Pyrite specks. | Primary | I | | | | | |
| 200 | | | | Fine-grained, saccaroidal, speckled with recrystallized dolomite veinlets. | | I | | | | | |

Hole No. : MJZK-11
 Line : 18 Elevation : 1,173 m
 Point : 375 Bearing : N 40° E
 Depth : 201 m Inclination : -45°

| Depth (m) | Lithology | | | | Zone | Minerali- zation | | Assay Results | | | |
|--------------|--------------|--------------|----------|--|-----------|---------------------|----|---------------|-----------|------------|------|
| | Logg- ing | Hori- zon | Rock | Remarks | | Py | Zn | from (m) | to (m) | run (m) | % Zn |
| 0 | | | | Surface soil | Weathered | | | | | | |
| 5 | | Cenozoic | | Soil beds | | | | | | | |
| 10 | | | | | | | | | | | |
| 15 | | | | | | | | | | | |
| 20 | | | | Sand beds | | | | | | | |
| 25 | | | | | | | | | | | |
| 30 | | Mwashia | Phyllite | Pale-brownish gray, deeply weathered, talcose in places. | | | | | | | |
| 35 | | | | | | | | | | | |
| 40 | | | | | | | | | | | |

| Depth (m) | Lithology | | | Zone | Mineralization | | Assay Results | | | | | | |
|--------------|-----------|------------|----------|---|----------------|--------------|---------------|-------------|-----------|------------|-------|------|-----|
| | Logging | Horizon | Rock | | Remarks | Py | Zn | from (m) | to (m) | run (m) | % Zn | | |
| | | Mwa. | Phy. | | | | | | | | | | |
| 45 | | Cenozoic | | Sand beds | Weathered | | | | | | | | |
| 50 | | | | Gray dolomite, banded with vuggy veinlets of recrystal-lized dolomite at an angle of 70°. | | Non-oxidized | | | | | | | |
| 55 | | Upper Roan | Dolomite | Brick-brown dull crusts. | Oxidized | | | | | | | | |
| 60 | | | | Porous, stained in brown to brick-brown. | | | | | | | | | |
| 65 | | | | Argillaceous banding with an angle of 65°. | | | | | | | | | |
| 70 | | | | Stained with yellowish brown crusts. | | | | | | | | | |
| 75 | | | | Brick-brown staining. | | | | | | | | | |
| | | | | Brick-brown stringers. | | | | | | 73.30 | 74.30 | 1.00 | 2.8 |
| | | | | Gray, banded dolomite, speckled with recrystal-lized dolomite patches. | | | | | | | 75.30 | 1.00 | 5.6 |
| | | | | | | | | | | | 76.30 | 1.00 | 2.3 |
| 80 | | | | Porous and stained with brick-brown crusts. | | | | | | | | | |
| 85 | | | | Black manganese wad in voids at 86.3 and 88.3 m. | | | | | | | | | |
| 90 | | | | Brick-brown stringers. | | | | | | | | | |

| Depth (m) | Lithology | | | Zone | Mineralization | | Assay Results | | | | |
|--------------|---------------------|------------|----------|---|----------------|------------------------|---------------|-------------|-----------|------------|------|
| | Logging | Horizon | Rock | | Remarks | Py | Zn | from (m) | to (m) | run (m) | % Zn |
| | [Brickwork pattern] | Upper Roan | Dolomite | Light-gray, fine-grained dolomite, saccaroidal. | Non-oxidized | [Vertical dashed line] | | | | | |
| 95 | | | | Brick-brown stringers at an angle of 40°. | | | | | | | |
| 100 | | | | Speckled and rich in voids with recrystallized dolomite patches and veinlets. | | | | | | | |
| 105 | | | | Decomposed pyrite stringers and patches. | | | | | | | |
| 110 | | | | Banded with an angle of 55°. | | | | | | | |
| 115 | | | | Argillaceous banding with an angle of 25°. | | | | | | | |
| 120 | | | | Light-gray dolomite. | | | | | | | |
| | | | | Porous and stained in brick-brown. | | | | | | | |
| 125 | | | | Brick-brown stringers. | | | | | | | |
| | | | | White saccaroidal dolomite. | | | | | | | |
| 130 | | | | Brick-brown to yellowish-brown veinlets. | | | | | | | |
| 135 | | | | Decomposed pyrites and iron-staining. | | | | | | | |
| 140 | | | | Fractures with brick-brown crusts. | | | | | | | |
| | | | | | | | 137.80 | 138.60 | 0.80 | 2.5 | |
| | | | | | | | | 139.60 | 1.00 | 2.5 | |
| | | | | | | | | 140.60 | 1.00 | 6.7 | |

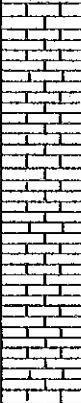
| Depth (m) | Lithology | | | Zone | Mineralization | | Assay Results | | | | |
|--------------|-----------------|--------------|----------|---|----------------|----|---------------|-------------|-----------|------------|------|
| | Logg- ing | Hori- zon | Rock | | Remarks | Py | Zn | from (m) | to (m) | run (m) | % Zn |
| 195 | [Brick pattern] | Upper Roan | Dolomite | Sphalerite patches and veinlets. | Oxi. | | I | | | | |
| 200 | | | | Pyrite specks and stringers. | Non-oxidized | I | | | | | |
| | | | | White, fine-grained, saccaroidal dolomite, speckled and banded with recrystallized dolomite at an angle of 50°. | | | I | | | | |

Hole No. : MJZK-12
 Line : 19 Elevation : 1,172 m
 Point : 375 Bearing : N 40° E
 Depth : 201 m Inclination : -45°

| Depth (m) | Lithology | | | | Zone | Mineralization | | Assay Results | | | | | |
|--------------|--------------|---------------|------|---------------|-----------|----------------|----|---------------|-----------|------------|------|------------------------|------------------------------------|
| | Logg- ing | Hori- zon | Rock | Remarks | | Py | Zn | from (m) | to (m) | run (m) | % Zn | | |
| 5 | | Ceno- zoic | | Surface soil | Weathered | | | | | | | | |
| 10 | | | | | | | | | | | | | |
| 15 | | | | Soil beds | | | | | | | | | |
| 20 | | | | | | | | | | | | | |
| 21 | | | | Mwa. Phy. | | | | | | | | Weathered phyllite (?) | |
| 22 | | | | Cen. | | | | | | | | Soil beds | |
| 23 | | | | Mwa. Phy. | | | | | | | | Weathered phyllite (?) | |
| 24 | | | | | | | | | | | | | |
| 25 | | | | Ceno- zoic | | | | | | | | | Pebble - bearing soil beds. |
| 30 | | | | Upper Roan | | | | | | | | Dolomite | Banded with an angle of 60°. |
| 32 | | | | | | | | | | | | | Iron - stain banding. |
| 33.5 | | | | | | | | | | | | | Cavity between 33.5 and 34.7 m. |
| 36.8 | | | | | | | | | | | | | Cavity at 36.8 to 37.0 m. |
| 40.4 | | | | | | | | | | | | | Cavity at 39.9 to 40.4 |
| 40 | | | | | | | | | | | | | |

| Depth (m) | Lithology | | | | Zone | Mineralization | | Assay Results | | | |
|--------------|-----------|---------|------|--|--------------|----------------|----|---------------|-----------|------------|------|
| | Logging | Horizon | Rock | Remarks | | Py | Zn | from (m) | to (m) | run (m) | % Zn |
| | | | | Gray banded, sericite dolomite. | Non-oxidized | | | | | | |
| 45 | | | | Banding with vuggy veinlets of recrystallized dolomite. | | | | | | | |
| 50 | | | | Banded with an angle of 60°. | | | | | | | |
| | | | | Brownish stains. | | | | 52.90 | 53.90 | 1.00 | 3.9 |
| 55 | | | | Rich in voids and stained along recrystallized dolomite veinlets. | | | | | 54.90 | 1.00 | 4.4 |
| | | | | Yellowish-brown stringers. | | | | 55.90 | 1.00 | 1.9 | |
| 60 | | | | Speckled with recrystallized dolomite patches and veins. | | | | 56.90 | 1.00 | 6.5 | |
| 65 | | | | Phyllite -intercalations at 67.1 and 67.2 m. | | | | 57.10 | 1.00 | 3.1 | |
| 70 | | | | White, banded dolomite rich in voids. | Oxidized | | | | | | |
| 75 | | | | Cavity at 73.8 to 74.0 m. | | | | | | | |
| 80 | | | | Speckled and stained with brown to dark- brown stringers. | | | | | | | |
| 85 | | | | Argillaceous banding with an angle of 45°. | | | | | | | |
| 90 | | | | Speckled and stained in brown. | | | | | | | |

| Depth (m) | Lithology | | | Zone | Mineralization | | Assay Results | | | | | | |
|--------------|---------------------------------------|--------------|------|--|----------------|----|---------------|-------------|-----------|------------|--------|------|-----|
| | Logg- ing | Hori- zon | Rock | | Remarks | Py | Zn | from (m) | to (m) | run (m) | % Zn | | |
| 145 | Upper Roan | Dolomite | | Speckled with recrystallized dolomite patches, rich in voids. | Oxidized | I | | | | | | | |
| | | | | Banded with an angle of 45°. | | | | | | | | | |
| | | | | Pyrite and sphalerite stringers. | Non. | I | I | | | | | | |
| 150 | | | | Dolomite - sphalerite veins. Brecciated dolomite filled with sphalerite. Sphalerite patches and stringers. | Non-oxidized | I | | | | 149.80 | 150.80 | 1.00 | 6.2 |
| | | | | | | | | | | | | | |
| 155 | | | | Banded with brownish stringers at an angle of 35°. | Oxi- dized | I | I | | | 155.80 | 156.80 | 1.00 | 4.8 |
| 160 | | | | Sphalerite patches and veinlets. | Primary | I | | | | | | | |
| 165 | | | | White compact, saccaroidal dolomite. | | | | | | | | | |
| | | | | Sphalerite stringers. | | | | | | | | | |
| 170 | | | | Iron-stain bands and decomposed pyrite stringers. | | | | | | | | | |
| 175 | Banded with an angle of 40°. | I | | | | | | | | | | | |
| 180 | White, saccaroidal sericite dolomite. | | | | | | | | | | | | |
| 185 | Banded with an angle of 40°. | I | | | | | | | | | | | |
| 190 | | | | | | | | | | | | | |

| Depth (m) | Lithology | | | | Zone | Minerali- zation | | Assay Results | | | |
|--------------|---|--------------|----------|--------------------------------------|------|---------------------|----|---------------|-----------|------------|------|
| | Logg- ing | Hori- zon | Rock | Remarks | | Py | Zn | from (m) | to (m) | run (m) | % Zn |
| 195 |  | Upper Roan | Dolomite | Pyrite specks and stringers. | | I | | | | | |
| 200 | | | | White compact, saccaroidal dolomite. | | | | | | | |

References

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PART II

I Summary of drilling operation

1. Introduction

An overall progress is shown in Table 1, and progress of drilling is listed in Table 2-1. Number of days required for drilling is shown in Table 2-2. Details of progress of each hole are given in Table 3.

Total consumption of commodity is listed in Table 4-1, and details of bits are shown in Table 4-2. Commodities consumed in each hole are listed in Table 4-3.

