EXPLOREMIN PTY. LTD.

Exploration Management
Geological Consultants & Contractors

P.O. Box 93, Earlville 4870
7 Holly Street, Mooroobool, Cairns
Telephone: (070) 546370
A/Hours : (070) 544139

REPORT EPL-88/22

Results of Drilling at the Zapopan Mine, Northern Territory, April-August,1988.

by

J. Goulevitch and D.J. Holden

Appendix 3

Logs of Diamond Drill Holes

OPEN FILE

CR88/413D

1:100,000 - Batchelor, 5171
1:250,000 - Pine Creek, SD52/8

August, 1988

Appendix 3

Logs of Diamond Drill Holes
ZZAP/18 - 23

EXPLOREMIN PTY.LTD.

Diamond Drill Log: ZZAP/18

SUMMARY

CLIENT: ZAPOPAN N.L.

PROSPECT: ZAPOPAN

PROPOSED CO-ORDS E: 10112.5 N: 9921.50R.L.:98.0
LAID OUT CO-ORDS E: 10112.8 N: 9921.50R.L.:98.0
ACTUAL CO-ORDS E: 10112.83 N: 9921.58R.L.:98.16

PLANNED DEPTH (M): 175
TARGET DEPTH (M): 50-175
ACTUAL DEPTH (M): 175.10

BEARING ° Grid: 302 ° Mag:
INCLINATION -°: 65

PROPOSED BY: J.G.
PLANNED BY: J.G.
LAID OUT BY: MACJAP
SURVEYED BY:

DRILLED BY: ROCKDRILL RIG 8

DATE COMMENCED: 88/04/29
DATE COMPLETED: 88/05/08

PRE-COLLAR (M): 50
HQ (M): 125.1
NQ (M):
BQ (M):
OTHER (M):
WEDGES PLACED:

COMMENTS/ASSAY SUMMARY:

84-88m (4m) 10.6 g/t Au

DOWN HOLE SURVEYS

DEPTH (m): 70	AZIMUTH (mag. °): 309.5	INCLN (°): 64
DEPTH (m): 120	AZIMUTH (mag. °): 309.5	INCLN (°): 64
DEPTH (m): 170	AZIMUTH (mag. °): 313.5	INCLN (°): 63
DEPTH (m):	AZIMUTH (mag. °):	INCLN (°):
DEPTH (m):	AZIMUTH (mag. °):	INCLN (°):
DEPTH (m):	AZIMUTH (mag. °):	INCLN (°):
DEPTH (m):	AZIMUTH (mag. °):	INCLN (°):
DEPTH (m):	AZIMUTH (mag. °):	INCLN (°):
DEPTH (m):	AZIMUTH (mag. °):	INCLN (°):
DEPTH (m):	AZIMUTH (mag. °):	INCLN (°):

ANALABS

A division of MacDonald Hamilton & Co. Pty. Ltd. (Inc NSW)

(089) 84 3849

Cnr Coonawarra & Mataram Rds, Winnellie

Fax: (089) 84 3984

ANALYTICAL REPORT No. 247 0.14 02409

THIS REPORT MUST BE READ IN CONJUNCTION WITH THE ACCOMPANYING ANALYTICAL DATA

INVOICE TO:

ZAPOPAN NL
PO BOX 4045

DARWIN NT 0801

ORDER No.	PROJECT

DATE RECEIVED	RESULTS REQUIRED
22/04/88	ASAP

No. OF PAGES OF RESULTS	DATE REPORTED	No. OF COPIES	TOTAL No. OF SAMPLES
2	15/08/88	1	25

SAMPLE NUMBERS	SAMPLE DESCRIPTION	ELEMENT/METHOD
18 00-02/48-50/02-02	PC Prep: 033	Au,Au(1),Au(2)/313
18 00-02/48-50/02-02	PC	As/401

REMARKS

Z-ZAP 18

PRE-COLLAR

RESULTS TO

ZAPOPAN NL
PO BOX 4045

DARWIN NT 0801

RESULTS TO

RESULTS TO

AUTHORISED OFFICER

ANALABS

A Division of Macdonald Hamilton & Co. Pty. Ltd.

ANALYTICAL DATA

SAMPLE PREFIX	REPORT NUMBER	REPORT DATE	CLIENT ORDER No.	PAGE
	247.0.14.02409	15/08/88		1 OF 2

TUBE No.	SAMPLE No.	As	Au	Au(1)	Au(2)				
	ZAP18 00-02	80	0.045	–	–				
	ZAP18 02-04	70	0.018	–	–				
3	ZAP18 04-06	45	0.276	–	–				
	ZAP18 06-08	60	0.008	–	–				
5	ZAP18 08-10	35	0.005	–	–				
	ZAP18 10-12	95	0.011	–	–				
	ZAP18 12-14	620	1.359	1.208	–				
8	ZAP18 14-16	250	0.347	–	–				
	ZAP18 16-18	55	0.209	–	–				
0	ZAP18 18-20	35	0.024	–	–				
	ZAP18 20-22	65	0.054	–	–				
	ZAP18 22-24	35	0.017	–	–				
3	ZAP18 24-26	40	0.125	–	–				
	ZAP18 26-28	35	0.016	–	–				
5	ZAP18 28-30	40	0.008	–	–				
	ZAP18 30-32	25	0.008	0.012	–				
7	ZAP18 32-34	20	0.006	–	–				
	ZAP18 34-36	30	0.010	–	–				
	ZAP18 36-38	95	0.061	–	–				
1	ZAP18 38-40	65	0.031	–	–				
	ZAP18 40-42	40	0.014	–	–				
	ZAP18 42-44	75	0.088	–	–				
	ZAP18 44-46	65	0.024	–	–				
	ZAP18 46-48	50	0.029	0.020	–				
	ZAP18 48-50	55	0.065	–	–				

Results in ppm unless otherwise specified
T = element present; but concentration too low to measure
X = element concentration is below detection limit
— = element not determined

AUTHORISED OFFICER

ANALABS

A Division of Macdonald Hamilton & Co. Pty. Ltd.

ANALYTICAL DATA

SAMPLE PREFIX	REPORT NUMBER	REPORT DATE	CLIENT ORDER No.	PAGE
	247.0.14.02409	15/08/88		2 OF 2

TUBE No.	SAMPLE No.		As	Au	Au(1)	Au(2)				
1										
2										
3										
4										
5										
6										
7										
8										
9										
10										
11										
12										
13										
14										
15										
16										
17										
18										
19										
20										
21										
22	DETECTION		2	0.005	0.005	0.005				
23	UNITS		PPM	PPM	PPM	PPM				
24	METHOD		401	313	313	313				
25										

Results in ppm unless otherwise specified
T = element present; but concentration too low to measure
X = element concentration is below detection limit
— = element not determined

AUTHORISED OFFICER

ANALABS

A division of MacDonald Hamilton & Co. Pty. Ltd. (Inc NSW)

(089) 84 3849 | Cnr Coonawarra & Mataram Rds, Winnellie | Fax: (089) 84 3984

ANALYTICAL REPORT No. 247.0.14.02499

THIS REPORT MUST BE READ IN CONJUNCTION WITH THE ACCOMPANYING ANALYTICAL DATA

INVOICE TO:

ZAPOPAN NL
PO BOX 4045
DARWIN NT 0801

ORDER No.	PROJECT

DATE RECEIVED	RESULTS REQUIRED
27/05/98	ASAP

No. OF PAGES OF RESULTS	DATE REPORTED	No. OF COPIES	TOTAL No. OF SAMPLES
7	10/08/98	1	172

SAMPLE NUMBERS	SAMPLE DESCRIPTION	ELEMENT/METHOD
Various	RO Prep: 033	Au,Au(1),Au(2)/313
Various	RO	As/114
Various	PC Prep: 033	Au,Au(1),Au(2)/313
Various	PC	As/114
Various	RO	As/421

RESULTS TO

MR ROD JOHNSON
ZAPOPAN NL
PO BOX 4045
DARWIN NT 0801

RESULTS TO

RESULTS TO

REMARKS

ZRC/ 7
2
3
4
8

Z-ZAP/18

AUTHORISED OFFICER

ANALABS

ANALYTICAL DATA

SAMPLE PREFIX | REPORT NUMBER | DATE | CLIENT ORDER No. | PAGE

247.0.14.02499	10/08/88		6 OF 7

TUBE No.	SAMPLE No.	As	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	depth
1	6519	34000	>100	1.219	1.615	1.230		ZKC 8	76-77m
2	6520	3050	>100	0.127	–	–			77-78m
3	6521	200	>100	0.027	–	–			78-79m
4	6522	300	>100	0.052	–	–			79-80m
5	6523	–	90	0.017	–	–		Z-ZAP 18	49.85-52m
6	6524	1500	>100	0.016	–	–			52-54m
7	6525	–	80	0.020	–	–			54-56m
8	6526	360	>100	0.008	–	–			56-58m
9	6527	–	52	0.221	–	–			58-60m
10	6528	–	72	0.075	–	–			60-62m
11	6529	120	>100	0.018	–	–			62-64m
12	6530	–	50	0.016	–	–			64-66m
13	6531	–	33	0.059	–	–			66-68m
14	6532	–	28	0.011	–	–			68-70m
15	6533	4650	>100	0.083	–	–			70-72m
16	6534	300	>100	0.284	–	–			72-74m
17	6535	2900	>100	0.102	–	–			74-76m
18	6536	–	100	0.061	–	–			76-78m
19	6537	–	47	0.459	–	–			78-80m
20	6538	–	14	0.021	–	0.020			80-82m
21	6539	–	33	0.111	–	–			82-84m
22	6540	64000	>100	29.740	28.020	22.620			84.4-85.2m
23	6541	400	>100	0.215	–	–			88.2-86m
24	6542	110	>100	8.710	7.740	6.400			86-88m
25	6543	130	>100	0.064	–	–			88-90m

Results in ppm unless otherwise specified
T = element present, but concentration too low
X = element concentration is below detection
— = element not determined

ANALABS

ANALYTICAL DATA

SAMPLE PREFIX | PAGE

247.0.14.02499	10/08/88		OF 7 7

TUBE No.	SAMPLE No.	As	As	[illegible]	[illegible]	[illegible]		hole	depth
1	6544	–	23	0.038	–	–		2-ZAP18	90-92m
2	6545	–	32	0.008	–	–			92-94m
3	6546	230	>100	0.027	–	–			94-96m
4	6547	–	20	0.008	–	–			96-98m
5	6548	–	58	0.027	–	–			98-100m
6	6549	–	39	<0.005	–	–			100-102m
7	6550	–	70	0.128	–	–			102-104m
8	6551	–	32	0.007	–	–			104-106m
9	6552	–	34	0.020	–	–			106-108m
10	6553	110	>100	0.021	–	–			108-110m
11	6554	–	35	0.011	–	–			110-112m
12	6555	–	40	<0.005	–	–			112-114m
13	6556	–	36	0.005	–	–			114-115.5m
14	6557	170	>100	0.054	–	–			115.5-116m
15	6558	–	49	0.019	–	–			116-118m
16	6559	–	68	0.005	–	–			118-120m
17	6560	–	SNR	SNR	–	–			—
18	6561	–	25	0.007	–	–			120-122m
19	6562	–	25	0.017	–	–			122-124m
20	6563	–	21	0.005	–	–			124-126m
21	6564	–	3	<0.005	–	<0.005			126-128m
22	6565	–	11	0.005	–	–			128-130m
23	DETECTION	100	1	0.005	0.005	0.005			
24	UNITS	PPM	PPM	PPM	PPM	PPM			
25	METHOD	101	114	313	313	313			

Results in ppm unless otherwise specified
T = element present, but concentration too low
X = element concentration is below detection
— = element not determined

ANALABS

A division of Macdonald Hamilton & Co. Pty. Ltd.

Phone(09) 458 7999 — 52 Murray Road, Welshpool, W.A. 6101 — Telex AA92860

RECEIVED 7 JUN 1988

ANALYTICAL REPORT No. 247.0.14.02313

THIS REPORT MUST READ IN CONJUNCTION WITH THE ACCOMPANYING ANALYTICAL DATA

ORDER No. | PROJECT

ZAPOPAN NL
PO BOX 4045

DARWIN NT 5791

DATE RECEIVED	RESULTS REQUIRED
30/05/88	ASAP

No. OF PAGES OF RESULTS	DATE REPORTED	No. OF COPIES	TOTAL No. OF SAMPLES
2	21/06/88	1	23

ATE IF PLES		PRE-TREATMENT								ANALYSIS			
ER OW	SAMPLE NUMBERS	DRY	CRUSH	SPLIT	PUL-VERISE	SIEVE	OTHER SEE REMARKS	NONE		REFER TO ANALYSIS SECTION	PREPARATION	METHOD
	6566/88	DC	Prep: 833							Au,Au(1),Au(2)/313		
	6566/88	DC								As/401		

RESULTS TO

MR ROD JOHNSON
ZAPOPAN NL
PO BOX 4045

DARWIN NT 5791

RESULTS TO

REMARKS

Z-ZAP 18

STATE OF SAMPLES		ANALYSIS — PREPARATION				ANALYSIS — METHOD	
ole core	WC	perchloric acid	A1	cold acid	CA	atomic absorbtion	AAS
lit core	SC	hydrochloric acid	A2	specific sulphide	SS	x-ray fluorescence	XRF
tting	CU	nitric acid	A3	other mixed acids	Ma	spectrophotometry	SPEC
k	Ro	aqua regia	A4	alkaline attack	AA	colorimetry	COL
l	SO	nitric-perchloric	A5	volatilization	VO	chromatography	CHR
ip	PU	HF mixture	A6	ignition	IG	titration	TTN
ter	WA	HF under pressure	A7	pressed powder (XRF)	PP	other chemical means	CHEM
sue	TI	fusion	A8	glass fusion (XRF)	GF	miscellaneous	MISC
eam sediment	SS					fluorescence	FLUOR
avy mineral	HM					inductively coupled plasma	ICP

AUTHORISED OFFICER

ANALABS

A Division of Macdonald Hamilton & Co. Pty Ltd

ANALYTICAL DATA

RECEIVED

SAMPLE PREFIX	REPORT NUMBER	REPORT DATE	CLIENT ORDER No.	PAGE
	247.0.14.02513	21/06/88		1 OF 1

TUBE No.	SAMPLE No.	As	Au	Au(1)	Au(2)		Hole No.	Depth		
1	6566	4	0.009	–	–		ZZAP 18	130-132		
2	6567	<2	0.015	–	–			132-134		
3	6568	4	0.012	–	–			134-136		
4	6569	10	0.008	–	–			136-138		
5	6570	7	0.007	–	–			138-140		
6	6571	15	0.013	–	–			140-142		
7	6572	10	0.018	–	–			142-144		
8	6573	10	0.015	–	–			144-146		
9	6574	15	0.023	–	–			146-148		
10	6575	60	0.009	–	–			148-150		
11	6576	8	0.021	–	–			150-152		
12	6577	10	0.011	–	–			152-154		
13	6578	55	0.196	–	–			154-156		
14	6579	240	0.069	–	–			156-158		
15	6580	35	<0.005	–	–			158-160		
16	6581	15	0.011	–	–			160-162		
17	6582	<2	0.008	–	–			162-164		
18	6583	4	0.006	–	–			164-166		
19	6584	5	0.041	–	–			166-168		
20	6585	45	0.018	–	0.008			168-170		
21	6586	20	0.010	–	–			170-172		
22	6587	4	0.010	–	–			172-174		
23	6588	10	0.011	–	0.009			174-175.10		
24										
25										

Results in ppm unless otherwise specified
T = element present but concentration
K = element concentration
— = element not determined

AUTHORISED OFFICER

ANALABS

A Division of Macdonald Hamilton & Co. Pty. Ltd.

ANALYTICAL DATA

SAMPLE PREFIX	REPORT NUMBER	REPORT DATE	CLIENT ORDER No.	PAGE
	247.0.14.02513	21/06/88		OF 2

RECEIVED

TUBE No.	SAMPLE No.	As.	Au	Au(1)	Au(2)					
1										
2										
3										
4										
5										
6										
7										
8										
9										
10										
11										
12										
13										
14										
15										
16										
17										
18										
19										
20										
21										
22	DETECTION	2	0.005	0.005	0.005					
23	UNITS	PPM	PPM	PPM	PPM					
24	METHOD	401	313	313	313					
25										

Results in ppm unless otherwise specified
T = element present but concentration [illegible]
X = element concentration is below detection [illegible]
— = element not determined

AUTHORISED OFFICER

CORE RECOVERY LOG

PROSPECT/MINE: ZAPOPAN HOLE NO: Z-ZAP-18

Logged By: ..... Sheet: ...../.....

Depth (m) From	Depth (m) To	Interval (m)	Recovery (m)	Depth (m) From	Depth (m) To	Interval (m)	Recovery (m)
49.85	50.70	0.85	0.84	130.90	132.70	1.80	1.78
50.70	53.10	2.40	2.38	132.70	134.40	1.70	1.66
53.10	54.42	1.32	1.30	134.40	136.70	2.30	2.26
54.42	55.78	1.36	1.25	136.70	139.80	3.10	2.90
55.78	57.40	0.60	0.53	139.60	142.70	2.90	2.86
57.40	57.55	0.15	0.08	142.70	144.70	2.00	2.00
57.55	57.70	0.15	0.14	144.70	146.70	2.00	1.97
57.70	58.30	0.60	0.61	146.70	148.80	2.10	1.99
58.30	58.98	0.68	0.60	148.80	150.90	2.10	2.06
58.98	59.70	0.72	0.67	150.90	152.70	1.80	1.55
59.70	62.02	0.89	0.76	152.70	155.70	3.00	2.86
62.02	62.50	0.48	0.34	155.70	158.70	3.00	2.92
62.50	63.70	1.20	0.94	158.70	160.20	1.50	1.38
63.70	64.20	0.50	0.49	160.20	160.60	0.40	0.39
64.20	65.0	0.80	0.68	160.60	161.50	0.90	0.83
65.0	65.50	0.50	0.34	161.50	162.45	0.95	0.60
65.50	65.90	0.40	0.40	162.45	164.25	1.80	1.77
65.90	66.70	0.80	0.66	164.25	166.50	2.25	2.24
66.70	68.20	0.50	0.44	166.50	168.0	1.50	1.25
68.20	69.10	0.90	0.90	168.0	170.90	2.90	2.63
69.10	69.60	0.50	0.45	170.90	174.0	3.10	3.10
69.60	70.00	0.40	0.41	174.0	175.10	1.10	0.97
70.0	71.20	1.20	1.10				
71.20	72.40	1.20	1.14				
72.40	74.20	1.80	1.63				
74.20	76.10	1.90	1.73				
76.10	78.60	2.50	2.11				
78.60	80.0	1.40	1.28				
80.0	80.70	0.70	0.65				
80.70	82.70	2.00	1.90				
82.70	84.40	1.70	1.64				
84.40	86.70	2.30	2.20				
86.70	89.70	3.00	2.97				
89.70	92.70	3.00	2.97				
92.70	95.30	2.80	2.58				
95.30	97.70	2.40	2.33				
97.70	99.0	1.30	1.30				
99.0	100.10	1.10	1.06				
100.10	102.90	2.80	2.81				
102.90	104.70	1.80	1.69				
104.70	107.70	3.00	2.96				
107.70	109.50	1.86	1.57				
109.50	110.70	0.90	0.90				
110.70	113.50	2.80	2.75				
113.50	116.50	3.00	2.92				
116.50	119.60	2.10	2.07				
119.60	122.60	3.00	2.50				
122.60	124.70	2.10	1.95				
124.70	127.80	3.10	3.02				
127.80	130.90	3.10	2.70				

SHEET 1 of 2

LOGGED BY: D.S.H

CORELOGGING DATA

AREA / LEASE ..... PROSPECT ZAPOPAN ..... HOLE No Z-ZAP 18

DIST. FROM COLLAR	BREAKS / METRE	RECOVERY	R.Q.D.	SPEC. GRAVITY	MAG. SUSCEPTILITY	ANGLE TO LONG CORE AXIS: So	ANGLE TO LONG CORE AXIS: S1	STRUCTURES	LITHOLOGY	ESTIMATED MINERAL PERCENTAGES: milky qtz.	sugary qtz.	f. gr. qtz.	muso.	biot.	garnet	chl.	act.	cbl.	tourm.	py.	po.	hem.	base metal su.	aspy.	K-Spar	SAMPLE No.	ASSAY RSLTS: Au	ASSAY RSLTS: As	GEOLOGICAL COMMENTS (mainly texture)
70														tr														
71														tr												0.085		
72																												Pink ? alt. Slist. within Qtz breccia.
73										60														5		0.42%		
74										60														6				
75										10										tr						0.102		
76												1/2		tr		10				1								
77												1		tr		5				2						0.061		
78										7		1/2				15				1						0.059		
79												1				5		tr		tr								
80																		tr		tr						0.021		
81																				1								
82										3						1	1	2		2						0.111		
83										6		1/2				5	2			1								
84														tr						tr						28.0		Hem IB.i.f
85								B.i.f				40				20	10			20			1	4				
86												10				5	1		tr	4				1		0.21		
87												5				5				2								
88												2			1	2				1						4.1		

LITHOLOGICAL LEGEND:

Sdm	Mudstone	tAn	Anhalone	Su	Massive Sulphide		Veining > 30%
cSdm	Carbonaceous Mudstone	Sct	Chert	Ss	Gossan		Tourmaline > 5%
Sst	Siltstone	Sif	B.I.F.	Mh	Hornfels		Arsenopyrite > 0.5%
Sst	Sandstone	cbSif	B.I.F. Carbonate > 15%	MBd	Metadolerite		Base metal sulphides > 5%
Sgw	Greywacke	chSif	B.I.F. Chlorite > 40%	Af	Felsite	Py	Pyrite > 5%
Sco	Conglomerate	actSif	B.I.F. Actinolite > 40%	Agr	Granite	Po	Iron sulphides > 5%
Sco	Carbonate	micSif	Mica > 30% (commonly includes garnets)		Brecciation/Rock		

SHEET 2 of 2

LOGGED BY: D.S.H.

CORELOGGING DATA

AREA / LEASE ..... PROSPECT ZAPOPAN ..... HOLE No: Z-ZAP 18

DIST. FROM COLLAR	BREAKS / METRE	RECOVERY	R.Q.D.	SPEC. GRAVITY	MAG. SUSCEPTILITY	ANGLE TO LONG CORE AXIS So	ANGLE TO LONG CORE AXIS Si	STRUCTURES	LITHOLOGY	ESTIMATED MINERAL PERCENTAGES milky qtz.	sugary qtz.	f. gr. qtz.	musc.	biot.	garnet	chl.	act.	cbt.	tourm.	py.	po.	hem.	base metal su.	aspy.			SAMPLE No.	ASSAY RSLTS. Au	ASSAY RSLTS. As	GEOLOGICAL COMMENTS (mainly texture)
88																														
								b.i.f.				10		tr		14	1			5								0.064		
89												8			2	5				2				<½						
90														tr	½					tr										
91								b.i.f.				10			4	2				2				tr				0.038		
92												20			1					5										
93										3		2			1	10				4						tr		0.008		
94												2			tr	tr				½										
95								Qtz.		10		5								tr								0.027		
96										8					18				1	½						tr				
97												10							1							2		0.008		
98												30							tr	tr						2				?Shear zone
99									SS SS SS	6		8			tr													0.022		
100															1			3		1										
101								b.i.f.				17			2		4			2				tr				<0.005		
102												15			2	tr				<½										
103								b.i.f.				40			3	30	8			6		2		tr				0.128		?Basal b.i.f.
104												½				5		1		tr										
105												tr						½		tr								0.007		
106																														

LITHOLOGICAL LEGEND:

Sxm	Mudstone	tAv	Ashstone	Su	Massive Sulphide		Veining > 30%
cSxm	Carbonaceous Mudstone	Sct	Chert	go	Gossan		Tourmaline > 5%
Ssi	Siltstone	Slf	B.I.F.	Mh	Hornfels		Arsenopyrite > 0.5%
Sst	Sandstone	caSlf	B.I.F. Carbonate > 15%	MBd	Metadolerite		Base metal sulphides > 5%
Sgw	Greywacke	chSlf	B.I.F. Chlorite > 40%	Af	Felsite	py	Pyrite > 5%
Scg	Conglomerate	actSlf	B.I.F. Actinolite > 40%	Agr	Granite	po	Iron sulphides > 2%
Sca	Carbonate	micSlf	Micas > 30% (commonly includes garnets)		Brecciated rock		

PERCUSSION DRILL LOG

PROSPECT/MINE: ZAPOPAN HOLE NO: Z-ZAP 18

Collar: ..... E ..... N ..... RL

Azimuth: 302 °~~Mag~~/grid Inclination: -65 °

Date Drilled: 20/4/88 Logged By: D.J.H. Sheet: 1/1

Depth (m) From	Depth (m) To	Sample No.	Description: Lithology	Qtz	Py	Apy	Au
0	2	A 15401	Soil sample				
2	4	02	Soil weathered/oxidized Siltstone				
4	6	03	Oxidized Slst 10% grey Slst 10% Qtz frag	✓			
6	8	04	60% dk grey Slst < 10% Qtz Yellow/green Slst	✓			
8	10	05	a.a. 40% dk grey Slst	✓			
10	12	06	a.a.	✓			
12	14	07	a.a. 60% dk grey Slst	✓			
14	16	08	40% red chert 20% green Dk grey Slst				
16	18	09	Dk grey Slst 30% yellow green 30% Chert 40%				
18	20	10	a.a. 70% yellow/green Chert 30%				
20	22	11	80% Dk grey Slst 20% Qtz Minor pyr	✓	✓		
22	24	12	< 5% Qtz 10% Gyke 60% Dk grey Slst	✓	✓		
24	26	13	a.a. < 10% pale green chert				
26	28	14	30% Qtz (milky) Dk grey Slst with pyr	✓	✓		
28	30	15	< 5% Qtz + pyr 10% Gyke Dk grey Siltstone	✓	✓		
30	32	16	Smoky Qtz + pyr Pyr as nodules in Dk grey Slst 80%	✓	✓		
32	34	17	a.a. No pyr in Slst	✓			
34	36	18	Milky Qtz (10%) 70% Dk grey Slst Pale green chert	✓			
36	38	19	< 10% green/red chert Dk grey Slst				
38	40	20	60% Gyke < 5% Qtz Dk grey Slst	✓	✓		
40	42	21	40% red chert/green chert < 5% Qtz Dk grey Slst	✓	✓		
42	44	22	< 5% Qtz + pyr Dk grey Slst + green chert	✓	✓		
44	46	23	a.a.				
46	48	24	Pyr nodules in dk grey Slst		✓		
48	50	25	70% Dk grey Slst 2% Smokey Qtz with pyr ? tuff frag	✓	✓		

DRILLHOLE LOG

Drillhole No. Z-ZAP 18
Page 1 of 32.

PROJECT: ZAPOPAN
DRILL: RIG 8
COORDINATES:

COMPANY: ROCKDRIL
COMMENCED:
ELEVATION:

CONTRACTOR:
COMPLETED:
AZIMUTH: 302° [GRID]

DECLINATION: -65°
LOGGED BY: D.J.H

DEPTH m	RUN m	INTER-VAL m	RECOV-ERY m	%	SURVEY	DESCRIPTION	STRUCT-URE	DEPTH m	SAMPLE NUMBER	INTER-VAL m	WIDTH m	ANALYSES Au (ppm)		
48														
49														
50	49.					METASILTSTONE / CHERT foliation 35° to core. banded. pyx 1-2 mm in foliation				49.85				
						Qtz veining minor pyx + asp.								
51	50.70	0.85	0.84			METASILTSTONE minor pyx along joints and fractures								
						Rose qtz veining with pyx + asp.								
52						METASILTSTONE. grades into pale green coarsely foliated siltstone, intensly deformed with fold // to foliation @ 30° to core. Grades into more silicic grey siltstone. Grades in to pale green/white METAN FF Qtz ein 1cm wide. offset by fractures @ 51.46.			6523	52.0	2.15	0.017		

GEONORTH

DRILLHOLE LOG

Drillhole No. Z-ZAP18
Page 2 of 32

PROJECT: ZAPOPAN
DRILL:
COORDINATES:

COMPANY:
COMMENCED:
ELEVATION:

CONTRACTOR:
COMPLETED:
AZIMUTH:

DECLINATION:
LOGGED BY: D.J.H.

DEPTH m	RUN m	INTER-VAL m	RECOV-ERY m	%	SURVEY	DESCRIPTION	STRUCT-URE		DEPTH m	SAMPLE NUMBER	INTER-VAL m	WIDTH m	ANALYSES			
52						strongly foliated 35° to core. conformable contact to METASILTSTONE.					52.	2.	0.017			
						Milky qtz ± rose qtz vein 52.51 - 52.57 m banded minor pyr ± asp.										
						Silty chert interbedded pale red/green.										
53	53.10	2.40	2.38			METACHERT pale red/green. silicic. 2mm wide asp, pyr filled fracture flanked by cherts.										
54																
						Qtz vein 54.16 - 54.17 m.				6524.	54.	2.	0.016			
	54.42	1.32.	1.30			Red/green METACHERT minor 2-4 cm wide qtz bands & boudins of leucocratic chert with abundant pyr. boudins 2-3cm x 5-6cm long wide.										
55						54.70 - 55.16. well foliated METATUFF. foliation 25° to core.										
						55.16 - 55.71 less foliated METATUFF cream. Pyr along fractures // to foliation & along joints										
	55.78	1.36	1.25.													
56	56.80	1.02	1.04			Coarse grained foliated METATUFF foliation 30° to core.				6525.	56	2.	0.020			

GEONORTH

DRILLHOLE LOG

Drillhole No. 2 ZAP17
Page 3 of 32

PROJECT: ZAPOPAN
COMPANY:
CONTRACTOR:
DRILL:
COMMENCED:
COMPLETED:
COORDINATES:
ELEVATION:
AZIMUTH:
DECLINATION:
LOGGED BY: D.J.H.

DEPTH m	RUN m	INTER-VAL m	RECOV-ERY m	%	SURVEY	DESCRIPTION	STRUCT-URE		DEPTH m	SAMPLE NUMBER	INTER-VAL m	WIDTH m	ANALYSES			
57						Core badly fractured. 57.11 - 57.30. Fine-grained bas foliated										
	57.40	0.60	053			METATUFF pale grey/green.										
	57.55	0.15	0.09			57.30 - 58.05 V. broken (coarse-grained										
	57.70	0.15	0.4			METATUFF and loose ?back fill sands.										
58										6526	58	2	0.008			
	58.30	060	0.61			58.05. - 58.22 Fine-grained METATUFF										
						with minor ?chert horizons.										
59	58.98	068	060			58.22 - 58.89 Crushed METATUFF.										
						Recent crush zone Fresh pegs. 59.19 - 59.29										
						METASILTSTONE dk grey, massive minor qtz										
	59.70	0.72	067			freq. @ 59.76 with massive pyr gtz vn. Altered to pink colored SILST										
60						59.82 - 60.79. Hydraulic breccia of				6527	60.	2.	0.221			
						METASILTSTONE with milky qtz matrix 10 pyr										
						with minor asp both within qtz and along fault										
						and fractures. Both fresh & altered SILST with breccia										
						Qtz veining (mm) scale within										
61						METASILTSTONE. Pyr gtz vtg 4-5mm in dia.										

61.13. 1.43 1.17.

GEONORTH

DRILLHOLE LOG

Drillhole No. ZDH18
Page 4. of 32

PROJECT: ZAPOPAN
COMPANY:
CONTRACTOR:
DRILL:
COMMENCED:
COMPLETED:
COORDINATES:
ELEVATION:
AZIMUTH:
DECLINATION:
LOGGED BY: D.J.H

DEPTH m	RUN m	INTER-VAL m	RECOV-ERY m	%	SURVEY	DESCRIPTION	STRUCT-URE		DEPTH m	SAMPLE NUMBER	INTER-VAL m	WIDTH m	ANALYSES			
61																
						massive METASILTSTONE.										
										6528	62	2.	0.078			
62																
	62.02	0.89	0.76													
	62.50	0.48	0.34													
63						61.95-62.02. Fresh core zone.											
	63.70	1.20	0.94			Bedding within METASILTSTONE on mm scale.										
										6529	64	2.	0.10			
64																
	64.20	0.50	0.49													
65	65.0	0.80	0.68													

GEONORTH

DRILLHOLE LOG

Drillhole No. E-ZAP18
Page 5 of 32

PROJECT: ZAPOPAN
COMPANY:
CONTRACTOR:
DRILL:
COMMENCED:
COMPLETED:
COORDINATES:
ELEVATION:
AZIMUTH:
DECLINATION:
LOGGED BY: D.J.H.

DEPTH m	RUN m	INTERVAL m	RECOVERY m	%	SURVEY	DESCRIPTION	STRUCTURE
65						Dk grey massive METASILTSTONE.	
	65.50	0.50	0.34				
66	65.90	0.40	0.40				
						66.01 - 66.15 - Qtz vein coarse milky white. Aspealog fractures.	
	66.70	0.80	0.66			Qtz veining @ 66.31, 66.36, 67.38	
						with Dk grey METASILTSTONE.	
67							
68						METASILTSTONE.	
	68.20	0.50	0.44				
						Coarse pale green/pink chert. 68.74-68.91	
69						3cm of intense Qtz veining.	
	69.10	0.90	0.90				

DEPTH m	SAMPLE NUMBER	INTERVAL m	WIDTH m	ANALYSES
66	6530	66	2	0.016
68	6531	68	2	0.059

GEONORTH

DRILLHOLE LOG

Drillhole No. Z-ZAP18
Page 6 of 32

PROJECT: ZAPOPAN
DRILL:
COORDINATES:

COMPANY:
COMMENCED:
ELEVATION:

CONTRACTOR:
COMPLETED:
AZIMUTH:

DECLINATION:
LOGGED BY: D.J.H.

DEPTH m	RUN m	INTER-VAL m	RECOV-ERY m	%	SURVEY	DESCRIPTION	STRUCT-URE	DEPTH m	SAMPLE NUMBER	INTER-VAL m	WIDTH m	ANALYSES			
69	69.10	0.90	0.90			68.96 - 71.68 chert grades into pale grey pink NFF. minor qtz bands. 50° no core.									
	69.60	0.50	0.45												
70	70.00	0.40	0.41		64°/306°	Asp. filled gash 5cm x 2cm + silicic			6532	70.	2.	0.011			
						71.68 - 71.97. Clasts of pink altered SHst with pale grey METATUFF - 2mm wide qtz vein with asp + lesser pyr.									
71	71.20	1.20	1.10			TUFF + SLTST partly altered to pink / light grey colour.									
						71.97 - 72.15. Pale grey TUFF with insipient foliation 35° to core.			6533	72	2	0.083			
72	72.40	1.20	1.14			72.15 - 74.20. Hydraulic breccia of altered SHst with chert frag									
73															

GEONORTH

DRILLHOLE LOG

Drillhole No. Z-ZAP 18
Page 7. of 32

PROJECT: ZAPOPAN | COMPANY: | CONTRACTOR:

DRILL: | COMMENCED: | COMPLETED:

COORDINATES: | ELEVATION: | AZIMUTH: | DECLINATION:

LOGGED BY: D.J.H.

DEPTH m	RUN m	INTER-VAL m	RECOV-ERY m	%	SURVEY	DESCRIPTION	STRUCT-URE		DEPTH m	SAMPLE NUMBER	INTER-VAL m	WIDTH m	ANALYSES
74	74.20	1.80	1.63			Breccias top to 74.20. 74.20 - 74.26. Dk grey/black spec coarse ash tuff. Siliceous. Py throughout. massive py gravel at base.				6534	74	2	0.284
						Fine-grained green/red chert. massive py + asp along fract. 30° to core.							
						Foliated coarse grained pink grey METATUFF (Foliation 40° to core).							
75						Coarse pink/white banded with green red chert. 75.02 - 75.03 Qtz vein. @ 85° to core.							
						Hydraulic qtz breccia with RUFF clasts showing asp euhedral crystal growth with Qtz.							
						Clasts of red chert. Py mineralization within 1cm wide Qtz vein @ 75.69.							
76						½ cm wide siliceous band @ to core.				6535	76	2	0.02
	76.10.	1.90	1.73			Banded METATUFF with 1cm py bands @ to core foliation 45° to core.							
						METASILTSTONE 76.37 - 76.57.							
						Well folded Silicic TUFF white/grey black spec. folded 50° to core.							
77						METASILTSTONE dk grey banded minor pyr lenses.							
						Silicic coarse-grained TUFF. w.k siltstone clasts pyr + asp infilling fractures + disseminated in knots of pyr. Altered to pink colour				6536	78	2.	0.061
79	78.60	2.50	2.11.										

GEONORTH

DRILLHOLE LOG

Drillhole No. t-ZAP 18
Page 8 of 32

PROJECT: ZAPOPAN
DRILL:
COORDINATES:

COMPANY:
COMMENCED:
ELEVATION:

CONTRACTOR:
COMPLETED:
AZIMUTH:

DECLINATION:
LOGGED BY: D.J.H.

DEPTH m	RUN m	INTER-VAL m	RECOV-ERY m	%	SURVEY	DESCRIPTION	STRUCT-URE		DEPTH m	SAMPLE NUMBER	INTER-VAL m	WIDTH m	ANALYSES			
78						METASILTSTONE.				6536	78	2	0.061			
						Qtz vein 78.23 - 78.60 v. minor asp.										
	78.60	2.50	2.11			78.60 - 78.72. Silicic band Incipient foliation 45° to core.										
79																
						METASILTSTONE - badly broken core minor CHERT fragments.										
80	80.0	1.40	1.28							6537	80	2	0.459			
	80.70	0.70	0.65													
81						Qtz, pyr, asp band 60° to core @ 81.14.										
						CHERT-rich zone. minor pyr.										
82	82.70	2.0	1.90			minor pyr lenses long axis // to foliation				6538	82	2	0.021		0.020	

GEONORTH

DRILLHOLE LOG

Drillhole No. Z-2AR18
Page 9 of 32

PROJECT: ZAPOPAN
COMPANY:
CONTRACTOR:
DRILL:
COMMENCED:
COMPLETED:
COORDINATES:
ELEVATION:
AZIMUTH:
DECLINATION:
LOGGED BY: D.J.H.

DEPTH m	RUN m	INTER-VAL m	RECOV-ERY m	%	SURVEY	DESCRIPTION	STRUCT-URE		DEPTH m	SAMPLE NUMBER	INTER-VAL m	WIDTH m	ANALYSES			
82						82.02 - 82.06. Coarse qtz band, 70° to core. Off-set by sub-parallel fracture to core infilled with py+asp.				6538	82	2	0.121		0.120	
	82.70	2.0	1.90			82.75 - 82.99. Qtz veining, pyr throughout										
83						Banded METASILTSTONE 30° to core. Pyr ladder veins define sub-vert foliation 40° to core.											
						83.03 pyr band 1-2mm wide. Folded silicic band with pyr+asp, dominant in fold hinge. 84.52 - 85.21											
84										6539	84.40	2.4	0.111			
	84.40	1.70	1.64			84.52 - 85.21.										
						Intensly deformed qtz/chert bands. Abundant asp >30% pyr >20%. Asp as euhedral crystals up to 3mm with disseminated pyr throughout.											
85						Asp dominates 84.50 - 84.90. Pervasive min foliation @ 50° to core. Bands grey/green in colour. 1-2 specks fine gold.				6540	85.20	0.80	29.74	28.02	22.62		
						METASILTSTONE with pyr along foliation.										
86										6541	86.0	0.80	0.210			
	86.70	2.30	2.20													

GEONORTH

DRILLHOLE LOG

Drillhole No. E-ZAP18
Page 10 of 32

PROJECT: ZAPOPAN
DRILL:
COORDINATES:

COMPANY:
COMMENCED:
ELEVATION:

CONTRACTOR:
COMPLETED:
AZIMUTH:

DECLINATION:
LOGGED BY: D.J.H.

DEPTH	RUN m	INTER-VAL m	RECOV-ERY m	%	SURVEY	DESCRIPTION	STRUCT-URE		DEPTH m	SAMPLE NUMBER	INTER-VAL m	WIDTH m	ANALYSES		
86						METASILTSTONE dk grey				6541	86	0.80	0.210		
	86.70.	2.30	2.20												
87						86.86 - 87.10. Deformed silic/chert pyr/garnet zone - minor cos ? Ankerite Garnets 2-6mm pink/brown.									
						Pale grey coarse METASILTSTONE ? METARGILLITE. grades into coarse dk SILTSTONE clusted with garnets									
88						88.19. 1cm wide pale silicic band.				6542	88	2	0.710	7.740	6.400
89						Pale pink hard zone 88.90 - 89.11. Banded with green chert/pyr/qtz - leucocratic coarse boudins and qtz rich zone along base pyr dominates fold hinges and ∥ to folded beds. foldow 45° to core.									
						Dk grey METASILTSTONE.									
	89.70	3.0.	2.97												
90						Garnet rich green chert/qtz/pyr boudins				6543	90	2	0.064		

GEONORTH

DRILLHOLE LOG

Drillhole No. Z-ZAP 8
Page 11 of 32

PROJECT: ZAPOPAN
DRILL:
COORDINATES:

COMPANY:
COMMENCED:
ELEVATION:

CONTRACTOR:
COMPLETED:
AZIMUTH:

DECLINATION:
LOGGED BY: D.J.H.

