Fig.II-3-2-1 Location Map of the Drillholes in Affynsai District

● MJSN-1 ···· Drillholes MMAJ (1997)

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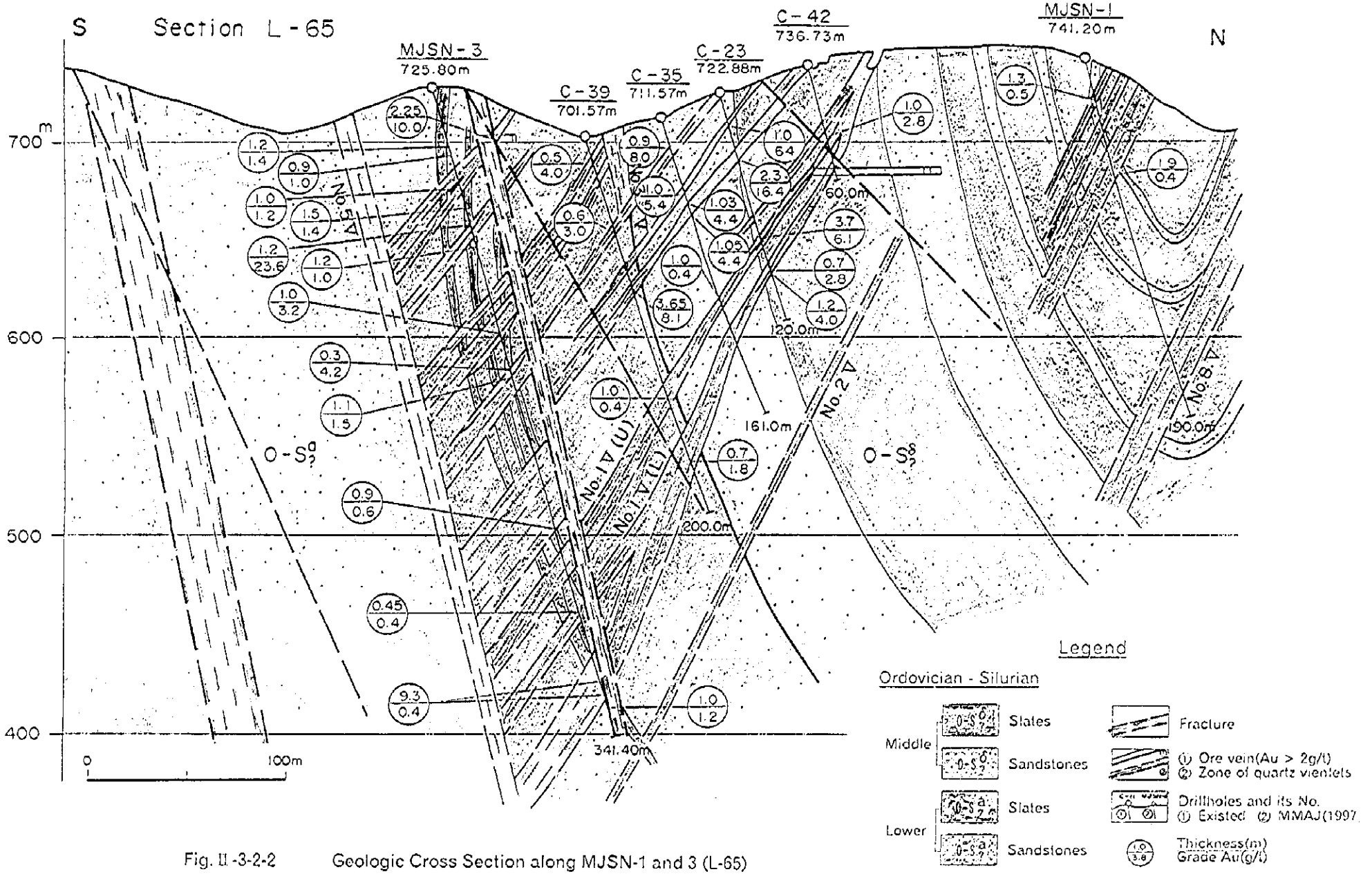


Fig. II-3-2-2 Geologic Cross Section along MJSN-1 and 3 (L-65)

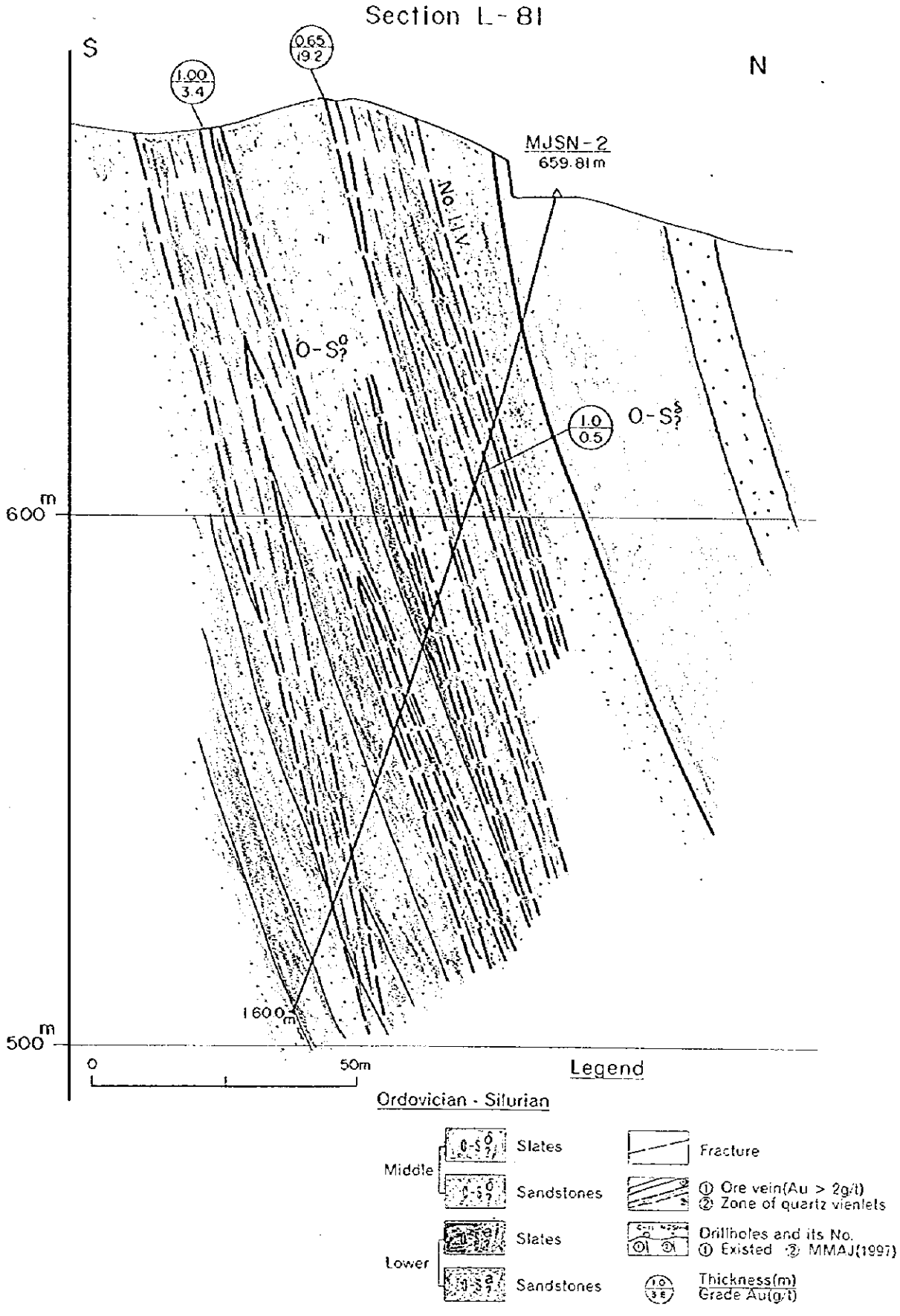


Fig. II -3-2-3 Geologic Cross Section along MJSN-2 (L-81)

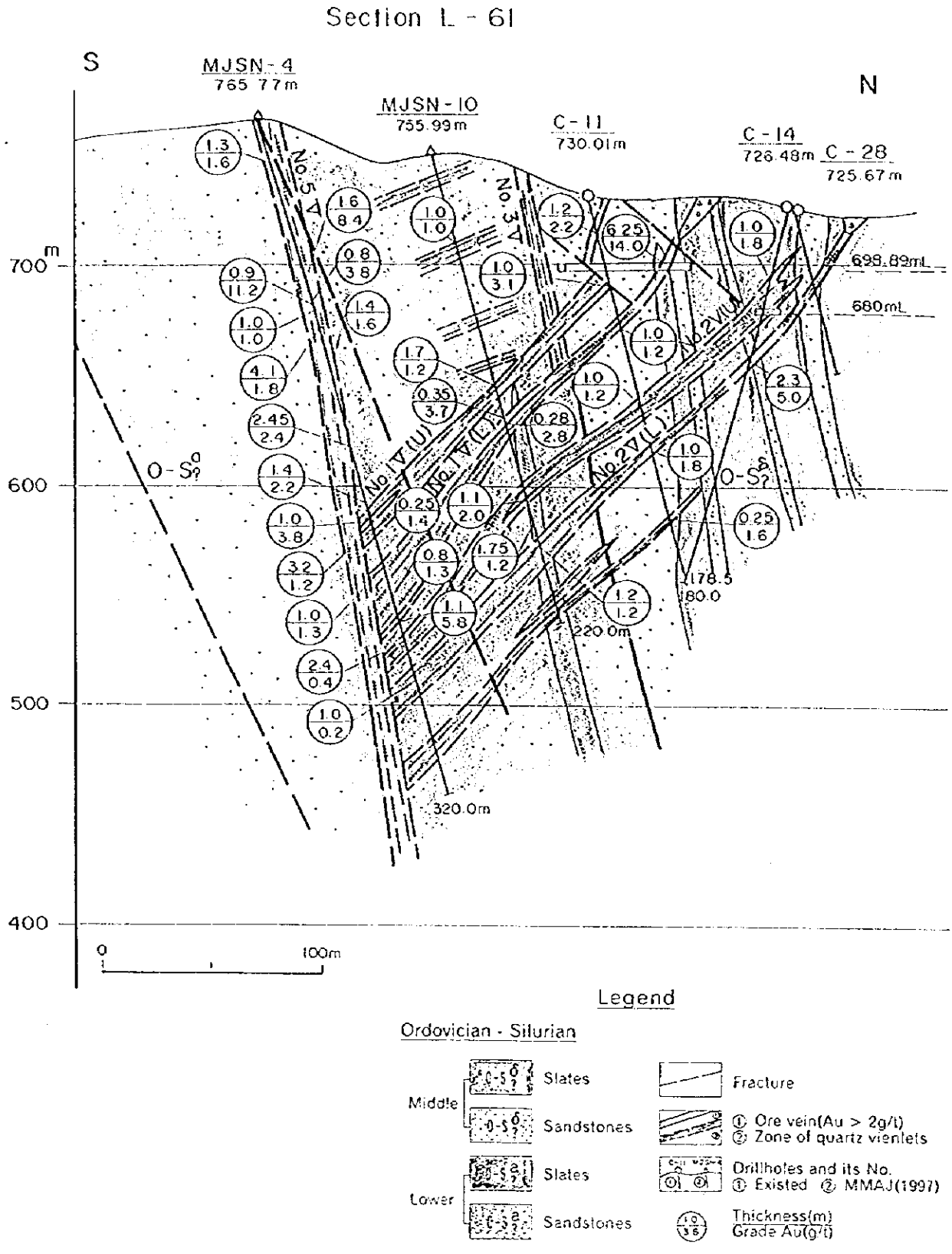


Fig. II-3-2-4 Geologic Cross Section along MJSN-4 and 10 (L-61)

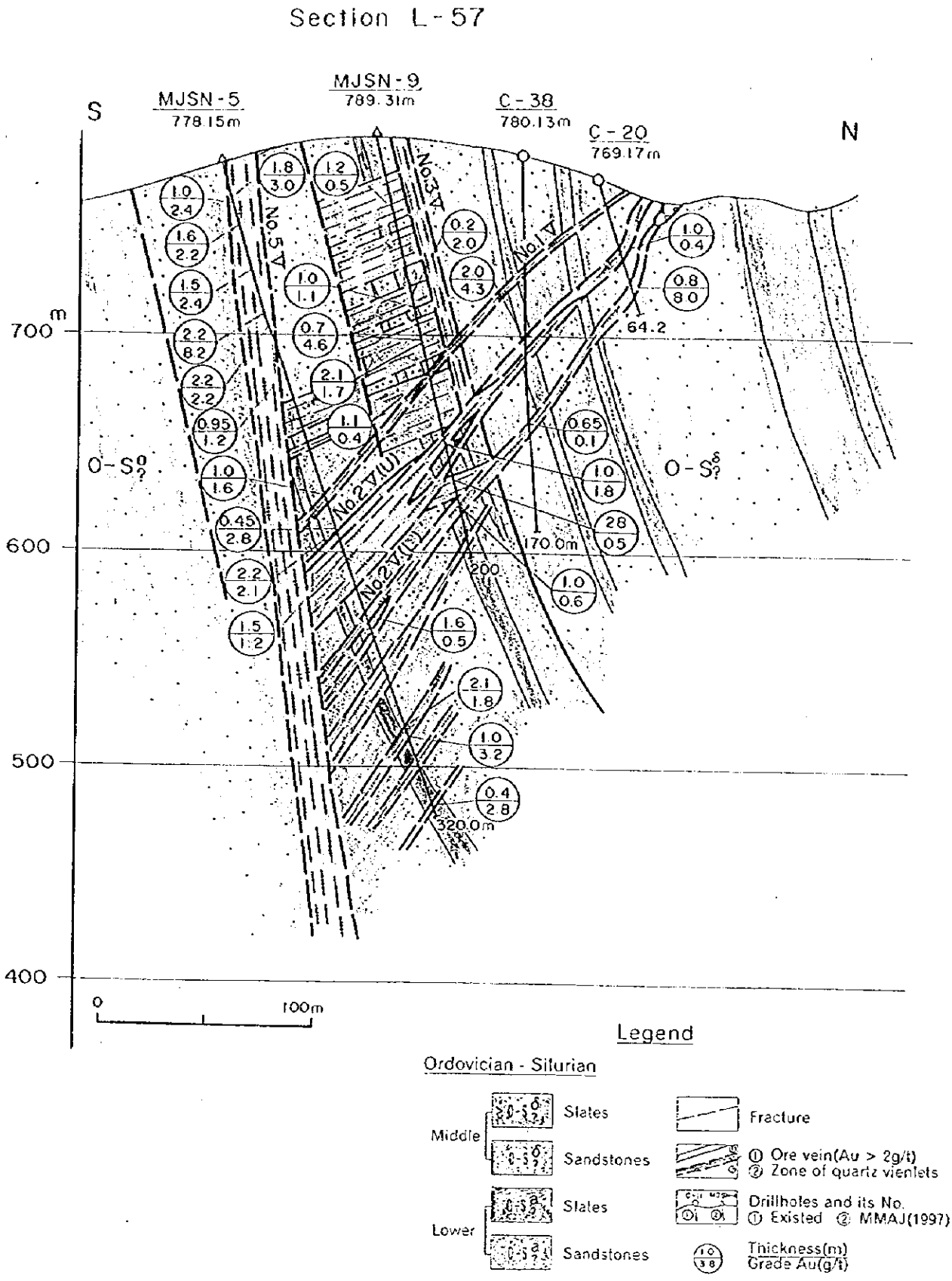


Fig. II-3-2-5 Geologic Cross Section along MJSN-5 and 9 (L-57)