2. Common items

2.1 Crew

Engineer: UENO, Tadamasa
ITODA, Hidemitsu
KOBAYASHI, Shouichi

A drilling team comprises one drilling engineer, one trainee and three helpers per shift. Drilling operation was conducted by 3 shifts a day of 8 hours each. Water was also transported by 3 shifts a day by drivers with or without helpers. Preparation of drill sites, moving, installation and dismantlement were principally on a basis of one shift a day. In addition to the above, one or two teams comprising three to four members were engaged in road construction and its maintenance. Two boys were employed in the camp for cooking and washing.

2.2 Working hour

| | |
|---------------|---------------------|
| Morning shift | from 8 to 16 hours |
| Evening shift | from 16 to 24 hours |
| Night shift | from 24 to 8 hours |

Table 1. Progress

| | October | November | December | January | February | March | April |
|----------------|---------|----------|----------|---------|----------|-------|-------|
| Mobilization | 23-4 | | | | | | |
| Preparation | 31 | | | | | | |
| Formalities | | 5-15 | | | | | |
| Carrying in | | 17-28 | | | | | |
| Supplies | | 18-20 | | | | | |
| Road | | | | | | | |
| Accommodation | | | | | | | |
| Drilling | | | | | | | |
| MJZK- 2 | | 22-5 | | | | | |
| - 1 | | 6-14 | | | | | |
| - 6 | | 14-26 | | | | | |
| - 5 | | 27-9 | | | | | |
| - 4 | | | 10-19 | | | | |
| - 3 | | | 20-29 | | | | |
| - 7 | | | 30-8 | | | | |
| - 8 | | | 9-17 | | | | |
| - 9 | | | 18-26 | | | | |
| -11 | | | 27-6 | | | | |
| -10 | | | | | | 9-18 | |
| -12 | | | | | | 19-27 | |
| Carrying out | | | | | | | |
| Demobilization | | | | | | | 10-13 |

Table 2.1 Summary of drilling progress

| Hole No. | Drilling | | Shift | | Man power | | | Working Time | | | | | | |
|-------------|-------------------|---------------------|-----------------|------------------|---------------|----------------|--------------|--------------|-----------------|-----------|--------------|--------------------------|-----------------------|-------------|
| | Bit size | Drilling length (m) | Core length (m) | Drilling (shift) | Total (shift) | Engineer (man) | Helper (man) | Drilling (h) | Other works (h) | Total (h) | Removing (h) | Water transportation (h) | Road construction (h) | G.Total (h) |
| MJZK-1 | 3 7/8" T.B. NQ.BQ | 201.00 | 181.90 | 13.5 | 16.5 | 22.5 | 90 | 49.20 | 50.40 | 100.00 | 30.00 | 2.00 | - | 132.00 |
| MJZK-2 | ditto | 201.00 | 185.60 | 14.0 | 25.0 | 57.0 | 228 | 56.40 | 55.20 | 112.00 | 30.00 | 8.00 | 16.00 | 216.00 |
| MJZK-3 | ditto | 201.00 | 192.10 | 16.0 | 20.0 | 27.0 | 108 | 42.40 | 85.20 | 128.00 | 32.00 | - | - | 160.00 |
| MJZK-4 | ditto | 201.00 | 189.10 | 16.0 | 20.0 | 27.0 | 108 | 53.10 | 74.50 | 128.00 | 32.00 | - | - | 160.00 |
| MJZK-5 | ditto | 201.00 | 190.50 | 19.0 | 25.0 | 36.0 | 144 | 53.50 | 98.10 | 152.00 | 48.00 | - | - | 200.00 |
| MJZK-6 | ditto | 201.00 | 164.80 | 14.5 | 18.5 | 28.5 | 114 | 55.10 | 60.50 | 116.00 | 32.00 | - | - | 148.00 |
| MJZK-7 | ditto | 201.00 | 167.50 | 10.0 | 16.0 | 27.0 | 108 | 35.10 | 44.50 | 80.00 | 48.00 | - | - | 128.00 |
| MJZK-8 | ditto | 201.00 | 173.50 | 10.0 | 15.0 | 24.0 | 96 | 37.30 | 42.30 | 80.00 | 40.00 | - | - | 120.00 |
| MJZK-9 | ditto | 201.00 | 167.10 | 13.0 | 17.0 | 24.0 | 96 | 52.00 | 52.00 | 104.00 | 32.00 | - | - | 136.00 |
| MJZK-10 | ditto | 201.00 | 175.00 | 14.0 | 18.0 | 24.0 | 108 | 45.50 | 66.10 | 112.00 | 32.00 | - | - | 144.00 |
| MJZK-11 | ditto | 201.00 | 154.60 | 10.0 | 16.0 | 27.0 | 108 | 37.50 | 42.10 | 80.00 | 48.00 | - | - | 128.00 |
| MJZK-12 | ditto | 201.00 | 172.70 | 11.0 | 15.0 | 24.0 | 96 | 39.30 | 48.30 | 88.00 | 32.00 | - | - | 120.00 |
| Grand Total | | 2,412.00 | 2,114.40 | 161.0 | 222.0 | 348.0 | 1,404 | 558.40 | 721.20 | 1,280.00 | 486.00 | 10.00 | 16.00 | 1,792.00 |

Table 2.2 Number of days required for drilling

| Hole No. | Duration | | | | | | Details | | | | Appurtenant works | | | |
|----------|---------------------------|-----------------------------|----------------------|------|------|------|-----------|--------------|---------------------------|---------------------------|---------------------------|--------|------|-------|
| | Preparation days | Drilling days | Dismantle-ment days | days | days | days | daystotal | working days | off days | Bringing in & out days | Site prepa. days | Others | days | total |
| MJZK - 1 | 6/12/89 1.5 | 7/12/89 13/12/89 6 | 14/12/89 14/12/89 | 6 | 1 | 8.5 | 7.5 | 1 | | | | | | |
| MJZK - 2 | 25/11/89 28/11/90 4 | 29/11/89 4/12/89 6 | 5/12/89 5/12/89 | 6 | 1 | 11 | 11 | 0 | 21/11/89 24/11/89 4 | 19/11/89 20/11/89 2 | 17/11/89 18/11/89 2 | | 8 | |
| MJZK - 3 | 20/ 1/90 22/ 1/90 3 | 23/ 1/90 28/ 1/90 5.5 | 28/ 1/90 28/ 1/90 | 5.5 | 1.5 | 10 | 9 | 1 | | | | | | |
| MJZK - 4 | 10/ 1/90 12/ 1/90 3 | 13/ 1/90 18/ 1/90 5.5 | 18/ 1/90 19/ 1/90 | 5.5 | 1.5 | 10 | 9 | 1 | | | | | | |
| MJZK - 5 | 27/12/89 1/ 1/90 6 | 2/ 1/90 8/ 1/90 6.5 | 8/ 1/90 9/ 1/90 | 6.5 | 1.5 | 14 | 12 | 2 | | | | | | |
| MJZK - 6 | 14/12/89 16/12/89 2 | 16/12/89 21/12/89 5.5 | 22/12/89 26/12/89 | 5.5 | 5 | 12.5 | 9.5 | 3 | | | | | | |
| MJZK - 7 | 30/ 1/90 3/ 2/90 5 | 4/ 2/90 7/ 2/90 3.5 | 7/ 2/90 8/ 2/90 | 3.5 | 1.5 | 10 | 9 | 1 | | | | | | |

| Hole No. | Duration | | | | | | Details | | | | Appurtenant works | | | |
|-------------|----------------------|----------------------|----------------------|------|------|------|--------------|----------|---------------------|------|-------------------|------|------|-------|
| | Preparation | Drilling | Dismantle- | days | days | days | working days | off days | Bringing in & out | Site | Others | days | days | total |
| | | | | | | | | | | | | | | |
| MJZK - 8 | 9/ 2/90 12/ 2/90 | 13/ 2/90 16/ 2/90 | 16/ 2/90 17/ 2/90 | 3.5 | 4 | 1.5 | 8 | 1 | | | | | | |
| MJZK - 9 | 18/ 2/90 21/ 2/90 | 22/ 2/90 26/ 2/90 | 26/ 2/90 26/ 2/90 | 4.5 | 4 | 0.5 | 8 | 1 | | | | | | |
| MJZK -10 | 9/ 3/90 12/ 3/90 | 13/ 3/90 17/ 3/90 | 18/ 3/90 18/ 3/90 | 5 | 4 | 1 | 9 | 1 | | | | | | |
| MJZK -11 | 27/ 2/90 2/ 3/90 | 3/ 3/90 6/ 3/90 | 6/ 3/90 8/ 3/90 | 3.5 | 4 | 2.5 | 9 | 1 | | | | | | |
| MJZK -12 | 19/ 3/90 21/ 3/90 | 22/ 3/90 25/ 3/90 | 26/ 3/90 27/ 3/90 | 4 | 3 | 2 | 8 | 1 | | | | | | |
| With-drawal | | | | | | | | | 28/ 3/90 1/ 4/90 | 5 | | | | |
| Total | | | | 59.0 | 43.5 | 20.5 | 109 | 14 | | 9 | 2 | | 2 | 13 |

Table 3. Progress of Each Hole

| Hole No. | Drilling | | Shift | | Man-power | | Workig hours | | | | Total | |
|----------|----------|---------------------|----------------|-------|-----------|---------|--------------|------------------------|--------------|------------|--------|----------|
| | bit size | drilled core length | drilling shift | total | enginers | helpers | sub-total | mantling & dismantling | water supply | road, etc. | | |
| MJZK - 1 | 3"8/7 | 18.5 | | | | | | | | | | |
| | --- | --- | | | | | | | | | | |
| | NQ-WL | 53.5 | | | | | | | | | | |
| | BQ-WL | 83.1 | | | | | | | | | | |
| | | 45.9 | | | | | | | | | | |
| | Total | 201.0 | 181.9 | 13.5 | 16.5 | 22.5 | 90 | 49° 20' | 50° 40' | 30° 00' | 2° 00' | 132° 00' |
| MJZK - 2 | 3"7/8 | 15.4 | | | | | | | | | | |
| | --- | --- | | | | | | | | | | |
| | NQ-WL | 95.2 | | | | | | | | | | |
| | | 27.7 | | | | | | | | | | |
| | | 78.1 | | | | | | | | | | |
| | Total | 201.0 | 185.6 | 14 | 25 | 57 | 228 | 56 40 | 55 20 | 80 00 | 8 00 | 216 00 |
| MJZK - 3 | 3"7/8 | 8.9 | | | | | | | | | | |
| | --- | --- | | | | | | | | | | |
| | NQ-WL | 69.1 | | | | | | | | | | |
| | BQ-WL | 112.5 | | | | | | | | | | |
| | | 10.5 | | | | | | | | | | |
| | Total | 201.0 | 192.1 | 16 | 20 | 27 | 108 | 42 40 | 85 20 | 31 00 | | 160 00 |

| Hole No. | Drilling | | Shift | | Man-power | | Working hours | | | | | | | |
|----------|----------|---------------------|----------------|-------|------------|----------|---------------|---------|----------|-----------|------------------------|--------------|------------|----------|
| | bit size | drilled core length | drilling shift | total | engi-neers | help-ers | drilling | others | recovery | sub-total | mantling & dismantling | water supply | road, etc. | Total |
| MJZK - 7 | 3"8/7 | 38.5 | -- | | | | | | | | | | | |
| | NQ-WL | 81.5 | 81.5 | | | | | | | | | | | |
| | BQ-WL | 81.0 | 81.0 | | | | | | | | | | | |
| | Total | 201.0 | 162.5 | 10 | 16 | 27 | 108 | 35° 10' | 44° 50' | 80° 00' | 48° 00' | | | 128° 00' |
| MJZK - 8 | 3"7/8 | 27.5 | -- | | | | | | | | | | | |
| | NQ-WL | 92.5 | 92.5 | | | | | | | | | | | |
| | BQ-WL | 81.0 | 81.0 | | | | | | | | | | | |
| | Total | 201.0 | 173.5 | 10 | 15 | 24 | 96 | 37 30 | 42 30 | 80 00 | 40 00 | | | 120 00 |
| MJZK - 9 | 3"7/8 | 29.5 | -- | | | | | | | | | | | |
| | NQ-WL | 47.6 | 43.2 | | | | | | | | | | | |
| | BQ-WL | 42.9 | 42.9 | | | | | | | | | | | |
| | Total | 201.0 | 167.1 | 13 | 17 | 24 | 96 | 52 00 | 52 00 | 104 00 | 32 00 | | | 136 00 |