DEPTH m	RUN m	INTER-VAL m	RECOV-ERY m	%	SURVEY	DESCRIPTION	STRUCT-URE		DEPTH m	SAMPLE NUMBER	INTER-VAL m	WIDTH m	ANALYSES			
90						90.35. SILTSTONE grades into coarse silicic METATUFF.				6543	90	2.	0.064			
						90.60. 5cm wide Qtz pyr vein garnet-rich along base. Minor CO3 ? Ankerite Minor deformation with qtz vein										
91						METATUFF										
						91.62. Qtz chert band 6cm wide, mm leucocratic/dk bands + garnets, arp & pyr.										
92						METATUFF.				6544	92	2	0.038			
						Deformed silicic tuff @ 92.50										
	92.70	30	2.97													
93						Coarse pale grey METATUFF. 93.0-93.48. Banded speck green/pink chert. Cross-cutting CO3 veins leucocratic boudins with abundant pyr. Badly deformed.										
94										6545	94	2	0.008			

GEONORTH

DRILLHOLE LOG

Drillhole No. Z-ZAP1Y
Page 12 of 32

PROJECT: ZAPOPAN
DRILL:
COORDINATES:

COMPANY:
COMMENCED:
ELEVATION:

CONTRACTOR:
COMPLETED:
AZIMUTH:

DECLINATION:
LOGGED BY: D.J.H.

DEPTH	RUN m	INTER-VAL m	RECOV-ERY m	%	SURVEY	DESCRIPTION	STRUCT-URE	DEPTH m	SAMPLE NUMBER	INTER-VAL m	WIDTH m	ANALYSES			
94						94.07 METATUFF grades into METASILTSTONE. 94.18 3.5cm wide silicic band folded along base fold 30° to core. with pyr & garnets.			6545	94	2	0.028			
95	95.3	2.80	2.58			Bedded METASILTSTONE. 30° to core. Foliation 40° to core. defined by pyr 'ladder' veins									
96						95.91 - 96.9 Qtz vein. Coarse milky. v. minor pyr.			6546	96	2	0.027			
						Jointed silicic green fine-grained METATUFF. Pyr along joints 30° to core.									
						96.47 - 96.52 Qtz vein									
97						96.94 - 97.6 Qtz coarse + brecciated green tuff. + leucocratic frag.									
						METATUFF - grey more coarse-grained towards base.									
	97.70	2.40	2.33			97.70 - 97.74 Pink chert ⊥ to core.			6547	98	2	0.008			
98															

GEONORTH

DRILLHOLE LOG

Drillhole No. Z-ZAP 18
Page 13 of 32

PROJECT: ZAPOPAN
DRILL:
COORDINATES:

COMPANY:
COMMENCED:
ELEVATION:

CONTRACTOR:
COMPLETED:
AZIMUTH:

DECLINATION:
LOGGED BY: D. J H.

DEPTH m	RUN m	INTER-VAL m	RECOV-ERY m	%	SURVEY	DESCRIPTION	STRUCT-URE	DEPTH m	SAMPLE NUMBER	INTER-VAL m	WIDTH m	ANALYSES			
98						98.30 5cm silicic pink cherts + silicic CO_3 veining ⊥ to joints.			6547	98	2	0.008			
						3 cm wide folded pale silicic zone. (Fold 35° to core). with minor qtz vein + pyr									
99	99.0	1.30	1.30												
						dk grey METASILTSTONE.									
						pyr along fractures			6549	100	2	0.027			
100	100.10	1.10	1.06			CO_3 veining.									
101						100.89 - 101.07 Banded chert/tuff with coarse leucocratic boudins. Garnet zone above + pyr zone at base mm wide. Pale silicic band 1cm wide									
						Dk grey METASILTSTONE.			6549	102	2	<0.005			
102															

GEONORTH

DRILLHOLE LOG

Drillhole No. Z-ZAP18
Page 14 of 32

PROJECT: ZAPOPAN
COMPANY:
CONTRACTOR:
DRILL:
COMMENCED:
COMPLETED:
COORDINATES:
ELEVATION:
AZIMUTH:
DECLINATION:
LOGGED BY: D.S.H.

DEPTH m	RUN m	INTER-VAL m	RECOV-ERY m	%	SURVEY	DESCRIPTION	STRUCT-URE	DEPTH m	SAMPLE NUMBER	INTER-VAL m	WIDTH m	ANALYSES			
102	102.90	2.80	2.81						6549	102	2	<0.005			
						METASILTSTONE Garnet dusted									
103						103.26 - grades into METATUFF with pyr along fractures.									
						garnet zone @ 103.54 - 103.71. Progressively more silicic									
104									6550	104	2	0.128			
						104.02 - 104.60. Silicic pale green/grey black spc. intensely deformed hfts & chert. mm pyr bands + asp. hematite/garnet mm banding along base. banded sequence on mm scale light grey/dk bands									
	104.70	1.8	1.49			silicic METATUFF.									
105						Pale grey/green silicic METATUFF bedding 20° to core Silicic infilling fractures 40° to core.									
106						Qtz veining + CO3 cross-cutting veins.			6551	106	2	0.007			

GEONORTH

Drillhole No. Z-ZAPO
Page 15 of 32

DRILLHOLE LOG

PROJECT: ZAPOPAN
DRILL:
COORDINATES:

COMPANY:
COMMENCED:
ELEVATION:

CONTRACTOR:
COMPLETED:
AZIMUTH:

DECLINATION:
LOGGED BY: D.J.H

DEPTH m	RUN m	INTER-VAL m	RECOV-ERY m	%	SURVEY	DESCRIPTION	STRUCT-URE	DEPTH m	SAMPLE NUMBER	INTER-VAL m	WIDTH m	ANALYSES			
106						METATUFF. garnet dusted.			6551	106	2	0.007			
						107.0 - 107.02 qtz veining									
107						METATUFF.									
	107.70	3.0	2.96			mm banding of sulfide dk + pyr			6552	108	2	0.020			
108						108.41 - 108.44 CO_3 vein 50° to core ? Dolomite or Ankerite.									
						METATUFF.									
109						109.61 garnet zone 25° to core.									
	109.50	1.80	1.57			banded TUFF.									
						dk grey METASILTSTONE			6553	110	2	0.021			
110															

GEONORTH

DRILLHOLE LOG

Drillhole No. Z-ZAP18
Page 16 of 32

PROJECT: ZAPOPAN
COMPANY:
CONTRACTOR:
DRILL:
COMMENCED:
COMPLETED:
COORDINATES:
ELEVATION:
AZIMUTH:
DECLINATION:
LOGGED BY: D.J.H.

DEPTH m	RUN m	INTER-VAL m	RECOV-ERY m	%	SURVEY	DESCRIPTION	STRUCT-URE	DEPTH m	SAMPLE NUMBER	INTER-VAL m	WIDTH m	ANALYSES		
110									6553	110	2	0.021		
						garnet dusted dk grey METASILTSTONE								
	110.70	0.90	0.90											
111						111.17 - 111.37. Folded leucocratic coarse tuff. band Fold 40° to core. mm banding at base.								
						111.87. 1cm CO_3 band.								
112									6554	112	2	0.011		
						112.25. 2cm qtz/chl. band black spec. ? tourmaline. + other asp. ≤ @ 112.50								
113						Banded pyr/garnet. with pyr lenses elongate 40° to core								
	113.50	2.80	2.75			113.40 - 113.50 Silicic bedded TUFF.								
114									6555	114	2	<0.005		

GEONORTH

DRILLHOLE LOG

Drillhole No. 2 ZAP18
Page 17 of 32

PROJECT: ZAPOPAN
DRILL:
COORDINATES:

COMPANY:
COMMENCED:
ELEVATION:

CONTRACTOR:
COMPLETED:
AZIMUTH:

DECLINATION:
LOGGED BY: D.J.H.

DEPTH m	RUN m	INTER-VAL m	RECOV-ERY m	%	SURVEY	DESCRIPTION	STRUCT-URE	DEPTH m	SAMPLE NUMBER	INTER-VAL m	WIDTH m	ANALYSES		
114									6555	114	2	<0.005		
						METASILTSTONE - dk grey garnet dusted								
115						115.48 - 116.05. Folded deformed green/grey chert. with pyr along beds & on grounds within hinges. Pelecocratic tuff bovalis garnet/pyr rich. banding on mm scale.			6556	115.5	1.5	0.005		
116									6557	116.0	0.5	0.054		
						METASILTSTONE - garnet dusted								
	116.5	3.0	292											
117						Silicic bands 2-3cm wide 20cm spacing.								
118									6558	118.0	2	0.019		

GEONORTH

DRILLHOLE LOG

Drillhole No. 2 · ZAP18
Page 18 of 32.

PROJECT: ZAPOPAN
DRILL:
COORDINATES:

COMPANY:
COMMENCED:
ELEVATION:

CONTRACTOR:
COMPLETED:
AZIMUTH:

DECLINATION:
LOGGED BY: D.J.H

DEPTH m	RUN m	INTER-VAL m	RECOV-ERY m	%	SURVEY	DESCRIPTION	STRUCT-URE	DEPTH m	SAMPLE NUMBER	INTER-VAL m	WIDTH m	ANALYSES			
118						garnet zone 25° to core			6558	118	2	0.019			
119						10cm wide coarse qtz/massive pyr vein									
						minor CO_3 veining									
	119.6	2.10	2.07			119.55 - 119.61. Qtz/Act/Chl. band ?tourmaline speck. → foliation 40° to core.									
120					64°/306°	Folded pale chert/tuff. + pyr. 60° to core → fold.			6559	120	2	0.005			
						Silicic band.									
121						METASILTSTONE dk grey									
122						garnet zone 22° to core.			6561	122	2	0.007			

GEONORTH

DRILLHOLE LOG

Drillhole No. 2-ZAP18
Page 19 of 32

PROJECT: ZAPOPAN
COMPANY:
CONTRACTOR:
DRILL:
COMMENCED:
COMPLETED:
COORDINATES:
ELEVATION:
AZIMUTH:
DECLINATION:
LOGGED BY: D.D.H.

DEPTH	RUN m	INTERVAL m	RECOVERY m	%	SURVEY	DESCRIPTION	STRUCTURE		DEPTH m	SAMPLE NUMBER	INTERVAL m	WIDTH m	ANALYSES
122										6561	122	2	0.007
	122.60	3.0	2.55			122.83: Silicic tuff bed. black spec + 2 cm zone of mm pyr lgt/dk bands. garnet rich							
123													
						MELANOSTONE dk grey. pyr ladder veins define bedding and foliation.							
										6562	124	2	0.007
124						124.10 - 124.25: pyr/silica bands. 1 cm wide.							
	124.70	2.0	1.95										
125						125.46: CO3 veining							
						125.49 - 125.52: Folded & deformed silicic tuff./pyr/chert beds. garnet rich							
						Partly gltzed coarse SILTSTONE.				6563	126	2	over
126													

GEONORTH

DRILLHOLE LOG

Drillhole No. Z-ZAP18
Page 20 of 32

PROJECT: ZAPOPAN
COMPANY:
CONTRACTOR:
DRILL:
COMMENCED:
COMPLETED:
COORDINATES:
ELEVATION:
AZIMUTH:
DECLINATION:
LOGGED BY: D.J.H.

DEPTH m	RUN m	INTERVAL m	RECOVERY m	%	SURVEY	DESCRIPTION	STRUCTURE	DEPTH m	SAMPLE NUMBER	INTERVAL m	WIDTH m	ANALYSES		
126									6563	126	2	0.005		
127						127.0 – 127.81 Abundant CO_3 mm scale cross-cutting veins.								
128	127.80	3.10	3.02			128.02 garnet / dk. / sil / dk. band 60° to core. 1cm wide.			6564	128	2	<0.005		<0.005
						128.31 – garnet zone with 2cm of mm scale dk/lt grey banding, microfolds 45° to core – banded 25° to core.								
129						129.30 – 7cm coarse qtz veins.								
						Hard silicic METAMVP								
130									6565	130	2	0.005		

GEONORTH

DRILLHOLE LOG

Drillhole No 2 · ZAP 18
Page 21 of 32

PROJECT: ZAPOPAN
COMPANY:
CONTRACTOR:
DRILL:
COMMENCED:
COMPLETED:
COORDINATES:
ELEVATION:
AZIMUTH:
DECLINATION:
LOGGED BY: D. J. H.

DEPTH m	RUN m	INTER-VAL m	RECOV-ERY m	%	SURVEY	DESCRIPTION	STRUCT-URE	DEPTH m	SAMPLE NUMBER	INTER-VAL m	WIDTH m	ANALYSES			
130									6565	130	2	0.005			
						Dk METASILTSTONE gradational into fine-grained silicic tuff.									
131	130.90	3.10	2.70												
						131.15 - 131.45 Coarse tuff top 2 cm grade into silicic band. Garnet rich at base. 18° to core.									
132						5cm wide folded chert/pyr bands @ 132.85 Folded 40° to core.			6566	132	2	0.009			
	132.70	1.80	1.78												
133						Dk grey METASILTSTONE minor silicic bands. Garnet dusted.									
134									6567	134	2	0.05			
	134.40	1.70	1.66												

GEONORTH

DRILLHOLE LOG

Drillhole No. Z-ZAP-18
Page 22 of 32

PROJECT: ZAPOPAN
COMPANY:
CONTRACTOR:
DRILL:
COMMENCED:
COMPLETED:
COORDINATES:
ELEVATION:
AZIMUTH:
DECLINATION:
LOGGED BY: D.S.H.

DEPTH m	RUN m	INTER-VAL m	RECOV-ERY m	%	SURVEY	DESCRIPTION	STRUCT-URE	DEPTH m	SAMPLE NUMBER	INTER-VAL m	WIDTH m	ANALYSES			
134									6567	134	2	0.015			
	134.40	1.70	1.66			134.30. 2cm wide zone Pyr + garnets 15° to core.									
						Pyr within SILTSTONE elongate along foliation 40° to core.									
135						Grades into dk grey silicic. METATUFF.									
						135.26 5cm Pale grey silicic zone 10° to core. with folded 2cm. Silicic dk/lgt banded zone with pyr ± asp. 3cm Banded garnet/chl. at base.									
136									6568	136	2	0.012			
						Garnet disted. METATUFF.									
	136.70	2.30	2.26												
137						136.56. 3cm variously banded on mm scale silicic/dk grey tuff. folded 64° to core. approx. 10° bedding to core.									
						137.41 Garnet/chl/Act. 2cm wide banded zone.									
138						METASILTSTONE dk grey garnet disted			6569	138	2	0.008			

GEONORTH

DRILLHOLE LOG

Drillhole No. Z ZAP18
Page 23 of 32

PROJECT: ZAPOPAN
COMPANY:
CONTRACTOR:
DRILL:
COMMENCED:
COMPLETED:
COORDINATES:
ELEVATION:
AZIMUTH:
DECLINATION:
LOGGED BY: D.J.H.

DEPTH m	RUN m	INTER-VAL m	RECOV-ERY m	%	SURVEY	DESCRIPTION	STRUCT-URE	DEPTH m	SAMPLE NUMBER	INTER-VAL m	WIDTH m	ANALYSES			
138						138.22. 1cm folded silicic zone Fold 40° to core			6569	138	2	0.008			
						138.78 - 138.82. Qtz veining Garnet-rich at base									
139															
						dk grey METAPELITE									
	139.80	3.10	2.90												
140									6570	140	2	0.007			
						140.16 - 140.82 Folded light grey bandmaged METATUFF Dk / light banding for 2-4mm on margins of zone. Pyr & garnet-rich.									
141						dk grey METASILTSTONE									
						141.38 1cm wide CO_3 ? calcite breccia veining.									
						141.70 - 142.10. Banded sequence. Qtz garnet + pyr Folded pyr / leucocratic bands dk/light									
142	142.70	2.90	2.86			bands. Qtz bands folded + disseminated pyr + garnet at base			6571	142	2	0.013			

GEONORTH

DRILLHOLE LOG

Drillhole No. Z-ZAP 18
Page 24 of 32

PROJECT: ZAPOPAN
COMPANY:
CONTRACTOR:
DRILL:
COMMENCED:
COMPLETED:
COORDINATES:
ELEVATION:
AZIMUTH:
DECLINATION:
LOGGED BY:

DEPTH m	RUN m	INTER-VAL m	RECOV-ERY m	%	SURVEY	DESCRIPTION	STRUCT-URE	DEPTH m	SAMPLE NUMBER	INTER-VAL m	WIDTH m	ANALYSES			
142									6571	142	2	0.013			
	142.70	2.90	2.86												
143															
						V dk fine grained METAPERITE + minor CO_3 veining									
									6572	144	2	0.016			
144															
	144.70	2.0	2.0												
145						145: #1. Folded pale grey silicic tuff · minor pyr/chl.									
						Garnet ± v. minor pyr.									
									6573	146	2	0.015			
146	146.70	2.0	1.97.												

GEONORTH

DRILLHOLE LOG

Drillhole No. 2-ZAP 18
Page 25 of 32

PROJECT: ZAPOPAN
DRILL:
COORDINATES:

COMPANY:
COMMENCED:
ELEVATION:

CONTRACTOR:
COMPLETED:
AZIMUTH:

DECLINATION:
LOGGED BY: D.J.H.

DEPTH m	RUN m	INTER-VAL m	RECOV-ERY m	%	SURVEY	DESCRIPTION	STRUCT-URE	DEPTH m	SAMPLE NUMBER	INTER-VAL m	WIDTH m	ANALYSES		
146									6573	146	2	0.015		
						146.48. Garnet/pyr zone mm banding over 5 cm.								
	146.70	2.0	1.97											
147														
148									6574	148	2	0.023		
						minor CO3 veining with dk grey metasiltstone. largely massive.								
149	148.80	2.10	1.99											
150									6575	150	2	0.009		
	150.90	2.10	2.06											

GEONORTH

DRILLHOLE LOG

Drillhole No. Z-ZAP18
Page 26 of 32

PROJECT: ZAPOPAN
COMPANY:
CONTRACTOR:
DRILL:
COMMENCED:
COMPLETED:
COORDINATES:
ELEVATION:
AZIMUTH:
DECLINATION:
LOGGED BY: D.J.H.

DEPTH m	RUN m	INTER-VAL m	RECOV-ERY m	%	SURVEY	DESCRIPTION	STRUCT-URE	DEPTH m	SAMPLE NUMBER	INTER-VAL m	WIDTH m	ANALYSES			
150						15.10 - 150.20 Carbonate zone			6575	150	2	0.009			
						Pale tuff with non pyr rind + pyr in fractures & garnet disted									
151	150.70	2.10	2.06			150.70. Folded banded chl/pyr bands mm scale around leucocratic tuff core. to 150.74									
						151.01. cm size garnets in pale tuff chl deformation zone to 151.06									
152						151.69 & 151.82 banded garnet chl/pale tuff dk banding with leucocratic centre. Fine garnets.			6576	152	2	0.021			
	152.70	1.80	1.55			152.81 15° to core garnet zone 152.90 Chl. zone. garnets + 3-5cm banded tuff / chl. garnet. Garnet rich at base.									
153															
154									6577	154	2	0.011			

GEONORTH

DRILLHOLE LOG

Drillhole No. Z-ZAP18
Page 27 of 32

PROJECT: ZAPOPAN
DRILL:
COORDINATES:

COMPANY:
COMMENCED:
ELEVATION:

CONTRACTOR:
COMPLETED:
AZIMUTH:

DECLINATION:
LOGGED BY: D.J.H.

DEPTH m	RUN m	INTER-VAL m	RECOV-ERY m	%	SURVEY	DESCRIPTION	STRUCT-URE	DEPTH m	SAMPLE NUMBER	INTER-VAL m	WIDTH m	ANALYSES			
154						154.0 Garnet zone with CO_3 vein. ?calcite			6577	154	2	0.011			
						Banded light grey tuff / Chl garnets deformed. Scarce pyr - crosscut by CO_3 vein - ? Dolomite calcite ? Hematite wall.									
155						Garnet-dusted dk grey METASILTSTONE.									
	155.70	3.0	2.86												
156						155.28. Intensly deformed chert. hematite rich + pyr. pale green. dk green. Qtz / silica tuff at base pyr + hematite rich.			6578	156	2	0.196			
157															
						Minor CO_3 ? calcite veining within METASILTSTONE									
158	158.70	3.0	2.92						6579	158	2	0.069			

GEONORTH

DRILLHOLE LOG

Drillhole No. Z-ZAP.18
Page 28 of 32.

PROJECT: ZAPOPAN
COMPANY:
CONTRACTOR:
DRILL:
COMMENCED:
COMPLETED:
COORDINATES:
ELEVATION:
AZIMUTH:
DECLINATION:
LOGGED BY: D.J.H.

DEPTH m	RUN m	INTER-VAL m	RECOV-ERY m	%	SURVEY	DESCRIPTION	STRUCT-URE	DEPTH m	SAMPLE NUMBER	INTER-VAL m	WIDTH m	ANALYSES			
158									6579	158	2	0.069			
						Minor calcite veining within dk grey, massive METASILTSTONE.									
	158.70	3.0	2.92												
159						159.0 leucocratic bordin. CO_3-rich									
160						159.98 - Pyr rich chl bordin? trf. with garnet at base and top.			6580	160	2	<0.005			
	160.20	1.50	1.38												
161	160.60	0.40	0.30												
						CO_3 veining within METASILTSTONE									
	161.50	0.90	0.83												
162									6581	162	2	0.011			
	162.45	0.85	0.60												

GEONORTH

DRILLHOLE LOG

Drillhole No Z-ZAP18
Page 29 of 32

PROJECT: ZAPOPAN
DRILL:
COORDINATES:

COMPANY:
COMMENCED:
ELEVATION:

CONTRACTOR:
COMPLETED:
AZIMUTH:

DECLINATION:
LOGGED BY: D.S.H.

DEPTH m	RUN m	INTER-VAL m	RECOV-ERY m	%	SURVEY	DESCRIPTION	STRUCT-URE	DEPTH m	SAMPLE NUMBER	INTER-VAL m	WIDTH m	ANALYSES			
162									6581	162	2	0.011			
	162.45	0.95	0.60												
163						Bedded coarse / fine METASILTSTONE bedding 80 to core Insipient foliation elongate pyr 60°									
									6582	164	2	0.008			
164	164.25	1.80	1.77												
						CO3 veining within SILTSTONE									
165															
						Coarse silicic bands x-cut by CO3 veins.									
									6583	166	2	0.006			
166	166.50	2.25	2.24												

GEONORTH

DRILLHOLE LOG

Drillhole No. 2-ZAP 18
Page 30 of 32

PROJECT: ZAPOPAN
COMPANY:
CONTRACTOR:
DRILL:
COMMENCED:
COMPLETED:
COORDINATES:
ELEVATION:
AZIMUTH:
DECLINATION:
LOGGED BY:

DEPTH	RUN m	INTER-VAL m	RECOV-ERY m	%	SURVEY	DESCRIPTION	STRUCT-URE
166							
						METASILTSTONE	
	166.50	2.25	2.24				
167							
						Garnet/pyrite rich zone 2cm.	
	168.0	1.50	1.25			METASILTSTONE	
168							
169							
						Thin non-siliceous band.	
						METASILTSTONE	
170	170.90	2.90	2.63.				

DEPTH m	SAMPLE NUMBER	INTER-VAL m	WIDTH m	ANALYSES			
	6583	166	2	0.004			
	6584	168	2	0.041			
	6585	170	2	0.019		0.008	

GEONORTH

DRILLHOLE LOG

Drillhole No. 2-ZAP 18
Page 31 of 32

PROJECT: ZAPOPAN
COMPANY:
CONTRACTOR:
DRILL:
COMMENCED:
COMPLETED:
COORDINATES:
ELEVATION:
AZIMUTH:
DECLINATION:
LOGGED BY: D.J.H.

DEPTH m	RUN m	INTERVAL m	RECOVERY m	%	SURVEY	DESCRIPTION	STRUCTURE	DEPTH m	SAMPLE NUMBER	INTERVAL m	WIDTH m	ANALYSES
170									6585	170	2	0.008 0.008
						METASILTSTONE.						
171	170.70	2.90	2.63			bedding within METASILTSTONE sub // to core.						
						METASILTSTONE						
172									6586	172	2	0.010
						Garnet zone						
173						METASILTSTONE						
						ladder veins of py elongate to incipient foliation. 40° to core			6587	174	2	0.010
174	174.0	3.10	3.0									

GEONORTH

DRILLHOLE LOG

Drillhole No. 2 ~~-ZAP 18~~
Page 32 of 32

PROJECT: ZAPOPAN | COMPANY: | CONTRACTOR:

DRILL: | COMMENCED: | COMPLETED:

COORDINATES: | ELEVATION: | AZIMUTH: | DECLINATION:

LOGGED BY: D.J.H.

DEPTH m	RUN m	INTERVAL m	RECOVERY m	%	SURVEY	DESCRIPTION	STRUCTURE		DEPTH m	SAMPLE NUMBER	INTERVAL m	WIDTH m	ANALYSES			
~~174~~																
	174.0	3.10	3.10							6587	174	2	0.010			
						Dk grey SILTSTONE:										
175.																
	175.10	1.10	0.97			175.10 E.O.H				6588	175.10	1.10	0.011		0.209	

GEONORTH

EXPLOREMIN PTY.LTD.

Diamond Drill Log: ZZAP/19

SUMMARY

CLIENT: ZAPOPAN N.L.

PROSPECT: ZAPOPAN

PROPOSED CO-ORDS E: 10150.0 N: 9898 R.L.: 100m
LAID OUT CO-ORDS E: 10162.0 N: 9890.0 R.L.: 100m
ACTUAL CO-ORDS E: 10162.2 N: 9890.2 R.L.: 100.9

PLANNED DEPTH (M): 200
TARGET DEPTH (M): 75-200
ACTUAL DEPTH (M): 203.3

BEARING ° Grid: 302 ° Mag:
INCLINATION -°: 65

PROPOSED BY: J.G.
PLANNED BY:
LAID OUT BY: MACJAP
SURVEYED BY:

DRILLED BY: ROCKDRILL

DATE COMMENCED: 88/04/20
DATE COMPLETED: 88/04/28

PRE-COLLAR (M): 75
HQ (M): 128.3
NQ (M):
BQ (M):
OTHER (M):
WEDGES PLACED:

COMMENTS/ASSAY SUMMARY:

DOWN HOLE SURVEYS

DEPTH (m): 100	AZIMUTH (mag. °): 313	INCLN (°): 61
DEPTH (m): 150	AZIMUTH (mag. °): 316	INCLN (°): 60
DEPTH (m): 200	AZIMUTH (mag. °): 320	INCLN (°): 57.5
DEPTH (m):	AZIMUTH (mag. °):	INCLN (°):
DEPTH (m):	AZIMUTH (mag. °):	INCLN (°):
DEPTH (m):	AZIMUTH (mag. °):	INCLN (°):
DEPTH (m):	AZIMUTH (mag. °):	INCLN (°):
DEPTH (m):	AZIMUTH (mag. °):	INCLN (°):
DEPTH (m):	AZIMUTH (mag. °):	INCLN (°):
DEPTH (m):	AZIMUTH (mag. °):	INCLN (°):

ANALABS

A division of MacDonald Hamilton & Co. Pty. Ltd. (Inc NSW)

(089) 84 3849

Cnr Coonawarra & Mataraa Rds, Winnellie

Fax: (089) 84 3984

ANALYTICAL REPORT No. 247.0 14.02423

THIS REPORT MUST BE READ IN CONJUNCTION WITH THE ACCOMPANYING ANALYTICAL DATA

INVOICE TO:

ZAPOPAN NL
PO BOX 4045

DARWIN NT 0801

ORDER No.	PROJECT

DATE RECEIVED	RESULTS REQUIRED
28/04/88	ASAP

No. OF PAGES OF RESULTS	DATE REPORTED	No. OF COPIES
3	15/08/88	1

TOTAL No. OF SAMPLES: 58

SAMPLE NUMBERS	SAMPLE DESCRIPTION	ELEMENT/METHOD
Various	PC Prep: 033	Au,Au(1),Au(2)/313
Various	PC	As/401
Various	PC	As/404

RESULTS TO

ZAPOPAN NL
PO BOX 4045

DARWIN NT 0801

RESULTS TO

RESULTS TO

REMARKS

2-ZAP 19

PRE-COLLARS

AUTHORISED OFFICER

ANALABS

A Division of Macdonald Hamilton & Co. Pty. Ltd.

ANALYTICAL DATA

SAMPLE PREFIX	REPORT NUMBER	REPORT DATE	CLIENT ORDER No.	PAGE
	247.0.14.02423	15/08/88		1 OF 3

BE	SAMPLE No		As	As	Au	Au(1)	Au(2)			
	ZAP 19 00-02		35	-	0.013	-	-	ZZAP19		
2	ZAP 19 02-04		30	-	0.012	-	-			
	ZAP 19 04-06		55	-	0.005	-	-			
4	ZAP 19 06-08		25	-	0.005	-	-			
	ZAP 19 08-10		40	-	0.006	-	-			

Results in ppm unless otherwise specified
T = element present; but concentration too low to measure
X = element concentration is below detection limit
— = element not determined

AUTHORISED OFFICER

ANALABS

A Division of Macdonald Hamilton & Co. Pty. Ltd.

ANALYTICAL DATA

SAMPLE PREFIX	REPORT NUMBER	REPORT DATE	CLIENT ORDER No.	PAGE
	247.0.14.02423	15/08/88		2 OF 3

TUBE No.	SAMPLE No.		As	As	Au	Au(1)	Au(2)			
1	ZAP 19 10	12	25	–	<0.005	–	–			
2	ZAP 19 12	14	15	–	<0.005	–	–			
3	ZAP 19 14	16	20	–	0.006	–	–			
4	ZAP 19 16	18	25	–	<0.005	–	–			
5	ZAP 19 18	20	30	–	0.005	–	–			
6	ZAP 19 20	22	40	–	<0.005	–	–			
7	ZAP 19 22	24	40	–	<0.005	–	–			
8	ZAP 19 24	26	45	–	0.006	–	0.011			
9	ZAP 19 26	28	25	–	<0.005	–	–			
10	ZAP 19 28	30	30	–	0.015	–	–			
11	ZAP 19 30	32	15	–	0.007	–	–			
12	ZAP 19 32	34	25	–	0.005	–	–			
13	ZAP 19 34	36	30	–	<0.005	–	–			
14	ZAP 19 36	38	30	–	0.007	–	–			
15	ZAP 19 38	40	25	–	0.006	–	–			
16	ZAP 19 40	42	25	–	0.005	–	–			
17	ZAP 19 42	44	25	–	<0.005	–	–			
18	ZAP 19 44	46	35	–	0.008	–	–			
19	ZAP 19 46	48	55	–	0.178	–	–			
20	ZAP 19 48	50	90	–	0.044	–	–			
21	ZAP 19 50	52	45	–	0.012	–	–			
22	ZAP 19 52	54	50	–	0.022	–	–			
23	ZAP 19 54	56	55	–	<0.005	0.012	–			
24	ZAP 19 56	58	25	–	<0.005	–	–			
25	ZAP 19 58	60	15	–	0.005	–	–			

Results in ppm unless otherwise specified
T = element present; but concentration too low to measure
X = element concentration is below detection limit
— = element not determined

AUTHORISED OFFICER

ANALABS

A Division of Macdonald Hamilton & Co. Pty. Ltd.

ANALYTICAL DATA

SAMPLE PREFIX	REPORT NUMBER	REPORT DATE	CLIENT ORDER No.	PAGE
	247.0.14.02423	15/08/88		3 OF 3

TUBE No.	SAMPLE No		As	As	Au	Au(1)	Au(2)			
1	ZAP 19 60-62		30	-	0.008	-	-			
2	ZAP 19 62-64		8	-	<0.005	-	-			
3	ZAP 19 64-66		20	-	<0.005	-	-			
4	ZAP 19 66-68		25	-	<0.005	-	-			
5	ZAP 19 68-70		50	-	<0.005	-	0.008			
6	ZAP 19 70-72		90	-	0.012	-	-			
7	ZAP 19 72-74		10	-	<0.005	-	-			
8	ZAP 19 74-75		35	-	0.042	-	-			
9										
10										
11										
12										
13										
14										
15										
16										
17										
18										
19										
20										
21										
22										
23	DETECTION		2	0.01	0.005	0.005	0.005			
24	UNITS		PPM	%	PPM	PPM	PPM			
25	METHOD		401	404	313	313	313			

Results in ppm unless otherwise specified
T = element present; but concentration too low to measure
X = element concentration is below detection limit
— = element not determined

AUTHORISED OFFICER

ANALABS

A division of MacDonald Hamilton & Co. Pty. Ltd. (Inc NSW)

(089) 84 3849

Cnr Coonawarra & Mataranka Rds, Winnellie

Fax: (089) 84 3584

ANALYTICAL REPORT No. 247.0.14.02455

THIS REPORT MUST BE READ IN CONJUNCTION WITH THE ACCOMPANYING ANALYTICAL DATA

INVOICE TO:

ZAPOPAN NL
PO BOX 4045

DARWIN NT 0801

ORDER No.	PROJECT

DATE RECEIVED	RESULTS REQUIRED
16/05/88	ASAP

No. OF PAGES OF RESULTS	DATE REPORTED	No. OF COPIES
3	15/08/88	1

TOTAL No. OF SAMPLES: 70

SAMPLE NUMBERS	SAMPLE DESCRIPTION	ELEMENT/METHOD
ZAP5464/533	DC Prep: 033	Au,Au(1),Au(2)/313
ZAP5464/533	DC	As/401

RESULTS TO:

MR ROD JOHNSON
ZAPOPAN NL
PO BOX 4045

DARWIN NT 0801

RESULTS TO:

RESULTS TO:

REMARKS

2 - ZAP 19

½ CORES

AUTHORISED OFFICER

ANALABS

A Division of Macdonald Hamilton & Co. Pty. Ltd.

ANALYTICAL DATA

SAMPLE PREFIX	REPORT NUMBER	REPORT DATE	CLIENT ORDER No.	PAGE
	247.0.14.02455	15/08/88		1 OF 3

TUBE No.	SAMPLE No.	As	Au	Au(1)	Au(2)			Hole	Depth
1	ZAP5464	45	0.007	-	0.008			2-ZAP19	74.3-75m
2	ZAP5465	35	0.008	-	-				75-76m
3	ZAP5466	50	0.006	-	-				76-78m
4	ZAP5467	15	<0.005	-	-				78-80m
5	ZAP5468	35	0.005	-	-				80-82m
6	ZAP5469	20	0.005	-	-				82-84m
7	ZAP5470	20	<0.005	-	-				84-86m
8	ZAP5471	<2	<0.005	-	-				86-88m
9	ZAP5472	5	<0.005	-	-				88-90m
10	ZAP5473	5	<0.005	-	-				90-92m
11	ZAP5474	<2	<0.005	-	-				92-94m
12	ZAP5475	15	<0.005	-	-				94-96m
13	ZAP5476	30	<0.005	-	-				96-98m
14	ZAP5477	40	<0.005	-	-				98-100m
15	ZAP5478	35	0.005	-	-				100-102m
16	ZAP5479	25	<0.005	-	-				102-104m
17	ZAP5480	15	0.005	-	-				104-106m
18	ZAP5481	<2	0.005	-	-				106-108m
19	ZAP5482	5	<0.005	-	-				108-110m
20	ZAP5483	10	0.006	-	-				110-112m
21	ZAP5484	9	0.006	-	-				112-114m
22	ZAP5485	25	0.009	-	-				114-116m
23	ZAP5486	20	<0.005	-	-				116-118m
24	ZAP5487	30	0.005	-	-				118-120m
25	ZAP5488	7	0.012	-	-				120-122m

Results in ppm unless otherwise specified
T = element present; but concentration too low to measure
X = element concentration is below detection limit
— = element not determined

AUTHORISED OFFICER

ANALABS

A Division of Macdonald Hamilton & Co. Pty. Ltd.

ANALYTICAL DATA

SAMPLE PREFIX	REPORT NUMBER	REPORT DATE	CLIENT ORDER No.	PAGE
	247.0.14.02455	15/08/88		2 OF 3

TUBE No.	SAMPLE No.	As	Au	Au(1)	Au(2)			hole	depth	
	ZAP5489	<2	0.008	–	–			Z-ZAP 19	122-124M	
	ZAP5490	15	0.012	–	–				124-126M	
3	ZAP5491	6	0.008	–	–				126-128M	
	ZAP5492	65	0.275	–	–				128-129.6M	
5	ZAP5493	190	0.409	0.616	–				129.6-130.1M	
	ZAP5494	20	0.010	–	–				130.1-132M	
	ZAP5495	15	0.008	–	–				135-136M	
8	ZAP5496	460	1.138	0.970	1.568				132-132.5M	
	ZAP5497	20	0.026	0.022	0.029				132.5-134.5M	
0	ZAP5498	20	0.005	–	–				138-140M	
	ZAP5499	130	0.054	–	–				134.5-135M	
2	ZAP5500	10	0.017	–	–				136-138M	
	ZAP5501	<2	0.006	–	–				140-142M	
	ZAP5502	15	0.021	–	–				142-144M	
5	ZAP5503	6	<0.005	–	–				146-148M	
	ZAP5504	6	<0.005	–	–				144-146M	
	ZAP5505	<2	<0.005	–	–				148-150M	
	ZAP5506	40	0.011	–	–				150-152M	
	ZAP5507	210	0.045	–	–				152-154M	
	ZAP5508	35	<0.005	–	–				154-156M	
	ZAP5509	<2	<0.005	–	–				156-158M	
	ZAP5510	<2	0.007	–	–				158-160M	
	ZAP5511	<2	0.005	–	–				160-162M	
	ZAP5512	80	0.014	–	–				162-164M	
	ZAP5513	<2	<0.005	–	–				164-166M	

Results in ppm unless otherwise specified
T = element present; but concentration too low to measure
X = element concentration is below detection limit
– = element not determined

AUTHORISED OFFICER

ANALABS

A Division of Macdonald Hamilton & Co. Pty. Ltd.

ANALYTICAL DATA

SAMPLE PREFIX	REPORT NUMBER	REPORT DATE	CLIENT ORDER No.	PAGE
	247.0.14.02455	15/08/88		3 OF 3

TUBE No.	SAMPLE No.	As	Au	Au(1)	Au(2)			hole	depth	
1	ZAP5514	15	0.005	–	–			2-ZAP19	166-168m	
2	ZAP5515	35	0.008	–	–				168-170m	
3	ZAP5516	90	0.007	–	–				170-172m	
4	ZAP5517	6	<0.005	–	–				172-174m	
5	ZAP5518	60	0.007	–	–				174-176m	
6	ZAP5519	95	0.014	–	–				176-178m	
7	ZAP5520	85	0.005	–	–				178-180m	
8	ZAP5521	20	0.005	–	0.005				180-182m	
9	ZAP5522	20	0.008	–	–				182-184m	
10	ZAP5523	<2	0.008	–	–				184-186m	
11	ZAP5524	<2	0.020	–	–				186-188m	
12	ZAP5525	15	<0.005	–	–				188-190m	
13	ZAP5526	8	<0.005	–	–				190-192m	
14	ZAP5527	20	0.006	–	–				192-194m	
15	ZAP5528	7	0.009	–	–				194-196m	
16	ZAP5529	15	0.005	–	–				196-198m	
17	ZAP5530	10	0.005	–	–				198-200m	
18	ZAP5531	15	0.005	–	0.005				200-202m	
19	ZAP5532	<2	<0.005	–	–				202-203.2m	
20	ZAP5533	10	0.007	–	–					
21										
22										
23	DETECTION	2	0.005	0.005	0.005					
24	UNITS	PPM	PPM	PPM	PPM					
25	METHOD	401	313	313	313					

Results in ppm unless otherwise specified
T = element present; but concentration too low to measure
X = element concentration is below detection limit
— = element not determined

AUTHORISED OFFICER

CORE RECOVERY LOG

PROSPECT/MINE: ZAPOPAN HOLE NO: Z-ZAP.19.

