巻末資料

1. Existing Drill Hole Data(1)

HOLE NO.	TYPE OF HOLE	YEAR	CO-ORDINATES -Y	CO-ORDINATES +X	COLLAR ELEVATION ASL IN METRES	INCLI-NATION	TRUE BEARING	TOTAL DEPTH IN METRES	MINERALIZATION FROM	MINERALIZATION TO	F / W ELEVATION ASL IN METRES	INTER-SECTION ANGLE	REC %	TRUE THICK-NESS IN m	AVERAGE PERCENT TOTAL Cu	AVERAGE PERCENT OXIDE Cu	AVERAGE PERCENT Co		HORIZON / FORMATION	HOLE NO.
																				DH1
DH1	DD		11740.90	19790.66				124.97	RECORDS NOT AVAILABLE											DH2
DH2	DD		10162.03	19434.05				196.90	〃	〃										DH3
DH3	DD		10174.22	19415.76					〃	〃										NN4
NN4	DD	1950	6638.54	15547.85	NO RECORD	V		265.48	NO COPPER MINERALS RECORDED											NN5
NN5	DD	1950	7789.98	15771.88		V		297.18	〃	〃	〃									NN6
NN6	DD	1950	8620.57	12420.25	1226.95	V		735.79	ABANDONED IN UPPER ROAN DOLOMITE											NN7
NN7	DD	1958	11773.09	20133.96	NO RECORD	V		137.16	36.58	92.66		GEOCHEM			570ppm				DOLOMITE	NN8
NN8	DD	1958	11922.65	19972.89	〃 〃	V		235.61	120.46	125.27	1146.50	24°00′	96.8	1.93	1.10			*	〃	NN9
NN9	DD	1960	11737.01	19868.73	〃 〃	V		407.21	223.42	224.64	1042.00	40°00′	100	0.79	0.41			*	〃	NN10
NN10	DD	1960	11840.68	19781.08	〃 〃	V		416.05	243.84	274.32		GEOCHEM			300ppm				〃	NN11
NN11	DD	1960	9206.52	13223.31	1192.85	V		593.75	504.75	512.98	685.00	87°30′	97.4	3.23	1.57	0.01	0.03		Cp, Bn SHALE/DOLOMITE	
〃	〃	〃	〃	〃	〃	〃	〃	or	505.36	512.98	685.00	87°30′	97.2	7.62	1.64	0.01	0.03	*	〃 〃	〃
〃	〃	〃	〃	〃	〃	〃	〃	or	507.49	512.98		88°00′	100	5.49	1.88	0.01	0.04		〃 〃	〃
NN12	DD	1960	8912.72	13193.45	1192.89	V		530.05	493.78	509.02		GEOCHEM			400ppm				DOLOMITE	NN12
NN13	DD	1961	9206.26	12888.33	1197.42	V		629.41	541.81	545.77		79°30′	100	3.87	1.40	0.01	0.12		Cp SHALE	NN13
〃	〃	〃	〃	〃	〃	〃	〃	or	542.12	544.56	660.70	79°00′	100	2.41	1.85	0.01	0.07	*	〃	〃
NN14	DD	1961	9190.47	13556.04	1209.09	V		554.13	519.23	521.76		83°00′	100	2.50	2.75	0.06			Bn. Cp SHALE	NN14
〃	〃	〃	〃	〃	〃	〃	〃	or	520.29	521.76	714.80	83°18′	100	1.43	4.48	0.08		*	〃	〃
NN15	DD	1961	9481.40	13359.55	1203.67	V		522.73	487.25	495.15	709.90	83°00′	100	7.86	1.27	0.01	0.03		Cp SHALE	NN15
〃	〃	〃	〃	〃	〃	〃	〃	or	487.86	492.86		85°00′	100	4.97	1.48	0.01	0.04	*	〃	〃
NN16	DD	1961	9508.02	13733.93	1218.64	V		511.15	483.41	485.85	759.00	80°00′	100	2.41	0.81	0.01	0.02	*	Cp SHALE	NN16
NN17	DD	1962	8915.58	12743.69	1205.95	V		657.76	573.48	577.44	635.00	67°30′	100	3.35	1.41	0.01	0.07	*	Cp SHALE	NN17
NN18	DD	1962	8623.28	12888.62	1204.93	V		671.17	541.32	549.25		59°00′	98.8	6.80	2.43	0.05	0.05		Cp SHALE	NN18
〃	〃	〃	〃	〃	〃	〃	〃	or	544.28	549.25		64°24′	98.2	4.48	2.81	0.05	0.07	*	〃	〃
〃	〃	〃	〃	〃	〃	〃	〃	or	545.59	549.25		66°30′	100	3.35	3.29	0.06	0.07		〃	〃
NN19	DD	1962	8648.14	12568.85	1212.69	V		724.18	599.85	606.61		71°00′	100	6.40	1.39	0.06	0.05		Cp SHALE	NN19
〃	〃	〃	〃	〃	〃	〃	〃	or	603.96	606.67	609.50	72°13′	100	2.53	2.66	0.05	0.08	*	〃	〃
NN20	DD	1963	8399.76	12756.90	1211.03	V		576.99	472.44	481.64		74°00′	100	8.84	1.44	0.05	0.11		Cp SHALE	NN20
〃	〃	〃	〃	〃	〃	〃	〃	or	475.49	481.64		75°00′	100	5.94	1.83	0.05	0.13	*	〃	〃
NN21	DD	1963	8338.52	12390.76	1216.19	V		600.46	524.56	528.96		73°30′	100	4.24	1.14	0.03	0.05		Cp SHALE	NN21
〃	〃	〃	〃	〃	〃	〃	〃	or	526.39	528.98	690.50	71°20′	100	2.47	1.50	0.03	0.06	*	〃	〃
NN22	DD	1963	7742.22	12065.97	1204.15	V		812.60	662.33	669.19		78°00′	98.7	6.80	2.07	0.03	0.18		Cp SHALE	NN22
〃	〃	〃	〃	〃	〃	〃	〃	or	662.94	668.67	548.00	77°48′	98.4	5.61	2.37	0.03	0.13	*		
22D2	〃	〃	〃	〃	〃	〃	〃	675.74	664.77	669.95		72°42′	97.0	4.94	2.72	0.03				D2
NN23	DD	1965	8035.75	12920.21	1205.86	V		553.21	444.55	453.54		74°30′	100	8.66	1.85	0.11	0.18		Cp, Bn SHALE	NN23
〃	〃	〃	〃	〃	〃	〃	〃	or		453.54	763.00	76°30′	100	4.75	2.62	0.10	0.27	*	〃	〃
N24	DD	1966	8334.65	13054.78	1203.22	V		438.00	395.63	406.91	797.00	79°30′	100	11.09	0.20			*	DOLOMITE	NN24

DD:DIAMOND DRILL. SH:SHOT. CH:CHURN. ASL:ABOVE SEA LEVEL(assumed local datum)

1. Existing Drill Hole Data (2)

HOLE NO.	TYPE OF HOLE	YEAR	CO-ORDINATES -Y	CO-ORDINATES +X	COLLAR ELEVATION ASL IN METRES	INCLINATION	TRUE BEARING	TOTAL DEPTH IN METRES	MINERALIZATION FROM	MINERALIZATION TO	F / W ELEVATION ASL IN METRES	INTERSECTION ANGLE	REC %	TRUE THICKNESS IN m	AVERAGE PERCENT TOTAL Cu	AVERAGE PERCENT OXIDE Cu	AVERAGE PERCENT Co		HORIZON / FORMATION	HOLE NO.
NN25	DD	1966	7704.73	12730.87	1201.50	V		629.72	523.22	527.06		85°00′	100	3.84	1.33		0.13		Cp DOLOMITE / SHALE	NN25
〃	〃	〃	〃	〃	〃	〃		or	524.87	527.06	679.00	87°00′	100	2.19	1.77		0.16	*	〃	〃
NN26	DD	1966	7732.01	13035.58	1200.79	V		488.90	457.96	465.28		79°24′	93.8	7.19	1.60	0.03	0.16		CP, Bn SHALE	NN26
〃	〃	〃	〃	〃	〃	〃		or	460.55	465.28	743.00	78°30′	100	4.63	1.87	0.02	0.12	*	〃	〃
〃	〃	〃	〃	〃	〃	〃		or	460.55	464.21		80°00′	100	3.60	2.12	0.01	0.14		〃	〃
NN27	DD	1966	7741.60	13352.85	1197.76	V		500.79	446.38	452.48		82°00′	100	6.04	2.05	0.05	0.26		Cp SHALE	NN27
〃	〃	〃	〃	〃	〃	〃		or	446.99	452.17		81°00′	100	5.12	2.31	0.05	0.23	*	〃	〃
〃	〃	〃	〃	〃	〃	〃		or	447.60	451.10		79°18′	100	3.44	2.85	0.05	0.25		〃	〃
NN28	DD	1966	7137.72	13336.68	1209.39	V		869.59	679.25	682.14	534.00	70°00′	100	2.72	0.98	0.03	0.09	*	Cp SHALE	NN28
28D1	〃	1967	〃	〃	〃	〃		915.62	676.05	680.80		69°18′	100	4.45	1.17	0.05	0.09			28D1
〃	〃	〃	〃	〃	〃	〃		or	677.88	680.80	534.00	68°12′	100	2.71	1.50	0.06	0.09	*		
NN29	DD	1967	7192.02	12342.95	1218.97	V		691.59	ABANDONED IN UPPER ROAN DOLOMITE											NN29
NN29A	DD	1967	7192.02	12342.95	1218.97	V		1469.44	1240.81	1253.40		62°20′	99.8	11.16	1.54	0.03	0.19		Cp SHALE	NN29A
〃	〃	〃	〃	〃	〃	〃		or	1240.81	1250.96		63°30′	99.7	9.08	1.75	0.04	0.17	*		
〃	〃	〃	〃	〃	〃	〃		or	1240.81	1246.33		59°30′	99.4	4.75	2.13	0.04	0.22			
NN30	DD	1967	8072.50	13298.08	1197.89	V		425.50	399.29	402.34		GEOCHEM			420ppm				DOLOMITE	NN30
NN31	DD	1967	7884.22	12417.88	1207.56	V		656.84	552.18	558.61		75°00′	100	6.22	1.26	0.06	0.06		Cp SHALE	NN31
〃	〃	〃	〃	〃	〃	〃		or	553.52	558.15	658.80	73°45′	100	4.45	1.48	0.05	0.04	*		
NN32	DD	1968	6056.76	11934.74	1242.69	V		236.52	20.73	23.16		69°00′	68.8	2.29	0.70	0.07	0.05	*	DOLOMITE / SHALE	NN32
NN33	DD	1969	6389.29	11865.75	1236.87	70°	076°	402.95	146.30	152.70		GEOCHEM			50ppm				SHALE	NN33
NN34	DD	1969	7865.44	13913.24	1195.18	V		585.52	504.75	510.84		73°20′	100	5.82	1.59	0.03	0.03		Bn SHALE	NN34
〃	〃	〃	〃	〃	〃	〃		or	504.75	509.02	693.00	76°00′	100	4.15	1.91	0.04	0.03			
D1	〃	〃	〃	〃	〃	〃		605.64	503.22	510.17	686.00	74°00′	95.6	6.64	1.40	0.03	0.03	*		D1
NN35	DD	1969	8877.39	13748.48	1210.54	V		526.39	470.92	486.16		GEOCHEM			266ppm				DOLOMITE	NN35
NN36	DD	1969	8300.71	14028.19	1208.12	V		491.34	454.15	466.34		GEOCHEM			140ppm				DOLOMITE	NN36
NN37	DD	1969	7922.67	14317.17	1207.82	V		487.68	457.20	476.71		GEOCHEM			50ppm				DLOMITE	NN37
NN38	DD	1969	7444.05	14313.84	1198.89	V		720.55				CORE LOSS THROUGH ORE SHALE							Bn, Cc SHALE	NN38
D1	〃	〃	〃	〃	〃	〃		790.04	705.92	712.32		80°18′	100	6.31	2.10	0.01	0.03		Bn, Cc SHALE	D1
〃	〃	〃	〃	〃	〃	〃		or	706.83	710.79	505.00	79°10′	100	3.90	2.98	0.01	0.03	*		
NN39D1	DD	1970	7120.58	14671.36	1201.82	V		488.59	411.48	413.00		GEOCHEM			76ppm					NN39D1
NN40	DD	1970	6972.59	14341.55	1193.53	V		1136.29	923.85	933.97	461.00	75°30′	100	9.78	2.17	0.01	0.04	*	Bn SHALE	NN40
NN41	DD	1974	7438.90	14707.65	1197.11	V		917.97	788.20	790.72	485.00	86°00′	96.8	1.31	1.07	0.01	0.01	*	Bn, Cp SHALE DOLOMITE	NN41
NN42	DD	1975	9288.45	14946.96	1215.75	V		866.46	789.26	806.92	420.00	67°00′	97.3	16.27	2.29	0.02	0.10	*	Cp SHALE	NN42
NN43	DD	1975	9296.92	14555.86	1218.06	V		798.31	687.85	700.52	524.50	71.5°	99.0	12.02	2.93	0.02	0.09	*	Cp, Py SHALE	NN43
NN44D1	DD	1976	8890.61	15153.56	1214.65	38°	180°	913.07	775.50	794.50		58.8°	99.5	8.63	5.95	0.02	0.10		Cp SHALE	NN44D1
								or						10.47	3.93	0.02	0.26	*		
NN45	DD	1976	9689.82	14945.31	1218.19	V		786.20	739.84	740.44	492.00	76.9°	98.5	10.39	2.32	0.01	0.06	*	Cp SHALE	NN45
NN46	DD	1976	9290.79	14155.84	1218.69	V		579.35	558.50	559.95		71.8°	100	1.38	3.38	0.01	0.04	*	Bn, Cp SHALE DOLOMITE	NN46

DD:DIAMOND DRILL, SH:SHOT, CH:CHURN, ASL:ABOVE SEA LEVEL(assumed local datum)

1. Existing Drill Hole Data(3)

HOLE NO.	TYPE OF HOLE	YEAR	CO-ORDINATES -Y	CO-ORDINATES -X	COLLAR ELEVATION ASL IN METRES	INCLINATION	TRUE BEARING	TOTAL DEPTH IN METRES	MINERALIZATION FROM	MINERALIZATION TO	F / W ELEVATION ASL IN METRES	INTERSECTION ANGLE	REC %	TRUE THICKNESS IN m	AVERAGE PERCENT TOTAL Cu	AVERAGE PERCENT OXIDE Cu	AVERAGE PERCENT Co	HORIZON / FORMATION	HOLE NO.
NN47	DD	1977	8437.75	14948.17	1213.06	V		642.81	568.93	570.89		81.5°	100	1.93	0.38	0.01	0.01 *	Cp SHALE, DOLOMITE	NN47
NN48B	DD	1977	10510.57	14952.01	1231.75	V		1057.05	810.00	815.05	421.50	64.5°	99.9	4.67	2.06	0.01	0.02 *	Cp SHALE	NN48A
NN49	DD	1977				V		41.65	ABANDONED										NN49
NN49A	DD	1977				V		29.84	ABANDONED										NN49A
NN49B	DD	1977	9278.43	15745.89	1219.44	V		894.79	NO ORE INTERSECTED										NN49B
NN50	DD	1977	8470.59	15729.97	1206.57	V		853.03	828.70	829.45	456.50	70.0°	98.7	0.71	0.61	0.01	0.01 *	Bn SHALE, DOLOMITE	NN50
NN51	DD	1977	10075.90	15756.97	1227.26	V		1062.14	1018.40	1034.34	243.00	61.1°	98.8	14.21	2.68	0.01	0.06 *	Cp SHALE	NN51
NN52	DD	1977	10869.71	15766.96	1248.21	V		1184.45	1012.09	1022.06	260.20	70.0°	100	0.86	1.32	0.01	0.02 *	Py SHALE	NN52
NN53D1	DD	1977	10071.98	15358.24	1232.95	V		953.83	924.36	939.63	329.00	69.0°	99.1	4.92	2.15	0.01	0.05 *	Cp, Po, Py SHALE	NN53D1
NN54	DD	1978	9282.77	15346.44	1220.06	V		928.8	NO ORE INTERSECTED										NN54
NN55	DD	1978	9629.34	14580.99	1219.61	V		685.23	581.00	586.42	644.50	79°	100	5.32	1.74	0.02	0.04 *	Cp, Po SHALE	NN55
NN55A			9685.54	14555.22	1219.61	V		686.5	583.00	586.08		79°	100	3.02	2.04	0.02	0.04		NN56
NN56	DD	1978	6653.10	13328.16	1205.64	54°	094°	764.04	NO ORE INTERSECTED										NN57
NN57	DD	1979	6415.99	12424.62	1221.74	53°	089°	459.55	NO ORE INTERSECTED										NN58
NN58	DD	1979	10090.78	16148.44	1235.94	V		1239.90	1128.00	1162.40	230.00	42.0°	96.7	22.92	2.21		0.09 *	Cp SHALE	
								&	1200.00	1203.45		53.0°	107	2.74	1.69		0.07	F / W	NN59
NN59	DD	1980	8348.09	15336.91	1203.00	V		789.63	668.50	679.25		58.0°	101	9.20	0.63		0.03	Bn SHALE	
								or	676.50	677.00	550.00	52.0°	98	0.39	1.30		0.03 *		NN60
NN60	DD	1981	10396.69	16569.67	1239.14	V		1194.90	1111.40	1114.60	201.00	62.0°	100	0.72	1.33		0.03 *	Cp, Bn SHALE	NN61
NN61	DD	1981	9735.46	16533.50	1218.81	V		1017.27	990.68	995.59	254.30	79.4°	100	1.83	0.03		0.02 *	Cp SHALE, DOLOMITE	NN61
								or	1000.00	1005.59		47.8°	100	3.68	1.92		0.01	Cp, FOOTWALL	NN62D1
NN62D1	DD	1981	12911.96	19267.02	1259.19	78°	351°27.3	439.36	423.60	427.60	845.00	79.1°	97	3.92	0.95		0.01 *	SHALE	NN63
NN63	DD	1981	9599.97	15339.76	1216.78	V		967.12	899.50	918.00	338.40	84.6°	100	18.41	2.11		0.21 *	Cp, Po SHALE	NN64
NN64	DD		13252.83	14594.34	1216.01	V		803.77											NN65
NN65	DD	1981	10906.18	19292.07	1245.04	77.2°	025°12'	698.24	NO ORE INTERSECTED										NN66
NN66	DD	1981	11708.25	14124.09	1209.61	V		1153.47	NO ORE INTERSECTED										NN67
NN67	DD	1981	10010.13	17234.30	1218.66	V		780.69	NO ORE INTERSECTED										NN68
NN68	DD	1982	12504.41	17748.13	1234.25	V		811.93	784.52	802.48	439.29	61.0°	97.6	15.71	0.98		0.01	F / W QUARTZITE	NN69
NN69	DD	1981	11609.15	17804.58	1227.83	89.4°	099.4°	1002.33	NO ORE INTERSECTED										NN70
NN70	DD	1982	10782.08	17600.61	1225.33	V		944.25	NO ORE INTERSECTED										NN71
NN71	DD	1982	11294.89	16555.76	1250.55	89°17'	061°23'	936.88	NO ORE INTERSECTED										NN72
NN72	DD	1982	12363.65	12706.38	1198.55	V		1274.91	NO ORE INTERSECTED										NN73
NN73	DD	1982	13262.54	18529.94	1254.10	89.5°	135°	758.64	NO ORE INTERSECTED										NN74
NN74	DD	1982	7720.48	15393.71	1201.20	V		859.00	783.40	783.90	423.73	47.0°	100	0.37	1.08		0.01	Bn SHALE	NN75
NN75	DD	1982	12354.58	16601.52	1243.63	V		1033.78	960.16	971.57	306.23	70.0°	100	10.72	2.11		0.09	Cp SHALE	
								or	963.16	971.57	306.23	69.7°	100	7.87	2.09		0.11		
								or	971.57	982.24	297.36	70.0°	100	10.03	0.64		0.01	F / W GRITTY QUARTZITE	

DD:DIAMOND DRILL, SH:SHOT, CH:CHURN, ASL:ABOVE SEA LEVEL(assumed local datum)

2. Summary of the Drilling Operation(1)

MJZC-1

Operation	Survey Period: Period	Day	Work Day	Off Day	Total Man Day: Engineer	Worker
Preparation	06.11.1994~08.11.1994	2.50	2.50	0.00	9.00	24.00
Drilling	08.11.1994~30.11.1994	22.50	Drilling 17.50	4.00	61.00	181.00
			Recovering 1.00	0.00	5.00	10.00
Dismantling	01.12.1994~06.12.1994	6.00	5.00	1.00	17.00	38.00
Total	06.11.1994~06.12.1994	31.00	26.00	5.00	92.00	253.00

Drilling Length	m		m
Length Planed	800.00	Overburden	
Increase/Decrease in Length	-149.15	Core Length	602.32
Length Drilled	650.85	Core	
(N/C Drilling)	33.78	Recovery	97.61
(Core Drilling)	617.07		

Working Hours	h	%	%
Drilling	241.00	51.72	34.01
Other Working	187.00	40.13	26.39
Recovering	38.00	8.15	5.36
Subtotal	466.00	100.00	65.75
Reassemblage	24.00		3.39
Dismantlement	20.00		2.82
Water Supply	168.70		23.80
Road Construction	6.00		0.85
Transportation	24.00		3.39
Grand Total	708.70		100.00

Core Recovery of 100m Hole

Depth of Hole (m)	Core Recovery (%)	Core Recovery Cumulated (%)
0.00~ 100.00	88.31	88.31
100.00~ 200.00	96.25	93.09
200.00~ 300.00	97.33	94.68
300.00~ 400.00	99.72	96.06
400.00~ 500.00	99.69	96.84
500.00~ 600.00	100.00	97.40
600.00~ 700.00	100.00	97.61

Efficiency of Drilling

		m	day	m/day
Total Length / Drilling Period		650.85	22.50	28.93
Total Length / Total Drilling Shifts		650.85	35.00 shift	m/shift 18.60

Casing Pipe Inserted

Size	Meterage (m)	Meterage / Drilling Length ×100 (%)	Recovery (%)
mm	0.00	0.00	
mm	0.00	0.00	
HW	0.00	0.00	
NW	33.78	5.19	100.00
BX	0.00	0.00	

Drilling Length / Each Bit (m)

Bit Size	Drilled Length	Core Length
mm	0.00	N/C
117mm	33.78	N/C
mm	0.00	N/C
HQ	0.00	0.00
NQ	617.07	602.32
BQ	0.00	0.00

MJZC-2

Operation	Survey Period: Period	Days	Work day	Off day	Total man day: Engineer	Worker
			days	days	man	man
Preparation	27.12.1993~27.12.1993		0.5			
	18.01.1994~21.01.1994	4.5	4.0	0	10	28
Drilling	27.12.1993~29.12.1993		Drilling 21	3	60	168
	22.01.1994~10.02.1994	24	Recovering 0	0	0	0
Dismantling	11.02.1994~12.02.1994	2	2	0	8	24
Total	27.12.1993~12.02.1994	30.5	27.5	3	78	220

Drilling length				
Length planed	810.00 m	Overburden	12.00 m	
Increase or Decrease in length	— m	Core length	652.02 m	
Length drilled	810.00 m	Core recovery	99.2 % 652.02 /657.00	

Working hours	h	%	%
Drilling	198°00′	39.2	26.1
Other working	238°00′	47.1	31.4
Recovering	69°00′	13.7	9.1
Total	505°00′	100.0	66.6
Reassemblage	106°00′		14.0
Dismantlement	52°00′		6.9
Water transportation	42°00′		5.5
Road construction and transportation	53°00′		7.0
G.Total	758.00		100.0

Core recovery of 100 m hole

Depth of hole (m)	Core recovery (%)	Core recovery cumulated (%)
0.00 ~ 100.00	N/C	—
100.00 ~ 200.00	96.2	96.2
200.00 ~ 300.00	98.6	98.3
300.00 ~ 400.00	98.2	98.3
400.00 ~ 500.00	99.9	98.7
500.00 ~ 600.00	100.0	99.0
600.00 ~ 700.00	99.9	99.2
700.00 ~ 800.00	99.5	99.2
800.00 ~ 900.00	100.0	99.2

Efficiency of Drilling

Total m/work period(m/day)	810.00 m/ 24 days (33.75 m/day)
Total m/work shift(m/shift)	810.00m/ 37 shift (21.89 m/shift)

Drilling length/bit (each sized bit)

Bit size	200mm	150mm	NQ	BQ
Drilled length	35.00m	118.00m	657.00m	— m
Core length	0.00m	0.00m	652.02m	— m

Casing pipe inserted

Size	Meterage (m)	Meterage / drilling length ×100 (%)	Recovery (%)
200mm	35.00	4.3	0
HW	153.00	18.9	100
NW	153.00	18.9	100

2. Summary of the Drilling Operation(2)

MJZC-3

	Survey Period			Total man day	
	Period	Days	Work day / Off day	Engineer	Worker
Operation			days / days	man	man
Preparation	24.11.1993~05.12.1993	12	9 / 3	10	48
Drilling	16.12.1993~17.01.1993	43	Drilling 29 / 5 Recovering 7 / 2	93 19	242 60
Dismantling	18.01.1994~19.01.1994	2	2 / 0	4	8
Total	24.11.1993~19.01.1994	57	47 / 10	126	358

Drilling length				
Length planed	805.00 m	Overburden	12.00 m	
Increase or Decrease in length	- m	Core length	679.62 m	
Length drilled	805.34 m	Core recovery	96.6 % 679.62 /703.84	

Working hours	h	%	%
Drilling	454°00'	61.6	38.5
Other working	193°00'	26.2	16.3
Recovering	90°00'	12.2	7.6
Total	737°00'	100.0	62.5
Reassemblage	40°00'		3.4
Dismantlement	48°00'		4.1
Water transportation	178°00'		15.1
Road construction and transportation	177°00'		15.0
G.Total	1180		100.0

Casing pipe inserted			
Size	Meterage (m)	Meterage/drilling length × 100 (%)	Recovery (%)
165mm	4.00	0.5	0
HW	84.00	10.4	0
NW	102.00	12.7	82.4
BX	534.00	66.3	100.0

Core recovery of 100 m hole

Depth of hole (m)	Core recovery (%)	Core recovery cumulated (%)
0.00 ~ 100.00	N/C	-
100.00 ~ 200.00	93.4	93.4
200.00 ~ 300.00	98.6	96.0
300.00 ~ 400.00	99.7	97.3
400.00 ~ 500.00	89.4	95.3
500.00 ~ 600.00	95.2	95.3
600.00 ~ 700.00	99.7	96.0
700.00 ~ 800.00	99.6	96.5
800.00 ~ 900.00	100.0	96.6

Efficiency of Drilling	
Total m/work period(m/day)	805.84 m/ 43 days (18.74 m/day)
Total m/drilling work shift(m/shift)	805.84m/ 68 shift (11.85 m/shift)

Drilling length/bit (each sized bit)

Bit size	165mm	150mm	130mm	NQ	BQ
Drilled length	4.00 m	86.00 m	12.00 m	432.00 m	271.84 m
Core length	N/C	N/C	N/C	413.30 m	266.32 m

MJZC-4

	Survey Period			Total man day	
	Period	Days	Work day / Off day	Engineer	Worker
Operation			days / days	man	man
Preparation	23.11.1993~04.12.1993	12	9 / 3	19	45
Drilling	05.12.1993~10.02.1994	68	Drilling 51 / 12 Recovering 5 / 0	157 15	407 40
Dismantling	11.02.1994~15.02.1994	5	5 / 0	15	40
Total	23.11.1993~15.02.1994	85	70 / 15	206	532

Drilling length				
Length planed	1051.00 m	Overburden	12.00 m	
Increase or Decrease in length	- m	Core length	945.37 m	
Length drilled	1051.00 m	Core recovery	97.8 % 945.37 /967.00	

Working hours	h	%	%
Drilling	562°00'	45.1	31.8
Other working	270°00'	21.6	15.3
Recovering	416°00'	33.3	23.6
Total	1248°00'	100.0	70.7
Reassemblage	40°00'		2.3
Dismantlement	36°00'		2.0
Water transportation	304°00'		17.2
Road construction and transportation	137°00'		7.8
G.Total	1765°00'		100.0

Casing pipe inserted			
Size	Meterage (m)	Meterage/drilling length × 100 (%)	Recovery (%)
165mm	7.00	0.7	0
HW	72.00	6.9	100
NW	84.00	8.0	100
BX	504.00	48.0	95

Core recovery of 100 m hole

Depth of hole (m)	Core recovery (%)	Core recovery cumulated (%)
0.00 ~ 100.00	93.7	93.7
100.00 ~ 200.00	91.8	92.2
200.00 ~ 300.00	97.1	94.5
300.00 ~ 400.00	98.8	95.2
400.00 ~ 500.00	99.5	96.7
500.00 ~ 600.00	98.6	97.1
600.00 ~ 700.00	95.4	96.8
700.00 ~ 800.00	99.7	97.2
800.00 ~ 900.00	98.9	97.4
900.00 ~1000.00	99.4	97.6
1000.00 ~1100.00	99.8	97.8

Efficiency of Drilling	
Total m/work period(m/day)	1051.00 m/ 68days (15.46 m/day)
Total m/work shift(m/shift)	1051.00 m/ 98 shift (10.72 m/shift)

Drilling length/bit (each sized bit)

Bit size	165mm	150mm	130mm	NQ	BQ
Drilled length	7.00 m	65.00 m	12.00 m	420.04 m	546.96 m
Core length	0.00 m	0.00 m	0.00 m	406.44 m	538.93 m