Table 4-1 Total consumption

| Description | Specifications | Unit | Quantity | Description | Specifications | Unit | Quantity |
|---------------------|----------------|------|----------|----------------------|-------------------------------------|------|----------|
| Diesel fuel | | ℓ | 7,380 | Petrol | | ℓ | 3,575 |
| Hydraulic oil | | ℓ | 120 | Engine oil | | ℓ | 784 |
| Gear oil | | ℓ | 70 | Grease | | kg | 31 |
| Bentonite | | kg | 12,825 | C M C | | kg | 158 |
| Tel-stop | | kg | 150 | Mud oil | | ℓ | 1,290 |
| Mud seal | | kg | 150 | Seaclay | | kg | 125 |
| Cement | | kg | 920 | Tricone bit | 3 ⁷ / ₈ " 3MH | pc | 12 |
| Diamond bit | NQ-WL | pc | 16 | Diamond bit | BQ-WL | pc | 15 |
| Diamond reamer | NQ-WL | pc | 12 | Diamond reamer | BQ-WL | pc | 12 |
| Casing diamond shoe | NW-NU | pc | 9 | Casing metal shoe | NW-NU | pc | 5 |
| Casing metal shoe | BW-NU | pc | 12 | Core barrel Ass'y | NQ-WL x3.0m | set | 3 |
| Core barrel Ass'y | BQ-WL x3.0m | set | 3 | Inner tube | NQ-WL x3.0m | pc | 6 |
| Inner tube | BQ-WL x3.0m | pc | 8 | Core lifter case | NQ-WL | pc | 36 |
| Core lifter case | BQ-WL | pc | 38 | Core lifter | NQ-WL | pc | 45 |
| Core lifter | BQ-WL | pc | 48 | Thrust ball bearing | NQ-WL | pc | 24 |
| Thrust ball bearing | BQ-WL | pc | 36 | Stop ring | NQ-WL | pc | 7 |
| Stop ring | BQ-WL | pc | 12 | Shut off valve | NQ-WL | pc | 48 |
| Shut off valve | BQ-WL | pc | 48 | Ratch | NQ-WL | pc | 2 |
| Ratch | BQ-WL | pc | 2 | Landing ring | NQ-WL | pc | 6 |
| Landing ring | BQ-WL | pc | 5 | Lifting dock | NQ-WL | pc | 2 |
| Lifting dock | BQ-WL | pc | 2 | Lifting dock spring | NQ-WL | pc | 12 |
| Lifting dock spring | BQ-WL | pc | 10 | Pipot pin | NQ-WL | pc | 3 |
| Pipot pin | BQ-WL | pc | 3 | Chuck piece | NQ-WL | set | 6 |
| Chuck piece | BQ-WL | set | 6 | Oil pressure hose | | pc | 3 |
| Crutch board | | pc | 1 | V-belt | C-61 x 4 | pc | 16 |
| Cylinder liner | | pc | 4 | Piston rod | | pc | 6 |
| Piston rubber | | pc | 50 | Ball valve | | pc | 40 |
| Valve seat | | pc | 40 | Delivery hose | 1" x 15m | pc | 3 |
| Suction hose | 3" x 5m | pc | 4 | Pressure gage | 100mmx100kg/cm ² | pc | 5 |
| V-belt | B-81x4, B-80x4 | pc | 24 | Counter crutch board | | pc | 1 |
| Ball bearing | | pc | 6 | Thrust ball bearing | | pc | 6 |
| Inner pipe | | pc | 8 | Oil seal | | pc | 3 |
| Gasket | | pc | 3 | Sheet | | pc | 8 |
| V-gasket | WG-15h | pc | 122 | Wire | φ10 x 50kg | kg | 250 |
| Wire | φ16 x 20kg | kg | 80 | Wire rope | 16mm x 35m | pc | 4 |
| Wire rope | 45mm x 250m | pc | 5 | Manila rope | 16mm x 50m | pc | 2 |
| Manila rope | 10mm x 50m | pc | 3 | Pipe wrench | 1,200mm | pc | 3 |
| Core box | NQ-WL | pc | 157 | Pipe wrench | 900mm | pc | 7 |
| Core box | BQ-WL | pc | 113 | Pipe wrench | 600mm | pc | 12 |
| Pipe wrench | 450mm | pc | 15 | | | | |

Table 4-2 List of used bits

| Item | Size | Bit No. | Matrix | Diamond(kt/Bit) | Meterage by Bit | Attrition Rate | |
|----------------|--------|---------|---------|-----------------|-----------------|----------------|----|
| Tri-cono | 3 1/8" | | | 3 pieces | 270.80 | | |
| Diamond bit | NQ-WL | 191649 | E-35 | 30kt | 155.40m | 30% | |
| | | 191647 | E-35 | 30 | 94.90 | 30 | |
| | | 191656 | E-35 | 30 | 14.60 | 30 | |
| | | 191653 | E-35 | 30 | 157.00 | 30 | |
| | | 191648 | E-35 | 30 | 177.90 | 30 | |
| | | 191655 | E-35 | 30 | 94.50 | 30 | |
| | | 191650 | E-35 | 30 | 153.20 | 30 | |
| | | 191652 | E-35 | 30 | 164.70 | 30 | |
| | | Total | | | | 1,012.20 | |
| | BQ-WL | 191661 | E-35 | 22 | 162.00 | 30 | |
| | | 191659 | E-35 | 22 | 255.20 | 30 | |
| | | 191657 | E-35 | 22 | 129.00 | 30 | |
| | | 191666 | E-35 | 22 | 269.80 | 30 | |
| | | 191665 | E-35 | 22 | 128.80 | 30 | |
| | | 191662 | E-35 | 22 | 184.20 | 30 | |
| | | Total | | | | 1,129.00 | |
| | Reamer | NQ-WL | NNTR-25 | E-35 | 8 | 568.40 | 30 |
| | | | NNTR-29 | E-35 | 8 | 443.80 | 30 |
| Total | | | | | | 1,012.20 | |
| BQ-WL | | 39637 | E-35 | 6 | 335.90 | 30 | |
| | | 39636 | E-35 | 6 | 793.10 | 30 | |
| | | Total | | | | 1,129.00 | |

Table 4-3 Consumption

| Hole No. | Consumption | | | | | | | | | | | | Total | |
|---------------|-------------|-------|-------|-------|-------|-------|-------|-----|-----|-------|-------|-------|-------|--------|
| | Unit | - 1 | - 2 | - 3 | - 4 | - 5 | - 6 | - 7 | - 8 | - 9 | - 10 | - 11 | | - 12 |
| Diesel fuel | ℓ | 1,060 | 1,050 | 470 | 420 | 850 | 700 | 550 | 300 | 420 | 850 | 270 | 440 | 7,380 |
| Petrol | ℓ | 650 | 630 | 215 | 230 | 600 | 485 | 180 | 120 | 160 | 350 | 100 | 255 | 3,575 |
| Engine oil | ℓ | 130 | 100 | 40 | 30 | 75 | 78 | 30 | 60 | 70 | 75 | 40 | 56 | 784 |
| Hydraulic oil | ℓ | - | 20 | - | 15 | - | 15 | 10 | - | 10 | 30 | - | 20 | 120 |
| Gear oil | ℓ | - | 20 | - | 10 | - | 5 | 5 | - | 10 | 10 | - | 10 | 70 |
| Greas | kg | 2 | 5 | 2 | 3 | 3 | 2 | 2 | 2 | 2 | 3 | 2 | 3 | 31 |
| Mud oil | ℓ | 45 | 35 | 120 | 100 | 140 | 150 | 100 | 120 | 180 | 120 | 80 | 100 | 1,290 |
| Bentonite | kg | 575 | 500 | 1,125 | 1,125 | 2,325 | 1,250 | 750 | 750 | 1,000 | 1,125 | 1,000 | 1,300 | 12,825 |
| C M C | kg | 10 | 10 | 10 | 15 | 30 | 10 | 10 | 10 | 15 | 10 | 15 | 13 | 158 |
| Tel-stop | kg | 10 | - | 15 | 25 | 25 | 15 | 15 | - | 15 | 15 | - | 15 | 150 |
| Mud seal | kg | 10 | - | 20 | 25 | 25 | 20 | 15 | - | 10 | 10 | - | 15 | 150 |
| Seaclay | kg | 10 | - | 10 | 25 | 25 | 10 | 10 | - | 15 | 10 | - | 10 | 125 |
| Cement | kg | 40 | 40 | - | 120 | - | 120 | - | - | - | 200 | 200 | 200 | 920 |

II Record of operation

1. MJZK-1

0 ~ 18.5 m

Tri-cone bits of 3"7/8 were used with bentonite mud-fluid. Two bits were used alternately to penetrate sticky clay beds between 14 and 16 m where each bit required removing of clay several times. The hole reached to sand beds and NW casing pipes were inserted.

18.5 ~ 72.0 m

Drilled using NQ-WL diamond bits with mud-fluid and mud-oil. The hole entered into dolomite at a depth of 22.2m. Due to loss of all circulation fluid at 34.1 m in depth, NW casing pipes were inserted to the depth of 34.3 m after reaming. Leakage continued and BW casing pipes were set to the depth of 72.0 m.

72.0 ~ 201.0 m

Drilled with BQ-WL diamond bits using mud-oil fluid. All circulation fluid was lost at 72.5 m. Bentonite and filler were added to prevent circulation loss. A bit was exchanged at 155.1 m.

2. MJZK-2

0 ~ 15.4 m

Overburden was drilled by tri-cone bits with bentonite-fluid. For sticky clay beds, two bits were used alternatively. Casing pipes of NW size were set to the depth of 15.4 m.

15.4 ~ 122.9 m

Dolomite was drilled by NQ-WL bits with bentonite-fluid and mud-oil. Due to loss of circulation at 68.2 m, drilling fluid was feeded continuously. A bit was exchanged at 95.2 m and BW casing pipes were inserted to the depth of 122.9 m.

122.9 ~ 201.0 m

Drilled by BQ-WL with mud-oil fluid. After casing, the hole proceeded smoothly and ended at 201.0m.