Logged By: D.J.H. Sheet: 1 / 1

Depth (m) From	Depth (m) To	Interval (m)	Recovery (m)	Depth (m) From	Depth (m) To	Interval (m)	Recovery (m)
74.30	74.55		0.21	137.25	138.60		1.44
74.55	75.45		0.92	138.60	140.50		1.40
75.45	75.55		0.14	140.50	143.50		1.84
75.55	76.0		0.18	143.50	146.50		2.98
76.0	76.50		0.50	146.50	149.50		2.95
76.50	77.03		0.42	149.50	150.95		2.97
77.03	77.44		0.20	150.95	152.50		1.37
77.44	77.60		0.25	152.50	155.10		1.54
77.60	78.16		0.54	155.10	158.20		2.54
78.16	78.70		0.52	158.20	161.30		3.00
78.70	79.25		0.51	161.30	164.0		3.10
79.25	79.35		0.09	164.0	167.10		2.58
79.35	79.65		0.20	167.10	170.20		3.08
79.65	80.10		0.46	170.20	173.20		2.86
80.10	80.40		0.30	173.20	176.30		3.0
80.40	80.75		0.28	176.30	179.40		2.96
80.75	82.0		1.10	179.40	182.45		2.98
82.0	82.80		0.73	182.45	185.50		3.00
82.80	82.90		0.95	185.50	188.50		2.96
82.90	83.06		0.11	188.50	191.20		2.74
83.90	86.65		2.64	191.20	194.20		3.00
86.65	88.70		2.01	194.20	197.30		2.91
88.70	90.45		0.11	197.30	200.30		3.00
90.45	92.65		1.62	200.30	203.30		3.00
92.65	94.30		2.07				
94.30	95.10		1.67				
95.10	95.74		0.75				
95.74	96.33		0.63				
96.33	96.59		0.22				
96.59	97.61		1.06				
97.61	98.78		1.25				
98.78	101.05		1.24				
101.05	103.15		2.32				
103.15	105.87		1.96				
105.87	108.92		2.10				
108.92	110.50		3.00				
110.50	113.50		1.47				
113.50	115.90		2.40				
115.90	118.50		2.36				
118.50	121.45		2.62				
121.45	124.52		2.87				
124.52	127.24		2.18				
127.24	127.64		3.15				
127.64	129.0		0.38				
129.0	130.35		1.46				
130.35	131.20		1.34				
131.20	134.50		0.80				
134.50	135.75		3.15				
135.75	37.25		1.36				

-06-83.90
erval:
vered:
84

PROSPECT/MINE: ZAPOPAN HOLE NO: Z-ZAP 19

Logged By: D.S.H. Sheet: 1 / 2

Depth (m) From	Depth (m) To	SAMPLE NUMBER.		Depth (m) From	Depth (m) To	SAMPLE NUMBER	
CHIP →							
0	2	A 5426		96	98	A 5476	
2	4	" 27		98	100	" 77	
4	6	" 28		100	102	" 78	
6	8	" 29		102	104	" 79	
8	10	" 30		104	106	" 80	
10	12	" 31		106	108	" 81	
12	14	" 32		108	110	" 82	
14	16	" 33		110	112	" 83	
16	18	" 34		112	114	" 84	
18	20	" 35		114	116	" 85	
20	22	" 36		116	118	" 86	
22	24	" 37		118	120	" 87	
24	26	" 38		120	122	" 88	
26	28	" 39		122	124	" 89	
28	30	" 40		124	126	" 90	
30	32	" 41		126	128	" 91	
32	34	" 42		128	129.65	" 92	
34	36	" 43		129.65	130.10	" 93	
36	38	" 44		130.10	132	" 94	
38	40	" 45		132	132.5	" 96	
40	42	" 46		132.5	134.5	" 97	
42	44	" 47		134.5	135	" 99	
44	46	" 48		135	136	" 95	
46	48	" 49		136	138	A 5500	
48	50	" 50		138	140	A 5498	
50	52	" 51		140	142	A 5501	
52	54	" 52		142	144	A 5502	
54	56	" 53		144	146	" 04	
56	58	" 54		146	148	" 03	
58	60	" 55		148	150	" 05	
60	62	" 56		150	152	" 06	
62	64	" 57		152	154	" 07	
64	66	" 58		154	156	" 08	
66	68	" 59		156	158	" 09	
68	70	" 60		158	160	" 10	
70	72	" 61		160	162	" 11	
72	74	" 62		162	164	" 12	
74	75	" 63		164	166	" 13	
CORE → 75.3	75.0	" 64		166	168	" 14	
75.0	76.0	" 65		168	170	" 15	
76	78	" 66		170	172	" 16	
78	80	" 67		172	174	" 17	
80	82	" 68		174	176	" 18	
82	84	" 69		176	178	" 19	
84	86	" 70		178	180	" 20	
86	88	" 71		180	182	" 21	
88	90	" 72		182	184	" 22	
90	92	" 73		184	186	" 23	
92	94	" 74		186	188	" 24	
94	96	" 75		188	190	" 25	
				190	192	" 26	

CORE RECOVERY LOG

PROSPECT/MINE: ZAPOPAN HOLE NO: 2-ZAP-19

Logged By: D.S.M. Sheet: 2 of 2

Depth (m) From	Depth (m) To	SAMPLE NUMBER		Depth (m) From	Depth (m) To		
192	194	A5527					
194	196	" 28					
196	198	" 29					
198	200	" 30					
200	202	" 31					
202	203.20	" 32					

SHEET 1 of 2

LOGGED BY: D.S.H.

CORELOGGING DATA

AREA / LEASE ..... PROSPECT ZAPOPAN ..... HOLE No 2-ZAP 19

DIST. FROM COLLAR	BREAKS / METRE	RECOVERY	R.Q.D.	SPEC. GRAVITY	MAG. SUSCEPTIBILITY	ANGLE TO LONG CORE AXIS So	ANGLE TO LONG CORE AXIS Si	STRUCTURES	LITHOLOGY	ESTIMATED MINERAL PERCENTAGES milky qtz.	sugary qtz.	f. gr. qtz.	musc.	biot.	garnet	chl.	act.	cbt.	tourm.	py.	po.	hemt.	base metal su.	aspy.			SAMPLE No.	ASSAY RSLTS Au	ASSAY RSLTS As	GEOLOGICAL COMMENTS (mainly texture)
120														tr				tr												
121												2				2				2								0.012		
122												2			½				1					tr						
123														tr		tr												0.008		
124										20						2				2										
125											4					20				1								0.012		
126																		tr												
127												2				18		tr										0.008		
128																12				3								0.275		
129								b.i.f				40			1	30	2			20		4		tr				0.5		Hem-rid B.i.f
130											½					40				<½										
131								b.i.f.		10		20			5	30	8	½	tr	6				tr				1.0		
132												5			1	20				<½								0.026		
133											4			tr	1	30		<½		1										
134								b.i.f.				8			2	40	10	tr		4		2						0.008		
135												2				5				<1								0.008		
136																2		tr		tr										
137											4			tr	4	18	3			2								0.017		
138																														

LITHOLOGICAL LEGEND:

Ssm	Mudstone	tAv	Ashstone	Su	Massive Sulphide		Veining > 30%
cSsm	Carbonaceous Mudstone	Sct	Chert	go	Gossan		Tourmaline > 5%
Ssl	Siltstone	Slf	B.I.F.	Mh	Hornfels		Arsenopyrite > 0.5%
Sst	Sandstone	caSlf	B.I.F. Carbonate > 15%	MBd	Metadolerite		Base metal sulphides > 5%
Sgw	Greywacke	chSlf	B.I.F. Chlorite > 40%	Af	Felsite	py	Pyrite > 5%
Scg	Conglomerate	actSlf	B.I.F. Actinolite > 40%	Agr	Granite	po	Iron sulphides > 2%
Sca	Carbonate	micSlf	Micas > 30% (commonly includes garnets)		Brecciated rock		

SHEET 2 of 2

LOGGED BY: D.J.H

CORELOGGING DATA

AREA / LEASE ..... PROSPECT ZAPPAN ..... HOLE No ZAP 19

DIST. FROM COLLAR	BREAKS / METRE	RECOVERY	R.Q.D.	SPEC. GRAVITY	MAG. SUSCEPTILITY	ANGLE TO LONG CORE AXIS: So	ANGLE TO LONG CORE AXIS: Si	STRUCTURES	LITHOLOGY	ESTIMATED MINERAL PERCENTAGES: milky qtz.	sugary qtz.	f. gr. qtz.	muso.	biot.	garnet	chl.	act.	cbt.	tourm.	py.	po.	hem.	base metal su.	sapy.	SAMPLE No.	ASSAY RSLTS: Au	ASSAY RSLTS: As	GEOLOGICAL COMMENTS (mainly texture)
138													tr					tr		tr								
139								b.i.f.			3					5		2		2						0.005		? Basal B.i.f.
140											1					19		1										
141																21		2		2						0.005		
142																												

LITHOLOGICAL LEGEND:

Sm — Mudstone	Av — Aphanite	Su — Massive Sulphide		Veining > 30%	
cSm — Carbonaceous Mudstone	Ch — Chert	Qz — Quartz		Tourmaline > 5%	
Si — Siltstone	BIF — B.I.F.	Mn — Hornfels		Arsenopyrite > 0.5%	
Sst — Sandstone	cBIF — B.I.F. Carbonate > 15%	MBd — Metadolerite		Base metal sulphides > 5%	
Sgw — Greywacke	chBIF — B.I.F. Chlorite > 40%	Af — Felsite		Py — Pyrite > 5%	
Cgl — Conglomerate	actBIF — B.I.F. Actinolite > 40%	Agr — Granite		Po — Iron sulphides > 2%	
Sch — Carbonate	micBIF — Mica > 30% (commonly includes garnets)		Brecciated Rock		

PERCUSSION DRILL LOG

PROSPECT/MINE: ZAPOPAN HOLE NO: Z-ZAP 19

Collar: 10150 E 9898 N ..... RL

Azimuth: 302 °~~Mag~~/grid Inclination: -65 °

Date Drilled: 21/4/88 Logged By: D.S.M. Sheet: 1/2

Depth (m) From	Depth (m) To	Sample No.	Description: Lithology	Qtz	Py	Apy	Au
0	2		Soils				
2	4		Heavily weathered oxidized Sltst.				
4	6		Oxidized dk grey Sltst. 10% buff/grn frag >5% Qtz	✓			
6	8		A.a. + sil. chert frag	✓			
8	10		15% Chert frag. green tuff <10% dk grey Sltst.				
10	12		Green tuff <10% dk grey Sltst.				
12	14		A.a. 5% coarse dk tuff <1% red chert				
14	16		10% coarse dk + dk green coarse tuff				
16	18		60% Qtz + above tuffs	✓✓			
18	20		60% milky Qtz dk grey Sltst <10% green tuff	✓✓			
20	22		40% Qtz 20% green chert 30% dk grey tuff + green tuff	✓✓			
22	24		60% dk grey coarse tuff 15% Qtz + green tuff	✓			
24	26		30% Qtz + v minor pyr Fe-rich Sltst 60% above tuff				
26	28		60% coarse dk tuff 40% Green chert				
28	30		90% grn speck chert 10% milky Qtz	✓			
30	32		<10% Qtz 20% chert + dk grey Sltst	✓			
32	34		Dk grey Sltst: pyr nodules + laminae		✓		
34	36		A.a. Qtz 10%	✓	✓		
36	38		<20% Qtz green/grey Sltst minor pyr				
38	40		Dk grey Sltst minor pyr				
40	42		A.a. 10% pale green chert				
42	44		50% speck grn chert 40% Sltst 10% Qtz Minor pyr within Sltst	✓	✓		
44	46		Dk grey Sltst >10% Qtz Speck chert minor pyr	✓	✓		

PERCUSSION DRILL LOG

PROSPECT/MINE: ZAPOPAN HOLE NO: Z-ZAP 19.

Collar: ..... E ..... N ..... RL

Azimuth: ..... °Mag/grid Inclination: .....°

Date Drilled: ..... Logged By: D. S. M. Sheet: 2 / 2

Depth (m)		Sample	Description				
From	To	No.	Lithology	Qtz	Py	Apy	Au
46	48		10% smoky Qtz. pyr + apy Dk grey sltst	✓	✓	✓	
48	50		30% smoky Qtz + pyr. Dk sltst	✓	✓		
50	52		Pale green chert. 20% sltst >10% Qtz	✓			
52	54		20% milky Qtz. Dk grey sltst + pyr	✓	✓		
54	56		<5% Qtz. sltst + pyr.	✓	✓		
56	58		sltst: 20% pale green & pink chert				
58	60		sltst: <10% Qtz. Pyr. with ~ sltst	✓	✓		
60	62		As above	✓	✓		
62	64		sltst + minor pyr. green + pink chert <10%				
64	66		Dk grey sltst. Pale green chert 5% green/pink chert 10%				
66	68		As above 20% grn/pink chert				
68	70		<10% Qtz. 30% pale grn chert. Red chert frag. 50% Dk sltst	✓	✓		
70	72		Pale grn. tuff. 20% dk sltst + pyr		✓		
72	74		As above <10% sltst		✓		
74	75		sltst + pyr		✓		

DIAMOND DRILL LOG

PROSPECT/MINE: ZAPOPAN HOLE NO: Z. ZAP. 19.

Collar: ..... E ..... N ..... RL

Azimuth: 302 °Mag/grid Inclination: -65 °

Date Commenced: 20/4/88 Precollar: 75 M

Date Completed: 28/4/88 HQ(3) ✓ NQ(3) .... BQ ...

Logged By: D.J.H. Sheet: 1 / 6

Depth (m) From	Depth (m) To	Description
74.3	75.0	METASILTSTONE (fract. core) fine dk grey massive minor pyr. along fractures
75.0	75.20	CHERT - red/green - 44° to core. Minor CO_3 veining pyr. abundant - grades into pale green chert to 75.34. Qtz veining mm wide
75.34	75.64	METASILTSTONE
75.64	75.72	Breccia - mm angular clasts of Sltst. in CO_3/Qtz matrix + chert frag.
75.12	75.82	Coarsing Sltst. Cleavage @ 40° to core. fractured with Qtz in filling
75.82	76.19	Minor pyr. within joints of Sltst.
76.19	77.0	Sltst. - Brecciated @ 77.50 - 77.55 (as above)
77.0	77.82	Pale green METACHERT - CO_3 min.
77.82	79.85	METASILTSTONE - Minor tuff bed grey blk speck @ 78.7 - 79.2. Milky Qtz stringers & veinlets at base. 23 cm pale green METACHERT at base
79.85	80.85	METASILTSTONE - brecciated toward base with CO_3/Qtz veining. Angular clasts - fresh clays
80.85	81.32	Fresh crush zone
81.32	81.36	Pale green METACHERT - crushed bedded 50° to core
81.36	83.13	Coarse grey METATUFF. Minor interbedded pink CHERT/CO_3 bands 45° to core. Qtz - pyr - apy vein 82.77 - 82.78 @ 40° to core. TUFF fining upwards
83.13	83.46	CHERT red/green. Pyr. disseminated throughout
83.46	85.09	Coarse grey METATUFF. Qtz veining + pyr + apy brecciating tuff @ 84.10 - 84.29
85.09	85.22	pale green METACHERT 4mm garnets. mm pyr - apy along upper & lower contacts
85.22	88.90	Interbedded METATUFF & METASILTSTONE. Bedded 65° to core. foliation 35° to core. Green/red chert garnet - n.c. asp - pyr at base 87.48 - 87.50. 88.02 - 88.15. Milky Qtz vein pyr - apy to core
88.90	89.53	Coarse pale green speckled/banded METACHERT pyr - apy in mm wide bands 40° to core. garnet - n.c. @ 89.49 - 89.53
89.53	96.04	Coarse grey METATUFF. 90.17 - pink chert inclusions 90.20 - 91.34. more silicic with light chert bandings Red/green chert 50° to core folded 40° to core 93.35 mm Qtz veinlets

DIAMOND DRILL LOG

PROSPECT/MINE: ..ZAPOPAN..... HOLE NO: .Z-ZAP.19..

Collar: ..... E ..... N ..... RL

Azimuth: .....°Mag/grid Inclination: .....°

Date Commenced: ..... Precollar: .....

Date Completed: ..... HQ(3) .... NQ(3) .... BQ ...

Logged By: .D.S.M... Sheet: ...2../..6...

Depth (m)		Description
From	To	
96.04	96.14	Pale green grnt-dusted CHERT bed also at 97.12 98.47 Hosted in dk grey METATUFF. Foliation 30° to core. Bedding 40° to core. Minor folding // to foliation
96.04	119.96	Interbedded METATUFF & METACHERT (green) ± pyr
100.46	100.52	2mm Qtz/CO3 vein abundant pyr ± apy ± grnt TUFF 40° to core @ 107.84
107.40	107.42	Folded METACHERT with hem in-filling fractures. Folded 45° to core // to foliation
109.28	109.32	Qtz veining minor pyr ± apy
111.37	111.69	Intensly deformed pale green-dk grey METACHERT. Aspy ± pyr folds @ 80° to core tight
111.69	119.96	Chert bands X-10mm wide pale green/pink pyr in fractures & bedded with chert
119.40	119.96	Banded grey/pink METACHERT. Apy filled inner band 30° to core + CO3/pyr-apy in-filling fractures within TUFF
119.96	129.88	Interbedded fine dk SLTST + Green METACHERT folded with central nodules of Svg Qtz. Banded pyr + occasional apy
124.26	124.53	Qtz veining Intense defm Abundant pyr, sph. as p
129.88	130.29	B.I.F. - hem-pyr-mag-apy. Intense defm within CHERT. also @ 132.23 - 132.38 (+ Qtz & euhedral aspy)
132.04	132.12	Qtz veining Pyr ± sph
130.29	139.29	Interbedded SLTST with chert (green) pyr bands @ 132.23 - 132.38, 134.52 - 134.55, 134.71 - 134.85, 136.15 - 136.26, 136.53 - 136.66, 137.24 - 137.66
139.26	139.29	Milky Qtz vein Strongly chl. Minor pyr

DIAMOND DRILL LOG

PROSPECT/MINE: ZAPOPAN HOLE NO: 2-ZAP.19

Collar: .. E ..... N ..... RL

Azimuth: 302 °~~Mag~~/grid Inclination: -65 °

Date Commenced: ..... Precollar: .....

Date Completed: ..... HQ(3) ✓ NQ(3) .... BQ ...

Logged By: D.J.H. Sheet: 3/6

Depth (m) From	Depth (m) To	Description
139.29	139.39	METASILTSTONE as above
139.39	139.44	Qtz stringer
139.44	139.66	META SILTSTONE grey, massive
139.66	139.77	METACHERT Folded and squeezed. Silicic green Pyr throughout
139.77	140.93	METASILTSTONE fine grey Qtz/CO3 filled fractures and stringers
140.93	140.96	Badly damaged METACHERT Abundant CO3 + Pyr
140.96	142.16	Non cm scale interbedded CHERT and SILT STONE Coarse mica + asp within chert mm fractures infilled with Qtz Pink Chert band off-set by fractures Band 30° to core
142.16	142.79	METASILTSTONE fine grey
142.79	142.85	Deformed silicic METACHERT Coarse mica + abundant Pyr Folded 30° to core
142.85	144.05	METASILTSTONE fine grey Pyr blebs 25° to core axis
144.05	144.16	METACHERT green banded 60° to core
144.16	145.26	META CHERT pale green/grey Pink chert lenses Pyr throughout Folded bands @ 144.59 off-set by 30° Qtz/CO3 Pyr like fracture N to fold axis Pink chert with Qtz/Pyr inner
145.26	146.15	Deformed silty CHERT sequence Pyr in foliation 25° to core
146.15	146.71	METACHERT pink/green folded Coarse Pyr garnet Qtz mica band within
146.71	147.51	METASILTSTONE fine light grey
147.51	147.59	Milky Qtz zone minor veins minor pyr + asp
147.59	147.88	Fine grey SILTSTONE
147.88	147.89	METACHERT banded Pink
147.89	148.18	Silty CHERT Pink/green bands + Qtz/CO3 Stringers + asp throughout
148.18	149.44	METACHERT Banded: Intensly deformed green/yellow at top → pink/yellow → grey/white at base Clasts of coarse micas, pyr + asp
149.44	150.10	METAPELITE dk grey Fold axis // to foliation 30° to core
150.10	150.32	Deformed Qtz veining Minor Pyr
150.32	151.08	METASILTSTONE grey Ciarsd - dusted + garnet rich bands 1-2cm wide
151.08	151.09	Qtz vein Milky Minor pyr
151.09	151.69	METASILTSTONE as above
151.69	151.70	Qtz vein + CHERT frag Minor Pyr
151.70	152.34	METASILTSTONE / CHERT green/pink Pyr throughout

DIAMOND DRILL LOG

PROSPECT/MINE: ZAPOPAN HOLE NO: Z-ZAP 19

Collar: ..... E ..... N ..... RL

Azimuth: 302 °~~Mag~~/grid Inclination: -65 °

Date Commenced: ..... Precollar: .....

Date Completed: ..... HQ(3) ✓ NQ(3) .... BQ ...

Logged By: D.J.H. Sheet: 4 / 6

Depth (m) From	Depth (m) To	Description
152.34	152.48	METACHERT silicic grey/green. Massive pyr, asp. in filling cm wide fractures and in bands // to bedding 40° to core
152.48	152.84	SILTSTONE grey. Speckled with 1-2mm garnets
152.84	152.91	Coarse qtz / Cqz zone. Sub ⊥ to core
152.91	153.13	META CHERT bands. Garnet-rich intensely deformed abundant pyr in fractures 1-2 cm wide & in fold hinges Abundant ~~Coarse~~ pyr within boudins of silicic leucocratic CHERT
153.13	153.23	METACHERT banded pale green / black / white. Abundant pyr. bands 30° to core
153.23	153.69	METASILTSTONE with banded garnets 80° to core
153.69	153.70	METACHERT - folded with sulphide-rich bands 40° to core
153.70	153.85	METASILTSTONE grey garnet rich
153.85	154.01	CHERT - grey / black / green 2-4mm bands top & bottom of abundant pyr
154.01	155.31	METASILTSTONE dk grey scattered garnets
155.31	155.32	Qtz band with asp, pyr. Milky white qtz. 50° to core
155.32	155.59	METASILTSTONE grey. Garnet-rich at base
155.59	155.84	METACHERT folded silicic with pyr. esp in fold hinges as well as disseminated through-out
155.84	155.87	METACHERT Green / black speckled Pyr. Fold 20° to core // to foliation
155.87	156.17	METASILTSTONE grey, masive few garnets
156.17	156.31	METASILTSTONE grey/green
156.31	156.35	Qtz band, asp, pyr, Chl ± actinolite
156.35	156.44	METASILTSTONE grey massive
156.44	157.26	Silty METACHERT. Fold Qtz bands ½-1cm wide
157.26	157.28	Qtz band with hematite along contacts. 70° to core minor pyr
157.28	157.38	Recent crush zone
157.38	159.16	CHERT / Silty CHERT pink / green / grey with minor pyr
159.16	160.93	METASILTSTONE grey banded bedding is 30° to core Folded about 30° to core
160.93	161.0	METACHERT fine green / grey
161.0	162.84	METASILTSTONE fine grey ~~[illegible]~~
162.84	162.85	CHERT band coarse green with pyr, garnet, Qtz 50° to core
162.85	162.93	METACHERT coarse green / black speckled Foliation 45° to core
162.93	163.21	METASILTSTONE as above

DIAMOND DRILL LOG

PROSPECT/MINE: ZA POPAN ..... HOLE NO: Z-ZAP 19

Collar: ..... E ..... N ..... RL

Azimuth: .....°Mag/grid Inclination: .....°

Date Commenced: ..... Precollar: .....

Date Completed: ..... HQ(3) .... NQ(3) .... BQ ...

Logged By: D.J.H. Sheet: 5 / 6

Depth (m) From	Depth (m) To	Description
163.21	164.0	METACHERT 2-4 cm wide Qtz veins. Abundant pyr lining veins + infilling fractures. Minor apy-hem with Qtz @ 12° to core
164.0	164.94	CHERT grey 1-2 mm Qtz bands 40° to core + folded boudins (green) with leucocratic nodules
164.94	165.10	METASILTSTONE
165.10	168.30	Coarse grey METATUFF with CHERT bands (green) @ 165.20 - 165.31 folded 40° to foliation bedded 10° to core 166.84 - 167.10 Garnet rich CHERT
167.78	168.10	Brecciated angular clasts of TUFF in Qtz/Gas matrix
168.10	168.30	Qtz vein // foliation (40°) to core. pyr along basal contact
168.30	168.52	Banded METACHERT pale green/grey Grades into coarse speckled CHERT. Foliation 40° to core. offset (1cm) by 2mm Qtz filled fracture to core axis also @ 169.37 - 169.72
168.52	173.47	Dk grey METASILTSTONE garnet dusted
173.47	174.45	grades into dk coarse METATUFF
174.45	174.83	Green METACHERT gry/white sva Qtz boudins folded 40° to core. pyr ± apy within core. Abundant gnt along basal contact
174.83	175.19	METASILTSTONE
175.19	175.45	Qtz vein to core axis. Clast of SLTST + hem - pyr ± apy ± gal. also @ 175.42 - 175.65
175.19	177.58	METASILTSTONE
177.58	178.36	METACHERT chert leucocratic sil boudins within coarse grn gnt pyr - rich CHERT folded
178.36	182.83	METASILTSTONE
182.83	186.11	Boudinaged green / silicic METACHERT band pyr - apy bands 2-4 cm with dk interbedded chert
186.11	193.25	Bedded CHERTS and SLTST garnet rich CHERTS banded / folded green with white silicic boudinaged nodules centrally. Bands @ 188.73 - 188.79, 189.80 190.64 - 192.9 193.0 SLTST @ 10° to core
193.25	199.72	METACHERT banded / folded leucocratic boudins sub // to core bedding. Pyr - disseminated on margins @ mm lenses with the nodules. Pyr also with ?chl/grey black mm bands as a basal member

DIAMOND DRILL LOG

PROSPECT/MINE: ZAPOPAN HOLE NO: Z-ZAP.19

Collar: .. .. E . . ..: N ..... RL

Azimuth: 302 °~~Mag~~/grid Inclination: -65 °

Date Commenced: ..... Precollar: .....

Date Completed: ..... HQ(3) ✓ NQ(3) .... BQ ...

Logged By: D.D.H. Sheet: 6 / 6

Depth (m) From	Depth (m) To	Description
199.72	200.13	METASILTSTONE, grey, garnet-cluster
200.13	203.20	METACHERT, banded, banding of leucocratic chert with mm wide green/black/grey banding garnet & pyr rich
		E.O.H.
		h

LITHOLOGY LOG. 2-CHP 14.

74 SILTSTONE
red/green chert grades into pale green CO3/Qtz veining abundant pyr
75
Breccia/fault zone
Qtz veining.
76
SILTSTONE
77 Breccia
Breccia. chert silicic pale green. CO3 n.c. mica pyr.
78
SILTSTONE
pale-pink w/ bed banded speckled
79
milky Qtz. stringers & pockets CO3 - Qtz sphalerite rich
80
SILTSTONE
81 Breccia
fel. Fault zone
crushed chert
mm with chert bands
82 GREYWACKE
pyr along & Qtz band chert frag.
83
chert bed pale green silicic disseminated pyr.
GREYWACKE
84 pyr along joints
Qtz vein pyr + asp
85 MTA PELITE
fining towards banded chert
garnets pyr asp type
GREYWACKE
86 SILTSTONE
Qtz vein. pyr + asp.
87 GREYWACKE
SILTSTONE
GREYWACKE
garnet rich chert band. pyr + asp. red/green.
GREYWACKE
88 Qtz vein. pyr asp.
GREYWACKE
89

90 pale green sheared chert. 40° to core pyr along bands - Qtz veining + bands.
GREYWACKE
pink chert inclusions
GREYWACKE
91 Silica bands & META TUFF.
GREYWACKE
92 sheared/banded chert 40° to core 30° bedding to core
93 pyr bands
GREYWACKE
92:39
SILTSTONE
94
95
GREYWACKE
pyr. along foliation
96
97
banded chert 40° to core pyr along fracture.
98
pyr
99
GREYWACKE
pyr along joints
Qtz vein pyr + asp
100 MTA PELITE
fining towards
banded chert
garnets pyr asp type
at base contact.
GREYWACKE
101 SILTSTONE
GREYWACKE
102
103
104
105
GREYWACKE
calcite Qtz veining
106
107
108
109
110
111
pyr
banded chert
MTA PELITE
GREYWACKE
112
113
GREYWACKE
meta chert.
114
tuff band.
foliated 40 to core.
foliated chert 89.
115
meta chert. 30° to core.
chert foliated.
116
GREYWACKE.
117
30° to core pink/green Meta chert 30° to core.
118
GREYWACKE
119

2-2AT 19. SHEET 2/3.

Z-2 Ap 19.

SHEET 3/3

164 silty clst pyr + gnt + ser/Qtz bands folded clst bands. cm-scale folded clst. cm-scale folded clst.

165

166

167 CARBONACEOUS

168 Qtz vein/lens folded

169

170 gnt + pyr SILTSTONE

171

172

173 15° to core SILTSTONE

174

175 Qtz vein/lens folded clst + pyr

176 SILTSTONE

177 15° to core bedding folded clst

178 SILTSTONE

179

180

181 pyr/gnt-rich bands 45° to core. SILTSTONE

182 Qtz bnd. gnt + SILTSTONE

183 bedded clst with lenticular beds

184

185 SILTSTONE

186

187 black clst

188 gnt bnd.

189 SILTSTONE

190

191 CO3 Qtz vein

192 SILTSTONE

193

194

195 bedded metaclst.

196 SILTSTONE

197

198

199

200 clst bedded with bands of lenticular clasts

201

202 METASILTSTONE.

203

E.O.H.

EXPLOREMIN PTY.LTD.

Diamond Drill Log: ZZAP/20

SUMMARY

CLIENT: ZAPOPAN N.L.

PROSPECT: ZAPOPAN

PROPOSED CO-ORDS E: 9992.0 N: 9922.0 R.L.: 99
LAID OUT CO-ORDS E: 9992.0 N: 9922.0 R.L.: 99
ACTUAL CO-ORDS E: 9992.0 N: 9921.9 R.L.: 98.71

PLANNED DEPTH (M): 150
TARGET DEPTH (M): 40-150
ACTUAL DEPTH (M): 149.9

BEARING ° Grid: 032 ° Mag:
INCLINATION -°: 70

PROPOSED BY: J.G.
PLANNED BY: J.G.
LAID OUT BY: MACJAP
SURVEYED BY:

DRILLED BY: ROCKDRILL RIG 8

DATE COMMENCED: 88/05/20
DATE COMPLETED: 88/06/03

PRE-COLLAR (M): 41
HQ (M): 108.9
NQ (M):
BQ (M):
OTHER (M):
WEDGES PLACED:

COMMENTS/ASSAY SUMMARY:

66-82m (16m) 1.8 g/t Au

DOWN HOLE SURVEYS

DEPTH (m): 50	AZIMUTH (mag. °): 028	INCLN (°): 69
DEPTH (m): 100	AZIMUTH (mag. °): 026	INCLN (°): 68
DEPTH (m): 149	AZIMUTH (mag. °): 020	INCLN (°): 66
DEPTH (m):	AZIMUTH (mag. °):	INCLN (°):
DEPTH (m):	AZIMUTH (mag. °):	INCLN (°):
DEPTH (m):	AZIMUTH (mag. °):	INCLN (°):
DEPTH (m):	AZIMUTH (mag. °):	INCLN (°):
DEPTH (m):	AZIMUTH (mag. °):	INCLN (°):
DEPTH (m):	AZIMUTH (mag. °):	INCLN (°):
DEPTH (m):	AZIMUTH (mag. °):	INCLN (°):

ANALABS

A division of Macdonald Hamilton & Co. Pty. Ltd.
Phone(09) 458 7999
52 Murray Road, Welshpool, W.A. 6101
Telex AA92560

RECEIVED 7 JUN 1988

ANALYTICAL REPORT No. 247.0.14.0207A

THIS REPORT MUST READ IN CONJUNCTION WITH THE ACCOMPANYING ANALYTICAL DATA

ZAPOPAN NL
PO BOX 4045

DARWIN NT 5791

ORDER No.	PROJECT

DATE RECEIVED	RESULTS REQUIRED
31/05/88	ASAP

No. OF PAGES OF RESULTS	DATE REPORTED	No. OF COPIES	TOTAL No. OF SAMPLES
2	23/06/88	1	44

	PRE-TREATMENT							ANALYSIS		
SAMPLE NUMBERS	DRY	CRUSH	SPLIT	PULVERISE	SIEVE	OTHER SEE REMARKS	NONE	REFER TO ANALYSIS SECTION	PREPARATION	METHOD
6589/632	RO	Prep: 033						Au,Au(1),Au(2)/313		
6589/632	RO							As/401		
6589/632	RO							As/404		

RESULTS TO

MR ROD JOHNSON
ZAPOPAN NL
PO BOX 4045

DARWIN NT 5791

RESULTS TO

REMARKS

2-ZAP 20

STATE OF SAMPLES		ANALYSIS — PREPARATION				ANALYSIS — METHOD	
ore	WC	perchloric acid	A1	cold acid	CA	atomic absorbtion	AAS
ore	SC	hydrochloric acid	A2	specific sulphide	SS	x-ray fluorescence	XRF
	CU	nitric acid	A3	other mixed acids	Ma	spectrophotometry	SPEC
	Ro	aqua regia	A4	alkaline attack	AA	colorimetry	COL
	SO	nitric-perchloric	A5	volatilization	VO	chromatography	CHR
	PU	HF mixture	A6	ignition	IG	titration	TTN
	WA	HF under pressure	A7	pressed powder (XRF)	PP	other chemical means	CHEM
	TI	fusion	A8	glass fusion (XRF)	GF	miscellaneous	MISC
sediment	SS					fluorescence	FLUOR
neral	HM					inductively coupled plasma	ICP

AUTHORISED OFFICER

ANALABS

A Division of Macdonald Hamilton & Co. Pty. Ltd.

ANALYTICAL DATA

SAMPLE PREFIX | REPORT NUMBER | REPORT DATE | CLIENT ORDER No. | PAGE

247.0.14.02517 | 23/06/88 | | | 1 OF

TUBE No.	SAMPLE No.	As	As	Au	Au(1)	Au(2)			Depth	
1	6589	910	–	0.218	0.353	–				
2	6590	250	–	0.035	0.032	–			2-4	
3	6591	90	–	0.015	–	–			4-6	
4	6592	90	–	0.007	–	–			6-8	
5	6593	120	–	0.027	–	–			8-10	
6	6594	160	–	0.019	–	–			10-12	
7	6595	160	–	0.012	–	–			12-14	
8	6596	180	–	0.022	–	–			14-16	
9	6597	70	–	0.010	–	–			16-18	
10	6598	35	–	0.007	–	–			18-20	
11	6599	65	–	0.014	–	–			20-22	
12	6600	40	–	0.033	–	–			22-24	
13	6601	25	–	0.009	–	–			24-26	
14	6602	20	–	<0.005	–	–			26-28	
15	6603	20	–	0.021	–	–			28-30	
16	6604	90	–	0.023	–	–			30-32	
17	6605	15	–	0.006	–	–			32-34	
18	6606	40	–	0.007	–	–			34-36	
19	6607	7	–	<0.005	–	<0.005			36-38	
20	6608	10	–	<0.005	–	–			38-40	
21	6609	10	–	<0.005	–	<0.005			40-41	
22	6610	15	–	<0.005	–	–			40.90-42	
23	6611	10	–	<0.005	–	–			42-44	
24	6612	15	–	0.006	–	–			44-46	
25	6613	6	–	0.008	–	–			46-48	

Results in ppm unless otherwise specified
T = element present but concentration too low to measure
X = element concentration is below detection limit
– = element not determined

AUTHORISED OFFICER

ANALABS

A Division of Macdonald Hamilton & Co. Pty. Ltd.

ANALYTICAL DATA

SAMPLE PREFIX	REPORT NUMBER	REPORT DATE	CLIENT ORDER No.	PAGE
	247.0.14.02517	23/06/88		OF 2

TUBE No.	SAMPLE No.	As	As	Au	Au(1)	Au(2)		Hole No	Depth	
1	6614	25	--	<0.005	--	--		ZZAP20	48-50	
	6615	20	--	<0.005	--	--			50-52	
3	6616	15	--	0.005	--	--			52-54	
	6617	10	--	0.014	--	--			54-56	
5	6618	60	--	0.013	--	--			56-58	
6	6619	2350	--	1.177	0.977	1.061			58-60	
	6620	290	--	0.191	--	--			60-62	
8	6621	35	--	0.156	--	--			62-64	
	6622	35	--	0.020	--	--			64-66	
0	6623	>2500	0.83	2.661	2.459	2.158			66-68	
	6624	55	--	0.180	--	--			68-70	
	6625	>2500	0.54	2.278	--	2.464			70-72	
3	6626	560	--	0.358	--	--			72-74	
	6627	120	--	0.450	--	--			74-75	
5	6628	30	--	0.302	--	--			75-76	
	6629	100	--	0.164	--	--			76-78	
7	6630	490	--	0.214	--	--			78-80	
	6631	930	--	1.118	--	1.067			80-82	
	6632	10	--	0.072	--	--			82-84	
	DETECTION	2	0.01	0.005	0.005	0.005				
	UNITS	PPM	%	PPM	PPM	PPM				
	METHOD	401	404	313	313	313				

Results in ppm unless otherwise specified.
T = element present but concentration too low to measure
X = element concentration is below detection limit
— = element not determined

AUTHORISED OFFICER

ANALABS

A division of Macdonald Hamilton & Co. Pty. Ltd.

Phone(09) 458 7999

52 Murray Road, Welshpool, W.A. 6101

Telex AA[illegible]60

ANALYTICAL REPORT No. 247.0.14.[illegible]631

THIS REPORT MUST READ IN CONJUNCTION WITH THE ACCOMPANYING ANALYTICAL [illegible]

ORDER N[illegible] PRO[illegible]

ZAPOPAN NL
PO BOX 4045

DARWIN NT 5791

DATE RECEIVED	RESULTS REQUIRED
06/06/88	ASAP

No. OF PAGES OF RESULTS	DATE REPORTED	No. OF COPIES	TOTAL No. OF SAMPLES
2	28/06/88	1	69

ER OW	SAMPLE NUMBERS	PRE-TREATMENT: DRY	CRUSH	SPLIT	PULVERISE	SIEVE	OTHER SEE REMARKS	NONE	ANALYSIS: REFER TO ANALYSIS SECTION	PREPARATION	METHOD
	6633/67,6672/785		Prep: 833						Au,Au(1),Au(2)/313		
	6633/67,6672/785								As/401		

RESULTS TO

MR ROD JOHNSON
ZAPOPAN NL
PO BOX 4045

DARWIN NT 5791

RESULTS TO

REMARKS

Z-ZAP/20

21

STATE OF SAMPLES

hole core	WC
lit core	SC
tting	CU
ck	Ro
il	SO
lp	PU
ater	WA
sue	TI
eam sediment	SS
avy mineral	HM

ANALYSIS — PREPARATION

perchloric acid	A1	cold acid	CA
hydrochloric acid	A2	specific sulphide	SS
nitric acid	A3	other mixed acids	Ma
aqua regia	A4	alkaline attack	AA
nitric-perchloric	A5	volatilization	VO
HF mixture	A6	ignition	IG
HF under pressure	A7	pressed powder (XRF)	PP
fusion	A8	glass fusion (XRF)	GF

ANALYSIS — METHOD

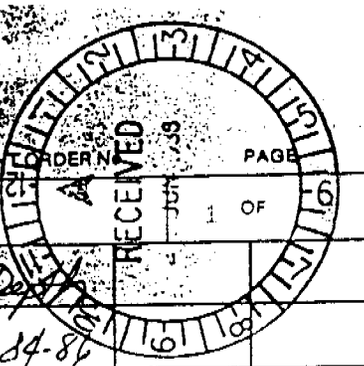
atomic absorbtion	AAS
x-ray fluorescence	XRF
spectrophotometry	SPEC
colorimetry	COL
chromatography	CHR
titration	TTN
other chemical means	CHEM
miscellaneous	MISC
fluorescence	FLUOR
inductively coupled plasma	ICP

AUTHORISED OFFICER

ANALABS

A Division of Macdonald Hamilton & Co. Pty Ltd

ANALYTICAL DATA



SAMPLE PREFIX	REPORT NUMBER	REPORT DATE	CLIENT ORDER NO.	PAGE
	247.0.14.02531	28/06/88		1 OF

TUBE No.	SAMPLE No.	As	Au	Au(1)	Au(2)		Hole No	Depth		
1	6633	40	0.074	-	-		ZZAP20	84-86		
2	6634	85	0.052	-	-			86-88		
3	6635	350	0.020	-	-			88-90		
4	6636	20	0.034	-	0.032			90-91.20		
5	6637	120	0.038	-	-			92.75-94.57		
6	6638	25	0.118	-	-			91.24-92.75		
7	6639	10	0.025	-	-			97.40-99.30		
8	6640	100	0.066	-	-			96.19-97.40		
9	6641	60	0.037	-	-			94.57-96.19		
10	6642	45	0.009	-	-			102-104		
11	6643	20	0.026	-	-			104-106		
12	6644	9	<0.005	-	-			106-108		
13	6645	20	0.015	-	-			108-110		
14	6646	3	<0.005	-	-			110-112		
15	6647	<2	<0.005	-	-			99.30-101.09		
16	6648	15	0.067	-	-			101.09-102		
17	6649	6	<0.005	-	-			112-114		
18	6650	20	<0.005	-	-			114-116		
19	6651	10	<0.005	-	-			116-118		
20	6652	3	<0.005	-	-			118-120		
21	6653	70	<0.005	-	-			120-122		
22	6654	30	0.008	-	-			122-124		
23	6655	20	<0.005	-	-			124-126		
24	6656	10	<0.005	-	-			126-128		
25	6657	85	0.034	-	-			128-130		

Results in ppm unless otherwise specified
T = element present but concentration too low to measure
X = element concentration is below detection limit
- = element not determined

AUTHORISED OFFICER

ANALABS

A Division of Macdonald Hamilton & Co. Pty. Ltd.