2. Summary of the Drilling Operation(3)

MJZC-5

Operation	Survey Period: Period	Day	Work Day	Off Day	Total Man Day: Engineer	Worker
Preparation	05.08.1994~08.08.1994	3.50	3.50	0.00	6.00	40.00
Drilling	08.08.1994~11.12.1994	125.50	Drilling 102.50	16.00	336.00	706.00
			Recovering 7.00	0.00	34.00	62.00
Dismantling	12.12.1994~15.12.1994	4.00	4.00	0.00	15.00	31.00
Total	05.08.1994~15.12.1994	133.00	117.00	16.00	391.00	839.00

Drilling Length	m		m
Length Planed	1100.00	Overburden	
Increase/Decrease in Length	0.15	Core Length	894.79
Length Drilled	1100.15	Core	
(N/C Drilling)	184.00	Recovery	97.67
(Core Drilling)	916.15		

Working Hours	h	%	%
Drilling	543.50	31.02	24.52
Other Working	487.00	27.80	21.97
Recovering	721.50	41.18	32.54
Subtotal	1752.00	100.00	79.03
Reassemblage	13.00		0.59
Dismantlement	12.00		0.54
Water Supply	343.00		15.47
Road Construction	24.00		1.08
Transportation	73.00		3.29
Grand Total	2217.00		100.00

Core Recovery of 100m Hole

Depth of Hole (m)	Core Recovery (%)	Core Recovery Cumulated (%)
0.00- 100.00	0.00	0.00
100.00- 200.00	87.00	87.00
200.00- 300.00	98.10	96.57
300.00- 400.00	94.95	95.82
400.00- 500.00	93.67	95.14
500.00- 600.00	100.00	96.31
600.00- 700.00	95.67	93.18
700.00- 800.00	99.81	96.77
800.00- 900.00	99.73	97.19
900.00-1000.00	99.24	97.44
1000.00-1100.00	99.55	97.67

Efficiency of Drilling

	m	day	m/day
Total Length / Drilling Period	1100.15	125.50	8.77
	m	shift	m/shift
Total Length / Total Drilling Shifts	1100.15	132.00	8.33

Casing Pipe Inserted

Size	Meterage (m)	Meterage / Drilling Length ×100 (%)	Recovery (%)
mm	0.00	0.00	
165mm	44.00	4.00	0.00
HW	0.00	0.00	
NW	183.00	16.63	13.11
BX	0.00	0.00	

Drilling Length / Each Bit (m)

Bit Size	Drilled Length	Core Length
212mm	37.00	N/C
mm	0.00	N/C
114mm	147.00	N/C
HQ	0.00	0.00
NQ	916.15	894.79
BQ	0.00	0.00

MJZC-6

Operation	Survey Period: Period	Day	Work Day	Off Day	Total Man Day: Engineer	Worker
Preparation	11.08.1994~12.08.1994	2.00	2.00	0.00	2.00	16.00
Drilling	13.08.1994~06.11.1994	85.00	Drilling 65.50	15.00	219.00	458.00
			Recovering 4.50	0.00	9.00	32.00
Dismantling	07.11.1994~10.11.1994	4.00	4.00	0.00	12.00	12.00
Total	11.08.1994~10.11.1994	91.00	76.00	15.00	242.00	518.00

Drilling Length	m		m
Length Planed	1100.00	Overburden	
Increase/Decrease in Length	-85.04	Core Length	813.76
Length Drilled	1014.96	Core	
(N/C Drilling)	189.88	Recovery	98.63
(Core Drilling)	825.08		

Working Hours	h	%	%
Drilling	395.50	34.21	25.30
Other Working	513.00	44.38	32.82
Recovering	247.50	21.41	15.83
Subtotal	1156.00	100.00	73.96
Reassemblage	14.00		0.90
Dismantlement	38.00		2.43
Water Supply	325.00		20.79
Road Construction	24.00		1.54
Transportation	6.00		0.38
Grand Total	1563.00		100.00

Core Recovery of 100m Hole

Depth of Hole (m)	Core Recovery (%)	Core Recovery Cumulated (%)
0.00- 100.00	0.00	0.00
100.00- 200.00	92.59	92.59
200.00- 300.00	98.25	97.73
300.00- 400.00	97.60	97.67
400.00- 500.00	99.03	98.11
500.00- 600.00	100.00	98.57
600.00- 700.00	96.38	98.14
700.00- 800.00	100.00	98.44
800.00- 900.00	98.94	98.51
900.00-1000.00	99.33	98.62
1000.00-1100.00	99.33	98.63

Efficiency of Drilling

	m	day	m/day
Total Length / Drilling Period	1014.96	85.00	11.94
	m	shift	m/shift
Total Length / Total Drilling Shifts	1014.96	87.70	11.57

Casing Pipe Inserted

Size	Meterage (m)	Meterage / Drilling Length ×100 (%)	Recovery (%)
200mm	0.00	0.00	
165mm	41.00	4.04	0.00
HW	0.00	0.00	
NW	189.88	18.71	74.72
BX	0.00	0.00	

Drilling Length / Each Bit (m)

Bit Size	Drilled Length	Core Length
200mm	41.00	N/C
165mm	0.00	N/C
150mm	148.88	N/C
HQ	0.00	0.00
NQ	825.08	813.76
BQ	0.00	0.00

2. Summary of the Drilling Operation(4)

MJZC-7

Operation	Survey Period: Period	Day	Work Day	Off Day	Total Man Day: Engineer	Worker
Preparation	16.08.1994~17.08.1994	2.00	2.00	0.00	2.00	16.00
Drilling	18.08.1994~17.11.1994	92.00	Drilling 75.00	17.00	251.00	638.00
			Recovering 0.00	0.00	0.00	0.00
Dismantling	18.11.1994~21.11.1994	4.00	4.00	0.00	14.00	39.00
Total	16.08.1994~21.11.1994	98.00	81.00	17.00	267.00	693.00

Drilling Length	m		m
Length Planed	1100.00	Overburden	
Increase/Decrease in Length	-115.00	Core Length	828.75
Length Drilled	985.00	Core	
(N/C Drilling)	131.60	Recovery	97.11
(Core Drilling)	853.40		

Working Hours	h	%	%
Drilling	545.00	36.19	25.28
Other Working	602.50	40.01	27.95
Recovering	358.50	23.80	16.63
Subtotal	1506.00	100.00	69.85
Reassemblage	20.00		0.93
Dismantlement	26.00		1.21
Water Supply	522.00		24.21
Road Construction	24.00		1.11
Transportation	58.00		2.69
Grand Total	2156.00		100.00

Core Recovery of 100m Hole

Depth of Hole (m)	Core Recovery (%)	Core Recovery Cumulated (%)
0.00- 100.00	0.00	0.00
100.00- 200.00	84.49	84.49
200.00- 300.00	91.98	88.94
300.00- 400.00	98.71	92.58
400.00- 500.00	97.58	93.94
500.00- 600.00	100.00	95.23
600.00- 700.00	98.91	95.88
700.00- 800.00	99.24	96.38
800.00- 900.00	99.63	96.80
900.00-1000.00	84.94	97.12

Efficiency of Drilling

	m	day	m/day
Total Length / Drilling Period	985.00	92.00	10.71
	m	shift	m/shift
Total Length / Total Drilling Shifts	985.00	117.67	8.37

Casing Pipe Inserted

Size	Meterage (m)	Meterage / Drilling Length ×100 (%)	Recovery (%)
200mm	0.00	0.00	
165mm	49.00	4.97	0.00
HW	54.00	5.48	100.00
NW	144.00	14.62	79.17
BX	0.00	0.00	

Drilling Length / Each Bit (m)

Bit Size	Drilled Length	Core Length
200mm	49.00	N/C
165mm	0.00	N/C
150mm	82.60	N/C
HQ	0.00	0.00
NQ	853.40	828.75
BQ	0.00	0.00

MJZC-8

Operation	Survey Period: Period	Day	Work Day	Off Day	Total Man Day: Engineer	Worker
Preparation	18.11.1994~20.11.1994	3.00	3.00	0.00	10.00	23.00
Drilling	13.11.1994~13.12.1994	26.00	Drilling 25.00	1.00	80.00	189.00
Dismantling	15.11.1994~17.11.1994		Recovering 0.00	0.00	0.00	0.00
	14.12.1994~16.12.1994	6.00	5.00	1.00	17.00	38.00
Total	13.11.1994~16.12.1994	35.00	33.00	2.00	107.00	250.00

Drilling Length	m		m
Length Planed	600.00	Overburden	
Increase/Decrease in Length	-109.74	Core Length	394.99
Length Drilled	490.26	Core	
(N/C Drilling)	61.00	Recovery	92.02
(Core Drilling)	429.26		

Working Hours	h	%	%
Drilling	269.00	49.72	32.99
Other Working	248.00	45.84	30.41
Recovering	24.00	4.44	2.94
Subtotal	541.00	100.00	66.34
Reassemblage	13.00		1.59
Dismantlement	15.00		1.84
Water Supply	203.50		24.95
Road Construction	6.00		0.74
Transportation	37.00		4.54
Grand Total	815.50		100.00

Core Recovery of 100m Hole

Depth of Hole (m)	Core Recovery (%)	Core Recovery Cumulated (%)
0.00- 100.00	93.77	93.77
100.00- 200.00	97.51	96.46
200.00- 300.00	96.16	96.33
300.00- 400.00	74.63	89.93
400.00- 500.00	90.12	92.02

Efficiency of Drilling

	m	day	m/day
Total Length / Drilling Period	490.26	26.00	18.86
	m	shift	m/shift
Total Length / Total Drilling Shifts	490.26	43.80	11.19

Casing Pipe Inserted

Size	Meterage (m)	Meterage / Drilling Length ×100 (%)	Recovery (%)
mm	0.00	0.00	
165mm	44.27	9.03	0.00
HW	54.00	11.01	100.00
NW	72.89	14.87	100.00
BX	0.00	0.00	

Drilling Length / Each Bit (m)

Bit Size	Drilled Length	Core Length
212mm	44.27	N/C
mm	16.73	N/C
114mm	0.00	N/C
HQ	11.89	9.46
NQ	417.37	385.53
BQ	0.00	0.00

2. Summary of the Drilling Operation (5)

MJZC-9

Operation	Survey Period: Period	Day
Preparation	06.07.1995~10.07.1995	
	15.07.1995	6
Drilling	11.07.1995~13.07.1995	
	17.07.1995~21.09.1995	71
Dismantling	14.07.1995	
	22.09.1995~28.09.1995	6
Total		83

Total Man Day: Work Day		Off Day	Engineer	Worker
	5	1	15	48
Drilling	53	9	224	430
Recovering	6	3	29	54
	5	1	18	39
	69	14	286	571

Drilling Length	m		m
Length Planed	1100.00	Overburden	60.00
Increase/Decrease in Length	44.76	Core Length	1031.27
Length Drilled	1144.76	Core	
(W/C Drilling)	97.00	Recovery	98.43
(Core Drilling)	1047.76		

Working Hours	h	%	%
Drilling	625.90	45.89	35.98
Other Working	550.00	40.20	31.65
Recovering	193.00	14.11	11.10
Subtotal	1368.90	100.00	78.71
Reassemblage	32.00		1.84
Dismantlement	18.00		1.04
Water Supply	270.00		15.54
Road Construction	8.00		0.46
Transportation	42.00		2.42
Grand Total	1738.90		100.00

Core Recovery of 100m Hole

Depth of Hole	Core Recovery	Core Recovery Cumulated
(m)	(%)	(%)
0.00~ 100.00	98.20	98.20
100.00~ 200.00	94.18	94.28
200.00~ 300.00	95.31	94.79
300.00~ 400.00	97.99	95.85
400.00~ 500.00	97.34	96.22
500.00~ 600.00	100.00	96.97
600.00~ 700.00	100.00	97.47
700.00~ 800.00	99.18	97.71
800.00~ 900.00	100.00	98.00
900.00~1000.00	100.00	98.22
1000.00~1100.00	99.60	98.36

Efficiency of Drilling

Total Length / Drilling Period	m	day	m/day
	1144.76	71	16.12
Total Length / Total Drilling Shifts	m	shift	m/shift
	1144.76	100	11.45

Casing Pipe Inserted

Size	Meterage (m)	Meterage / Drilling Length ×100 (%)	Recovery (%)
219mm	40.00	3.49	0.00
177mm	62.00	5.42	0.00
114mm	07.00	0.61	0.00
NW	201.00	17.56	100.00
BX	0.00	0.00	

Drilling Length / Each Bit (m)

Bit Size	Drilled Length	Core Length
254mm	40.00	N/C
203mm	22.00	N/C
165mm	35.00	N/C
HQ	104.00	96.10
NQ	943.76	933.17
BQ	0.00	0.00

MJZC-10

Operation	Survey Period: Period	Day
Preparation	04.07.1995~07.07.1995	
	10.07.1995	
	06.10.1995~07.10.1995	6.00
Drilling	08.07.1995~09.07.1995	
	11.07.1995~04.10.1995	
	07.10.1995~27.11.1995	139.50
Dismantling	10.07.1995	
	05.10.1995	
	28.11.1995~01.12.1995	5.50
Total		151.00

Total Man Day: Work Day		Off Day	Engineer	Worker
	5.00	1.00	21.00	62.00
Drilling	84.00	5.00	370.00	821.00
Recovering	44.50	6.00	190.00	398.00
	5.50	0.00	21.00	48.00
	139.00	12.00	602.00	1330.00

Drilling Length	m		m
Length Planed	1100.00	Overburden	7.00
Increase/Decrease in Length	-90.14	Core Length	924.68
Length Drilled	1009.86	Core	
(W/C Drilling)	60.00	Recovery	97.35
(Core Drilling)	949.86		

Working Hours	h	%	%
Drilling	634.00	21.30	17.16
Other Working	588.50	19.77	15.93
Recovering	1753.50	58.92	47.47
Subtotal	2976.00	100.00	80.56
Reassemblage	40.00		1.08
Dismantlement	28.00		0.76
Water Supply	612.00		16.57
Road Construction	8.00		0.22
Transportation	30.00		0.81
Grand Total	3694.00		100.00

Core Recovery of 100m Hole

Depth of Hole (m)	Core Recovery (%)	Core Recovery Cumulated (%)
0.00~ 100.00	96.45	96.45
100.00~ 200.00	95.46	95.74
200.00~ 300.00	97.87	96.63
300.00~ 400.00	90.27	94.76
400.00~ 500.00	99.77	95.90
500.00~ 600.00	98.15	96.31
600.00~ 700.00	99.80	96.86
700.00~ 800.00	99.25	97.18
800.00~ 900.00	99.21	97.42
900.00~1000.00	96.76	97.35
1000.00~1100.00	96.94	97.35

Efficiency of Drilling

Total Length / Drilling Period	m	day	m/day
	1009.86	151.00	6.69
Total Length / Total Drilling Shifts	m	shift	m/shift
	1009.86	167.00	6.05

Casing Pipe Inserted

Size	Meterage (m)	Meterage / Drilling Length ×100 (%)	Recovery (%)
219mm	24.00	2.38	0.00
177mm	32.00	3.17	0.00
114mm	117.00	11.59	0.00
NW	173.90	17.22	100.00
BW	628.76	62.26	60.00

Drilling Length / Each Bit (m)

Bit Size	Drilled Length	Core Length
254mm	24.00	N/C
203mm	8.00	N/C
139mm	28.00	N/C
HQ	113.90	110.03
NQ	784.50	763.70
BQ	51.46	50.05

2. Summary of the Drilling Operation(6)

MJZC-11

Operation	Survey Period: Period	Day	Work Day	Off Day	Total Man Day: Engineer	Worker
Preparation	23.07.1995~24.07.1995					
	28.07.1995					
	29.07.1995~06.08.1995					
	07.08.1995~08.08.1995					
	15.09.1995	14.5	5.5	9.0	35	78
Drilling	25.07.1995~27.07.1995					
	09.08.1995~13.09.1995		Drilling 42.5	4.0	164	376
	15.09.1995~25.09.1995	49.5	Recovering 3.0	0.0	12	51
Dismantling	14.09.1995					
	26.09.1995~04.10.1995	10.0	9.0	1.0	30	82
Total		74.0	60.0	14.0	243	592

Drilling Length	m		m
Length Planned	1100.00	Overburden	6.00
Increase/Decrease in Length	-247.13	Core Length	720.63
Length Drilled	852.87	Core	
(N/C Drilling)	126.00	Recovery	99.14
(Core Drilling)	726.87		

Working Hours	h	%	%
Drilling	491.00	49.30	37.61
Other Working	414.00	41.57	31.71
Recovering	91.00	9.14	6.97
Subtotal	996.00	100.00	76.29
Reassemblage	46.00		3.52
Dismantlement	30.00		2.30
Water Supply	189.50		14.52
Road Construction	0.00		0.00
Transportation	44.00		3.37
Grand Total	1305.50		100.00

Core Recovery of 100m Hole

Depth of Hole (m)	Core Recovery (%)	Core Recovery Cumulated (%)
0.00~ 100.00	-	-
100.00~ 200.00	95.07	95.07
200.00~ 300.00	98.55	97.07
300.00~ 400.00	100.00	98.14
400.00~ 500.00	100.00	98.64
500.00~ 600.00	100.00	98.92
600.00~ 700.00	98.86	98.91
700.00~ 800.00	100.00	99.07
800.00~ 900.00	100.00	99.14

Casing Pipe Inserted

Size	Meterage (m)	Meterage/Drilling Length ×100 (%)	Recovery (%)
219mm	33.00	3.87	0.0
181mm	95.00	11.14	0.0
114mm	95.00	11.14	37.9
NW	174.00	20.40	65.5
BX	0.00	0.00	

Efficiency of Drilling

Total Length / Drilling Period	m	day	m/day
	852.87	49.5	17.23
Total Length / Total Drilling Shifts	m	shift	m/shift
	852.87	68	12.54

Drilling Length / Each Bit (m)

Bit Size	Drilled Length	Core Length
254mm	36.00	N/C
203mm	59.00	N/C
114mm	31.00	N/C
HQ	48.00	44.39
NQ	678.87	676.24
HQ	0.00	0.00

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Operation	Survey Period: Period	Day	Work Day	Off Day	Total Man Day: Engineer	Worker
Preparation	17.07.1995~18.07.1995					
	23.07.1995~25.07.1995					
	17.08.1995~23.09.1995					
	23.09.1995	12	6	6	31	97
Drilling	19.07.1995~22.07.1995		Drilling 44	8	158	315
	26.07.1995~15.08.1995		Recovering			
	24.09.1995~05.10.1995	68	3	13	35	43
Dismantling	16.09.1995					
	06.10.1995~10.10.1995	6	5	1	18	55
Total		86	58	28	242	480

Drilling Length	m		m
Length Planned	1100.00	Overburden	29.00
Increase/Decrease in Length	-317.72	Core Length	584.05
Length Drilled	782.28	Core	
(N/C Drilling)	180.00	Recovery	98.63
(Core Drilling)	602.28		

Working Hours	h	%	%
Drilling	340.00	47.16	36.64
Other Working	313.00	43.41	33.73
Recovering	68.00	9.43	7.33
Subtotal	721.00	100.00	77.69
Reassemblage	24.00		2.58
Dismantlement	18.00		1.94
Water Supply	111.00		11.96
Road Construction	12.00		1.29
Transportation	42.00		4.53
Grand Total	928.00		100.00

Core Recovery of 100m Hole

Depth of Hole (m)	Core Recovery (%)	Core Recovery Cumulated (%)
0.00~ 100.00	-	-
100.00~ 200.00	99.78	99.78
200.00~ 300.00	99.39	99.46
300.00~ 400.00	97.84	98.77
400.00~ 500.00	97.26	98.33
500.00~ 600.00	100.00	98.73
600.00~ 700.00	98.50	98.68
700.00~ 800.00	98.32	98.63

Efficiency of Drilling

Total Length / Drilling Period	m	day	m/day
	782.28	68	11.50
Total Length / Total Drilling Shifts	m	shift	m/shift
	782.28	53	14.76

Casing Pipe Inserted

Size	Meterage (m)	Meterage/Drilling Length ×100 (%)	Recovery (%)
219mm	34.00	4.35	0.00
177mm	48.00	6.14	0.00
114mm	180.00	23.01	0.00
NW	180.00	23.01	76.80
BX	0.00	0.00	

Drilling Length / Each Bit (m)

Bit Size	Drilled Length	Core Length
254mm	43.00	N/C
203mm	29.00	N/C
139mm	108.00	N/C
HQ	0.00	0.00
NQ	602.28	584.05
BQ	0.00	0.00

3. Results of Microscopic Observation of Thin Sections

Sample No.	Locality Depth(m)	Formation	Rock Name	Phenocryst/Crystal Fragment Qz	Kf	Pl	Ca	Do	Bi	Mc	Rb	Sr	Ti	Tl	Ap	Sc	Cz	Ah	Cl	Zc	Cs	Op	Texture
S301	MJZC-3, 121.00	MY	Phyllite	◎		○				◎			△	△	△							△	clastic to shistbose
S302	MJZC-3, 184.00	UIC	Arg-Dolomite	○		◎		◎	○	○					△							○	
S304	MJZC-3, 232.00	GB	Gabbro(?)			◎	○		◎		○	△	△		△		△					○	euhedral granular
S305	MJZC-3, 265.00	UIC	Argillite	◎		○	○		○	◎				△	△							△	
S306	MJZC-3, 414.00	UIB	Dolomite	○				◎		△					△							△	equigranular
S307	MJZC-3, 544.00	UIL	Argillite	◎		○	○		◎	○												○	
S308	MJZC-3, 558.30	UCD	Dolomite	○				◎		○								○	△			△	equigranular
S309	MJZC-3, 590.00	LOQ	Metasandstone	◎	◎	○	○		○	△				△								△	clastic to granular
S310	MJZC-3, 625.60	LBQ	Metasandstone	◎	◎	○	○		○	△				△								△	clastic to granular
S311	MJZC-3, 636.20	LOS	Argillite	◎		○	○		○	◎			△	△								○	metamorphosed siltstone
S312	MJZC-3, 642.00	LOS	Argillite	◎		○	○		○	◎			△	△								○	metamorphosed siltstone
S313	MJZC-3, 702.00	LIC	Argillite	◎		○	○			◎			△	△						△		△	
S402	MJZC-4, 178.00	MY	Green Shale(?)	○		○		◎			◎					○					△		
S406	MJZC-4, 390.00	GB	Metamor-rock	○					◎				△		△	◎						△	

Sample No.	Locality Depth (m)	Formation	Rock Name	Phenocryst/Crystal Fragment Qz	Sf	Pl	Ca	Do	Mg	Bi	Mc	Rb	To	Ti	Ap	Ep	Ch	Zr	Op	Tc	Texture
T-101	MJZC-1, 633.20	BSG	Granite	◎	○	○	△			○	○			△	·	△		·	△		granular
T-102	MJZC-1, 645.20	GB	Amphibolite							◎		◎		△		○		·			granular to poikiritic
T-103	MJZC-1, 648.70	BSG	Granite	◎	○	◎				○	○			·	·	○	·	·			granular
T-501	MJZC-5, 716.00	LIL	Magnesite-talc-rock						◎	△	○				○		△		△	◎	equigranular
T-502	MJZC-5, 879.00	UIB	Argillaceous Quartzite	◎	○	○	○			○	△			·	·			·	△		clastic
T-601	MJZC-6, 764.80	LIL	Dolomite	○				◎		○				·					△		equigranular
T-602	MJZC-6, 828.80	LIL	Metasandstone	◎	○	○	△			○	○			·	·				△		clastic to granular
T-603	MJZC-6, 1010.70	BSG	Granite	◎	△	○	△			○	○			·	·	△	△	·	·		granular
T-701	MJZC-7, 909.50	LRI	Metasandstone	◎	○	○	△			△	△		·		·		△	·	·		clastic to granular
T-702	MJZC-7, 964.00	LPC	Argillite?	○		△	△			◎			·		·		△	△	·		

Sample No.	Locality Depth(m)	Formation	Rock Name	Phenocryst/Crystal Fragment Qz	Kf	Pl	Ca	Anh	Bi	Mc	Rut	To	Ti	Ap	Ep	Ch	Zr	Op	All	others	Texture
T901	MJZC-9, 1132.50	LFQ	anh rock	△	○	△		◎	○							△		△			granular
T902	MJZC-9, 1144.00	LFQ	meta-ss	◎			○	○	◎	△		·		·			·	△	·		granular
T1001	MJZC-10, 1007.30	LFQ	Bi schist	◎				○	◎	○		△		·		△	·	·	·		schistose
T1101	MJZC-11, 827.00	BSG	metegranite	◎	◎	◎			△	○		·	·					·	·		granular
T1102	MJZC-11, 852.80	BSG	metegranite	◎	◎	◎	△		○	○						·			△		granular
T1201	MJZC-12, 701.20	LIC	meta-ss	◎	◎	○	·		◎	○				·				·	·		granular
T1202	MJZC-12, 723.50	LIC	Bi-Ch rock	△	○			○	◎							◎		△			schistose
T1203	MJZC-12, 732.00	LIC	mica schist	◎				·	○	◎							·	△		Ba(△)	schistose
T1204	MJZC-12, 750.00	LQG	meta-ss	◎		◎		○	·			·					·	·	·		granular
T1205	MJZC-12, 782.00	BSG	metegranite	◎	◎	◎	△		·	◎		·		·		·		·	·		granular

Abbreviations

Abundance of minerals: ◎ : abundant, ○ : common, △ : a few, · : trace

Rock : ss:Sandstone, Cal:Calcareous, Arg:Argillaceous, Metamor:Metamorphosed

Mineral : Qz:Quartz, Kf:Alkali feldspar, Pl:Plagioclase, Ca:Carbonate, Anh:Anhydrite, Bi:Biotite, Mc:Muscovite, Rut:Rutile, To/Tl:Tourmaline, Ti:Titanite, Ap:Apatite, Ep:Epidote, Ch/Cl:Chlorite, Zr:Zircon, Op:Opaque minerals All:Allanite, Ba:Barite, Do:Dolomite, Mg:Magnesite, Tc:Talc, Cs:Celestine

4. Results of Microscopic Observation of Polished Sections

No.	Locality Depth(m)	Forma-tion	Description	Cp	Gn	Bi	Ln	Co	Py	Xn	Mz	Zr	Th	Br	Sd	Re
P301	MJZC-3. 124.00	MW	Py with boudinage	○					◎	·	·				○	
P302	MJZC-3. 145.50	MW	Py-quartz vein	△					◎		·					
P303	MJZC-3. 181.00	UIU	Py dot in Do		·				△		·	·			△	
P304	MJZC-3. 559.70	UCD	Cp bleb in Do	△					△					·		
P305	MJZC-3. 635.50	LOS	fine Py-(bornite) diss.	·					○			·	·	·		·
P306	MJZC-3. 636.20	LOS	laminated fine Cp	○					○				·			·
P307	MJZC-3. 637.00	LOS	Cp inc. in Do spot	○					○				·			
P308	MJZC-3. 648.00	LOS	Cp inc. in sil. Do concretion	○					○		·					
P309	MJZC-3. 648.50	LOS	Cp Py pyrrhotite veinlet	○		·	·	△	△		·					
P402	MJZC-4. 262.00	MW	laminated fine Py in Do						○				·			
P403	MJZC-4. 597.50	UIL	Cp inc. in silica spot	△					○		·					
P404	MJZC-4. 588.50	UIL	Cp-Py-mica-Do vein	○					·	·						

Abbreviations:

Abundance of minerals: ◎; abundant. ○; common. △; small. ·; trace

Cp; Chalcopyrite. Gn; Galena. Bi; Bismuthinite. Ln; Linnaeite. Co; Cobaltite and Cobaltian Pyrite mixture. Py; Pyrite. Xn; Xenotime. Mz; Monazite. Zr; Zircon. Th; Thorite. Br; Barite. Sd; Siderite. Re; REE Carbonate. Do; Dolomite. diss.; dissemination. inc.; included. sil.; siliceous