3. MJZK-3

0 ~ 8.9 m

Overburden was drilled with a tri-cone bit using bentonite-fluid. Casing pipes of NW size were set at 8.9 m.

8.9 ~ 78.0 m

Dolomite was drilled by NQ-WL diamond bits with bentonite- and mud-oil fluids.

Loss of circulation at 16.4 m could not be stopped with additives and NW casing pipes were lowered by reaming to the depth of 17.1 m and then to the depth of 47.1 m because of circulation loss at 46.4 m. Leakage continued and BW casing pipes were inserted to the depth of 78.0 m.

78.0 ~ 201.0 m

Drilled by BQ-WL diamond bits with mud-oil fluid. Leakage of circulation occurred at 187.0 m and drilling fluid was feeded continuously. The bit was exchanged at 190.5 m, and the hole completed at 201.0 m.

4. MJZK-4

0 ~ 11.9 m

Soil was drilled by a tri-cone bit with bentonite-fluid. NW casing pipes were inserted to dolomite at the depth of 11.9 m.

11.9 ~ 120.0 m

Drilled by NQ-WL diamond bits with bentonite- and mud-oil fluids. All circulation was lost at 20.2 and also 34.0 m and all efforts with additives were failed to prevent loss. The casing pipes were lowered by reaming with a diamond shoe bit to the depth of 35 m. A bit was exchanged at 77.1 m and BW casing pipes were inserted to the depth of 120.0 m.

120.0 ~ 201.0 m

Dolomite was drilled by a BQ-WL diamond bit using mud-oil fluid. Some loss of circulation was covered with supply of new drilling fluid.

5. MJZK-5

0 ~ 10.5 m

Soil was drilled with a tri-cone bit and circulation was lost at 10.1 m. NW casing pipes were tentatively set to a depth of 10.5 m.

10.5 ~ 120.0 m

The hole entered into dolomite at 10.8 m. Loss of circulation continued and casing pipes were lowered after reaming with a diamond shoe bit to 25.3 and further to the depth of 31.6 m. A NQ-WL bit was exchanged at 71.1 m and BW casing pipes

were inserted to the depth of 120 m.

120 ~201.0 m

With supply of mud-oil drilling fluid, the hole was drilled with a BQ-WL diamond bit and completed at 201.0 m in depth.

6. MJZK-6

0 ~33.4 m

Unconsolidated sediments were drilled by a tri-cone bit using bentonite-fluid. NW casing pipes were inserted to 33.4 m in depth.

33.4 ~72.2 m

Dolomite was drilled with a NQ-WL diamond bit using bentonite- and mud-oil fluids. Cavities were encountered at 45.1 and 51.2 m. BW casing pipes were set at a depth of 72.2 m.

72.2 ~ 201.0 m

Drilled by a BQ-WL diamond bit with mud-oil and bentonite-fluid. All circulation was lost at a cavity of 102.0 m in depth and filtrate loss reduction additives were introduced. The hole completed at 201.0 m with replenishment of drilling fluid.

7. MJZK-7

0 ~38.5 m

Surface soil was drilled with a tri-cone bit using bentonite-fluid. NW casing pipes were set at the top of basement rocks of 38.5 m in depth.

38.5 ~120.0 m

Dolomite was drilled with a NQ-WL diamond bit using bentonite- and mud-oil fluids.

All circulation was lost in a cavity at 43.5 m and additives could not stop loss. The casing pipes were lowered by reaming with a diamond shoe bit to a depth of 45.0 m. BW casing pipes were inserted at a depth of 120.0 m.

120.0 ~ 201.0 m

The hole completed at a depth of 201.0 m with a BQ-WL bit using mud-oil fluid.

8. MJZK-8

0 ~ 27.5 m

Surface soil was drilled by a tri-cone bit with bentonite-fluid. Casing pipes of NW size were fixed at a depth of 27.5 m.

27.5 ~ 120.0 m

A NQ-WL bit was used with bentonite- and mud-oil fluids. Difficulties were experienced with blocking caused by wedge-shaped cores of phyllite to a depth of 59.0 m. The hole entered into dolomite and a fault was encountered at 77.5 m which created loss of circulation. Drilling fluid was replenished until casing pipes of BW size were inserted at a depth of 120.0 m.

120.0 ~ 201.0 m

Dolomite was drilled by a BQ-WL diamond bit using mud-oil fluid. Loss of water was replenished with additional fluid and the hole completed at 201.0 m in depth.

9. MJZK-9

0 ~ 29.5 m

Soil and clay beds were drilled with a tri-cone bit using bentonite fluid to a depth

of 29.5 m and casing pipes of NW size were set.

29.5 ~120.0 m

Drilled with a NQ-WL bit using bentonite and mud-oil fluid. The consistency of bentonite-fluid was kept thick within phyllite to a depth of 37.4 m. The hole entered to dolomite and all circulation was lost at 97.5 m. Additives were introduced and with replenishment of fluid, the hole proceeded to a depth of 120.0 m where casing pipes of BW size were set.

120.0 ~201.0 m

Drilled by a BQ-WL bit using mud-oil fluid to the depth of 201.0 m.

10. MJZK-10

0 ~26.0 m

Surface soil and weathered phyllites were penetrated by a tri-cone bit using bentonite-fluid. Reaching to dolomite at 26.0 m, casing pipes of NW size were set.

26.0 ~105.0 m

Drilled by a NQ-WL bit with bentonite fluid. Loss of all circulation occurred at 85.5 m and 92.5 m. Additives were introduced and fluid was replenished until casing pipes of NW-size were inserted at a depth of 105.0 m.

105.0 ~201.0 m

Dolomite was drilled with BQ-WL bits using mud-oil fluid. The bit and core tube were exchanged at 152.0 m in depth and the hole was completed at 201.0 m.

11. MJZK-11

0 ~ 24.0 m

After insertion of a drive pipe of 1.5 m, the mouth was cemented. A tri-cone bit and bentonite-fluid were used to a depth of 24.0 m, where casing pipes of NW size were inserted.

24.0 ~ 120.1 m

Drilled by a NQ-WL bit with mud-oil fluid. The hole penetrated weathered phyllite between 29.4 and 40.9 m and reached to dolomite at a depth of 46.4 m. The casing pipes of NW size were extended and fixed to this depth. Bentonite-fluid was used to a depth of 60 m, but due to an outbreak of mud sheath, fluid was replaced by mud-oil fluid. Casing pipes of BW size were inserted at a depth of 120.1 m.

120.1 ~ 201.0 m

Drilled by a BQ-WL diamond bit with mud-oil fluid until the hole was completed at 201.0 m in depth.

12. MJZK-12

0 ~ 27.1 m

After cementing of a drive pipe of 1.5 m, soil and weathered phyllites were penetrated by a tri-cone bit using bentonite-fluid, and casing pipes of NW size were inserted to a depth of 27.1 m.

27.1 ~ 112.8 m

Dolomite was drilled with a NQ-WL diamond bit. All circulation was lost at a depth of 78.5 m and additives were introduced. Replenishment with drilling fluid was

maintained until casing pipes of BW size
were inserted at a depth of 112.8 m.

112.8 ~201.0 m

Drilled to the depth of 201.0 m by a
diamond bit of BQ size using mud-oil fluid.

Table 5-1-1 Progress Report of Drilling MJZK-1

| Date | Drilling length per shift | | | Total length | | Number of shift | | Man-shift | |
|-------|---------------------------|----------|---------|--------------|-------|-----------------|-------|-----------|--------|
| | 1st | 2nd | 3rd | run | core | Drilling | Total | Engineer | Helper |
| Dec. | m | m | m | m | m | | | | |
| 6 | Installation | | | | | | | | |
| 7 | ditto & 16.4 | | | 16.4 | - | | | | |
| 8 | - | | | | | | | | |
| 9 | 9.5 | 8.4 | Reaming | 17.9 | 15.2 | 3.5 | 5.0 | 9.0 | 36 |
| 10 | 6.2 | 16.5 | 12.5 | 35.2 | 35.2 | | | | |
| 11 | 3.4 | 28.2 | 24.0 | 55.6 | 55.6 | | | | |
| 12 | 30.0 | 21.0 | 24.9 | 75.9 | 75.9 | | | | |
| 13 | Measurement | Dis- | | | | | | | |
| 14 | Dis- | mantling | | | | 10.0 | 11.5 | 13.5 | 54 |
| Total | 65.5 | 74.1 | 61.4 | 201.0 | 181.9 | 13.5 | 16.5 | 22.5 | 99 |

Table 5-1-2 Summary of Drilling MJZK-1

| | Survey Period | | | | Man-shift | | |
|---------------|-------------------|---------------------------|--------------|------------------------------|-----------|------------|-------|
| | Period | Days | Working Days | Off-days | Engineer | Helper | |
| Preparation | 6 ~ 7, Dec., 1989 | 1.5 | 1.5 | | 4.5 | 18 | |
| Drilling | 7 ~13, Dec. | 6.0 | Drilling:5.0 | 1 | 15.0 | 60 | |
| | | | Recovery: | | | | |
| Removal | 14, Dec. | 1.0 | 1.0 | | 3.0 | 12 | |
| Total | 6 ~14, Dec., 1989 | 8.5 | 7.5 | 1 | 22.5 | 90 | |
| Depth, etc. | | | | Core Recovery per Every 100m | | | |
| Planned | 200.0m | Soil, etc. | 18.6m | Depth | Section | Cumulative | |
| Revised | m | Core Length | 181.9m | 0~100 | 81.4% | 90.5% | |
| Measured | 201.0m | Core Recovery | 90.5% | 100~200m | 100.0% | | |
| Working Hours | | | | | | | |
| Drilling | 49°20' | 46% | 37% | Drilling speed | | | |
| Others | 58°40' | 54 | 44 | | | | |
| Recovering | | | | Run/drilling days | | | |
| Sub-total | 108°00' | 100 | 81 | 201.0 ÷ 5 = 40.20m/day | | | |
| Preparation | 10°00' | | 8 | Run/drilling shifts | | | |
| Dismantling | 12°00' | | 9 | 201.0 ÷ 13.5 = 14.89m/shift | | | |
| Water Supply | 2°00' | | 2 | Run for each size | | | |
| Access, etc. | | | | Bit Size | 3' 8/7 | NQ | BQ |
| Total | 132°00' | | 100 | Run (m) | 18.6 | 53.5 | 129.0 |
| | | | | Core Length | - | 52.9 | 129.0 |
| Casing | | | | Notes: | | | |
| Size | Depth | Ratio against total depth | Recovery | | | | |
| HX | m | % | % | | | | |
| NW | 34.3 | 17.1 | 100 | | | | |
| BW | 72.0 | 35.8 | 100 | | | | |