ANALYTICAL DATA

SAMPLE PREFIX	REPORT NUMBER	REPORT DATE	CLIENT ORDER No.	PAGE
	247.0.14.02531	28/06/88		OF

RECEIVED

TUBE No	SAMPLE No.	As	Au	Au(1)	Au(2)		Hole No.	Depth		
1	[illegible]	4	<0.005				ZAP 20	130-132		
2	[illegible]	25	<0.005					132-134		
3	[illegible]	5	<0.005					134-136		
4	[illegible]	<2	<0.005					136-138		
5	6662	20	0.009					138-140		
6	6663	15	0.075					140-142		
7	6664	15	0.010					142-144		
8	6665	20	<0.005					144-146		
9	[illegible]	<2	<0.005					146-148		
10	6667	<2	<0.005					148-149.90		
11	[illegible]	90	<0.005				ZAP 21	8-10m		
12	6673	160	<0.005					10-12m		
13	[illegible]	85	<0.005					12-14m		
14	6675	260	0.010					14-16m		
15	[illegible]	60	<0.005		<0.005			16-18m		
16	6677	85	<0.005					18-20m		
17	6678	70	<0.005					20-22m		
18	6679	180	0.013					22-24m		
19	6680	600	0.015					24-26m		
20	6681	1200	0.009					26-28m		
21	6682	85	0.319	0.294				28-30m		
22	6683	90	0.069					30-32m		
23	6684	110	0.010					32-34m		
24	6685	90	0.015					34-36m		
25	6686	45	<0.005					36-38m		

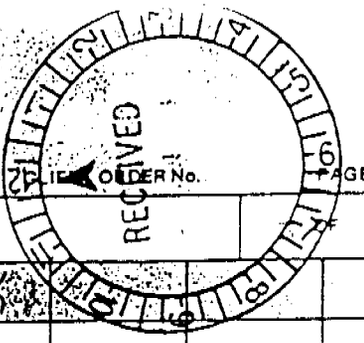
Results in ppm unless otherwise specified
T = element present, but concentration too low to measure
X = element concentration is below detection limit
— = element not determined

AUTHORISED OFFICER

ANALABS

A Division of Macdonald Hamilton & Co. Pty. Ltd.

ANALYTICAL DATA



SAMPLE PREFIX | REPORT NUMBER 247.0.14.02531 | REPORT DATE 28/06/88 | ORDER No. | PAGE

TUBE No.	SAMPLE No.	As	Au	Au(1)	Au(2)	Hole No.	Depth			
1	6667	70	0.134	–	–	ZAP-21	38	40m		
2	6668	30	0.022	–	–		40	42m		
3	6669	50	0.011	–	–		42	44m		
4	6670	65	0.010	–	–		44	46m		
5	6671	50	0.009	–	–		46	48m		
6	6672	50	<0.005	–	–		48	50m		
7	6673	80	0.008	–	–		50	52m		
8	6674	230	0.016	–	–		52	54m		
9	6675	1100	1.050	0.961	0.971		54	56m		
10	6676	970	0.076	–	0.091		56	58m		
11	6677	190	0.031	–	–		58	60m		
12	6678	140	0.035	–	–		60	62m		
13	6679	110	0.015	–	–		62	64m		
14	6700	170	0.016	–	–		64	66m		
15	6701	300	0.015	–	–		66	68m		
6	6702	140	0.023	–	0.029		68	70m		
7	6703	70	0.009	–	–		70	72m		
8	6704	120	0.012	–	–		72	74m		
9	6705	120	0.019	–	–		74	75m		
0										
1										
2										
3	DETECTION	2	0.005	0.005	0.005					
4	UNITS	PPM	PPM	PPM	PPM					
5	METHOD	401	313	313	313					

Results in ppm unless otherwise specified.
T = element present, but concentration too low to measure
X = element concentration is below detection limit
– = element not determined

AUTHORISED

CORE RECOVERY LOG

PROSPECT/MINE: ZAPOPAN HOLE NO: Z-ZAP 20

Logged By: ..... Sheet: ...../.....

Depth (m)		Interval	Recovery	Depth (m)		Interval	Recovery
From	To	(m)	(m)	From	To	(m)	(m)
40.90	42.30	1.40	1.31	104.50	105.20	0.70	0.30
42.30	43.00	0.70	0.59	105.20	105.35	0.15	0.15
43.00	44.10	1.10	0.53	105.35	105.70	0.35	0.25
44.10	44.60	0.50	0.50	105.70	107.50	1.8	1.79
44.60	45.10	0.50	0.49	107.50	109.10	1.60	1.51
45.10	45.70	0.60	0.52	109.10	111.10	2.0	1.86
45.70	46.0	0.30	0.21	111.10	112.30	1.20	1.21
46.00	47.30	1.30	1.22	112.30	114.15	1.85	1.66
47.30	47.90	0.60	0.57	114.15	115.40	1.25	1.26
47.90	48.20	0.70	0.38	115.40	116.80	1.40	1.31
48.20	49.60	1.40	0.96	116.80	117.95	1.15	1.08
49.60	50.50	0.90	0.84	117.95	119.0	1.05	1.05
50.50	50.90	0.40	0.34	119.0	121.10	2.10	1.91
50.90	51.80	0.90	0.86	121.10	123.10	2.0	1.92
51.80	53.0	1.20	1.16	123.10	124.45	1.35	1.35
53.0	53.80	0.80	0.49	124.45	127.65	3.20	2.94
53.80	54.20	0.40	0.32	127.65	129.50	1.85	1.84
54.20	55.10	1.10	—	129.50	131.0	1.50	1.42
55.10	55.90	0.80	0.35	131.10	132.40	1.40	1.18
55.90	56.60	0.70	0.46	132.40	133.70	1.30	1.09
56.60	58.95	2.45	2.46	133.70	135.85	2.15	1.85
58.95	62.05	3.10	2.74	135.85	137.55	1.70	1.44
62.05	64.20	2.15	2.09	137.55	138.40	0.85	0.75
64.20	66.60	2.40	2.03	138.40	139.75	1.35	1.27
66.60	67.30	0.70	0.70	139.75	141.25	2.50	2.16
67.30	70.0	1.70	1.57	141.25	142.90	1.65	0.92
70.0	70.60	0.60	0.57	142.90	144.50	1.60	1.46
70.60	72.70	2.10	1.80	144.50	146.90	2.40	2.21
72.70	73.90	1.20	1.09	146.90	149.90	3.00	3.00
73.90	76.40	2.60	2.22				
76.40	77.40	1.0	0.74				
77.40	79.70	2.30	2.01				
79.70	80.60	0.90	0.84				
80.60	83.50	2.90	1.54				
83.50	84.70	1.30	1.20				
84.70	85.60	0.90	0.80				
85.60	86.70	1.10	1.05				
86.70	87.20	0.50	0.50				
87.20	87.40	0.20	0.13				
87.40	88.10	0.70	0.46				
88.10	89.10	1.0	0.71				
89.10	89.90	0.80	0.21				
89.90	90.45	0.55	0.45				
90.45	91.35	0.90	0.72				
91.35	92.95	1.60	1.59				
92.95	95.85	2.90	2.83				
95.85	96.75	0.90	0.90				
96.75	99.10	2.35					
99.10	101.60	2.50	1.65				
101.60	104.50	2.90	2.88				

SHEET 1 of 2

LOGGED BY: D.J.H.

CORELOGGING DATA

AREA / LEASE ..... PROSPECT ZAPOPAN ..... HOLE No. Z-ZAP 20

DIST. FROM COLLAR	BREAKS / METRE	RECOVERY	R.Q.D.	SPEC. GRAVITY	MAG. SUSCEPTILITY	ANGLE TO LONG CORE AXIS So	ANGLE TO LONG CORE AXIS S1	STRUCTURES	LITHOLOGY	ESTIMATED MINERAL PERCENTAGES milky qtz.	sugary qtz.	f. gr. qtz.	musc.	biot.	garnet	chl.	act.	cbt.	tourm.	py.	po.	hemt.	base metal su.	aspy.	Sericite	K-Spar	SAMPLE No.	ASSAY RSLTS. Au	ASSAY RSLTS. As	GEOLOGICAL COMMENTS (mainly texture)
56																														
57															4	8	1			2										
58								b.i.f.				5				8	2	½		2		2		tr						Hem-rich b.i.f.
59								b.i.f.			5	10			<½	20	5			5				2				1.0		
60								b.i.f.		2	1					5	tr			1										
61										1		5		tr		20	5	tr		2				tr	40			0.171		Sericite-tuff.
62												12		1	tr	20									tr			0.156		
63												2		2		40	5								10					
64										10		40		tr	<1	30	4								5	tr		0.020		
65												10				20	2			4										
66								b.i.f.				6		tr		22				1					40			0.180		
67											1				2	10	tr			½										
68										2					½	10				2				tr						
69								Qtz		14		6		tr	2	10	1			2				2				2.40		Vuggy Qtz
70										40					1	2				2				tr						Vuggy Qtz.
71								Qtz																				2.20		
								b.i.f		10	2				1	20				2				tr						
72										16	5			tr	2	10	tr			3										
73											3				½	20	2			2								0.358		
74								b.i.f																						

LITHOLOGICAL LEGEND:

Ssm	Mudstone	tAv	Ashstone	Su	Massive Sulphide		Veining > 30%
cSsm	Carbonaceous Mudstone	Sct	Chert	go	Gossan		Tourmaline > 5%
Ssl	Siltstone	Slf	B.I.F.	Mn	Hornfels		Arsenopyrite > 0.5%
Sst	Sandstone	caSlf	B.I.F. Carbonate > 15%	MBd	Metadolerite		Base metal sulphides > 5%
Sgw	Greywacke	chSlf	B.I.F. Chlorite > 40%	Af	Felsite	py	Pyrite > 5%
Scg	Conglomerate	actSlf	B.I.F. Actinolite > 40%	Agr	Granite	po	Iron sulphides > 2%
Sss	Carbonate	micSlf	Micas > 30% (commonly includes garnets)		Brecciated rock		

SHEET 2 of 2

LOGGED BY: D.S.H.

CORELOGGING DATA

AREA / LEASE ..... PROSPECT ZAPOPAN ..... HOLE No Z-ZAP 20

DIST. FROM COLLAR	BREAKS / METRE	RECOVERY	R.Q.D.	SPEC. GRAVITY	MAG. SUSCEPTILITY	ANGLE TO LONG CORE AXIS So	ANGLE TO LONG CORE AXIS Si	STRUCTURES	LITHOLOGY	ESTIMATED MINERAL PERCENTAGES milky qtz.	sugary qtz.	f. gr. qtz.	musc.	biot.	garnet	chl.	act.	cbt.	tourm.	py.	po.	hemt.	base metal su.	aspy.			SAMPLE No.	ASSAY RSLTS Au	ASSAY RSLTS As	GEOLOGICAL COMMENTS (mainly texture)
74								Qtz		15	4				2	15	tr			4				tr				0.[illegible]		
75								b.i.f.			6				4	18				1								0.[illegible]		
76												4			3	10				1/2								0.164		
77								b.i.f.		2		2			1/2	10	tr			1				tr						
78								Qtz		14		10			1/2	15	2			12				tr				0.214		Basal B.i.f.
79										8					1					tr										
80										14		1			tr					8								1.067		
81										10										1										
82									CORE LOSS																			0.072		
83											1				16		tr		1/2											
84											8		tr		8				1									0.074		
85																	tr		1/2											
86																														

LITHOLOGICAL LEGEND:

Ssm	Mudstone	tAv	Ashstone	Su	Massive Sulphide		Veining > 30%
cSsm	Carbonaceous Mudstone	Sct	Chert	go	Gossan		Tourmaline > 5%
Ssl	Siltstone	Slf	B.I.F.	Mh	Hornfels		Arsenopyrite > 0.5%
Sst	Sandstone	caSlf	B.I.F. Carbonate > 15%	MBd	Metadolerite		Base metal sulphides > 5%
Sgw	Greywacke	chSlf	B.I.F. Chlorite > 40%	Af	Felsite	py	Pyrite > 5%
Scg	Conglomerate	actSlf	B.I.F. Actinolite > 40%	Agr	Granite	po	Iron sulphides > 2%
Sca	Carbonate	micSlf	Micas > 30% (commonly includes garnets)		Brecciated rock		

PERCUSSION DRILL LOG

PROSPECT/MINE: ..... HOLE NO: E-BAP 20.

Collar: ..... E ..... N ..... RL

Azimuth: ..... °Mag/grid Inclination: .....°

Date Drilled: ..... Logged By: D.J.M. Sheet: 1./1.

Depth (m) From	Depth (m) To	Sample No.	Description: Lithology	Qtz	Py	Apy	Au
0	2	6589	70% milky qtz + weathered silicic tuff & clays	✓			
2	4	6590	40% clays. Slts N 20% grey black speck weathered tuff. Minor silicic tuff. minor pink chert weathered				
4	6	6591	20% qtz. 40% grey tuff. 20% silicic tuff. Slst clays weathered	✓			
6	8	6592	Pale tuff - weathered Slst clays. 40% dk green speck tuff				
8	10	6593	60% pale grey silicic tuff. minor Slst. < 20% qtz. Minor green tuff + clays	✓			
10	12	6594	As above. <5% Qtz. 10% pale green chert	✓			
12	14	6595	40% weathered green chert. minor qtz. Slst. 40% coarse & fine tuffs	✓			
14	16	6596	Dk Slst. 30% spec tuff. 20% hard tuff clays				
16	18	6597	as above	✓		✓	
18	20	6598	20% pale grey tuff Slst v. minor smoky qtz + veg				
20	22	6599	40% dk silicic tuff Slst weathered				
22	24	6600	Dk grey Slst. Partly weathered				
24	26	6601	Dk Slst. 10% hard fine silicic tuff clays				
26	28	6602	Dk Slst				
28	30	6603	30% hard fine silicic tuff Slst. v. minor milky qtz	✓			
WATER LEVEL 30	32	6604	As above	✓			
32	34	6605	Dk grey Slst				
34	36	6606	10% green chl coarse black speck tuff. <5% Qtz <10% hard silicic tuff Slst	✓			
36	38	6607	20% pale pink laced chert frag. 20% dk silicic tuff Slst				
38	40	6608	As above				
40	41	6609	<20% Chert. 40% dk silicic tuff 40% coarse green black speck tuff. minor Slst.				

DRILLHOLE LOG

Drillhole No. Z-ZAP20
Page 1 of 28

PROJECT: ZAPOPAN
DRILL: RIG 8.
COORDINATES:

COMPANY: ROCKDRIL
COMMENCED: 20/5/88
ELEVATION:

CONTRACTOR:
COMPLETED: 2/6/88.
AZIMUTH:

DECLINATION:
LOGGED BY: D.S.M.

DEPTH m	RUN m	INTER-VAL m	RECOV-ERY m	%	SURVEY	DESCRIPTION	STRUCT-URE		DEPTH m	SAMPLE NUMBER	INTER-VAL m	WIDTH m	ANALYSES			
40						40.90 → bedded coarse & fine-grained tuffs. Chl rich in part to light grey in colour. Minor pyr along fracture surfaces.										
41	40.90					Bedding 30° to core.			40.9							
42									42	6610	1.1					
	42.30	1.40	1.31			?grades into dk METASILTSTONE. @ 43.90	BADLY FRACTURED CORE									
43	43.0	0.10	0.59													
44	44.10	1.10	0.53						44	6611	2.					

GEONORTH

DRILLHOLE LOG

Drillhole No. 2-ZAP20
Page 2 of 28

PROJECT: ZAPOPAN
COMPANY:
CONTRACTOR:
DRILL:
COMMENCED:
COMPLETED:
COORDINATES:
ELEVATION:
AZIMUTH:
DECLINATION:
LOGGED BY: D.S.H.

DEPTH m	RUN m	INTERVAL m	RECOVERY m	%	SURVEY	DESCRIPTION	STRUCTURE
~~44~~							
	44.10	1.10	0.59				
	44.60	0.50	0.50				
45							
	45.10	0.50	0.49			45:46 - grades back into variably bedded lvfs	
	45.70	0.60	0.52				
46	46.0	0.30	0.21				
47							
	47.30	1.30	1.22				
						47.20 Qtz / Silicic zone Cl. - rich. 2cm wide.	
	47.90	0.40	0.57				
48	48.20	0.70	0.38				

DEPTH m	SAMPLE NUMBER	INTERVAL m	WIDTH m	ANALYSES
46	6612	2		
48	6613	2		

GEONORTH

DRILLHOLE LOG

Drillhole No. Z ZAP 20
Page 3 of 28

PROJECT: ZAPOPAN.
COMPANY:
CONTRACTOR:
DRILL:
COMMENCED:
COMPLETED:
COORDINATES:
ELEVATION:
AZIMUTH:
DECLINATION:
LOGGED BY: D.J.H.

DEPTH m	RUN m	INTER-VAL m	RECOV-ERY m	%	SURVEY	DESCRIPTION	STRUCT-URE	DEPTH m	SAMPLE NUMBER	INTER-VAL m	WIDTH m	ANALYSES			
48	48.20	0.70	0.38												
						1 cm silicic vein with thin pale grey fine-grained silicic tuff.									
49															
	49.60	1.40	0.96												
						METATUFF									
50								50	6614	2					
	50.50	0.90	0.84			50.61-50.64 Pink/green chert zone within fine silicic tuff.									
51	50.90	0.40	0.34			50.90 - tuff becomes fine-grained ?tourmaline black speck									
						51.42 - grades into dk METASILISTONE.									
	51.80	0.90	0.86												
52								52	6615	2					

GEONORTH

DRILLHOLE LOG

Drillhole No. Z-ZAP20
Page 4 of 28

PROJECT: ZAPOPAN
DRILL:
COORDINATES:

COMPANY:
COMMENCED:
ELEVATION:

CONTRACTOR:
COMPLETED:
AZIMUTH:

DECLINATION:
LOGGED BY: D.J.H.

DEPTH m	RUN m	INTER-VAL m	RECOV-ERY m	%	SURVEY	DESCRIPTION	STRUCT-URE	DEPTH m	SAMPLE NUMBER	INTER-VAL m	WIDTH m	ANALYSES
52						52 - 54m. Badly crushed core ? shear zone. clay-rich.	BADLY FRACTURED CORE					
						frag. of fine grey tuff with ½m dk black specks ? tourmaline						
53	53.0	1.20	1.16			53.21. 1cm wide cream silicic zone.						
	53.80	0.80	0.49			METATUFF. Fine, dk grey						
54								54	6616	2		
	54.20	0.40	0.32				CORE LOSS					
55	55.10	1.10	—									
						Dk grey METASILTSTONE.						
	55.90	0.80	0.35			Rose qtz band 1½cm wide @ 55.96						
56								56	6617	2		
	56.60	0.70	0.45									

GEONORTH

DRILLHOLE LOG

Drillhole No. Z-ZAP 20
Page 5 of 28

PROJECT: ZAPOPAN
COMPANY:
CONTRACTOR:
DRILL:
COMMENCED:
COMPLETED:
COORDINATES:
ELEVATION:
AZIMUTH:
DECLINATION:
LOGGED BY: D. S. H.

DEPTH m	RUN m	INTER-VAL m	RECOV-ERY m	%	SURVEY	DESCRIPTION	STRUCT-URE	DEPTH m	SAMPLE NUMBER	INTER-VAL m	WIDTH m	ANALYSES
56												
						Various bedded coarse and fine METATUFFS.						
	56.60	0.70	0.45									
57												
						Banded green chert. Garnetiferous. Pyr in bedding plane Band 2-3cm wide						
58						Banded METATUFF on cm scale with mm pyr bands		58	6618	2		
						58.20 - Hematitic pale pink/green/black pyr rich banded chert mm scale. Grades into fine-grained grey silicic METATUFF @ 58.31						
	58.95	2.45	2.46			58.63 - 2mm wide pyr band to core						
59						Coarse grained chl METATUFF.						
						59.04. banded Chl, qtz pyr growths over 8cm zone. mm banded dk/light silicified zone 20% pyr.						
						Grades into 14 cm qtz vein. vuggy textures with 2-4 mm long euhedral growths of qtz, asp & massive pyr. along fract. 1 cm wide. Brecciated dk sltst with qtz & fine pyr & asp. 5 cm wide asp zone with euhedral xtals 5-6mm in sp. intergrown.						
60								60	6619	2		

Sltst. foliation 30° to core. ? tourmaline speckled. bedding 40°

GEONORTH

DRILLHOLE LOG

Drillhole No. Z-ZAP20
Page 6 of 28

PROJECT: ZAPOPAN
DRILL:
COORDINATES:

COMPANY:
COMMENCED:
ELEVATION:

CONTRACTOR:
COMPLETED:
AZIMUTH:

DECLINATION:
LOGGED BY: D.J.H.

DEPTH m	RUN m	INTER-VAL m	RECOV-ERY m	%	SURVEY	DESCRIPTION	STRUCT-URE	DEPTH m	SAMPLE NUMBER	INTER-VAL m	WIDTH m	ANALYSES
60						Bedded tuff sequence to 60.28. Pyr bands mm wide grading into progressively more silicic METATUFF. 2cm qtz vein. Euhedral crystal growth + fine pyr ± asp within vugs.						
						METASILTSTONE with cm qtz veining. foliation 30° to core. Coarse pale silicic band 2cm wide 50° to core.						
61						61.12 1cm qtz folded in bedding plane. 61.38 1x 4cm leucocratic banding with bedding.						
						Coarse qtz veins 2cm wide vuggy. 61.45. Coarse qtz vein 2cm wide ⊥ to core.						
62	62.05	3.10	2.74			62.02 Qtz stringer coarse pyr vuggy pitted ? weathered sulphide. Coarse speck tuff (?cordierite) in plane of foliation 30° to core. 2cm qtz stringer @ above.		62	6620	2		
63						62.90 Progressively more silicic leucocratic tuff. Intensely folded ∥ to foliation @ 36° to core. Folds more defined in pale tuff.						
						63.46-63.55 Dk METASILTSTONE						
						Banded tuffs. Dk speck ? tourmaline mi defines foliation @ 30° to core. Bedding 55° to core.						
64	64.20	2.15	2.09					64	6621	2		

GEONORTH

DRILLHOLE LOG

Drillhole No. Z-ZAP20
Page 7 of 28

PROJECT: ZAPOPAN
DRILL:
COORDINATES:

COMPANY:
COMMENCED:
ELEVATION:

CONTRACTOR:
COMPLETED:
AZIMUTH:

DECLINATION:
LOGGED BY: D.S.H.

DEPTH m	RUN m	INTER-VAL m	RECOV-ERY m	%	SURVEY	DESCRIPTION	STRUCT-URE	DEPTH m	SAMPLE NUMBER	INTER-VAL m	WIDTH m	ANALYSES
64						64.06. Silicic altered tuff zone 1° Qtz veining minor hematite, pale tuff & pink min ? K-spar in crude planes // to bedding.						
						64.63. Strongly chl. with pyr along fractures // to bedding						
						64.84. mm pyr bands & dusted 2cm garnet 3 mes on cm spacing within Sltst. pyr lensed long axis // to foliation.						
65						65.22 - 65.32. Banded pyr + 1-2mm asp crystals in silicic matrix pitted.						
66						Banded dk grey METASILTSTONE garnet dusted grades into tuff with dk min. ? tourmaline defining foliation @ 45°		66	6622	2		
	66.60	2.40	2.03			66.38. tuff folded // to foliation. 45° to core (Bedding 30° to core). Strongly banded on cm scale						
67												
	67.30	0.70	0.70			Banded coarse/fine METATUFF						
68								68	6623	2		

GEONORTH

DRILLHOLE LOG

Drillhole No. Z-ZAP20
Page 8 of 28

PROJECT: ZAPOPAN
DRILL:
COORDINATES:

COMPANY:
COMMENCED:
ELEVATION:

CONTRACTOR:
COMPLETED:
AZIMUTH:

DECLINATION:
LOGGED BY: D.S.H.

DEPTH m	RUN m	INTER-VAL m	RECOV-ERY m	%	SURVEY	DESCRIPTION	STRUCT-URE	DEPTH m	SAMPLE NUMBER	INTER-VAL m	WIDTH m	ANALYSES
68						68.49 - 68.52. dk grey METASILTSTONE gradational contact. bedded 50° to core.						
69						68.90 - 69.41. Qtz veining. Chl. alteration with 2-4mm abundant asp xtals. & fine grained pyr. 2cm garnet zone along base.						
						METASILTSTONE - garnet dusted.						
70	70.0	1.70	1.57					70	6624	2		
						70.40 - 70.44. Silicic zone in bedding pyr - ncl.						
	70.60	0.60	0.57			70.60 - 71.01. Qtz coarse - vuggy pyr up to 4mm xtals + fine grained along fractures. Chl. altered slt. inclusions						
71						71.83 - 71.86. Silicic band + chl/pyr mm along bedding. cf. set // to foliation						
72	72.70	2.10	1.80					72	6625	2		

GEONORTH

DRILLHOLE LOG

Drillhole No. Z-ZAP 20
Page 9 of 28

PROJECT: ZAPOPAN
DRILL:
COORDINATES:

COMPANY:
COMMENCED:
ELEVATION:

CONTRACTOR:
COMPLETED:
AZIMUTH:

DECLINATION:
LOGGED BY: D.J.H.

DEPTH m	RUN m	INTER-VAL m	RECOV-ERY m	%	SURVEY	DESCRIPTION	STRUCT-URE	DEPTH m	SAMPLE NUMBER	INTER-VAL m	WIDTH m	ANALYSES
72						72.36 1cm wide qtz veins with v minor pyr.						
	72.70	2.10	1.80			72.74 - 73.28. Qtz vein deformed & fractured. Chl alteration + pyr-filled fract. core badly broken.						
73												
	73.90	1.20	1.09			Dk grey METASILTSTONE Foliation 30° to core. Bedding 50° to core.		74	6626	2		
74						74.75 - 75.04 Coarse milky vuggy qtz fine pyr with vugs with euhedral drip up to 5mm inside vugs. Minor euhedral Qtz needles growing into vugs up to 2-4mm long.						
75								75	6627	1		
76	76.40	2.60	2.22					76	6628	1		

GEONORTH

DRILLHOLE LOG

Drillhole No. Z-ZAP20
Page 10 of 28

PROJECT: ZAPOPAN
DRILL:
COORDINATES:

COMPANY:
COMMENCED:
ELEVATION:

CONTRACTOR:
COMPLETED:
AZIMUTH:

DECLINATION:
LOGGED BY: D.J.H

DEPTH m	RUN m	INTER-VAL m	RECOV-ERY m	%	SURVEY	DESCRIPTION	STRUCT-URE	DEPTH m	SAMPLE NUMBER	INTER-VAL m	WIDTH m	ANALYSES
76						76.35 - 76.47 mm scale band of pyr, silicic, chl, leuco tuff with garnets along base & top of zone.						
	76.40	2.60	2.22									
77						METASILTSTONE - garnet dusted.						
	77.40	1.0	0.74									
						77.37 to 77.56 Broken qtz vein. vuggy pyr + asp as previously described. large garnet growth.						
78						77.92 silicic/pyr 2 cm wide band.		78	6629	2		
						78.61 - 78.90. Intensly deformed chl. altered zone of tuff. banded with leucocratic boudins. Banding as mm scale for 5 cm at base.						
79												
						79.22 and 79.30 1 cm qtz veins.						
	79.70	2.30	2.01									
80								80	6630	2		
	80.60	0.90	0.84									

GEONORTH

DRILLHOLE LOG

Drillhole No. Z-ZAP20
Page 11 of 28

PROJECT: ZAPOPAN
DRILL:
COORDINATES:

COMPANY:
COMMENCED:
ELEVATION:

CONTRACTOR:
COMPLETED:
AZIMUTH:

DECLINATION:
LOGGED BY: D.S.H.

DEPTH m	RUN m	INTER-VAL m	RECOV-ERY m	%	SURVEY	DESCRIPTION	STRUCT-URE		DEPTH m	SAMPLE NUMBER	INTER-VAL m	WIDTH m	ANALYSES			
80																
	80.60	0.90	0.84													
81						Leucocratic boudins within METASILTSTONE										
						Qtz vein (coarse) 81.41 2 cm wide										
82									82	6631	2					
						Dk grey METASILTSTONE										
83																
	83.50	2.90	1.54													
						Boudins of leucocratic lift ∥ to foliation										
84									84	6632	2					
	84.70	1.20	1.20													

GEONORTH

DRILLHOLE LOG

Drillhole No. Z-ZAP 20
Page 12 of 28

PROJECT: ZAPOPAN
DRILL:
COORDINATES:

COMPANY:
COMMENCED:
ELEVATION:

CONTRACTOR:
COMPLETED:
AZIMUTH:

DECLINATION:
LOGGED BY: D. J. M.

DEPTH m	RUN m	INTER-VAL m	RECOV-ERY m	%	SURVEY	DESCRIPTION	STRUCT-URE		DEPTH m	SAMPLE NUMBER	INTER-VAL m	WIDTH m	ANALYSES			
84						grades into hard & grey silicic banded METATUFF.										
	84.70	1.20	1.20													
85							Sandy fractured core									
	85.60	0.90	0.80													
86						86.16 Boudinaed leucocratic tuff with pyr.			86	6633	2					
	86.70	1.10	1.05													
87	87.20	0.50	0.50			87.0 - 87.16. Intensely brecciated Sltst. partly silicified (pink colour) in Qtz matrix.										
	87.40	0.20	0.13			Interbedded green chert with coarse pale grey tuff.										
88	88.10	0.70	0.46						88	6634	2					

GEONORTH

DRILLHOLE LOG

Drillhole No. Z-ZAP20
Page 13 of 28

PROJECT: ZAPOPAN
COMPANY:
CONTRACTOR:
DRILL:
COMMENCED:
COMPLETED:
COORDINATES:
ELEVATION:
AZIMUTH:
DECLINATION:
LOGGED BY: D.J.H.

DEPTH m	RUN m	INTER-VAL m	RECOV-ERY m	%	SURVEY	DESCRIPTION	STRUCT-URE
88	88.10	0.70	0.46				
89	89.10	1.0	0.71			89.05: Shear zone graphitic sl. sheared qtz veining. 20cm	
90	89.90	0.80	0.21			90.22 - 90.26. Shear zone as above	
	90.45	0.55	0.45			OK Slst. Pyr bands dipping 60° to core	
91	91.35	0.90	0.72				
92	92.95	1.60	1.59				

DEPTH m	SAMPLE NUMBER	INTER-VAL m	WIDTH m	ANALYSES
90	6635	2		
91.24	6636	1.2		

GEONORTH

DRILLHOLE LOG

Drillhole No. Z-ZAP20
Page 14 of 28

PROJECT: ZAPOPAN
COMPANY:
CONTRACTOR:
DRILL:
COMMENCED:
COMPLETED:
COORDINATES:
ELEVATION:
AZIMUTH:
DECLINATION:
LOGGED BY: D. J. H.

DEPTH m	RUN m	INTER-VAL m	RECOV-ERY m	%	SURVEY	DESCRIPTION	STRUCT-URE	DEPTH m	SAMPLE NUMBER	INTER-VAL m	WIDTH m	ANALYSES
92												
						92.37. Banded tuff with light/dark bands, pyr - top folded around leucocratic boudins <1mm thick bands to 92.42		92.75	6638	1.51		
93	92.95	1.60	1.59									
						93.14 - 93.20. Silicic band pale grey coarse grained minor pyr scattered throughout						
						again @ 93.41 - 93.46						
						and 93.91 - 93.99						
94						coarse METATUFF. - leucocratic boudins pyr, chl. foliation 35° to core bedding 40° to core.						
						94.46 - 95.35						
						? Lamphophyre dyke		94.57	6637	1.82		
95												
						95.41 - 95.62. Zone of boudinaged tuff leucocratic - with chl, pyr banding around boudins - later stage [illegible] calcite - cuts all.						
	95.85	2.90	2.83									
						95.85 - 96.07. Abundant pyr/chl. coarse qtz brecciating sltst.						
96	96.75	0.90	0.90									

GEONORTH

DRILLHOLE LOG

Drillhole No. Z-ZAP20
Page 15 of 28

PROJECT: ZAPOPAN
COMPANY:
CONTRACTOR:
DRILL:
COMMENCED:
COMPLETED:
COORDINATES:
ELEVATION:
AZIMUTH:
DECLINATION:
LOGGED BY: D.J.H.

DEPTH m	RUN m	INTER-VAL m	RECOV-ERY m	%	SURVEY	DESCRIPTION	STRUCT-URE	DEPTH m	SAMPLE NUMBER	INTER-VAL m	WIDTH m	ANALYSES
96	96.75	0.90	0.90					96.19	6641	1.62		
						METASILTSTONE. Garnet-dusted						
97						97.86 - 97.94 Shear zone		97.4	6640	1.21		
						97.54 - 97.59. Banded garnet zone. minor CO_3						
98						97.94 - 98.11. fractured/brecciated CO_3 veined METASILTSTONE. Pyr-rich silicic zones as folded bands and lenses with CO_3 veining through-out						
99	99.10					METASILTSTONE garnet dusted. 99.10 - 99.21. Qtz vein minor fine asp & pyr		99.3	6639	1.9		
100												

GEONORTH

DRILLHOLE LOG

Drillhole No. Z-ZAP20
Page 16 of 28

PROJECT: ZAPOPAN
DRILL:
COORDINATES:

COMPANY:
COMMENCED:
ELEVATION:

CONTRACTOR:
COMPLETED:
AZIMUTH:

DECLINATION:
LOGGED BY: D. J. H.

DEPTH m	RUN m	INTER-VAL m	RECOV-ERY m	%	SURVEY	DESCRIPTION	STRUCT-URE	DEPTH m	SAMPLE NUMBER	INTER-VAL m	WIDTH m	ANALYSES
100												
						100.58 - 100.92. folded chl/tuff. seq. dk light bands on mm scale. + silicic bands						
101								101.09	6647	1.70		
						101.60 - 101.91. banded coarse silicic tuff. also 102.01 - 102.11.						
	101.60	2.50	1.65									
102								102.0	6648	0.91		
						102.34 - 102.42. Chl. rich zone with silicic coarse tuff. 102.85 3cm zone of banded leuco tuff + chl. x-cutting CO_3 veins. 1cm wide silicic band @ 102.86						
103						103.38. 6 cm wide leucocratic band with mm scale light/dk/pyr bands + 4cm garnet zone below						
104								104.0	6642	2		
	104.50	2.90	2.88									

GEONORTH

DRILLHOLE LOG

Drillhole No. Z-ZAP20
Page 17 of 28

PROJECT: ZAPOPAN
DRILL:
COORDINATES:

COMPANY:
COMMENCED:
ELEVATION:

CONTRACTOR:
COMPLETED:
AZIMUTH:

DECLINATION:
LOGGED BY: D.S.H.

DEPTH m	RUN m	INTER-VAL m	RECOV-ERY m	%	SURVEY	DESCRIPTION	STRUCT-URE	DEPTH m	SAMPLE NUMBER	INTER-VAL m	WIDTH m	ANALYSES
104												
	104.50	2.40	2.88			104.30 - 104.44. Leucocratic bouchins Chl & pyr bands & nodules with silicic zone. Insipient foliation 30° to core.						
105												
	105.20	0.70	0.30									
	105.35	0.15	0.15			Bedded dk grey METASILTSTONE.						
	105.70	0.35	0.25									
106								106	6643	2		
						106.28. Qtz band - pink pink min. ?tourmaline speckled from band. qvso @ 106.63 & 106.67 (2cm wide)						
107						Chl/silicic bands bedded 50° to core @ 107.15 - 107.16 & 107.18 - 107.20						
	107.50	2.0	1.79									
108								108	6644	2		

GEONORTH

DRILLHOLE LOG

Drillhole No. 2 - ZAP20
Page 18 of 28

PROJECT: ZAPOPAN
DRILL:
COORDINATES:

COMPANY:
COMMENCED:
ELEVATION:

CONTRACTOR:
COMPLETED:
AZIMUTH:

DECLINATION:
LOGGED BY: D.J.H.

DEPTH m	RUN m	INTER-VAL m	RECOV-ERY m	%	SURVEY	DESCRIPTION	STRUCT-URE	DEPTH m	SAMPLE NUMBER	INTER-VAL m	WIDTH m	ANALYSES
108						108.03 - 108.06 Qtz band with bronze? sulphide? sphal. + pyr						
						108.16 2cm shr zone 40° to core						
						Chert band + garnets @ 108.17 - 108.14						
						108.39 - 108.41 Qtz band + pink? k spar. min lining wallrock contact. minor pyr within fractures						
109	109.10	1.60	1.51									
						109.46 - 109.59 Coarse silicic zone						
						Coarse grey tuff banded + pyr. Lower 6 cm chl. rich with pyr elongate along foliation 35° to core minor CO3 veining at base.						
110								110	6645	2		
						Banded coarse/fine silicic tuffs						
111						6 cm zone with chl rich tuff + chert band						
	111.10	2.0	1.86			@ 111.57 k green abic min growth ? cordierite						
						111.68 silicic bands 2-3mm wide in 4 cm zone						
112								112	6646	2		
	112.30	1.20	1.21									

GEONORTH

DRILLHOLE LOG

Drillhole No. Z-ZAP20
Page 19 of 28

PROJECT: ZAPOPAN
COMPANY:
CONTRACTOR:
DRILL:
COMMENCED:
COMPLETED:
COORDINATES:
ELEVATION:
AZIMUTH:
DECLINATION:
LOGGED BY: D.J.H

DEPTH m	RUN m	INTER-VAL m	RECOV-ERY m	%	SURVEY	DESCRIPTION	STRUCT-URE	DEPTH m	SAMPLE NUMBER	INTER-VAL m	WIDTH m	ANALYSES
112	112.30	1.20	1.21			112.35 Tuff grades into dk grey METASILTSTONE.						
						112.84 2cm. Cll-ncl banded silicic zone						
113						113.52 Banded coarse/green tuffs & silicic bands. CO_3 ncl. 40° to core.						
114								114	6649	2		
	114.15	1.85	1.66			v. fine grained light grey silicic tuff. 114.57 - 114.72.						
						114.88 16 cm banded chert & leuco tuff + pyr. grades into dk tuff & coarse dk green cubic mtn ? cordierite (⊗ in shape)						
115						grades into dk fine-grained grey tuff.						
	115.40	1.25	1.26			½cm silicic band folded ∥ to foliation. 114.40 - 115.51						
						115.77 Chert-nsh bands & coarse tuffs. fractures & off-set by CO_3 veins. v. minor cc pyr within CO_3 4cm wide						
116								116	6650	2		
	116.80	1.40	1.31									

GEONORTH

DRILLHOLE LOG

Drillhole No. 2 ZAP20
Page 20 of 28

PROJECT: ZAPOPAN
DRILL:
COORDINATES:

COMPANY:
COMMENCED:
ELEVATION:

CONTRACTOR:
COMPLETED:
AZIMUTH:

DECLINATION:
LOGGED BY: D.J.H.

DEPTH m	RUN m	INTER-VAL m	RECOV-ERY m	%	SURVEY	DESCRIPTION	STRUCT-URE	DEPTH m	SAMPLE NUMBER	INTER-VAL m	WIDTH m	ANALYSES			
116						117.17 2cm wide silicic ?altered (pink) zones pyr along contact. abo 15 cm wide at 117.25									
	116.80	1.40	1.31			Dk grey SILTSTONE. minor CO_3 veining.									
117						6cm qtz band with pyr cross-cut by CO_3 @ 117.56.									
118	117.95	1.15	1.08					118	6651	2					
						chl-rich bands within dk METASILTSTONE									
119	119.0	1.05	1.05			118.70 10 cm crush zone.									
120								120	6652	2					

GEONORTH

DRILLHOLE LOG

Drillhole No. Z-ZAP20
Page 21 of 28

PROJECT: ZAPOPAN
DRILL:
COORDINATES:

COMPANY:
COMMENCED:
ELEVATION:

CONTRACTOR:
COMPLETED:
AZIMUTH:

DECLINATION:
LOGGED BY: D.J.H.