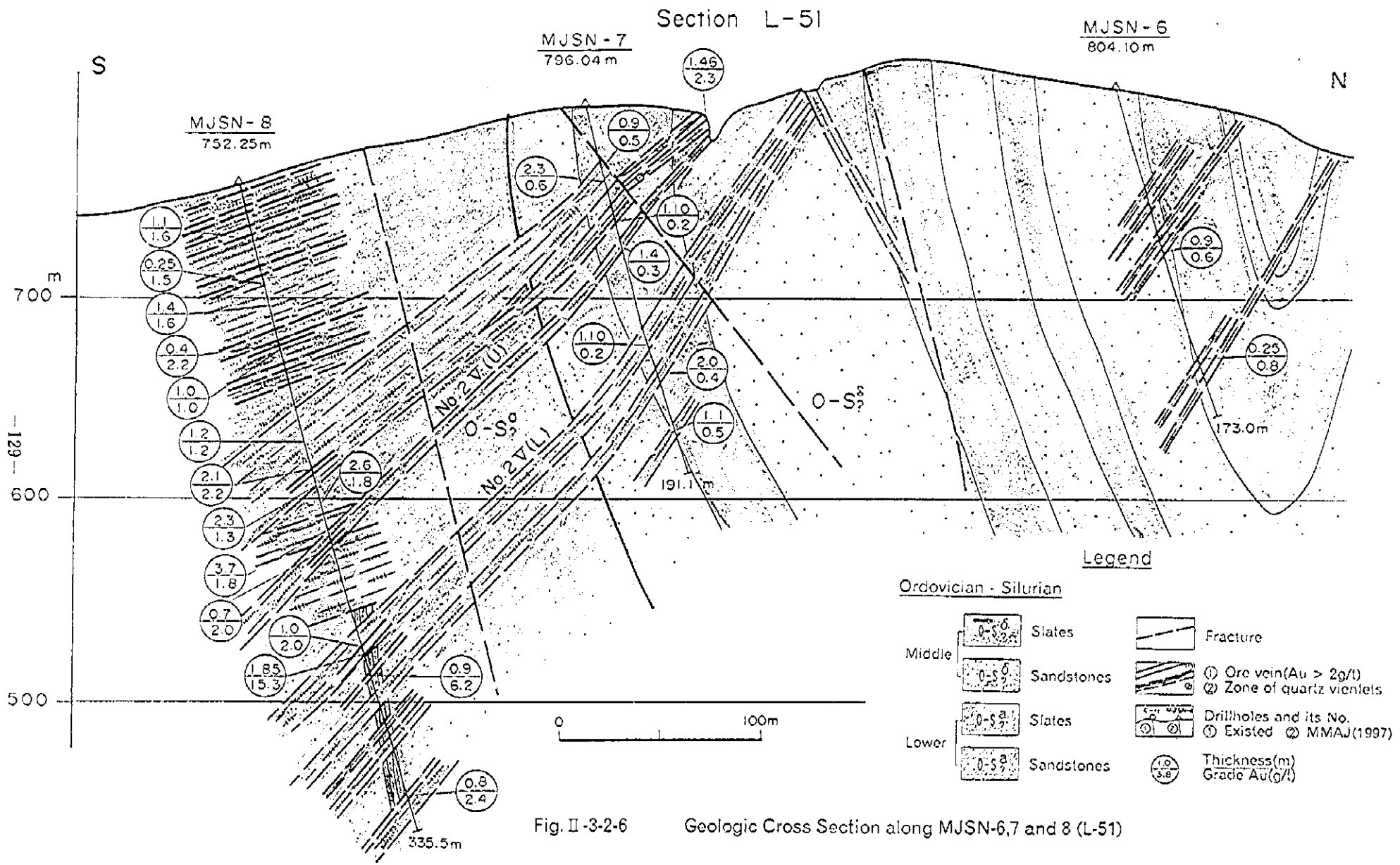


Fig. II-3-2-6 Geologic Cross Section along MJSN-6,7 and 8 (L-51)