Table 5-2-1 Progress Report of Drilling MJZK-2

| Date | Drilling length per shift | | | Total length | | Number of shift | | Man-shift | |
|-------|---------------------------|----------|------|--------------|-------|-----------------|-------|-----------|--------|
| | 1st | 2nd | 3rd | run | core | Drilling | Total | Engineer | Helper |
| Nov. | m | m | m | m | m | | | | |
| 17 | Supply-purchase | | | | | | | | |
| 18 | ditto | | | | | | 2 | 6 | 24 |
| 19 | Site-prepara. | | | | | | | | |
| 20 | ditto | | | | | | | | |
| 21 | Carriage | | | | | | | | |
| 22 | ditto | | | | | | | | |
| 23 | ditto | | | | | | | | |
| 24 | ditto | | | | | | | | |
| 25 | Mast-assembl. | | | | | | 7 | 21 | 84 |
| 26 | Installation | | | | | | | | |
| 27 | ditto | | | | | | | | |
| 28 | Wiring | | | | | | | | |
| 29 | 13.4 | | | | | | | | |
| 30 | 3.8 | 9.0 | 15.0 | 27.8 | 25.8 | | | | |
| Dec. | | | | | | | | | |
| 1 | 9.0 | 21.0 | 24.0 | 54.0 | 54.0 | | | | |
| 2 | 17.0 | 10.7 | 11.2 | 38.9 | 38.9 | 10 | 13 | 21 | 84 |
| 3 | 22.0 | 24.0 | 20.9 | 66.9 | 66.9 | | | | |
| 4 | Measure. | Dismant. | | | | | | | |
| 5 | Dismant. | | | | | | | | |
| | | | | | | 4 | 6 | 9 | 36 |
| Total | 65.2 | 64.7 | 71.1 | 201.0 | 185.6 | 14 | 28 | 57 | 228 |

Table 5-2-2 Summary of Drilling MJZK-2

| | Survey Period | | | | Man-shift | |
|---------------|---------------------|---------------------------|--------------|------------------------------|-----------|------------|
| | Period | Days | Working Days | Off-days | Engineer | Helper |
| Preparation | 17 ~ 28, Nov., 1989 | 12 | 12 | | 36 | 144 |
| Drilling | 29, Nov. ~ 4, Dec. | 6 | Drilling: 6 | | 18 | 72 |
| | | | Recovery: | | | |
| Removal | 5, Dec. | 1 | 1 | | 3 | 12 |
| Total | 17, Nov. ~ 5, Dec. | 19 | 19 | | 57 | 228 |
| Depth, etc. | | | | Core Recovery per Every 100m | | |
| Planned | 200.0m | Soil, etc. | 15.4m | Depth | Section | Cumulative |
| Revised | m | Core Length | 185.6 | 0~100m | 84.6% | |
| Measured | 201.0m | Core Recovery | 92.3% | 100~200m | 100.0 | 92.3% |
| Working Hours | | | | | | |
| Drilling | 56°40' | 51% | 26% | Drilling speed | | |
| Others | 55°20' | 49 | 26 | | | |
| Recovering | | | | Run/drilling days | | |
| Sub-total | 112°00' | 100 | 52 | 201.0 ÷ 6 = 33.50m/day | | |
| Preparation | 72°00' | | 33 | Run/drilling shifts | | |
| Dismantling | 8°00' | | 4 | 201.0 ÷ 14 = 14.36m/shift | | |
| Water Supply | 8°00' | | 4 | Run for each size | | |
| Access, etc. | 16°00' | | 7 | Bit Size | 3' 8/7 | NQ BQ |
| | | | | Run (m) | 15.4 | 107.5 78.1 |
| Total | 216°00' | | 100 | Core Length | - | 107.5 78.1 |
| Casing | | | | Notes: | | |
| Size | Depth | Ratio against total depth | Recovery | | | |
| HX | m | % | % | | | |
| NW | 15.4 | 7.7 | 100 | | | |
| BW | 122.9 | 61.1 | 100 | | | |

Table 5-3-1 Progress Report of Drilling MJZK-3

| Date | Drilling length per shift | | | Total length | | Number of shift | | Man-shift | |
|---------|---------------------------|------------------|---------|--------------|-------|-----------------|-------|-----------|--------|
| | 1st | 2nd | 3rd | run | core | Drilling | Total | Engineer | Helper |
| Jan. 20 | m | m | m | m | m | | | | |
| | Instal- lation | | | | | | 1 | 3 | 12 |
| 21 | ditto | | | | | | | | |
| 22 | - | | | | | | | | |
| 23 | 17.1 | 12.0 | 3.0 | 32.1 | 23.2 | | | | |
| 24 | 12.0 | 3.0 | Reaming | 15.0 | 15.0 | | | | |
| 25 | 6.0 | 9.0 | 15.9 | 30.9 | 30.9 | | | | |
| 26 | 11.0 | 21.0 | 30.0 | 62.0 | 62.0 | | | | |
| 27 | 30.0 | 20.5 | 10.5 | 61.0 | 61.0 | | | | |
| | | | | | | 15 | 16 | 18 | 72 |
| 28 | Measure- ment | Dis- mantling | | | | | | | |
| 29 | Dis- mantling | | | | | 1 | 3 | 6 | 24 |
| Total | 76.1 | 65.5 | 59.4 | 201.0 | 192.1 | 16 | 20 | 27 | 108 |

Table 5-3-2 Summary of Drilling MJZK-3

| | Survey Period | | | | Man-shift | | |
|---------------|---------------------|---------------------------|---------------|------------------------------|-----------|------------|-------|
| | Period | Days | Working Days | Off-days | Engineer | Helper | |
| Preparation | 20 ~ 22, Jan., 1990 | 3.0 | 2.0 | 1.0 | 6.0 | 24 | |
| Drilling | 23 ~ 28, Jan. | 5.5 | Drilling: 5.5 | | 16.5 | 66 | |
| | | | Recovery: | | | | |
| Removal | 28 ~ 29, Jan. | 1.5 | 1.5 | | 4.5 | 18 | |
| Total | 20 ~ 29, Jan., 1990 | 10.0 | 9.0 | 1.0 | 27.0 | 108 | |
| Depth, etc. | | | | Core Recovery per Every 100m | | | |
| Planned | 200.0m | Soil, etc. | 8.9m | Depth | Section | Cumulative | |
| Revised | m | Core Length | 192.1m | 0~100m | 91.1% | 95.6% | |
| Measured | 201.0m | Core Recovery | 95.6% | 100~200m | 100.0 | | |
| Working Hours | | | | | | | |
| Drilling | 42°40' | 33% | 27% | Drilling speed | | | |
| Others | 85°20' | 67 | 53 | Run/drilling days | | | |
| Recovering | | | | 201.0 ÷ 5.5 = 36.54m/day | | | |
| Sub-total | 128°00' | 100 | 80 | Run/drilling shifts | | | |
| Preparation | 16°00' | | 10 | 201.0 ÷ 16 = 12.56m/shift | | | |
| Dismantling | 16°00' | | 10 | Run for each size | | | |
| Water Supply | | | | Bit Size | 3' 8/7 | NQ | BQ |
| Access, etc. | | | | Run (m) | 8.9 | 69.1 | 123.0 |
| Total | 160°00' | | 100 | Core Length | - | 69.1 | 123.0 |
| Casing | | | | Notes: | | | |
| Size | Depth | Ratio against total depth | Recovery | | | | |
| HX | m | % | % | | | | |
| NW | 47.1 | 23.4 | 100 | | | | |
| BW | 78.1 | 38.8 | 100 | | | | |

Table 5-4-1 Progress Report of Drilling MJZK-4

| Date | Drilling length per shift | | | Total length | | Number of shift | | Man-shift | |
|-------|---------------------------|----------|------|--------------|-------|-----------------|-------|-----------|--------|
| | 1st | 2nd | 3rd | run | core | Drilling | Total | Engineer | Helper |
| Jan. | m | m | m | m | m | | | | |
| 10 | Instal- | | | | | | | | |
| 11 | lation | | | | | | | | |
| 12 | ditto | | | | | | | | |
| 13 | 13.2 | 7.9 | 9.0 | 30.1 | 18.2 | | | | |
| | | | | | | 3 | 5 | 9 | 36 |
| 14 | 5.0 | 6.0 | 21.0 | 32.0 | 32.0 | | | | |
| 15 | 15.0 | 18.0 | 9.0 | 42.0 | 42.0 | | | | |
| 16 | 15.7 | 5.2 | 21.0 | 41.9 | 41.9 | | | | |
| 17 | 18.0 | 18.0 | 19.0 | 55.0 | 55.0 | | | | |
| 18 | Measure- | Dis- | | | | | | | |
| 19 | ment | mantling | | | | | | | |
| | Dis- | | | | | | | | |
| | mantling | | | | | 3 | 15 | 18 | 72 |
| Total | 66.9 | 55.1 | 79.0 | 201.0 | 189.1 | 16 | 20 | 27 | 108 |

Table 5-4-2 Summary of Drilling MJZK-4

| | Survey Period | | | | Man-shift | |
|---------------|---------------------|---------------------------|---------------|------------------------------|-----------|------------|
| | Period | Days | Working Days | Off-days | Engineer | Helper |
| Preparation | 10 ~ 12, Jan., 1990 | 3.0 | 2.0 | 1 | 6.0 | 24 |
| Drilling: | 13 ~ 18, Jan. | 5.5 | Drilling: 5.5 | | 16.5 | 66 |
| | | | Recovery: | | | |
| Removal | 18 ~ 19, Jan. | 1.5 | 1.5 | | 4.5 | 18 |
| Total | 10 ~ 19, Jan., 1990 | 10.0 | 9.0 | 1 | 27.0 | 108 |
| Depth, etc. | | | | Core Recovery per Every 100m | | |
| Planned | 200.0m | Soil, etc. | 11.9m | Depth | Section | Cumulative |
| Revised | m | Core Length | 189.1m | 0~100m | 88.1% | |
| Measured | 201.0m | Core Recovery | 94.1% | 100~200m | 100.0 | 94.1% |
| Working Hours | | | | | | |
| Drilling | 53°10' | 42% | 33% | Drilling speed | | |
| Others | 74°50' | 58 | 47 | Run/drilling days | | |
| Recovering | | | | 201.0 ÷ 5.5 = 36.54m/day | | |
| Sub-total | 128°00' | 100 | 80 | Run/drilling shifts | | |
| Preparation | 16°00' | | 10 | 201.0 ÷ 16 = 12.56m/shift | | |
| Dismantling | 16°00' | | 10 | Run for each size | | |
| Water Supply | | | | Bit Size | 3' 8/7 | NQ BQ |
| Access, etc. | | | | Run (m) | 11.9 | 108.1 81.0 |
| Total | 160°00' | | 100 | Core Length | | 108.1 81.0 |
| Casing | | | | Notes: | | |
| Size | Depth | Ratio against total depth | Recovery | | | |
| HX | m | % | % | | | |
| NW | 35.0 | 17.4 | 100 | | | |
| BW | 120.0 | 59.7 | 100 | | | |