5. Results of Microscopic Observation of Polished Thin Sections(1)

Sample No.	Locality Depth (m)	Formation	Description	Ore Mineral										Gangue Mineral														
				Cp	Py	Po	Bo	Co	Gn	Bs	Ti	Sp	Mo	Hs	Qz	Kf	Pl	Ca	Di	Bi	Mc	To	Ti	Ap	Ch	Zr	Tc	Gt	Al	Ru	As
P-101	NJZC-1, 517.80	LOS	Cp-Po-Py diss. in dol-Arg	○	◎	△									◎			○	◎			○	·	·	·	△					
P-102	NJZC-1, 522.70	LPC	Cp diss. in Cgl	◎	△			△							◎	○	◎			○				·	·	·			△		
P-501	NJZC-5, 973.30	LOS	Cp Po-Do lens in dol-Arg	○	△	○		△	·						◎	○	○	△			◎	△	·	·	·	·					
P-502	NJZC-5, 977.30	LOS	Cp-Po diss. Bo band	◎	△	○						△			○				◎	◎			·		△						
P-503	NJZC-5, 979.40	LOS	Cp-Po diss. in dol-sdy-Arg	◎	△	◎						·			○	△	○	◎		◎		·	·	·	△					·	
P-504	NJZC-5, 982.10	LOS	Cp-Po-Do lamination in dol-Arg	◎	△	◎		·				·			○	△	○	◎		◎	·	·	·	·	△					·	
P-505	NJZC-5, 985.60	LOS	Cp-Py-Po-Do lens in dol-Arg	○	△	○		·							○	△	○	◎		◎		·	·	·	△					·	
P-506	NJZC-5, 987.40	LOS	Po-Py-Cp diss. in dol-Arg	△	◎	△									○	△	○	◎		◎		·	·	·	△	·				·	
P-601	NJZC-6, 875.20	UCO	Cp diss. in dol-Arg	○			○								○		△	○		◎			·		△						
P-602	NJZC-6, 881.10	LOS	Bo diss. in dol-Ss				△		·	·		·			◎		△	○		◎	○		·	·		·					
P-603	NJZC-6, 884.20	LOS	Cp diss. in dol-Ss	○			△	·							◎		○	○		◎	○	·	·	·	△	·					
P-604	NJZC-6, 885.70	LOS	Cp diss. in dol-Ss	△											◎	○	○	○		◎	○		·	·	·	·					
P-605	NJZC-6, 888.10	LOS	Bo-Cp diss. in dol-Ss	△			△		·	·					◎	○	○	○		◎	○		·	·		·					
P-606	NJZC-6, 893.10	LOS	Cp diss. in dol-Ss	○			△								◎	○	○	○		◎	○		·	·		·					
P-607	NJZC-6, 895.00	LOS	Bo diss. in sdy-Arg	·			○								◎		△	△		◎	△				△	·					
P-608	NJZC-6, 1008.20	LPQ	Cp-Bo diss. in Ss	○			△	·							◎		△	◎		◎	○		·	·	△	·					
P-701	NJZC-7, 931.70	LOS	Py-Cp diss. in sl	△	◎										◎		○			◎	○		△	·	△	·					
P-702	NJZC-7, 950.60	LOS	Cp diss. in Do	○								·			△				◎	◎	○			·	○						
P-703	NJZC-7, 958.50	LOS	Cp diss. in micaceous Arg	○																◎	○			△							○
P-704	NJZC-7, 962.90	LOS	Cp diss. in Do-lens	○			○							·	○			○		◎							○		△		◎

Abbreviations

Abundance of minerals: ◎ ;abundant, ○;common, △;a few, ·;trace

Rock : Do;Dolomite, Arg;Argillite, Cgl;Conglomerate, Ss;Sandstone, Sl;Shale, diss;dissemination, Cp;Chalcopyrite, dol;dolomitic, sdy;sandy

Mineral : Py;Pyrite, Po;Pyrrhotite, Bo;Bornite, Co;Cobalt pentlandite, Gn;Galena, Bs;Native Bismuth, Wi;Wittichenite, Sp;Sphalerite, Mo;Molybdenite, Hs;Hessite, Qz;Quartz, Kf;Alkali feldspar, Pl;Plagioclase, Ca;Carbonate, Bi;Biotite, Mc;Muscovite, To;Tourmaline, Ti;Titanite, Ap;Apatite, Ch;Chlorite, Zr;Zircon, Tc;Talc, Al;Allanite, Ru;Rutile, As;Asphibole

sample No.	Locality Depth(m)	Formation	Description	Ore Mineral									Gangue Mineral													
				Cp	Py	Po	Bo	Co	Gn	BS	SP	others	Qz	Kf	Pl	Ca	Bi	Mc	Rut	To	Ti	Ap	Ep	Ch	Zr	All	others
P-901	NJZC-8, 1087.90	LOS	Cp diss in dol Arg	◎	○							Ba(-)	○	○	△	◎	◎	○	·			·				△	REE(-),Mon(-)
P-902	NJZC-8, 1109.40	LOS	Cp blob rich in dol Arg	◎				○cat	·		·		◎			○	○	◎	·			·					
P-903	NJZC-8, 1111.80	LOS	Cp patch rich in sch Arg	◎	△				·				◎				○	◎	·					△			
P-904	NJZC-8, 1112.40	LFQ	Cp diss in m/s Ss	△				◎cat · car	·				◎	△		○	◎	○		·							Xen(-)
P-905	NJZC-8, 1114.20	LFQ	Cp diss in pebbly QZT	◎								Th(-)	◎	○	△	○	◎		·	·	·	·			·		
P-906	NJZC-8, 1120.00	LFQ	Cp Bo diss in QZT	◎			◎		·				◎	△	◎	○	○	△	·				·		·		
P-1003	NJZC-10, 965.50	LOS	Py diss in Arg		◎				·			Th(-)		○	◎	○	·	○	·								Mon(-)
P-1002	NJZC-10, 974.80	LOS	Py-Po diss in bedding plane and rim of dol spot	△	◎	○		· pent					△		○	◎	◎	○							·		
P-1003	NJZC-10, 983.30	LOS	Cp-Py lrr lens in Arg	◎	○	△		· co pent	·	·			◎			○	◎		·		·				·		
P-1004	NJZC-10, 986.80	LOS	Cp-Py diss in Arg	◎	○			· co pent	·				◎	△	△	◎	◎		·								
P-1005	NJZC-10, 992.40	LFQ	Cp-diss in QZT	◎					·			Ba(-)	◎	◎	△	○	○	○			·			·	·		
P-1101	NJZC-11, 843.30	LOS	Py-Po/Cp diss in dol Arg	·	◎	◎		○co pent					◎		△	◎	○		·		·						
P-1102	NJZC-11, 848.00	LOS	Po-Cp-Py spot in Arg	○	◎	◎		· co pent		·		Th(-)	◎		△	◎	△	△	·						·		
P-1103	NJZC-11, 851.30	LOS	Cp-Py-Po-dol lens/spot/vlt in carb Arg	◎	◎	·			·		·		◎			△	△	○						△			
P-1104	NJZC-11, 856.30	LOS	Py>Cp-Po diss in dol-arg Ss	◎	○	△		· co pent				Ura(-)	◎	◎		○	◎		·								
P-1201	NJZC-12, 861.50	LOS	Cp-Py-Po-dol diss in Arg	◎	◎	○		· co pent	·				○		◎	○	○	○		·		·					
P-1202	NJZC-12, 864.90	LOS	Cp-Py-Po-dol lens/spot	◎	◎	△							◎			○	·	○	·			·		·			Mon(-)
P-1203	NJZC-12, 870.50	LOS	Cp lrr lens in Arg	◎	◎	◎		· co pent		·			◎			○		○		·				○			
P-1204	NJZC-12, 871.10	LOS	Qz-Cp-Py-Po lens in Arg	◎	◎	◎		· co pent	·		·		◎			△		◎	·	·				·			
P-1205	NJZC-12, 873.30	LOS	Bo patch/lens/rim & diss in m/s Ss	◎	·		◎	· car					◎		○	◎	△	○				·					

Abbreviations

Abundance of minerals: ◎ : abundant, ○ : common, △ : a few, · : trace

Rock : dol:dolomitic, Arg:argillite, QZT:quartzite, ss:sandstone,sch:schistose, m/c:micaceous, carb:carbonaceous

Mineral : Bo:Bornite, Cp:Chalcopyrite, Po:Pyrrhotite, Py:Pyrite, Gn:Galena, BS:Native Bismuth, SP:Sphalerite, diss:dissemination
Cat:Cattierite, Car:Carrollite, Pen:Pentlandite, Co pen:Cobalt pentlandite, Ba:Barite, Th:Thorite, Ura:Uraninite,
Qz:Quartz, Kf:Alkali feldspar, Pl:Plagioclase, Ca:Carbonate, Anh:Anhydrite, Bi:Biotite, Mc:Muscovite,
Rut:Rutile, To:Tourmaline, Ti:Titanite, Ap:Apatite, Ep:Epidote, Ch:Chlorite, Zr:Zircon, Op:Opaque minerals
All:Allanite, Mon:Monazite, Xen:Xenotime, REE:REEcarbonate, vlt:vaiolet

5. Results of Microscopic Observation of Polished Thin Sections (2)

Hole No.	MJZC-1	MJZC-5	MJZC-5	MJZC-6	MJZC-6	MJZC-9	MJZC-9	MJZC-9	MJZC-11	MJZC-12	MJZC-12
Sample No.	P102	P501	P504	P603	P608	P902	P904	P904	P1101	P1204	P1205
wt.%											
S	33.29	32.45	33.43	32.99	33.14	50.32	46.75	39.26	30.94	30.86	40.24
Fe	0.51	6.79	9.24	0.33	3.69	13.32	21.59	2.08	2.52	3.5	0.02
Cu	1.75	0.13	0.19	0.44	10.42	0.07	0	14.32	0	0	14.68
Co	63.28	52.46	51.22	65.94	50.23	35.09	26.21	44.38	63.98	64.07	44.48
Zn	0.14	0.11	nd	nd	0.56	0	0	0	0	0.14	0
As	nd	nd	nd	nd	0.31	0	4.48	0.01	0	0	0
Ni	1.24	7.17	6.49	0.45	0.92	0.4	0.04	0.13	2	1.54	0.37
Total	100.21	99.11	100.57	100.15	99.27	99.21	99.05	100.17	99.44	100.12	99.74
Atom.%											
S	47.80	47.08	47.59	47.45	48.20	65.08	62.05	54.6	45.31	44.95	55.86
Fe	0.42	5.66	7.55	0.27	3.08	9.89	16.45	1.66	2.11	2.93	0.02
Cu	1.27	0.10	0.14	0.32	7.65	0.05	0	10.05	0	0	10.25
Co	49.44	41.41	39.67	51.60	39.75	24.69	18.93	33.58	50.97	50.79	33.6
Zn	0.10	0.08	0.00	0.00	0.40	0	0	0	0	0.1	0
As	0.00	0.00	0.00	0.00	0.19	0	2.55	0	0	0	0
Ni	0.97	5.68	5.05	0.35	0.73	0.28	0.03	0.1	1.6	1.23	0.28
Mineral	Co-Pen	Co-Pen	Co-Pen	Co-Pen	Co-Pen	Cat	Cat	Carr	Co-Pen	Co-Pen	Carr

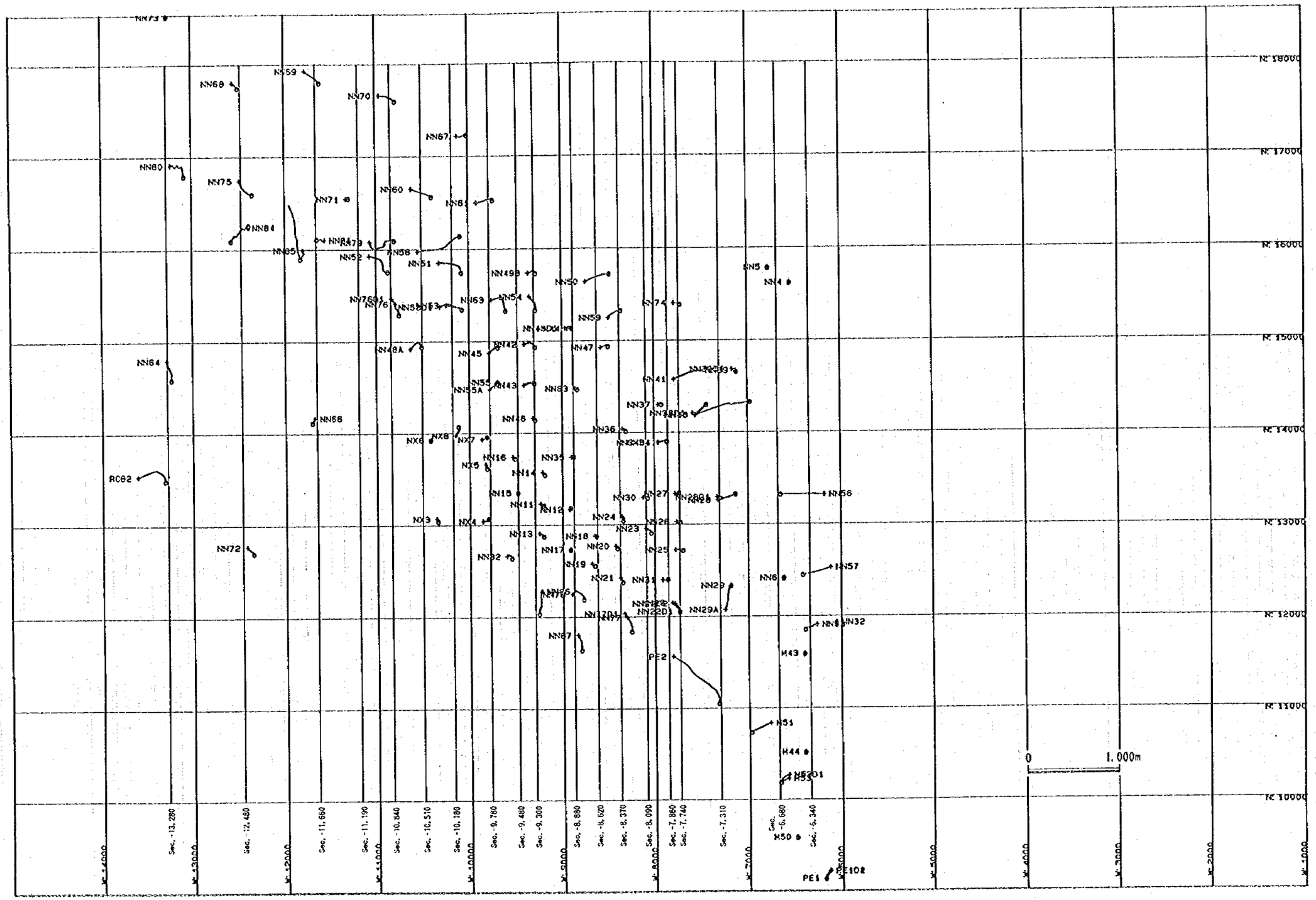
Mineral; Co-Pen: Cobalt Pentlandite Cat: Cattierite Carr: Carrollite

6. Results of X-ray Diffraction Analysis

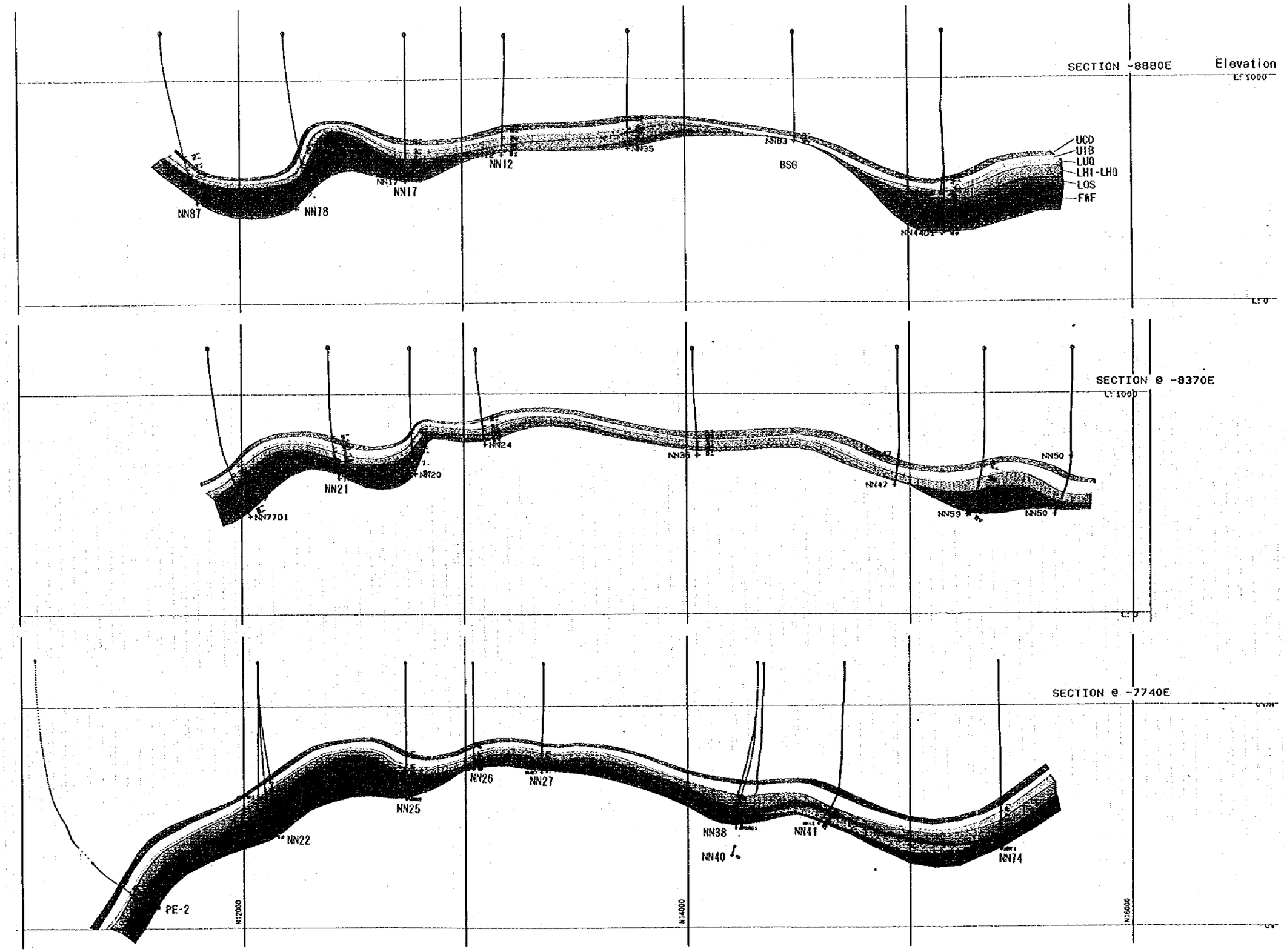
Sample No	Location	Clay Minerals						Silica	Feldspar		Silicates								Carbonates			Sulfates		Sulfides	
		sm	mix	ch	kl	tk	pp	q	pl	or	ov	px	h	mc	bt	ph	gt	ad	nrl	ca	dol	mg	ah	gyp	cp	py
XR-301	MJ2C-3 121.00m			▲?	▲			◎	○					◎			▲?									△
XR-302	173.00m						▲?		◎		▲															▲?
XR-303	177.00m						▲?	◎	◎		▲										◎					△?
XR-304	184.00m			▲				◎	◎					◎			▲?				◎					▲
XR-305	193.00m							○	◎					○							◎					
XR-306	215.00m			▲				○	◎		▲?			▲						○	◎					
XR-307	223.00m			▲					○		▲?			○			▲?		◎		○					
XR-308	265.00m			▲				◎	▲					◎		△?	▲?		▲							▲
XR-309	304.00m							◎	◎					△						▲?	○	◎				
XR-310	462.00m			○				◎		▲				◎	○	△?										△
XR-311	481.00m			▲										△							◎		◎	△		
XR-312	558.00m					▲		▲						▲							◎		◎			
XR-313	590.00m							◎	○	◎				▲						▲	◎					
XR-314	625.00m							◎		◎		▲?		○							△					▲?
XR-315	647.80m			▲				◎	▲?					◎	△	△?				▲	◎					▲
XR-316	702.00m							◎	○	○				○								▲?				
XR-401	MJ2C-4 101.00m				▲?			◎	◎					◎	△?	△?										▲
XR-402	151.00m			▲				○	○					○	▲?						◎					▲?
XR-403	178.00m	▲						▲	○				◎							○	◎			○		
XR-404	208.00m							▲	▲?	○				▲						◎	○			▲?		
XR-405	248.00m					○		○						△				▲?		○	◎					
XR-406	321.00m	▲?		△				◎	△					◎	△				△	○						
XR-407	375.00m			▲				◎	▲					◎	○								▲?			
XR-408	390.00m							◎	○					◎	○				○							
XR-409	406.00m							◎						◎	○					○					△	○
XR-410	448.40m		△	○				◎						◎	○	△?									▲?	▲
XR-411	470.00m			▲		◎								○	○						◎	○	◎	○		
XR-412	532.00m							○	◎	△				◎	△						○		◎			▲
XR-413	575.50m					▲		○						◎	○	△					○				▲?	▲
XR-414	593.00m					▲		○	◎					▲							◎		◎			▲
XR-415	598.00m			▲				◎						△								○			▲	△

Remarks: Intensity of X-Ray Diffraction ; ◎ strong, ○ moderate, △ weak, ▲ very weak

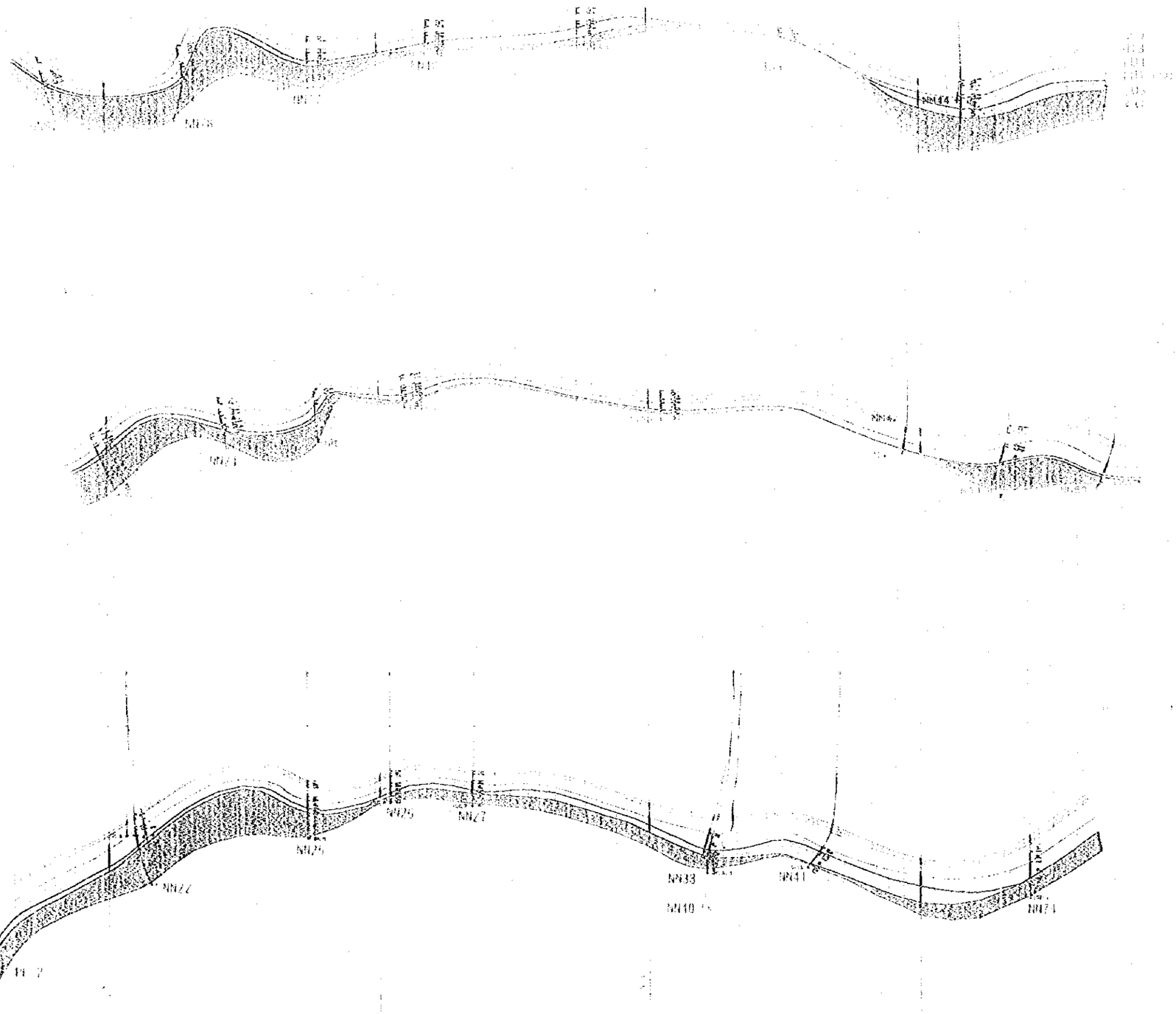
Abbreviations: sm ; smectite mix; chlorite-montmorillonite mixed layer clay mineral ch ; chlorite
kl ; kaolinite tk ; talc pp ; pyrophyllite q ; quartz pl ; plagioclase or ; potash feldspar
ov ; olivine px ; pyroxene h ; asphibole mc ; muscovite bt ; biotite ph ; phlogopite
gt ; garnet ad ; andalusite ca ; calcite dol; dolomite mg ; magnesite ah ; anhydrite
gyp; gypsum cp ; chalcopyrite py ; pyrite
nrl; marialite[$(Na, Ca)_4(Si, Al)_6(O, OH)_{12}(Cl, CO_3)_{0.5}$] or mizzonite[$(Na, K)Ca(Si, Al)_6O_{12}Cl$]. scapolite group



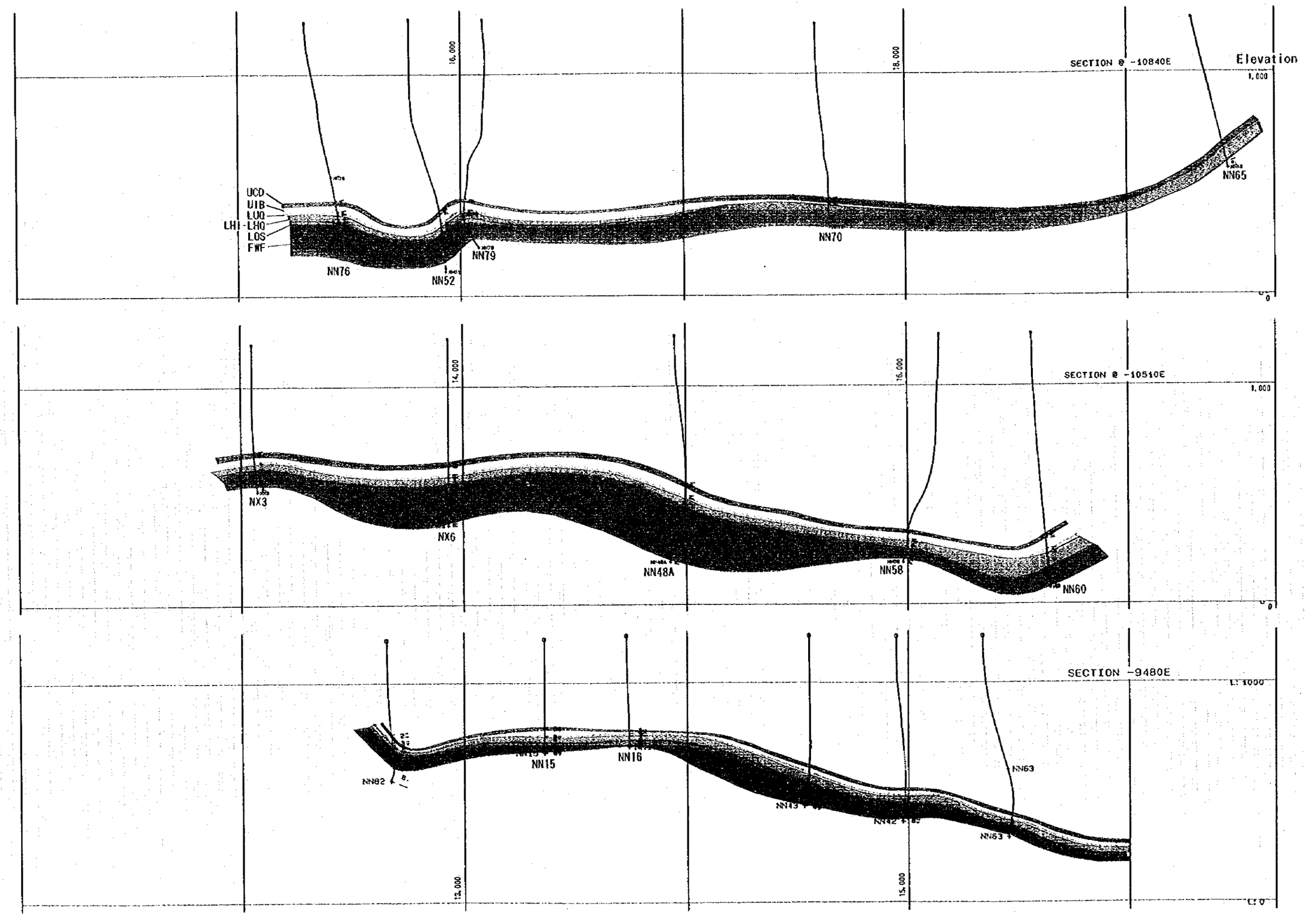
7. Plan of Borehole Collar
and Trace with Section Lines