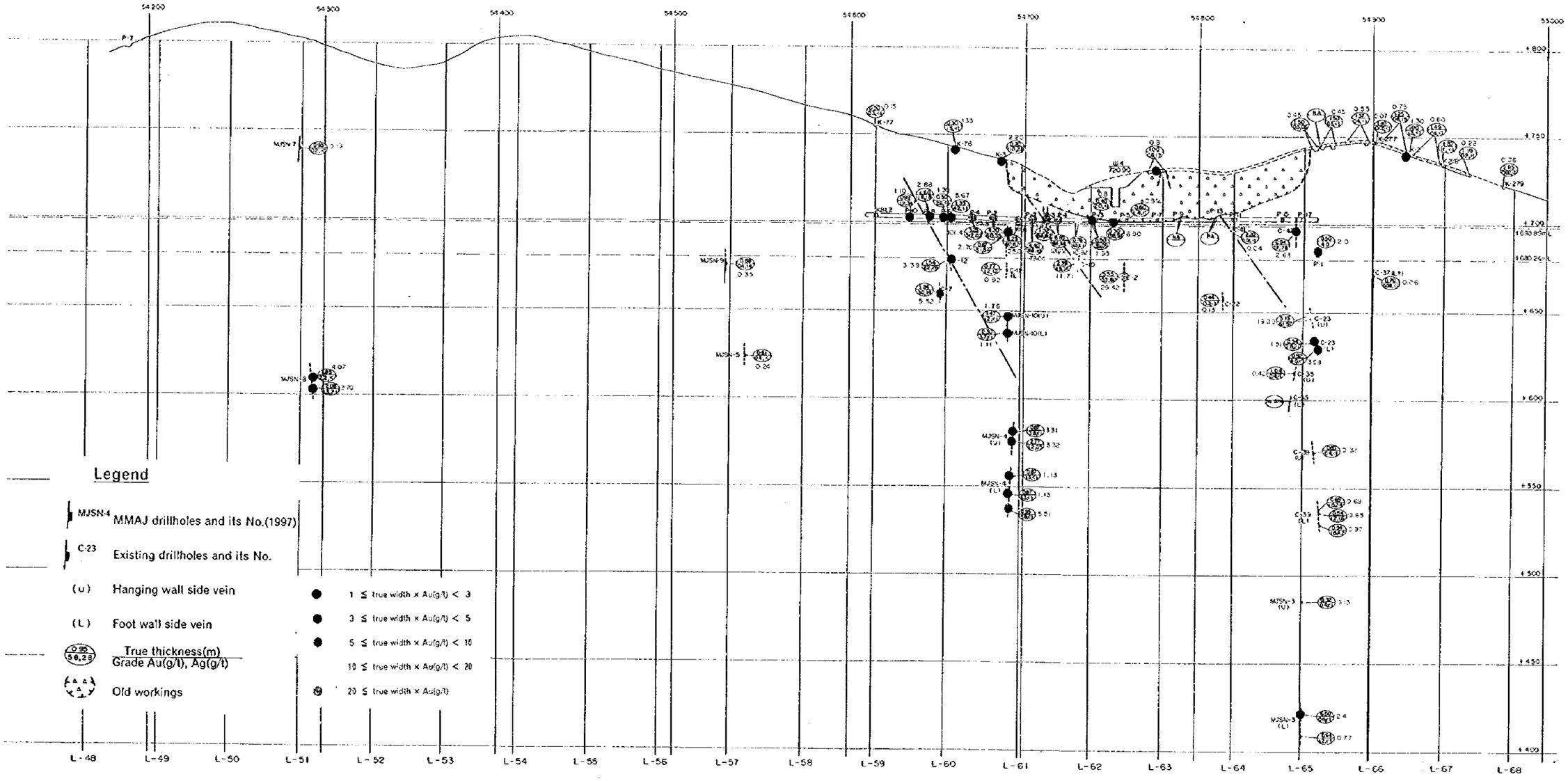


Fig. II-3-2-7 Perspective Section for Altynsai No.1 Vein

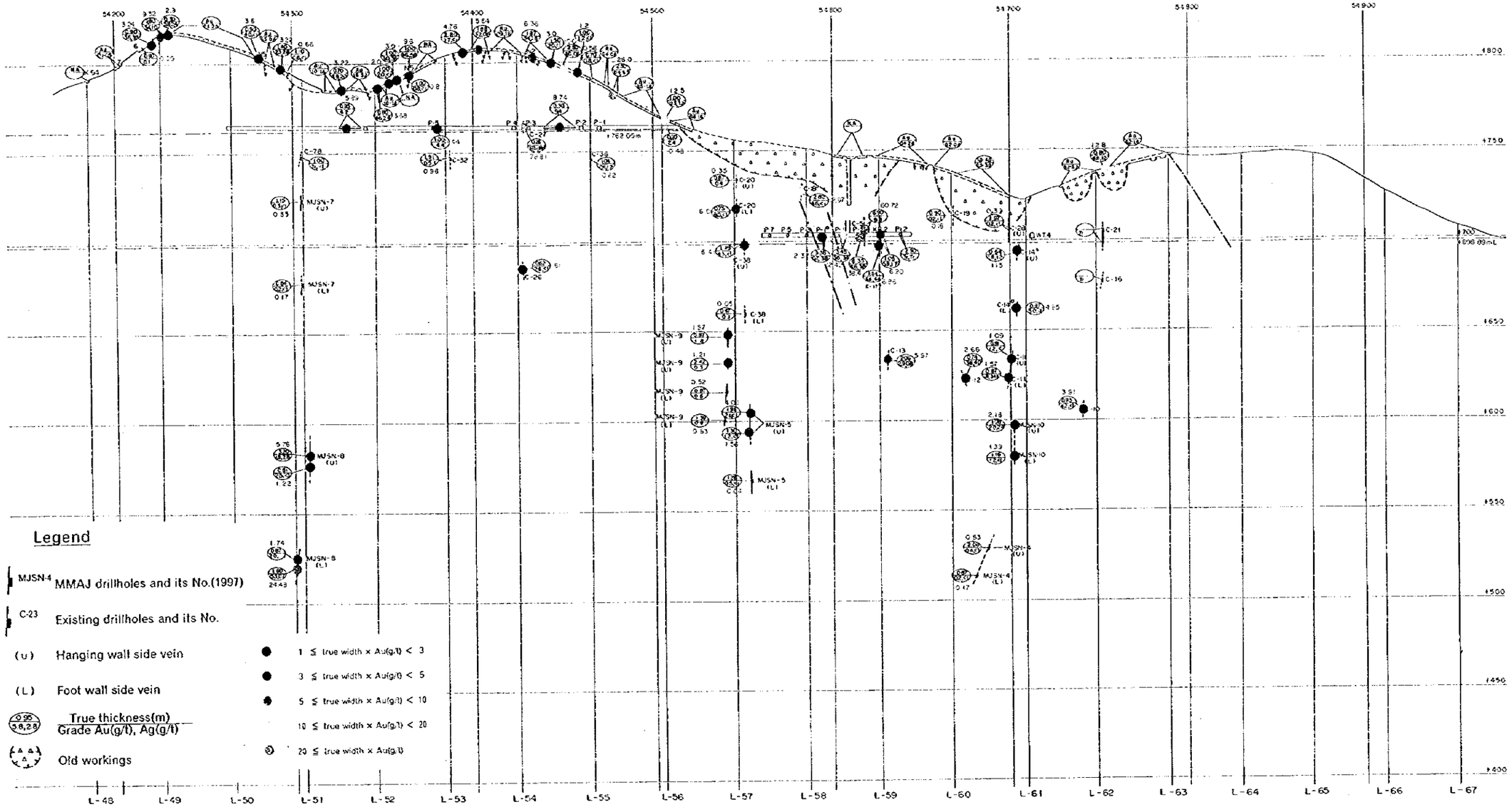


Fig. II-3-2-8 Perspective Section for Ailtynsai No.2 Vein

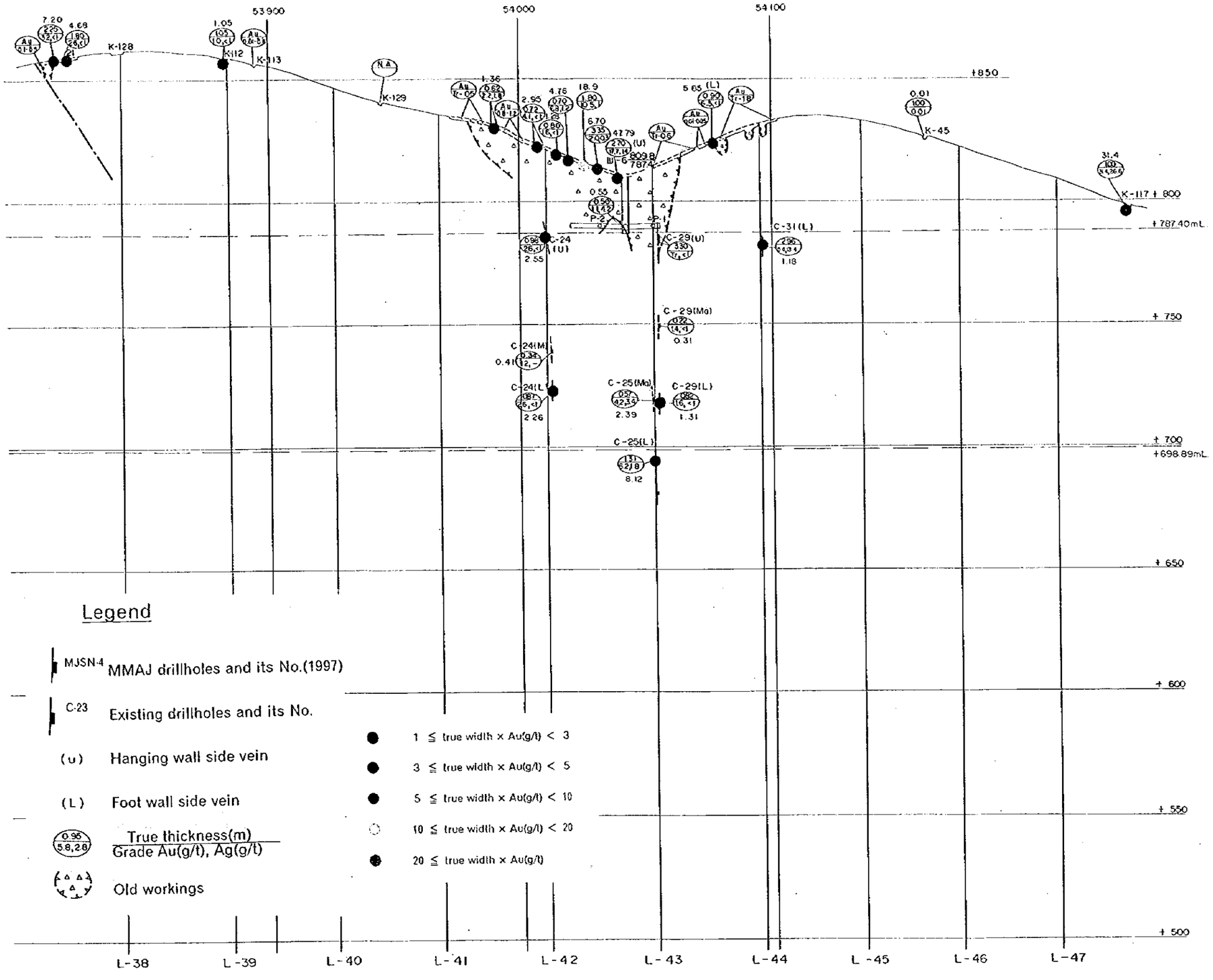
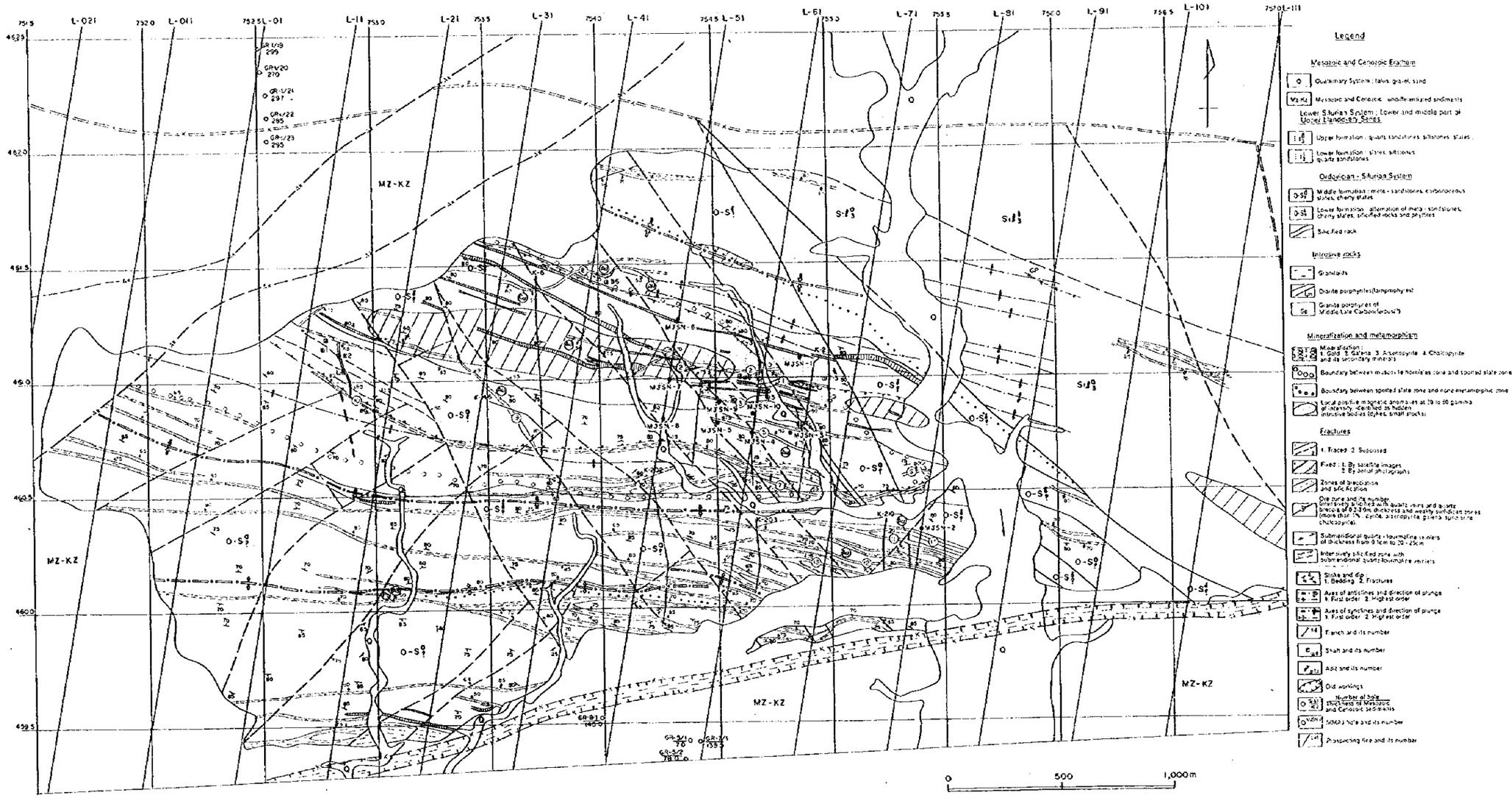
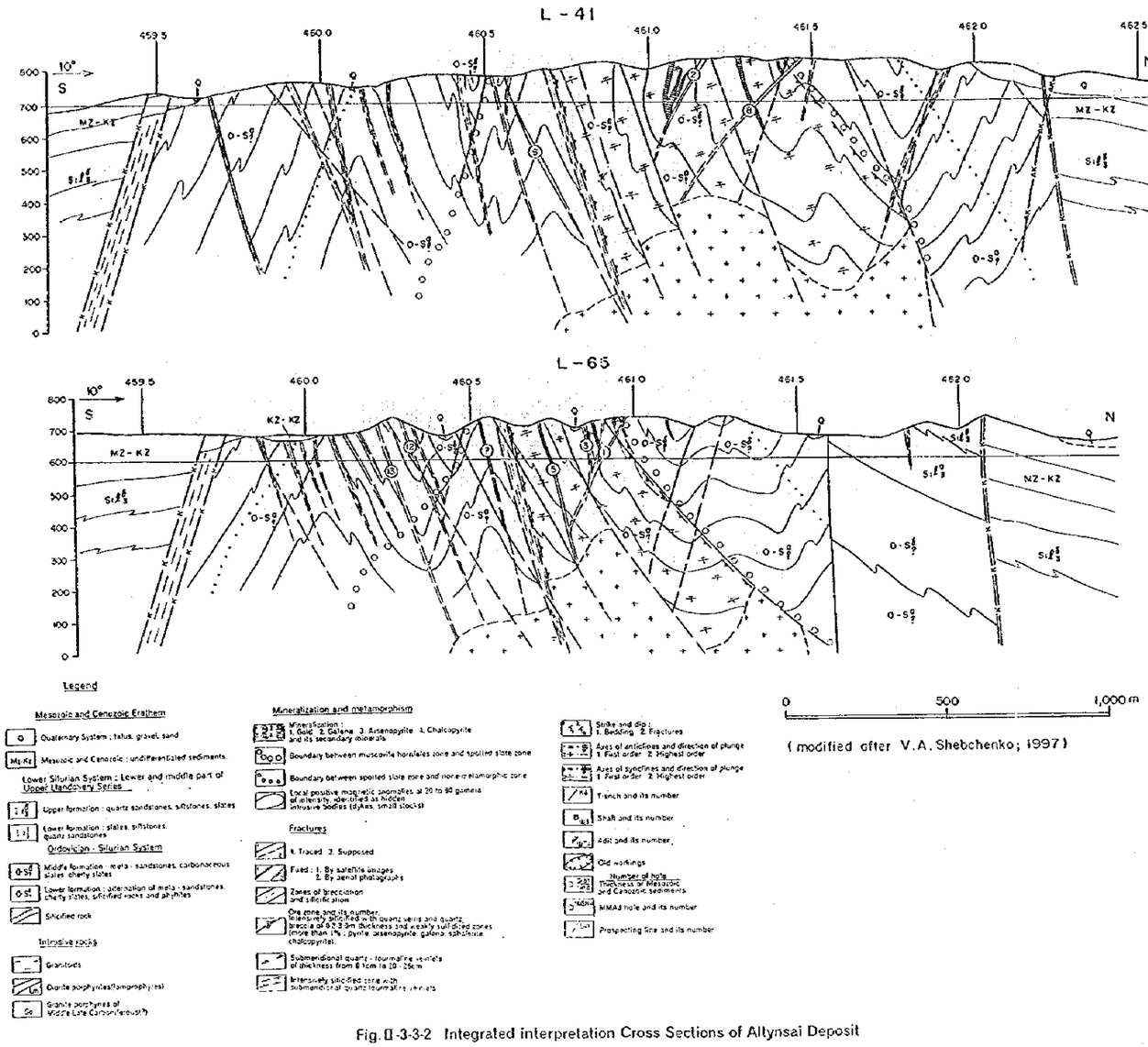


Fig. II -3-2-9 Perspective Section for Altynsai No.8 Vein



(modified after V. A. Shebchenko, 1997)

Fig. II-3-3-1 Integrated interpretation Map of Altynsai Deposit



(modified after V.A. Shebchenko; 1997)

Fig. Ⅱ-3-3-2 Integrated interpretation Cross Sections of Altynsai Deposit

第Ⅲ部　結論及び将来への提言

第1章　結　　論

1－1　南ヌラタウ地域全域

（1）本地域は，南天山帯のザラフシャン－トルケスタン帯に位置し，中部から南部には下部カンブリア系～下部シルル系の陸源堆積物が分布し，北部には，上部シルル系～中部石炭系の石灰岩が主に分布している。これらに，シルル紀～三畳紀の岩脈類と石炭紀～二畳紀の花崗岩類が貫入している。地層はWNW-ESE方向の軸を有する褶曲によって褶曲し，ほぼ同方向の断裂によって切られ，WNW-ESE方向に伸張する細長い構造帯を形成している。この方向と交差するNE-SW及びE-W方向の断裂も発達する。

（2）LANDSAT TMデータを用いて作成された衛星画像は，地質の分布と構造を明瞭に表し，調査地域での地質判読に有効であることが確かめられた。調査地中北部の花崗岩体の中央部を横切るNW-SE方向の明瞭なリニアメントは，幅約100mの破砕帯を伴う断層であった。TMデータの比演算処理により酸化鉄帯として抽出された地区は，実際に酸化鉄帯が認められた場合と日陰斜面である場合とがあった。粘土化・炭酸塩化変質帯として抽出された地区は，鉱化作用に伴うものではなかったが，カオリナイト・セリサイト及び方解石を含む風化花崗岩が分布することが確認された。

（3）本地域の金を主体とする鉱床・鉱徴地は，WNW-ESE方向の断裂帯に沿って分布し，カラタウ花崗岩体の北側に沿うカラタウ鉱化帯（東西70km，南北2-4km）及びアクタウ花崗岩体の南側に沿うアクタウ鉱化帯（東西70km，南北2-5km）を形成している。

（4）カラタウ鉱化帯中には，カラメチェット－クライ鉱徴地，精査地区のアルティンサイ鉱床等の金・銀石英脈タイプの鉱床・鉱徴地が分布している。アクタウ鉱化帯中には，ビタブ，バシュタット，マウリャン，タウリャン等の金・銀石英脈タイプの鉱徴地がある。これらのほかに，アクムラの鉄・マンガン鉱徴地，サルタクチのニオブ・タンタル鉱徴地とリャンガールのスカルン型タングステン・モリブデン鉱床がある。

（5）含金石英脈の構成鉱物は石英，黄鉄鉱，針鉄鉱，鱗緑石を主とし，少量の白鉄鉱，硫砒鉄鉱，黄銅鉱，閃亜鉛鉱，方鉛鉱，磁硫鉄鉱，灰重石及びエレクトラムを伴う。

（6）マウリャン鉱徴地では，直径約2mmの金粒が単独で石英中に認められ，初生のものと判断された。ビタブ鉱徴地の研磨片観察で確認したエレクトラムは石英の割れ目中に黄鉄鉱及びマンガン酸化物と共生しており，二次富化作用によって生成された可能性がある。

（7）石英の流体包有物均質化温度は140℃～340℃を示し，140℃～170℃の比較的低い温度のグループと270℃～340℃前後の高い温度のグループに分けられる。低い温度の流体包有物均質化温度は，その産状から，後期の熱水溶液が石英中の割れ目に取り込まれた二次的な

流体包有物の均質化温度を示すと考えられる。低い温度を示したものはクライ，セビスタン及びサルタクチの石英で，高い温度を示したものはカラメチェット，マウリャン，タウリャン及びリャンガールの石英である。

（8）マウリャン鉱徴地では，約10条のWNW-ESE方向の破砕・珪化帯に沿う石英脈や珪化帯に金鉱化作用が伴われる。現在までに脈幅1-4m，延長150m，200m及び800mの鉱体３条が確認されている。金品位は，1-18g/tと変化する。石英の流体包有物均質化温度は，１個のサンプルで金鉱脈としてはやや高い328℃を示した。自然金（径2mm）は電気石を伴う新鮮な石英中に含まれ，初生のものと判断される。本鉱徴地は，鉱化帯の連続性が比較的良く，金品位も高い。東西の延長部及び下部に探鉱余地があり，概査地域内では最も有望と考えられた。

1－2　アルティンサイ地区

（1）本地区の地質は，オルドビス系－シルル系の粘板岩，シルト岩，砂岩，千枚岩と下部シルル系の粘板岩，シルト岩，砂岩からなり，これらに貫入したランプロファイアーの岩脈が分布する。本地区の鉱床は，WNW-ESE系，NW-SE系の断裂帯に規制された金を含む石英脈とN-S系節理に伴う電気石・石英脈からなる鉱脈型鉱床である。現在までに，No.1，No.2，No.5，No.8（北西脈），No.9（カザンブラク脈），No.10脈（ベルクット脈）等20以上の鉱化帯が確認されている。

（2）No.1，No.2，No.5，No.8脈及びNo.10脈を含む延長2.5km，幅500-800mの範囲に，N-S系の節理が無数に発達し，電気石・石英細脈帯を形成している。本細脈帯は母岩の黒雲母－白雲母ホルンフェルス帯の分布範囲とほぼ一致することと，ウズベク側が実施した空中磁気探査の結果から，本細脈帯の下部にWNW-ESE方向に配列する花崗岩類の岩株の存在が推定される。

（3）WNW-ESE系，NW-SE系断裂帯中に胚胎する石英脈の構成鉱物は，石英，黄鉄鉱，白鉄鉱，硫砒鉄鉱，黄銅鉱，閃亜鉛鉱，針鉄鉱，鱗繊石を主とし，方鉛鉱，自然蒼鉛，アイキナイト，閃蒼鉛銅鉱，灰重石，ルチル及びエレクトラムを伴う。今回研磨片観察で確認されたエレクトラムは粒径5-10μmで石英中に存在し，黄銅鉱，自然蒼鉛及び閃蒼鉛銅鉱と脈状の配列をなして共生するが単独に存在し，初生のものと考えられた。

（4）N-S系の電気石・石英脈は，石英，電気石，黄鉄鉱，硫砒鉄鉱を主とする。ウズベク側の研究結果では，鉄マンガン重石，錫石，トパーズ，緑柱石，自然金を含み，電気石グライゼンと考えられた。

（5）石英の流体包有物均質化温度は，一般に250℃～350℃を示すが，WNW-ESE及びNW-SE方向の鉱脈の一部の試料で110℃～200℃の低温を示すものがある。概査地域と同様に低温を示すグループは，二次的な流体包有物の均質化温度を示すと考えられる。N-S系の電

気石・石英脈の均質化温度は，250℃～340℃を示し，WNW-ESE方向及びNW-SE方向の鉱脈と有意な差は認められない。

（6）本年度のボーリングの結果では，No.1脈の上盤側やNo.5脈で比較的良好な鉱化作用（真幅0.2-1m，金品位2-20g/t）を捕捉し，MJSN-8孔でNo.2脈の下部に優勢な鉱化作用（真幅1.6m，金品位15.3g/t）を確認した。しかし，No.1脈ひ押し坑道（延長135m，平均幅2.29m，金品位15.7g/t）及びNo.2脈のひ押し坑道(延長55m，平均幅4.28m，金品位4.5g/t)で確認した富鉱体の下部を探鉱したMJSN-4，5，9，10孔では低品位の鉱化作用（金品位4g/t以下）を捕捉したにとどまった。この理由としては，これら鉱体が小規模で品位が不均質なためと推定される。MJSN-8孔では，地表下250mで良好な鉱化作用を捕捉したため，No.2脈の鉱化作用はかなり深部まで連続することが確認された。

第2章　第2年次への提言

1）マウリャン地区

本鉱徴地は，本年次の既存資料調査と地質調査の結果，鉱化帯の連続性が比較的良く，金品位も高いことが判明した。ウズベク側がトレンチで確認した鉱体の地下深部における鉱化状況を明らかにするためにボーリング調査を実施することが望ましい。また，本鉱徴地の南東延長方約3kmにはベシュブラク金鉱徴地，北東方4kmにはタウリャン金鉱徴地が存在する。これらの鉱徴地を含めた地区について地質精査を実施することが望ましい。

2）アルティンサイ地区

（1）本年次のボーリング調査の結果，地表下250mで良好な鉱化作用を捕捉し，深部への連続が明らかになったNo.2脈の西延長及び地下深部における鉱化状況を確認するためにボーリング探鉱を継続することが望ましい。

（2）坑道で確認したNo.1脈の富鉱体(延長135m，平均幅2.29m，金品位15.7g/t)の下部延長が未確認なため，ボーリング調査で探鉱することが望ましい。

（3）南部鉱化帯のNo.5，No.6，No.7，No.11，No.12脈等の各脈の下部については，本年次のボーリング調査でその一部を探鉱しただけでほとんど未探鉱である。これら北傾斜の断裂が深部まで連続して花崗岩体に達し，鉱液の通路となって主要鉱体を胚胎し，No.1，No.2脈はこれから派生した分岐脈である可能性がある。地下深部における鉱化状況を確認するためにボーリング調査を実施することが望ましい。

（4）N-S系電気石・石英細脈帯は，本年次のボーリング調査の結果，金品位は0.3-1.0g/tであったが，2-5g/tを示す部分も捕捉された。ストックワーク状に細脈が濃集し，金品位が1-1.5g/t以上になる部分では，露天掘りで採掘できる可能性がある。地表における細脈濃集帯の下部をボーリング調査で探鉱することが望ましい。

Collected Data

1.Akobleva, N. A. (1953) : Altyn-kazgan geological expedition works in 1952, Samarkandgeology, 182p.

2.Chernjavsky, Yu. A. (1961) : Report of the Lyangar exploration in 1960 and copper ore reserves estimation, Samarkandgeology, 154p.

3.Dyukov, Yu. F. (1972) : Report on the results of the prospecting by the scope of geophysical methods in the region of Khalbashinsk, Maulyan-Beshbulak, Aktau areas and Sarmich-Altyn-kazgan ore zone, Samarkandgeology, 234p.

4.Karasiy, A. (1976) : Report on the results of preliminary exploration of Sarmich and Tsentralny sites of the Sarmich deposit and evaluation of the ore manifestations of Karatau ore zone, carried out during 1973-1975, Samarkandgeology.