Table 5-5-1 Progress Report of Drilling MJZK-5

| Date | Drilling length per shift | | | Total length | | Number of shift | | Man-shift | |
|-------|---------------------------|----------|--------|--------------|-------|-----------------|-------|-----------|--------|
| | 1st | 2nd | 3rd | run | core | Drilling | Total | Engineer | Helper |
| Dec. | m | m | m | m | m | | | | |
| 27 | Carriage | | | | | | | | |
| 28 | Instal- | | | | | | | | |
| 29 | lation | | | | | | | | |
| 30 | Mast- | | | | | | | | |
| | assembl. | | | | | | | | |
| | Wiring | | | | | | 4 | 12 | 48 |
| 31 | - | | | | | | | | |
| Jan. | | | | | | | | | |
| 1 | - | | | | | | | | |
| 2 | 12.0 | 5.1 | 9.0 | 26.1 | 15.6 | | | | |
| 3 | Reaming | Reaming | Casing | | | | | | |
| 4 | 5.5 | 0.5 | 18.0 | 24.0 | 24.0 | | | | |
| 5 | 21.0 | 12.0 | 21.0 | 54.0 | 54.0 | | | | |
| 6 | 7.3 | 10.6 | 21.0 | 38.9 | 38.9 | 15 | 15 | 15 | 60 |
| 7 | 24.0 | 24.0 | 10.0 | 58.0 | 58.0 | | | | |
| 8 | Measure- | Dis- | | | | | | | |
| | ment | mantling | | | | | | | |
| 9 | Dis- | | | | | | | | |
| | mantling | | | | | 4 | 6 | 9 | 36 |
| Total | 69.8 | 52.2 | 79.0 | 201.0 | 190.5 | 19 | 25 | 36 | 144 |

Table 5-5-2 Summary of Drilling MJZK-5

| | Survey Period | | | | Man-shift | |
|---------------|------------------------|---------------------------|---------------|------------------------------|-----------|------------|
| | Period | Days | Working Days | Off-days | Engineer | Helper |
| Preparation | 27, Dec. ~1, Jan., '90 | 6.0 | 4.0 | 2.0 | 12.0 | 42 |
| Drilling | 2 ~ 8, Jan. | 6.5 | Drilling: 6.5 | | 19.5 | 78 |
| | | | Recovery: | | | |
| Removal | 8 ~ 9, Jan. | 1.5 | 1.5 | | 4.5 | 18 |
| Total | 27, Dec. ~9, Jan., '90 | 14.0 | 12.0 | 2.0 | 36.0 | 144 |
| Depth, etc. | | | | Core Recovery per Every 100m | | |
| Planned | 200.0m | Soil, etc. | 10.5m | Depth | Section | Cumulative |
| Revised | m | Core Length | 190.5m | 0~100m | 89.5% | |
| Measured | 201.0m | Core Recovery | 94.8% | 100~200m | 100.0 | 94.8% |
| Working Hours | | | | | | |
| Drilling | 53°50' | 35% | 27% | Drilling speed | | |
| Others | 98°10' | 65 | 49 | Run/drilling days | | |
| Recovering | | | | 201.0 ÷ 6.5 = 30.92m/day | | |
| Sub-total | 152°00' | 100 | 76 | Run/drilling shifts | | |
| Preparation | 32°00' | | 16 | 201.0 ÷ 19 = 10.58m/shift | | |
| Dismantling | 16°00' | | 8 | Run for each size | | |
| Water Supply | | | | Bit Size | 3' 8/7 | NQ BQ |
| Access, etc. | | | | Run (m) | 10.5 | 109.5 81.0 |
| Total | 200°00' | | 100 | Core Length | - | 109.5 81.0 |
| Casing | | | | Notes: | | |
| Size | Depth | Ratio against total depth | Recovery | | | |
| HX | m | % | % | | | |
| NW | 31.6 | 15.7 | 100 | | | |
| BW | 120.0 | 59.7 | 100 | | | |

Table 5-6-1 Progress Report of Drilling MJZK-6

| Date | Drilling length per shift | | | Total length | | Number of shift | | Man-shift | |
|-------|---------------------------|-------------|------|--------------|-------|-----------------|-------|-----------|--------|
| | 1st | 2nd | 3rd | run | core | Drilling | Total | Engineer | Helper |
| Dec. | m | m | m | m | m | | | | |
| 14 | Installation | | | | | | | | |
| 15 | ditto | | | | | | | | |
| 16 | ditto & 16.4 | | | 16.4 | - | 0.5 | 2.5 | 7.5 | 30 |
| 17 | 12.0 | 13.0 | 11.8 | 36.8 | 18.1 | | | | |
| 18 | 13.0 | 8.0 | 8.7 | 29.7 | 28.6 | | | | |
| 19 | 15.0 | 18.0 | 13.5 | 46.5 | 46.5 | | | | |
| 20 | 15.0 | 12.5 | 22.1 | 49.6 | 49.6 | | | | |
| 21 | 22.0 | Measurement | | 22.0 | 22.0 | | | | |
| 22 | Dis- | | | | | | | | |
| 23 | mantling | | | | | 14.0 | 15.0 | 18.0 | 72 |
| 24 | | | | | | | | | |
| 25 | | | | | | | | | |
| 26 | Dis- | | | | | | | | |
| | mantling | | | | | | 1.0 | 3.0 | 12 |
| Total | 93.4 | 51.5 | 56.1 | 201.0 | 164.8 | 14.5 | 18.5 | 28.5 | 114 |

Table 5-6-2 Summary of Drilling MJZK-6

| | Survey Period | | | | Man-shift | | |
|---------------|---------------------|---------------------------|--------------|------------------------------|-----------|------------|-------|
| | Period | Days | Working Days | Off-days | Engineer | Helper | |
| Preparation | 14 ~ 16, Dec., 1989 | 2.0 | 2.0 | | 6.0 | 24 | |
| Drilling | 16 ~ 21, Dec. | 5.5 | Drilling:5.5 | | 16.5 | 66 | |
| | | | Recovery: | | | | |
| Removal | 22 ~ 26, Dec. | 5.0 | 2.0 | 3.0 | 6.0 | 24 | |
| Total | 14 ~ 26, Dec., 1989 | 12.5 | 9.5 | 3.0 | 28.5 | 114 | |
| Depth, etc. | | | | Core Recovery per Every 100m | | | |
| Planned | 200.0m | Soil, etc. | 33.4m | Depth | Section | Cumulative | |
| Revised | m | Core Length | 164.8m | 0~100m | 63.8% | | |
| Measured | 201.0m | Core Recovery | 82.5% | 100~200m | 100.0 | 82.0% | |
| Working Hours | | | | | | | |
| Drilling | 55°10' | 48% | 37% | Drilling speed | | | |
| Others | 60°50' | 52 | 41 | Run/drilling days | | | |
| Recovering | | | | 201.0÷5.5=36.54m/day | | | |
| Sub-total | 116°00' | 100 | 78 | Run/drilling shifts | | | |
| Preparation | 16°00' | | 11 | 201.0÷14.5=13.86m/shift | | | |
| Dismantling | 16°00' | | 11 | Run for each size | | | |
| Water Supply | | | | Bit Size | 3'8/7 | NQ | BQ |
| Access, etc. | | | | Run (m) | 33.4 | 38.8 | 128.8 |
| Total | 148°00' | | 100 | Core Length | - | 36.0 | 128.8 |
| Casing | | | | Notes: | | | |
| Size | Depth | Ratio against total depth | Recovery | | | | |
| HX | m | % | % | | | | |
| NW | 33.4 | 16.6 | 100 | | | | |
| BW | 72.2 | 35.9 | 100 | | | | |

Table 5-7-1 Progress Report of Drilling MJZK-7

| Date | Drilling length per shift | | | Total length | | Number of shift | | Man-shift | |
|-------|---------------------------|------------------|------|--------------|-------|-----------------|-------|-----------|--------|
| | 1st | 2nd | 3rd | run | core | Drilling | Total | Engineer | Helper |
| Jan. | m | m | m | m | m | | | | |
| 30 | Carriage | | | | | | | | |
| 31 | Instal- lation | | | | | | | | |
| Feb. | | | | | | | | | |
| 1 | Mast- assembl. | | | | | | | | |
| 2 | Sheeting | | | | | | | | |
| 3 | - | | | | | | | | |
| | | | | | | | 4 | 12 | 48 |
| 4 | 15.0 | 23.5 | 6.5 | 45.5 | 6.5 | | | | |
| 5 | 17.1 | 24.0 | 33.9 | 75.0 | 75.0 | | | | |
| 6 | 8.0 | 39.0 | 34.0 | 81.0 | 81.0 | | | | |
| 7 | Measure- ment | Dis- mantling | | | | | | | |
| 8 | Dis- mantling | | | | | | | | |
| | | | | | | 10 | 12 | 15 | 60 |
| Total | 40.1 | 86.5 | 74.4 | 201.0 | 162.0 | 10 | 16 | 27 | 108 |

Table 5-7-2 Summary of Drilling MJZK-7

| | Survey Period | | | | Man-shift | | |
|---------------|------------------------|---------------------------|---------------|------------------------------|-----------|------------|------|
| | Period | Days | Working Days | Off-days | Engineer | Helper | |
| Preparation | 30, Jan. ~3, Feb., '90 | 5.0 | 4.0 | 1.0 | 12.0 | 48 | |
| Drilling | 4 ~ 7, Feb. | 3.5 | Drilling: 3.5 | | 10.5 | 42 | |
| | | | Recovery: | | | | |
| Removal | 7 ~ 8, Feb. | 1.5 | 1.5 | | 4.5 | 18 | |
| Total | 30, Jan. ~8, Feb., '90 | 10.0 | 9.0 | 1.0 | 27.0 | 108 | |
| Depth, etc. | | | | Core Recovery per Every 100m | | | |
| Planned | 200.0m | Soil, etc. | 38.5m | Depth | Section | Cumulative | |
| Revised | m | Core Length | 162.5m | 0~100m | 61.5% | | |
| Measured | 201.0m | Core Recovery | 80.8% | 100~200m | 100.0 | 80.8% | |
| Working Hours | | | | | | | |
| Drilling | 35°10' | 44% | 27% | Drilling speed | | | |
| Others | 44°50' | 56 | 35 | | | | |
| Recovering | | | | Run/drilling days | | | |
| Sub-total | 80°00' | 100 | 62 | 201.0 ÷ 3.5 = 57.42m/day | | | |
| Preparation | 32°00' | | 25 | Run/drilling shifts | | | |
| Dismantling | 16°00' | | 13 | 201.0 ÷ 10 = 20.10m/shift | | | |
| Water Supply | | | | Run for each size | | | |
| Access, etc. | | | | Bit Size | 3' 8/7 | NQ | BQ |
| | | | | Run (m) | 38.5 | 81.5 | 81.0 |
| Total | 128°00' | | 100 | Core Length | | 81.5 | 81.0 |
| Casing | | | | Notes: | | | |
| Size | Depth | Ratio against total depth | Recovery | | | | |
| HX | m | % | % | | | | |
| NW | 45.0 | 22.3 | 100 | | | | |
| BW | 120.0 | 59.7 | 100 | | | | |

Table 5-8-1 Progress Report of Drilling MJZK-8

| Date | Drilling length per shift | | | Total length | | Number of shift | | Man-shift | |
|-------|---------------------------|----------|------|--------------|-------|-----------------|-------|-----------|--------|
| | 1st | 2nd | 3rd | run | core | Drilling | Total | Engineer | Helper |
| Feb. | m | m | m | m | m | | | | |
| 9 | Instal- | | | | | | | | |
| 10 | lation | | | | | | | | |
| | ditto | | | | | | 2 | 6 | 24 |
| 11 | Wiring | | | | | | | | |
| 12 | | | | | | | | | |
| 13 | 27.0 | 8.1 | 17.2 | 52.3 | 24.8 | | | | |
| 14 | 30.8 | 30.0 | 6.9 | 67.7 | 67.7 | | | | |
| 15 | 26.0 | 36.0 | 19.0 | 81.0 | 81.0 | | | | |
| 16 | Measure- | Dis- | | | | | | | |
| | ment | mantling | | | | | | | |
| 17 | Dis- | | | | | | | | |
| | mantling | | | | | 10 | 13 | 18 | 72 |
| Total | 83.8 | 74.1 | 43.1 | 201.0 | 173.5 | 10 | 15 | 24 | 96 |