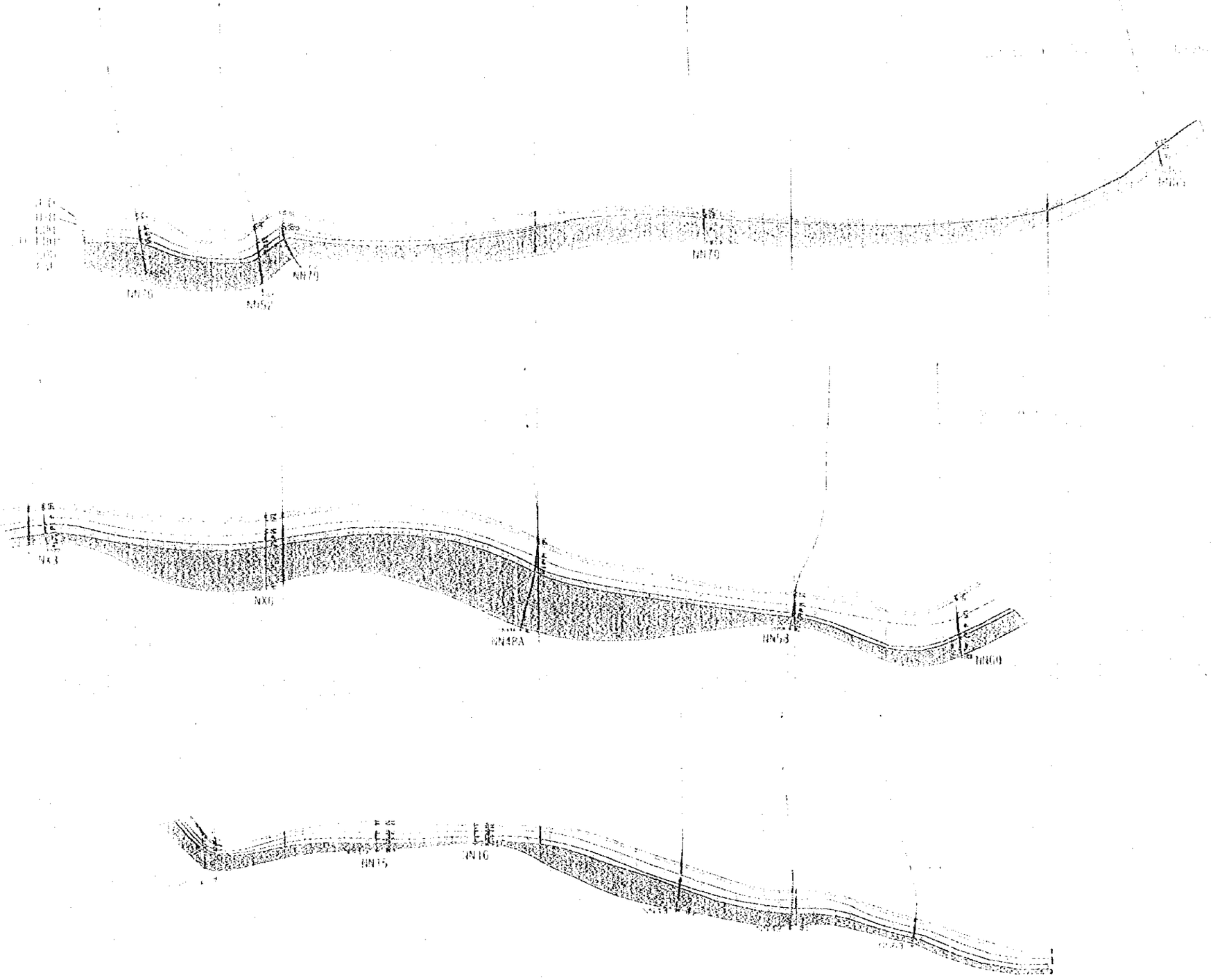
8. Geological Sections by LYNX (1)



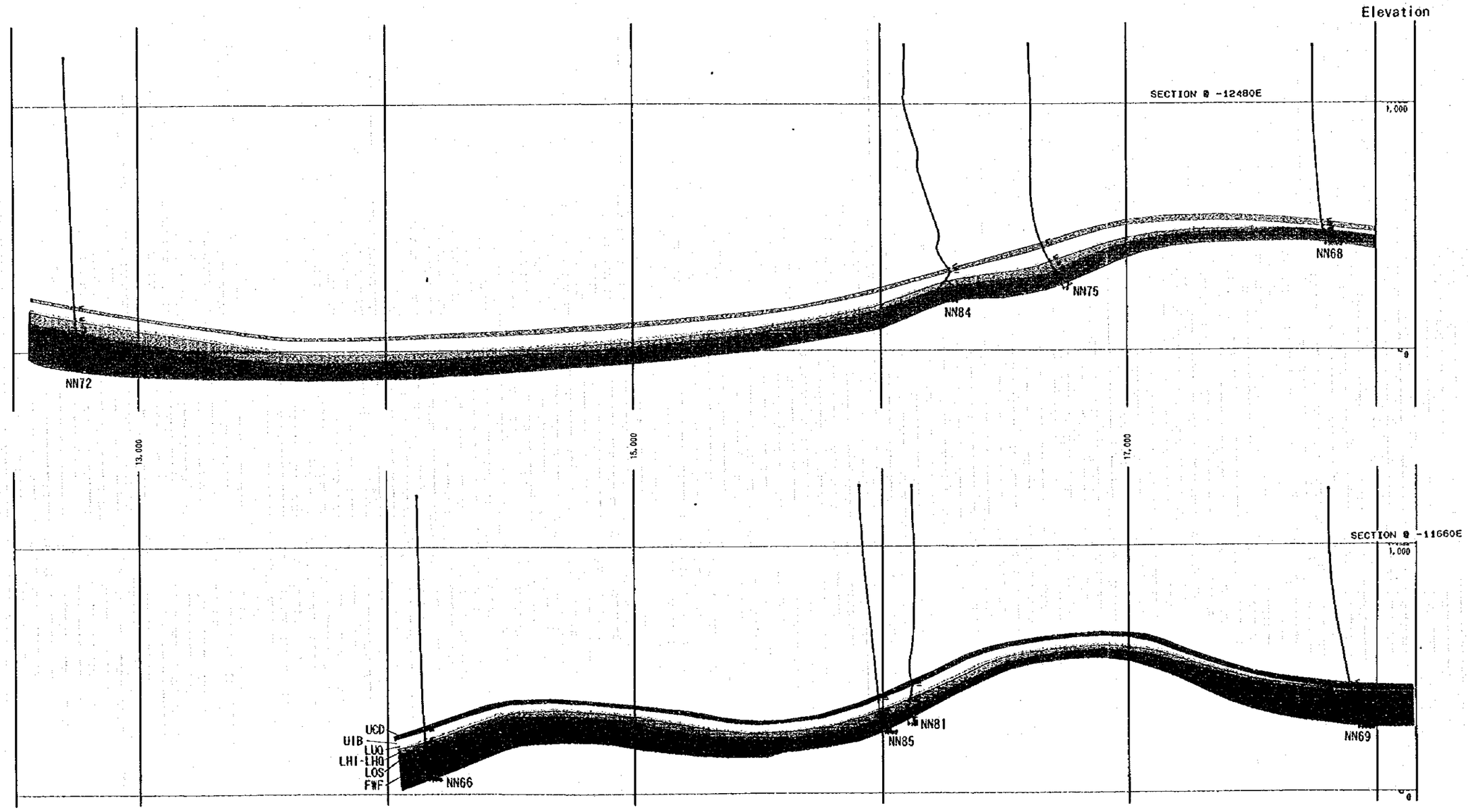
3 Geological Sections by LINE (1)



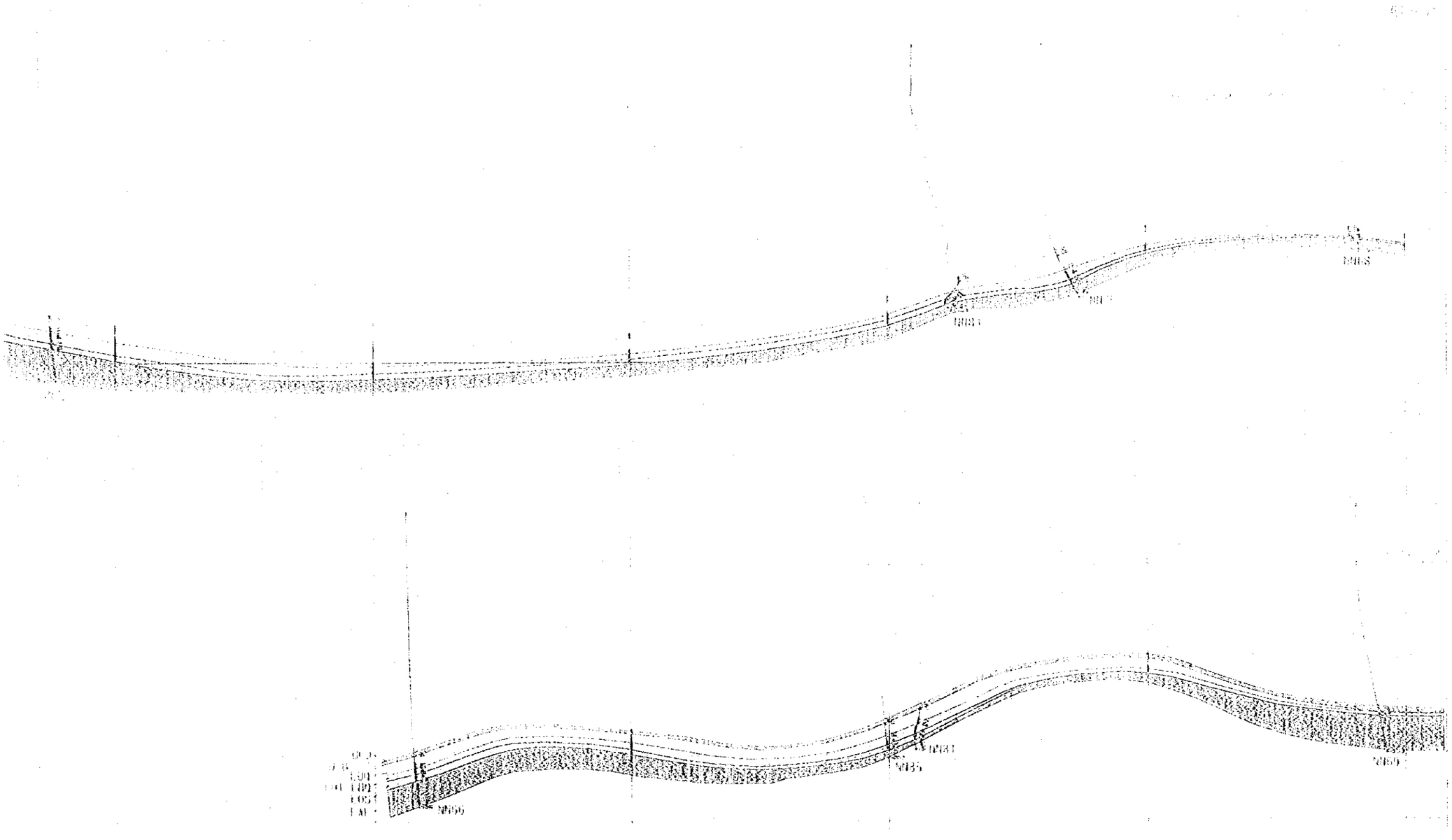
8. Geological Sections by LYNX (2)



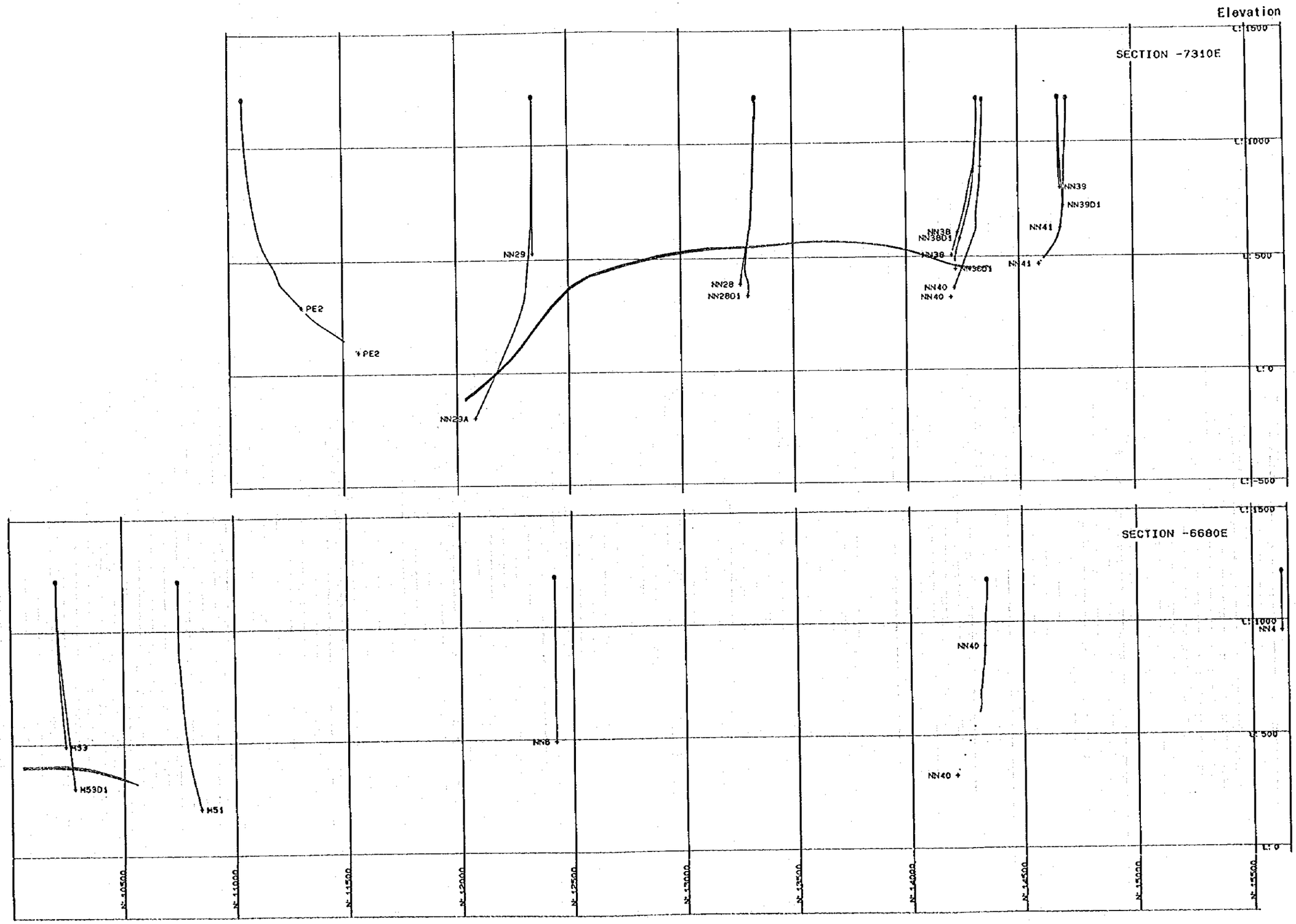
8 Geological Sections by LYNX (2)



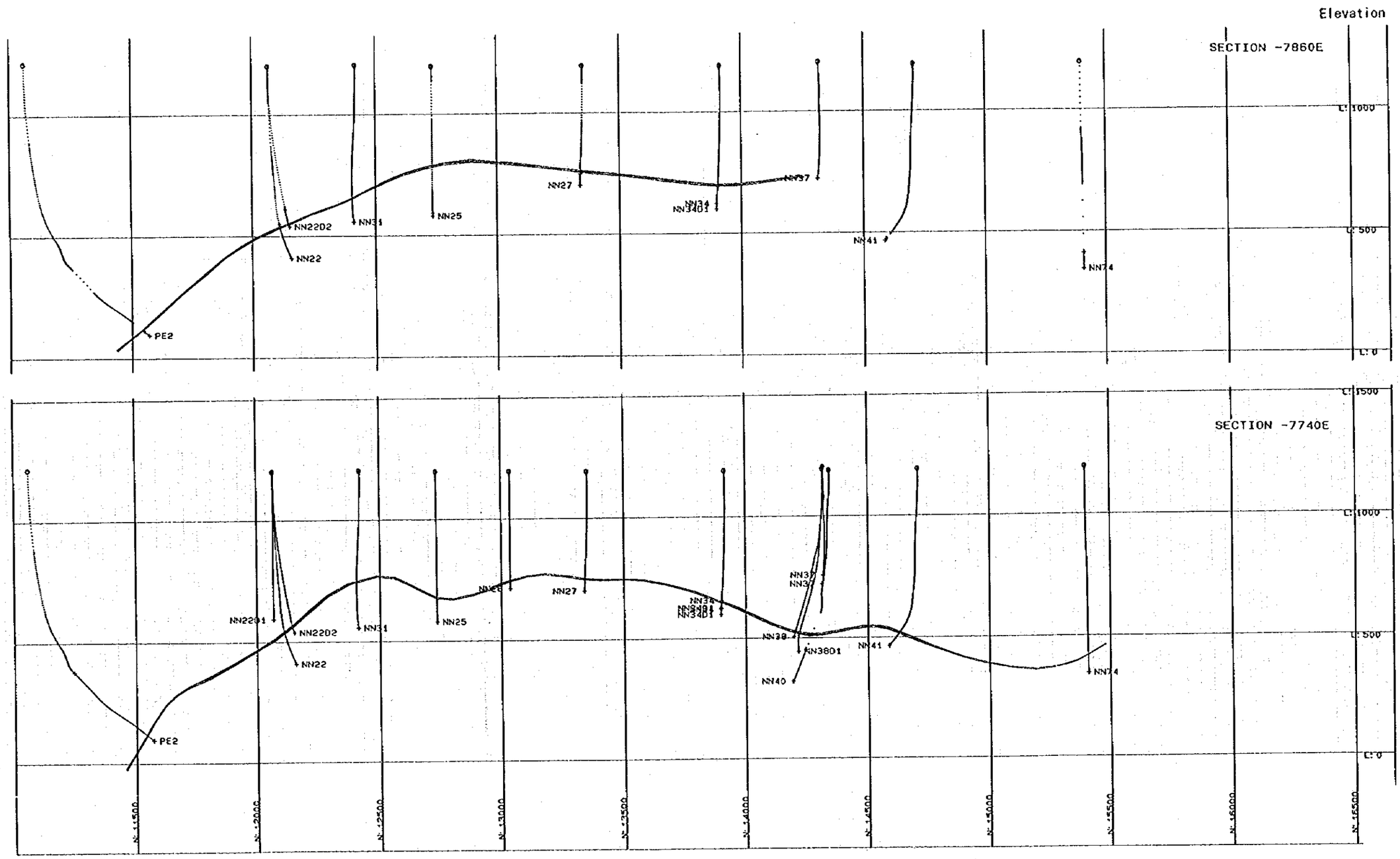
8. Geological Sections by LYNX (3)



8. Geological Sections by LYNX (3)

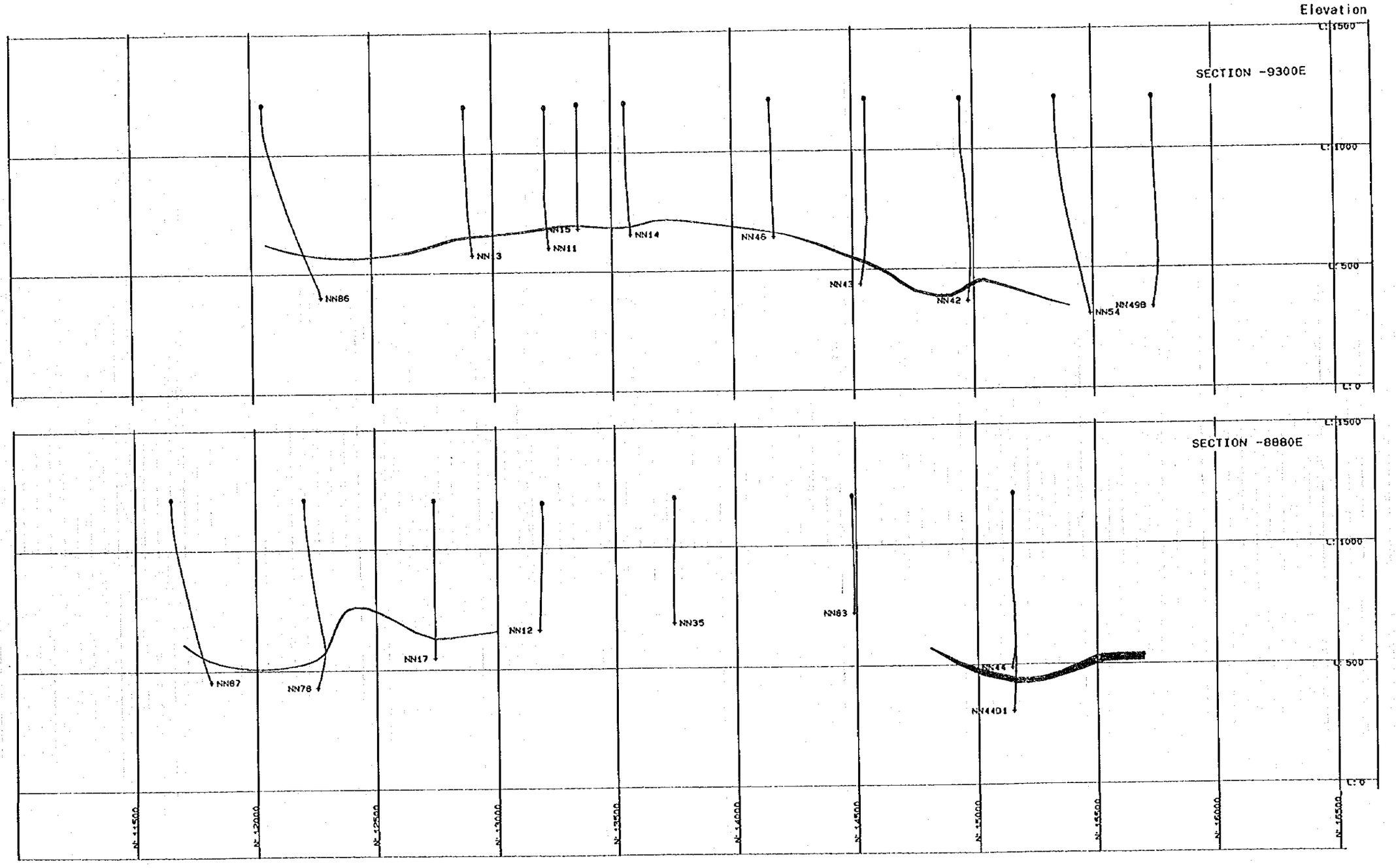


9. Orebody Sections by LYNX (1)

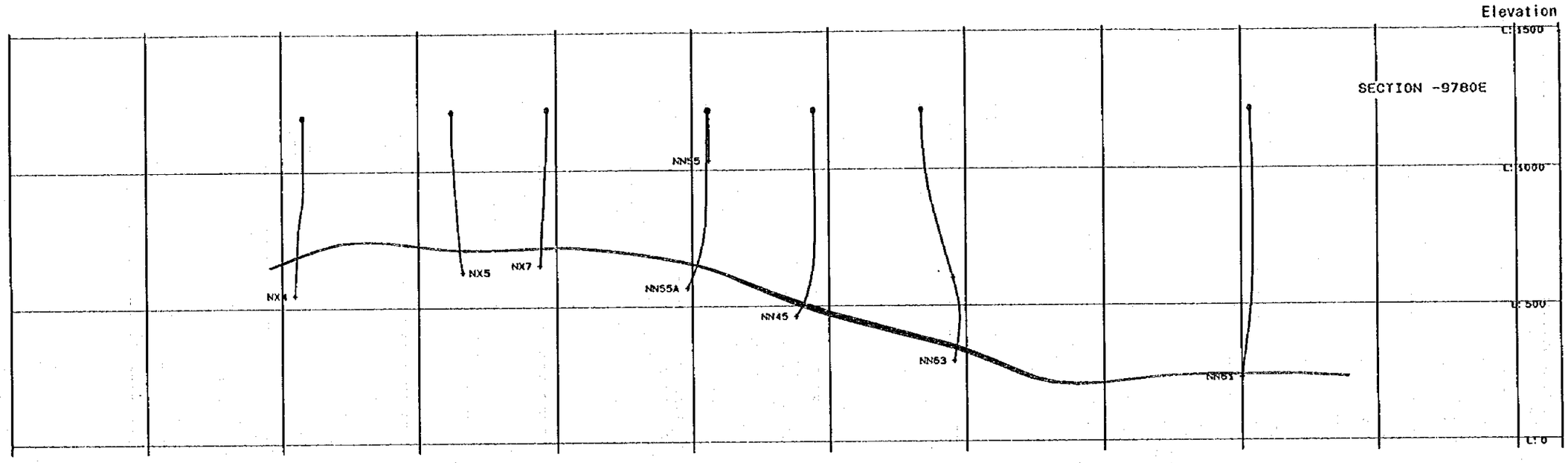


9. Orebody Sections by LYNX (2)

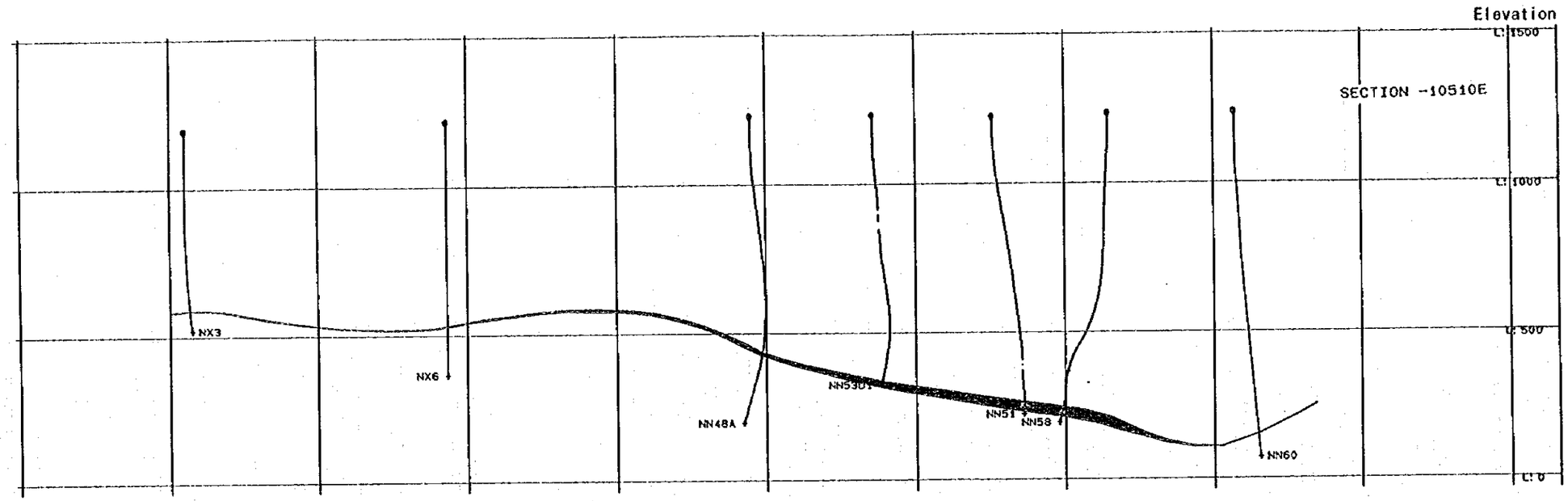
9. Orebody Sections by LYNX (3)