5.Khan, R. S. (1989) : Geological structure and minerals of Aktau and Karakchatau mountains, Samarkandgeology, 175p.

6.Kumanikin, N. P. (1960) : Report on the results of geological prospecting at Altynkazgan deposit and works of Altynkazgan party in 1959, Samarkandgeology, 369p.

7.Loshkin, Yu. I. (1967) : Report on the geological survey works of Karakchatausk geological survey party during 1965-1966, Samarkandgeology, 138p.

8.Mezentsev, V. I. (1978) : Report on the results of detailed prospecting of gold and other minerals by the scope of geological-geophysical methods in the western part of Karatau and the central part of Bashtut ore zone and evaluation works at the ore manifestations of Tansarai, Bitab, Bashtut and others, Samarkandgeology, 175p.

9.Ogarev, D. M. (1970) : Geological structure and minerals of the quadrangles of K-41-131-Г, K-41-132-В, K-41-143-б and K-41-144-А/б, Samarkandgeology, 368p.

10.Ogarev, D. M.(1974) : Report on the results of geological-geophysical prospecting for gold and other minerals in the western part of Karatau gold ore zone during 1972-1974, Samarkandgeology, 242p.

11. Ogarev, D. M. (1976) : Report on the results of geological prospecting for gold in the central and eastern parts of Karatau and Bashtut ore zones, Samarkandgeology, 147p.

12.Pyanovskaya, I. A., Enchikova A.F. and Pyanovski G.V.(1986): Geological structure of the southern Nuratau range, Ministry of Geology, 130p.

13.Shamshurin, I. (1950) : Report on the prospecting for tin in Karatau mountains of Nurata range, Samarkandgeology, 174p.

14. Shubin, E. N. (1983) : Report on the results of detailed prospecting at the Biran, Kuraim and Pirash sites and evaluation of the ore bodies No.1, 3, 4 and 7 of Biran site, Samarkandgeology, 199p.

15.Shurygin, V. (1957) : Report of the lead prospecting party of the works in 1956, Samarkandgeology, 163p.

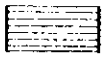
16.Trojanov, M. (1956) : An overall calculation of tungsten-molybdenum reserves in the Lyangar deposit, Samarkandgeology, 411p.

APPENDICES

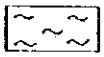
Appendix 1. Geologic Core Logs of the Drillings

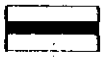
Legend


Soil

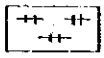

Slate


Sandstone


Phyllite


Quartz vein


Quartz veinlets


Silicification


Fracture zone

Dip (bedding plane)

Dip (joint plane, fault plane, contact plane of silicified rock)

Au	Ag	As	W
2.0	7.8	0.38	0.005

$\frac{\text{Assay Result}}{\text{Au(g/t), Ag(g/t), As(\%) (W\%)}}$

LAB TEST $\frac{\text{B 1 – 5}}{\text{F · T · P · X}}$ ---------- Laboratory Test $\frac{\text{Sample No.}}{\text{Samples}}$

F-------Fluid inclusion test sample, T-------Thin section sample
P-------Polished section sample, X-------X-Ray diffraction analysis sample

Abbreviation

qz, v	quartz vein	asp	arsenopyrite
qz vls	quartz veinlets	chℓ	chlorite
sℓ	slate	cp	chalcopyrite
ss	sandstone	limo	limonite
bℓk	black	tor	tourmaline
dk	dark	py	pyrite
diss	disseminate		
frac	fracture	int	interval
silic	silicified	w	width

GEOLOGIC CORE LOG OF MJSN-1 (1/4)

1/200

MJSN-1 (1/4) 0 m ~ 50 m

Level 741.20 m Direction N10°E
X 61,087.45 m Inclination -25°
Y 54,769.01 m Length 190.0 m

LITHOLOGY	DEPTH (m)	DESCRIPTIONS
	0	Sand with pebbles
	2.00	2.00~16.60 m blk sl with py, limo
		Casing 23.0m
		76mm; 0~7.0m
		59mm; 7.0m~
	8.50	8.5~16.60m frac. sl with py, limo
		9.0 m joint, 30°
		13.8m joint with limo., 28°
	16.60	16.3m joint with limo, 30°
		16.60~25.35m grey silic. ss with few gz, limo vls
		18.2m, gz limo V. w=0.3cm
	21.70	21.70~25.35m frac. silic ss with few gz, limo vls (w=1~3cm int=25cm)
	25.35	25.35~30.25m blk sl with limo
	26.75	26.75~29.60m frac. sl with limo
	29.60	
	30.70	30.70~34.50m dk grey silic sl with network gz vls (w=1~2mm, int=2cm)
		33.0m joint with gz (w=2mm, 38°)
		34.50m gz V (w=5mm, 18°)
	34.50	34.50~36.40m blk sl with few gz vls & limo
	36.40	36.40~40.80m blk silic. sl with gz vls & limo
	39.70	39.70~40.00m frac. zone
	40.00	
	40.80	40.00~47.60m grey very fine ss
		42.50m joint with limo, 44°
		45.80m joint with limo, 12°
	47.60	47.6~49.40m dk grey silic. sl with network gz (w=1~2mm)
	49.40	49.40~53.40m blk sl with gz V & network vls (w=0.1~5cm)

DEPTH (m)	SAMPLE No.	ASSAY RESULT Au	Ag	As	W	LAB. TEST
16.60	B-101	<0.1	<1	<0.01	<0.001	
18.00	102	<0.1	<1	0.03	0.001	
19.00	103	<0.1	<1	0.02	<0.001	
20.00	104	<0.1	<1	0.01	0.003	
21.70	105	0.5	<1	0.08	0.003	
23.00	106	<0.1	<1	0.02	0.001	
25.35						
30.70	107	<0.1	<1	<0.01	<0.001	
32.00	108	<0.1	<1	<0.01	<0.001	
33.00	109	0.2	<1	<0.01	<0.001	
34.50	149	<0.1	<1	<0.01	<0.001	
36.40	110	<0.1	<1	<0.01	<0.001	
38.00	111	<0.1	<1	<0.01	<0.001	
39.50	112	<0.1	<1	<0.01	<0.001	
40.80						
42.60	113	<0.1	<1	<0.01	0.001	
49.40	114	<0.1	<1	<0.01	<0.001	

GEOLOGIC CORE LOG OF MJSN-1 (2/4)

1/200

MJSN-1 (2/4) 50 m ~ 100 m

Level . . m Direction °
X . . m Inclination °
Y . . m Length m

LITHOLOGY.	DEPTH (m)	DESCRIPTIONS
	50	
	51.00	51.00 m gz, py V (w=5cm)
	53.40	53.4~58.30 m blk sl with gz vls (w=1~3mm, int=4cm) 54.80 m gz V (w=6mm, 35°)
	58.30	58.30~63.1 m blk sl with few gz vls (w=1~3mm, int=20 cm)
	62.40	62.1 m gz, asp, py V. (w=6mm, 12°) 62.4~63.1 m abu gz, py, asp V & vls
	63.10	
	64.00	63.1~64.0 m blk sl with few ss bands 64.00~104.10 m blk sl with py (bedding plane)
	72.1 m	gz, py asp V (w=2cm, 35°)
	77.20	77.2~77.8 m gz, py, asp vls
	77.80	77.3 m gz, py V (w=3mm, 18°)
	78.50	78.5 m gz, py, asp V. w=1.5cm
	79.50	78.5~79.5 gz, py, asp V. & vls
	80.4 m	gz, py V (w=3mm, 40°)
	81.3 m	gz, py V (w=1cm, 40°)
	88.5 m	gz, py V. (w=5mm, 45°)
	93.2 m	gz, py V (w=3cm, 25°)
	97.4 m	joint with py
	98.50	98.5~99.30 m gz, py, asp vls
	99.30	99.3 m gz, py, asp V (w=6mm, 40°)
	100	

DEPTH (m)	SAMPLE No.	ASSAY RESULT Au	Ag	As	W	LAB. TEST
51.00	B-114	<0.1	<1	<0.01	<0.001	
52.00	115	<0.1	2.4	<0.01	<0.001	
53.40	116	<0.1	<1	0.02	<0.001	
	117	<0.1	<1	<0.01	<0.001	
55.00	118	<0.1	<1	<0.01	<0.001	
56.00	119	<0.1	<1	<0.01	<0.001	
57.00	120	<0.1	<1	<0.01	<0.001	
58.30	121	0.4	17.8	<0.01	<0.001	
60.20	122	<0.1	<1	0.04	<0.001	
62.40	123	<0.1	<1	0.02	<0.001	
63.10						
77.20	150	<0.1	<1	<0.01	<0.001	
77.80						
78.50	151	<0.1	<1	0.28	<0.001	
79.50						
98.50						
99.30	152	<0.1	<1	0.06	<0.001	

GEOLOGIC CORE LOG OF MJSN-1 (3/4)

1/200

MJSN-1 (3/4) 100 m ~ 150 m

Level . m Direction °
X . m Inclination °
Y . m Length m

LITHOLOGY	DEPTH (m)	DESCRIPTIONS
	100	
	102.50	102.50m qz, py, asp V (w=2cm, 35°)
	103.40	103.40m qz, py V (w=2mm, 30°)
	104.10	104.10 ~ 108.20m dk grey silic. sl with few qz vls (w=1~2mm)
	105.40	105.40 ~ 106.80m qz, py, asp vls
	106.80	
	108.20	108.20 ~ 110.10m dk grey ss with py
	109.70	
	110.10	110.10 ~ 119.90m blk sl with ss bands
	112.00	109.70 ~ 112.00m qz, py, asp vls
	116.30	116.30m qz, py, asp V (w=2mm, 20°)
	116.50	
	119.80	119.80 ~ 121.10m qz, py, vls
	119.90	119.90m qz, py V (w=3mm, 18°)
	119.93	119.93 ~ 125.30m alt (grey ss > sl)
	121.10	
	125.30	125.30 ~ 131.80m blk sl with ss bands
	128.10	128.10m qz, py, asp V (w=2cm, 25°)
	130.80	130.80m joint with py, 35°
	131.10	131.10 ~ 131.80m qz, py, asp vls
	131.40	131.40m qz, py, asp V (w=1.5cm, 22°)
	131.80	131.80 ~ 155.20m blk sl with few qz, py, asp vls
	138.30	138.30m qz, py V (w=1mm, 30°)
	139.30	
	139.3	139.3 ~ 139.5m grey ss
	139.50	
	141.50	141.5m qz, py, asp V (w=3.5cm, 25°)
	142.30	142.3m qz, py V (w=4mm, 15°)
	142.80	143.8m qz, py, asp V (w=4mm, 20°)
	147.40	147.4 ~ 147.75m qz, py, cp V. (15°)
	147.75	147.75 ~ 155.2m blk sl with few qz vls (w=1~3mm, int=25~30cm)
	150	

DEPTH (m)	SAMPLE No.	ASSAY RESULT Au	Ag	As	W	LAB. TEST
105.40	B-124	<0.1	< 1	0.04	<0.001	
106.80						
109.7	153	<0.1	< 1	<0.01	<0.001	
110.10	125	<0.1	< 1	0.02	<0.001	
112.00						
116.2	154	<0.1	< 1	0.02	<0.001	
117.1						
119.8	155	<0.1	< 1	0.04	<0.001	
121.1						
131.1	156	<0.1	< 1	0.04	<0.001	
131.8						
141.3	157	<0.1	< 1	0.03	<0.001	
142.8						
147.40	126	<0.1	< 1	<0.01	<0.001	
147.75						

GEOLOGIC CORE LOG OF MJSN-1 (4/4)

1/200

MJSN-1 (4/4) 150 m ~ 190 m

Level . m Direction °
X . m Inclination °
Y . m Length m

DEPTH (m)	DESCRIPTIONS
151.20	151.2m qz, py V (w=2mm, 52°)
152.30	152.3-152.8m frac. zone with qz vls
152.80	
153.70	153.6 qz, py V (w=2mm, 27°)
153.90	153.9-157.7m fract zone
155.20	155.20-157.70m
157.70	frac. sl with qz V & vls (w=0.2-5cm, int=10-15cm)
157.90	157.9-161.8m
158.90	grey ss with few qz vls
160.00	158.9-160.0 frac. zone
161.80	161.8-164.7m
162.52	blk sl with few network qz
162.50	162.50-164.70m
164.70	frac. zone with few qz vls
165.00	164.70-165.40m
166.20	blk sl with network qz, py vls
166.90	166.2-166.9m
168.20	qz, py, asp V & network vls
169.0	168.2-170.3m
170.30	qz, py, asp network vls
171.0	169.0-170.3m frac. zone
	171.0-175.8m frac zone with qz V & vls (w=0.1~3cm)
175.8	
176.2	176.2-177.3m frac zone with few qz vls
177.3	
177.5	177.5-178.3m frac zone with few qz vls
178.3	
179.8	179.8-181.50m blk sl with ss bands & qz, py, asp V & vls (w=0.1~5cm, int=15cm)
181.5	181.1m qz V (w=3cm) with py & asp
181.10	181.5-190.0m
	blk sl with few qz vls (w=0.1-0.3cm)
185.0	185.0-186.0m qz vls with py
186.0	
186.8	186.8-187.6m qz vls with py
187.6	
188.0	188.0-190.0m frac zone with few qz V
189.9	189.9m qz V with py (w=3cm)
190.0	190.00m
	Bottom of the hole

DEPTH (m)	SAMPLE No.	ASSAY RESULT Au	Ag	As	W	LAB. TEST
155.20	B-127	<0.1	<1	<0.01	<0.001	
156.20	128	<0.1	<1	0.02	<0.001	
157.70	129	<0.1	<1	<0.01	<0.001	
159.00	130	<0.1	2.4	<0.01	<0.001	
160.0	131	<0.1	<1	<0.01	<0.001	
161.80	132	<0.1	<1	<0.01	<0.001	
162.9	133	<0.1	<1	<0.01	<0.001	
164.7	134	<0.1	<1	<0.01	<0.001	
165.4	135	<0.1	<1	<0.01	<0.001	
166.2	136	0.2	<1	0.01	<0.001	
166.9	137	<0.1	<1	<0.01	<0.001	
168.20	138	<0.1	<1	<0.01	<0.001	
170.3	139	<0.1	<1	0.01	<0.001	
172.0	140	<0.1	<1	<0.01	<0.001	
173.4	141	<0.1	<1	<0.01	<0.001	
174.8	142	<0.1	<1	<0.01	<0.001	
176.2	143	<0.1	<1	<0.01	<0.001	
178.3	144	0.2	<1	0.10	<0.001	
179.8	145	<0.1	<1	<0.01	<0.001	B1-4 X, F
181.5						
185.0	146	<0.1	<1	0.01	<0.001	
186.0						
186.8	147	<0.1	<1	0.01	<0.001	
187.6						
189.0	148	<0.1	<1	0.01	<0.001	
190.0						

GEOLOGIC CORE LOG OF MJSN-2(1/4)

1/200

MJSN-2(1/4) 0 m ~ 50 m

Level 659.81 m Direction S10°W
X 60,334.96 m Inclination -75°
Y 54,394.61 m Length 160.1 m

LITHOLOGY	DEPTH (m)	DESCRIPTIONS
	0	0-3.9m soil with pebbles
	3.90	3.90-22.80m blk sl with ss bands
		8.4m gz V (w=0.2cm, 30°)
		18.0m joint with limo (45°)
	20.40	20.40-21.00m frac zone with limo
	21.00	
	22.80	22.80-30.20m dk grey weakly silic ss with gz vls
	24.00	22.80-24.00m gz, limo vls (w=0.1-0.5cm, int=5-10cm)
		26.90m gz, py, limo V (w=1.5cm, 35°)
	30.20	30.20-33.20m grey silic. ss with gz, py network vls (w=0.1-1cm)
		31.30m gz, py V (w=1cm, 35°)
	33.20	33.20-40.80m grey silic. ss with few gz, py vls
	38.00	38.00-39.00m frac. zone
	39.00	
	40.80	40.80-45.40m grey silic. ss with gz, py vls (w=0.1-2cm, int=5-10cm)
		44.60m gz, py, ch V (w=1.5cm, 45°)
	45.40	45.40-46.30m blk sl with ss bands & few gz, py, vls
	46.30	46.30-46.80m grey silic. ss with gz, py vls
	46.80	46.80-48.70m gz, py vls (w=0.1-1cm, int=1-5cm)
	48.70	48.70-49.60m few gz vls
	49.60	49.60-55.60m grey silic. ss with gz, chl V & vls (w=0.1-1cm, int=5cm)