DEPTH m	RUN m	INTER-VAL m	RECOV-ERY m	%	SURVEY	DESCRIPTION	STRUCT-URE	DEPTH m	SAMPLE NUMBER	INTER-VAL m	WIDTH m	ANALYSES			
120						Banded coarse & fine tuffs. foliation 30° to core bedding 40° to core.									
						120.40 - 120.46. CLI/Act/Pyr zone boulinaged & deformed.									
						METATUFF									
121	121.10	2.10	1.91												
						121.41 - 121.45 - minor CO_2 veining sub ∥ to bedding + CO_2 filled crush zone (calcite). with seam chert rich band below.									
122								122	6653	2					
						Bedded METATUFF.									
123	123.10	2.0	1.92			123.25 mm banded light/dark zone with coarse leucocratic boulins folded ∥ to 30° foliation. Scattered pyr. CLI rich Pyr defining foliation.									
						Dk grey METASILTSTONE									
124	124.45	1.35	1.35					124	6654	2					

GEONORTH

DRILLHOLE LOG

Drillhole No. 2 - ZAP20
Page 22 of 28

PROJECT: ZA POPAN
COMPANY:
CONTRACTOR:
DRILL:
COMMENCED:
COMPLETED:
COORDINATES:
ELEVATION:
AZIMUTH:
DECLINATION:
LOGGED BY: D.J.H.

DEPTH m	RUN m	INTERVAL m	RECOVERY m	%	SURVEY	DESCRIPTION	STRUCTURE		DEPTH m	SAMPLE NUMBER	INTERVAL m	WIDTH m	ANALYSES
124													
	124.45	1.35	1.35			124.45 - 1cm silicic fracture with "metallic blue" sulphide + v. minor pyr. Chl							
						Dk grey MEDSILTSTONE							
125						125.26 - 125.51. Coarse bdd.							
126						Dk grey METASILTSTONE.			126	6655	2		
						occasional pyr bands.							
127						127.05 - 127.06. coarse silicic/pint band.							
	127.65	3.20	2.94			127.46 - 127.58 Chl rich zone with pnt mineral. bands.							
128						127.96 - 128.02 pyr zone			128	6656	2		

GEONORTH

DRILLHOLE LOG

Drillhole No. Z-ZAP20
Page 23 of 28

PROJECT: ZAPOPAN
DRILL:
COORDINATES:

COMPANY:
COMMENCED:
ELEVATION:

CONTRACTOR:
COMPLETED:
AZIMUTH:

DECLINATION:
LOGGED BY: D.J.H.

DEPTH m	RUN m	INTER-VAL m	RECOV-ERY m	%	SURVEY	DESCRIPTION	STRUCT-URE	DEPTH m	SAMPLE NUMBER	INTER-VAL m	WIDTH m	ANALYSES
128						coarse METATUFF - grades into Dk s/bl.						
						128.27 pyr infilling gashes - sltr						
						128.77 - 128.97 Calcite filled shear zone. Intense CO_2 veining						
129												
	129.50	1.85	1.84			Dk grey METASILTSTONE. minor bedding 40° to core.						
130								130	6657	2		
						130.85 - 130.86 Deformed pink chert band						
131	131.0	1.50	1.42									
						131.21 - 131.42. Chl-rich zone ? altered bedding 40° to core.						
						pale grey METATUFF						
132	132.40	1.40	1.18					132	6658	2		

GEONORTH

DRILLHOLE LOG

Drillhole No. Z-ZAP 20
Page 24 of 28

PROJECT: ZAPOPAN
COMPANY:
CONTRACTOR:
DRILL:
COMMENCED:
COMPLETED:
COORDINATES:
ELEVATION:
AZIMUTH:
DECLINATION:
LOGGED BY: D.J.H.

DEPTH m	RUN m	INTERVAL m	RECOVERY m	%	SURVEY	DESCRIPTION	STRUCTURE
132						131.90 - 132.35. Interbedded coarse lenticular tuff/ black bands + green cherts folded 85° to core	
	132.40	1.40	1.18			DK SILTSTONE	
						132.85 & 132.75 1-2 cm. Pale banding coarse spark + pyr. bedded 15° to core.	
133						Coarse ch/ TUFF	
	133.70	1.30	1.09				
134						134.15 gradational contact to dk grey METASILTSTONE.	
						134.59 - 134.63. CO_3 veined Intense	
135							
						Dk grey METASILTSTONE. minor CO_3 veining.	
	135.85	2.15	1.85				
136							

DEPTH m	SAMPLE NUMBER	INTERVAL m	WIDTH m	ANALYSES
134	6659	2		
136	6660	2		

GEONORTH

DRILLHOLE LOG

Drillhole No. Z-CAP20
Page 25 of 28

PROJECT: ZAPOPAN
COMPANY:
CONTRACTOR:
DRILL:
COMMENCED:
COMPLETED:
COORDINATES:
ELEVATION:
AZIMUTH:
DECLINATION:
LOGGED BY: D.J.H.

DEPTH m	RUN m	INTER-VAL m	RECOV-ERY m	%	SURVEY	DESCRIPTION	STRUCT-URE
136							
						136.92 - 137.53. Bedding 15° to core. Dull reddish/grey bands insipient foliation - from - black specks ? tourmaline. 55° to core.	
137							
	137.55	1.70	1.44				
138							
	138.40	0.85	0.75				
139							
						139.02. Pyr/Chl/Silicic zone. pyr along joints 'n' fractures. 10 cm.	
	139.75	1.35	1.27			Dk grey SILTSTONE - pyr-ll & foliate	
140							

DEPTH m	SAMPLE NUMBER	INTER-VAL m	WIDTH m	ANALYSES
138	6661	2		
140	6662	2		

GEONORTH

DRILLHOLE LOG

Drillhole No. Z-ZAP20
Page 26 of 28

PROJECT: ZAPOPAN
COMPANY:
CONTRACTOR:
DRILL:
COMMENCED:
COMPLETED:
COORDINATES:
ELEVATION:
AZIMUTH:
DECLINATION:
LOGGED BY: D. J. H.

DEPTH m	RUN m	INTER-VAL m	RECOV-ERY m	%	SURVEY	DESCRIPTION	STRUCT-URE
140						Bedded dk green tuff 140.11-.10cm	
						140.48-140.71. Chl rich band 30° to core.	
141							
	141.25	2.50	2.16			141.30-.10cm Qtz vein pyr rich	
142							
						142.42-142.80 Deformed chl rich tuff	
	142.90	1.65	0.92				
143							
144	144.50	1.60	1.46				

DEPTH m	SAMPLE NUMBER	INTER-VAL m	WIDTH m	ANALYSES
142	6663	2		
140	6664	2		

GEONORTH

DRILLHOLE LOG

Drillhole No. Z-ZAP 20
Page 27 of 28

PROJECT: ZAPOPAN
DRILL:
COORDINATES:

COMPANY:
COMMENCED:
ELEVATION:

CONTRACTOR:
COMPLETED:
AZIMUTH:

DECLINATION:
LOGGED BY: D.J.H.

DEPTH	RUN m	INTER-VAL m	RECOV-ERY m	%	SURVEY	DESCRIPTION	STRUCT-URE	DEPTH m	SAMPLE NUMBER	INTER-VAL m	WIDTH m	ANALYSES
144						144.38. 24 cm zone 15° to core chl-rich + minor CO_3 & hematite						
	144.50	1.60	1.46									
145												
						145.51 - 146.0. Coarse chl-rich band 2 cm folded deformed chert along base + scattered pyr.						
146								146	6665	2		
	146.70	2.40	2.21									
147						Dk grey METASILTSTONE						
148								148	6666	2		

GEONORTH

DRILLHOLE LOG

Drillhole No. Z-ZAPCO
Page 28 of 28

PROJECT: ZAPOPAN
COMPANY:
CONTRACTOR:
DRILL:
COMMENCED:
COMPLETED:
COORDINATES:
ELEVATION:
AZIMUTH:
DECLINATION:
LOGGED BY: D. J. H.

DEPTH m	RUN m	INTER-VAL m	RECOV-ERY m	%	SURVEY	DESCRIPTION	STRUCT-URE
148						148.06. 28cm of CO3 veining within Dk Slst.	
149						Bedded dk grey MEDASILTSTONE: pyr bands - minor CO3 & hematite	
150	149.40	3.0	3.0.			149.90 E.O.H.	

DEPTH m	SAMPLE NUMBER	INTER-VAL m	WIDTH m	ANALYSES
149.9	6667	1.9		

GEONORTH

EXPLOREMIN PTY.LTD.

Diamond Drill Log: ZZAP/21

SUMMARY

CLIENT: ZAPOPAN N.L.

PROSPECT: ZAPOPAN

PROPOSED CO-ORDS E: 9976.0 N: 9897.0 R.L.: 103
LAID OUT CO-ORDS E: 9976.0 N: 9897.0 R.L.: 103
ACTUAL CO-ORDS E: 9977.5 N: 9898.8 R.L.: 99.21

PLANNED DEPTH (M): 195
TARGET DEPTH (M): 80-195
ACTUAL DEPTH (M): 187.8

BEARING ° Grid: 032 ° Mag:
INCLINATION -°: 70

PROPOSED BY: J.G.
PLANNED BY: J.G.
LAID OUT BY: MACJAP
SURVEYED BY:

DRILLED BY: ROCKDRILL RIG 8

DATE COMMENCED: 88/05/06
DATE COMPLETED: 88/12/06

PRE-COLLAR (M): 75
HQ (M): 112.8
NQ (M):
BQ (M):
OTHER (M):
WEDGES PLACED:

COMMENTS/ASSAY SUMMARY:

98-106m (8m) 3.2 g/t Au
(incl) (2m) 24.9 g/t Au

DOWN HOLE SURVEYS

DEPTH (m): 80 AZIMUTH (mag. °): 027 INCLN (°): 68
DEPTH (m): 130 AZIMUTH (mag. °): 021 INCLN (°): 60
DEPTH (m): 187 AZIMUTH (mag. °): 019 INCLN (°): 58
DEPTH (m): AZIMUTH (mag. °): INCLN (°):
DEPTH (m): AZIMUTH (mag. °): INCLN (°):
DEPTH (m): AZIMUTH (mag. °): INCLN (°):
DEPTH (m): AZIMUTH (mag. °): INCLN (°):
DEPTH (m): AZIMUTH (mag. °): INCLN (°):
DEPTH (m): AZIMUTH (mag. °): INCLN (°):
DEPTH (m): AZIMUTH (mag. °): INCLN (°):

ANALABS

A division of MacDonald Hamilton & Co. Pty. Ltd. (Inc NSW)

089 84 3845

Cnr Coonawarra & Mataram Rds, Winnellie

Fax: (089) 84 3984

ANALYTICAL REPORT No. 247.0.14.02538

THIS REPORT MUST BE READ IN CONJUNCTION WITH THE ACCOMPANYING ANALYTICAL DATA

INVOICE TO:

ZAPOPAN NL
PO BOX 4045

DARWIN NT 0801

ORDER No.	PROJECT
	BRITTANIA

DATE RECEIVED	RESULTS REQUIRED
08/06/88	ASAP

No. OF PAGES OF RESULTS	DATE REPORTED	No. OF COPIES	TOTAL No. OF SAMPLES
	15/08/88	1	90

SAMPLE NUMBERS	SAMPLE DESCRIPTION	ELEMENT/METHOD
6668/71,101/76,BT 01/10	MI Prep: 033	Au,Au(1),Au(2)/313
6668/71,101/76,BT 01/10	MI	As/401

RESULTS TO

MR ROD JOHNSON
ZAPOPAN NL
PO BOX 4045

DARWIN NT 0801

RESULTS TO

RESULTS TO

REMARKS

Z-ZAP 21
PRE-COLLAR

AUTHORISED OFFICER

ANALABS

A Division of Macdonald Hamilton & Co. Pty. Ltd.

ANALYTICAL DATA

SAMPLE PREFIX	REPORT NUMBER	REPORT DATE	CLIENT ORDER No.	PAGE
	247.0.14.02538	15/08/88		1 OF 4

TUBE No	SAMPLE No.	As	As	Au	Au(1)	Au(2)		hole	depth	
1	6668	350	-	0.042	-	-		ZAP21	0-2	
2	6669	>2500	0.27	1.005	1.118	1.057			2-4	
3	6670	160	-	0.035	-	-			4-6	
4	6671	130	-	0.033	-	-			6-8	

ANALABS

A Division of Macdonald Hamilton & Co. Pty. Ltd.

ANALYTICAL DATA

SAMPLE PREFIX	REPORT NUMBER	REPORT DATE	CLIENT ORDER No.	PAGE
	247.0.14.02538	15/08/88		4 OF 4

TUBE No	SAMPLE No	As	As	Au	Au(1)	Au(2)
16						
17						
18						
19						
20						
21						
22						
23	DETECTION	2	0.01	0.005	0.005	0.005
24	UNITS	PPM	%	PPM	PPM	PPM
25	METHOD	401	404	313	313	313

Results in ppm unless otherwise specified
T = element present: but concentration too low to measure
X = element concentration is below detection limit
— = element not determined

AUTHORISED OFFICER

ANALABS

A division of Macdonald Hamilton & Co. Pty. Ltd.

Phone(09) 458 7999

52 Murray Road, Welshpool, W.A. 6101

Telex AA[illegible]60

ANALYTICAL REPORT No. 247.0.14.[illegible]631

THIS REPORT MUST READ IN CONJUNCTION WITH THE ACCOMPANYING ANALYTICAL QUALIFIA[illegible]

ORDER N[illegible] PRO[illegible]

ZAPOPAN NL
PO BOX 4045

DARWIN NT 5791

DATE RECEIVED	RESULTS REQUIRED
06/06/88	ASAP

No. OF PAGES OF RESULTS	DATE REPORTED	No. OF COPIES	TOTAL No. OF SAMPLES
2	28/06/88	1	69

ER OW	SAMPLE NUMBERS	PRE-TREATMENT: DRY	CRUSH	SPLIT	PULVERISE	SIEVE	OTHER SEE REMARKS	NONE	ANALYSIS: REFER TO ANALYSIS SECTION	PREPARATION	METHOD
	6633/67,6672/705		Prep: 033						Au,Au(1),Au(2)/313		
	6633/67,6672/705								As/401		

RESULTS TO

MR ROD JOHNSON
ZAPOPAN NL
PO BOX 4045

DARWIN NT 5791

RESULTS TO

REMARKS

Z-ZAP/20

21

STATE OF SAMPLES		ANALYSIS — PREPARATION				ANALYSIS — METHOD	
ole core	WC	perchloric acid	A1	cold acid	CA	atomic absorbtion	AAS
lit core	SC	hydrochloric acid	A2	specific sulphide	SS	x-ray fluorescence	XRF
tting	CU	nitric acid	A3	other mixed acids	Ms	spectrophotometry	SPEC
ck	Ro	aqua regia	A4	alkaline attack	AA	colorimetry	COL
il	SO	nitric-perchloric	A5	volatilization	VO	chromatography	CHR
lp	PU	HF mixture	A6	ignition	IG	titration	TTN
ter	WA	HF under pressure	A7	pressed powder (XRF)	PP	other chemical means	CHEM
sue	TI	fusion	A8	glass fusion (XRF)	GF	miscellaneous	MISC
eam sediment	SS					fluorescence	FLUOR
evy mineral	HM					inductively coupled plasma	ICP

AUTHORISED OFFICER

ANALABS

A Division of Macdonald Hamilton & Co. Ltd.

ANALYTICAL DATA

RECEIVED

SAMPLE PREFIX	REPORT NUMBER	REPORT DATE	CLIENT ORDER No.	PAGE
	247.0.14.02531	28/06/88		2 OF

TUBE No.	SAMPLE No.	As	Au	Au(1)	Au(2)		Hole No.	Depth		
1	[illegible]	4	0.005				ZAP 20	130-132		
2	[illegible]	25	<0.005					132-134		
3	[illegible]	5	<0.005					134-136		
4	[illegible]	<2	<0.005					136-138		
5	6662	20	0.009					138-140		
6	6663	15	0.075					140-142		
7	6664	15	0.010					142-144		
8	6665	20	<0.005					144-146		
9	6666	<2	<0.005					146-148		
10	6667	<2	<0.005					148-149.90		
11	6672	90	<0.005				ZAP 21	8-10m		
12	6673	160	<0.005					10-12m		
13	[illegible]	85	<0.005					12-14m		
14	6675	260	0.010					14-16m		
15	[illegible]	60	<0.005		<0.005			16-18m		
16	6677	85	<0.005					18-20m		
17	6678	70	<0.005					20-22m		
18	[illegible]	180	0.013					22-24m		
19	6680	600	0.015					24-26m		
20	6681	1200	0.009					26-28m		
21	6682	85	0.319	0.294				28-30m		
22	6683	90	0.069					30-32m		
23	6684	110	0.010					32-34m		
24	6685	90	0.015					34-36m		
25	6686	45	<0.005					36-38m		

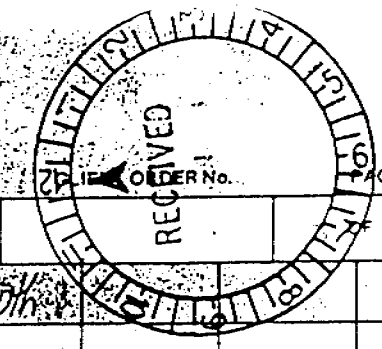
Results in ppm unless otherwise specified
T = element present, but concentration too low to measure
X = element concentration is below detection limit
— = element not determined

AUTHORISED OFFICER

ANALABS

A Division of Macdonald Hamilton & Co. Pty. Ltd.

ANALYTICAL DATA



SAMPLE PREFIX | REPORT NUMBER | REPORT DATE | FILE / ORDER No. | PAGE

		247.0.14.02531	28/06/88						
TUBE No.	SAMPLE No.	As	Au	Au(1)	Au(2)	Hole No.	Depth		
1	[illegible]	70	0.134	-	-	ZAP-21	38 - 40m		
2	[illegible]	30	0.022	-	-		40 - 42m		
3	[illegible]	50	0.011	-	-		42 - 44m		
4	[illegible]	65	0.010	-	-		44 - 46m		
5	[illegible]	50	0.009	-	-		46 - 48m		
6	[illegible]	50	0.005	-	-		48 - 50m		
7	[illegible]	80	0.008	-	-		50 - 52m		
8	[illegible]	230	0.016	-	-		52 - 54m		
9	[illegible]	1100	1.050	0.961	0.971		54 - 56m		
10	[illegible]	970	0.076	-	0.091		56 - 58m		
11	[illegible]	190	0.031	-	-		58 - 60m		
12	[illegible]	140	0.035	-	-		60 - 62m		
13	[illegible]	110	0.015	-	-		62 - 64m		
14	[illegible]	170	0.016	-	-		64 - 66m		
15	[illegible]	300	0.015	-	-		66 - 68m		
16	[illegible]	140	0.023	-	0.029		68 - 70m		
17	[illegible]	70	0.009	-	-		70 - 72m		
18	[illegible]	120	0.012	-	-		72 - 74m		
19	[illegible]	120	0.019	-	-		74 - 75m		
20									
21									
22									
23	DETECTION	2	0.005	0.005	0.005				
24	UNITS	PPM	PPM	PPM	PPM				
25	METHOD	401	313	313	313				

Results in ppm unless otherwise specified.
T = element present; but concentration too low to measure
X = element concentration is below detection limit
— = element not determined

AUTHORISED OFFICER

ANALABS

A division of Macdonald Hamilton & Co. Pty. Ltd.
Phone(09) 458 7999 — 52 Murray Road, Welshpool, W.A. 6101 — Telex AA92560

RECEIVED 14 JUN 1988

ANALYTICAL REPORT No. 247.0.14.0[illegible]3

THIS REPORT MUST READ IN CONJUNCTION WITH THE ACCOMPANYING ANALYTICAL DATA

ZAPOPAN NL
PO BOX 4045

DARWIN NT 5791

ORDER No.	PROJECT
RM 78893	Z. ZAP 21

DATE RECEIVED	RESULTS REQUIRED
10/06/88	ASAP

No. OF PAGES OF RESULTS	DATE REPORTED	No. OF COPIES	TOTAL No. OF SAMPLES
2	22/06/88	1	25

	PRE-TREATMENT								ANALYSIS		
SAMPLE NUMBERS	DRY	CRUSH	SPLIT	PULVERISE	SIEVE	OTHER SEE REMARKS	NONE	REFER TO ANALYSIS SECTION	PREPARATION	METHOD
6792/816	DC Prep: 033							Au,Au(1),Au(2)/313		
6792/816	DC							As/401		
6792/816	DC							As/404		

RESULTS TO

MR ROD JOHNSON
ZAPOPAN NL
PO BOX 4045

DARWIN NT 5791

RESULTS TO

REMARKS

Z-ZAP 21

STATE OF SAMPLES		ANALYSIS — PREPARATION				ANALYSIS — METHOD	
core	WC	perchloric acid	A1	cold acid	CA	atomic absorbtion	AAS
core	SC	hydrochloric acid	A2	specific sulphide	SS	x-ray fluorescence	XRF
g	CU	nitric acid	A3	other mixed acids	Ma	spectrophotometry	SPEC
	Ro	aqua regia	A4	alkaline attack	AA	colorimetry	COL
	SO	nitric-perchloric	A5	volatilization	VO	chromatography	CHR
	PU	HF mixture	A6	ignition	IG	titration	TTN
	WA	HF under pressure	A7	pressed powder (XRF)	PP	other chemical means	CHEM
	TI	fusion	A8	glass fusion (XRF)	GF	miscellaneous	MISC
sediment	SS					fluorescence	FLUOR
mineral	HM					inductively coupled plasma	ICP

AUTHORISED OFFICER

ANALABS

A Division of Macdonald Hamilton & Co. Pty. Ltd.

ANALYTICAL DATA

SAMPLE PREFIX	REPORT NUMBER	REPORT DATE	CLIENT ORDER No.	PAGE
	247.0.14.02543	22/06/88	RM 72893	1 OF

RECEIVED 1 JUN 1988

TUBE No.	SAMPLE No.	As	As	Au	Au(1)	Au(2)	Hole No.	Depth		
1	6792	200	–	0.073	–	–	ZZAP 21	75-76		
2	6793	25	–	0.009	–	–		76-78		
3	6794	25	–	0.010	–	–		78-80		
4	6795	>2500	0.38	0.496	–	–		80-82		
5	6796	80	–	0.023	–	–		82-84		
6	6797	160	–	0.340	–	–		84-86		
7	6798	40	–	0.100	–	–		86-88		
8	6799	550	–	0.785	–	1.126		88-90		
9	6800	810	–	0.139	–	–		90-92		
10	6801	85	–	0.048	–	–		92-94		
11	6802	1150	–	22.300	26.400	25.900		94-96		
12	6803	1300	–	0.306	–	–		96-98		
13	6804	45	–	0.075	–	–		98-99		
14	6805	>2500	1.90	2.283	–	1.875		99-100		
15	6806	25	–	0.079	–	–		100-102		
16	6807	250	–	0.614	0.633	0.277		102-104		
17	6808	65	–	0.743	0.564	0.236		104-106		
18	6809	35	–	0.032	–	–		106-108		
19	6810	770	–	0.125	–	–		108-110		
20	6811	50	–	0.033	–	–		110-112		
21	6812	15	–	0.124	–	–		112-114		
22	6813	6	–	0.184	–	0.228		114-116		
23	6814	65	–	0.049	–	–		116-118		
24	6815	15	–	0.112	–	–		118-120		
25	6816	20	–	0.015	–	–		120-122		

Results in ppm unless otherwise specified
T = element present but concentration too low to measure
X = element concentration is below detection limit
— = element not determined

AUTHORISED OFFICER

ANALABS

A Division of Macdonald Hamilton & Co. Pty. Ltd.

ANALYTICAL DATA

RECEIVED 22 JUN 1988

SAMPLE PREFIX	REPORT NUMBER	REPORT DATE	CLIENT ORDER No.	PAGE
	247.0.14.02543	22/06/88	RM 78[illegible]3	2

E	SAMPLE No.	As	As	Au	Au(1)	Au(2)				
1										
2										
4										
5										
8										
9										
1										
13										
16										
18										
20										
21										
2	DETECTION	2	0.01	0.005	0.005	0.005				
23	UNITS	PPM	%	PPM	PPM	PPM				
	METHOD	401	404	313	313	313				
25										

Results in ppm unless otherwise specified
T = element present; but concentration too low to measure
X = element concentration is below detection limit
— = element not determined

AUTHORISED OFFICER

ANALABS

A division of MacDonald Hamilton & Co. Pty. Ltd. (Inc NSW)

(089) 84 3849 | Cnr Coonawarra & Mataram Rds, Winnellie | Fax: (089) 84 3964

ANALYTICAL REPORT No. 247 0 14 02558

THIS REPORT MUST BE READ IN CONJUNCTION WITH THE ACCOMPANYING ANALYTICAL DATA

INVOICE TO:

ZAPOPAN NL
PO BOX 4045

DARWIN NT 0801

ORDER No.: RM 708854

PROJECT:

DATE RECEIVED: 14/06/88

RESULTS REQUIRED: ASAP

No. OF PAGES OF RESULTS	DATE REPORTED	No. OF COPIES	TOTAL No. OF SAMPLES
2	30/06/88	1	26

SAMPLE NUMBERS	SAMPLE DESCRIPTION	ELEMENT/METHOD
6818/6843	CO Prep: 833	Au,Au(1),Au(2)/313
6918/6843	CO	As/481

RESULTS TO:

MR ROD JOHNSON
ZAPOPAN NL
PO BOX 4045

DARWIN NT 0801

RESULTS TO:

RESULTS TO:

REMARKS

Z-ZAP 21

1/2 CORES

AUTHORISED OFFICER

ANALABS

A Division of Macdonald Hamilton & Co. Pty. Ltd.

ANALYTICAL DATA

SAMPLE PREFIX	REPORT NUMBER	REPORT DATE	CLIENT ORDER No.	PAGE
	247.0.14.02558	15/08/88	RM 708894	1 OF 2

TUBE No.	SAMPLE No.	As	As	Au	Au(1)	Au(2)		hole	depth.	
1	6818	35	-	0.056	-	-		2-ZAP21	122-124m	
2	6819	9	-	0.016	-	0.018			124-126m	
3	6820	15	-	<0.005	-	-			126-128m	
4	6821	10	-	<0.005	-	-			128-130m	
5	6822	10	-	0.016	-	-			130-132m	
6	6823	20	-	0.010	-	-			132-134m	
7	6824	8	-	<0.005	-	-			134-136m	
8	6825	25	-	<0.005	-	-			136-138m	
9	6826	3	-	<0.005	-	-			138-140m	
10	6827	15	-	<0.005	-	-			140-142m	
11	6828	35	-	<0.005	-	-			142-144m	
12	6829	8	-	<0.005	-	-			144-146m	
13	6830	80	-	<0.005	-	-			146-148m	
14	6831	25	-	<0.005	-	-			148-150m	
15	6832	<2	-	<0.005	-	-			150-152m	
16	6833	60	-	0.012	-	-			152-154m	
17	6834	90	-	<0.005	-	-			154-156m	
18	6835	15	-	<0.005	-	-			156-158m	
19	6836	85	-	<0.005	-	-			158-160m	
20	6837	65	-	<0.005	-	-			160-162m	
21	6838	30	-	<0.005	-	0.009			162-164m	
22	6839	40	-	<0.005	-	-			164-166m	

ANALABS

A Division of Macdonald Hamilton & Co. Pty. Ltd.

ANALYTICAL DATA

SAMPLE PREFIX	REPORT NUMBER	REPORT DATE	CLIENT ORDER No.	PAGE
	247.0.14.02558	15/08/88	RM 708894	2 OF 2

TUBE No	SAMPLE No.	As	As	Au	Au(1)	Au(2)				
1										
2										
3										
4										
5										
6										
7										
8										
9										
10										
11										
12										
13										
14										
15										
16										
17										
18										
19										
20										
21										
22										
23	DETECTION	2	0.01	0.005	0.005	0.005				
24	UNITS	PPM	%	PPM	PPM	PPM				
25	METHOD	401	404	313	313	313				

Results in ppm unless otherwise specified
T = element present; but concentration too low to measure
X = element concentration is below detection limit
— = element not determined

AUTHORISED OFFICER

ANALABS

A division of Macdonald Hamilton & Co. Pty. Ltd.

52 Murray Road, Welshpool, W.A. 6101

Phone(09) 458 7999

Telex AA62260

ANALYTICAL REPORT No. 247.0.14.0[illegible]

THIS REPORT MUST READ IN CONJUNCTION WITH THE ACCOMPANYING ANALYTICAL DATA

ORDER NO. | PROJECT

ZAPOPAN NL.
PO BOX 4045

DARWIN NT 0801

DATE RECEIVED	RESULTS REQUIRED
17/06/88	ASAP

No. OF PAGES OF RESULTS	DATE REPORTED	No. OF COPIES	TOTAL No. OF SAMPLES
2	02/01/89	1	32

SAMPLE NUMBERS	PRE-TREATMENT: DRY	CRUSH	SPLIT	PULVERISE	SIEVE	OTHER SEE REMARKS	NONE	ANALYSIS: REFER TO ANALYSIS SECTION	PREPARATION	METHOD
6817,6844/54,6901/20	DC Prep: 033							Au,Au(1),Au(2)/313		
6817,6844/54,6901/20	DC							As/401		

REMARKS

RESULTS TO

MR ROD JOHNSON
ZAPOPAN NL.
PO BOX 4045

DARWIN NT 0801

2-ZAP 21

RESULTS TO

STATE OF SAMPLES

hole core	WC
split core	SC
cutting	CU
rock	Ro
soil	SO
pulp	PU
water	WA
tissue	TI
stream sediment	SS
heavy mineral	HM

ANALYSIS — PREPARATION

perchloric acid	A1	cold acid	CA
hydrochloric acid	A2	specific sulphide	SS
nitric acid	A3	other mixed acids	Ma
aqua regia	A4	alkaline attack	AA
nitric-perchloric	A5	volatilization	VO
HF mixture	A6	ignition	IG
HF under pressure	A7	pressed powder (XRF)	PP
fusion	A8	glass fusion (XRF)	GF

ANALYSIS — METHOD

atomic absorbtion	AAS
x-ray fluorescence	XRF
spectrophotometry	SPEC
colorimetry	COL
chromatography	CHR
titration	TTN
other chemical means	CHEM
miscellaneous	MISC
fluorescence	FLUOR
inductively coupled plasma	ICP

AUTHORISED OFFICER

ANALABS

A Division of Macdonald Hamilton & Co. Pty. Ltd.

ANALYTICAL DATA

SAMPLE PREFIX	REPORT NUMBER	REPORT DATE	CLIENT ORDER No.	PAGE
	247.0.14.02569	02/01/83		1 of 8

TUBE No.	SAMPLE No.	As	Au	Au(1)	Au(2)					Depth
1							Hole 28			
2	6844	70	0.006	-	-		ZAP 21			166-168
3	6845	<2	<0.005	-	-					168-170
4	6846	<2	<0.005	-	-					170-172
5	6847	2	<0.005	<0.005	-					172-174
6	6848	10	<0.005	-	-					174-176
7	6849	8	<0.005	<0.005	-					176-178
8	6850	50	<0.005	-	-					178-180
9	6851	<2	<0.005	-	-					180-182
10	6852	<2	<0.005	-	-					182-184
11	6853	<2	<0.005	-	-					184-186
12	6854	15	<0.005		-					186-188

ANALABS

A Division of Macdonald Hamilton & Co. Pty. Ltd.

ANALYTICAL DATA

SAMPLE PREFIX	REPORT NUMBER	REPORT DATE	CLIENT ORDER No.	PAGE
	247.0.14.02569	02/01/88		OF

RECEIVED 6 JUL 1988

18										
19										
20										
21										
22										
23	DETECTION	2	0.005	0.005	0.005					
24	UNITS	PPM	PPM	PPM	PPM					
25	METHOD	401	313	313	313					

Results in ppm unless otherwise specified
T = element present, but concentration too low to measure
X = element concentration is below detection limit
— = element not determined

AUTHORISED OFFICER

CORE RECOVERY LOG

PROSPECT/MINE: ZAPOPAN HOLE NO: Z-ZAP 21

Logged By: ..... Sheet: ...../.....

Depth (m)		Interval	Recovery	Depth (m)		Interval	Recovery
From	To	(m)	(m)	From	To	(m)	(m)
75.0	76.40	1.40	1.27	146.15	146.55	0.40	0.36
76.40	77.40	1.0	0.97	146.55	148.60	0.95	0.77
77.40	79.60	2.20	1.97	148.60	149.70	1.10	0.78
79.60	81.0	1.40	1.26	149.70	151.40	1.70	1.36
81.0	83.30	2.30	2.13	151.40	152.80	1.40	1.32
83.30	85.50	2.20	2.17	152.80	155.20	2.40	1.98
85.50	87.0	1.50	1.44	155.20	158.20	3.0	1.49
87.0	88.60	1.6	1.43	158.20	161.30	3.10	3.0
88.60	90.00	1.40	1.39	161.30	162.70	1.40	1.32
90.00	91.40	1.40	1.26	162.70	163.60	0.90	0.90
91.40	92.0	0.60	0.42	163.60	166.80	3.20	
92.0	93.0	1.0	0.43	166.80	169.50	2.10	2.07
93.0	94.10	1.10	0.98	169.50	171.0	1.50	1.51
94.10	95.90	1.80	1.78	171.0	173.60	2.60	2.38
95.90	97.55	1.65	1.65	173.60	174.50	0.90	0.16
97.55	98.40	0.95	0.74	174.50	176.30	1.80	1.80
98.40	99.40	1.0	0.74	176.30	177.20	0.90	0.81
99.40	101.40	2.0	1.97	177.20	178.20	1.0	0.46
101.40	102.05	0.65	0.66	178.20	180.80	2.60	2.29
102.05	103.15	1.10	1.08	180.80	181.60	1.80	1.79
103.15	104.50	1.35	1.31	181.60	182.50	0.90	0.49
104.50	105.75	1.25	1.22	182.50	184.40	1.90	0.95
105.75	108.85	3.10	2.97	184.40	185.30	0.90	0.89
108.85	111.10	2.35	2.19	185.30	186.70	1.40	0.75
111.10	114.10	3.0	2.98	186.70	187.30	0.60	0.49
114.10	116.20	2.10	1.98	187.30	187.80	0.50	0.36
116.20	117.60	1.40	1.15				
117.60	118.60	1.0	0.93				
118.60	119.80	1.20	0.56				
119.80	120.80	1.0	0.49				
120.80	121.60	0.80	0.48				
121.60	122.60	1.0	1.0				
122.60	125.60	3.0	2.82				
125.60	126.70	1.10	1.04				
126.70	129.10	2.40	2.29				
129.10	131.50	2.40	2.34				
131.50	133.40	1.90	1.68				
133.40	135.0	1.60	1.55				
135.0	136.60	1.60	1.46				
136.60	137.50	0.90	0.90				
137.50	138.70	1.20	1.16				
138.70	140.70	2.0	1.79				
140.70	141.20	0.50	0.51				
141.20	141.50	0.30	0.23				
141.50	142.30	0.80	0.52				
142.30	143.35	1.05	0.72				
143.35	143.80	0.45	0.37				
143.80	145.20	1.40	1.26				
145.20	145.90	0.70	0.64				
145.90	147.15	0.55	0.41				

SHEET 1 of 3
LOGGED BY D.S.H.

CORELOGGING DATA

AREA / LEASE ..... PROSPECT ZAPOPAN ..... HOLE No Z-ZAP 21

DIST. FROM COLLAR	BREAKS / METRE	RECOVERY	R.Q.D.	SPEC. GRAVITY	MAG. SUSCEPTILITY	ANGLE TO LONG CORE AXIS S_o	ANGLE TO LONG CORE AXIS S_1	STRUCTURES	LITHOLOGY	milky qtz.	sugary qtz.	f. gr. qtz.	musc.	biot.	garnet	chl.	act.	cbt.	tourm.	py.	po.	hemt.	base metal su.	aspy.	Sericite	SAMPLE No.	ASSAY RSLTS. Au	ASSAY RSLTS. As	GEOLOGICAL COMMENTS (mainly texture)
78																													
79																											0.10		Hem-rich b.i.f.
								b.i.f.				30			5	50	4			5		2							
80										2		10		5	3	20	5			3							0.50		
81								b.i.f.		8		10			5	30				4				3					
82														5	2	10				2							0.023		
83												2		tr		20	tr												
84												4				20	tr								10		0.360		
85								b.i.f.				10			8	20	5			5				1	40				sericite tuff.
86												5			10	30				2					30		0.100		
87								b.i.f.		tr	5	5			5	40				2					5				
88												2		tr	2	50	2								10		1.0		
89										1	10				4	16				5									
90								Qtz		6	<1				1	6				3				<1			0.139		Qtz / pyr vein.
91															1					<1									
92								b.i.f.		2	3				tr	5				2							0.048		
93														tr	3														
94										2		3			2	6	1			2							0.0		
95								b.i.f. Qtz		35	20				4	6				10					4		24.0		euhedral asp within Qtz vein.
96																													

LITHOLOGICAL LEGEND:

Sem	Mudstone	tAv	Ashstone	Su	Massive Sulphide		Veining > 30%
eSem	Carbonaceous Mudstone	Sct	Chert	ss	Gossan		Tourmaline > 5%
Ssi	Siltstone	Slf	B.I.F.	Mh	Hornfels		Arsenopyrite > 0.5%
Sst	Sandstone	eaSlf	B.I.F. Carbonate > 15%	MBd	Metadolerite		Base metal sulphides > 5%
Sgw	Greywacke	chSlf	B.I.F. Chlorite > 40%	Af	Felsite	py	Pyrite > 5%
Scg	Conglomerate	actSlf	B.I.F. Actinolite > 40%	Agr	Granite	po	Iron sulphides > 2%
Sco	Carbonate	micSlf	Micas > 30% (commonly includes garnets)		Brecciated rock		

SHEET 2 of 3

LOGGED BY D.S.H.

CORELOGGING DATA

AREA / LEASE ..... PROSPECT ZAPOPAN ..... HOLE No Z-ZAP 21

DIST. FROM COLLAR	BREAKS / METRE	RECOVERY	R.Q.D.	SPEC. GRAVITY	MAG. SUSCEPTILITY	ANGLE TO LONG CORE AXIS S_o	ANGLE TO LONG CORE AXIS S_1	STRUCTURES	LITHOLOGY	milky qtz.	sugary qtz.	f. gr. qtz.	musc.	biot.	garnet	chl.	act.	cbt.	tourm.	py.	po.	hemt.	base metal su.	aspy.			SAMPLE No.	ASSAY RSLTS Au	ASSAY RSLTS As	GEOLOGICAL COMMENTS (mainly texture)
96								qtz b.i.f.		2	6	1			1	20	2			4				2				0.306		
97								qtz		14	2				tr					1										
98								qtz.		20	4			tr	<1													0.035		
99								b.i.f.		10	5	2		2	1	15	5			20				5				2.0		Basal b.i.f.
100															tr	4				1								0.070		
101											½				tr	2	tr			2										
102										10	1					1		2		tr						1		0.60		
103										10		1		1	tr	1				½										
104								veining		5	½	2			<½	tr		1		tr										
105								qtz		6						tr					1					½		0.50		
106										10					1	5				2						tr		0.032		
107										10		5		4		18				2				tr		½				
108												5			tr	25				1										
109								qtz			2	2		tr		5	1			1				tr				0.125		
110											4			tr	1	10	tr			½								0.033		
111															tr	12			1	tr										
112											1	½			½	5				1								0.124		
113											½	2				24				tr										
114																														

LITHOLOGICAL LEGEND:

Ssm	Mudstone	tAv	Ashstone	Su	Massive Sulphide		Veining > 30%
cSsm	Carbonaceous Mudstone	Sct	Chert	go	Gossan		Tourmaline > 5%
Ssl	Siltstone	Slf	B.I.F.	Mh	Hornfels		Arsenopyrite > 0.5%
Sst	Sandstone	caSlf	B.I.F. Carbonate > 15%	MBd	Metadolerite		Base metal sulphides > 5%
Sgw	Greywacke	chSlf	B.I.F. Chlorite > 40%	Af	Felsite	py	Pyrite > 5%
Scg	Conglomerate	actSlf	B.I.F. Actinolite > 40%	Agr	Granite	po	Iron sulphides > 2%
Sdc	Carbonate	micSlf	Micas > 30% (equivalent includes garnets)		Brecciated rock		

SHEET 3 of 3

LOGGED BY: D.S.H.