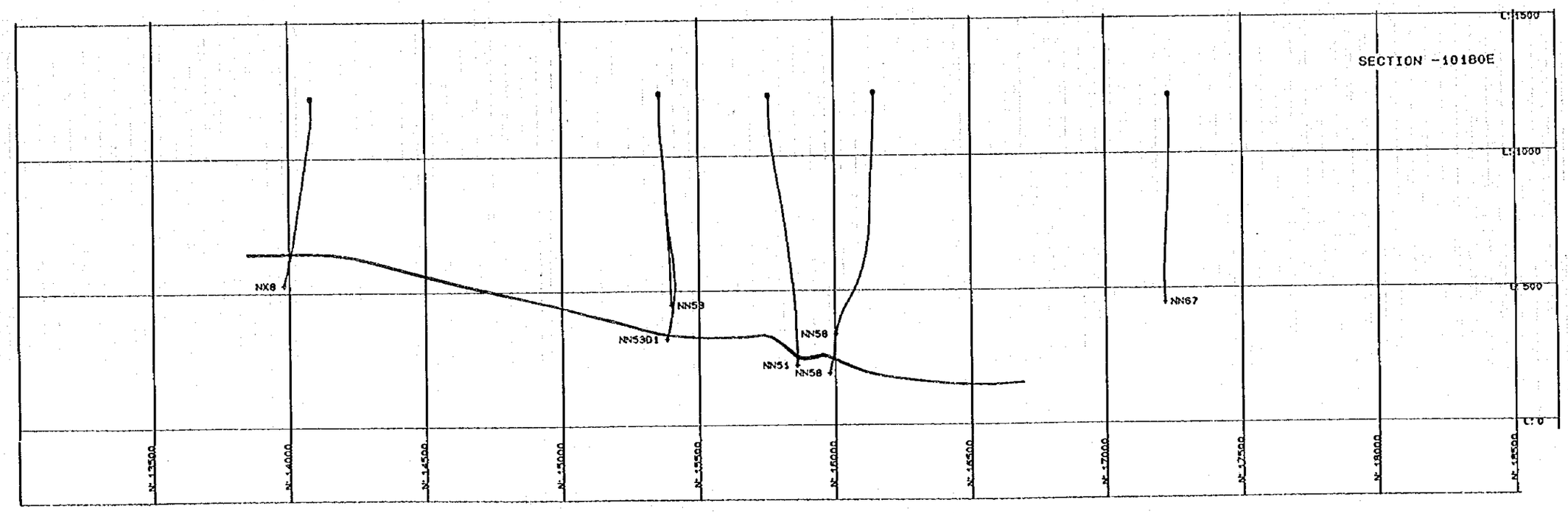


9. Orebody Sections by LYNX (4)

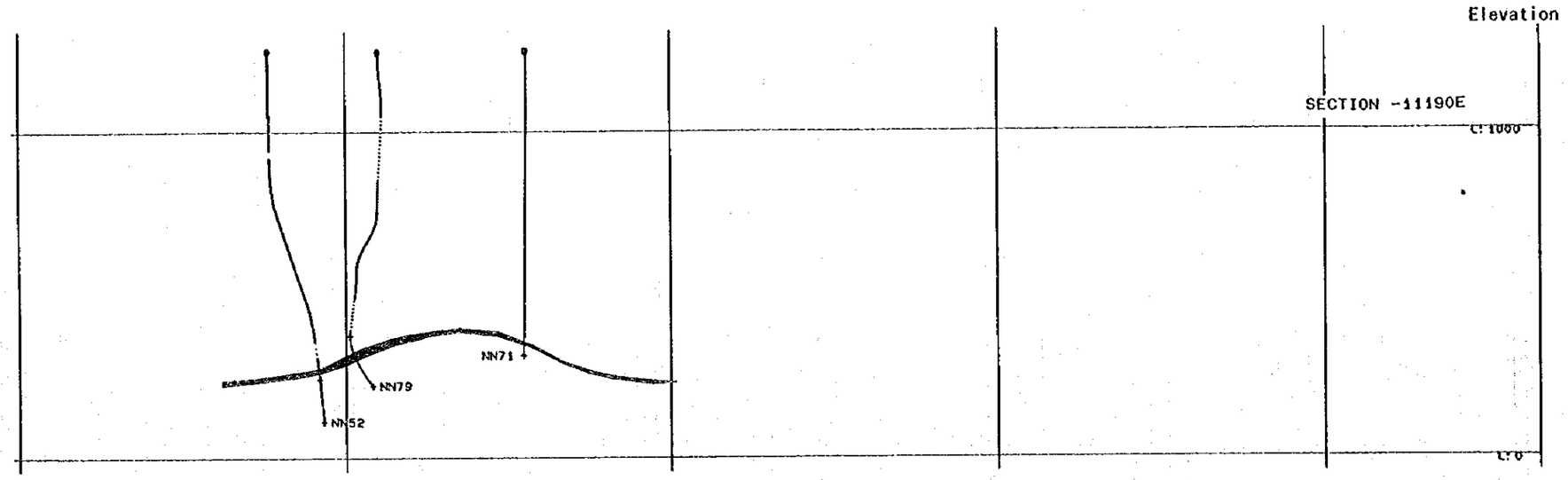


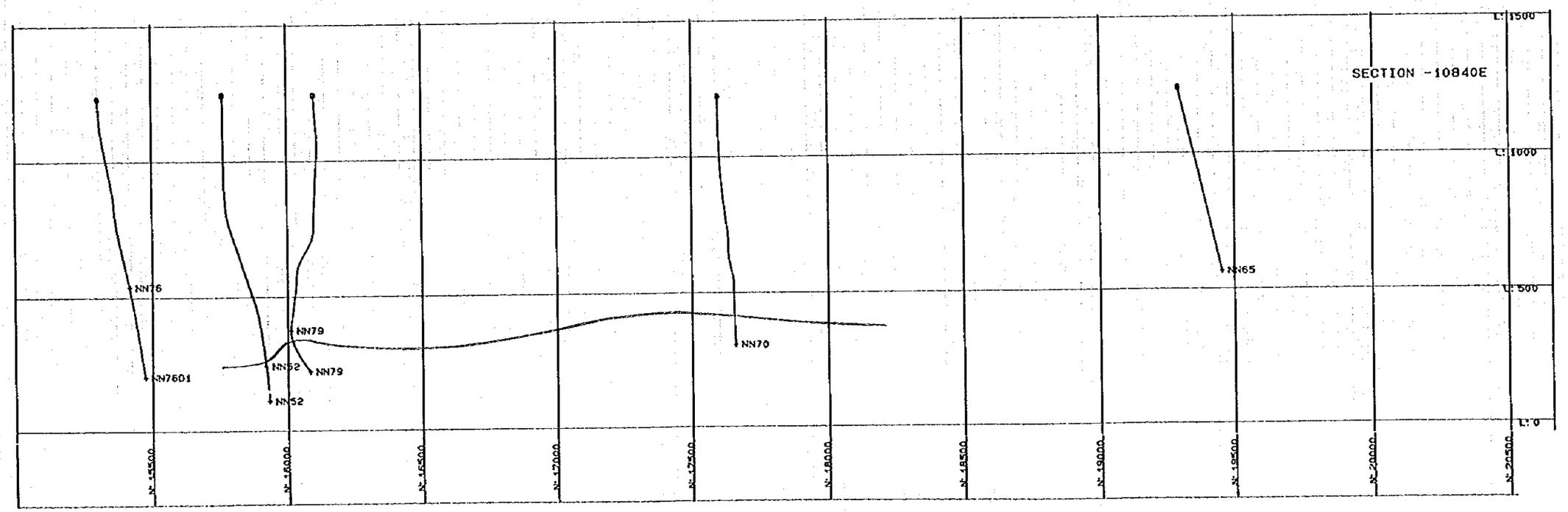
9. Orebody Sections by LYNX (5)



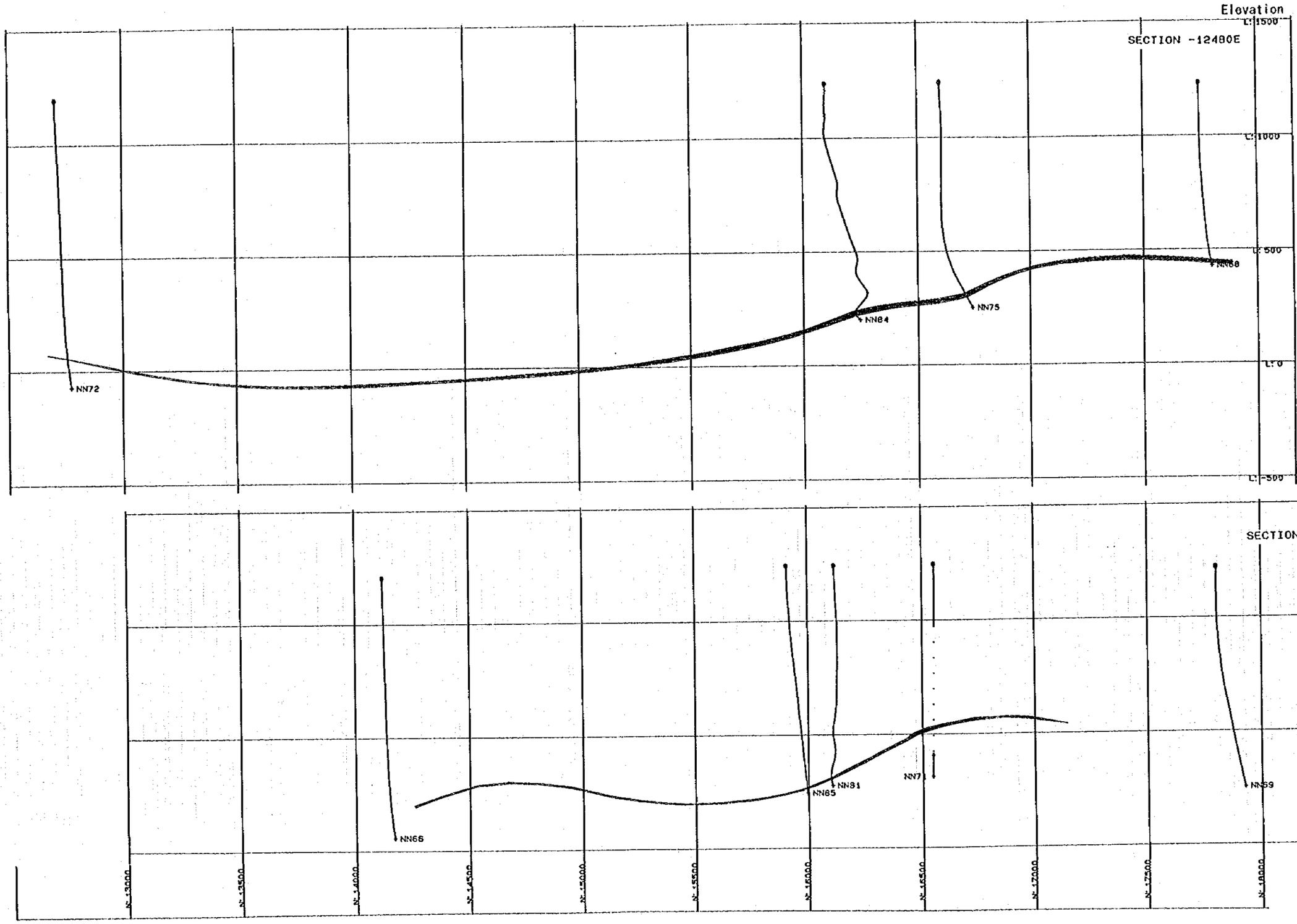


9. Orebody Sections by LYNX (6)

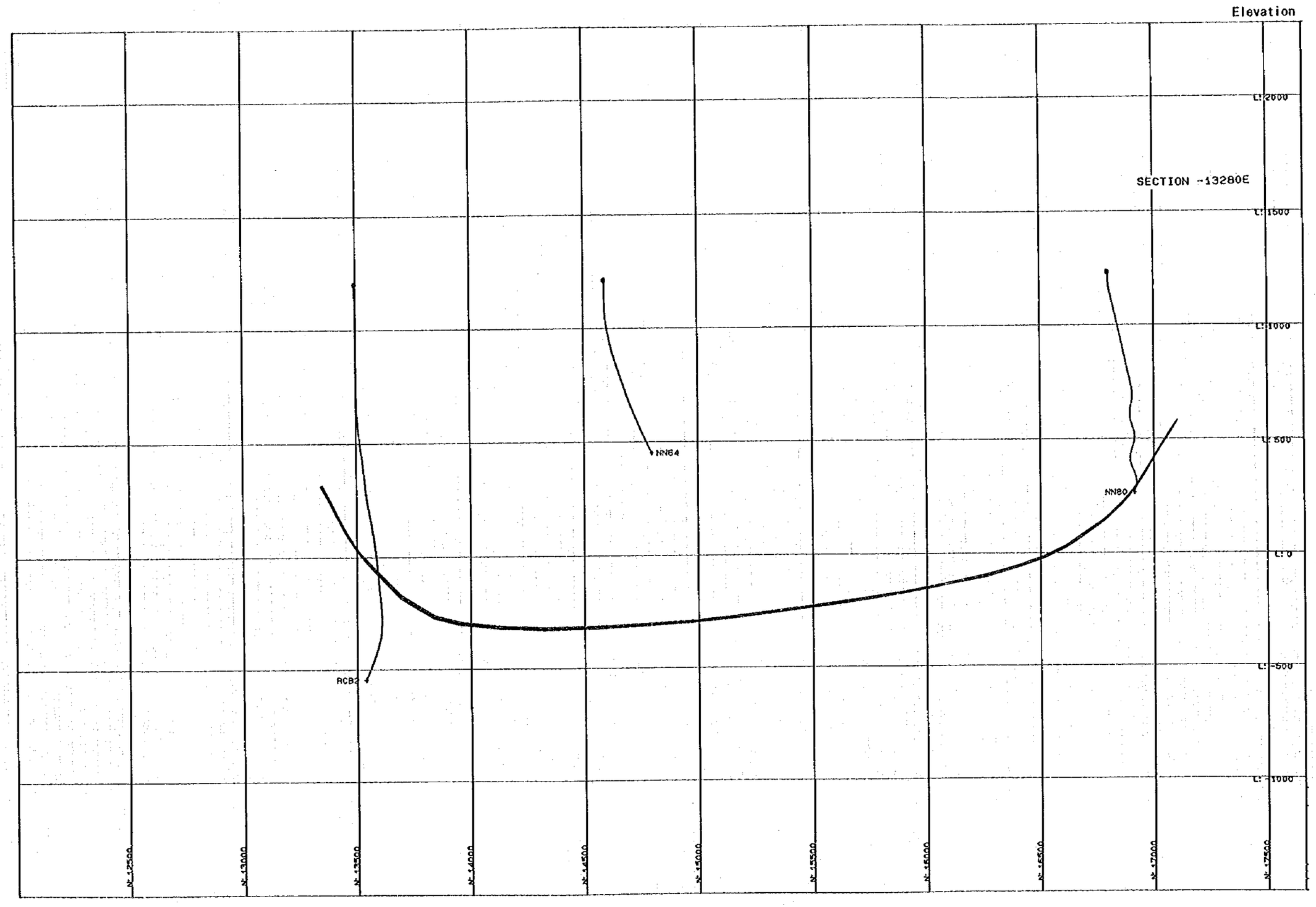




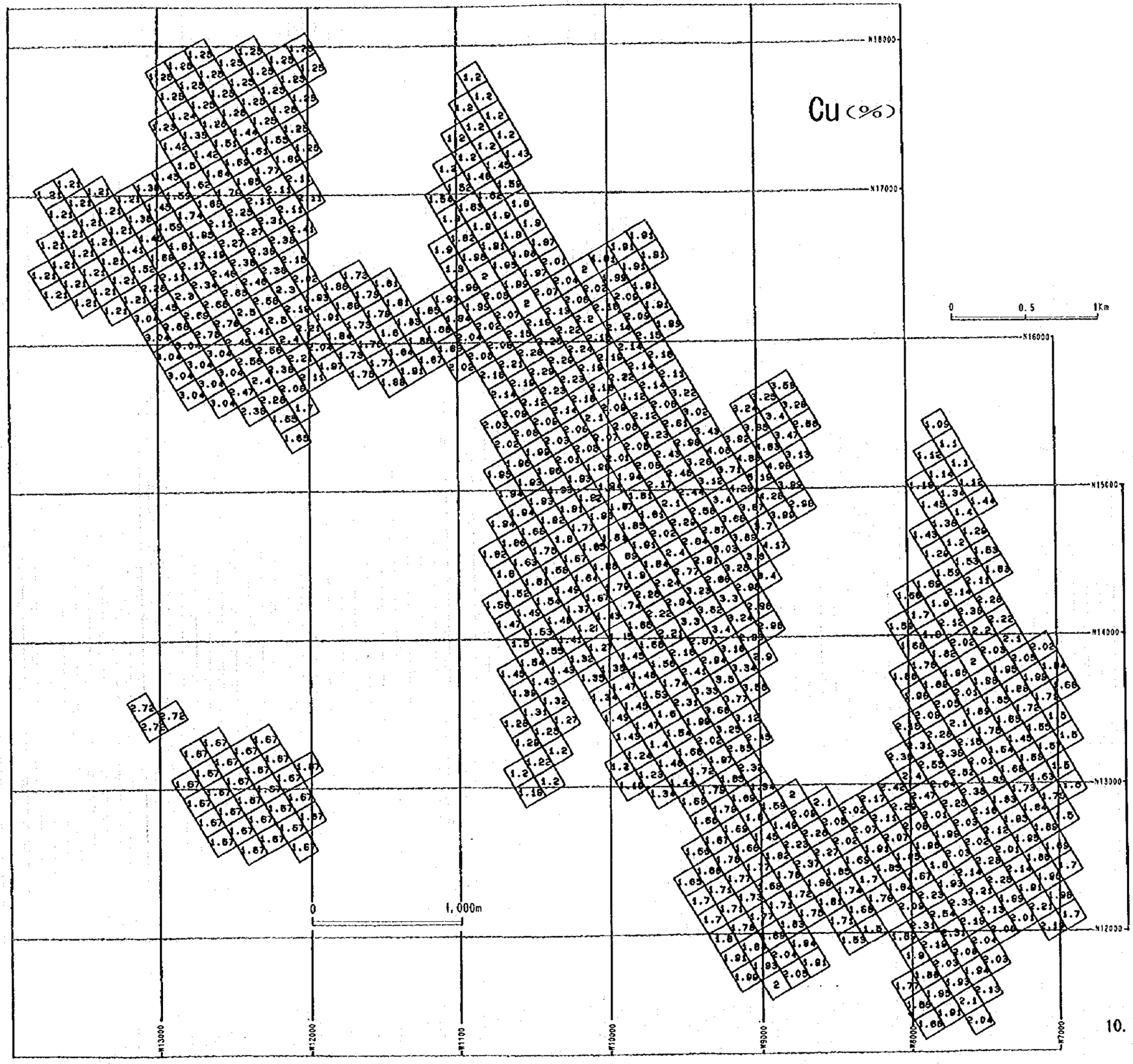
9. Orebody Sections by LYNX (7)



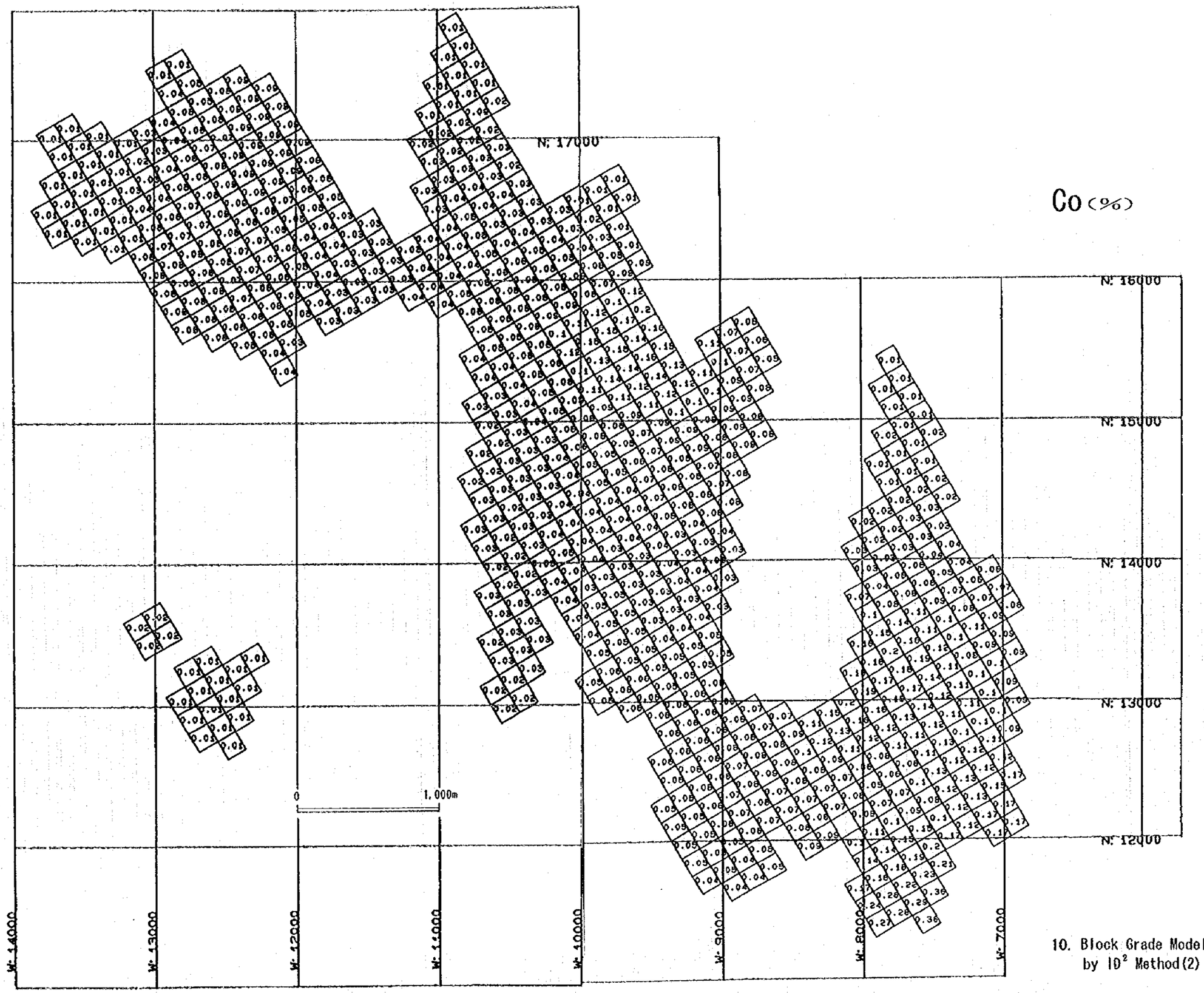
9. Orebody Sections by LYNX (8)



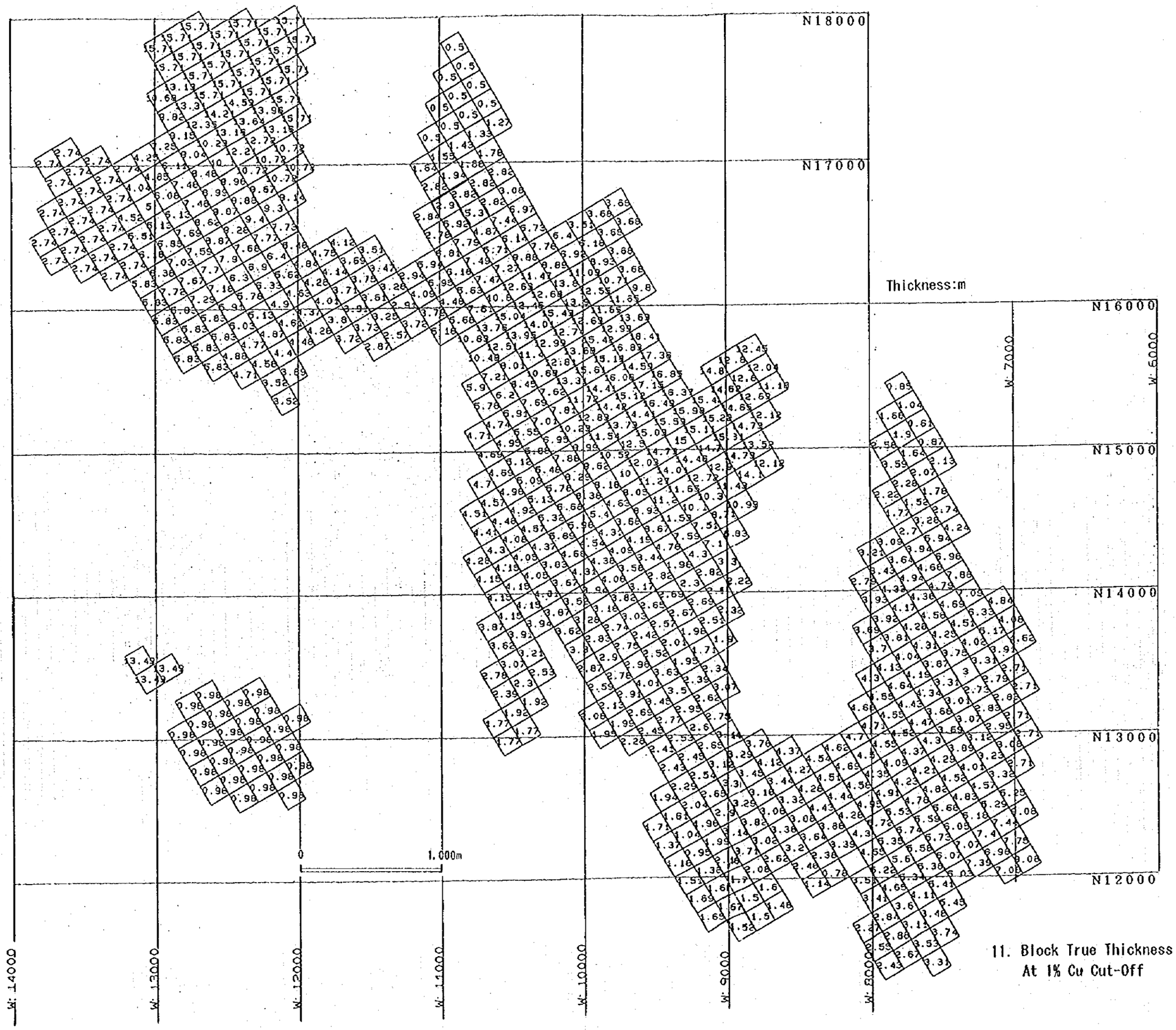
9. Orebody Sections by LYNX (9)



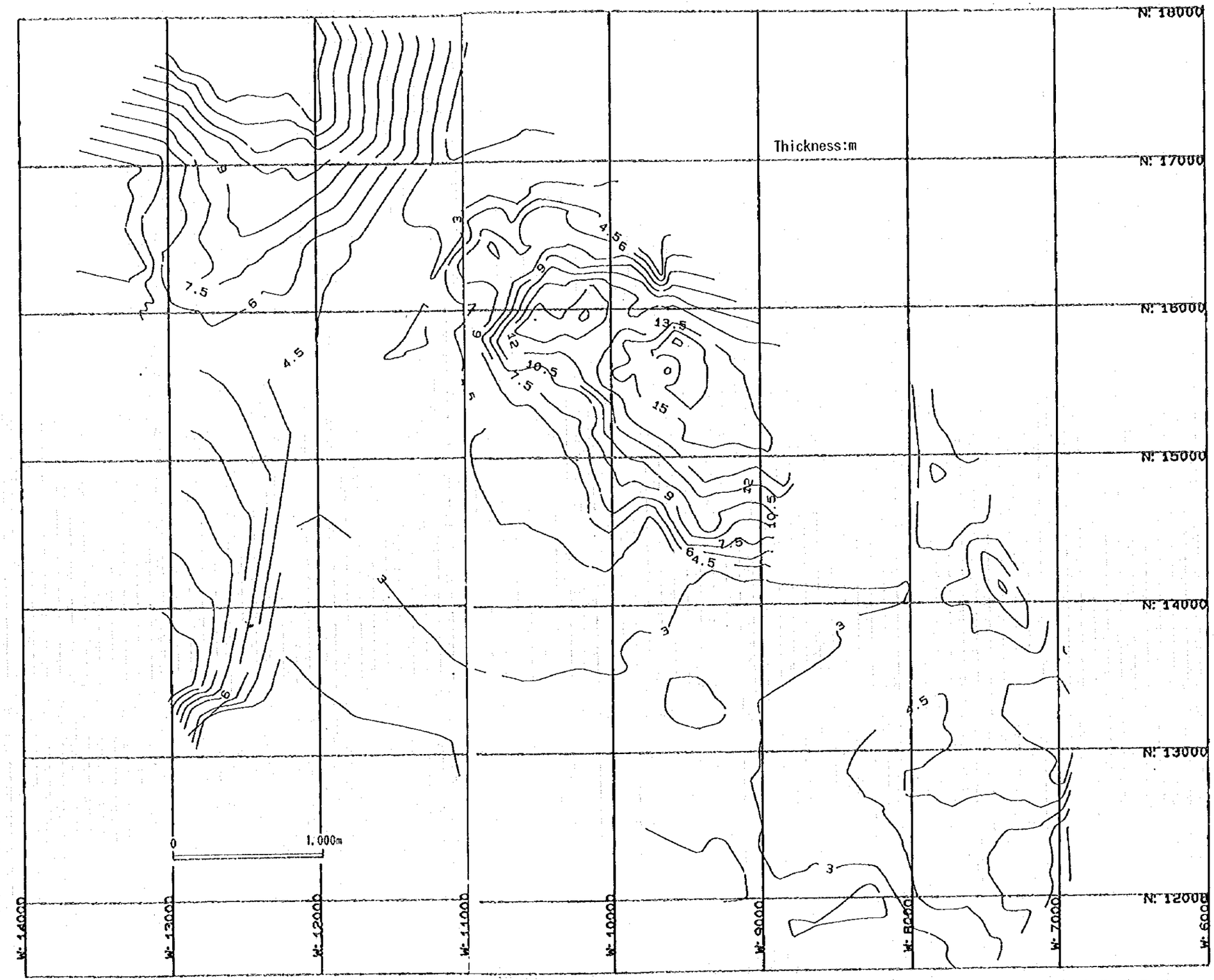
10. Block Grade Model At 1% Cu Cut-Off by ID^2 Method(1)



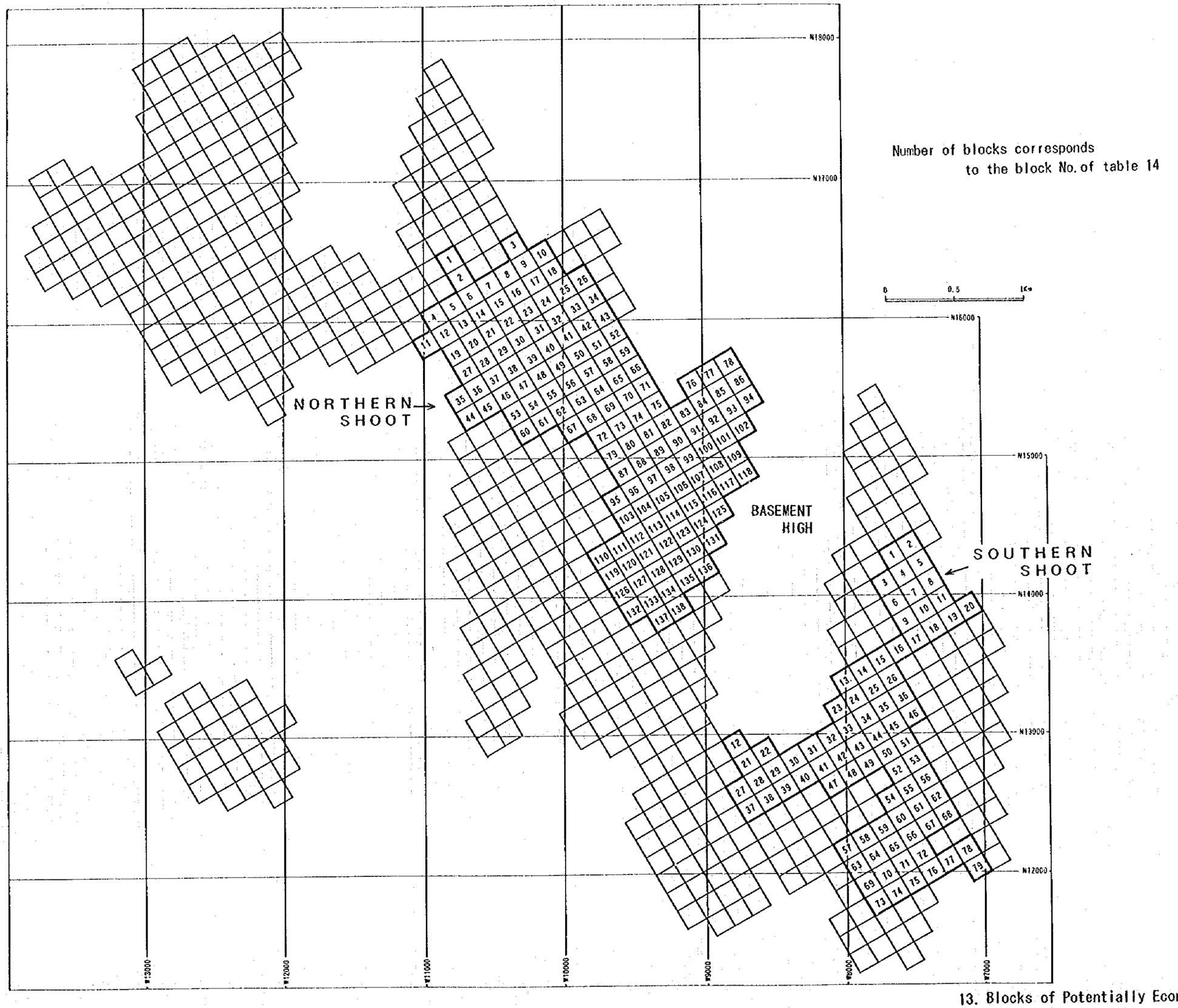
10. Block Grade Model At 1% Cu Cut-Off by 10^2 Method(2)