DEPTH (m)	SAMPLE No.	ASSAY RESULT Au	Ag	As	W	LAB. TEST
22.80	B-201	<0.1	<1	<0.01	<0.001	
24.00						
30.20	202	<0.1	<1	0.03	<0.001	
31.20	203	<0.1	<1	0.02	<0.001	
32.20	204	0.2	<1	0.02	<0.001	
33.20						
40.80	205	<0.1	<1	0.03	<0.001	
42.00	206	<0.1	<1	<0.01	<0.001	
43.00	207	<0.1	<1	0.04	<0.001	
44.20	208	<0.1	<1	<0.01	<0.001	
45.40						
46.80	209	<0.1	<1	<0.01	<0.001	
47.90	210	<0.1	<1	<0.01	<0.001	
48.70						
49.60	B-211					

GEOLOGIC CORE LOG OF MJSN-2 (2/4)

1/200

MJSN-2 (2/4) 50 m ~ 100 m

Level . . m Direction °
X . . m Inclination °
Y . . m Length m

LITHOLOGY	DEPTH (m)	DESCRIPTIONS
	55.60	53.20m gz V (w=0.5cm, 35°)
	57.00	55.60 – 62.80m grey silic. ss with few gz vls
	57.90	57.00 – 57.90m str. silic. ss with network gz vls
	62.10	62.10 – 63.50m blk sl with few gz vls
	63.50	63.50 – 68.80m dk grey silic. ss with gz V. & vls (partly network) (w=0.1 – 1.5m, int = 1 – 5cm)
	66.70	66.30m gz V (w=0.5cm, 30°)
	68.00	66.70 – 68.00m network gz, py vls
	68.80	68.00 – 70.00m blk sl
	69.30	68.00 – 69.30m gz, py. vls
	70.00	68.80 – 69.30m grey silic ss with gz, py vls
	78.00	70.00 – 77.50m grey silic ss with few gz, py vls
	78.90	72.00m gz, py V (w=0.7cm, 35°)
	77.50	74.00 – 74.90m blk sl with few gz vls
	77.80	77.50 – 77.80m blk sl with few gz vls
	79.80	77.80 – 79.80m grey silic ss with gz, py network vls
	81.70	79.80 – 81.70m grey silic ss with gz, py vls (w=0.1 – 1cm int = 3 – 10cm)
	82.90	81.70 – 82.90m network gz, py vls
	86.40	82.90 – 86.40m blk sl with few gz vls
	88.80	86.40 – 93.00m grey silic. ss with few gz vls
	89.60	88.80 – 89.60m gz, py vls
	90.35	90.35 – 91.35m gz, py vls
	91.25	90.75 – 91.25m gz, py V (w=5cm, 5°)
	91.35	
	93.00	93.00 ~ 94.40m silic ss with gz, py v & vls (w=0.1 – 1cm, int = 2 – 3cm) (partly network)
	94.40	94.40 – 94.70m blk sl with few gz vls
	94.70	94.70 – 95.80m grey str. silic ss with network gz vls
	95.80	95.80 – 97.20m blk sl with gz vls
	97.20	97.20 – 99.40m grey silic ss with gz, py vls (w=0.1 – 1cm, int=0.5 – 3cm)
	99.40	97.7m gz V (w=0.5cm, 40°)

DEPTH (m)	SAMPLE No.	ASSAY Au	Ag	RESULT As	W	LAB. TEST
51.00	B-211	<0.1	< 1	0.01	0.004	
52.00	212	<0.1	< 1	<0.01	0.001	
53.50	213	<0.1	< 1	<0.01	0.001	
54.50	214	0.5	< 1	<0.01	<0.001	
55.60	215	<0.1	< 1	<0.01	<0.001	
57.00	216	<0.1	< 1	<0.01	<0.001	
57.90						
63.50	217	<0.1	< 1	<0.01	<0.001	
64.50	218	<0.1	< 1	<0.01	<0.001	
65.50	219	<0.1	< 1	<0.01	<0.001	
66.70	220	<0.1	< 1	<0.01	<0.001	
68.00	221	<0.1	< 1	<0.01	<0.001	
69.30						
77.80	222	<0.1	< 1	<0.01	0.001	
78.90	223	<0.1	< 1	0.01	<0.001	
79.80	224	<0.1	4.4	<0.01	<0.001	
80.80	225	<0.1	< 1	<0.01	<0.001	
81.70	226	<0.1	< 1	<0.01	<0.001	
82.90						
88.80	227	<0.1	< 1	<0.01	<0.001	
89.60						
90.35	228	<0.1	1.6	0.01	0.001	
91.35						
93.00	229	<0.1	2.4	<0.01	<0.001	
94.40						
94.70	230	<0.1	< 1	<0.01	<0.001	
95.80	231	<0.1	< 1	<0.01	<0.001	
97.20	232	<0.1	< 1	0.02	0.001	
98.20	233	<0.1	< 1	<0.01	<0.001	
99.40						

GEOLOGIC CORE LOG OF MJSN-2 (3/4)

1/200

MJSN-2(3/4) 100m ~ 150 m

Level . m Direction °
X . m Inclination °
Y . m Length m

LITHOLOGY	DEPTH (m)	DESCRIPTIONS
	100.20	100.20 – 101.10m blk sl
	101.10	101.10 – 105.70m blk sl with gz vls (w=0.1–3cm 1–4cm) (partly network)
	105.70	105.00m gz V (w=3cm, 45°)
		105.70 – 110.00m blk sl
		107.70m gz V. (w=0.2cm, 42°)
	110.00	110.00 – 111.70m grey ss with few gz vls
		110.30m gz V (w=0.8cm, 5°)
	111.70	111.70 – 113.10m dk grey sl
		112.20m gz, Py, cp V (w=0.6cm, 25°)
	113.10	113.10 – 114.60m grey silic. ss with few gz, Py vls
	114.60	114.60 – 116.10m blk sl with few gz, Py, chl vls
	115.70	116.10 – 120.10m grey silic ss with few gz, Py vls
		115.10 – 118.60m gz, Py vn vls (w=0.1–2cm, int=5–10cm)
	118.60	116.50m gz, Py, V (w=0.5–2.5cm, 20°)
	120.10	120.1 – 121.20m gz Py vls (w=0.1–2.5cm)
	121.20	121.20 – 122.00m blk sl with few gz vls
	122.00	122.00 – 130.10m dk grey silic. ss with few gz vls
	128.50	128.50 – 130.10m frac. zone with few gz, Py vls
		128.85m gz, Py V (w=0.5cm, 25°)
	130.10	130.10 – 138.70m dk grey sl with gz, Py vls (w=0.1–2cm int=4–8cm)
	130.80	130.80 – 131.20m frac. zone with gz vls
	131.20	131.70 – 132.40m frac zone with gz vls
	132.40	134.10 – 134.80m frac zone with gz vls
	134.00	135.3 – 139.5m frac. zone
	134.80	
	135.30	
	138.70	138.70 – 144.10m grey silic. ss with few gz, Py vls
	139.50	140.0m gz V (w=0.7cm, 40°)
	144.10	144.10 – 145.30m blk sl with few gz, Py vls
	145.30	145.30 – 148.90m dk grey ss with few gz, Py vls
		146.40m gz V (w=0.5m, 20°)
	148.90	148.90 – 150.30m blk sl with few gz, Py vls
	150.30	

DEPTH (m)	SAMPLE No.	ASSAY RESULT Au	Ag	As	W	LAB. TEST
101.10	B-234	<0.1	1.6	0.01	<0.001	
102.50	235	<0.1	1.4	0.02	<0.001	
104.00	236	<0.1	2.8	<0.01	<0.001	
105.70						
115.70	237	<0.1	< 1	<0.01	<0.001	
116.70	238	<0.1	< 1	<001	<0.001	
117.60	239	<0.1	< 1	<0.01	<0.001	
118.60						B2-5
120.10	240	<0.1	< 1	<0.01	<0.001	B2-6 T F
121.20						
130.10	241	<0.1	< 1	<0.01	<0.001	
131.70	242	0.1	< 1	0.01	<0.001	
133.50	243	<0.1	< 1	<0.01	<0.001	
135.30	244	0.1	< 1	<0.01	<0.001	
136.80	245	<0.1	< 1	<0.01	<0.001	
138.70						

GEOLOGIC CORE LOG OF MJSN-2 (4/4)

1/200

MJSN-2 (4/4) 150 m ~ 160.10m

Level . . m Direction . °
X . . m Inclination . °
Y . . m Length . m

LITHOLOGY	DEPTH (m)	DESCRIPTIONS
	150.30	150.30–153.70m frac. sl with few gs, py vls
	153.70	153.70–158.20m alk. sl with few gs vls
	154.00	154.00–155.20m gs, py network vls
	155.20	
	156.00	156.00–157.40m gs, py vl (w=0.1–0.3cm int=1–3cm) (partly network)
	157.40	
	158.00	158.20–160.10m grey silic. ss
	160.10	160.10m bottom of the hole

DEPTH (m)	SAMPLE No.	ASSAY RESULT Au	Ag	As	W	LAB. TEST
154.00						B2-7
155.20	B-246	<0.1	< 1	<0.01	<0.001	X
156.00						
157.40	247	<0.1	< 1	0.07	<0.001	

GEOLOGIC CORE LOG OF MJSN-3 (1/7)

1/200

MJSN-3 (1/7) 0 m ~ 50 m

Level 225.80 m Direction N10°E
X 60,758.0 m Inclination -75°
Y 54,826.7 m Length 341.4 m

LITHOLOGY	DEPTH (m)	DESCRIPTIONS
	0	0-1.90m soil with pebbles
	1.90	1.90-6.30m dk grey fine ss with few qz vls
	6.30	6.30-29.70m blk sl with few qz vls
	7.60	7.40m qz V (w=1.5cm, 25°)
	9.55	7.60~9.55m frac. zone with qz, Py, limo
		10.70m qz V (w=0.2cm, 30°)
		13.00m qz V (w=0.3cm, 25°)
		14.70m qz V (w=0.2cm, 20°)
	17.30	17.30-29.20m blk sl with qz vls
	18.50	
	20.20	20.2-21.60m frac. zone with qz, limo vls
	21.60	22.1-23.3m frac. zone with qz, limo vls & clay
	22.10	
	23.30	23.9-24.85m frac zone with qz, limo vls
	23.90	24.85-29.70m frac. zone with few qz, limo vls
	24.85	
	27.95	
	29.70	29.70-42.2m dk grey ss with few qz vls (w=0.1-1cm, int=20cm)
	30.50	30.50-33.7m dk grey ss with qz, Py, asp V (w=0.1-1.5cm, int=5-7cm)
	31.50	31.2m qz V (w=0.3cm, 20°)
	32.50	34.0m qz V (w=1cm, 40°)
	33.70	36.0m qz V (w=0.1cm, 50°)
	34.25	
	35.40	36.8-38.70m dk grey ss with qz, Py vls (w=0.1-1.5cm, int=10cm)
	36.80	
	37.80	
	38.70	
	42.20	42.20-44.90m dk grey silic ss with qz, Py vls
	42.05	43.05-44.85m abu network qz, Py vls (w=0.1-2cm, int=0.5~3cm)
	44.00	
	44.85	
	46.00	
	47.00	
	47.90	47.90m qz, Py V (w=3cm, 30°)
		47.90-52.80m silic. ss with few qz, Py vls

DEPTH (m)	SAMPLE No.	ASSAY RESULT Au	Ag	As	W	LAB. TEST
7.60	B-301	0.2	<1	0.02	0.008	
8.45	302	0.2	<1	0.02	0.006	
9.55						
17.30	303	<0.1	<1	<0.01	0.001	
18.50	304	<0.1	<1	<0.01	0.001	
20.20	305	0.2	<1	0.02	0.005	
21.60	306	<0.1	<1	0.02	0.006	
23.30	307	0.2	<1	0.02	0.005	
24.85	308	<0.1	<1	0.01	0.010	
24.55	309	<0.1	<1	0.01	0.007	
27.95	310	0.2	<1	<0.01	0.007	
29.70						
30.50	311	0.8	<1	0.02	0.002	
31.50	312	0.4	<1	0.04	0.003	
32.50	313	1.4	<1	0.20	0.006	B3-1
33.70						P, X
34.25	3950	0.2	<1	0.02	0.002	
35.40						
36.80	314	0.4	<1	0.02	0.100	
37.80	315	1.0	<1	<0.01	0.006	
38.70						
42.20	316	0.2	<1	<0.01	0.005	
43.05	317	0.2	<1	<0.01	0.002	
44.00	318	0.6	<1	<0.01	0.003	
44.85	319	0.4	<1	<0.01	0.001	
46.00	320	<0.1	<1	<0.01	0.001	
47.00	321	0.8	3.2	<0.01	<0.001	
47.90						

GEOLOGIC CORE LOG OF MJSN-3 (2/7)

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MJSN-3 (2/7) 50 m ~ 100 m

Level . m Direction °
X . . m Inclination °
Y . . m Length m

LITHOLOGY	DEPTH (m)	DESCRIPTIONS
		50.10m qz, Py V. (w=9cm)
		51.3m qz, Py V. (w=6cm)
	52.80	52.80~55.00m qz vls (w=0.1-1cm, int=1-5cm)
	55.00	55.00~56.50m str. silic. rock with network qz, Py vls
		55.00m qz V. (w=30cm, 30°) (w=0.1-2cm)
	56.50	56.50~57.90m qz, Py V & vls (w=0.1-2cm, int=2-5cm)
	57.90	57.90~60.00m silic. ss with few qz, Py vls (w=0.1-3cm, int=10-20cm)
	60.00	60.0~62.0m qz, Py, vls
	62.00	61.3m qz V (w=0.2cm, 20°)
		62.00~73.80m silic ss with few qz, Py vls
		63.5m qz, Py V (w=1cm, 30°)
		65.2m qz, Py V (w=1cm, 45°)
	67.40	67.4m qz, Py V (w=1cm, 30°)
	68.90	67.4~68.9m qz, Py vls (w=0.1-2cm, int=5-10cm)
		69.8m qz V (w=4cm, 38°)
	73.80	73.8~76.4m qz, Py vls
	76.40	76.40~81.70m abu network qz, Py V
	78.00	77.00~80.70m alt (ss>sl)
	79.10	78.10~79.10m frac zone
		79.10~81.60m qz, Py vls
	80.70	80.70~84.10m alt (sl>ss)
	81.60	81.60m qz V (w=7cm, 43°)
	84.10	84.10~89.30m alt (ss>sl)
	85.80	84.10~84.40m qz, Py vls
	86.00	84.80~86.00m frac. zone
	86.40	
	88.40	88.40~90.90m frac. zone with qz vls
	89.30	89.30~93.50m blk sl with few qz vls
	90.10	90.10~90.90m qz vls
	90.90	92.3~93.5m qz vls
	92.30	93.50~95.20m dk grey ss with few qz V.
	93.50	93.90~98.55m frac. zone with clay
	95.20	95.20~100.10m dk grey ss with network qz
	98.55	

DEPTH (m)	SAMPLE No.	ASSAY RESULT Au	Ag	As	W	LAB. TEST
50.40						
51.40	B-322	0.2	<1	<0.01	0.001	
52.80						
54.00	323	0.2	<1	<0.01	0.001	
55.00	324	1.2	<1	<0.01	0.002	
56.50	325	0.8	<1	0.03	0.003	
57.90	326	0.7	<1	<0.01	<0.001	
60.00						
61.00	327	0.6	<1	<0.01	0.030	
62.00	328	0.8	<1	0.02	0.010	
62.40						
67.90	329	1.4	<1	0.05	0.004	
73.80						
75.00	330	23.6	<1	<0.01	0.001	
76.40	331	0.4	2.8	0.01	0.002	
78.00	332	0.2	3.6	<0.01	0.002	
79.10						
80.30	333	0.2	<1	<0.01	0.004	B3-2
81.40	334	0.4	<1	0.02	0.006	F B3-4
81.60	335	0.4	12.0	0.02	0.020	P
84.10						
85.20	336	0.5	2.6	0.02	0.007	
86.40	337	1.0	<1	0.02	0.010	
88.40						
89.30	338	0.4	2.4	<0.01	0.005	
90.10						
90.90	339	0.4	<1	<0.01	0.100	
92.30						
93.50	340	<0.1	<1	0.01	0.010	
95.20						
96.40	341	0.6	<1	<0.01	0.008	
97.30	342	0.2	11.2	<0.01	0.008	
98.50	343	<0.1	3.0	<0.01	0.005	
	344	1.2	<1	<0.01	0.004	