Table 5-8-2 Summary of Drilling MJZK-8

| | Survey Period | | | | Man-shift | | |
|---------------|--------------------|---------------------------|---------------|------------------------------|-----------|------------|------|
| | Period | Days | Working Days | Off-days | Engineer | Helper | |
| Preparation | 9 ~ 12, Feb., 1990 | 4.0 | 3.0 | 1.0 | 9.0 | 36 | |
| Drilling | 13 ~ 16, Feb. | 3.5 | Drilling: 3.5 | | 10.5 | 42 | |
| | | | Recovery: | | | | |
| Removal | 16 ~ 17, Feb. | 1.5 | 1.5 | | 4.5 | 18 | |
| Total | 9 ~ 17, Feb., 1990 | 9.0 | 8.0 | 1.0 | 24.0 | 96 | |
| Depth, etc. | | | | Core Recovery per Every 100m | | | |
| Planned | 200.0m | Soil, etc. | 27.5m | Depth | Section | Cumulative | |
| Revised | m | Core Length | 173.5m | 0~100m | 72.5% | 86.3% | |
| Measured | 201.0m | Core Recovery | 86.3% | 100~200m | 100.0 | | |
| Working Hours | | | | | | | |
| Drilling | 37°30' | 47% | 31% | Drilling speed | | | |
| Others | 42°30' | 53 | 35 | Run/drilling days | | | |
| Recovering | | | | 201.0 ÷ 3.5 = 57.42m/day | | | |
| Sub-total | 80°00' | 100 | 66 | Run/drilling shifts | | | |
| Preparation | 24°00' | | 20 | 201.0 ÷ 10 = 20.10m/shift | | | |
| Dismantling | 16°00' | | 14 | Run for each size | | | |
| Water Supply | | | | Bit Size | 3' 8/7 | NQ | BQ |
| Access, etc. | | | | Run (m) | 27.5 | 92.5 | 81.0 |
| Total | 120°00' | | 100 | Core Length | - | 92.5 | 81.0 |
| Casing | | | | Notes: | | | |
| Size | Depth | Ratio against total depth | Recovery | | | | |
| HX | m | % | % | | | | |
| NW | 27.5 | 13.7 | 100 | | | | |
| BW | 120.0 | 59.7 | 100 | | | | |

Table 5-9-1 Progress Report of Drilling MJZK-9

| Date | Drilling length per shift | | | Total length | | Number of shift | | Man-shift | |
|-------|---------------------------|----------|------|--------------|-------|-----------------|-------|-----------|--------|
| | 1st | 2nd | 3rd | run | core | Drilling | Total | Engineer | Helper |
| Feb. | m | m | m | m | m | | | | |
| 18 | Carriage | | | | | | | | |
| 19 | Mast- | | | | | | | | |
| | assembl. | | | | | | | | |
| 20 | Wiring | | | | | | | | |
| 21 | - | | | | | | | | |
| 22 | 28.4 | 9.7 | 17.0 | 55.1 | 21.2 | | | | |
| 23 | 10.0 | 12.0 | 8.0 | 30.0 | 30.0 | | | | |
| 24 | 14.0 | 12.0 | 8.9 | 34.9 | 34.9 | | | | |
| | | | | | | 9 | 12 | 18 | 72 |
| 25 | 14.0 | 39.0 | 28.0 | 81.0 | 81.0 | | | | |
| 26 | Measure- | Dist- | | | | | | | |
| | ment | mantling | | | | | | | |
| | | | | | | 4 | 5 | 6 | 24 |
| Total | 66.4 | 72.7 | 61.9 | 201.0 | 167.1 | 13 | 17 | 24 | 96 |

Table 5-9-2 Summary of Drilling MJZK-9

| | Survey Period | | | | Man-shift | | |
|---------------|---------------------|---------------------------|---------------|------------------------------|-----------|------------|------|
| | Period | Days | Working Days | Off-days | Engineer | Helper | |
| Preparation | 18 ~ 21, Feb., 1990 | 4.0 | 3.0 | 1.0 | 9.0 | 36 | |
| Drilling | 22 ~ 26, Feb. | 4.5 | Drilling: 4.5 | | 13.5 | 54 | |
| | | | Recovery: | | | | |
| Removal | 26, Feb. | 0.5 | 0.5 | | 1.5 | 6 | |
| Total | 18 ~ 26, Feb., 1990 | 9.0 | 8.0 | 1.0 | 24.0 | 96 | |
| Depth, etc. | | | | Core Recovery per Every 100m | | | |
| Planned | 200.0m | Soil, etc. | 29.5m | Depth | Section | Cumulative | |
| Revised | m | Core Length | 167.1m | 0~100m | 70.5% | | |
| Measured | 201.0m | Core Recovery | 83.1% | 100~200m | 100.0% | 83.1% | |
| Working Hours | | | | | | | |
| Drilling | 52°00' | 50% | 38% | Drilling speed | | | |
| Others | 52°00' | 50 | 38 | Run/drilling days | | | |
| Recovering | | | | 201.0 ÷ 4.5 = 44.66m/day | | | |
| Sub-total | 104°00' | 100 | 76 | Run/drilling shifts | | | |
| Preparation | 24°00' | | 18 | 201.0 ÷ 13 = 15.46m/shift | | | |
| Dismantling | 8°00' | | 6 | Run for each size | | | |
| Water Supply | | | | Bit Size | 3' 8/7 | NQ | BQ |
| Access, etc. | | | | Run (m) | 29.5 | 90.5 | 81.0 |
| Total | 136°00' | | 100 | Core Length | - | 86.1 | 81.0 |
| Casing | | | | Notes: | | | |
| Size | Depth | Ratio against total depth | Recovery | | | | |
| IX | m | % | % | | | | |
| NW | 29.5 | 14.7 | 100 | | | | |
| BW | 120.0 | 59.7 | 100 | | | | |

Table 5-10-1 Progress Report of Drilling MJZK-10

| Date | Drilling length per shift | | | Total length | | Number of shift | | Man-shift | |
|--------|----------------------------|----------------|------|--------------|-------|-----------------|-------|-----------|--------|
| | 1st | 2nd | 3rd | run | core | Drilling | Total | Engineer | Helper |
| Mar. 9 | m | m | m | m | m | | | | |
| 10 | Carriage Mast- assembl. | | | | | | | | |
| | | | | | | | 2 | 6 | 24 |
| 11 | Maintenance | | | | | | | | |
| 12 | | | | | | | | | |
| 13 | 29.1 | 32.3 | 30.7 | 92.1 | 66.1 | | | | |
| 14 | 12.9 | 22.6 | 24.4 | 59.9 | 59.9 | | | | |
| 15 | Bit- change | 6.8 | 12.0 | 18.8 | 18.8 | | | | |
| 16 | 12.0 | 11.2 | 7.0 | 30.2 | 30.2 | | | | |
| 17 | Messure- ment | Dis- casing | | | | | | | |
| | | | | | | 14 | 15 | 15 | 72 |
| 18 | Dis- mantling | | | | | | | | |
| | | | | | | | 1 | 3 | 12 |
| Total | 54.0 | 72.9 | 74.1 | 201.0 | 175.0 | 14 | 18 | 24 | 108 |

Table 5-10-2 Summary of Drilling MJZK-10

| | Survey Period | | | | Man-shift | | |
|---------------|--------------------|---------------------------|--------------|------------------------------|-----------|------------|------|
| | Period | Days | Working Days | Off-days | Engineer | Helper | |
| Preparation | 9 ~ 12, Mar., 1990 | 4 | 3 | 1 | 9 | 36 | |
| Drilling | 13 ~ 17, Mar. | 5 | Drilling: 5 | | 15 | 60 | |
| | | | Recovery: | | | | |
| Removal | 18, Mar. | 1 | 1 | | 3 | 12 | |
| Total | 9 ~ 18, Mar., 1990 | 10 | 9 | 1 | 27 | 108 | |
| Depth, etc. | | | | Core Recovery per Every 100m | | | |
| Planned | 200.0m | Soil, etc. | 26.0m | Depth | Section | Cumulative | |
| Revised | m | Core Length | 175.0m | 0~100m | 74.0% | 87.0% | |
| Measured | 201.0m | Core Recovery | 87.1% | 100~200m | 100.0 | | |
| Working Hours | | | | | | | |
| Drilling | 45°50' | 41% | 32% | Drilling speed | | | |
| Others | 66°10' | 59 | 46 | Run/drilling days | | | |
| Recovering | | | | 201.0÷5 = 40.20m/day | | | |
| Sub-total | 112°00' | 100 | 78 | Run/drilling shifts | | | |
| Preparation | 24°00' | | 17 | 201.0÷14=14.35m/shift | | | |
| Dismantling | 8°00' | | 5 | Run for each size | | | |
| Water Supply | | | | Bit Size | 3' 8/7 | NQ | BQ |
| Access, etc. | | | | Run (m) | 26.0 | 79.0 | 96.0 |
| Total | 144°00' | | 100 | Core Length | - | 79.0 | 96.0 |
| Casing | | | | Notes: | | | |
| Size | Depth | Ratio against total depth | Recovery | | | | |
| HX | m | % | % | | | | |
| NW | 26.0 | 12.9 | 100 | | | | |
| BW | 105.0 | 52.2 | 100 | | | | |

Table 5-11-1 Progress Report of Drilling MJZK-11

| Date | Drilling length per shift | | | Total length | | Number of shift | | Man-shift | |
|-------|---------------------------|--------|------|--------------|-------|-----------------|-------|-----------|--------|
| | 1st | 2nd | 3rd | run | core | Drilling | Total | Engineer | Helper |
| Feb. | m | m | m | m | m | | | | |
| 27 | Mast- | | | | | | | | |
| | assembl. | | | | | | | | |
| 28 | ditto | | | | | | | | |
| Mar. | | | | | | | | | |
| 1 | Scaf- | | | | | | | | |
| | folding | | | | | | | | |
| 2 | - | | | | | | | | |
| 3 | 24.0 | 22.6 | 15.0 | 61.6 | 15.2 | 3 | 6 | 12 | 48 |
| 4 | 30.3 | 15.6 | 12.3 | 58.5 | 58.5 | | | | |
| 5 | 15.7 | 40.0 | 25.2 | 80.9 | 80.9 | | | | |
| 6 | Mesure- | | | | | | | | |
| | ment | | | | | | | | |
| 7 | Dis- | Dis- | | | | | | | |
| | mantling | casing | | | | | | | |
| 8 | ditto | | | | | 7 | 10 | 15 | 60 |
| Total | 70.0 | 78.5 | 52.5 | 201.0 | 154.6 | 10 | 16 | 27 | 108 |