11. Block True Thickness Grids
At 1% Cu Cut-Off



12. Block True Thickness Contours of Orebody



13. Blocks of Potentially Economic Mineralization

14. Grade and Tonnage of Potentially Economic Mineralizati(1)

NORTHERN SHOOT

Block No	VOLUME m³	GRADE %Cu	VOL*GR	Block No	VOLUME m³	GRADE %Cu	VOL*GR	Block No	VOLUME m³	GRADE %Cu	VOL*GR
1	29300.7	2	58601.4	49	239604	2.18	522336.72	96	113207.2	2.29	259244.488
2	96047.06	2.05	196896.473	50	203959.2	2.22	452789.424	97	123983.6	2.58	319877.688
3	5423.37	2.01	10900.9737	51	114575.7	2.14	245191.998	98	235169	3.4	799574.6
4	33265.03	2.04	67860.6612	52	29366.08	2.16	63430.7328	99	270393.1	4.26	1151874.56
5	96081.92	2.07	198889.574	53	210905.2	2.03	428137.556	100	291329.2	5.19	1511998.5
6	227143.2	2.07	470186.424	54	152323.7	2.06	313786.822	101	199084.8	4.98	991442.304
7	213383.2	2	426766.38	55	150745.8	2.1	316566.18	102	58898.17	3.13	184351.272
8	49950.96	2.07	103398.487	56	229200	2.09	479028	103	141548.4	2.4	339716.184
9	10810.02	2.04	22052.4408	57	248884.4	2.12	527634.949	104	147633.5	2.84	419279.14
10	796.76	2	1593.52	58	124921.4	2.14	267331.796	105	130734.8	2.87	375208.876
11	3454.54	2.02	6978.1708	59	3240.59	2.11	6837.6449	106	262988.7	3.66	962538.605
12	43007.6	2.06	88595.656	60	130690.6	2.01	262688.106	107	303215.1	3.87	1173442.4
13	167698.1	2.08	348812.027	61	129469.1	2.05	265411.655	108	175570.9	4.26	747932.077
14	352184.7	2.15	757197.084	62	161358.9	2.07	334012.944	109	108107.5	3.99	431348.925
15	329835.3	2.19	722339.329	63	220450.3	2.06	454127.618	110	76378.69	2.25	171852.053
16	124431.9	2.13	265039.947	64	291256.5	2.12	617463.78	111	88679.59	2.24	198642.282
17	38383.97	2.01	77151.7797	65	156748.7	2.08	326037.296	112	116694.3	2.77	323243.211
18	27545.79	2.02	55642.4958	66	17596.83	3.22	56662.1146	113	193503.1	2.91	563093.992
19	70710.52	2.16	152734.723	67	183425.9	2.01	368686.079	114	243953.8	3.03	739180.014
20	244306.7	2.21	539917.807	68	215372.1	2.06	443666.505	115	269991.7	3.89	1050267.67
21	838173	2.29	1919416.17	69	218955.6	2.23	488270.966	116	149898.8	3.7	554625.56
22	311101.2	2.25	699977.678	70	154471	2.61	403169.31	117	47000.06	3.99	187530.239
23	185252.3	2.22	411260.106	71	21318.97	3.02	64383.2894	118	18457.42	2.96	54633.9632
24	76727.73	2.25	172637.393	72	276817.6	2.08	575780.587	119	57024.86	2.22	126595.189
25	55368.99	2.16	119597.018	73	170973.6	2.43	415465.824	120	71586.42	2.94	210464.075
26	72417.16	2.09	151351.864	74	90797.77	2.98	270577.355	121	68240.07	3.23	220415.426
27	110734.3	2.14	236971.402	75	7151.42	3.42	24457.8564	122	134427.6	2.86	384462.907
28	304059.3	2.19	665889.889	76	357.14	3.24	1157.1336	123	243149	3.25	790234.25
29	341951.2	2.29	783068.225	77	51352.07	3.25	166894.228	124	168787	3.8	641390.6
30	306706.8	2.29	702358.595	78	78581.12	3.58	281320.41	125	1910.96	4.17	7968.7032
31	185670.1	2.24	415901.002	79	271525.3	2.17	589209.923	126	41342.2	2.21	91366.262
32	118897.1	2.18	259195.678	80	185424.8	2.46	456145.008	127	49487.23	3.3	163307.859
33	76694.02	2.14	164125.203	81	70853.53	3.28	232399.578	128	37393.89	3.62	135365.882
34	65740.53	2.09	137397.708	82	40073.02	4.06	162696.461	129	141756.4	3.3	467796.153
35	2756.39	2.03	5595.4717	83	68517.47	3.92	268588.482	130	218934.4	2.98	652424.542
36	181186.3	2.09	378679.367	84	156805.1	3.85	603699.597	131	26719.52	3.4	90846.368
37	305403.5	2.12	647455.42	85	371404.1	3.4	1262773.91	132	25805.97	2.18	56257.0146
38	269613.1	2.23	601237.191	86	164024.1	3.28	537999.015	133	29736.81	2.97	88318.3257
39	226283.9	2.23	504613.119	87	154751.8	2.1	324978.78	134	75494.09	3.4	256678.906
40	227310.5	2.19	497809.995	88	149168	2.44	363969.92	135	178878.3	3.24	579565.692
41	160009	2.19	350419.71	89	168034.9	3.12	524268.919	136	90512.11	2.96	267915.846
42	98010.84	2.14	209743.198	90	176137.6	3.71	653470.459	137	33804.22	2.94	99384.4068
43	60152.55	2.15	129327.983	91	246098.4	4.86	1196038.27	138	134622.5	3.16	425407.1
44	41403.5	2.02	83635.07	92	317463.9	4.83	1533350.69		20521878	369.17	55389238.9
45	253523.3	2.08	527328.464	93	280470	3.47	973230.9				
46	252732	2.09	528209.88	94	7271.39	2.66	19341.8974	ARITH AVGR		2.675145	
47	186505.6	2.14	399121.963	95	169025	2.02	341430.5	AV GRADE=		2.699034	
48	165778.2	2.18	361386.476					TONNAGE=	54793415		

14. Grade and Tonnage of Potentially Economic Mineralizati(2)

SOUTHERN SHOOT

BLOCK NO	VOLUME m3	GRADE %Cu	VOL*GR	BLOCK NO	VOLUME m3	GRADE %Cu	VOL*GR
1	104514.6	2.14	223661.244	49	110796.1	2.01	222700.161
2	81902.59	2.11	172814.465	50	64930.93	2.25	146094.593
3	69978.15	2.12	148353.678	51	59596.74	2.38	141840.241
4	67519.97	2.36	159347.129	52	59994.84	2.03	121789.525
5	8494.82	2.28	19368.1896	53	56917.4	2.18	124079.932
6	73213.62	2.02	147891.512	54	66582.1	2.03	135161.663
7	36375	2.2	80025	55	78675.62	2.02	158924.752
8	2313.24	2.22	5135.3928	56	87484.31	2.12	185466.737
9	59953.47	2	119906.94	57	34251.8	2.09	71586.262
10	14277.44	2.03	28983.2032	58	92798.52	2.23	206940.7
11	468.15	2.1	983.115	59	100712.9	1.93	194375.897
12	7927.8	2	15855.6	60	79026	2.14	169115.64
13	35220.31	2.15	75723.6665	61	87965.32	2.28	200560.93
14	140681	2.09	294023.29	62	91506.14	2.01	183927.341
15	70333.17	2.05	144182.999	63	114751.5	2.31	265075.965
16	65869.57	2.01	132397.836	64	118688.1	2.54	301467.774
17	41084.12	1.98	81346.5576	65	102400.9	2.33	238594.097
18	15608.2	1.95	30436.99	66	112303.1	2.21	248189.851
19	3996.87	2.05	8193.5835	67	112845.9	2.25	253903.275
20	54.68	2.02	110.4536	68	114958.1	2.14	246010.334
21	20765.22	2.09	43399.3098	69	149655.6	2.19	327745.742
22	43402.87	2.1	91146.027	70	110108.4	2.31	254350.404
23	1953.62	2.39	4669.1518	71	123885.5	2.19	271309.245
24	117400.1	2.31	271194.231	72	115046.2	2.13	245048.406
25	116304.9	2.26	262849.074	73	109425.3	2.03	222133.359
26	90565.38	2.1	190187.298	74	108362.6	2.08	225394.208
27	31568.34	2.23	70397.3982	75	100103.9	2.04	204211.956
28	56669.35	2.26	128072.731	76	66070.79	2.06	136105.827
29	85950.92	2.05	176199.386	77	45139.52	2.01	90730.4352
30	52257.74	2.02	105560.635	78	107526.3	2.21	237633.123
31	42776.5	2.17	92825.005	79	4856.48	2.19	10635.6912
32	43344.87	2.42	104894.585				
33	54523.19	2.4	130855.656	TOTAL	5593100	171.49	12223474.8
34	123815.7	2.55	315730.035	ARITH. AVGR		2.170759	
35	74147.05	2.36	174987.038	AV. GRADE =		2.185456	
36	91350.12	2.15	196402.758	TONNAGE =	14933576		
37	38759.38	2.37	91859.7306				
38	55041.02	2.27	124943.115				
39	78480.85	2.02	158531.317				
40	82644.77	2.07	171074.674				
41	71735.02	2.11	151360.892				
42	78696.52	2.29	180215.031				
43	107831	2.47	266342.57				
44	86597.8	2.54	219958.412				
45	76731.44	2.52	193363.229				
46	54102.74	2.01	108746.507				
47	38069.62	2.07	78804.1134				
48	90459.81	2.09	189061.003				

14. Grade and Tonnage of Potentially Economic Mineralizati(1)

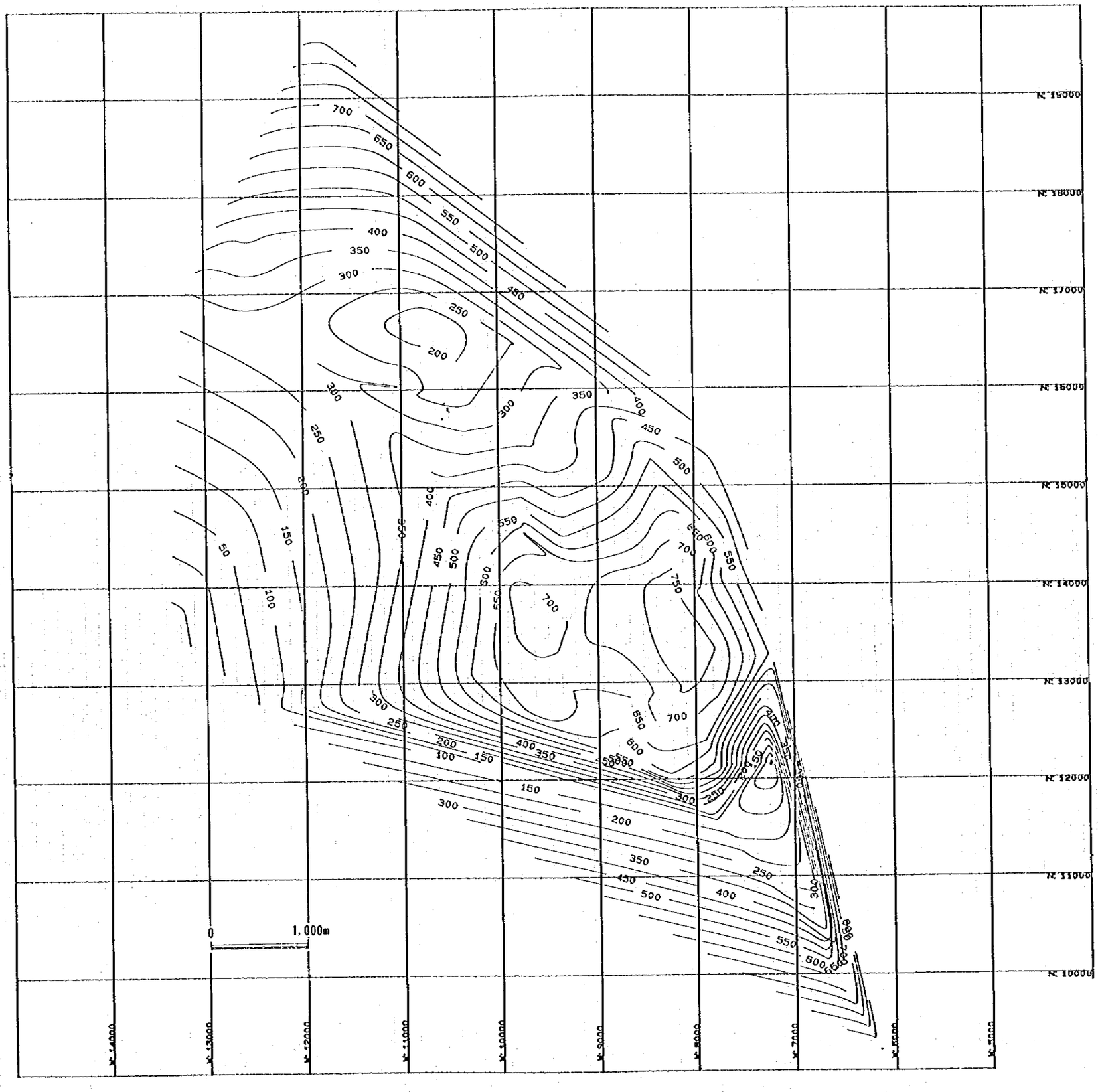
NORTHERN SHOOT

Block No	VOLUME m3	GRADE %Cu	VOL*GR	Block No	VOLUME m3	GRADE %Cu	VOL*GR	Block No	VOLUME m3	GRADE %Cu	VOL*GR
1	29300.7	2	58601.4	49	239504	2.18	522336.72	96	113207.2	2.29	259244.488
2	96047.06	2.05	196896.473	50	203959.2	2.22	452789.424	97	123983.6	2.58	319877.688
3	5423.37	2.01	10900.9737	51	114575.7	2.14	245191.998	98	235169	3.4	799574.6
4	33265.03	2.04	67860.6612	52	29366.08	2.16	63430.7328	99	270393.1	4.26	1151874.56
5	96081.92	2.07	198889.574	53	210905.2	2.03	428137.556	100	291329.2	5.19	1511998.5
6	227143.2	2.07	470186.424	54	152323.7	2.06	313786.822	101	199084.8	4.98	991442.304
7	213383.2	2	426766.38	55	150745.8	2.1	316566.18	102	58898.17	3.13	184351.272
8	49950.96	2.07	103398.487	56	229200	2.09	479028	103	141548.4	2.4	339716.184
9	10810.02	2.04	22052.4408	57	248884.4	2.12	527634.949	104	147633.5	2.84	419279.14
10	796.76	2	1593.52	58	124921.4	2.14	267331.796	105	130734.8	2.87	375208.876
11	3454.54	2.02	6978.1708	59	3240.59	2.11	6837.6449	106	262988.7	3.66	962538.605
12	43007.6	2.06	88595.656	60	130690.6	2.01	262688.106	107	303215.1	3.87	1173442.4
13	167698.1	2.08	348812.027	61	129469.1	2.05	265411.655	108	175570.9	4.26	747932.077
14	352184.7	2.15	757197.084	62	161358.9	2.07	334012.944	109	108107.5	3.99	431348.925
15	329835.3	2.19	722339.329	63	220450.3	2.06	454127.618	110	76378.69	2.25	171852.053
16	124431.9	2.13	265039.947	64	291256.5	2.12	617463.78	111	88679.59	2.24	198642.282
17	38383.97	2.01	77151.7797	65	156748.7	2.08	326037.296	112	116694.3	2.77	323243.211
18	27545.79	2.02	55642.4958	66	17596.83	3.22	56662.1146	113	193503.1	2.91	563093.992
19	70710.52	2.16	152734.723	67	183425.9	2.01	368686.079	114	243953.8	3.03	739180.014
20	244306.7	2.21	539917.807	68	215372.1	2.06	443666.505	115	269991.7	3.89	1050267.67
21	838173	2.29	1919416.17	69	218955.6	2.23	488270.966	116	149898.8	3.7	554625.56
22	311101.2	2.25	699977.678	70	154471	2.61	403169.31	117	47000.06	3.99	187530.239
23	185252.3	2.22	411260.106	71	21318.97	3.02	64383.2894	118	18457.42	2.96	54633.9632
24	76727.73	2.25	172637.393	72	276817.6	2.08	575780.587	119	57024.86	2.22	126595.189
25	55368.99	2.16	119597.018	73	170973.6	2.43	415465.824	120	71586.42	2.94	210464.075
26	72417.16	2.09	151351.864	74	90797.77	2.98	270577.355	121	68240.07	3.23	220415.426
27	110734.3	2.14	236971.402	75	7151.42	3.42	24457.8564	122	134427.6	2.86	384462.907
28	304059.3	2.19	665889.889	76	357.14	3.24	1157.1336	123	243149	3.25	790234.25
29	341951.2	2.29	783068.225	77	51352.07	3.25	166894.228	124	168787	3.8	641390.6
30	306706.8	2.29	702358.595	78	78581.12	3.58	281320.41	125	1910.96	4.17	7968.7032
31	185670.1	2.24	415901.002	79	271525.3	2.17	589209.923	126	41342.2	2.21	91366.262
32	118897.1	2.18	259195.678	80	185424.8	2.46	456145.008	127	49487.23	3.3	163307.859
33	76694.02	2.14	164125.203	81	70853.53	3.28	232399.578	128	37393.89	3.62	135365.882
34	65740.53	2.09	137397.708	82	40073.02	4.06	162696.461	129	141756.4	3.3	467796.153
35	2756.39	2.02	5595.4717	83	68517.47	3.92	268588.482	130	218934.4	2.98	652424.542
36	181186.3	2.09	378679.367	84	156805.1	3.85	603699.597	131	26719.52	3.4	90846.368
37	305403.5	2.12	647455.42	85	371404.1	3.4	1262773.91	132	25805.97	2.18	56257.0146
38	269613.1	2.23	601237.191	86	164024.1	3.28	537999.015	133	29736.81	2.97	88318.3257
39	226283.9	2.23	504613.119	87	154751.8	2.1	324978.78	134	75494.09	3.4	256679.906
40	227310.5	2.19	497809.995	88	149168	2.44	363969.92	135	178878.3	3.24	579565.692
41	160009	2.19	350419.71	89	168034.9	3.12	524268.919	136	90512.11	2.96	267915.846
42	98010.84	2.14	209743.198	90	176137.6	3.71	653470.459	137	33804.22	2.94	99384.4068
43	60152.55	2.15	129327.983	91	246098.4	4.86	1196038.27	138	134622.5	3.16	425407.1
44	41403.5	2.02	83635.07	92	317463.9	4.83	1533350.69		20521878	369.17	55389238.9
45	253523.3	2.08	527328.464	93	280470	3.47	973230.9				
46	252732	2.09	528209.88	94	7271.39	2.66	19341.8974	ARITH AVGR		2.675145	
47	186505.6	2.14	399121.963	95	169025	2.02	341430.5	AV GRADE=		2.699034	
48	165778.2	2.18	361396.476					TONNAGE=	54793415		

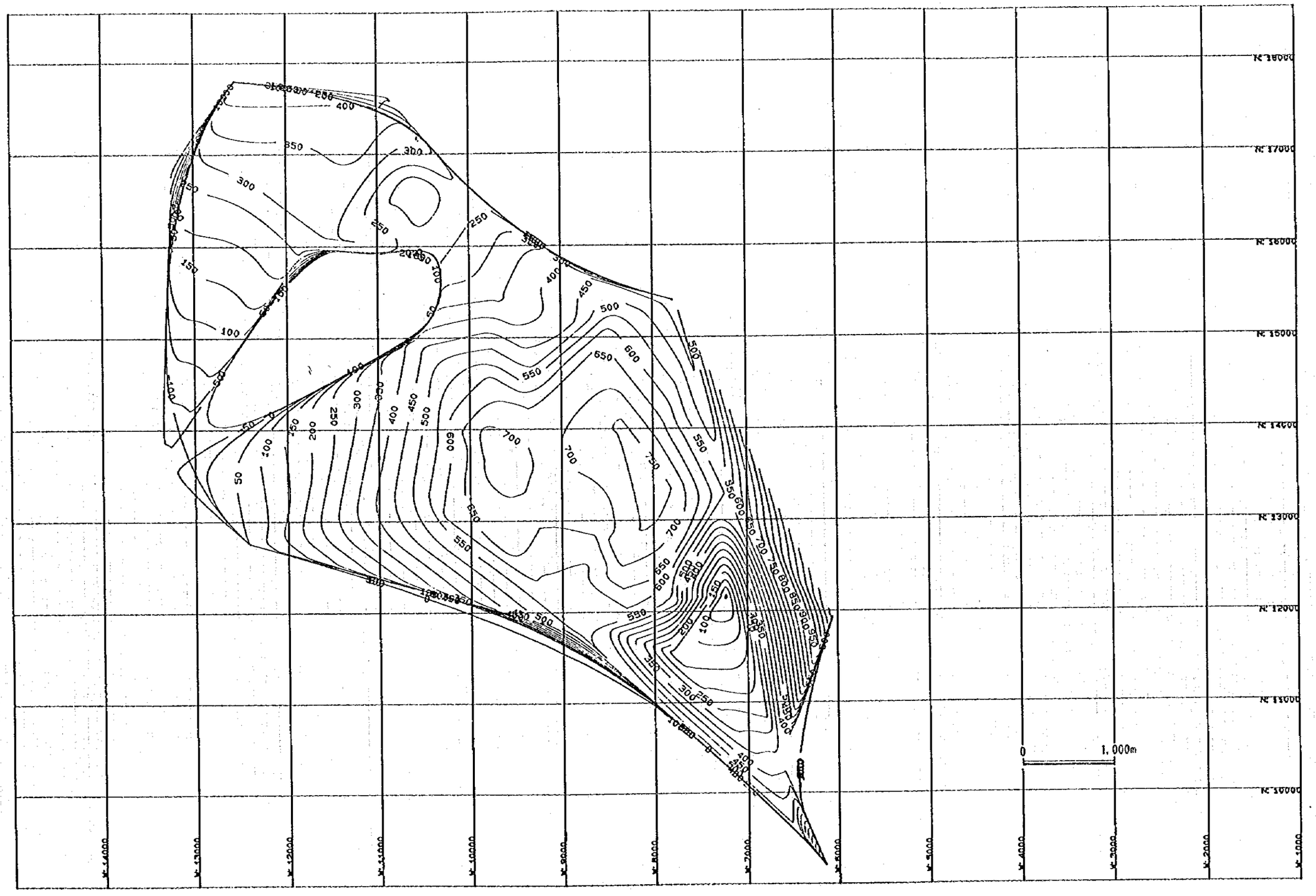
14. Grade and Tonnage of Potentially Economic Mineralizati(4)

SOUTHERN SHOOT

Block No	VOLUME(m3)	GRADE(%Co)	VOL*CoGR	Block No	VOLUME(m3)	GRADE(%Co)	VOL*CoGR	Block No	VOLUME(m3)	GRADE(%Co)	VOL*CoGR
1	104514.6	0.03	3135.438	28	56669.35	0.08	4533.548	55	78675.62	0.11	8654.318
2	81902.59	0.03	2457.078	29	85950.92	0.09	7735.583	56	87484.31	0.13	11372.96
3	69978.15	0.03	2099.345	30	52257.74	0.11	5748.351	57	34251.8	0.08	2740.144
4	67519.97	0.03	2025.599	31	42776.5	0.15	6416.475	58	92798.52	0.07	6495.896
5	8494.82	0.03	254.8446	32	43344.87	0.2	8668.974	59	100712.9	0.27	27192.48
6	73213.62	0.06	4392.817	33	54523.19	0.19	10359.41	60	79026	0.1	7902.6
7	36375	0.04	1455	34	123815.7	0.17	21048.67	61	87965.32	0.13	11435.49
8	2313.24	0.04	92.5296	35	74147.05	0.18	13346.47	62	91506.14	0.12	10980.74
9	59953.47	0.08	4796.278	36	91350.12	0.19	17356.52	63	114751.5	0.11	12622.67
10	14277.44	0.05	713.872	37	38759.38	0.09	3488.344	64	118688.1	0.1	11868.81
11	468.15	0.04	18.726	38	55041.02	0.08	4403.282	65	102400.9	0.09	9216.081
12	7927.8	0.07	554.946	39	78480.85	0.1	7848.085	66	112303.1	0.08	8984.248
13	35220.31	0.16	5635.25	40	82644.77	0.12	9917.372	67	112845.9	0.12	13541.51
14	140681	0.15	21102.15	41	71735.02	0.13	9325.553	68	114958.1	0.13	14944.55
15	70333.17	0.14	9846.644	42	78696.52	0.16	12591.44	69	149655.59	0.14	20951.78
16	65869.57	0.11	7245.653	43	107831	0.16	17252.96	70	110108.4	0.15	16516.26
17	41084.12	0.09	3697.571	44	86597.8	0.16	13855.65	71	123885.5	0.15	18582.83
18	15608.2	0.07	1092.574	45	76731.44	0.17	13044.34	72	115046.2	0.1	11504.62
19	3996.87	0.06	239.8122	46	54102.74	0.14	7574.384	73	109425.3	0.18	19696.55
20	54.68	0.06	3.2808	47	33069.62	0.11	4187.658	74	108362.6	0.19	20588.89
21	20765.22	0.07	1453.565	48	90459.81	0.12	10855.18	75	100103.9	0.2	20020.78
22	43402.87	0.07	3038.201	49	110796.1	0.12	13295.53	76	66070.79	0.17	11232.03
23	1953.62	0.16	312.5792	50	64930.93	0.13	8441.021	77	45139.52	0.12	5416.742
24	117400.1	0.18	21132.02	51	59596.74	0.14	8343.544	78	107526.3	0.17	18279.47
25	116304.9	0.2	23260.98	52	59994.84	0.11	6599.432	79	4856.48	0.17	825.6016
26	90565.38	0.16	14490.46	53	56917.4	0.12	6830.088				
27	31568.34	0.08	2525.467	54	66582.1	0.08	5326.568				
						TOTALS			5593100	9.27	717035.2
						ARITH.AVGR				0.11734177	
						AV.GRADE				0.12819997	