GEOLOGIC CORE LOG OF MJSN-3 (3/7)

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MJSN-3 (3/7) 100 m ~ 150 m

Level . m Direction °
X . m Inclination °
Y . m length m

DEPTH (m)	DESCRIPTIONS
100.10	100.10 ~ 101.00 m blk sl with few qz, limo vls
101.00	101.00 ~ 103.00 m alt (sl > ss) with few qz V.
103.00	103.00 ~ 108.20 m qz, py vls (w = 0.1 ~ 0.5 cm, int = 1 cm)
106.90	106.90 ~ 111.70 m dk grey ss with few qz vls
108.20	108.40 m qz, py V. (w = 0.3 cm, 25°)
111.70	111.7 ~ 115.9 m dk grey silic. ss with qz, py, asp V. (max = 8 cm)
112.30	111.7 ~ 113.0 m frac. zone 112.30 m qz, py, asp V. (w = 8 cm)
113.30	113.3 ~ 114.0 m frac. zone
114.75	115.9 ~ 119.20 m dk grey silic. ss with sl bands and few qz vls
115.90	117.3 m qz, brown-tor, asp. V. (w = 2.5 cm, 30°)
119.20	119.20 ~ 119.80 m frac. zone
119.80	119.80 ~ 127.20 m dk grey silic ss with qz, asp. V & vls 120.50 m qz, asp V (w = 1 cm, 40°)
121.00	121.00 ~ 139.85 m frac. zone with qz, asp. V & vls
123.35	123.35 ~ 124.40 m frac. zone with qz, py network
124.40	123.50 m qz V (w = 4 cm, 36°)
127.20	127.20 ~ 129.80 m blk sl with few qz, py, asp vls in joints
129.80	129.80 ~ 138.45 m frac. zone of dk grey ss with few py, asp in joints
134.60	134.60 ~ 135.60 m grey silic ss with qz, py vls
135.60	
138.45	138.45 ~ 154.70 m blk sl with few qz vls
139.85	139.90 m qz, py V (w = 4 cm, 26°)
143.25	143.25 ~ 145.10 m dk grey sl with ss bands and qz, py, asp V & vls
145.10	145.10 m qz, py, asp V (w = 10 cm, 46°)
	146.90 m qz, tor, py V (w = 2 cm, 30°)
150	

DEPTH (m)	SAMPLE No.	ASSAY RESULT Au	Ag	As	W	LAB. TEST
100.10						
103.10	B-345	<0.1	< 1	<0.01	0.001	
104.00	346	<0.1	< 1	<0.01	0.002	
105.00	347	<0.1	< 1	<0.01	0.003	
106.00	348	<0.1	< 1	0.07	0.002	
106.90	349	<0.1	< 1	<0.01	0.001	
108.20						
111.70	350	<0.1	< 1	<0.01	0.030	
112.30	351	0.2	< 1	<0.01	0.014	
113.30	352	0.4	< 1	0.03	0.006	
114.75	353	<0.1	< 1	0.03	0.003	
115.90						
119.80	354	<0.1	< 1	0.02	0.003	
121.00	355	0.8	< 1	0.05	0.020	
122.00	356	0.1	< 1	<0.01	0.008	
123.35	357	0.2	< 1	<0.01	0.006	
124.40	358	0.2	< 1	<0.01	0.003	
125.30	359	0.2	< 1	0.01	0.050	
127.20	360	0.1	< 1	<0.01	0.006	
128.50	361	<0.1	< 1	<0.01	0.004	
129.80	362	<0.1	< 1	<0.01	0.005	
131.00	363	0.4	< 1	0.01	0.030	
132.60	364	0.2	< 1	<0.01	0.010	
134.60	365	3.2	< 1	<0.01	0.008	
135.60						
143.75	366	0.5	< 1	<0.01	0.006	
145.10						

GEOLOGIC CORE LOG OF MJSN-3 (4/7)

1/200

MJSN-3 (4/7) 150 m ~ 200 m

Level . m Direction °
X . m Inclination °
Y . m Length m

LITHOLOGY	DEPTH (m)	DESCRIPTIONS
	151.70	151.70m gz, brown tor, asp, py V (w=3cm, 40°)
	152.00	152.00m gz, brown tor, py V (w=5cm, 45°)
	153.00	153.00 m gz, brown tor, py V (w=3cm, 40°)
	154.30	154.30 – 180.30 m grey weakly silic ss with few gz V.
		154.90m gz, py V (w=2.5cm, 40°)
		155.90m gz, py V (w=6cm, 43°)
		156.70m gz, tor, py V (w=3cm, 45°)
		157.8m gz, py V (w=2cm)
		159.00 gz, brown tor, py asp V (w=4cm, 48°)
	161.30	161.30 – 164.50m gz, py V & Vls
		161.40m gz, py, brown tor. V (w=2cm, 50°)
	164.50	164.50m gz, py, brown tor, asp V (w=1.5cm, 45°)
	180.30	173.30m gz V (w=0.2cm, 30°)
		178.80m gz V (w=1cm, 40°)
	181.40	180.30 – 181.40m gz, py, asp V & Vls
		180.30m gz, brown tor; py, asp V. (w=3cm, 40°)
		180.30 – 183.80m frac. zone
	183.80	183.80 – 188.0m dk gray silic. ss
	184.40	184.40 – 186.80m frac. zone
	186.80	
	188.0	188.0 – 189.0m gz, brown tor, py, asp V. & Vls
		188.0m gz, brown tor, py, asp V (w=1cm)
	189.0	189.0m gz, brown tor, py asp V (w=3cm, 30°)
		189.00 – 200.00m blk sl with few gz V & Vls
		191.90m gz, tor, py V (w=1cm, 35°)
	192.60	193.40 – 194.50m frac zone with chl and few py, gz Vls
	194.50	
		194.50 – 197.90m frac zone with gz, py Vls
	197.90	197.80m gz, brown tor, py V (w=2cm, 45°)
	198.00	
	200.00	

DEPTH (m)	SAMPLE No.	ASSAY RESULT Au	Ag	As	W	LAB. TEST
151.70	B-367					
152.00		4.2	< 1	<0.01	0.005	
154.30	368	1.5	< 1	<0.01	0.005	
156.00	369	0.5	< 1	<0.01	0.004	
156.70						
161.30	370	0.2	< 1	<0.01	0.003	
162.50	371	<0.1	< 1	<0.01	0.003	
163.50	372	0.2	< 1	0.02	0.007	
164.50						
180.30	373	<0.1	< 1	0.01	0.003	
181.40						
188.00	374	0.2	< 1	0.01	0.001	
189.00						
194.50	375	<0.1	< 1	0.03	0.001	
195.50	376	<0.1	< 1	<0.01	0.001	
196.50	377	0.2	< 1	0.02	0.002	
197.90						

GEOLOGIC CORE LOG OF MJSN-3 (5/7)

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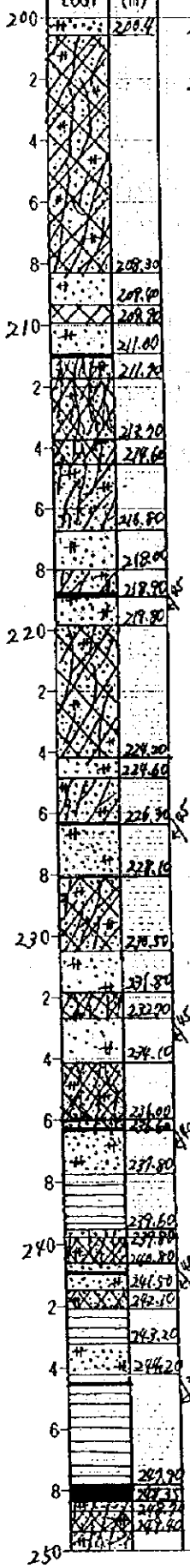
MJSN-3 (5/7) 200 m ~ 250 m

Level . m Direction °
X ; . m Inclination °
Y ; . m Length m



DESCRIPTIONS

200.0 ~ 208.30m grey silic. ss with qz vls
200.40 – 208.30m frac. zone (chloritization)

208.30 – 211.00 grey silic. ss with few qz vls

211.00 – 216.80m qz, py vls
211.00m qz V. w = 8cm
211.70 – 214.60m frac zone (chloritization)

218.00 – 218.90m, qz, py vls
218.90m qz, tor, py V (w=1.5cm, 45°)
219.80 – 224.20m frac zone with qz, py, chl vls

224.20 – 226.30m grey silic ss with qz, py vls
226.30m qz, py, asp V (w=3cm, 45°)

228.10 – 230.50m frac zone with qz, py, chl vls

231.80 – 232.70m frac. zone with py, qz, chl vls
232.80m qz, tor, py V (w=0.2cm, 45°)
234.10 – 236.00m frac. zone with qz vls

236.50m qz V (w=4cm, 40°)

237.80 – 239.60m blk sl with few qz vls

239.60 – 242.10m dk grey ss with few qz vls
239.80 – 240.80m frac. zone
241.20m qz, py V (w=2cm, 40°)

242.10 – 243.20m blk sl. with few qz

243.20 – 244.20m dk grey ss with few qz vls
244.20 – 247.90m blk sl with few qz vls
244.50m qz, py V (w=3cm, 35°)

247.90 – 248.35m qz, py, chl V (dip?)
248.35 – 253.40m grey silic. ss with qz, py, chl vls
248.70 – 249.40m frac. zone

DEPTH (m)	SAMPLE No.	ASSAY RESULT Au	Ag	As	W	LAB. TEST
200.40	B-378	0.1	<1	0.01	0.004	
201.40	379	0.4	<1	0.03	0.004	
202.40	380	<0.1	<1	<0.01	0.020	
203.30	381	<0.1	<1	<0.01	0.080	
204.70	382	0.2	<1	<0.01	0.010	
206.00	383	0.1	<1	<0.01	0.005	B3-5 X
207.00	384	0.4	<1	0.01	0.005	
208.30						
211.0	385	0.2	<1	<0.01	0.002	B3-6 F
211.70	386	<0.1	<1	0.01	0.007	
212.90	387	<0.1	<1	0.02	0.004	
213.70	388	0.1	<1	0.02	0.004	
214.80	389	0.1	<1	<0.01	0.004	
215.70	390	0.1	<1	<0.01	0.003	
216.80						
218.00	391	0.4	<1	<0.01	0.004	
218.90						
219.80	392	0.2	<1	0.01	0.003	
221.00	393	0.1	<1	<0.01	0.004	
222.60	394	0.1	<1	0.02	0.005	
223.50	395	<0.1	<1	0.02	0.004	
224.60	396	0.1	<1	0.02	0.002	
225.40	397	0.2	1.8	0.05	0.003	
226.30						
228.10	398	0.1	<1	<0.01	0.005	
229.10	399	0.4	<1	<0.01	0.004	
230.50						
231.80	3100	<0.1	<1	0.03	0.002	
232.70						
234.10	3101	0.6	<1	0.02	0.004	
235.00	3102	<0.1	<1	<0.01	0.002	
236.00	3103	0.2	<1	<0.01	0.002	
236.60						
239.60	3104	0.4	<1	<0.01	0.007	
240.80						
247.90	3105	0.4	<1	0.02	0.008	
248.35	3106	<0.1	<1	0.02	0.020	
249.40	3107	<0.1	<1	0.02	0.005	

GEOLOGIC CORE LOG OF MJSN-3 (6/7)

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MJSN-3 (6/7) 250 m ~ 300 m

Level . m Direction °
X , , m Inclination °
Y , , m Length m

LITHOLOGY	DEPTH (m)	DESCRIPTIONS
	250.40	250.40–254.00 m frac. zone with gz, py vls (w=0.1–1cm)
		251.20 m gz V (w=1cm, 40°)
	254.00	254.00 – 254.40 m grey silic. ss with gz vls
	254.40	254.40 – 255.40 m str silic. ss with abu gz, brown tor vls
	255.40	255.40–260.50 m frac zone with gz vls (w=0.1–2cm)
	260.50	
	261.80	261.80–263.00 m frac zone with few gz vls
	263.00	
	263.90	263.90–264.70 m gz, brown tor, py vls
	264.70	264.70 m gz, py, brown-tor V (w=1cm, 85°)
		267.50 m gz, py V (w=2.5cm, 40°)
	269.50	269.50–270.40 m frac zone with gz V
	270.40	270.50–272.10 m blk sl with few gz
	270.50	270.50–271.40 m frac zone
	271.40	
	272.10	272.10 – 279.55 m dk grey ss with few gz vls
		272.40 m gz, py, brown tor, asp V (w=1.5cm, 40°)
	274.95	274.95–277.60 m frac. zone with gz vls
	277.60	
	279.55	279.55–284.00 m dk grey ss with gz, brown tor vls (w=0.1–2cm, int=5cm)
		282.0 m gz, brown tor V (w=1.5cm, 5°)
		283.70 m gz, brown tor, py V (w=2cm, 30°)
	284.00	285.00 m gz V (w=0.7cm, 25°)
	285.80	285.80–288.20 m frac. zone
		285.80–287.90 m gz vls
	287.90	
	289.20	289.20–291.70 m frac. zone
	290.40	290.40–291.10 m frac. zone with gz vls
	291.70	
	295.80	295.80–297.40 m frac. zone with gz, ckl vls
	297.40	
	298.40	298.40–318.20 blk sl
		298.40–299.50 m frac. zone
	299.50	

DEPTH (m)	SAMPLE No.	ASSAY RESULT Au	Ag	As	W	LAB. TEST
250.40	B-3108	<0.1	<1	0.03	0.008	
251.40	3109	<0.1	<1	0.02	0.008	
252.40	3110	<0.1	<1	0.02	0.010	
253.40	3111	<0.1	<1	0.02	0.020	
254.40	3112	<0.1	<1	0.02	0.020	
255.40	3113	<0.1	<1	0.03	0.020	
256.60	3114	<0.1	<1	0.02	0.020	
257.60	3115	<0.1	<1	0.02	0.050	
259.20	3116	0.1	4.6	0.02	0.007	
260.50	3117	<0.1	3.6	0.02	0.005	
261.80	3118	0.1	<1	0.02	0.007	
263.00						
263.90						
264.70	3119	<0.1	2.8	0.02	0.040	
269.50	3120	0.1	<1	0.02	0.008	
270.40						
274.95						
276.20	3121	0.1	<1	<0.01	0.004	
277.60	3122	<0.1	<1	<0.01	0.003	
279.55						
281.00	3123	<0.1	<1	<0.01	0.002	
282.50	3124	0.1	<1	0.02	0.003	
284.00	3125	<0.1	<1	0.03	0.003	
285.80						
286.95	3126	<0.1	<1	<0.01	0.002	
287.90	3127	0.1	<1	<0.01	0.004	
290.00						
291.70	3128	0.4	<1	<0.01	0.003	
295.80						
297.40	3129	<0.1	<1	<0.01	0.003	

GEOLOGIC CORE LOG OF MJSN-3 (7/7)

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MJSN-3 (7/7) 300 m ~ 341.40m

Level . m Direction °
X , . m Inclination °
Y , . m Length m

LITHOLOGY	DEPTH (m)	DESCRIPTIONS
	300.00	
	302.10	300.8-301.40m frac zone
	302.90	302.9-303.5m frac. zone
	303.50	
	305.60	305.6m gz, Py V (w=0.3cm, 15°)
	307.00	307.0-314.3m dk gray silic. sl with gz, py network
	308.00	308.0-308.5m frac. zone with gz vls
	308.50	
	309.00	309.0-309.7m frac. zone with gz vls
	309.70	
	310.00	310.0-314.30m frac. zone with gz vls
	311.80	
	312.10	312.1-312.2m fault clay
	312.20	
	314.30	314.30-318.20m blk sl with gz, py vls
	315.00	315.0m gz V (w=1cm, 25°)
	315.60	315.6m gz V (w=0.6cm, 45°)
	318.20	318.20-320.50m dk grey silic. v.f. ss with gz, py network
	320.20	320.20m gz, Py, asp V (w=2.5cm, 40°)
	320.50	320.5 — 322.70 silic. ss with gz, py, tor, asp vls
	322.70	322.70-324.0m str. silic. ss with gz, brown tor network.
	324.00	324.0 — 326.0m grey silic. ss with gz, Py vls (w=0.1-0.5cm, Int=2-5cm)
	326.00	326.0-329.5m grey silic. ss with gz, Py vls (partly network) (w=0.1-1.0cm, Int=0.5-2cm)
	329.50	
	332.0	332.0-333.7m gz, Py, vls (w=0.1-1cm, Int=1-3cm)
	333.00	333.3m gz, tor, Py, asp V (w=1cm, 38°)
	333.70	
	335.40	335.4-337.1m gz, Py vls (w=0.1-0.5cm, Int=2-5cm)
	337.10	
	338.60	338.6-341.0m silic. ss with gz, Py vls (w=0.1-0.3cm, Int=5-7cm)
	340.20	340.1-341.4m frac. zone
	341.00	
	341.40	341.40m (Bottom of the hole)