CORELOGGING DATA

AREA / LEASE ..... PROSPECT ZAPOPAN ..... HOLE No. Z-ZAP 21

DIST. FROM COLLAR	BREAKS / METRE	RECOVERY	R.Q.D.	SPEC. GRAVITY	MAG. SUSCEPTILITY	ANGLE TO LONG CORE AXIS So	ANGLE TO LONG CORE AXIS Si	STRUCTURES	LITHOLOGY	ESTIMATED MINERAL PERCENTAGES milky qtz.	sugary qtz.	f. gr. qtz.	musc.	biot.	garnet	chl.	act.	cbt.	tourm.	py.	po.	hemt.	base metal su.	aspy.			SAMPLE No.	ASSAY RSLTS Au	ASSAY RSLTS As	GEOLOGICAL COMMENTS (mainly texture)
114										20		2				2		1		tr								0.18		
115								Qtz		2				2		5				tr								0		
116																6	4			½										
117								Qtz	SS.SS	2								1										0.04		? crush zone.
118											1	1		1	tr	½		2		tr								0.112		
119										2						tr		2										0		
120																														

LITHOLOGICAL LEGEND:

Ssm	Mudstone	tAv	Ashstone	Su	Massive Sulphide		Veining > 30%
cSsm	Carbonaceous Mudstone	Sct	Chert	go	Gossan		Tourmaline > 5%
Ssl	Siltstone	Slf	B.I.F.	Mh	Hornfels		Arsenopyrite > 0.5%
Sst	Sandstone	caSlf	B.I.F. Carbonate > 15%	MBd	Metadolerite		Base metal sulphides > 5%
Sgw	Greywacke	chSlf	B.I.F. Chlorite > 40%	Af	Felsite	py	Pyrite > 5%
Scg	Conglomerate	actSlf	B.I.F. Actinolite > 40%	Agr	Granite	po	Iron sulphides > 2%
Sdc	Carbonate	micSlf	Micas > 30% (commonly includes garnets)		Brecciated rock		

PERCUSSION DRILL LOG

PROSPECT/MINE: ZAPOPAN HOLE NO: Z-ZAP-21

Collar: 6.0m E ..... N ..... RL

Azimuth: 032° °~~Mag~~/grid Inclination: -70°

Date Drilled: 4/6/88 Logged By: D.J.H. Sheet: 1/2

Depth (m) From	Depth (m) To	Sample No.	Description Lithology	Qtz	Py	Apy	Au
0	2		Tailings. Sands				
2	4		Weathered pale grey coarse tuff <10% Qtz. Slst. clay rich	✓			
4	6		<10% weathered green chert 30% pale grey tuff 30% hard silicic tuff + slst				
6	8		10% hard tuff 60% pale green chert. Slst				
8	10		As above				
10	12		40% pale grey tuff. Weathered clays. Slst. V. minor hard silicic tuff				
12	14		70% coarse tuff. Dk slst clays				
14	16		Slst: minor clays				
16	18		as above				
18	20		Dk slst + minor hard tuffs clay rich				
20	22		as above				
22	24		40% Qtz. Coarse green ctl tuff (50%) <10% Slst. weathered clay-rich	✓			
24	26		80% coarse green tuff <5% Qtz. >15% Slst: clays	✓			
26	28		20% Qtz (milky). Hard green coarse tuff. Minor apy within Qtz.	✓	✓		
WATER GEL 28	30		Pale grey coarse spar tuff Dk green tuff. hi clays				
30	32		Dk grey slst. minor highly micaceous slst: ? pelite				
32	34		80% milky Qtz + apy + asp: Minor tuffs + Slst	✓	✓	✓	
34	36		50% milky Qtz. minor apy + asp. Dk slst. 30% mica rich slst	✓	✓	✓	
36	38		as above				
36	40		as above				
40	42		2% Dk slst. Mica-rich slst				
42	44		10% milky Qtz. Slst	✓			
44	46		70% mica-rich slst 50% milky Qtz: Pale grey spar tuff. 20% mica slst. dk slst + minor apy	✓	✓	✓	

1 asp within Qtz

PERCUSSION DRILL LOG

PROSPECT/MINE: ..... HOLE NO: 2-ZAP 21

Collar: ..... E ..... N ..... RL

Azimuth: ..... °Mag/grid Inclination: .....°

Date Drilled: ..... Logged By: D.D.H. Sheet: 2/2

Depth (m) From	Depth (m) To	Sample No.	Description Lithology	Qtz	Py	Apy	Au
46	48		Minor pale green chert. 60% Qtz. Dk. Sltst	✓			
48	50		<10% Qtz. 40% pale silicic hff Sltst	✓			
50	52		<60% Qtz. 30% pale pink/green chert >10% coarse ch. hff. Minor Sltst	✓			
52	54		10% green chert + coarse dk green hff. <20% Qtz + py ± asp. V. minor Sltst	✓	✓	✓	
54	56		60% Sltst. 30% pink/green cherts. Minor hff. <10% Qtz	✓			
56	58		Dk Sltst. V. minor qtz	✓			
58	60		10% milky Qtz. 10% green hff. + Sltst				
60	62		40% green chert 20% Qtz: minor scattered asp + galena + py within Qtz. as above	✓	✓		
62	64		as above				
64	66		40% green chert. 20% Qtz. 60% pale silicic hff. 25% green chert. minor Qtz + py ± asp	✓	✓	✓	
68	70		60% hard dk silicic hff. Sltst. 20% pink/green chert <10% milky Qtz.	✓			
70	72		15% green chert. <10% Qtz. Sltst with py. 60% hard dk silicic hff	✓			
72	74		as above	✓			
74	75		80% pink/green chert <10% Qtz. 10% hard silicic hff	✓			

DRILLHOLE LOG

Drillhole No. Z-ZAP21
Page 1 of 28

PROJECT: ZAPOPAN
DRILL: RIG 8
COORDINATES:

COMPANY: ROCKDRIL
COMMENCED: 5/6/88
ELEVATION:

CONTRACTOR:
COMPLETED: 12/6/88
AZIMUTH: 032° GRID

DECLINATION: -70°
LOGGED BY: D.J.H

DEPTH m	RUN m	INTER-VAL m	RECOV-ERY m	%	SURVEY	DESCRIPTION	STRUCT-URE
75	75.0					75.12 2cm qtz band. v. fine silicic pink METATUFF.	
76	76.40	1.40	1.27			76.31 grades into dk fine grained METASILTSTONE.	
77	77.40	1.0	097			76.95 Incoming blank specks within banded tuff. ? Tourmaline Foliation 35° to core Bedding 50° to core. 77.49 grades into dk grey METASILTSTONE bedded up to cm bands.	
78						78.17 - 78.40 dk green tuff : with dk specks defining a foliation 30° to core. bedding 50° to core.	
79	79.60	2.20	197				

DEPTH m	SAMPLE NUMBER	INTER-VAL m	WIDTH m	ANALYSES
75		75		
76	6792	76	1	
78	6793	78	2	

GEONORTH

DRILLHOLE LOG

Drillhole No. Z-~~ZAP~~21
Page 2 of 28

PROJECT: ZAPOPAN
COMPANY:
CONTRACTOR:
DRILL:
COMMENCED:
COMPLETED:
COORDINATES:
ELEVATION:
AZIMUTH:
DECLINATION:
LOGGED BY: D.S.H.

DEPTH m	RUN m	INTERVAL m	RECOVERY m	%	SURVEY	DESCRIPTION	STRUCTURE
79							
	79.60	2.20	1.97			79.60 - 79.87 mm banded basaltic, Chl, silicic, mica & buff mineral. Eroded vugs. Sulphides. - Banded formation x-cut by two silicic veins.	
80						METASILTSTONE.	
						80.71 - 8cm silicic band in bedding plane.	
81	81.0	1.40	1.26			81.02 - 81.10 Silicic bands 70° to axe.	
						81.39 - 81.49. Silicic mm banded Bar. euhedral asp (20%) + pyr bands. Chl rich. minor garnets at base	
						Silicic bands @ 81.59, 81.67 and 81.71	
82							
						82.47 Qtz / garnet vein 4cm.	
						Dk grey METASILTSTONE.	
83	83.30	2.30	2.13				

DEPTH m	SAMPLE NUMBER	INTERVAL m	WIDTH m	ANALYSES
	6794	80	2.	
	6795	82	2	

GEONORTH

DRILLHOLE LOG

Drillhole No. Z-ZAP 21
Page 3 of 28

PROJECT: ZAPOPAN
COMPANY:
CONTRACTOR:
DRILL:
COMMENCED:
COMPLETED:
COORDINATES:
ELEVATION:
AZIMUTH:
DECLINATION:
LOGGED BY: D. J. H.

DEPTH m	RUN m	INTER-VAL m	RECOV-ERY m	%	SURVEY	DESCRIPTION	STRUCT-URE	DEPTH m	SAMPLE NUMBER	INTER-VAL m	WIDTH m	ANALYSES
83	83.30	2.30	2.13									
						progressively more silicic, finely banded on mm scale. Chl / silicic / dk / light tuff coarse & fine bedded 45° to core.						
84									6796	84	2	
85						85.13. grades into METASILTSTONE						
	85.50	2.20	2.17			85.41 - 85.52. Qtz / chl, pyr zone + weathered garnets.						
						85.75 - 85.83 Silicic band ⊥ to core. Pyr-rich minor 3mm euhedral esp grains. Abundant garnet in 15 cm below.						
86									6797	86	2	
						86.17 4 cm wide pyr-rich silicic band 45° to core.						
						86.42 - 87.18. Chl-rich altered sltst. deformed bands with insipient foliation 10° to bedding.						
87	87.0	1.50	1.44									

GEONORTH

DRILLHOLE LOG

Drillhole No. Z-ZAP21
Page 4 of 28

PROJECT: ZAPOPAN | COMPANY: | CONTRACTOR:

DRILL: | COMMENCED: | COMPLETED:

COORDINATES: | ELEVATION: | AZIMUTH: | DECLINATION:

LOGGED BY: D.S.H

DEPTH	RUN m	INTER-VAL m	RECOV-ERY m	%	SURVEY	DESCRIPTION	STRUCT-URE	DEPTH m	SAMPLE NUMBER	INTER-VAL m	WIDTH m	ANALYSES
87												
	87.0	1.50	1.44									
						87.36 4 cm siliceous band - eroded sulphides chl/garnet-rich. also @ 87.96 (1½ cm) - and						
						88.70 2cm.						
88									6798	88	2	
	88.60	1.6	1.43			dk grey - METABASALTSTONE.						
89												
90	9.00	1.40	1.39						6799	90	2	0.785 1.126
						90.23 - 90.26. Silicic band well pitted - ? weathered sulphides.						
						Bedded dk grey METABASALTSTONE with chl/pyr bands + garnet bands + garnet dusted.						
						90.67-90.70 silicic - chl. band containing pyr.						
91	91.40	1.40	1.26.									

GEONORTH

DRILLHOLE LOG

Drillhole No. Z-ZAP21
Page 5 of 28

PROJECT: ZAPOPAN
COMPANY:
CONTRACTOR:
DRILL:
COMMENCED:
COMPLETED:
COORDINATES:
ELEVATION:
AZIMUTH:
DECLINATION:
LOGGED BY: D.J.H.

DEPTH m	RUN m	INTER-VAL m	RECOV-ERY m	%	SURVEY	DESCRIPTION	STRUCT-URE	DEPTH m	SAMPLE NUMBER	INTER-VAL m	WIDTH m	ANALYSES
91												
	91.40	1.40	1.26									
92	92.0	0.60	0.42									
									6800	92	2	0.139
						92.41 CO_3 vein 2cm ?calcite						
93	93.0	1.0	0.43			Dk grey SHETASILTSTONE bedded + garnet dusted - leucocratic bedding and green chl horizons 1-4cm wide 40cm spacing (approx).	BADLY BROKEN CORE					
94	94.10	1.10	0.98						6801	94	2	0.048
95	95.90	1.80	1.78									

GEONORTH

DRILLHOLE LOG

Drillhole No. Z-ZAP21
Page 6 of 28

PROJECT: ZAPOPAN
COMPANY:
CONTRACTOR:
DRILL:
COMMENCED:
COMPLETED:
COORDINATES:
ELEVATION:
AZIMUTH:
DECLINATION:
LOGGED BY: D. S. H.

DEPTH m	RUN m	INTER-VAL m	RECOV-ERY m	%	SURVEY	DESCRIPTION	STRUCT-URE
95							
	95.90	1.80	1.78			95.34 - 95.37 Bedded silica/chert dk bands + pyr.	
						95.57 - 2cm silica/pyr zone	
						95.64 - 95.67 Qtz veh. euhedral 2-4mm asp + pyr - minor chl.	
96						Garnets a zone dipping 40° to core	
						95.81 - 96.02 Qtz band. Pyr in fractures mm wide.	
						96.18 3cm zone of silica/chl weathered vugs pyr partly infilling 1cm lenses with Qtz.	
						96.40 - 96.75 - pyr - chl. Silicic dk c pyr chl banding euhedral asp in 2-4mm xtals scattered through out.	
97						Qtz veins 97.01 - 97.16, 97.45 - 97.58 vuggy coarse pyr.	
						97.68 - 98.08 - chl - na qtz veining + silic pyr band 1cm thick @ 98.02.	
	97.55	1.65	1.65			METASEDIMENTS - foliation 30° to core	
						Chl/silicic zone 2-3 mm wide 10 cm spacing.	
98						98.56 - 98.74. Qtz band + cm size lenses along joints of pyr - chl - rich at base + garnet dusted.	
	98.40	0.95	0.74			98.80 1.6cm chl/metallic sulphide ? galena. band.	
						98.96 - 99.10 Qtz brecciated silst.	
99						pyr grains ~99m - 101m. with slight	
99	99.40	1.0	0.74				

DEPTH m	SAMPLE NUMBER	INTER-VAL m	WIDTH m	ANALYSES			
	6802	96	2	22.3	24.4	25.9	
	6803	98	2	0.306			
	6804	99	1	0.[illegible]			

GEONORTH

DRILLHOLE LOG

Drillhole No. Z-ZAP21
Page 7 of 28

PROJECT: ZAPOPAN
COMPANY:
CONTRACTOR:
DRILL:
COMMENCED:
COMPLETED:
COORDINATES:
ELEVATION:
AZIMUTH:
DECLINATION:
LOGGED BY: D.J.H.

DEPTH m	RUN m	INTER-VAL m	RECOV-ERY m	%	SURVEY	DESCRIPTION	STRUCT-URE
99						Breccia to 99.10.	
						99.15 - 5cm band a to core of Chl/garnet/silicic	
	99.40	1.0	0.74				
						99.55 - 99.71 Qtz / Chl pyr banding + veining - massive euhedral asp on - size grains. Garnets at base.	
100						99.81 - 100.11. Qtz veining - Asp banded + pyr/Chl - 2 dk mm banding for 4cm becoming massive Qtz. Silicic - Chl at base banded also at base.	
						100.96 Chl/silicic bands 1cm wide	
101							
						Dk grey METASILTSTONE.	
	101.40	2.0	1.97			minor pyr bands mm wide 30cm spacing.	
						Sparsely dusted with garnets.	
						101.84 Qtz coarse milky stringer. 2cm wide.	
102							
	102.05	0.65	0.66			102.27 - 10cm pyr banding 4cm spacing	
						102.59 - 102.62 Qtz veining pyr + dk green ? Act. mineral.	
103	103.15	1.0	1.08				

DEPTH m	SAMPLE NUMBER	INTER-VAL m	WIDTH m	ANALYSES			
	6804	99	1.				
	6805	100	1	2.28	1.93		
	6806	102	2	0.07			

GEONORTH

DRILLHOLE LOG

Drillhole No. Z-ZAP 21
Page 8 of 28

PROJECT: ZAPOPAN
DRILL:
COORDINATES:

COMPANY:
COMMENCED:
ELEVATION:

CONTRACTOR:
COMPLETED:
AZIMUTH:

DECLINATION:
LOGGED BY: D.J.H.

DEPTH	RUN m	INTER-VAL m	RECOV-ERY m	%	SURVEY	DESCRIPTION	STRUCT-URE	DEPTH m	SAMPLE NUMBER	INTER-VAL m	WIDTH m	ANALYSES		
103	103.15	1.10	1.06			103.63 - 103.68 chl zone banded leucocratic tuff boudins								
104						103.98 - 104.04 Silicic band. Py-rich in fractures.			6807	104	2	0.614	0.633	0.211
	104.50	1.35	1.31											
105						104.62 - 104.92 Silicic breccia of metasiltstone. Minor associated CO_3 5cm below as 10cm Chl-rich zone. Banded upper & lower. Leucocratic boudins. 105.03 Coarse black speck 2cm. tuff band.								
	105.75	1.25	1.22			Metasiltstone progressively more tuffaceous.								
106						105.12 - 105.21 Crush zone. Intense CO_3 veining. 105.31 11cm of qtz vein sub ∥ to core minor pink ?k-spar min. 106.05 - 106.15 Coarse bedded Chl. tuff 50° to core - progressively more silicic banding towards base			6808	106	2	0.743	0.564	0.236
107														

GEONORTH

PROJECT: ZAPOPAN | COMPANY: | CONTRACTOR: | Z-ZAP 21 Page 9 of 28

DRILL: | COMMENCED: | COMPLETED:

COORDINATES: | ELEVATION: | AZIMUTH: | DECLINATION:

LOGGED BY: D.J.H

DEPTH m	RUN m	INTERVAL m	RECOVERY m	%	SURVEY	DESCRIPTION	STRUCTURE
107						107.21 – 107.24 CO_3 veining fractured Meta-siltstone.	
						107.42 – 107.45: Silicic banded + pyr in discrete lenses. Chl. altered above/below.	
108						107.62 Chl. zone + silicic banding. 107.90 3cm. Qtz vein. Abundant pink min ?K-Spar minor asp + pyr	
	108.85	3.10	2.92			108.87: CO_3 veining intensely deformed sub // to core.	
109						109.70 – 109.73 & 109.30 – 109.32 leucocratic boudins in coarse green ?chl bands. Minor pyr & asp.	
						110.25 3cm chl. band.	
110						110.32 boudinaged leucocratic felt in chl pyr band 2 cm wide.	
						110.82: Coarse leucocratic felt band min scale in 3cm zone 50° to core.	
						CO_2 veining within dk grey METASILTSTONE both // to and ⊻ cutting core.	
111	111.10	2.35	2.19				

DEPTH m	SAMPLE NUMBER	INTERVAL m	WIDTH m	ANALYSES
108	6809	108	2	0.032
110	6810	110	2	

GEONORTH

PROJECT: ZAPOPAN | COMPANY: | CONTRACTOR:

DRILL: | COMMENCED: | COMPLETED:

COORDINATES: | ELEVATION: | AZIMUTH: | DECLINATION:

LOGGED BY: D.S.H.

DEPTH m	RUN m	INTER-VAL m	RECOV-ERY m	%	SURVEY	DESCRIPTION	STRUCT-URE	DEPTH m	SAMPLE NUMBER	INTER-VAL m	WIDTH m	ANALYSES
111	111.10	2.35	2.19									
						Dk grey METASILTSTONE.						
112									6811	112	2	
113						113.65. Chl. Fine strongly banded on mm scale silicic tuff.						
114	114.10	3.0	2.98			Tuff grades back into METASILTSTONE @ 114.10.			6812	114	2	
						114.24 - 114.31. CO_3 breccia 30mm very thin veinlets.						
						114.71 49cm of Qtz veining coarse milky brecciating Sltst. c angular fragments ?hydraulic breccia.						
115												

GEONORTH

PROJECT: ZAPOPAN.
DRILL:
COORDINATES:

COMPANY:
COMMENCED:
ELEVATION:

CONTRACTOR:
COMPLETED:
AZIMUTH:

Page 11 of 28 Z-ZAP 21

DECLINATION:
LOGGED BY: D.J.H.

DEPTH m	RUN m	INTER-VAL m	RECOV-ERY m	%	SURVEY	DESCRIPTION	STRUCT-URE	DEPTH m	SAMPLE NUMBER	INTER-VAL m	WIDTH m	ANALYSES
115												
						dk grey METASILISTONE						
116						116.14 - 116.16. Silicic zone			6813	116	2	
	116.20	2.10	1.98			116.96 - 117.07. Crush zone CO3 abundant.						
						Dk grey METASILISTONE	BADLY FRACTURED CORE					
117												
	117.60	1.40	1.15.									
118						118.78 - 118.81. Qtz milky coarse veining			6814	118	2	
	118.60	1.0	0.93.			Dk METASILISTONE						
119	119.80	1.0	0.56									

GEONORTH

PROJECT: ZAPOPAN.
DRILL:
COORDINATES:

COMPANY:
COMMENCED:
ELEVATION:

CONTRACTOR:
COMPLETED:
AZIMUTH:

DECLINATION:
LOGGED BY: D.J.H.

DEPTH m	RUN m	INTER-VAL m	RECOV-ERY m	%	SURVEY	DESCRIPTION	STRUCT-URE	DEPTH m	SAMPLE NUMBER	INTER-VAL m	WIDTH m	ANALYSES
119												
						119.61 - 120.23.						
	119.80	1.0	0.56			CO_3 mm wide veining within sltst.						
120									6815	120	2	
						120.82 - 121.11. Coarse foliated tuff 40° to core.						
	120.80	1.0	0.49									
121												
						121.11 - 121.35 CO_3 veining within sltst.						
	121.60	0.80	0.48			121.89. Qtz breccia - 4cm CO_3 veining + chl alteration above & below.						
122									6816	122	2	
						122.31 - 122.35. Banded leucocratic/ ok/pyr/chl/mm scale deformed. ~2-4 mm wide pyr lenses within banding.						
	122.60	1.0	1.0			122.83 - 122.88. Chl-rich zone 75° to core progressively more silicic sltst.						
123												

BADLY FRACTURED CORE

GEONORTH

PROJECT: ZAPOPAN | COMPANY: | CONTRACTOR: | Page 3 ZAP 21 of 28

DRILL: | COMMENCED: | COMPLETED:

COORDINATES: | ELEVATION: | AZIMUTH: | DECLINATION:

LOGGED BY: D. J. H.

DEPTH m	RUN m	INTER-VAL m	RECOV-ERY m	%	SURVEY	DESCRIPTION	STRUCT-URE
123						123·02 dk grey METABASILTSTONE	
						123·18 - 123·21 1·2cm bedded bands 70° to cor.	
						123·34 - 123·46 CO3 veining. Siltstone grades into Coarse Cl. Tuff.	
124						123·88 bedded Cl. band - foliation 85° to cor	
						124·23 grades back to dk grey METABASILTSTONE	
125							
	125·60	3·0	2·82				
						125·45 CO3 veining cm wide	
						Siltstone bedded @ 70° to cor	
126							
						126·28 11cm Cl. 2u 30c	
	126·70	1·10	1·04				
127							

DEPTH m	SAMPLE NUMBER	INTER-VAL m	WIDTH m	ANALYSES
	6818	124	2	
	6819	126	2	

GEONORTH

PROJECT: ZAPOPAN.
DRILL:
COORDINATES:

COMPANY:
COMMENCED:
ELEVATION:

CONTRACTOR:
COMPLETED:
AZIMUTH:

Page 14 of 28 Z-ZAP 21

DECLINATION:
LOGGED BY: D.J.H.

DEPTH m	RUN m	INTER-VAL m	RECOV-ERY m	%	SURVEY	DESCRIPTION	STRUCT-URE	DEPTH m	SAMPLE NUMBER	INTER-VAL m	WIDTH m	ANALYSES
127						dk grey METASILTSTONE. Coarse to fine bedded sequence, minor ppr as bands and lenses (75° to core)						
128									6820	128	2	
129	129.10	2.40	2.29			129. Ok. Intensly deformed pale green/grey chl. tuff. Coarse. Lig & dk bands in part chert-rich, becomes progressively more bedded towards base 80° to core						
130									6821	130	2	
						Dk grey METASILTSTONE. minor cal veins. Foliation 65° bedding 80°						
131	131.50	2.40	2.34.									

GEONORTH

PROJECT: ZAPOPAN | COMPANY: | CONTRACTOR:

DRILL: | COMMENCED: | COMPLETED:

COORDINATES: | ELEVATION: | AZIMUTH: | DECLINATION:

LOGGED BY: D.S.H.

DEPTH m	RUN m	INTER-VAL m	RECOV-ERY m	%	SURVEY	DESCRIPTION	STRUCT-URE	DEPTH m	SAMPLE NUMBER	INTER-VAL m	WIDTH m	ANALYSES
131												
	131.50	2.40	2.34			METASILTSTONE						
132									6822	132	2	
						132.30. 5cm band. pyr-rich. fine-grained tuff with coarse grained dk light banding abundant x-cutting CO_3 veining.						
133						METASILTSTONE						
	133.40	1.90	1.68			133.41 - 133.56 Intense CO_3 brecciation of METASILTSTONE & banded bandinged zones rich in pyr. CO_3 veining extends 34cm below into SHst.						
134									6823	134	2	
						METASILTSTONE.						
135	135.0	1.60	1.55									

GEONORTH

PROJECT: [redacted] COMPANY: CONTRACTOR:

DRILL: COMMENCED: COMPLETED:

COORDINATES: ELEVATION: AZIMUTH: DECLINATION:

LOGGED BY: D.S.H

DEPTH m	RUN m	INTER-VAL m	RECOV-ERY m	%	SURVEY	DESCRIPTION	STRUCT-URE	DEPTH m	SAMPLE NUMBER	INTER-VAL m	WIDTH m	ANALYSES
135	135.0	1.60	1.55									
136									6824	136	2	
						Dk grey METASILTSTONE minor CO_3 veining through-out.						
	136.60	1.60	1.46			Slst becomes progressively more coarse toward						
137												
	137.50	0.90	0.90									
138									6825	138	2	
	138.70	1.20	1.16									
139												

GEONORTH

PROJECT: ZAPOPAN | COMPANY: | CONTRACTOR:

DRILL: | COMMENCED: | COMPLETED:

COORDINATES: | ELEVATION: | AZIMUTH: | DECLINATION:

LOGGED BY: D.J.H

DEPTH	RUN m	INTER-VAL m	RECOV-ERY m	%	SURVEY	DESCRIPTION	STRUCT-URE	DEPTH m	SAMPLE NUMBER	INTER-VAL m	WIDTH m	ANALYSES
139						139.62 - 139.60. Banded green/buff tuff - banded on mm scale pale banding at top. 1cm band of 2-3mm tourmaline needles + metallic sulphide ?galena - Folds about 85° to core.						
140						METADUPE contact 60° to core speck with 1-4 mm dk green mineral ?cordierite			6826	140	2	
	140.70	2.0	1.79			140.71 - 140.78 Qtz veining white/massive abo @ 140.94 - 141.20						
141	141.20	0.50	0.51									
	141.50	0.30	0.23			141.68 - 141.91. Silicified zone banded dk/light + pyr bands sub ∥ to core pyr & secondary CO_3 veining through-out.						
142	142.30	0.80	0.52						6827	142	2	
						142.90. 4cm Qtz band flanked upper & lower by banded light/dk mm bands + pyr csp along Qtz contact						
143	143.35	1.05	0.72									

Core

Broken

Badly

GEONORTH

PROJECT: ZAPOPAN COMPANY: CONTRACTOR:

DRILL: COMMENCED: COMPLETED:

COORDINATES: ELEVATION: AZIMUTH: DECLINATION:

LOGGED BY: D.J.H.

DEPTH m	RUN m	INTER-VAL m	RECOV-ERY m	%	SURVEY	DESCRIPTION	STRUCT-URE	DEPTH m	SAMPLE NUMBER	INTER-VAL m	WIDTH m	ANALYSES
143												
	143.35	1.05	0.72									
						143.47 - 143.67. CO_3 veining intense mm veins.						
	143.80	0.45	0.37									
144						METASILTSTONE			6828	144	2	
						144.26 - 144.44 V. speckled Sltst. elongate specks about foliation of 50° to core.						
145						METASILTSTONE						
	145.20	1.40	1.26			145.37 - 145.42 Intensly deformed banded silicic zone						
						METASILTSTONE.						
146	145.90	0.70	0.65						6829	146	2	
						146.39. - CO_3 veining b/w to core over 8 cm zone. Sltst grades into green chert band.						
						146.53 Dk grey METASILTSTONE						
	146.60	0.70	0.64									
147	147.15	0.55	0.41									

GEONORTH

PROJECT: EAPOPA COMPANY: CONTRACTOR:

DRILL: COMMENCED: COMPLETED:

COORDINATES: ELEVATION: AZIMUTH: DECLINATION:

LOGGED BY: D.J.H.

DEPTH m	RUN m	INTER-VAL m	RECOV-ERY m	%	SURVEY	DESCRIPTION	STRUCT-URE	DEPTH m	SAMPLE NUMBER	INTER-VAL m	WIDTH m	ANALYSES
147	147.15	0.55	0.41									
						147.82. Chert bands 1-2 cm wide Intensly deformed within Slbt + Qtz & minor hematite - grades into silicic tuff zone						
	147.55	0.40	0.36									
148									6830	148	2	
						148.20 Pale dk green chert / Slbt deformed Interbedded. CO_3 veining 1-2 cm wide 10° to core						
	148.60	0.95	0.77									
						dk silicic METATUFF						
149												
						149.70 grades into Dk grey metasiltstone.						
	149.70	1.10	0.78									
150									6831	150	2	
						150.31 - 150.34 CO_3-rich breccia band with abundant Qtz veining extending up from this zone.						
						Dk grey METASILTSTONE with ?sed. structures. 35° to core bedding						
151	151.40	1.70	1.36									

GEONORTH

PROJECT: [illegible]

DRILL:

COORDINATES:

COMPANY:

COMMENCED:

ELEVATION:

CONTRACTOR:

COMPLETED:

AZIMUTH:

DECLINATION:

LOGGED BY: D.J.H.

DEPTH m	RUN m	INTER-VAL m	RECOV-ERY m	%	SURVEY	DESCRIPTION	STRUCT-URE	DEPTH m	SAMPLE NUMBER	INTER-VAL m	WIDTH m	ANALYSES
151	151.40	1.70	1.36									
						151.11 – 15 .85 Qtz veining Subll to core.						
152									6832	152	2	
						Qtz Silicic dk/light bands mm Scale 2-4 cm wide rgr in banding	Qtz →					
	152.80	1.40	1.32									
153												
						153.08 155.01 dk/light mm Scale silicic banding deformed. subll to core.						
154									6833	154	2	
155	155.20	2.40	1.98									

GEONORTH

PROJECT: ZAPOPAN
DRILL:
COORDINATES:

COMPANY:
COMMENCED:
ELEVATION:

CONTRACTOR:
COMPLETED:
AZIMUTH:

DECLINATION:
LOGGED BY:

DEPTH m	RUN m	INTER-VAL m	RECOV-ERY m	%	SURVEY	DESCRIPTION	STRUCT-URE		DEPTH m	SAMPLE NUMBER	INTER-VAL m	WIDTH m	ANALYSES			
155	155·20	2·40	1·98													
156							Core recovery poor broken core			6834	156	2				
157						157·76. Banded light/dk non silicic bands + abundant pyr. within fine light grey silicic tuff. Fully silicic borders. Well deformed bands										
158	158·20	3·0	1·49.			Fine light grey silicic tuff.				6835	158	2				
159																

GEONORTH

PROJECT: ZAPOPAN | COMPANY: | CONTRACTOR:

DRILL: | COMMENCED: | COMPLETED:

COORDINATES: | ELEVATION: | AZIMUTH: | DECLINATION:

LOGGED BY: D.J.H

DEPTH m	RUN m	INTER-VAL m	RECOV-ERY m	%	SURVEY	DESCRIPTION	STRUCT-URE
159							
160						dkgy METATUFF - grades into dk grey MICROSILTSTONE.	
161						Banded light/dk siliceous mm. bands + pyr. sub ⊥ to core. deformed	
	161.30	3.10	3.0				
162							
	162.70	1.40	1.32			lensoidal pyr defines foliation @ 50° to core.	
163	163.60	0.90	0.90				

DEPTH m	SAMPLE NUMBER	INTER-VAL m	WIDTH m	ANALYSES
160	6836	160	2	
162	6837	162	2	

GEONORTH

PROJECT: [illegible] COMPANY: CONTRACTOR:

DRILL: COMMENCED: COMPLETED:

COORDINATES: ELEVATION: AZIMUTH: DECLINATION:

LOGGED BY: D.J.H.

DEPTH m	RUN m	INTER-VAL m	RECOV-ERY m	%	SURVEY	DESCRIPTION	STRUCT-URE	DEPTH m	SAMPLE NUMBER	INTER-VAL m	WIDTH m	ANALYSES
163												
	163.60	0.90	0.90									
164						dk grey METASILTSTONE, massive			6838	164	2	
165												
166									6839	166	2	
						66.04. Silicic coarse tuff inclusions within slst. pyr-rich 8cm x 4cm.						
	166.30					166.79. hard pale grey silicic tuff. surrounded by dk/lg bands.						
167												

GEONORTH

PROJECT: ZAPOPAN.
DRILL:
COORDINATES:

COMPANY:
COMMENCED:
ELEVATION:

CONTRACTOR:
COMPLETED:
AZIMUTH:

DECLINATION:
LOGGED BY: D.S.H.

DEPTH m	RUN m	INTER-VAL m	RECOV-ERY m	%	SURVEY	DESCRIPTION	STRUCT-URE	DEPTH m	SAMPLE NUMBER	INTER-VAL m	WIDTH m	ANALYSES
167												
						Fine grained pale grey hard silicic METATUFF banded 10° to core						
168									6844	168	2	
						168: sh. grades from fine silicic tuff back to dk sltst.						
169												
	169.50	2.10	2.07									
170									6845	170	2	
						Dk grey METASILTSTONE ? sed. structures with sltst. fine-grained.						
171	171.0	1.50	1.51									

GEONORTH

PR[redacted]T: [redacted]OP [redacted] [redacted]MPA[redacted] [redacted]CONTRACTOR: [redacted]

DRILL: COMMENCED: COMPLETED:

COORDINATES: ELEVATION: AZIMUTH: DECLINATION:

LOGGED BY: D.S.H.

DEPTH m	RUN m	INTER-VAL m	RECOV-ERY m	%	SURVEY	DESCRIPTION	STRUCT-URE		DEPTH m	SAMPLE NUMBER	INTER-VAL m	WIDTH m	ANALYSES			
171	171.0	1.50	1.51			171.76 – 171.90										
						metasiltstone coarsening & grading into tuffaceous unit with distinct foliation. 50° to core.										
172						171.90 – back to dk grey METASILTSTONE				6846	172	2				
173																
	173.60	2.60	2.38													
174	174.50	0.90	0.16			Dk grey METASILTSTONE.				6847	174	2				
175																

GEONORTH

PROJECT: ZAPOPAN COMPANY: CONTRACTOR:

DRILL: COMMENCED: COMPLETED:

COORDINATES: ELEVATION: AZIMUTH: DECLINATION:

LOGGED BY: D.J.H.

DEPTH m	RUN m	INTER-VAL m	RECOV-ERY m	%	SURVEY	DESCRIPTION	STRUCT-URE	DEPTH m	SAMPLE NUMBER	INTER-VAL m	WIDTH m	ANALYSES
175						175.71. Chl. zone with pyr. Leucocratic / dk silicic coarse tuffs mm banding with pyr. minor fills silicic / Qtz lenses to 176.22.						
176									6848	176	2	
	176.30	1.80	1.80									
177						Dk grey METASILTSTONE.						
	177.20	0.90	0.81									
178									6849	178	2	
	178.20	1.0	0.46			178.14. Coarse silicic boudins. 2cm wide 4cm long						
						178.47 - 178.55. Banded mica / Qtz + sulphide leases (pyr) 2-4mm + qsp with 5cm long chl. coarse tuff pyr-rich.						
179												

GEONORTH

PROJECT: [illegible] COMPANY: CONTRACTOR:

DRILL: COMMENCED: COMPLETED:

COORDINATES: ELEVATION: AZIMUTH: DECLINATION:

LOGGED BY:

DEPTH m	RUN m	INTER-VAL m	RECOV-ERY m	%	SURVEY	DESCRIPTION	STRUCT-URE	DEPTH m	SAMPLE NUMBER	INTER-VAL m	WIDTH m	ANALYSES
179						grades from sltst to coarse METATUFF						
180									6850	180	2	
						180.73 84cm of silicic tuff cm size dk green xtal grnt scattered ?cordierite 3cm clear/milky qtz with 6 cm of green chert at upper zone. Strongly foliated to 45° to core.						
	180.80	2.60	2.29									
181												
	181.60	1.80	1.79									
182						Dk grey METASILTSTONE minor CO3 veining.			6851	182	2	
	182.50	0.90	0.49									
183												

GEONORTH

PR[redacted]T: 2[redacted]PAN [redacted] [redacted]MPA[redacted] [redacted] CONTRACTOR: [redacted]

DRILL: COMMENCED: COMPLETED:

COORDINATES: ELEVATION: AZIMUTH: DECLINATION:

LOGGED BY: D.J.H.

DEPTH m	RUN m	INTER-VAL m	RECOV-ERY m	%	SURVEY	DESCRIPTION	STRUCT-URE	DEPTH m	SAMPLE NUMBER	INTER-VAL m	WIDTH m	ANALYSES
183												
						183.67. 2cm wide silicic band 45° to core.						
184									6852	184	2	
	184.40	1.90	0.95									
185												
	185.30	0.90	0.89			Dk grey METASILTSTONE minor pyr along fractures, minor CO3 veining mm wide.						
186									6853	186	2	
	186.70	1.40	0.75									
187	187.30	0.60	0.49									
	187.80	T.D. 0.50	0.36				T.D.		6854	187.80	1.8	

GEONORTH

EXPLOREMIN PTY.LTD.

Diamond Drill Log: ZZAP/22

SUMMARY

CLIENT: ZAPOPAN N.L.