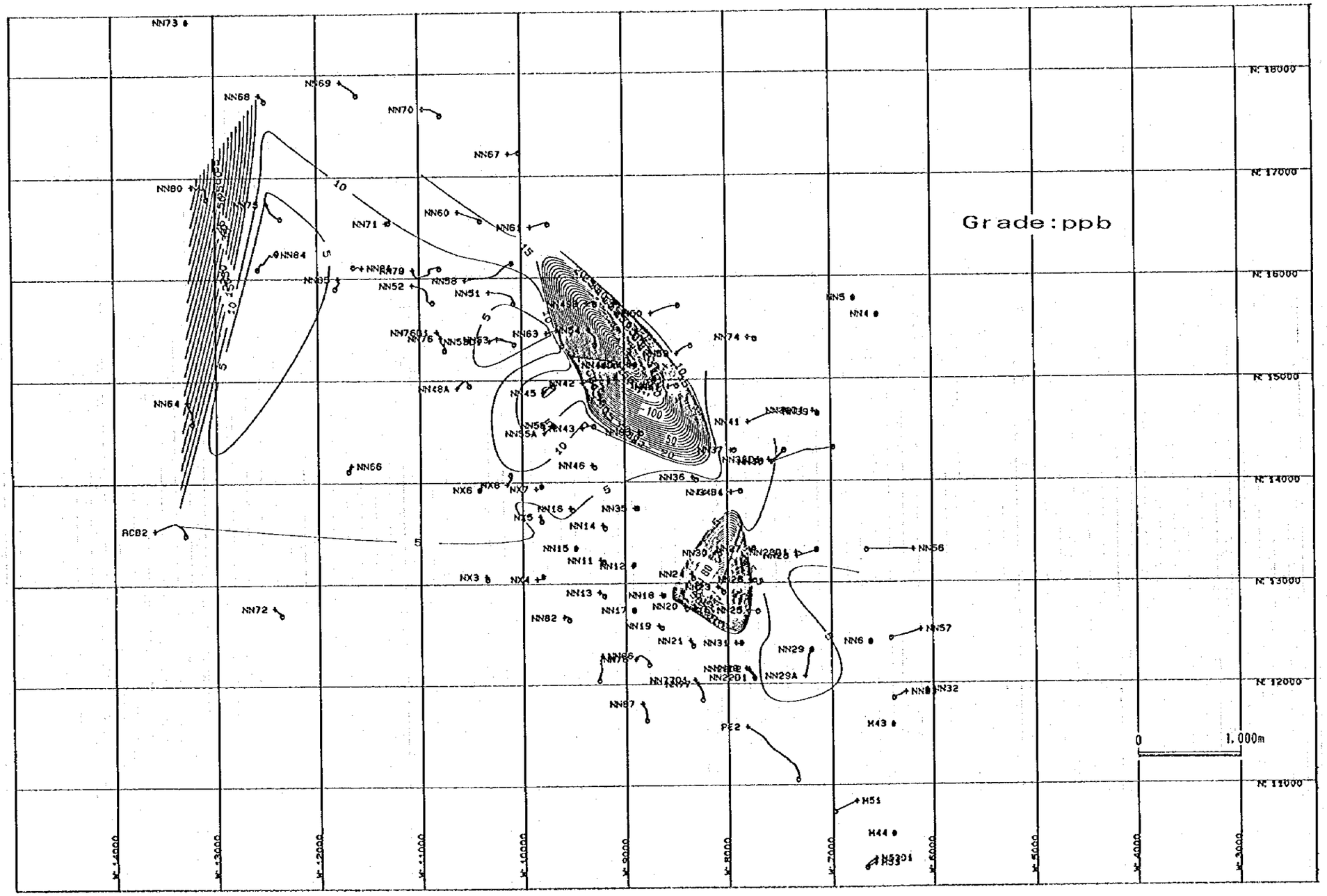


15. Footwall Elevation Contours of 0.5% Cu Mineralization

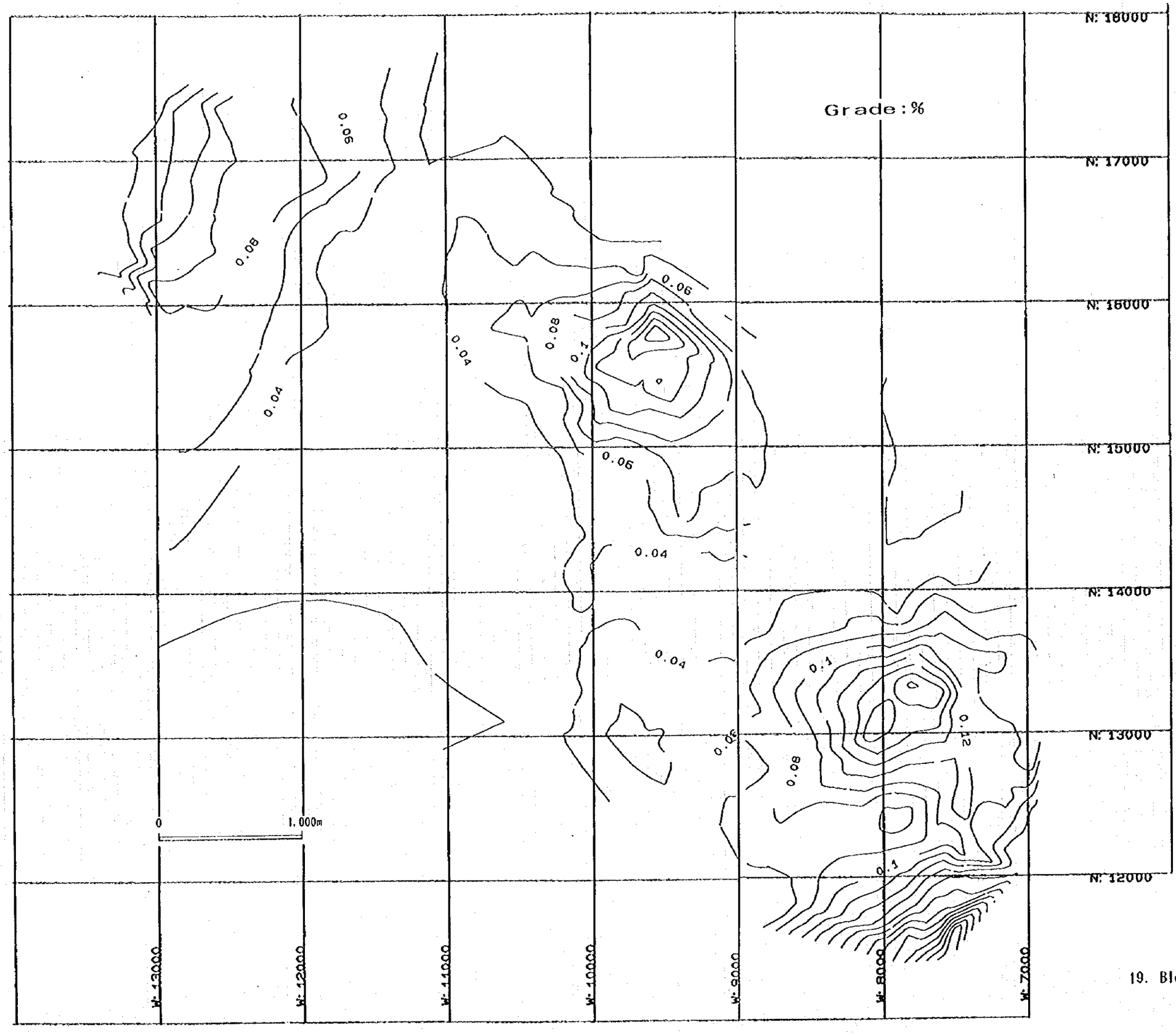


16. Basement Elevation Contours by LYNX

17. Copper Grades Contours



18. Gold Grades Contours



19. Block Cobalt Grade Contours

20 Gold and Silver in Core Composites (1)

ZAMBIA CONSOLIDATED COPPER MINES LTD
CHAMBISHI SOUTHEAST CORE COMPOSITES
GOLD AND SILVER RESULTS

BH	SAMPLE	Au/B	Ag	Dup Au	Dup Ag	Au/FA	DISTANCE	
No	No	PPB	PPM	ppb	ppm	OPT	FROM	To
NN75	14101	6	<0.5				959.90	960.90
NN75	17680	<2	<0.5					961.90
NN75	17681							962.90
NN75	17682	6	<0.5					963.90
NN75	17683	<2	<0.5					964.90
NN75	17684	<2	<0.5					965.90
NN75	17685	4	<0.5					966.90
NN75	17686	4	<0.5					967.90
NN75	17687	2	<0.5					968.90
NN75	17688	4	<0.5					969.90
NN75	17689	6	<0.5					970.90
NN75	17690	4	<0.5					971.90
NN75	17691			2	<0.5			972.90
NN75	17692							973.90
NN75	17693	4	<0.5					974.90
NN75	17694	<2	<0.5					975.90
NN75	17695	<2	<0.5					976.90
NN75	17696	2	<0.5					977.90
NN75	17697							978.90
NN75	17698							979.90
NN75	17699							980.90
NN75	17700							981.66
NN61	14102	19	<0.5				991.30	992.30
NN61	14103	<2	<0.5					993.30
NN61	14104	<2	<0.5					994.30
NN61	14105	<2	<0.5	<2	<0.5			995.30
NN61	14106	<2	<0.5					996.30
NN61	14107	<2	<0.5					997.30
NN61	14108	<2	<0.5					998.30
NN61	14109	<2	<0.5					999.30
NN61	14110	<2	<0.5					1000.30
NN61	14111	19	<0.5					1001.30
NN61	14112	110	<0.5					1002.30
NN61	14113	25	<0.5					1003.30
NN61	14114	41	<0.5					1004.30
NN61	14115	51	<0.5					1005.30
NN61	14116	14	<0.5					1006.30
NN42	14117	<2	<0.5				788.42	789.42
NN42	14118	<2	<0.5					790.42
NN42	14119	4	<0.5					791.42
NN42	14120	8	<0.5					792.42
NN42	14121	19	<0.5	19	<0.5			793.42
NN42	14122	14	<0.5					794.42
NN42	14123	115	<0.5					795.42
NN42	14124	14	<0.5					796.42
NN42	14125	19	<0.5					797.42
NN42	14126	29	<0.5					798.42
NN42	14127	14	<0.5					799.42
NN42	14128	8	<0.5					800.42
NN42	14129	12	<0.5					801.42
NN42	14130	6	<0.5					802.42
NN42	14131	14	<0.5					803.42
NN42	14132	12	<0.5					804.42
NN42	14133	16	<0.5					805.42
NN42	14134	21	<0.5					806.42
NN42	14135	16	<0.5					807.42
NN51	14136	4	<0.5				1017.60	1018.60
NN51	14137	2	<0.5					1019.60
NN51	14138	<2	<0.5					1020.60
NN51	14139	<2	<0.5					1021.60
NN51	14140	<2	<0.5					1022.60
NN51	14141	6	<0.5					1023.60
NN51	14142	8	<0.5					1024.60
NN51	14143	6	<0.5					1025.60
NN51	14144	<2	<0.5					1026.60
NN51	14145	6	<0.5					1027.60
NN51	14146	4	<0.5					1028.60
NN51	14147	4	<0.5					1029.60
NN51	14148	10	<0.5					1030.60
NN51	14149	10	<0.5					1031.60
NN51	14150	12	<0.5					1032.60
NN51	14151	10	<0.5					1033.60
NN51	14152	4	<0.5					1034.50
NN68	14153	8	<0.5				784.07	785.07
NN68	14154	6	<0.5					786.07
NN68	14155	49	2.5					787.07
NN68	14156	56	4					788.07
NN68	14157	<2	<0.5					789.07
NN68	14158	4	<0.5					790.07
NN68	14159	<2	<0.5					791.07
NN68	14160	4	<0.5					792.07
NN68	14161	4	<0.5					793.07
NN68	14162	6	<0.5					794.07

20 Gold and Silver in Core Composites (2)

ZAMBIA CONSOLIDATED COPPER MINES LTD
CHAMBISHI SOUTHEAST CORE COMPOSITES
GOLD AND SILVER RESULTS

BH	SAMPLE	Au/B	Ag	Dup Au	Dup Ag	Au/FA	DISTANCE	
No	No	PPB	PPM	ppb	ppm	OPT	FROM	To
NN68	14163	8	<0.5					795.07
NN68	14164	6	<0.5					796.07
NN68	14165	10	<0.5					797.07
NN68	14166	4	<0.5					798.07
NN68	14167	2	<0.5					799.07
NN68	14168	6	<0.5					800.07
NN68	14169	8	<0.5					801.07
NN68	14170	4	<0.5					802.07
NN68	14171	16	2					803.07
NN68	14172	4	<0.5					803.55
NN63	14173	4	<0.5				898.90	899.90
NN63	14174	2	<0.5					900.90
NN63	14175	<2	<0.5					901.90
NN63	14176	<2	<0.5					902.90
NN63	14177	<2	<0.5					903.90
NN63	14178	<2	<0.5					904.90
NN63	14179	<2	<0.5					905.90
NN63	14180	<2	<0.5					906.90
NN63	14181	4	<0.5					907.90
NN63	14182	6	<0.5	2	<0.5			908.90
NN63	14183	6	<0.5					909.90
NN63	14184	6	<0.5					910.90
NN63	14185	4	<0.5					911.90
NN63	14186	4	<0.5					912.90
NN63	14187	8	<0.5					913.90
NN63	14188	6	<0.5					914.90
NN63	14189	2	<0.5					915.90
NN63	14190	6	<0.5					916.90
NN63	14191	6	<0.5					917.90
NN63	14192	4	<0.5					918.60
NN41	14193	2	<0.5				788.20	789.20
NN41	14194	2	<0.5					790.20
NN41	14195	2	<0.5					791.20
NN41	14196	<2	<0.5					792.20
NN41	14197	<2	<0.5					793.20
NN41	14198	<2	<0.5					794.20
NN41	14199	<2	<0.5					795.20
NN41	14200	<2	<0.5					796.20
NN41	16201	4	<0.5	2	<0.5			797.20
NN41	16580	6	<0.5					798.20
NN41	16581	39	<0.5					799.20
NN41	16582	275	1					800.20
NN41	16205	4	<0.5					801.20
NN41	16206	2	<0.5					802.20
NN41	16207	4	<0.5					803.20
NN41	16208	2	2					804.20
NN41	16209	4	<0.5					804.80
NN41	16210	21	<0.5					
NN41	16211	8	1					
NN13	16401	4	<0.5				545.43	546.43
NN13	16402	4	<0.5					547.43
NN13	16403	2	7	<2	<0.5			548.43
NN13	16404	2	<0.5					549.43
NN13	16405	4	<0.5					550.53
NN13	16406	6	<0.5					551.60
NN13	16297	4	<0.5				541.43	542.43
NN13	16298	6	<0.5					543.43
NN13	16299	4	1					544.43
NN13	16300	4	<0.5					545.43
NN78	16407	6	<0.5				650.99	651.99
NN78	16408	2	<0.5					652.99
NN78	16409	2	<0.5					653.99
NN78	16410	<2	<0.5					654.99
NN78	16411	4	<0.5					655.99
NN78	16412	4	<0.5					656.99
NN18	16413	<2	<0.5				541.11	542.11
NN18	16414	<2	<0.5					543.11
NN18	16415	<2	<0.5					544.11
NN18	16416	<2	<0.5					545.11
NN18	16417	<2	<0.5					546.11
NN18	16418	4	<0.5					547.11
NN18	16419	8	<0.5					548.11
NN18	16420	14	<0.5					549.11
NN18	16421	2	<0.5					550.11
ND5	16422	2	<0.5				504.28	505.28
ND5	16423	<2	<0.5					506.28
ND5	16424	2	<0.5	2	<0.5			507.28
ND5	16425	2	<0.5					508.28
ND5	16426	4	<0.5					509.58
ND5	16427	<2	<0.5					510.93
NN22D2	16428	<2	<0.5				663.76	664.76
NN22D2	16429	12	<0.5					665.76
NN22D2	16430	10	<0.5					666.76

20 Gold and Silver in Core Composites (3)

ZAMBIA CONSOLIDATED COPPER MINES LTD
CHAMBISHI SOUTHEAST CORE COMPOSITES
GOLD AND SILVER RESULTS

BH No	SAMPLE No	Au/B PPB	Ag PPM	Dup Au ppb	Dup Ag ppm	Au/FA OPT	DISTANCE FROM	To
NN22D2	18431	6	<0.5					667.76
NN22D2	18432	12	<0.5					668.76
NN22D2	18433	8	<0.5					669.76
NN22D2	18434	2	<0.5					670.76
NN22D2	18435	8	<0.5					671.76
NN23	18436	270	5.5				444.69	445.69
NN23	18437	250	4.5	300	3			446.69
NN23	18438	230	5					447.69
NN23	18439	4	<0.5					448.69
NN23	18440	150	2.5					449.69
NN23	18441	74	<0.5					450.69
NN23	18442	99	1					451.69
NN23	18443	255	2.5					452.69
NN23	18444	180	1.5					453.69
NN44D1	18445	4	<0.5				777.50	778.50
NN44D1	18446	14	1.5					779.50
NN44D1	18447	12	<0.5					780.50
NN44D1	18448	10	1					781.50
NN44D1	18449	>2 PPM	5			0.021		782.50
NN44D1	18450	23	2					783.50
NN44D1	18451	43	6.5					784.50
NN44D1	18452	100	14					785.50
NN44D1	18453	10	<0.5					786.50
NN44D1	18454	16	2					787.50
NN44D1	18455	2	<0.5					788.50
NN44D1	18456	4	<0.5					789.50
NN44D1	18457	2	<0.5					790.50
NN44D1	18458	97	<0.5					791.50
NN44D1	18459	54	<0.5					792.50
NN44D1	18460	25	<0.5					793.50
NN44D1	18461	16	<0.5					794.50
NN44D1	18462	54	<0.5					792.50
NN44D1	18463	25	<0.5					793.50
NN44D1	18464	16	<0.5					794.50
NN44D1	18465	43	1.5					794.70
NN32	18466	2	<0.5				20.72	21.72
NN32	18467	<2	<0.5					23.16
NN31	18468	4	<0.5				552.41	553.41
NN31	18469	6	<0.5					554.41
NN31	18470	2	<0.5					555.41
NN31	18471	4	<0.5					556.41
NN31	18472	2	<0.5					557.41
NN31	18473	8	<0.5					558.41
NN29A	18474	8	<0.5				1240.63	1241.63
NN29A	18475	8	<0.5					1242.63
NN29A	18476	17	<0.5					1243.63
NN29A	18477	4	<0.5					1244.63
NN29A	18478	10	<0.5					1245.63
NN29A	18479	14	<0.5	23	<0.5			1246.63
NN29A	18480	2	<0.5					1247.63
NN29A	18481	4	<0.5					1248.63
NN29A	18482	4	<0.5					1249.63
NN29A	18483	4	<0.5					1250.63
NN29A	18484	10	<0.5					1251.63
NN29A	18485	6	<0.5					1252.63
NN29A	18486	4	<0.5					1253.53
NN29A	18487	8	<0.5					1253.73
NX7	18488	4	<0.5	<2	<0.5		506.08	507.08
NX7	18489	6	<0.5					508.08
NX7	18490	8	<0.5					509.08
NX7	18491	6	<0.5					510.08
NX7	18492	10	<0.5					511.08
NX7	18493	23	<0.5					511.84
NN40	18494	6	<0.5				923.34	924.34
NN40	18495	25	3					925.34
NN40	18496	19	1.5					926.34
NN40	18497	4	<0.5					927.34
NN40	18498	2	<0.5					928.34
NN40	18499	6	<0.5					929.34
NN40	18500	2	<0.5					930.34
NN40	18501	6	<0.5					931.34
NN40	18502	6	<0.5					932.34
NN40	18503	12	<0.5					933.34
PE2	18212	6	1				1418.90	1419.90
PE2	18213	2	<5					1420.90
PE2	18214	2	1.5					1421.90
PE2	18215	4	<5					1422.90
PE2	18216	8	<5					1423.90
NN19	18217	2	1				599.97	600.97
NN19	18218	4	<5					601.97
NN19	18219	<2	<5					602.97
NN19	18220							603.97
NN19	18221	8	<5					604.97

20 Gold and Silver in Core Composites (4)

ZAMBIA CONSOLIDATED COPPER MINES LTD
CHAMBISHI SOUTHEAST CORE COMPOSITES
GOLD AND SILVER RESULTS

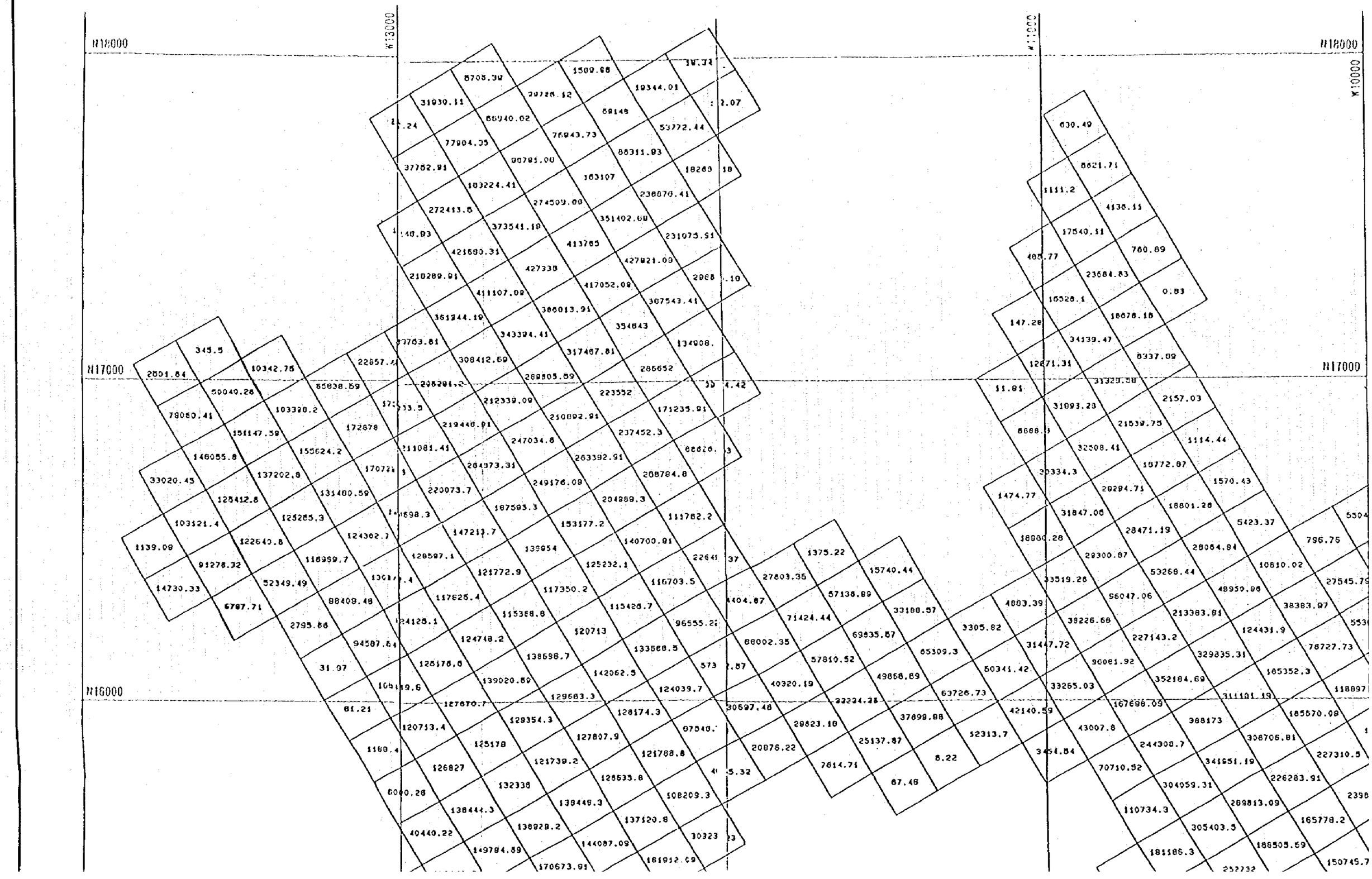
BH No	SAMPLE No	Au/B PPB	Ag PPM	Dup Au ppb	Dup Ag ppm	Au/FA OPT	DISTANCE FROM	DISTANCE To
NN19	18222	4	<5					605.97
NN19	18223	4	<5					606.97
NN80	18224	2	<5				976.56	977.56
NN80	18225	<2	<5					978.56
NN80	18226	88	1.5					979.56
NN80	18227	175	1.5					980.56
NN80	18228	87	2					981.56
NN80	18229	135	4.5					982.56
NN80	18230	210	8					983.56
NN80	18231	82	3.5					984.56
NN81	18232	8	<5				948.45	949.45
NN81	18233	12	<5					950.45
NN81	18234	6	<5					951.45
NN81	18235	2	<5					952.45
NN81	18236	2	<5					953.45
NN81	18237	<2	<5					954.45
NN81	18238	2	<5					955.45
NN38D1	18239	10	1.5				705.68	706.68
NN38D1	18240							707.68
NN38D1	18241	2	1					708.68
NN38D1	18242	2	<5					709.68
NN38D1	18243	<2	<5					710.68
NN38D1	18244	<2	<5					711.68
NN38D1	18245	<2	<5					712.68
NN20	18246	4	<5				472.47	473.47
NN20	18247	<2	<5					474.47
NN20	18248	<2	<5					475.47
NN20	18249	4	<5	4	<5			476.47
NN20	18250	4	<5					477.47
NN20	18251	6	<5					478.47
NN20	18252	2	<5					479.47
NN20	18253	<2	<5					480.47
NN20	18254	2	<5					481.47
NX6	18255	4	1				687.27	688.27
NX6	18256	2	1					689.27
NX6	18257	4	<5					690.27
NX6	18258	33	<5					691.27
NX6	18259	10	<5					692.27
NN34D1	18260	<2	<5				500.77	501.77
NN34D1	18261	<2	<5					502.77
NN34D1	18262	<2	1					503.77
NN34D1	18263	2	1					504.77
NN34D1	18264	<2	<5					505.77
NN34D1	18265	2	1					506.77
NN34D1	18266	<2	<5					507.77
NN34D1	18267	4	<5					508.77
NN34D1	18268	16	<5					510.63
NN11	18269	<2	<5				504.92	505.92
NN11	18270	<2	<5					506.92
NN11	18271	<2	2.5					507.92
NN11	18272	2	4					508.92
NN11	18273	<2	4					509.92
NN11	18274	2	<5					510.92
NN11	18275	<2	<5					511.92
NN11	18276	<2	<5					512.97
NN15	18277	<2	<5				487.01	488.01
NN15	18278	<2	<5					489.01
NN15	18279	<2	1					490.01
NN15	18280	8	2.5					491.01
NN15	18281	<2	<5					492.01
NN15	18282	2	<5					493.01
NN15	18283	<2	<5					494.01
NN15	18284	6	1					495.99
NN27	18285	2	<5				446.74	447.74
NN27	18286	6	<5					448.74
NN27	18287	8	<5					449.74
NN27	18288	6	<5					450.74
NN27	18289	8	<5					451.74
NN27	18290	4	<5					452.47
NN25	18291	6	<5				522.97	523.97
NN25	18292	<2	<5					524.97
NN25	18293	2	<5					525.97
NN25	18294	8	<5					526.97
NN25	18295	2	<5					527.97
NN25	18296	2	<5					529.74
RCB2	17601	<2	<5				1279.16	1280.16
RCB2	17602	<2	<5					1281.16
RCB2	17603	<2	<5					1282.16
RCB2	17604	<2	<5					1283.16
RCB2	17605	<2	<5					1284.16
RCB2	17606	<2	<5					1285.16
RCB2	17607	<2	<5					1286.16
RCB2	17608	<2	<5					1287.16

20 Gold and Silver in Core Composites (5)

ZAMBIA CONSOLIDATED COPPER MINES LTD
CHAMBISHI SOUTHEAST CORE COMPOSITES
GOLD AND SILVER RESULTS

BH	SAMPLE	Au/B	Ag	Dup Au	Dup Ag	Au/FA	DISTANCE	
No	No	PPB	PPM	ppb	ppm	OPT	FROM	To
RCB2	17609	<2	2					1288.16
RCB2	17610	<2	<5					1289.16
RCB2	17611	4	<5					1290.16
RCB2	17612	54	<5					1291.16
RCB2	17613	4	<5					1292.16
RCB2	17614	4	<5					1293.16
RCB2	17615	<2	1					1293.80
RCB2	17616	<2	<5					1284.20
NN43	17617	6	<5				687.85	688.85
NN43	17618	33	<5					689.85
NN43	17619	14	<5					690.85
NN43	17620	14	<5					691.85
NN43	17621	6	<5					692.85
NN43	17622	6	<5	4	<5			693.85
NN43	17623	10	<5					694.85
NN43	17624	10	<5					695.85
NN43	17625	8	<5					696.85
NN43	17626	4	<5					697.85
NN43	17627	<2	<5					698.85
NN43	17628	6	<5					699.85
NN43	17629	10	<5					698.85
NN43	17630	<2	<5					699.85
NN48A	17631	6	<5				801.04	802.04
NN48A	17632	4	<5					803.04
NN48A	17633	4	<5					804.04
NN48A	17634	6	1.5					805.04
NN48A	17635	<2	<5					806.04
NN48A	17636	<2	<5					807.04
NN48A	17637	<2	<5					808.04
NN48A	17638	<2	<5					809.04
NN48A	17639	<2	<5					810.04
NN48A	17640	4	<5					811.04
NN48A	17641	6	<5					812.04
NN48A	17642	6	<5	2	<5			813.04
NN48A	17643	10	<5					814.36
NN48A	17644	23	<5					815.68
NN48A	17645	14	<5					815.80
NN45	17646	14	<5				718.75	719.75
NN45	17647	12	<5					720.75
NN45	17648	<2	<5					721.75
NN45	17649	23	<5					722.75
NN45	17650	51	<5					723.75
NN45	17651	35	<5					724.75
NN45	17652	29	<5					725.75
NN45	17653	33	<5					726.75
NN45	17654	25	<5					727.75
NN45	17655	23	<5					728.75
NN45	17656	4	<5					729.75
NN45	17657	8	<5					730.75
NN45	17658	25	<5					731.75
NN45	17659	25	1					732.75
NN45	17660	6	<5					733.75
NN45	17661	17	<5					734.75
NN45	17662	25	<5					735.75
NN45	17663	14	1					736.75
NN45	17664	39	1.5					737.75
NN45	17665	19	1					738.75
NN45	17666	23	<5					739.75
NN45	17667	39	2.5					740.75
NN45	17668	21	0.5					740.90
NN59	17669	4	<5				668.60	669.50
NN59	17670	4	<5					670.50
NN59	17671	25	<5					671.50
NN59	17672	10	<5					672.50
NN59	17673	4	<5					673.50
NN59	17674	8	<5					674.50
NN59	17675	4	<5					675.50
NN59	17676	4	<5					676.50
NN59	17677	8	<5					677.50
NN59	17678	6	<5					678.50
NN59	17679	4	<5					679.50