DEPTH (m)	SAMPLE No.	ASSAY Au	Ag	As	W	LAB. TEST
307.00						
308.00	B-3130	0.1	<1	<0.01	0.002	
309.00	3131	<0.1	<1	<0.01	<0.001	
310.00	3132	<0.1	<1	0.01	0.007	
311.20	3133	<0.1	<1	<0.01	0.006	
312.20	3134	0.3	<1	0.02	0.008	
313.40	3135	0.1	2.8	0.02	0.006	
314.30	3136	0.4	<1	0.02	0.030	
315.20	3137	0.5	<1	0.02	0.004	
316.20	3138	0.4	<1	<0.01	0.004	
317.20	3139	0.4	<1	0.02	0.005	
318.20	3140	0.4	<1	0.03	0.002	
319.40	3141	0.4	<1	0.05	0.004	
320.50	3142	<0.1	<1	0.02	0.004	
321.50	3143	0.6	1.4	<0.01	<0.001	B3-10 T.X
322.70	3144	0.8	<1	0.05	<0.001	
324.00	3145	0.2	<1	0.07	0.002	
325.0	3146	0.6	<1	0.02	0.001	
326.0	3147	0.5	<1	0.04	0.003	
327.2	3148	<0.1	<1	0.04	0.002	
328.5	3149	0.6	<1	0.06	0.002	
329.5	3150	1.2	<1	0.01	0.002	
330.6	3151	0.5	1.4	0.04	0.002	
332.0	3152	0.2	1.2	0.02	0.001	
333.0	3153	0.4	<1	0.35	0.004	
333.7	3154	0.4	<1	0.03	0.001	
335.0	3155	<0.1	<1	0.05	<0.001	
336.0	3156	0.1	<1	0.02	0.002	
337.1						
338.6	3157	0.3	<1	0.08	0.002	
339.7	3158	0.4	3.2	0.06	0.002	
341.0						

GEOLOGIC CORE LOG OF MJSN-4 (1/7)

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MJSN-4 (1/7) 0 m ~ 50 m

Level 765.77 m Direction N10°E
X 60,763.38 m Inclination -75°
Y 54,657.38 m Length 320.0 m

LITHOLOGY	DEPTH (m)	DESCRIPTIONS
	0	0~2.20m soil with pebbles
	2.20	2.20~4.00m dk grey ss with few qz, py vls
	4.00	4.00~7.20m brownish grey silic. ss with qz, py, limo V & vls (w = 0.1~0.4cm, int=5cm)
		6.5m qz, py V (w=0.5cm, 20°)
		7.0m qz, py, limo V (w=0.1cm, 22°)
	7.20	7.20~13.30m dk grey ss with few qz vls
	13.30	13.30~17.00m brownish grey partly silic. qz, py, limo vls (w=0.1~0.5cm, int=5~10cm)
		14.2m qz, limo V (w=0.2cm, 18°)
	17.00	17.00~20.10m grey ss with few qz, py, limo vls
	20.10	20.10~22.70m brownish grey silici ss with qz, limo V & network vls (w=0.1~0.5cm, int=1~3cm)
	21.40	20.40~21.00 frac. zone
	22.70	22.70~24.45m grey silic. ss with few qz, py, limo vls
	24.45	24.45~25.40m brownish grey silic. ss with qz, py, limo vls
	25.40	25.40~29.90m brownish grey silic. ss with few qz, py vls
	26.10	26.10~26.60m frac. zone
	26.60	
		28.70m qz, py, limo V (w=0.2cm, 7°)
	29.90	29.90~32.20m dk grey ss with few qz py vls
	32.20	32.20~33.00m white str. silici rock with py, limo
	33.00	33.00~35.50m red-brownish grey silici ss with qz, py, limo vls
	33.65	33.65~34.10m brownish white str. silic. rock with py, limo
	34.10	34.10~35.50m frac. zone cemented by hema
	35.50	35.50~39.00m brownish grey silic. ss with qz, py, hema V & network vls (w=0.1~1cm, int=0.5~3cm)
	38.00	
	39.00	39.00~44.30m dk grey silic. ss with few qz, py, asp, hema V & vls
	39.70	39.70~40.20m reddish brown silic. ss with qz, py, asp, hema vls
		39.75m qz py V (w=0.3cm, 35°)
	42.90	42.90~43.40m grey silic. ss with qz, py, hema vls
	43.40	43.95m qz, py V (w=0.5cm, 35°)
	44.30	44.30~45.00m brownish grey ss with qz, py, hema network vls
	45.00	45.00~47.90m reddish grey silic. ss with qz, hema vls
	47.90	47.90~51.30m reddish grey str. silic. rock with network qz, py, hema vls
	50	

DEPTH (m)	SAMPLE No.	ASSAY RESULT Au	Ag	As	W	LAB. TEST
4.00						
5.10	B-401	<0.1	<1	<0.01	0.002	
	402	<0.1	<1	0.02	0.003	
6.20	403	0.5	<1	0.02	0.002	
7.20						
13.30	404	0.2	<1	0.03	0.003	
14.50	405	0.1	<1	0.03	0.003	
15.80	406	0.3	<1	<0.01	0.001	
17.00						
20.10	407	1.6	<1	0.02	0.006	
21.40	408	<0.1	<1	0.02	0.003	
22.70	409	<0.1	<1	<0.01	0.003	
23.50	410	<0.1	<1	0.01	0.002	
24.45	411	<0.1	<1	0.02	0.006	
25.40	412	<0.1	<1	0.01	0.003	
26.60	413	<0.1	<1	0.01	0.002	
27.50	414	<0.1	<1	0.01	0.003	
28.50	415	<0.1	<1	0.02	0.003	
29.90						
32.20	416	<0.1	<1	<0.01	0.007	
33.00	417	<0.1	<1	<0.01	0.004	
34.10	418	<0.1	<1	0.02	0.015	
35.50	419	<0.1	<1	0.01	0.004	
36.20	420	<0.1	<1	0.01	0.001	
38.00	421	0.2	<1	0.03	0.003	
39.00	422	0.1	<1	0.02	0.002	
40.20	423	<0.1	<1	0.02	0.001	
41.00	424	0.2	<1	<0.01	<0.001	
42.00	425	<0.1	<1	<0.01	<0.001	
42.90	426	<0.1	<1	0.02	0.002	
43.40	427	<0.1	<1	<0.01	0.001	
44.30	428	<0.1	<1	0.02	0.001	
45.00	429	<0.1	<1	0.02	0.002	
46.00	430	<0.1	<1	0.04	<0.001	
47.00	431	0.2	<1	0.04	0.004	
47.90	432	<0.1	<1	0.10	0.005	
49.00	433	0.4	<1	0.02	0.001	
50.00						

GEOLOGIC CORE LOG OF MJSN-4 (2/7)

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MJSN-4 (2/7) 50m ~ 100 m

Level . m Direction °
X , . m Inclination °
Y , . m Length m

LITHOLOGY	DEPTH (m)	DESCRIPTIONS
	50.00	50.40-50.70m frac zone
	51.30	51.30-55.90m grey silic. ss with qz V & vls (w=0.1-2cm, int=0.5-4cm)
	52.10	53.10-54.00m frac. zone
	54.00	brownish grey str. silic. rock with qz, hema
	54.30	54.30-54.60m str. silic rock with qz, py, hema
	54.60	55.90-56.70m str. silic rock with qz, py, hema
	55.90	56.70-57.50m frac. zone of silic. dk grey sdy-phy
	56.70	57.50-62.55m dk grey silic. sdy-phy with qz, hema, py vls
	57.50	59.00-59.70m qz, tor, py, hema vls (w=0.1-3cm)
	59.00	62.55-63.90m reddish grey frac. str. silic. rock with qz, py, hema
	59.70	63.90-68.40 reddish grey - dk grey str. silic. rock with qz, asp, py, hema
	62.55	66.00-67.60m abu qz V
	63.90	68.40-71.30m grey silic. sdy-phy with qz vls
	66.00	1.10m qz V (w=0.5cm, 35°)
	67.60	71.30-76.30m grey silic. sdy-phy with few qz vls
	68.40	74.60m qz, py, asp V (w=1-2cm, 20°)
	71.30	76.30-77.60m dk grey silic sdy phy with, qz, py vls
	74.60	77.60-77.95m qz, py, asp V (22°)
	76.30	77.95-79.20m grey silic. sdy-phy with qz, py, asp vls
	77.60	79.20-82.30m str. silic sdy-phy with network qz py, asp vls
	77.95	80.90-81.18m qz V (30°)
	79.20	82.30-83.50m dk grey str. silic ss with abu qz, py vls
	80.90	83.5-89.7m silic ss with qz, py vls
	81.18	86.30-87.60m frac zone
	82.30	88.50-88.90m str. silic. rock with abu qz, py, asp
	83.50	89.7-91.00m str. silic. rock with abu qz, py, asp
	86.30	90.30-91.00m qz V
	87.60	91.00-93.80m silic ss with abu qz, py, asp (w=0.1-1cm, int=0.5-2cm)
	88.50	93.80-97.00m silic. ss with qz, py vls
	88.90	94.60m joint with py (30°)
	89.70	95.9-96.40m fract. zone
	90.30	96.40m qz V (w=1.5cm, 30°)
	91.00	97.00-99.10m frac. zone
	93.80	98.50-99.60m dk grey ss wit qz py vls
	95.90	99.60-100.90m frac silic sdy-phy with qz vls
	96.60	
	97.00	
	98.50	
	99.10	
	99.60	

DEPTH (m)	SAMPLE No.	ASSAY RESULT Au	Ag	As	W	LAB. TEST
50.00	B-434	0.4	<1	0.05	0.003	B4-2 P.X
51.30	435	0.2	<1	0.03	0.002	
52.20	436	<0.1	<1	0.01	0.002	
53.10	437	<0.1	<1	0.07	0.003	
54.00	438	<0.1	<1	0.03	0.002	
54.60	439	<0.1	<1	0.02	0.001	
55.50	449	0.2	<1	0.02	0.002	
56.70	441	<0.1	<1	<0.01	0.003	
58.00	442	<0.1	<1	0.04	0.002	
59.00	443	0.2	<1	0.02	0.002	
59.70	444	<0.1	<1	0.02	0.002	
60.50	445	<0.1	<1	0.02	0.002	
61.50	446	<0.1	<1	0.01	0.002	
62.55	447	<0.1	<1	0.01	0.005	
63.90	448	<0.1	<1	0.02	0.007	
65.00	449	<0.1	<1	0.01	0.002	
66.00	450	<0.1	<1	0.02	0.001	B4-3 X
66.80	451	0.1	<1	0.01	0.003	B4-4 F
67.60	452	0.7	<1	0.02	0.002	
68.40	453	<0.1	<1	0.01	0.002	
69.50	454	0.2	<1	0.02	0.003	
70.50	455	<0.1	<1	0.02	0.010	
71.30						
76.30	456	<0.1	<1	<0.01	0.003	
77.60	457	1.4	<1	0.07	0.005	B4-6 P.F
77.95	458	10.3	2.4	0.02	0.010	
79.20	459	0.4	<1	0.04	0.040	
80.10	460	0.5	<1	0.02	0.004	
80.90	461	0.1	<1	0.01	0.004	
81.18	462	0.7	2.4	0.04	0.004	
82.30	463	<0.1	<1	<0.01	0.002	
83.50	464	0.4	<1	0.02	0.002	
84.50	465	<0.1	<1	0.03	0.001	
85.50	466	3.8	<1	0.04	0.003	
86.30	467	0.2	<1	0.03	0.003	
87.60	468	11.2	38	0.04	0.003	
88.50	469	0.6	<1	0.03	0.002	
89.70	470	0.5	1.6	0.02	0.004	
90.70	471	0.3	<1	0.02	0.004	
91.00	472	1.0	<1	<0.01	0.001	
92.00	473	<0.1	1.6	<0.01	0.001	
93.00	474	<0.1	<1	0.02	0.001	
93.80						
95.90	475	0.4	<1	0.07	0.005	
96.60						
98.50						
99.60	476	0.3	<1	0.05	0.002	
	499					

GEOLOGIC CORE LOG OF MJSN-4 (3/7)

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MJSN-4 (3/7) 100m ~ 150 m

Level . m Direction °
X . m Inclination °
Y . m Length m

DEPTH (m)	DESCRIPTIONS
100.90	frac. zone of sdy-phy with few qz vls
	100.90 – 103.30 m
	qz V. with py, asp. cp
103.30	103.30 – 103.80m grey silic. sdy-phy with qz vls
103.80	103.80 – 106.30m
	qz V, with abu py, asp
106.30	106.30 – 109.20 m
	grey silic. ss with qz, py, asp vls
	108.50m network qz with py, asp
109.20	109.20 – 110.80m
	grey silic. ss with network qz, py, asp, cp vls
110.80	110.80 – 112.80m
	grey silic. ss with qz py vls
112.80	112.80 – 114.30m
	frac. silic. ss with qz vls
114.30	114.90
115.70	114.90 – 115.70m
	frac. silic. ss with qz vls
	115.70 – 123.50 m
	dk grey silic. ss with few qz vls
119.90	119.90 – 121.30 m
121.30	dk grey silic. ss with qz, py, asp V. & vls (w=0.1-3cm, int=5cm)
123.50	123.50 – 126.70m
124.40	dk grey silic. ss with qz, py, asp, V.
125.00	124.60 – 125.00m qz, py, asp V.
126.70	126.7 – 127.1m qz, py, asp V.
127.10	127.1 – 140.0m
	dk gray silic. ss with qz, tor, py, asp V.
131.00	131.0 – 131.70m frac. zone
131.70	132.25m qz, tor, py, asp V (w=0.8cm, 40°)
132.75	132.75 – 134.55m, dk grey silic. ss with few qz V
133.60	133.6 – 135.90m
	frac zone
134.55	134.55 – 140.0m
	dk grey silic ss with qz, py, asp vls
135.90	
136.80	136.8 – 137.1m frac. zone
137.10	132.9 – 138.0m qz, tor, asp, py V
138.00	138.4 – 138.8 m frac. zone
138.80	
140.00	140.0 – 142.40m
140.50	grey ss with few qz vls
	140.5 – 144.80m frac. zone
142.40	142.4 – 144.8m
	grey ss with qz, py, asp, vls
144.80	144.8 – 147.00m
145.50	brownish grey silic. rock with qz, tor, py, asp
	145.5 – 151.0m frac. zone
147.00	147.0 – 152.0m
	grey ss with qz, tor, py, asp vls