PROSPECT: ZAPOPAN

PROPOSED CO-ORDS E: 10023 N: 9876 R.L.: 98
LAID OUT CO-ORDS E: 10023 N: 9876 R.L.: 98
ACTUAL CO-ORDS E: 10023 N: 9875 R.L.: 97.8

PLANNED DEPTH (M): 195
TARGET DEPTH (M): 80-195
ACTUAL DEPTH (M): 154.4

BEARING ° Grid: 032 ° Mag:
INCLINATION -°: 70

PROPOSED BY: J.G.
PLANNED BY: J.G.
LAID OUT BY: MACJAP
SURVEYED BY:

DRILLED BY: ROCKDRILL RIG 8

DATE COMMENCED: 88/06/25
DATE COMPLETED: 88/07/01

PRE-COLLAR (M): 80
HQ (M): 74.4
NQ (M):
BQ (M):
OTHER (M):
WEDGES PLACED:

COMMENTS/ASSAY SUMMARY:

94.7-116m (21.3m) 1.3 g/t Au

DOWN HOLE SURVEYS

DEPTH (m): 94 AZIMUTH (mag. °): 024 INCLN (°): 61
DEPTH (m): 154 AZIMUTH (mag. °): 023 INCLN (°): 60
DEPTH (m): AZIMUTH (mag. °): INCLN (°):
DEPTH (m): AZIMUTH (mag. °): INCLN (°):
DEPTH (m): AZIMUTH (mag. °): INCLN (°):
DEPTH (m): AZIMUTH (mag. °): INCLN (°):
DEPTH (m): AZIMUTH (mag. °): INCLN (°):
DEPTH (m): AZIMUTH (mag. °): INCLN (°):
DEPTH (m): AZIMUTH (mag. °): INCLN (°):
DEPTH (m): AZIMUTH (mag. °): INCLN (°):

ANALABS

A division of Macdonald Hamilton & Co Pty Ltd

Phone(09) 458 7999 | 52 Murray Road, Welshpool, W.A. 6101 | Telex AA92560

ANALYTICAL REPORT No. 247.0[illegible]4.0[illegible]

THIS REPORT MUST READ IN CONJUNCTION WITH THE ACCOMPANYING ANALYTICAL DATA

RECEIVED

ORDER No.	PROJECT
RM68[illegible]	

DATE RECEIVED	RESULTS REQUIRED
30/06/88	ASAP

JAPOPAN NL
PO BOX 4045

DARWIN NT 0801

No. OF PAGES OF RESULTS	DATE REPORTED	No. OF COPIES	TOTAL No. OF SAMPLES
1	03/07/88	1	40

ATE IF PLES	PRE-TREATMENT								ANALYSIS		
ER OW	SAMPLE NUMBERS	DRY	CRUSH	SPLIT	PUL-VERISE	SIEVE	OTHER SEE REMARKS	NONE	REFER TO ANALYSIS SECTION	PREPARATION	METHOD
	7201/240	RC	Prep: 033						Au,Au(1),Au(2)/313		

RESULTS TO

MR ROD JOHNSON
JAPOPAN NL
PO BOX 4045

DARWIN NT 0801

RESULTS TO

REMARKS

Z-ZAP 22

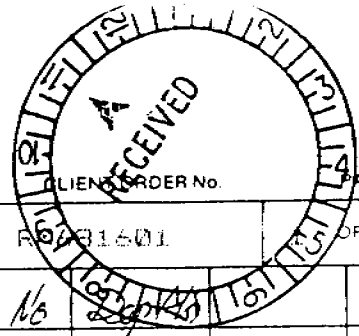
STATE OF SAMPLES		ANALYSIS — PREPARATION				ANALYSIS — METHOD	
hole core	WC	perchloric acid	A1	cold acid	CA	atomic absorbtion	AAS
oil core	SC	hydrochloric acid	A2	specific sulphide	SS	x-ray fluorescence	XRF
utting	CU	nitric acid	A3	other mixed acids	Ma	spectrophotometry	SPEC
ock	Ro	aqua regia	A4	alkaline attack	AA	colorimetry	COL
oil	SO	nitric-perchloric	A5	volatilization	VO	chromatography	CHR
ulp	PU	HF mixture	A6	ignition	IG	titration	TTN
ater	WA	HF under pressure	A7	pressed powder (XRF)	PP	other chemical means	CHEM
ssue	TI	fusion	A8	glass fusion (XRF)	GF	miscellaneous	MISC
ream sediment	SS					fluorescence	FLUOR
eavy mineral	HM					inductively coupled plasma	ICP

AUTHORISED OFFICER

ANALABS

A Division of Macdonald Hamilton & Co Pty Ltd

ANALYTICAL DATA



SAMPLE PREFIX	REPORT NUMBER	REPORT DATE	CLIENT ORDER No.	PAGE
	247 0.14.02620	03/07/88	R0881601	OF 2

TUBE No	SAMPLE No	Au	Au(1)	Au(2)						
							Hole No			
1	[illegible]0	1.551	1.270	1.595			ZEAR22	0-2		
2	[illegible]201	0.159	-	-				2-4		
3	[illegible]10	0.055	-					4-6		
4	[illegible]202	0.016		-				6-8		
5	[illegible]20[illegible]	0.011	-	-				8-10		
6	[illegible]20[illegible]	0.023	-	-				10-12		
7	[illegible]7207	0.005	-	-				12-14		
8	[illegible]7208	0.009	-	0.009				14-16		
9	[illegible]709	<0.005	-	-				16-18		
10	[illegible]7210	<0.005	-	-				18-20		
11	[illegible]7211	<0.005	-	-				20-22		
12	[illegible]7212	<0.005	-	-				22-24		
13	[illegible]7213	<0.005	-	-				24-26		
14	[illegible]7214	<0.005	-	-				26-28		
15	[illegible]7215	0.012	-	-				28-30		
16	[illegible]7216	0.005	-	-				30-32		
17	[illegible]17	0.005	-	-				32-34		
18	[illegible]18	0.009	-	-				34-36		
19	[illegible]219	0.143	-	-				36-38		
20	[illegible]220	0.005	-	-				38-40		
21	[illegible]221	SNR	-	-				40-42		
22	[illegible]222	0.015	-	-				42-44		
23	[illegible]223	<0.005	-	-				44-46		
24	[illegible]224	0.103	-	-				46-48		
25	[illegible]225	0.006	-	-				48-50		

Results in ppm unless otherwise specified
T = element present; but concentration too low to measure
X = element concentration is below detection limit
- = element not determined

AUTHORISED OFFICER

ANALABS

A Division of Macdonald Hamilton & Co. Pty Ltd.

ANALYTICAL DATA

RECEIVED

SAMPLE PREFIX	REPORT NUMBER	REPORT DATE	CLIENT ORDER No.	PAGE
	247.0.14.02620	03/07/88	FM681601	4 OF

TUBE No	SAMPLE No	Au	Au(1)	Au(2)		Hole No	Depth			
1	7226	0.014	-			ZZAP22	50-52			
2	7227	0.016	-	-			52-54			
3	7228	0.033	-				54-56			
4	7229	0.017	0.014	0.017			56-58			
5	7230	0.040	-	-			58-60			
6	7231	0.008	-	-			60-62			
7	[illegible]	0.033	-				62-64			
8	7233	0.009	-				64-66			
9	7234	<0.005					66-68			
10	7235	0.007	-	-			68-70			
11	[illegible]	0.005	-	-			70-72			
12	[illegible]	<0.005	-	-			72-74			
13	[illegible]	<0.005	-				74-76			
14	7239	<0.005	-	-			76-78			
15	7240	<0.005	-				78-80			
16										
17										
18										
19										
20										
21										
22										
23	DETECTION	0.005	0.005	0.005						
24	[illegible]	ppm	ppm	ppm						
25	METHOD	313	313	313						

Results in ppm unless otherwise specified
T = element present; but concentration too low to measure
X = element concentration is below detection limit
– = element not determined

AUTHORISED OFFICER

ANALABS

A division of Macdonald Hamilton & Co. Pty. Ltd.

Phone(09) 458 7999

52 Murray Road, Welshpool, W.A. 6101

Telex AA92560

ANALYTICAL REPORT No. 247.0.14.02655

THIS REPORT MUST READ IN CONJUNCTION WITH THE ACCOMPANYING ANALYTICAL DATA

ZAPOPAN NL
PO BOX 4045

DARWIN NT 0801

ORDER No.	PROJECT
058	

DATE RECEIVED	RESULTS REQUIRED
06/07/88	ASAP

No. OF PAGES OF RESULTS	DATE REPORTED	No. OF COPIES	TOTAL No. OF SAMPLES
3	14/07/88	1	55

ER OW	SAMPLE NUMBERS	PRE-TREATMENT: DRY	CRUSH	SPLIT	PULVERISE	SIEVE	OTHER SEE REMARKS	NONE	ANALYSIS: REFER TO ANALYSIS SECTION	PREPARATION	METHOD
	7296/338.7332/41	DC Prep: 803							Au,Au(1),Au(21/313		

RESULTS TO

MR ROD JOHNSON
ZAPOPAN NL
PO BOX 4045

DARWIN NT 0801

RESULTS TO

REMARKS

2-ZAP/22
23

STATE OF SAMPLES

ole core	WC
lit core	SC
tting	CU
ck	Ro
l	SO
ip	PU
ter	WA
sue	TI
eam sediment	SS
avy mineral	HM

ANALYSIS — PREPARATION

perchloric acid	A1	cold acid	CA
hydrochloric acid	A2	specific sulphide	SS
nitric acid	A3	other mixed acids	Ma
aqua regia	A4	alkaline attack	AA
nitric-perchloric	A5	volatilization	VO
HF mixture	A6	ignition	IG
HF under pressure	A7	pressed powder (XRF)	PP
fusion	A8	glass fusion (XRF)	GF

ANALYSIS — METHOD

atomic absorbtion	AAS
x-ray fluorescence	XRF
spectrophotometry	SPEC
colorimetry	COL
chromatography	CHR
titration	TTN
other chemical means	CHEM
miscellaneous	MISC
fluorescence	FLUOR
inductively coupled plasma	ICP

AUTHORISED OFFICER

ANALABS

A Division of Macdonald Hamilton & Co. Pty. Ltd.

ANALYTICAL DATA

SAMPLE PREFIX	REPORT NUMBER	REPORT DATE	CLIENT ORDER No.	PAGE
	[illegible]	14/07/88	058	[illegible]

TUBE No.	SAMPLE No.	Au	Au(1)	Au(2)		Hole No	Depth			
1	[illegible]	<0.005	-	-		ZZAP22	79.80-82			
2	[illegible]	<0.005	-	-			82-84			
3	[illegible]	<0.005	-	-			84-86			
4	[illegible]	<0.005		-			86-88			
5	[illegible]	0.006		-			88-89			
6	[illegible]	0.017	-	-			89-90			
7	[illegible]	<0.005	-				90-92			
8	[illegible]	<0.005	-	-			92-94.80			
9	[illegible]	2.193	-	2.168			94.80-96.10			
10	[illegible]	1.112		0.670			96.10-98			
11	[illegible]	0.146					98-100			
12	[illegible]	2.690	-	2.700			100-102			
13	[illegible]	0.121	0.115	0.118			102-104			
14	[illegible]	0.461	0.423				104-106			
15	[illegible]	[illegible].010	7.380	2.783			106-108			
16	[illegible]	0.071	-	-			108-110			
17	[illegible]	1.214	-	0.969			110-112			
18	[illegible]	0.086	-				112-114			
19	[illegible]	[illegible].149	[illegible]	1.497			114-116			
20		0.0[illegible]					116-118			
21	[illegible]	0.[illegible]					118-120			
22	[illegible]	0.055					120-122			
23	[illegible]	0.520					122-124			
24	[illegible]	0.389	-				124-126			
25	[illegible]	0.[illegible]					126-127			

Results in ppm unless otherwise specified
T = element present; but concentration too low to measure
X = element concentration is below detection limit
— = element not determined

AUTHORISED OFFICER

ANALABS

A Division of Macdonald Hamilton & Co. Pty. Ltd.

ANALYTICAL DATA

SAMPLE PREFIX	REPORT NUMBER	REPORT DATE	CLIENT ORDER No.	PAGE
	247.0.14.02655	14/07/88	058	2 OF 3

TUBE No.	SAMPLE No.	Au	Au(1)	Au(2)		Hole No.	Depth			
1	7311	2.360	2.680	4.840		ZZAP-22	127-128			
2	7312	0.134	–	–			128-130			
3	7313	0.086	–	–			130-132			
4	7314	0.021	–	–			132-134			
5	7315	0.764	0.689	0.682		Z-ZAP23	0-2			
6	7316	0.079	–	–			2-4			
7	7317	0.027	–	–			4-6			
8	7318	0.008	–	–			6-8			
9	7319	0.189	–	–			8-10			
10	7320	0.177	–	–			10-12			
11	7321	0.020	–	–			12-14			
12	7322	0.008	0.007	0.005			14-16			
13	7323	0.007	–	–			16-18			
14	7324	0.008	–	–			18-20			
15	7325	0.007	–	–			20-22			
16	7326	0.010	–	–			22-24			
17	7327	0.009	–				24-26			
18	7328	0.017	–	–			26-28			
19	7329	<0.005	–	–			28-30			
20	7330	0.007	–	–			30-32			
21	7332	<0.005	–	–		ZZAP22	134-136			
22	7333	0.016	–	–			136-138			
23	7334	<0.005	–	–			138-140			
24	7335	<0.005	–	–			140-142			
25	7336	<0.005	–	–			142-144			

Results in ppm unless otherwise specified
T = element present but concentration too low to measure
X = element concentration is below detection limit
– = element not determined

ANALABS

A Division of Macdonald Hamilton & Co. Pty. Ltd.

ANALYTICAL DATA

RECEIVED 19 JUL 1988

SAMPLE PREFIX	REPORT NUMBER	REPORT DATE	CLIENT ORDER No.	PAGE
	247.0.14.02655	14/07/88	058	3 OF 3

TUBE No.	SAMPLE No.	Au	Au(1)	Au(2)			Hole No.	Depth		
1	7337	0.007	-	-			Z ZAP-22	144-146		
2	7338	0.007	-	-				146-148		
3	7339	<0.005	-	-				148-150		
4	7340	<0.005	-	-				150-152		
5	7341	0.013	0.011	0.014				152-154.40		
6										
7										
8										
9										
10										
11										
12										
13										
14										
15										
16										
17										
18										
19										
20										
21										
22										
23	DETECTION	0.005	0.005	0.005						
24	UNITS	PPM	PPM	PPM						
25	METHOD	313	313	313						

Results in ppm unless otherwise specified
T = element present; but concentration too low to [illegible]
X = element concentration is below detection limit
— = element not determined

ANALABS

A division of MacDonald Hamilton & Co. Pty. Ltd. (Inc NSW)

(089) 84 3849 | Cnr Coonawarra & Mataram Rds, Winnellie | Fax: (089) 84 3984

ANALYTICAL REPORT No. 247.0.14.02819

THIS REPORT MUST BE READ IN CONJUNCTION WITH THE ACCOMPANYING ANALYTICAL DATA

INVOICE TO:

ZAPOPAN NL
PO BOX 4045

DARWIN NT 0801

ORDER No.	PROJECT
058	

DATE RECEIVED	RESULTS REQUIRED
24/08/88	ASAP

No. OF PAGES OF RESULTS	DATE REPORTED	No. OF COPIES
3	31/08/88	1

TOTAL No. OF SAMPLES: 55

SAMPLE NUMBERS	SAMPLE DESCRIPTION	ELEMENT/METHOD
7286/330,7332/41	PU Prep: 014	As/401

RESULTS TO

J.GOULEVITCH
ZAPOPAN NL
PO BOX 93

EARLVILLE QLD 4870

RESULTS TO

RESULTS TO

REMARKS

Z-ZAP/22
23

AUTHORISED OFFICER

ANALABS

A Division of Macdonald Hamilton & Co. Pty. Ltd.

ANALYTICAL DATA

SAMPLE PREFIX	REPORT NUMBER	REPORT DATE	CLIENT ORDER No.	PAGE
	247.0.14.02819	31/08/88	058	1 OF 3

TUBE No.	SAMPLE No.	As				Hole N°	Depth			
1	7286	7				Z-ZAP 22	79.80-82			
2	7287	10					82-84			
3	7288	32					84-86			
4	7289	11					86-88			
5	7290	19					88-89			
6	7291	119					89-90			
7	7292	6					90-92			
8	7293	31					92-94.80			
9	7294	176					94.80-96.10			
10	7295	110					96.10-98			
11	7296	9					98-100			
12	7297	471					100-102			
13	7298	449					102-104			
14	7299	87					104-106			
15	7300	953					106-108			
16	7301	73					108-110			
17	7302	536					110-112			
18	7303	12					112-114			
19	7304	189					114-116			
20	7305	14					116-118			
21	7306	21					118-120			
22	7307	188					120-122			
23	7308	1240					122-124			
24	7309	107					124-126			
25	7310	308					126-127			

Results in ppm unless otherwise specified
T = element present; but concentration too low to measure
X = element concentration is below detection limit
— = element not determined

AUTHORISED OFFICER

ANALABS

A Division of Macdonald Hamilton & Co. Pty. Ltd.

ANALYTICAL DATA

SAMPLE PREFIX	REPORT NUMBER	REPORT DATE	CLIENT ORDER No.	PAGE
	247.0.14.02819	31/08/88	058	2 OF 3

TUBE No.	SAMPLE No.	As				Hole N°	Depth			
1	7311	10500				Z-ZAP 22	127-128			
2	7312	55					128-130			
3	7313	31					130-132			
4	7314	<2					132-134			
5	7315	5200								
6	7316	611								
7	7317	191								
8	7318	83								
9	7319	160								
10	7320	141								
11	7321	68								
12	7322	32								
13	7323	68								
14	7324	89								
15	7325	85								
16	7326	108								
17	7327	91								
18	7328	108								
19	7329	59								
20	7330	52								
21	7332	32				Z-ZAP 22	134-136			
22	7333	28					136-138			
23	7334	14					138-140			
24	7335	23					140-142			
25	7336	<2					142-144			

Results in ppm unless otherwise specified
T = element present; but concentration too low to measure
X = element concentration is below detection limit
— = element not determined

AUTHORISED OFFICER

ANALABS

A Division of Macdonald Hamilton & Co. Pty. Ltd.

ANALYTICAL DATA

SAMPLE PREFIX	REPORT NUMBER	REPORT DATE	CLIENT ORDER No.	PAGE
	247.0.14.02819	31/08/88	058	3 OF 3

TUBE No.	SAMPLE No.	As				Hole No	Depth			
1	7337	40				E-ZAP22	144-146			
2	7338	22					146-148			
3	7339	15					148-150			
4	7340	28					150-152			
5	7341	13					152-154.40			
6										
7										
8										
9										
10										
11										
12										
13										
14										
15										
16										
17										
18										
19										
20										
21										
22										
23	DETECTION	2								
24	UNITS	PPM								
25	METHOD	401								

Results in ppm unless otherwise specified
T = element present; but concentration too low to measure
X = element concentration is below detection limit
— = element not determined

AUTHORISED OFFICER

CORE RECOVERY LOG

PROSPECT/MINE: ZAPOPAN HOLE NO: Z-ZAP 22

Logged By: ..... Sheet: ...../.....

Depth (m) From	Depth (m) To	Interval (m)	Recovery (m)	Depth (m) From	Depth (m) To	Interval (m)	Recovery (m)
79.80	80.80	1.0	1.05	150.10	151.30	1.20	0.95
80.80	82.30	1.50	1.30	151.30	152.40	1.10	0.84
82.30	83.80	1.50	1.28	152.40	154.40	2.0	1.89
83.80	84.60	0.80	0.59				
84.60	85.40	0.80	0.66				
85.40	86.60	1.20	1.10				
86.60	87.50	0.90	0.86				
87.50	88.20	0.70	0.68				
88.30	89.30	1.10	0.88				
89.30	90.90	1.60	1.51				
90.90	91.90	1.0	0.84				
91.90	93.20	1.30	1.21				
93.20	95.30	2.10	1.95				
95.30	98.0	2.70	2.46				
98.0	99.20	1.20	1.17				
99.20	101.20	2.0	1.79				
101.20	102.0	0.80	0.71				
102.0	104.80	2.80	2.67				
104.80	106.90	2.10	1.96				
106.90	107.80	0.90	0.84				
107.80	110.80	3.0	2.91				
110.80	113.80	3.0	2.94				
113.80	115.0	1.20	0.95				
115.0	116.80	1.80	1.53				
116.80	118.10	1.30	0.85				
118.10	118.90	0.80	0.66				
118.90	120.30	1.40	1.15				
120.30	122.80	2.50	2.43				
122.80	124.30	1.50	1.32				
124.30	125.50	1.20	1.08				
125.50	126.10	0.60	0.46				
126.10	127.50	1.40	1.18				
127.50	128.60	1.10	0.93				
128.60	130.60	2.0	1.63				
130.60	131.50	0.90	0.89				
131.50	132.45	0.95	0.72				
132.45	133.50	1.05	0.88				
133.50	134.70	1.20	1.08				
134.70	136.0	1.30	1.21				
136.0	137.15	1.15	0.90				
137.15	138.20	1.05	0.90				
138.20	139.40	1.20	1.12				
139.40	140.0	0.60	0.59				
140.0	140.60	0.60	0.37				
140.60	142.20	1.60	1.21				
142.20	144.90	2.70	2.54				
144.90	145.90	1.0	0.82				
145.90	146.20	0.30					
146.20	148.70	1.20	1.15				
148.70	150.10	1.30	1.13				

SHEET 1 of 3

LOGGED BY: D.S.H.

CORELOGGING DATA

AREA / LEASE ..... PROSPECT ZAPOPAN HOLE No. Z-ZAP 22

DIST. FROM COLLAR	BREAKS / METRE	RECOVERY	R.Q.D.	SPEC. GRAVITY	MAG. SUSCEPTILITY	ANGLE TO LONG CORE AXIS So	ANGLE TO LONG CORE AXIS Si	STRUCTURES	LITHOLOGY	milky qtz.	sugary qtz.	f. gr. qtz.	musc.	biot.	garnet	chl.	act.	cbt.	tourm.	py.	po.	hemt.	base metal su.	aspy.	Sericite	K-Spar	SAMPLE No.	Au (ppm) ASSAY RSLTS	As	GEOLOGICAL COMMENTS (mainly texture)
92														2						<½										Dk spec. coarse tuff.
93														<1						tr										
94								Qtz				4			tr	2	2			1										
95								b.i.f.				25				40	10			5		2		1				2.16		Hem.-rich. B.i.f.
96								b.i.f.				20				10	3			2				tr				0.80		
97								b.i.f.				10			2	20				2								0		Si/garnet/pyr banding
98												5		tr	1	30	4			<1					10					? Sericitic tuff.
99								Qtz		2	½			1		10	2								2			0.15		
100								Qtz		40						20	tr			<1				tr		2		2.70		
101								Qtz		38						10	8			2				tr						
102								b.i.f.		6	<1	4			tr	20				1				tr	15					sericite-tuff.
103								Qtz.		60					tr	20	<1											0.11		milky Qtz veining
104								b.i.f.				2			3	26	tr			2								0.43		
105								b.i.f.			½	4		tr	4	20	2			3				tr						
106								b.i.f.				13		½	2	12	tr			3				<1				4.0		
107								Qtz		20		4		tr	tr	4	2			1										
108											2	<1				30	4			tr								0.07		
109										1		2		tr	1	12				tr										Finely banded dk Slst.
110																														

LITHOLOGICAL LEGEND:

Ssm	Mudstone	tAv	Ashstone	Su	Massive Sulphide		Veining > 30%
eSsm	Carbonaceous Mudstone	Sct	Chert	ga	Gossan		Tourmaline > 5%
Ssl	Siltstone	Slf	B.I.F.	Mh	Hornfels		Arsenopyrite > 0.5%
Ssl	Sandstone	caSlf	B.I.F. Carbonate > 15%	MBd	Metadolerite		Base metal sulphides > 5%
Sgw	Greywacke	chSlf	B.I.F. Chlorite > 40%	Af	Felsite	py	Pyrite > 5%
Scg	Conglomerate	actSlf	B.I.F. Actinolite > 40%	Agr	Granite	po	Iron sulphides > 2%
Sdo	Carbonate	micSlf	Micas > 30% (commonly includes garnets)		Brecciated rock		

SHEET 2 of 3

LOGGED BY: D.J.H.

CORELOGGING DATA

AREA / LEASE ..... PROSPECT ZAPOPAN ..... HOLE No: Z-ZAP 22

DIST. FROM COLLAR	BREAKS / METRE	RECOVERY	R.Q.D.	SPEC. GRAVITY	MAG. SUSCEPTILITY	ANGLE TO LONG CORE AXIS: So	ANGLE TO LONG CORE AXIS: Si	STRUCTURES	LITHOLOGY	ESTIMATED MINERAL PERCENTAGES: milky qtz.	sugary qtz.	f. gr. qtz.	musc.	biot.	garnet	chl	act.	cbl.	tourm.	py.	po.	hem.	base metal su.	aspy.	SAMPLE No.	ASSAY RSLTS: Au	ASSAY RSLTS: As	GEOLOGICAL COMMENTS (mainly texture)
110								b.i.f.		17		2				8				2				tr			
111								Qt3																		1.21	
								b.i.f.		15	1	2		tr	1	30	10			2				½			
112										8		8			2	24				2							
113														tr	1	2		½								0.096	CO_3 veining on mm scale
114																											Qt3 vein chl. at base
								Qt3		8	2	2			½	10	2			1							
115								b.i.f.				14			tr	12	4			3				tr		1.14	
116												tr						tr		1						0.042	
117								Qt3		15							20	2		1						0.042	?Shear zone
118										2				tr	tr												?shear zone
119																2	tr	½	¼							0.416	
120								Qt3		20	5	2		tr			½	1	4							0.092	Strongly brecciated veining.
121										2	8	1				6	tr	4	2							0.092	
122								b.i.f.																			
										13		5				15	2		4					½		0.520	
123								Qt3			½				2	4			2								
124												5			2	15		<1	½	2				tr		0.389	
125								?b.i.f.																			
								b.i.f.						tr	tr			tr									
126											2	4			2	12		tr	<1	2						0.22	
127								b.i.f.			2	10		tr		10	4		1	4				1		2.80	Basal B.i.f.
128																											

LITHOLOGICAL LEGEND:

- Mdst — Mudstone
- cMdst — Carbonaceous Mudstone
- Slst — Siltstone
- Sst — Sandstone
- Gwke — Greywacke
- Cgl — Conglomerate
- Lmst — Limestone
- tAn — Ashstone
- Cht — Chert
- BIF — B.I.F.
- cBIF — B.I.F. Carbonate >15%
- chBIF — B.I.F. Chlorite >40%
- actBIF — B.I.F. Actinolite >40%
- micBIF — Mica >30% (sometimes includes garnets)
- Su — Massive Sulphide
- Qz — Quartz
- Hfls — Hornfels
- MBd — Metadolerite
- Ap — Pelsite
- Agr — Granite
- Vein — Veining >30%
- Tourmaline >5%
- Arsenopyrite >0.5%
- Base metal sulphides >5%
- Py — Pyrite >5%
- Po — Iron sulphides >2%
- Breccia/Fracture

SHEET 3 of 3

LOGGED BY: D.J.H.

CORELOGGING DATA

AREA / LEASE ..... PROSPECT ZAPOPAN ..... HOLE No. Z-ZAP 22

DIST. FROM COLLAR	BREAKS / METRE	RECOVERY	R.Q.D.	SPEC. GRAVITY	MAG. SUSCEPTILITY	ANGLE TO LONG CORE AXIS S_o	ANGLE TO LONG CORE AXIS S_1	STRUCTURES	LITHOLOGY	ESTIMATED MINERAL PERCENTAGES: milky qtz.	sugary qtz.	f. gr. qtz.	musc.	biot.	garnet	chl.	act.	cbt.	tourm.	py.	po.	hemt.	base metal su.	aspy.			SAMPLE No.	ASSAY RSLTS Au	ASSAY RSLTS As	GEOLOGICAL COMMENTS (mainly texture)
128								Qtz		2				tr	2					1				tr						
129											1	2			tr	5			1	½								0.134		
130										2	1				2	5	tr	tr	2	1										Fractured core.
131																tr		<½		½								0.056		
132											½	1		tr	½	1	tr			½										
133															tr			1		tr								0.021		
134																														

LITHOLOGICAL LEGEND:

Sxm	Mudstone	tAv	Ashstone	Su	Massive Sulphide		Veining > 30%
cSxm	Carbonaceous Mudstone	Sct	Chert	ga	Gossan		Tourmaline > 5%
Sst	Siltstone	Stf	B.I.F.	Mh	Hornfels		Arsenopyrite > 0.5%
Sst	Sandstone	caStf	B.I.F. Carbonate > 15%	MBd	Metadolerite		Base metal sulphides > 5%
Sgw	Greywacke	chStf	B.I.F. Chlorite > 40%	Af	Felsite	py	Pyrite > 5%
Scg	Conglomerate	actStf	B.I.F. Actinolite > 40%	Agr	Granite	po	Iron sulphides > 2%
Sco	Carbonate	micStf	Micas > 30% (commonly includes garnets)		Brecciated rock		

PERCUSSION DRILL LOG

PROSPECT/MINE: ZAPOPAN..... HOLE NO: Z-ZAP 22 PRECOLLAR

Collar: ...6m..... E ..... N ..... RL

Azimuth: ..032°.. °~~Mag~~/grid Inclination: -70 °

Date Drilled: 27/6/88.. Logged By: D.S.H.. Sheet: 1/2.

Depth (m) From	Depth (m) To	Sample No.	Description: Lithology	Qtz	Py	Apy	Au
0	2	7201	Soils				
2	4	7202	Clays. minor Sltst. v. minor sug. Qtz	✓			
4	6	7203	< 2% Qtz. dk. sltst. + clays	✓			
6	8	7204	40% grey silicic frag. coarse tuff < 2% Qtz clays + Sltst.	✓			
8	10	7205	2% milky Qtz. Coarse green tuff. dk. Sltst + clays	✓			
10	12	7206	< 2% dk. Sltst. minor pyr. 10% green chl. tuff. clays	✓	✓		
12	14	7207	< 10% coarse Qtz. clays < 20% Sltst. coarse chl tuff	✓			
14	16	7208	Clays. Coarse Sltst. Minor dk. Sltst				
16	18	7209	Coarse dk & green chl tuff. dk Sltst. < 2% Qtz. clay incl.	✓			
18	20	7210	As above				
20	22	7211	Mica-incl. Sltst. 60% dk Sltst.				
22	24	7212	80% dk. Sltst. 20% mica Sltst				
24	26	7213	As above				
26	28	7214	50/50 above Sltst				
28	30	7215	As above				
30	32	7216	< 2% Qtz + hematite - above Sltst	✓			
32	34	7217	Minor pyr. within dk Sltst < 2% Qtz	✓	✓		
34	36	7218	Dk Sltst. minor pyr + asp. nodules. common hematite		✓	✓	
36	38	7219	Minor metallic blue sulph. Dk Sltst. < 5% pale green chert. Minor pyr.		✓		
38	40	7220	10% pale grey tuff. Dk Sltst. v. minor pyr.				
40	42	7221	10% light grey black spec tuff. 40% grey tuff. Sltst				
42	44	7222	< 5% milky / transluc. Qtz + above lithologies	✓			
44	46	7223	60% speck tuff < 20% grey. dk Sltst				
46	48	7224	< % grey coarse tuff + above				
48	50	7225	50% dk Sltst. minor spec tuff & coarse chl tuff.				

OXIDATION BOUNDARY

WATER

PERCUSSION DRILL LOG

PROSPECT/MINE: ZAPOPAN ..... HOLE NO: Z-ZAP 22 PRECOLLAR

Collar: ..... E ..... N ..... RL

Azimuth: ..032°... °~~Mag~~/grid Inclination: -70...°

Date Drilled: 27/6/88 Logged By: D.J.H. Sheet: 2/2

Depth (m)		Sample	Description				
From	To	No.	Lithology	Qtz	Py	Apy	Au
50	52	7226	Dk. sltst.				
52	54	7227	Dk sltst. < 2% pyr + hem rich		✓		
54	56	7228	Dk. sltst scarce pyr		✓		
56	58	7229	< 2% milky qtz. Dk sltst 10% pale grey spec. tuff. scarce pyr		✓		
58	60	7230	50% coarse gen. tuff. 20% green lyellow cherts. pale speck tuff + dk sltst				
60	62	7231	10% smoky/milky qtz Dk sltst < 10% green chert. pale tuffs < 2% alt (pink) sltst.	✓			
62	64	7232	< 2% hem-rich sltst < 2% qtz. with pyr + arp < mm banding. Disted pyr through out. minor pale tuff.	✓	✓	✓	
64	66	7233	As above	✓	✓	✓	
66	68	7234	Dk sltst < 5% green tuff. minor pyr				
68	70	7235	As above				
70	72	7236	Dk sltst				
72	74	7237	Dk sltst < 10% pale tuff. < 2% milky qtz.	✓			
74	76	7238	10% dk sltst 30% green green chert with ? pink alteration ? < 2% qtz.	✓			
76	78	7239	grey/brown silicic tuff (20%). Dk sltst < 10% above chert < 2% qtz. Scarce pyr	✓	✓		
78	80	7240	60% pink/green silicic alt tuff < 10% milky qtz. Dk sltst. minor pyr	✓	✓		
			E.O.H.				

DRILLHOLE LOG

Drillhole No. Z-ZAP22
Page 1 of 15

PROJECT: ZAPOPAN
DRILL: RIG 8
COORDINATES:

COMPANY: ROCKDRIL
COMMENCED: 28/6/88
ELEVATION:

CONTRACTOR:
COMPLETED: 1/7/88
AZIMUTH: 032° GRID

DECLINATION: -70°
LOGGED BY: D.J.H

DEPTH m	RUN m	INTER-VAL m	RECOV-ERY m	%	SURVEY	DESCRIPTION	STRUCT-URE		DEPTH m	SAMPLE NUMBER	INTER-VAL m	WIDTH m	ANALYSES			
79						Dk grey metasiltstone with garnet band @ 80m. grades into pale tuff (silicic) (50° to core)			79.80							
	79.80															
80																
	8.80	1.0	1.05			Pale silicic (light grey) tuff. CO_3 veining < mm scale commonly 65° to core + lt green silicic ?alt at base (81.14) grades into dk sltst.										
81						81.61. v. fine disseminated pyr + v. scarce euhedral asp. < mm in size. Pyr defines foliation 30° to core. 81.35. CO_3 vein dk sltst + fine disseminated pyr. 81.62. 6cm silicic band with pyr & fine asp along foliation 35° to core. Band bedded. 35° to core. Pyr + asp v. minor + euhedral < mm in size.										
82	8 82.30	1.50	1.30						82	72.86	2.20					
						82.62. Dk sltst grades into coarse chl tuff. 2-3cm of intense CO_3 veining @ contact. CO_3 minor veining through-out.										
83						Grades into coarse METASILTSTONE with < mm wide CO_3 veining common along joints										
	83.80	1.50	1.28			83.80 - 84.56. Dk sltst. CO_3 brecciated with pyr, esp. around sltst clasts within CO_3 matrix. Zone ?alt green + pitted ?eroded sulph.										
84	84.60	0.80	0.51													

GEONORTH

DRILLHOLE LOG

Drillhole No. Z-ZAP22
Page 2 of 15

PROJECT: ZAPOPAN
COMPANY:
CONTRACTOR:
DRILL:
COMMENCED:
COMPLETED:
COORDINATES:
ELEVATION:
AZIMUTH:
DECLINATION:
LOGGED BY: D. S. M.

DEPTH m	RUN m	INTER-VAL m	RECOV-ERY m	%	SURVEY	DESCRIPTION	STRUCT-URE	DEPTH m	SAMPLE NUMBER	INTER-VAL m	WIDTH m	ANALYSES
84						84.56 - 86.69. Bedded dk sltst. V. fine 55° to core.		84	7287	2		
	84.60	0.80	0.59									
85						Dk grey METASILTSTONE.						
	85.40	0.80	0.66									
86								86	7288	2		
						86.69 - 86.70 Qtz vein // to bedding 2cm chl ?alt above + pink ?k-spar with Qtz silicified sltst at base + pyr 62cm						
	86.60	1.20	1.10									
87						86.70 - 87.48. Dk grey METASILTSTONE. 2cm wide light silicic band @ 86.86 & 86.91						
	87.50	0.90	0.86			grades into coarse tuff with developed foliation 35° to core occasional pyr bands 4mm wide		88	7289	2		
88						87.48 - 88.01 Speck tuff ?tourmaline needles elongate // to 35° to core foliation						
	88.20	0.70	0.68									
						88.16 - 91.62. Fine pale silicic tuff Pale pink/green chert nodule @ 88.23 disseminated pyr & asp. nodule 4cm wide						
89								89	7290	1		
	89.30	1.10	0.88									

GEONORTH

DRILLHOLE LOG

Drillhole No. Z-ZAP22
Page 3 of 15

PROJECT: ZAPOPAN
DRILL:
COORDINATES:

COMPANY:
COMMENCED:
ELEVATION:

CONTRACTOR:
COMPLETED:
AZIMUTH:

DECLINATION:
LOGGED BY: D. S. H.

DEPTH m	RUN m	INTER-VAL m	RECOV-ERY m	%	SURVEY	DESCRIPTION	STRUCT-URE	DEPTH m	SAMPLE NUMBER	INTER-VAL m	WIDTH m	ANALYSES
89	89.30	1.60	1.51			89.24-89.53. pink/green chert-like ?aft. zone with silicic tuff. green/silicic banding at top. asp-nd ± pyr disseminated with ? speck free Au??						
90						Dk sl/stone		90	7291	1.0		
91	90.90	1.00	1.51			91.62 - 92.39. Bedded dk sl/st. with dk green coarse silicic zones @ 92.0 (1 wide) & 92.48 (3cm wide). Sl/st. - Tourmaline speck with elongate 35° to core. CO2 veining < mm wide @ 91.64 & 91.98 ? hematite scattered pyr through-out.						
92	91.90	1.0	0.84			92.39 - 92.53. Deformed dk light silicic zone garnet dusted elongate // to 50° to core minor pyr. 92.53-93.19. Dk coarse tuff. ? Tourmaline 35° to core. grades to sl/st. at base.		92	7292	2.0		
93	93.20	1.30	1.21			93.19 - 94.52. Bedded dk sl/st. minor garnet-dusted zones @ 94.0 & 94.6 2-4cm wide 60° to core?						
94								94.80	7293	2.80		

GEONORTH

DRILLHOLE LOG

Drillhole No. Z-ZAP 22
Page 4 of 15

PROJECT: ZAPOPAN
COMPANY:
CONTRACTOR:
DRILL:
COMMENCED:
COMPLETED:
COORDINATES:
ELEVATION:
AZIMUTH:
DECLINATION:
LOGGED BY: D. J. H.

DEPTH m	RUN m	INTER-VAL m	RECOV-ERY m	%	SURVEY	DESCRIPTION	STRUCT-URE	DEPTH m	SAMPLE NUMBER	INTER-VAL m	WIDTH m	ANALYSES
94						94.52 - 3cm pale silicic band.						
						94.55 - 94.73. Silicic pale tuff.						
						94.73 - 95.07 Deformed silicic zone with chl/epidote altn + hematite, pyr asp + pale ? yellow min.						
95								94.80	7293	2.80		
	95.30	2.10	1.95			95.07 - 95.79 Dk banded METASILTSTONE						
						95.79 - 96.10. Silicic zone						
96						96.10 - 99.85	pyr					
						1° Dk sl/lst. with minor pale silicic bands.		96.10	7294	1.30		
						96.78. 12cm zone of Qtz/silicic altn pyr-rice, minor asp. CO_3 x-cutting veins 2-3mm wide veins crowded in part ? sulphs. Strongly chl. altered						
97												
						97.59. 4cm wide pink garnet/chl silicic boudin						
98	98.0	2.70	2.46					98.0	7295	1.90		
						Dk grey METASILTSTONE 55° to core. Insipient foliation. 35° to core.						
						3cm wide silicified/garnet-rich zone @ 98.24 - 98.27.						
99	99.20	1.20	1.17									

GEONORTH

DRILLHOLE LOG

Drillhole No. Z-ZAP 22
Page 5 of 15

PROJECT: ZAPOPAN
COMPANY:
CONTRACTOR:
DRILL:
COMMENCED:
COMPLETED:
COORDINATES:
ELEVATION:
AZIMUTH:
DECLINATION:
LOGGED BY: D.J.H.

DEPTH m	RUN m	INTER-VAL m	RECOV-ERY m	%	SURVEY	DESCRIPTION	STRUCT-URE	DEPTH m	SAMPLE NUMBER	INTER-VAL m	WIDTH m	ANALYSES
99	99.20	1.20	1.17			5cm x 4 m. pale silicic nodule @ 99.12						
100						99.85 - 100.17. Qtz veins within pink green fine grained silicic ? chert. pitted from eroded sulph. ? alt Sltst		100	7296	2		
						Garnet dusted minor pyr dk grey METASILTSTONE + minor tuff bands						
101	101.20	2.0	1.79			101.12 - 101.54 Coarse qtz vein. pyr infilling fractures & as lenses within the qtz						
						101.74 - 101.79 pyr - pale silicic band pale garnet dusted.						
102	102.0	0.80	0.71					102	7297	2		
						102.82 - 103.70 Coarse qtz breccia vein with occasional cm size tuff clasts. v. minor pyr.						
103						Dk grey METASILTSTONE garnet rich in bands 53° to core. v. minor pyr bands.						
104	104.80	2.80	2.67					104	7298	2		

GEONORTH

DRILLHOLE LOG

Drillhole No. Z-DAP22
Page 6 of 15

PROJECT: ZAPOPAN
COMPANY:
CONTRACTOR:
DRILL:
COMMENCED:
COMPLETED:
COORDINATES:
ELEVATION:
AZIMUTH:
DECLINATION:
LOGGED BY: D S H

DEPTH m	RUN m	INTER-VAL m	RECOV-ERY m	%	SURVEY	DESCRIPTION	STRUCT-URE		DEPTH m	SAMPLE NUMBER	INTER-VAL m	WIDTH m	ANALYSES
104													
						dk grey METASILTSTONE.							
	104·80	2·90	2·67										
105						105·47 folded Qtz vein 3cm wide folds // to foliation.							
						grades from s/st into finely banded silicic/pyr + asp 3cm deformed bands 13 cm wide.			106	7299	2		
106						106·74 - 106·21 pale silicic heavily deformed pitted py bearing zone // to bedding							
	106·90	2·10	1·96			METASILTSTONE							
107						107·17 py rich 2cm bleached silicic band.							
						107·51 - 107·56 Massive milky Qtz py vein extensively deformed.							
108	107·80	0·90	0·84			107·84 - 107·92 Qtz vein with py + asp along contact margins.			108	7300	2		
						107·99 5cm thick coarse green band 60° to c.a.							
109													

GEONORTH

DRILLHOLE LOG

Drillhole No. 2-ZAP22
Page 7 of 15

PROJECT: ZAPOPAN
COMPANY:
CONTRACTOR:
DRILL:
COMMENCED:
COMPLETED:
COORDINATES:
ELEVATION:
AZIMUTH:
DECLINATION:
LOGGED BY: D.J.H

DEPTH m	RUN m	INTER-VAL m	RECOV-ERY m	%	SURVEY	DESCRIPTION	STRUCT-URE	DEPTH m	SAMPLE NUMBER	INTER-VAL m	WIDTH m	ANALYSES
109						108.59 - 110.69.						
						Dk grey sltst. common small garnets in zones approx 55° to core + pyr bands on 5cm freq < mm wide also ∥ to bedding						
110								110	7301	2		
						110.67 - 110.69 ?Chl/silicic band 65° to core.						
	110.80	3.0	2.94			110.69 - 111.14 Coarse qtz vein b. to core with ∥ to bedding base. Inclusions of dk sltst on circle breccia. Massive pyr within foliation + v. minor asp.						
111												
						111.24 - 111.31 } silicic bands pyr + 111.39 - 111.49 } rich esp. along contacts						
112						111.57 - 111.96. Banded seq. of pyr/chl flow with silicic/slt seq. 2-3mm wide bands on cm scale repetition.		112	7302	2		
						Asp xtals at top of seq 2-3cm across < 2% + 1cm band + Tourmaline near garnet-rich base. Seq 60° to core.						
113						112.93 - 113.0 Qtz band massive - pyr-rich + dk stringers of sltst v. little asp. vein @ 60° to core						
	113.80	3.0	2.94			METABLISTOVE CO_3 + pyr bands throughout						
114								114	7303	2		

GEONORTH

DRILLHOLE LOG

Drillhole No. Z-ZAP22
Page 9 of 15

PROJECT: ZAPOPAN
COMPANY:
CONTRACTOR:
DRILL:
COMMENCED:
COMPLETED:
COORDINATES:
ELEVATION:
AZIMUTH:
DECLINATION:
LOGGED BY: D.J.H.