NOTE:All results from Rocky Mountain Geochemical Corporation, USA
OPT=Ounce per ton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N18000
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79060.41
103320.2
151147.39
172678
146055.8
137202.8
155624.2
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131480.59
125412.8
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220073.7
187593.3
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124748.2
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126176.6
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142062.5
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124039.7
129683.3
127870.7
129354.3
128174.3
120713.4
125178
127807.9
121788.8
126827
121739.2
126533.8
132338
108209.3
138444.3
138449.3
137120.8
136928.2
40440.22
144087.09
149784.69
161912.09
170673.91
630.49
8621.71
1111.2
4136.11
17540.11
760.89
465.77
23684.83
16526.1
0.83
18676.18
147.28
34139.47
8337.09
12671.31
31329.58
11.81
2157.03
31093.23
21539.75
6666.3
1114.44
32508.41
18772.87
30334.3
1570.43
26294.71
1474.77
31847.06
18801.26
5423.37
28471.19
18900.28
28064.84
796.76
29300.87
10810.02
53268.44
33519.26
27545.79
48959.96
96047.06
4803.39
38383.97
213383.81
38226.68
124431.9
227143.2
31447.72
78727.73
329835.31
90061.92
65309.3
60341.42
185352.3
352184.69
33265.03
63726.73
311101.19
118897
167696.09
42140.59
185570.08
388173
43007.8
306706.81
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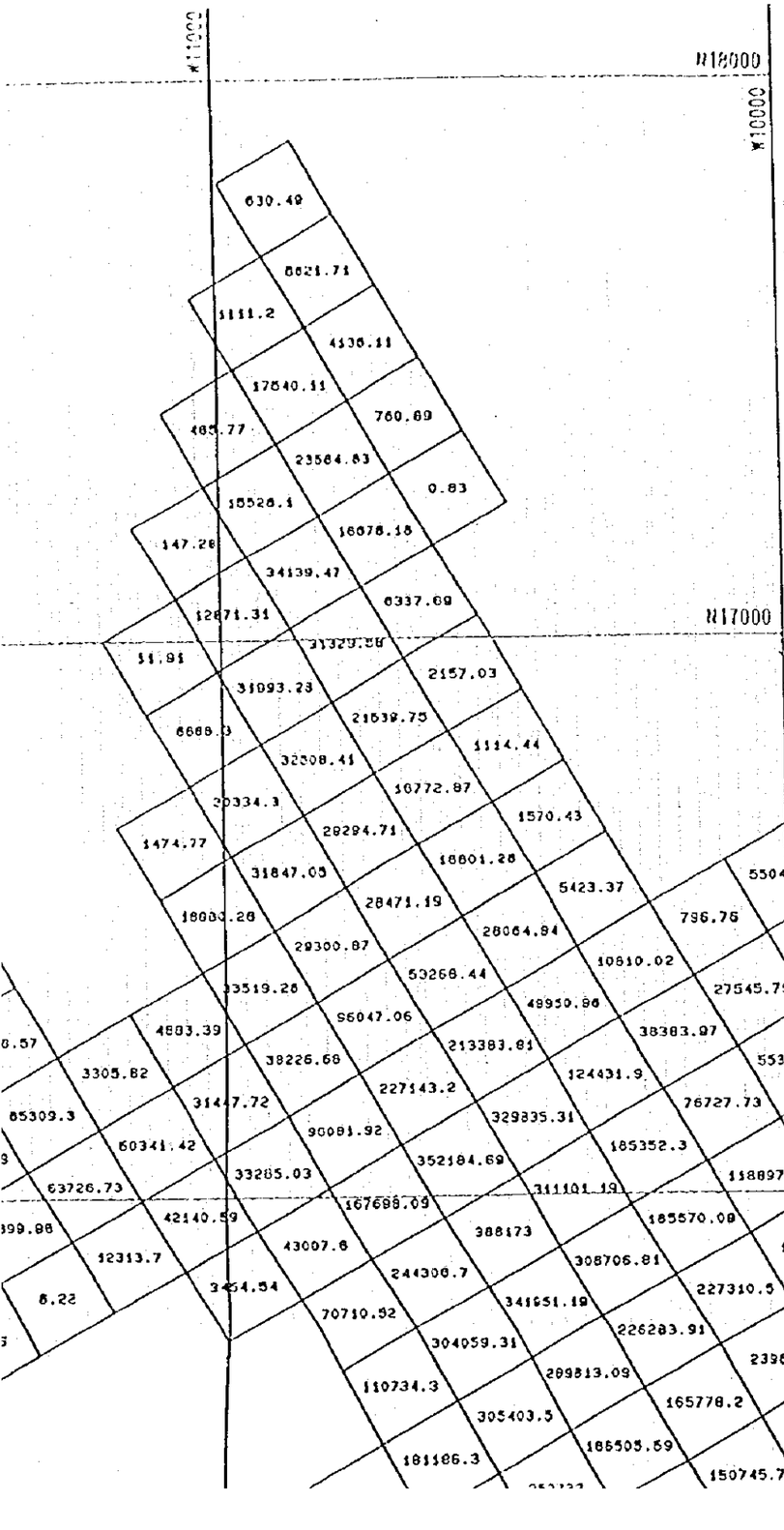
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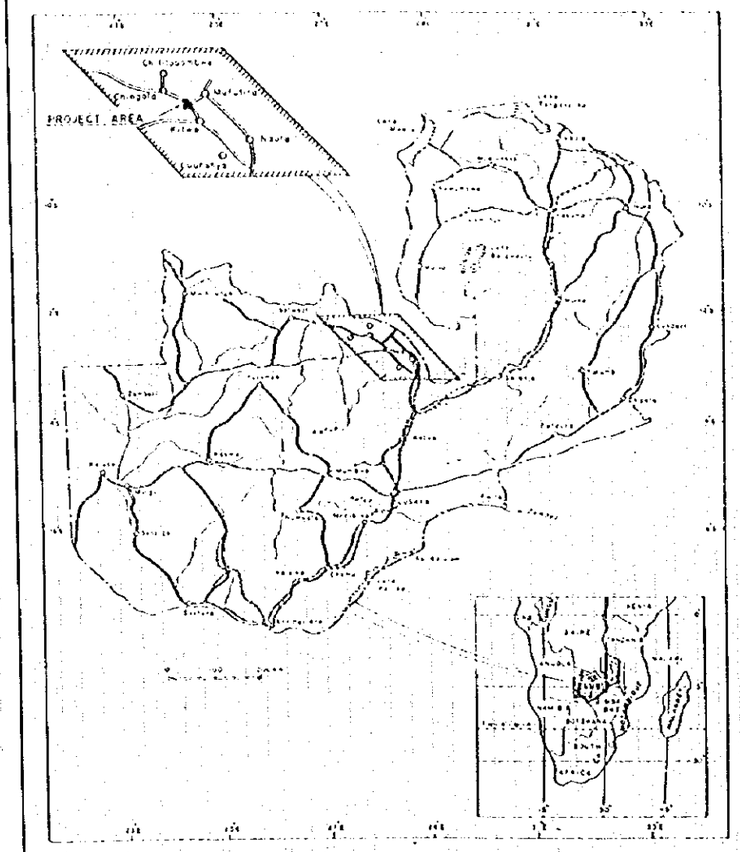
REPORT ON THE COOPERATIVE MINERAL EXPLORATION
IN
THE CHAMBISHI SOUTHEAST AREA,
THE REPUBLIC OF ZAMBIA

Chambishi Southeast Project Block Volumes



FEBRUARY 1996

JAPAN INTERNATIONAL COOPERATION AGENCY
METAL MINING AGENCY OF JAPAN

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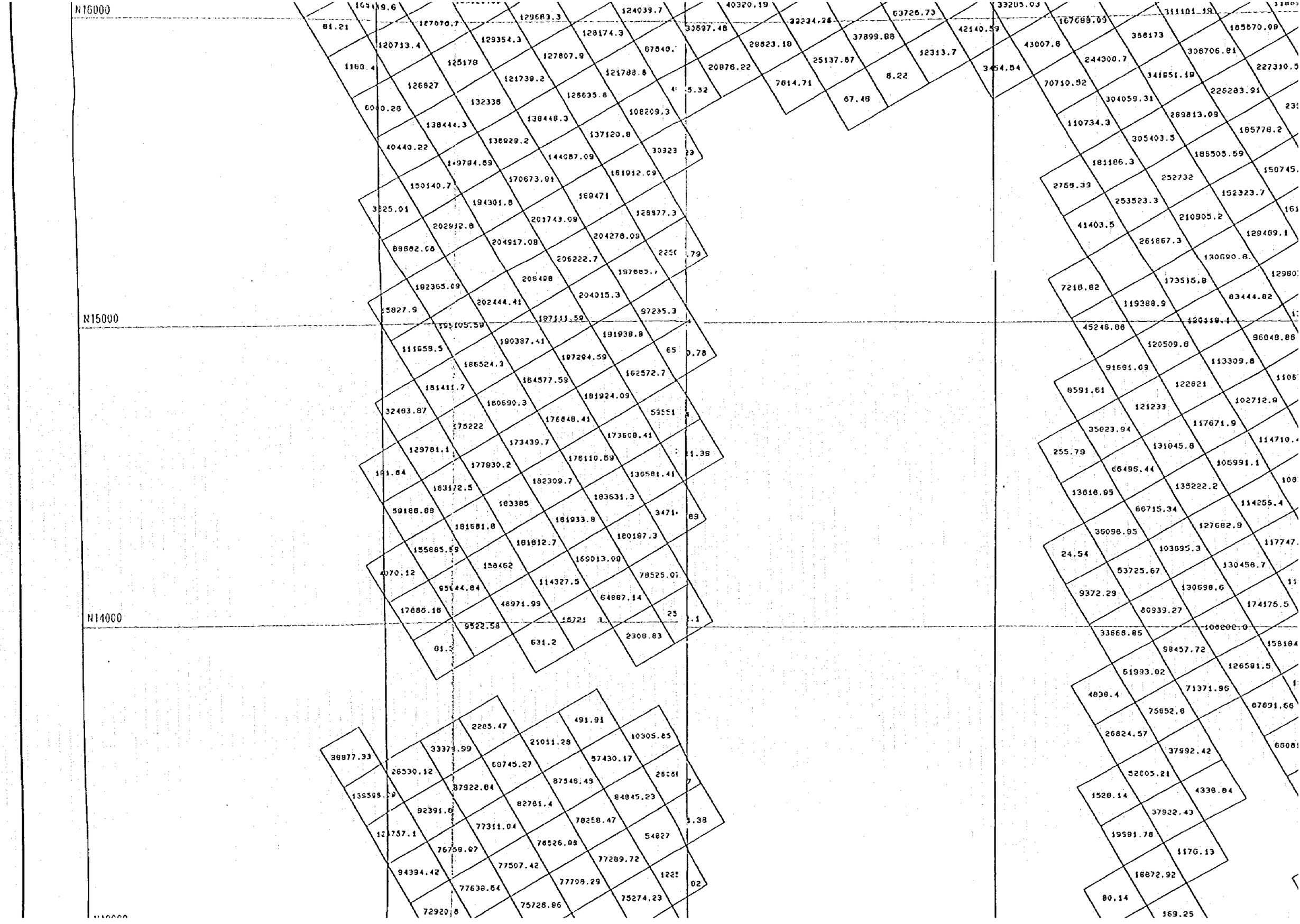
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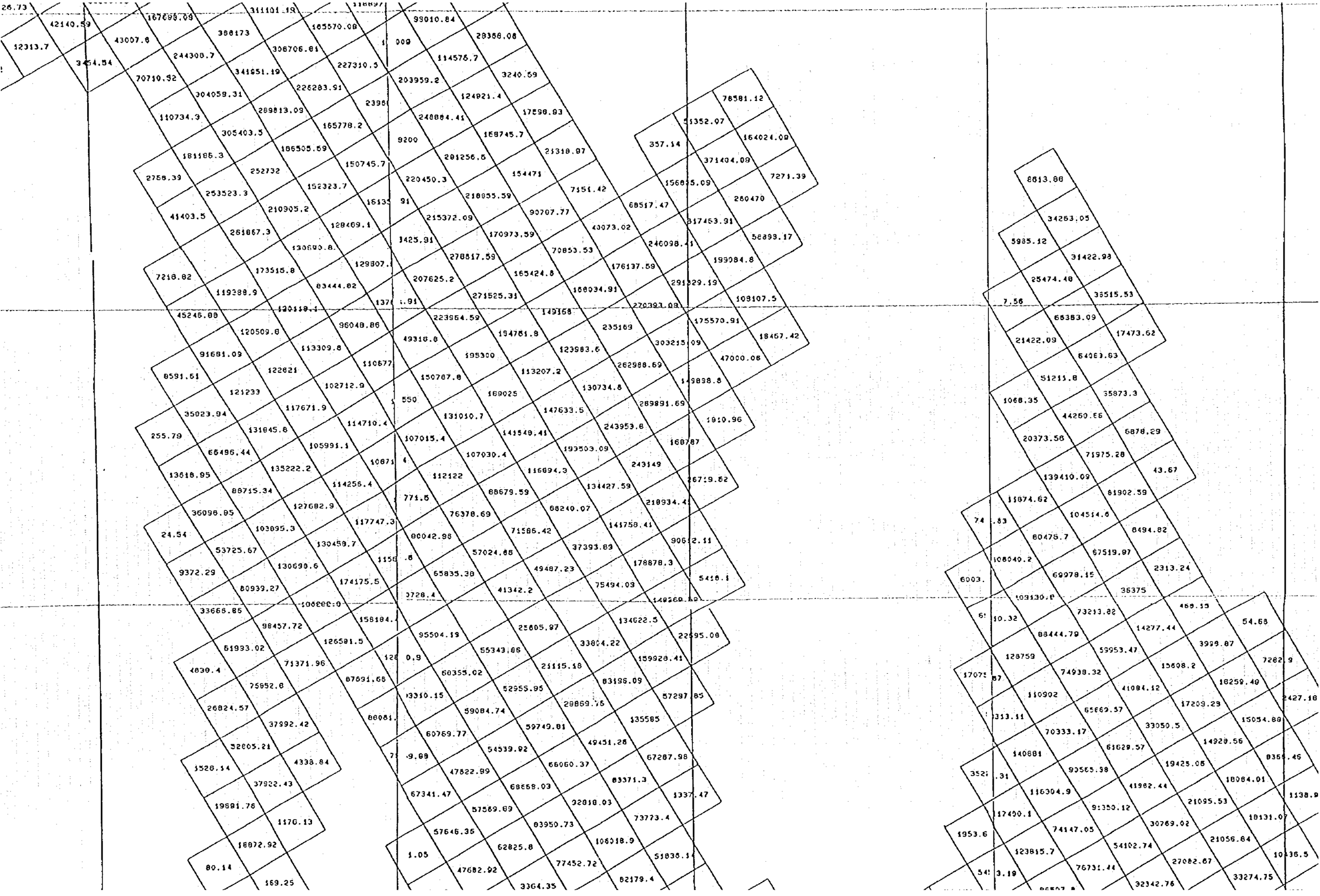
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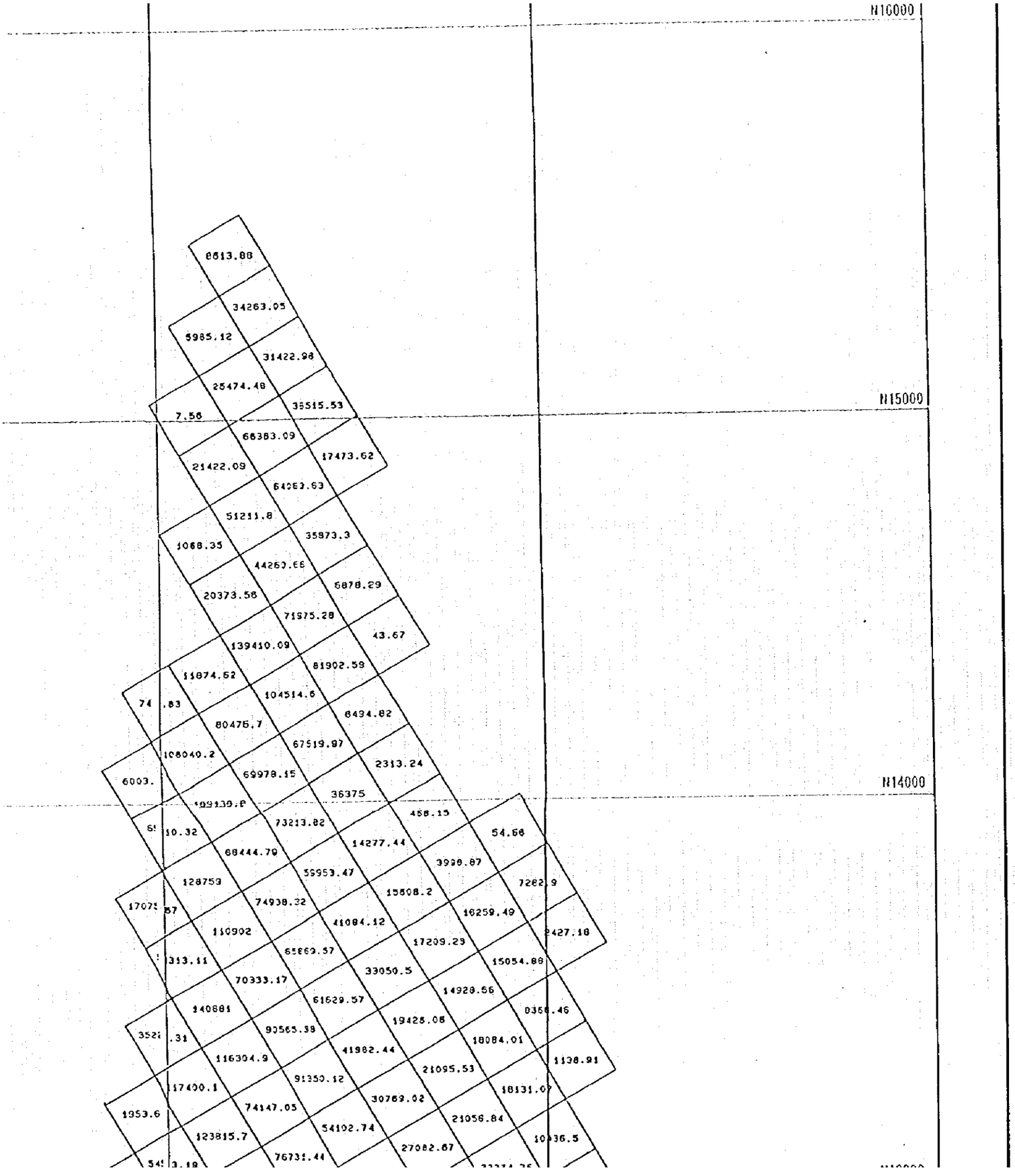
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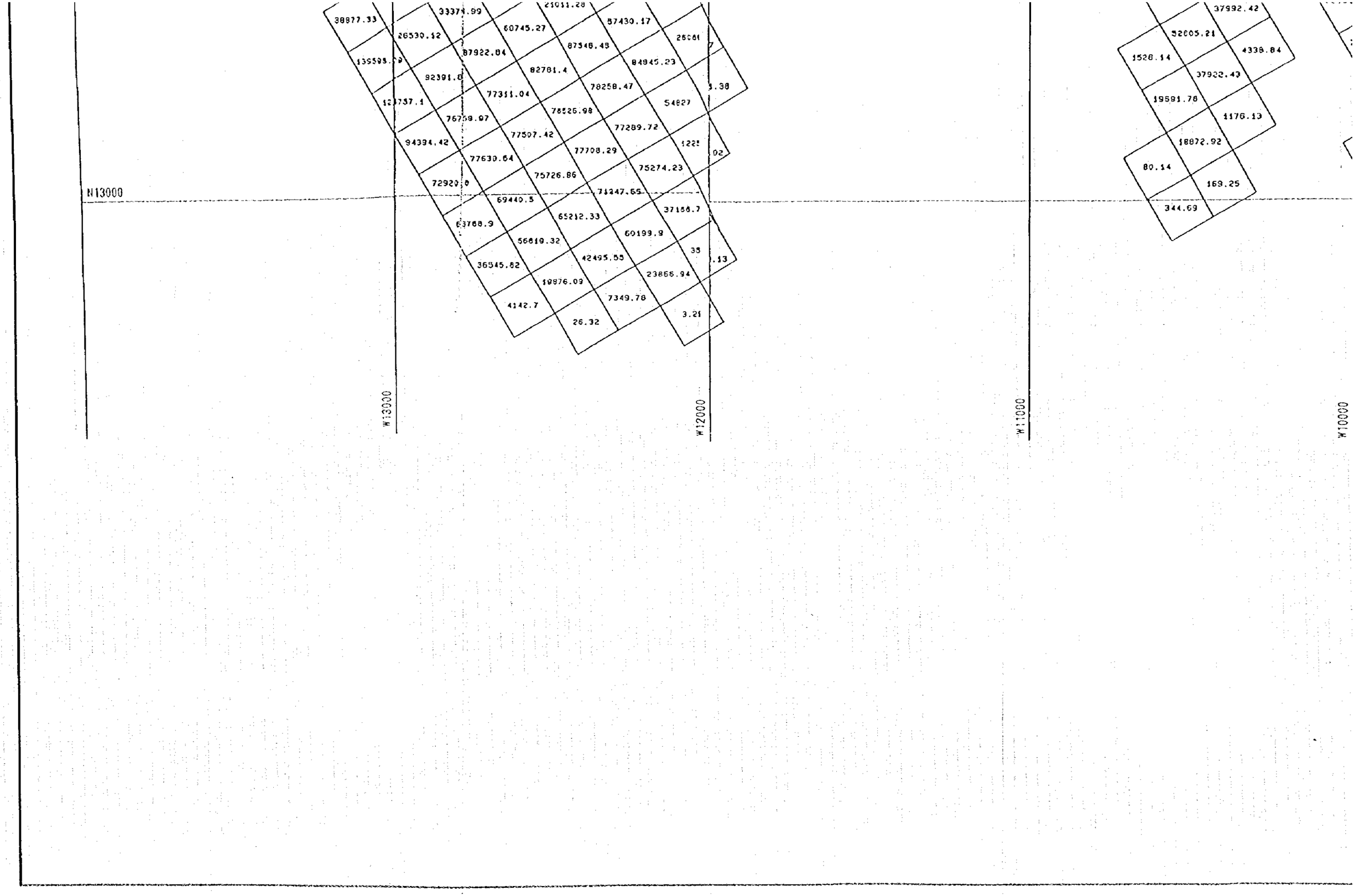
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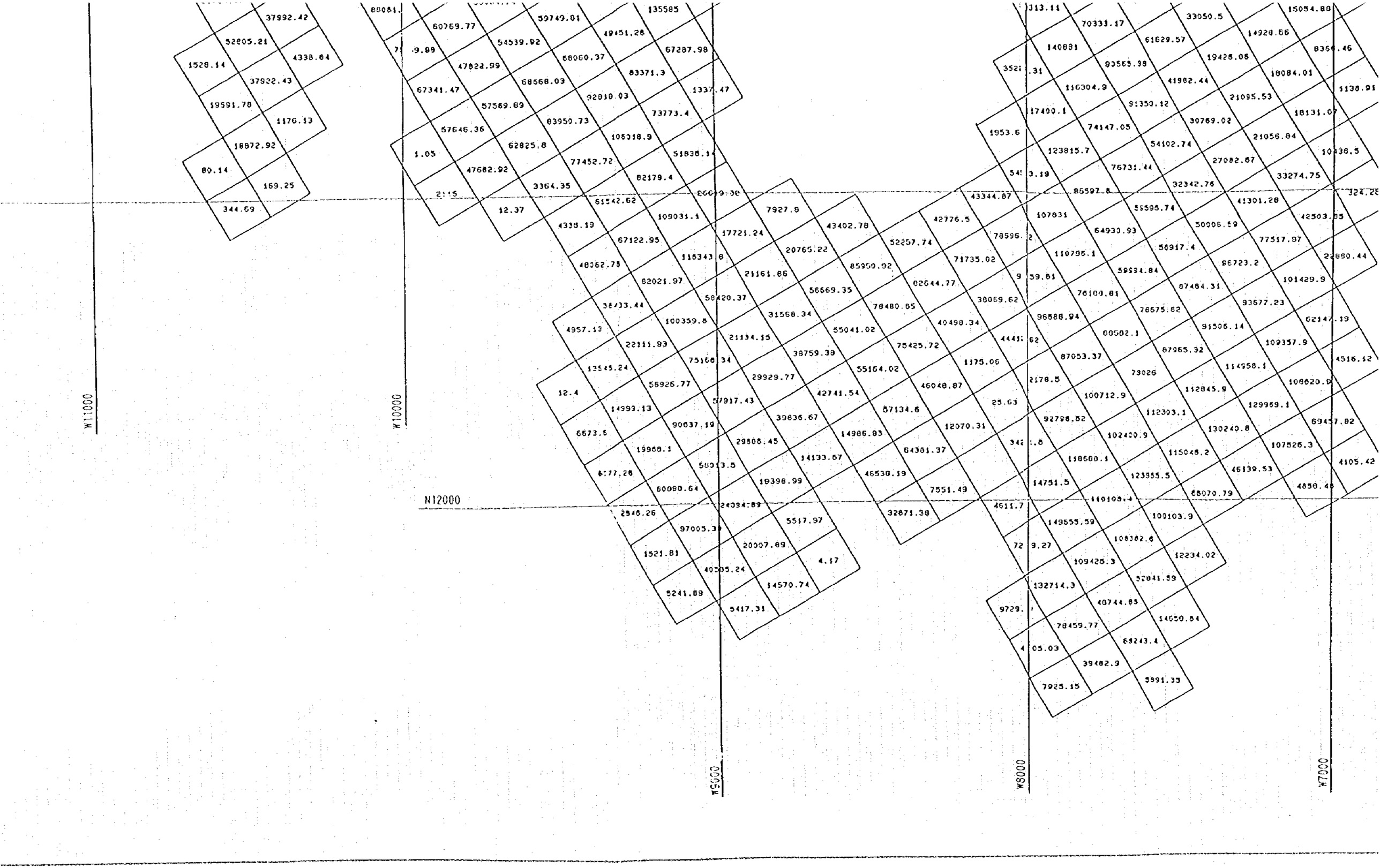
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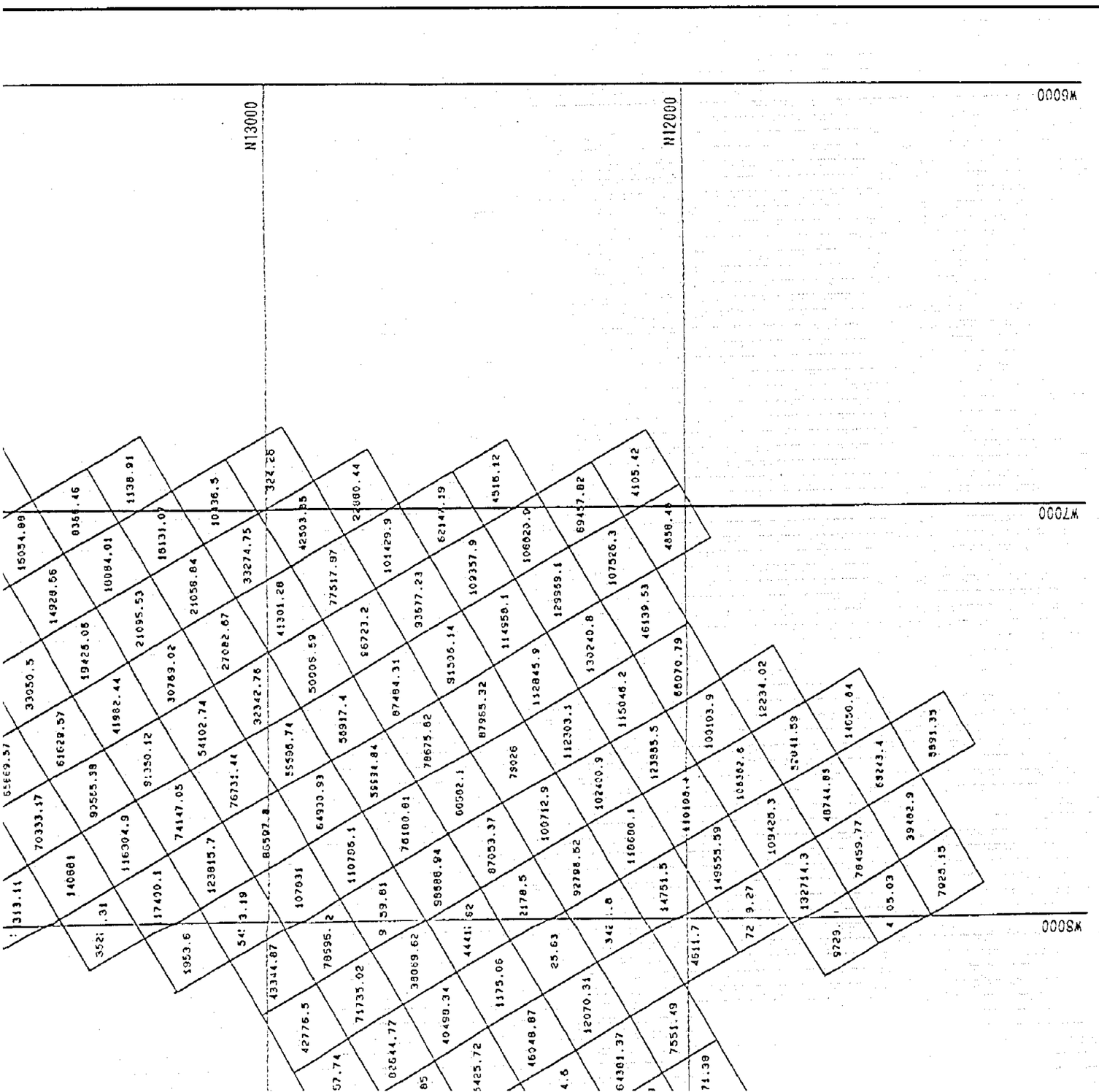
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