DEPTH (m)	SAMPLE No.	ASSAY RESULT Au	Ag	As	W	LAB. TEST
100.90	B-477	0.6	<1	0.09	0.001	
102.10	478	1.4	<1	0.07	0.002	
103.30	479	1.2	1.4	0.15	0.002	B4-8
103.80	480	0.1	<1	0.01	<0.001	P, F
105.00	481	3.4	<1	0.07	0.004	
106.30	482	0.2	<1	0.02	0.004	
107.30	483	<0.1	<1	0.01	0.004	
108.30	484	<0.1	<1	0.01	<0.001	
109.20	485	0.2	<1	0.02	0.002	
110.00	486	0.4	<1	0.10	0.003	
110.80	487	0.8	<1	0.11	0.003	
111.80	488	0.3	<1	0.04	0.002	
112.80	489	0.2	<1	0.05	0.003	
114.30	490	0.1	<1	0.03	0.003	
115.70	491	0.1	<1	0.02	0.001	
119.90						
121.30	492	1.6	<1	0.46	0.004	
122.30	493	<0.1	<1	0.07	0.001	
123.50	494	0.6	3.2	0.35	0.003	
124.40	495	0.4	<1	0.16	0.010	
125.00	496	<0.1	<1	0.01	0.001	
125.80	497	0.4	0.4	0.12	0.003	
126.70	498	0.1	<1	0.02	0.001	
127.10	499	0.3	<1	0.13	0.030	
128.00	4100	0.1	<1	0.03	0.005	
129.00	4101	0.1	<1	0.03	0.001	
130.00	4102	0.2	<1	0.16	0.003	
131.00	4103	<0.1	<1	0.03	0.001	
132.00	4104	0.2	<1	0.01	0.002	
132.75	4105	0.4	<1	0.15	0.002	
134.55						
135.90	4106	0.2	<1	0.15	0.002	
136.80	4107	0.5	<1	0.10	0.003	
138.00	4108	0.1	<1	0.01	0.001	
139.30	4109	0.4	<1	0.12	0.001	
140.00	4110	0.5	<1	0.05	0.001	
142.40						
143.60	4111	0.1	<1	0.04	0.002	
144.80	4112	0.1	<1	0.02	0.001	
146.00	4113	<0.1	<1	0.04	0.003	B4-10
147.00	4114	0.6	<1	0.08	0.003	X
148.00	4115	<0.1	<1	0.01	0.007	
149.00	4116	<0.1	<1	0.05	0.007	
150.00	4117	0.2	<1	0.05	0.003	

GEOLOGIC CORE LOG OF MJSN-4 (4/7)

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MJSN-4 (4/7) 150 m ~ 200 m

Level . . m Direction °
X . . m Inclination °
Y . . m Length m

LITHOLOGY	DEPTH (m)	DESCRIPTIONS
	151.00	
	152.00	152.0 – 155.10 m dk grey ss with few gz, py
	155.10	155.10 – 157.55 m dk grey silic. ss with gz, asp vls
	156.10	156.10 – 156.70 m frac. zone wit gz, py, asp vls
	156.70	156.50 m gz, asp V (w > 1cm)
	157.55	157.55 m gz, tor, py, asp V (w = 1.2cm, 27°)
		158.8 m gz, py V. (w = 0.5cm, 20°)
	161.30	161.3 – 162.4 m gz, py, asp vls
	162.10	161.8 m gz V (w = 1cm, 20°)
		162.40 m gz, py, asp, Pb Vein (w = 2cm, 25°)
	165.30	165.3 – 166.35 m dk grey ss with gz, py, asp vls
	166.35	165.4 – 166.35 m frac. zone
	168.20	168.2 – 171.35 m grey silic. ss with gz, py, asp vls
	168.80	168.8 – 168.9 m gz, asp V
	169.80	169.3 – 169.8 m frac zone
	171.35	171.35 – 174.80 m frac zone with gz, py, asp vls
	174.60	174.60 – 176.10 m blk sl with few gz vls
	176.10	176.10 – 182.00 m dk grey silic. ss with few gz vls
	182.00	182.00 – 185.35 m blk-sl
		182.00 – 184.4 m gz, py, (asp) vls
	184.40	184.30 m gz, py, brown tor V (w = 0.8cm, 30°)
	185.35	185.35 – 198.35 m dk grey silic. ss with few gz vls
	187.90	187.9 – 189.9 m gz, brown tor, py, V & vls (w = 0.1 – 0.8cm, int = 5 – 8 cm)
	189.90	189.9 – 190.45 m gz, brown tor, py, asp V
	190.55	190.55 – 191.25 m frac zone
	191.25	192.15 – 192.55 m frac zone
	192.15	
	192.55	
	194.40	194.4 – 194.60 m gz, py V (15°)
	194.60	194.60 – 195.60 m grey silic. ss with network gz, py, asp
	195.60	195.60 – 197.60 m frac zone of silic. ss with gz, py, brown tor, asp vls
	197.60	
	198.35	198.35 – 198.60 m gz, py, brown tor, asp V.
	198.60	198.60 – 201.50 m grey silic. ss with gz, py, chl & vls (w = 0.1 – 3cm, int = 1 – 5cm)
		198.70 m gz VC (w = 3cm, 20°)

DEPTH (m)	SAMPLE No.	ASSAY RESULT Au	Ag	As	W	LAB. TEST
152.00	4118	0.2	< 1	0.04	0.003	
155.10	4119	0.1	< 1	0.02	0.002	
155.10	4120	2.4	1.2	0.02	0.002	
156.50	4121	2.4	< 1	0.01	0.001	
157.55						
161.30	4122	0.3	6.0	0.05	0.001	
162.40						
165.30	4123	0.2	5.2	0.01	0.002	
166.35						
168.20	4124	0.4	3.2	0.05	0.002	
168.80	4125	0.2	5.8	0.03	0.002	
169.80	4126	0.4	2.8	0.04	0.004	
171.35	4127	0.2	< 1	0.02	0.002	
172.10	4128	0.1	< 1	0.06	0.004	
174.60						
182.00	4129	2.2	6.4	0.37	0.004	
183.40	14130	0.5	3.6	0.11	0.003	
184.40						
187.90	4131	0.1	2.4	< 0.01	0.001	
188.90	4132	3.8	< 1	0.02	0.010	
189.90	4133	0.8	2.8	0.32	0.004	
190.75						
194.40	4134	2.2	< 1	0.10	0.010	
195.60	4135	0.3	< 1	0.03	0.006	
196.60	4136	1.0	1.6	0.08	0.007	
197.60	4137	1.4	< 1	0.20	0.004	
198.35	4138	< 0.1	< 1	0.01	0.007	
198.60	4139					
199.60						

GEOLOGIC CORE LOG OF MJSN-4 (5/7)

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MJSN-4 (5/7) 200 m ~ 250 m

Level . m Direction °
X , . m Inclination °
Y , . m Length m

LITHOLOGY	DEPTH (m)	DESCRIPTIONS
	201.50	201.80–202.60m gz, py, brown tor network vls
	202.60	202.60–211.80m grey silic. ss with few gz vls
		203.3m gz, py, blk tor V (w=5cm, 40°)
	206.60	206.60–207.40m str. silic rock with abu gz, brown tor, py
	207.40	207.90m, gz, py asp V (w=1cm, 20°)
	211.00	210.60m, gz, py, asp, brown tor V (w=6cm, 20°)
		211.00–213.00m, dk-grey silic. sl with few gz, py vls
	213.00	211.80m gz, py, brown tor, asp V. (w=1.5cm, 35°)
		213.00–216.90m dk grey silic sl with gz, brown tor asp V & Vls (w=0.1–5cm, int=5–10cm, partly network)
	215.80	215.80–216.0m gz, py, brown tor, asp V (35°)
	216.90	216.90–217.60m gz, py, chl V
	217.60	217.60–219.70m grey silic. ss with gz, py, brown tor asp vls
	219.10	219.10–219.25m gz, py, brown tor, asp V (22°)
	219.70	219.70–222.20m blk sl wit gz vls
	220.50	220.50–221.40m network gz, py, brown tor, asp vls
	221.40	
	222.20	222.20–241.8m grey silic ss with gz, py, asp, brown tor Vls (partly network) (w=0.1–4cm, int=3–5cm)
	223.20	223.20–225.20m gz, py, asp network vls
	225.20	223.40m gz V (w=6cm, 50°).
	226.00	226.0m gz, py V (w=2cm, 42°)
	226.90	226.90–227.40m frac. zone
	227.40	228.10–229.10m gz, py, asp network vls
	228.10	229.10–230.00m frac. zone with gz, py, asp vls
	229.10	230.00–230.50m str. silic. ss with abu gz
	230.00	231.20–231.90m str. silic. ss with abu gz
	230.50	233.80–234.90m few gz vls (w=a1–2cm, int=3–5cm)
	231.20	234.90–241.80m grey ss with gz, py, brown tor, asp vls
	231.90	235.00m gz, py, brown tor, asp V (w=7cm, 30°)
	233.80	237.30–237.80m frac zone
	234.90	238.10–238.50m frac zone
	237.30	238.90m gz, brown tor, py V (w=4cm, 50°)
	237.80	241.8–248.10m grey silic. ss with few gz vls
	238.10	242.50m gz V (w=3cm, 16°)
	238.50	244.10–244.60m grey ss with gz, py network vls
	241.80	244.60–245.50m frac zone with gz vls
	244.10	245.50–247.30m grey ss with few gz vls
	244.60	247.30–249.10m str. silici ss with abu gz, py, brown tor, asp vls (w=0.1–5cm)
	245.50	249.10–250.20m frac. blk sl with few gz vls
	247.30	
	249.10	

DEPTH (m)	SAMPLE No.	ASSAY RESULT Au	Ag	As	W	LAB. TEST
200.60	4139	0.2	5.8	0.01	0.008	
201.50	4140	0.2	<1	0.02	<0.001	
202.60	4141	0.2	1.2	0.02	<0.001	
206.60	4142	0.5	<1	0.11	0.003	
207.40						
213.00	4143	0.7	<1	0.10	0.002	
214.00	4144	0.4	<1	0.02	<0.001	
215.00	4145	1.3	<1	0.22	0.008	B4-13
216.00	4146	0.4	<1	0.09	0.002	F
216.80	4147	0.5	<1	0.05	0.003	
217.60	4148	0.3	<1	0.07	0.002	
218.50	4149	0.7	<1	0.04	0.002	
219.70	4150	0.6	<1	0.02	0.001	
220.50	4151	0.3	<1	0.02	0.001	
221.40						
222.20	4152	0.4	<1	0.02	0.002	
223.20	4153	0.2	<1	0.05	0.020	
224.20	4154	<0.1	<1	<0.01	0.002	
225.20	4155	1.3	<1	<0.01	0.003	
226.00	4156	0.1	<1	0.01	0.003	
226.90	4157	0.2	<1	<0.01	0.004	
228.10	4158	0.2	<1	0.01	0.004	
229.10	4159	0.5	<1	0.04	0.002	
230.50	4160	<0.1	<1	<0.01	0.003	
231.20	4161	<0.1	<1	<0.01	0.003	
231.90	4162	<0.1	<1	0.02	0.005	
232.90	4163	0.2	<1	<0.01	0.005	
233.80						
234.90	4164	5.8	<1	0.03	0.080	
236.00	4165	0.4	<1	0.02	0.020	
237.00	4166	0.2	<1	0.02	0.008	
238.50	4167	0.5	<1	0.08	0.003	
239.50	4168	0.4	<1	0.03	0.010	
240.50	4169	0.5	<1	0.03	0.060	
241.80						
244.10	4170	0.2	<1	0.01	0.002	
245.50						
247.30	4171	0.4	<1	0.07	0.003	
248.40	4172	0.4	<1	0.05	0.001	
249.10						

GEOLOGIC CORE LOG OF MJSN-4 (6/7)

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MJSN-4 (6/7) 250 m ~ 300 m

Level . . m Direction °
X . . m Inclination °
Y . . m Length m

LITHOLOGY	DEPTH (m)	DESCRIPTIONS
	250.00	
	251.45	250.20–251.45m blk sl with few gz, py vls
	254.30	251.45–254.30m sltn silic. ss with gz, py, asp network vls.
	256.30	254.30–256.30m blk sl with few gz, py
	258.40	256.30–258.40m grey silic. ss with gz, py, asp vls
	259.40	257.1m gz, brown tor, py V (w=2cm, 38°)
	259.80	259.80–262.50m frac. dk grey silic. ss
	261.20	261.20–262.50m frac. zone with gz, py vls
	262.50	262.50–266.90m dk grey ss with gz vls (w=0.1-1cm; int=2-10cm)
	263.00	263.00–263.50m frac. zone
	263.50	266.20m gz V (w=1cm, 22°)
	264.90	266.30–266.80m frac. zone
	265.10	266.8–268.70m dk gray ss with few gz vls
	266.80	268.70–269.60m frac. zone
	268.70	269.40–270.40m grey silic. ss with gz vls (w=0.1–0.3cm, int=0.5–2cm)
	269.40	270.40–273.20m few gz vls
	270.40	273.20–273.90m grey ss with gz vls
	273.20	273.90–275.10m frac zone with few gz vls
	273.90	275.10–277.50m gz, py, vls
	275.10	275.90–277.50m frac. zone
	276.40	278.00–278.50m frac zone
	277.50	279.0–282.80m frac. zone
	278.00	283.2m gz, py, brown tor, asp V (w=5cm, 25°)
	278.50	284.50–284.m, gz, brown tor, py V (30°).
	279.0	284.70–285.60m blk sl with few gz vls
	282.80	285.60–286.70m grey silic. ss with few gz vls
	283.2	286.50m, gz V (w=1cm, 40°)
	284.50	286.70–288.30m blk sl with few gz vls
	284.70	288.30–300.05m grey silic. sdy ply with very few gz vls.
	285.60	291.40m gz, brown tor V (w=0.3cm, 20°)
	286.70	293.40m gz, py, brown tor, asp V (w=2cm, 20°)
	288.30	294.00–294.80m grey silic. rock with gz, py, brown tor, asp vls
	291.40	294.00–294.15m gz, py, brown tor, asp V (dip?)
	293.40	296.20–297.00m gz, chl, py, brown tor, asp V & vls
	294.00	297.00–297.70m frac. zone (w=0.2–4cm; int=1–5cm)
	294.15	298.50–300.00m gz, chl, py, brown tor, asp V & vls
	296.20	299.20m V (w=4cm) (w=0.1–5cm, int=5–8cm)
	297.00	299.70m V (w=5cm, 30°)
	297.70	
	298.50	
	299.20	
	299.70	
	300.00	

DEPTH (m)	SAMPLE No.	ASSAY RESULT Au	Ag	As	W	LAB. TEST
251.45						
253.85	B-4123	0.2	<1	0.01	0.002	
253.40	4124	<0.1	<1	0.01	0.004	
254.30	4125	<0.1	<1	<0.01	0.001	
256.30	4126	<0.1	<1	<0.01	0.002	
257.80	4127	0.2	<1	0.01	0.005	
258.40						
261.20	4128	<0.1	<1	<0.01	0.002	
262.50	4129	<0.1	<1	<0.01	0.001	
263.50	4180	<0.1	<1	0.01	0.002	
264.90	4181	<0.1	<1	0.01	0.003	
265.10	4182	0.2	<1	0.02	0.002	
266.90						
269.80	4183	<0.1	<1	<0.01	0.003	
270.40						
273.20	4184	0.2	<1	0.01	0.002	
273.90	4185	0.2	<1	<0.01	0.004	
275.10	4186	0.2	<1	0.01	0.004	
276.40	4187	<0.1	<1	0.01	0.003	
277.50						
296.00	4188	0.5	<1	0.07	0.002	
294.80						
296.20	4189	0.2	<1	0.10	0.004	
297.00	4190	0.1	<1	<0.01	0.002	
278.50	4191	0.4	28	0.05	0.002	
300.00						

GEOLOGIC CORE LOG OF MJSN-4 (7/7)

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MJSN-4 (7/7) 300 m ~ 320.00 m

Level . m Direction °
X ; . m Inclination °
Y ; . m Length m

LITHOLOGY	DEPTH (m)	DESCRIPTIONS
	300.50	300.00–300.50m grey sdy phy with few qz vls
	302.10	300.50–302.10m frac. zone
	302.10	301.20–302.10m frac. zone with qz, py, brown tor, asp vls
	303.40	302.10–303.40m qz, Py, asp vn vls (w = 0.1–3cm, int = 1–5cm)
	304.30	303.40–304.30m few qz, Py, asp, brown tor vls
	305.60	305.60–306.30m str. silic. rock with qz vls
	306.30	306.30–309.50m blk sl with few qz vls
	307.00	307.0–307.7m frac zone
	307.70	308.45–308.25m frac. zone
	308.45	309.50–319.40m grey silic. ss with few qz vls
	309.25	310.85–313.65m frac. zone
	309.50	313.25m qz vl (w = 0.3cm, 30°)
	310.85	
	313.65	
	319.40	319.4–320.0m blk sl
	320.00	320.00m bottom of the hole

DEPTH (m)	SAMPLE No.	ASSAY RESULT Au	Ag	As	W	LAB. TEST
300.00	B-4192	<0.1	<1	<0.01	0.002	
301.20	4193	0.4	<1	0.04	0.003	B4-17
302.50	4194	0.4	1.8	0.02	0.005	T, X
303.40	4195	0.2	<1	0.04	0.007	
304.30						
305.60	4196	0.1	<1	<0.01	0.002	
306.30						