Table-5-11-2 Summary of Drilling MJZK-11

| | Survey Period | | | | Man-shift | | |
|---------------|------------------------|---------------------------|---------------------------|------------------------------|-----------|------------|------|
| | Period | Days | Working Days | Off-days | Engincer | Helper | |
| Preparation | 27, Feb. ~2, Mar., '90 | 4.0 | 3.0 | 1.0 | 9.0 | 36 | |
| Drilling | 3 ~ 6, Mar. | 3.5 | Drilling:3.5 Recovery: | | 10.5 | 42 | |
| Removal | 6 ~ 8, Mar. | 2.5 | 2.5 | | 7.5 | 30 | |
| Total | 27, Feb. ~8, Mar., '90 | 10.0 | 9.0 | 1.0 | 27.0 | 108 | |
| Depth, etc. | | | | Core Recovery per Every 100m | | | |
| Planned | 200.0m | Soil, etc. | 46.4m | Depth | Section | Cumulative | |
| Revised | m | Core Length | 154.6m | 0~100m | 53.6% | | |
| Measured | 201.0m | Core Recovery | 76.9% | 100~200m | 100.0 | 76.9% | |
| Working Hours | | | | | | | |
| Drilling | 37°50' | 47% | 29% | Drilling speed | | | |
| Others | 42°10' | 53 | 33 | Run/drilling days | | | |
| Recovering | | | | 201.0÷3.5=57.42m/day | | | |
| Sub-total | 80°00' | 100 | 62 | Run/drilling shifts | | | |
| Preparation | 24°00' | | 19 | 201.0÷10=20.10m/shift | | | |
| Dismantling | 24°00' | | 19 | Run for each size | | | |
| Water Supply | | | | Bit Size | 3' 8/7 | NQ | BQ |
| Access, etc. | | | | Run (m) | 24.0 | 96.1 | 80.9 |
| Total | 128°00' | | 100 | Core Length | - | 73.7 | 80.9 |
| Casing | | | | Notes: | | | |
| Size | Depth | Ratio against total depth | Recovery | | | | |
| HX | 1.5m | 0.8% | 100% | | | | |
| NW | 46.4 | 23.1 | 100 | | | | |
| BW | 120.1 | 59.7 | 100 | | | | |

Table 5-12-1 Progress Report of Drilling MJZK-12

| Date | Drilling length per shift | | | Total length | | Number of shift | | Man-shift | |
|-------|---------------------------|--------|------|--------------|-------|-----------------|-------|-----------|--------|
| | 1st | 2nd | 3rd | run | core | Drilling | Total | Engineer | Helper |
| Mar. | m | m | m | m | m | | | | |
| 19 | Mast- | | | | | | | | |
| | assembl. | | | | | | | | |
| 20 | Scaf- | | | | | | | | |
| | folding | | | | | | | | |
| 21 | - | | | | | | | | |
| 22 | 22.2 | 4.9 | 19.8 | 46.9 | 18.6 | | | | |
| 23 | 30.0 | 27.0 | 8.9 | 65.9 | 65.9 | | | | |
| 24 | 27.0 | 30.0 | 24.0 | 81.0 | 81.0 | | | | |
| | | | | | | 9 | 11 | 15 | 60 |
| 25 | 7.2 | Dis- | | 7.2 | 7.2 | | | | |
| | | casing | | | | | | | |
| 26 | Dis- | | | | | | | | |
| | mantling | | | | | | | | |
| 27 | Dis- | | | | | | | | |
| | mantling | | | | | | | | |
| | | | | | | 2 | 4 | 9 | 36 |
| Total | 86.4 | 61.9 | 52.7 | 201.0 | 172.7 | 11 | 15 | 24 | 96 |

Table 5-12-2 Summary of Drilling MJZK-12

| | Survey Period | | | | Man-shift | | |
|---------------|---------------------|---------------------------|--------------|------------------------------|-----------|------------|------|
| | Period | Days | Working Days | Off-days | Engineer | Helper | |
| Preparation | 19 ~ 21, Mar., 1990 | 3 | 2 | 1 | 6 | 24 | |
| Drilling | 22 ~ 25, Mar. | 4 | Drilling: 4 | | 12 | 48 | |
| | | | Recovery: | | | | |
| Removal | 26 ~ 27, Mar. | 2 | 2 | | 6 | 24 | |
| Total | 19 ~ 27, Mar., 1990 | 9 | 8 | 1 | 24 | 96 | |
| Depth, etc. | | | | Core Recovery per Every 100m | | | |
| Planned | 200.0m | Soil, etc. | 27.1m | Depth | Section | Cumulative | |
| Revised | m | Core Length | 172.7m | 0~100m | 72.9% | | |
| Measured | 201.0m | Core Recovery | 85.9% | 100~200m | 100.0 | 85.9% | |
| Working Hours | | | | | | | |
| Drilling | 39°30' | 45% | 33% | Drilling speed | | | |
| Others | 48°30' | 55 | 41 | | | | |
| Recovering | | | | Run/drilling days | | | |
| Sub-total | 88°00' | 100 | 74 | 201.0÷4=50.25m/day | | | |
| Preparation | 16°00' | | 13 | Run/drilling shifts | | | |
| Dismantling | 16°00' | | 13 | 201.0÷11=18.27m/shift | | | |
| Water Supply | | | | Run for each size | | | |
| Access, etc. | | | | Bit Size | 3' 8/7 | NQ | BQ |
| | | | | Run (m) | 27.1 | 85.7 | 88.2 |
| Total | 120°00' | | 100 | Core Length | - | 84.5 | 88.2 |
| Casing | | | | Notes: | | | |
| Size | Depth | Ratio against total depth | Recovery | | | | |
| HX | 1.5m | 0.8% | % | | | | |
| NW | 27.1 | 13.5 | 100 | | | | |
| BW | 112.8 | 56.1 | 100 | | | | |

Table 6. Summary of Drilling Operation

| Hole No. | Depth | | Core | | | Size | | | | Speed | |
|----------|----------------|-----------------|---------------|-----------------|-------------------|------------|-------------|------------|-------------|--------------------------|----------------------------|
| | Planned (m) | Measured (m) | Length (m) | Recovery | | NQ-WL | | BQ-WL | | m per drilling day | m per drilling shift |
| | | | | 0m ~ 100m | 100m ~ 200m | run (m) | core (m) | run (m) | core (m) | | |
| MJZK- 1 | 200.0 | 201.0 | 181.9 | 81.4% | 100.0% | 53.5 | 52.9 | 129.0 | 129.0 | 40.20 | 14.89 |
| | | | | | (90.5) | | | | | | |
| MJZK- 2 | 200.0 | 201.0 | 185.6 | 84.6% | 100.0% | 107.5 | 107.5 | 78.1 | 78.1 | 33.50 | 14.36 |
| | | | | | (92.5) | | | | | | |
| MJZK- 3 | 200.0 | 201.0 | 192.1 | 91.1% | 100.0% | 69.1 | 69.1 | 123.0 | 123.0 | 36.54 | 12.56 |
| | | | | | (95.6) | | | | | | |
| MJZK- 4 | 200.0 | 201.0 | 189.1 | 88.1% | 100.0% | 108.1 | 108.1 | 81.0 | 81.0 | 36.54 | 12.56 |
| | | | | | (94.1) | | | | | | |
| MJZK- 5 | 200.0 | 201.0 | 190.5 | 89.5% | 100.0% | 109.5 | 109.5 | 81.0 | 81.0 | 30.92 | 10.58 |
| | | | | | (94.8) | | | | | | |
| MJZK- 6 | 200.0 | 201.0 | 164.8 | 63.8% | 100.0% | 38.8 | 36.0 | 128.8 | 128.8 | 36.54 | 13.86 |
| | | | | | (82.0) | | | | | | |
| MJZK- 7 | 200.0 | 201.0 | 162.5 | 61.5% | 100.0% | 81.5 | 81.5 | 81.0 | 81.0 | 57.42 | 20.10 |
| | | | | | (80.8) | | | | | | |
| MJZK- 8 | 200.0 | 201.0 | 173.5 | 72.5% | 100.0% | 92.5 | 92.5 | 81.0 | 81.0 | 57.42 | 20.10 |
| | | | | | (86.3) | | | | | | |
| MJZK- 9 | 200.0 | 201.0 | 167.1 | 70.5% | 100.0% | 90.5 | 86.1 | 81.0 | 81.0 | 44.66 | 15.46 |
| | | | | | (83.1) | | | | | | |
| MJZK-10 | 200.0 | 201.0 | 175.0 | 74.0% | 100.0% | 79.0 | 79.0 | 96.0 | 96.0 | 40.20 | 14.35 |
| | | | | | (87.0) | | | | | | |
| MJZK-11 | 200.0 | 201.0 | 154.6 | 53.6% | 100.0% | 96.1 | 73.7 | 80.9 | 80.9 | 57.42 | 20.10 |
| | | | | | (76.8) | | | | | | |
| MJZK-12 | 200.0 | 201.0 | 172.7 | 72.9% | 100.0% | 85.7 | 84.5 | 88.2 | 88.2 | 50.25 | 18.27 |
| | | | | | (85.9) | | | | | | |

() : Cumulative Recovery

Diagram:

Progress Records

of Each Hole

Progress Record of MJZK-1

| Depth (m) | Log | Lithology | Drilling hr./m 10' 20' | Method | Progress | | | | | | | | | | | | | |
|--------------|-----|--------------------|------------------------------|--------|--|---|---|---|----|----|----|----|----|--|--|--|--|--|
| | | | | | December, 1989. | | | | | | | | | | | | | |
| | | | | | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | | | | | |
| | | Soil and sand beds | | 3" 7/8 | Drilled with tri-cone bits to 18.5 m. | | | | | | | | | | | | | |
| | | Dolomite | | NW CP | NW Casing Pipes were inserted to 18.5 m and lowered to 34.3 m. | | | | | | | | | | | | | |
| | | | | NQ | Installation | | | | | | | | | | | | | |
| | | | | BW CP | Drilled with NQ-WL bits. | | | | | | | | | | | | | |
| | | | | BQ | Cased with BW pipes to the depth of 72.0 m. | | | | | | | | | | | | | |
| 100 | | | | | Drilled with BQ-WL bits. | | | | | | | | | | | | | |
| 200 | | | | | Dismantlement | | | | | | | | | | | | | |

Progress Record of MJZK-5

| Depth (m) | Log | Lithology | Drilling hr./m 10' 20' | Method | Progress | | | | | | | | | | | | | | | | |
|-----------|-----|---------------------|---------------------------|--------|----------|----|----|----|----|----------------|---|---|---|---|---|---|---|---|--|--|--|
| | | | | | December | | | | | January, 1990. | | | | | | | | | | | |
| | | | | | 27 | 28 | 29 | 30 | 31 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | | | |
| | | Soil and sand beds. | | 3' 7/8 | | | | | | | | | | | | | | | | | |
| | | Dolomite | | NW CP | | | | | | | | | | | | | | | | | Drilled with tri-cone bits to 10.5 m and cased with NW pipes. |
| | | | | NQ | | | | | | | | | | | | | | | | | Reaming. NW casing pipes were lowered to 25.3 m and then to 31.6 m. Drilled with NQ-WL bits and BW casing pipes were set at 120.0 m. |
| 100 | | | | BW CP | | | | | | | | | | | | | | | | | |
| | | | | BQ | | | | | | | | | | | | | | | | | Drilled with BQ-WL bits. |
| 200 | | | | | | | | | | | | | | | | | | | | | Dismantlement |