DEPTH m	RUN m	INTER-VAL m	RECOV-ERY m	%	SURVEY	DESCRIPTION	STRUCT-URE	DEPTH m	SAMPLE NUMBER	INTER-VAL m	WIDTH m	ANALYSES
119						Slst. grades into pale silicic tuff with insipient foliation of the elongate min. + pyr 35° to core.						
120	120.30	1.40	1.15			120.04 - 120.12 Milky qtz band sub/ to bedding ?50° to core.		120	7306	2		
121						120.42 - 121.17 Silicified Slst with common qtz (coarse) veining. Abundant fine-grained pyr + asp. ? Hydraulic brecciation of Slst + silicification. Intensly deformed pyr + euhedral asp. through-out.						
						121.57 - grades back to garnet dusted Slst.						
						122.19 - 122.26 Qtz + pyr/asp/garnet zone						
122	122.80	2.30	2.43			122.27 - 122.29 Coarse qtz vein 30° to core boudinaged pyr-rich.		122	7307	2		
123						123.0 - 123.08 Qtz pyr vein						
						Dk grey METASILTSTONE bedded 50° to core.						
						123.91 18 cm zone of banded silicic/chl pyr bands pyr 2-4 mm (x2) bands at base Abundant small <1mm garnets.						
124	124.30	1.50	1.32					124	7308	2		

GEONORTH

DRILLHOLE LOG

Drillhole No. Z-ZAP 22
Page 10 of 15

PROJECT: ZAPOPAN
DRILL:
COORDINATES:

COMPANY:
COMMENCED:
ELEVATION:

CONTRACTOR:
COMPLETED:
AZIMUTH:

DECLINATION:
LOGGED BY: D.J.H

DEPTH m	RUN m	INTER-VAL m	RECOV-ERY m	%	SURVEY	DESCRIPTION	STRUCT-URE	DEPTH m	SAMPLE NUMBER	INTER-VAL m	WIDTH m	ANALYSES
124	124.30	1.50	1.32			124.09 - 124.26 dk green chl alt. silicic zone banded sub ∥ to bedding coarse abundant asp. + pyr (30%) (20%)						
						25 cm silicic zone dk light banding & intensely deformed, abundant (50%) pyr + asp. (~20%) upper most. (@ 127.12)						
+25												
	125.50	1.20	1.08									
						Dk grey METASILTSTONE		126	7309	2		
+26												
	126.10	0.60	0.46									
						128.0 - 128.27 Coarse asp & pyr within silicic zone or above, mm bedding folded ∥ to? foliation @ 40°. Fractured & off-set by late-stage CO_3 veining @ 15° & 25° to core.		127	7310	1		
+27												
	127.50	1.40	1.18									
						128.69 - 8 cm Qtz + abundant pyr vein.		128	7311	1		
+28												
	128.60	1.10	0.93									
+29												

GEONORTH

DRILLHOLE LOG

Drillhole No. Z-ZAP22
Page 11 of 15

PROJECT: ZAPOPAN
COMPANY:
CONTRACTOR:
DRILL:
COMMENCED:
COMPLETED:
COORDINATES:
ELEVATION:
AZIMUTH:
DECLINATION:
LOGGED BY: D.J.H.

DEPTH m	RUN m	INTER-VAL m	RECOV-ERY m	%	SURVEY	DESCRIPTION	STRUCT-URE		DEPTH m	SAMPLE NUMBER	INTER-VAL m	WIDTH m	ANALYSES			
129						Silica fine-grained tuff coarse garnet band @ 130.21 - 130.22										
130									130	7312	2					
	130.60	2.0	1.63			D/c grey SMEDASILISTONE minor silicic bands @ 50° to core										
131																
	131.50	0.90	0.89													
132									132	7313	2					
	132.45	0.95	0.72													
133																
	133.50	1.05	0.88													
134									134	7314	2					
	134.70	1.20	1.08													

BADLY BROKEN CORE

GEONORTH

DRILLHOLE LOG

Drillhole No. Z-ZAP22
Page 12 of 15

PROJECT: ZAPOPAN
COMPANY:
CONTRACTOR:
DRILL:
COMMENCED:
COMPLETED:
COORDINATES:
ELEVATION:
AZIMUTH:
DECLINATION:
LOGGED BY: D.J.H

DEPTH m	RUN m	INTER-VAL m	RECOV-ERY m	%	SURVEY	DESCRIPTION	STRUCT-URE	DEPTH m	SAMPLE NUMBER	INTER-VAL m	WIDTH m	ANALYSES
134						134.10 Core-orientation device gives attitude of coarse tuff bed 2 mm wide @ 038°/14°S Insipient foliation is @ 015°/70°S attitude to core = 50° bedding 35° foliation.						
	134.70	1.20	1.08									
135						135.36 8 cm of leucocratic boudins in dk / light - mm scale banding deformed about axis 35° to core pyx or mm bands. Garnets near base + CO_3 veining.						
136	136.0	1.30	1.21					136	7332	2		
						136.60 - CO_3 veining + silicic / pyx bands 1-2 cm wide.						
137	137.15	1.15	0.90									
138								138	7333	2		
	138.20	1.05	0.90			138.29 - 138.36 Crush zone. CO_3 abundant. Fresh pyg.						
						138.66. 6-8 mm silicic veins within sltst.						
139						Grades into coarse green chl tuff @ garnets along base.						
	139.40	1.20	1.12									

GEONORTH

DRILLHOLE LOG

Drillhole No.
Page 13 of 15

PROJECT: ZAPOPAN
COMPANY:
CONTRACTOR:
DRILL:
COMMENCED:
COMPLETED:
COORDINATES:
ELEVATION:
AZIMUTH:
DECLINATION:
LOGGED BY: D. J. H.

DEPTH m	RUN m	INTER-VAL m	RECOV-ERY m	%	SURVEY	DESCRIPTION	STRUCT-URE	DEPTH m	SAMPLE NUMBER	INTER-VAL m	WIDTH m	ANALYSES
139												
	139.40	1.20	1.12			Coarse chl. METANIFF						
140	140.0	0.60	0.59			140.58 - 140.64. Banded dk/light coarse hft + tourmaline needles. mesofolding ∥ to 35° to core. pyr in 6mm central band. zone clips ∥ to bedding @ 40° to core.		140	7334	2		
	140.60	0.60	0.37									
141						DK grey METASILTSTONE						
142								142	7335	2		
	142.20	1.60	1.21			142.18 change to silicic tuff - fine light grey. minor Cas + hematite veins. coarsens towards base with foliation 35° to core. Bedded contact to dk sltst ∥ to foliation. Base 144.38.						
143						METASILTSTONE incoming from coarse METANIFF						
144								144	7336	2		
	144.90	2.70	2.54									

GEONORTH

DRILLHOLE LOG

Drillhole No.
Page 14 of 15

PROJECT: ZAPOPAN
COMPANY:
CONTRACTOR:
DRILL:
COMMENCED:
COMPLETED:
COORDINATES:
ELEVATION:
AZIMUTH:
DECLINATION:
LOGGED BY: D. J. H

DEPTH m	RUN m	INTER-VAL m	RECOV-ERY m	%	SURVEY	DESCRIPTION	STRUCT-URE	DEPTH m	SAMPLE NUMBER	INTER-VAL m	WIDTH m	ANALYSES
144												
						144.38 – 144.57 Banded silicic dk/ light chl/pyr band mm scale mesofolds.						
145	144.90	2.70	2.54			144.78 – 145.11 progressively silicic & coarse chl tuff last 10 cm is pale green chert bedded 75° to core						
						DK - CO_3-na Sltst. at base.						
146	145.90	1.0	0.82					146	7337	2		
	146.20		0									
147												
	147.50	1.30	1.30			147.07 – 147.05 Banded silicic boudinage. light grey silicic mm/dk bands + chl alt.						
148								148	7338	2		
	148.70	1.20	1.15									
149												

GEONORTH

DRILLHOLE LOG

Drillhole No. ZAP22
Page 15 of 15

PROJECT: ZAPOPAN
COMPANY:
CONTRACTOR:
DRILL:
COMMENCED:
COMPLETED:
COORDINATES:
ELEVATION:
AZIMUTH:
DECLINATION:
LOGGED BY: D. S. H

DEPTH m	RUN m	INTER-VAL m	RECOV-ERY m	%	SURVEY	DESCRIPTION	STRUCT-URE	DEPTH m	SAMPLE NUMBER	INTER-VAL m	WIDTH m	ANALYSES
149						149.30 - 10 m coarse Chl zone bedded contact 35° to core.						
						144.37 - 149.83 Silicic mm banded light/dark + silicic bandings		150	7339	2		
150	150.10	1.30	1.13									
						150.48 - 150.63. Intensely deformed silicic zone garnet & chl-rich at base (10 cm).						
151	151.30	1.20	0.95			Dk fine grey METASILTSTONE						
						151.59 - 151.78. Chl. rich coarse hff zone. Insipient foliation // to bedding @ 35°.						
152						5 cm pyr rich zone (+ chl) at base pyr crudely banded (mm) // to bedding		152	7340	2		
	152.40	1.10	0.84									
153						Dk metasiltstone bedded 30° to core with minor Qtz/hematite x-cutting veins						
						154.29 ½ cm wide, pyr-rich Qtz vein 80° to core & 4mm vein @ 154.37.						
154						Dk grey METASILTSTONE						
T.D	154.40	154.40	2.0	1.89.				T.D 154.40	7341	2.40		

GEONORTH

EXPLOREMIN PTY.LTD.

Diamond Drill Log: ZZAP/23

SUMMARY

CLIENT: ZAPOPAN N.L.

PROSPECT: ZAPOPAN

PROPOSED CO-ORDS E: 9946 N: 9941 R.L.: 99
LAID OUT CO-ORDS E: 9946 N: 9941 R.L.: 99
ACTUAL CO-ORDS E: 9946 N: 9941 R.L.: 100.9

PLANNED DEPTH (M): 150
TARGET DEPTH (M): 40-150
ACTUAL DEPTH (M): 115.3

BEARING ° Grid: 032 ° Mag:
INCLINATION -°: 70

PROPOSED BY: J.G.
PLANNED BY: J.G.
LAID OUT BY: MACJAP
SURVEYED BY:

DRILLED BY: ROCKDRILL RIG 8

DATE COMMENCED: 88/07/03
DATE COMPLETED: 88/07/09

PRE-COLLAR (M): 34
HQ (M): 81.3
NQ (M):
BQ (M):
OTHER (M):
WEDGES PLACED:

COMMENTS/ASSAY SUMMARY:

DOWN HOLE SURVEYS

DEPTH (m): 36 AZIMUTH (mag. °): 029 INCLN (°): 71
DEPTH (m): 80 AZIMUTH (mag. °): 026 INCLN (°): 70
DEPTH (m): 115 AZIMUTH (mag. °): 024 INCLN (°): 70
DEPTH (m): AZIMUTH (mag. °): INCLN (°):
DEPTH (m): AZIMUTH (mag. °): INCLN (°):
DEPTH (m): AZIMUTH (mag. °): INCLN (°):
DEPTH (m): AZIMUTH (mag. °): INCLN (°):
DEPTH (m): AZIMUTH (mag. °): INCLN (°):
DEPTH (m): AZIMUTH (mag. °): INCLN (°):
DEPTH (m): AZIMUTH (mag. °): INCLN (°):

ANALABS

A division of Macdonald Hamilton & Co. Pty. Ltd.
Phone(09) 458 7999
52 Murray Road, Welshpool, W.A. 6101
Telex AA92560

ANALYTICAL REPORT No. 247.0.14.02655

THIS REPORT MUST READ IN CONJUNCTION WITH THE ACCOMPANYING ANALYTICAL DATA

ZAPOPAN NL
PO BOX 4045

DARWIN NT 0801

ORDER No.	PROJECT
056	

DATE RECEIVED	RESULTS REQUIRED
06/07/88	ASAP

No. OF PAGES OF RESULTS	DATE REPORTED	No. OF COPIES	TOTAL No. OF SAMPLES
1	14/07/88	1	55

ATE F PLES	PRE-TREATMENT								ANALYSIS		
ER OW	SAMPLE NUMBERS	DRY	CRUSH	SPLIT	PUL-VERISE	SIEVE	OTHER SEE-REMARKS	NONE	REFER TO ANALYSIS SECTION	PREPARATION	METHOD
	7256/338,7332/41	DC	Prep: 833						Au,Au(1),Au(21/313		

RESULTS TO

MR ROD JOHNSON
ZAPOPAN NL
PO BOX 4045

DARWIN NT 0801

RESULTS TO

REMARKS

2-ZAP/22
23

STATE OF SAMPLES

ole core	WC
it core	SC
tting	CU
ck	Ro
l	SO
ip	PU
ter	WA
sue	TI
eam sediment	SS
avy mineral	HM

ANALYSIS — PREPARATION

perchloric acid	A1	cold acid	CA
hydrochloric acid	A2	specific sulphide	SS
nitric acid	A3	other mixed acids	Ma
aqua regia	A4	alkaline attack	AA
nitric-perchloric	A5	volatilization	VO
HF mixture	A6	ignition	IG
HF under pressure	A7	pressed powder (XRF)	PP
fusion	A8	glass fusion (XRF)	GF

ANALYSIS — METHOD

atomic absorbtion	AAS
x-ray fluorescence	XRF
spectrophotometry	SPEC
colorimetry	COL
chromatography	CHR
titration	TTN
other chemical means	CHEM
miscellaneous	MISC
fluorescence	FLUOR
inductively coupled plasma	ICP

AUTHORISED OFFICER

ANALABS

A Division of Macdonald Hamilton & Co. (SK) Ltd.

ANALYTICAL DATA

SAMPLE PREFIX | REPORT NUMBER | REPORT DATE | CLIENT ORDER No.

247.0.14.02655 | 14/07/88 | 058

TUBE No.	SAMPLE No.	Au	Au(1)	Au(2)		Type	Depth
1	7311	2.360	2.680	4.840		ZZAP22	127-128
2	7312	0.134	--	--			128-130
3	7313	0.086	--	--			130-132
4	7314	0.021	--	--			132-134
5	7315	0.764	0.689	0.682		Z-ZAP23	0-2
6	7316	0.079	--	--			2-4
7	7317	0.027	--	--			4-6
8	7318	0.008	--	--			6-8
9	7319	0.189	--	--			8-10
10	7320	0.177	--	--			10-12
11	7321	0.020	--	--			12-14
12	7322	0.008	0.007	0.005			14-16
13	7323	0.007	--	--			16-18
14	7324	0.008	--	--			18-20
15	7325	0.007	--	--			20-22
16	7326	0.010	--	--			22-24
17	7327	0.009	--	--			24-26
18	7328	0.017	--	--			26-28
19	7329	<0.005	--	--			28-30
20	7330	0.007	--	--			30-32
21	7331	<0.005	--	--		ZZAP22	134-136
22	7332	0.016	--	--			136-138
23	7334	<0.005	--	--			138-140
24	7335	<0.005	--	--			140-142
25	7336	<0.005	--	--			142-144

Results in ppm unless otherwise specified

T = element present but concentration too low to quantify

X = element concentration is below detection limit

— = element not determined

ANALABS

A Division of Macdonald Hamilton & Co. Pty. Ltd.

ANALYTICAL DATA

RECEIVED 19 JUL 1988

SAMPLE PREFIX	REPORT NUMBER	REPORT DATE	CLIENT ORDER No.	PAGE
	247.0.14.02655	14/07/88	058	3 OF 3

TUBE No.	SAMPLE No.	Au	Au(1)	Au(2)			Hole No.	Depth		
1	7337	0.007	--	--			Z ZAP-22	144-146		
2	7338	0.007	--	--				146-148		
3	7339	<0.005	--	--				148-150		
4	7340	<0.005	--	--				150-152		
5	7341	0.013	0.011	0.014				152-154.40		
6										
7										
8										
9										
10										
11										
12										
13										
14										
15										
16										
17										
18										
19										
20										
21										
22										
23	DETECTION	0.005	0.005	0.005						
24	UNITS	PPM	PPM	PPM						
25	METHOD	313	313	313						

Results in ppm unless otherwise specified
T = element present but concentration too low to measure
X = element concentration is below detection limit
— = element not determined

ANALABS

A division of MacDonald Hamilton & Co. Pty. Ltd. (Inc NSW)

(089) 84 3849 | Cnr Coonawarra & Mataram Rds, Winnellie | Fax: (089) 84 3984

ANALYTICAL REPORT No. 247.0.14.02819

THIS REPORT MUST BE READ IN CONJUNCTION WITH THE ACCOMPANYING ANALYTICAL DATA

INVOICE TO:

ZAPOPAN NL
PO BOX 4045

DARWIN NT 0801

ORDER No.	PROJECT
058	

DATE RECEIVED	RESULTS REQUIRED
24/08/88	ASAP

No. OF PAGES OF RESULTS	DATE REPORTED	No. OF COPIES
3	31/08/88	1

TOTAL No. OF SAMPLES: 55

SAMPLE NUMBERS	SAMPLE DESCRIPTION	ELEMENT/METHOD
7286/330,7332/41	PU Prep: 014	As/401

REMARKS

Z-ZAP/22
23

RESULTS TO:

J.GOULEVITCH
ZAPOPAN NL
PO BOX 93

EARLVILLE QLD 4870

RESULTS TO:

RESULTS TO:

AUTHORISED OFFICER

ANALABS

A Division of Macdonald Hamilton & Co. Pty. Ltd.

ANALYTICAL DATA

SAMPLE PREFIX	REPORT NUMBER	REPORT DATE	CLIENT ORDER No.	PAGE
	247.0.14.02819	31/08/88	058	2 OF 3

TUBE No.	SAMPLE No.	As				Hole N°	Depth			
1										
2										
3										
4										
5	7315	5200				ZAP23	0-2			
6	7316	611					2-4			
7	7317	191					4-6			
8	7318	83					6-8			
9	7319	160					8-10			
10	7320	141					10-12			
11	7321	68					12-14			
12	7322	32					14-16			
13	7323	68					16-18			
14	7324	89					18-20			
15	7325	85					20-22			
16	7326	108					22-24			
17	7327	91					24-26			
18	7328	108					26-28			
19	7329	59					28-30			
20	7330	52					30-32			
21										
22										
23										
24										
25										

Results in ppm unless otherwise specified
T = element present; but concentration too low to measure
X = element concentration is below detection limit
— = element not determined

AUTHORISED OFFICER

ANALABS

A Division of Macdonald Hamilton & Co. Pty. Ltd.

ANALYTICAL DATA

SAMPLE PREFIX	REPORT NUMBER	REPORT DATE	CLIENT ORDER No.	PAGE
	247.0.14.02819	31/08/88	058	3 OF 3

TUBE No.	SAMPLE No.	As				Hole N°	Depth			
1										
2										
3										
4										
5										
6										
7										
8										
9										
10										
11										
12										
13										
14										
15										
16										
17										
18										
19										
20										
21										
22										
23	DETECTION	2								
24	UNITS	PPM								
25	METHOD	401								

Results in ppm unless otherwise specified
T = element present; but concentration too low to measure
X = element concentration is below detection limit
— = element not determined

AUTHORISED OFFICER

ANALABS

A division of Macdonald Hamilton & Co Pty Ltd
52 Murray Road Welshpool W.A 6101
Phone(09) 458 7999
Telex AA92560

ANALYTICAL REPORT No. 247.0.14.02669

THIS REPORT MUST READ IN CONJUNCTION WITH THE ACCOMPANYING ANALYTICAL DATA

ZAPOFAN NL
PO BOX 4045

DARWIN NT 0801

ORDER No.	PROJECT
063	

DATE RECEIVED	RESULTS REQUIRED
09/07/88	ASAP

No. OF PAGES OF RESULTS	DATE REPORTED	No. OF COPIES	TOTAL No. OF SAMPLES
1	25/07/88	1	16

ER DW.	SAMPLE NUMBERS	PRE-TREATMENT: DRY	CRUSH	SPLIT	PULVERISE	SIEVE	OTHER SEE REMARKS	NONE	ANALYSIS: REFER TO ANALYSIS SECTION	PREPARATION	METHOD
	7342/57	RC Prep: 833							Au,Au(1),Au(2)/313		
	7342/57	RC							As/401		

RESULTS TO

MR ROD JOHNSON
ZAPOFAN NL
PO BOX 4045

DARWIN NT 0801

RESULTS TO

REMARKS

Z-ZAP 23

STATE OF SAMPLES		ANALYSIS — PREPARATION				ANALYSIS — METHOD	
ole core	WC	perchloric acid	A1	cold acid	CA	atomic absorbtion	AAS
it core	SC	hydrochloric acid	A2	specific sulphide	SS	x-ray fluorescence	XRF
tting	CU	nitric acid	A3	other mixed acids	Ma	spectrophotometry	SPEC
	Ro	aqua regia	A4	alkaline attack	AA	colorimetry	COL
	SO	nitric-perchloric	A5	volatilization	VO	chromatography	CHR
	PU	HF mixture	A6	ignition	IG	titration	TTN
	WA	HF under pressure	A7	pressed powder (XRF)	PP	other chemical means	CHEM
	TI	fusion	A8	glass fusion (XRF)	GF	miscellaneous	MISC
eam sediment	SS					fluorescence	FLUOR
mineral	HM					inductively coupled plasma	ICP

AUTHORISED OFFICER _____

ANALABS

A Division of Macdonald Hamilton & Co Pty Ltd

ANALYTICAL DATA

SAMPLE PREFIX	REPORT NUMBER	REPORT DATE	CLIENT ORDER No	PAGE
	247.0.14.02669	25/07/88	063	1 OF 1

TUBE No	SAMPLE No	As	As	Au	Au(1)	Au(2)		Hole No	Depth	
	7342	15	-	0.118	-	-		ZAP 23	33.50 -	34.00
	7343	35	-	0.007	-	-			36 -	38
	7344	75	-	0.006	-	-			38 -	40
	7345	40	-	0.005	-	-			40 -	42
	7346	320	-	0.321	-	-			42 -	44
	7347	910	-	0.330	-	-			44 -	46
	7348	30	-	0.022	-	-			46 -	48
	7349	>2500	0.73	0.660	0.777	1.035			48 -	50
	7350	230	-	0.083	-	-			50 -	52
	7351	90	-	0.092	-	-			52 -	54
	7352	360	-	0.555	0.585	0.492			54 -	56
	7353	45	-	0.043	-	-			56 -	58
	7354	440	-	0.977	0.916	0.416			58 -	60
	7355	2400	-	0.170	-	-			60 -	62
	7356	>2500	0.75	0.223	-	-			62 -	64
	7357	35	-	0.222	-	-			64 -	66
	DETECTION	2	0.01	0.005	0.005	0.005				
	UNITS	PPM	%	PPM	PPM	PPM				
	METHOD	401	404	313	313	313				

Results in ppm unless otherwise specified
T = element present; but concentration too low to measure
X = element concentration is below detection limit
– = element not determined

AUTHORISED OFFICER _____

CORE RECOVERY LOG

PROSPECT/MINE: ZAPOPAN HOLE NO: ZZAP23

Logged By: ..... Sheet: ...../.....

Depth (m)		Interval	Recovery
From	To	(m)	(m)
33.50	34.90	1.40	0.97
34.90	35.60	0.70	0.39
35.60	36.20	0.60	0.47
36.20	36.90	0.70	0.70
36.90	38.40	1.50	1.41
38.40	39.70	1.30	1.24
39.70	40.70	1.0	0.78
40.70	41.80	1.10	0.76
41.80	42.40	0.60	0.56
42.40	42.90	0.50	0.37
42.90	44.40	1.50	1.38
44.40	46.0	1.60	1.48
46.0	47.50	1.50	1.31
47.50	48.20	0.70	0.70
48.20	49.90	1.70	1.27
49.90	50.40	0.50	0.31
50.40	51.40	1.0	0.81
51.40	53.20	1.80	1.73
53.20	54.0	0.80	0.80
54.0	54.60	0.60	0.56
54.60	55.40	0.80	0.81
55.40	56.10	0.70	0.40
56.10	56.90	0.80	0.71
56.90	57.90	1.0	0.83
57.90	58.80	0.90	0.89
58.80	60.50	1.70	1.43
60.50	61.30	0.80	0.74
61.30	61.90	0.60	0.33
61.90	63.10	1.20	0.88
63.10	64.30	1.20	0.92
64.30	65.0	0.70	0.61
65.0	65.90	0.90	0.84
65.90	66.90	1.0	0.94
66.90	67.10	0.20	0.18
67.10	68.0	0.90	0.76
68.0	68.80	0.80	0.78
68.80	69.40	0.60	0.61
69.40	70.80	1.40	0.99
70.80	71.90	1.10	1.08
71.90	72.90	1.0	0.93
72.90	73.90	1.0	0.79
73.90	75.90	2.0	1.76
75.90	76.70	0.80	0.79
76.70	78.0	1.30	1.18
78.0	79.4	1.40	1.31
79.40	80.10	0.70	0.70
80.10	81.0	0.90	0.63
81.10	81.70	0.70	0.52
81.70	81.90	0.20	0.21
81.90	82.30	0.40	0.31
82.30	82.60	0.30	0.16
82.60	83.0	0.40	0.33
83.0	83.90	0.90	0.72
83.90	84.70	0.80	0.73
84.70	85.10	0.40	0.29
85.10	86.40	1.30	1.22
86.40	89.30	2.90	2.74
89.30	90.60	1.30	1.21
90.60	91.50	0.90	0.59
91.50	92.0	0.50	0.38
92.0	92.60	0.60	0.31
92.60	93.20	0.60	0.59
93.20	94.20	1.0	0.84
94.20	95.10	0.90	0.86
95.10	95.90	0.80	0.62
95.90	96.50	0.60	0.55
96.50	96.90	0.30	0.30
96.90	97.60	0.70	0.59
97.60	98.30	0.70	0.57
98.30	99.50	1.20	1.07
99.50	101.50	2.0	2.0
101.50	102.20	0.70	0.51
102.20	104.10	1.90	1.81
104.10	105.90	1.80	1.81
105.90	108.0	2.10	2.02
108.0	109.30	1.30	1.27
109.30	111.60	2.30	2.18
111.60	113.70	2.10	1.94
113.70	115.30	1.60	1.49

SHEET 1 of 2

LOGGED BY: D.S.H.

CORELOGGING DATA

AREA / LEASE ..... PROSPECT ZAPOPAN ..... HOLE No Z-ZAP 23

DIST. FROM COLLAR	BREAKS / METRE	RECOVERY	R.Q.D.	SPEC. GRAVITY	MAG. SUSCEPTILITY	ANGLE TO LONG CORE AXIS: So	ANGLE TO LONG CORE AXIS: Si	STRUCTURES	LITHOLOGY	ESTIMATED MINERAL PERCENTAGES: milky qtz.	sugary qtz.	f. gr. qtz.	musc.	biot.	garnet	chl.	act.	cbt.	tourm.	py.	po.	hemt.	base metal su.	aspy.	Sericite		SAMPLE No.	ASSAY RSLTS: Au	ASSAY RSLTS: As	GEOLOGICAL COMMENTS (mainly texture)
40												1		2						tr								0.005		
41														1		tr				tr										
42								b.i.f.		4		1				20	2			4		2		tr				0.321		Hem-rich B.I.f.
43										1					½					½				tr						
44								b.i.f.				8		tr	½	10			2		2			½				0.370		
45												½			1	2				½										
46								b.i.f.			1	½		tr	<1	5		½		3								0.022		
47										10				1											2			0.022		?sericite-tuff.
48														2		22				1								0.824		
49								b.i.f			8					18	5			5				1½						
50								Qtz		25		4		tr	1	12	tr			1								0.083		
51												1				10	tr			tr					10					
52								b.i.f.			1	5		tr	4	40	5			1				tr				0.092		
53								Qtz		8		4			3	20	1			2				tr						
54								b.i.f		2		5			3	40	5			2				tr				0.564		
55								b.i.f.			1	5			1	10	1			2										
56												½			½	10				½								0.043		
57										6	1				1	16	1			½						40				
58																														

LITHOLOGICAL LEGEND:

Ssm	Mudstone	tAv	Ashstone	Su	Massive Sulphide		Veining >30%
cSsm	Carbonaceous Mudstone	Sct	Chert	ca	Gossan		Tourmaline >5%
Ssl	Siltstone	Slf	B.I.F.	Mh	Hornfels		Arsenopyrite >0.5%
Sst	Sandstone	caSlf	B.I.F. Carbonate >15%	MBd	Metadolerite		Base metal sulphides >5%
Sgw	Greywacke	chSlf	B.I.F. Chlorite >40%	Af	Felsite	py	Pyrite >5%
Scg	Conglomerate	actSlf	B.I.F. Actinolite >40%	Agr	Granite	po	Iron sulphides >2%
Sca	Carbonate	micSlf	Micas >30% (commonly includes garnets)		Brecciated rock		

SHEET 2 of 2

LOGGED BY: D.S.H.

CORELOGGING DATA

AREA / LEASE ..... PROSPECT ZAPOPAN ..... HOLE No 2-ZAP 23

DIST. FROM COLLAR	BREAKS / METRE	RECOVERY	R.Q.D.	SPEC. GRAVITY	MAG. SUSCEPTILITY	ANGLE TO LONG CORE AXIS: So	ANGLE TO LONG CORE AXIS: Si	STRUCTURES	LITHOLOGY	ESTIMATED MINERAL PERCENTAGES: milky qtz.	sugary qtz.	f. gr. qtz.	musc.	biot.	garnet	chl.	act.	cbt.	tourm.	py.	po.	hemt.	base metal su.	aspy.		SAMPLE No.	ASSAY RSLTS: Au	ASSAY RSLTS: As	GEOLOGICAL COMMENTS (mainly texture)
58														·	4	10				3				tr	20				
59										2		2			2	20				5				1	2				
60								bif.																					
								Qtz		10		2		tr	4	10	2			3									
61											tr	7		tr	2	10				2					2				
62										5					1	14				1½				½					
63																													
								bif.		5	8				3	10		4		2				½				? Basal B.i.f.
64																													
										26		2			1	2		tr		1									
65								Qtz																					
											1	½				5				2									
66											2					12				tr									
67														tr		10													
68																													

LITHOLOGICAL LEGEND:

- Mdst — Mudstone
- Cbmd — Carbonaceous Mudstone
- Slst — Siltstone
- Sst — Sandstone
- Sgw — Greywacke
- Cgl — Conglomerate
- Lmst — Limestone
- Ash — Ashestone
- Cht — Chert
- BIF — B.I.F.
- cbBIF — B.I.F. Carbonate > 15%
- chBIF — B.I.F. Chlorite > 40%
- actBIF — B.I.F. Actinolite > 40%
- micBIF — Mica > 30% (approximate) includes garnets
- Sv — Massive Sulphide
- Qz — Quartz
- Hfls — Hornfels
- MBd — Metadolerite
- Ad — Felsite
- Agr — Granite
- Brecciated Rock
- Veining > 30%
- Tourmaline > 5%
- Arsenopyrite > 0.5%
- Base metal sulphides > 5%
- Py — Pyrite > 5%
- Po — Iron sulphides > 2%

PERCUSSION DRILL LOG

PROSPECT/MINE: ZAPOPAN HOLE NO: Z-ZAP23

Collar: ..... E ..... N ..... RL

Azimuth: 032° °Mag/~~grid~~ Inclination: -70°

Date Drilled: 3/7/88 Logged By: D.J.H. Sheet: 1/1

Depth (m) From	Depth (m) To	Sample No.	Description: Lithology	Qtz	Py	Apy	Au
0	2	7315	Soils + 10% coarse milky qtz + weathered sltst & clays	✓			
2	4	7316	40% milky qtz <10% pale tuff weathered <10% brown tuff + clays	✓			
4	6	7317	20% smoky qtz dk sltst pale clays 40% tuffs	✓			
6	8	7318	60% sltst, 20% pale tuff weathered hi clays				
8	10	7319	as above				
10	12	7320	Dk sltst + minor pyr Fe-rich in part + clays minor tuffs weathered		✓		
12	14	7321	Pale grey tuff (clean) tuffs minor sltst + clays				
14	16	7322	as above				
16	18	7323	<5% smoky qtz, dk sltst <10% tuffs + clays	✓			
18	20	7324	Dk sltst <2% milky qtz <5% tuffs minor clays & pyr	✓	✓		
20	22	7325	as above part Fe-rich				
22	24	7326	<2% qtz 10% pale fine hard tuff, dk sltst + v. mdyr pyr clays & green/grey tuff				
OXIDATION BOUNDARY							
24	26	7327	Dk sltst <10% pale tuff <10% pale green tuff				
WATER + 26	28	7328	<5% qtz coarse dk sltst minor pyr + asp within qtz pyr within sltst	✓	✓	✓	
28	30	7329	10% qtz milky 60% pale grey tuff sltst minor pyr	✓	✓		
30	32	7330	OPEN STOPE??				
32	34	—	Nil sample recovery				
			E.O. PRE-COLLAR				

DRILLHOLE LOG

Drillhole No. Z-ZAP 23
Page 1 of 17

PROJECT: ZAPOPAN
DRILL: RIG 8.
COORDINATES:

COMPANY: ROCKDRIL
COMMENCED: 5/7/88.
ELEVATION:

CONTRACTOR:
COMPLETED:
AZIMUTH: 032° GRID

DECLINATION: -70°
LOGGED BY: D.S.H

DEPTH m	RUN m	INTER-VAL m	RECOV-ERY m	%	SURVEY	DESCRIPTION	STRUCT-URE	DEPTH m	SAMPLE NUMBER	INTER-VAL m	WIDTH m	ANALYSES
33												
	33.50					33.50 → Fine pale/dk bedded silicic Metatuff Bedded @ 45° to core		33.50				
34						34.01 grades to dk grey METASILTSTONE bedded as above.	Core					
						34.59 light/dk bedded METATUFF.						
35	34.90	1.40	0.97			35.0 - 35.10 Crush zone clay-rich.						
						35.20 - 35.26 bedded pale green/cream chert zone with pale silicic bands						
	35.60	0.70	0.39			35.60-35.64 crush zone fresh clays						
36						35.64 - 36.52. Dk silicified sltst. grades in to fine pale hard silicic tuff with dk ? tourmaline needles defining foliation of 35° to core.	Back 4 Section	36.0	7342	2.50		
	36.20	0.60	0.47									
						36.66 - Tuff grades back to dk sltst with pyr along fract.						
37	36.90	0.70	0.70									
						37.62 - 37.65 Alternating dk/light bands with ?epidote/chl/pyr/?K-Spar min. pyr enriched within pale silicic zone below along base pyr defines foliation also at 35° to core.						
38	38.90	1.50	1.41					38.0	7343	2.0		

GEONORTH

DRILLHOLE LOG

Drillhole No. Z 7AP 23
Page 2 of 7

PROJECT: ZAPOPAN
DRILL: Rig 8
COORDINATES:

COMPANY: ROCKDRIL
COMMENCED:
ELEVATION:

CONTRACTOR:
COMPLETED:
AZIMUTH:

DECLINATION:
LOGGED BY: D. S. H.

DEPTH m	RUN m	INTER-VAL m	RECOV-ERY m	%	SURVEY	DESCRIPTION	STRUCT-URE	DEPTH m	SAMPLE NUMBER	INTER-VAL m	WIDTH m	ANALYSES
38	38.40	1.50	1.41			METATUFF 38.19 - 38.25 pale green / pink ? alt. Slts banded with central 2cm band pyr, asp rich 38.52 - 38.62 pale green / cream / pink silicic zone rich in pyr + asp. // to foliation. 38.98 - 39.0 Qtz vein // to bedding with mm wide CO3 along contact.						
39	39.70	1.30	1.24			39 - 41.80 Dk cm scale banded grey tuff with well developed min segregation @ 35° to core Dk grey METASILTSTONE minor pyr		40	7344	2		
40	40.70	1.0	0.78									
41												
42	41.80	1.10	0.76			42.35 - 42.40 Crush zone 42.49 - 42.76 mm-scale banding of light/dark silicic bands, abundant hematite pyr asp epidote + pale yellow (?k-sp) 3cm basal section heavily pitted from eroded sulph?		42	7345	2		
	42.40	0.60	0.56									
43	42.90	0.50	0.37									

GEONORTH

DRILLHOLE LOG

Drillhole No. Z-ZAP 23
Page 3 of 17

PROJECT: ZAPOPAN
DRILL:
COORDINATES:

COMPANY:
COMMENCED:
ELEVATION:

CONTRACTOR:
COMPLETED:
AZIMUTH:

DECLINATION:
LOGGED BY: D. J. H.

DEPTH m	RUN m	INTER-VAL m	RECOV-ERY m	%	SURVEY	DESCRIPTION	STRUCT-URE	DEPTH m	SAMPLE NUMBER	INTER-VAL m	WIDTH m	ANALYSES
43						Coarse dk MEASILTSTONE. Strong foliation 30° to core bedding 45° to core.						
44						43.91. 19 cm of altered Qtz/chl. ? epidote pale yellow mm/garnet/pyr/silicic lens & dk banding on mm scale // to bedding. Minor folding // to foliation @ 30° to core. Abundant pyr.		44	7346	2		
	44.40	1.50	1.38			44.13. 4 mm pyr band. 44.21 - 44.22. Epidote band // to foliation 35° to core.						
45						44.57 - 44.62 Qtz vein. 44.82 - 44.96. Deformed silicic zone abundant pyr pitted about top. Qtz rich + mm dk bands. all approx 45° to core.						
46	46.0	1.60	1.48			44.96 - 47.26 mm scale banded tuff light/dk/coarse/fine 4-12 cm rich beds 40° to core. Foliation 35° to core.						
						46.14 - 46.17. pitted silicic band // to bedding. 45° to core.						
47						47.26 - 47.49. Broken Qtz vein. 47.49 - 47.56 Fresh crush zone						
	47.50	1.50	1.31			47.56 - 48.76. Pale silicic banded tuff with Qtz veins. grades into dk sltst (altered) → dk sltst		48	7348	2		
48	48.20	0.70	0.70									

GEONORTH

DRILLHOLE LOG

PROJECT: ZAPOPAN | COMPANY: | CONTRACTOR:

DRILL: | COMMENCED: | COMPLETED:

COORDINATES: | ELEVATION: | AZIMUTH: | DECLINATION:

LOGGED BY: D. ⇒ H

Drillhole No. 2 ZAP 23

Page 4 of 17

DEPTH m	RUN m	INTER-VAL m	RECOV-ERY m	%	SURVEY	DESCRIPTION	STRUCT-URE
48	48.2	0.70	0.70			48.2 - 48.43 Coarse foliated Slt/st band, 60° to core foliation 35° to core	
						20cm at base of pale green/garnet alteration zone = hornfelsed/bleached dk Slt/st + qtz bands.	
49						49.23 - 49.39 Silicic band 40% qtz ~20% carb. massive in crude bedding @ 50° to core. 2cm garnet-rich zone at base	
						49.69 - 49.70 metallic green "lens"	
50	49.90	1.70	1.27			band of qtz 70° to core. Silicic & dk mm bands of qtz for 6cm at base with 15cm qtz vein - minor silicic bands 3-4cm wide within pale grey Slt/st	
	50.40	0.50	0.39				
51						50.94 - 51.11 Clay infilled fault-zone with foliated fault gouge followed by 18cm of Chl alt Slt/st with	
	51.40	1.0	0.81			qtz veining. minor milky coarse qtz	
						Further 8cm zone of heavily fractured crush zone.	
52						51.11 - 52.09 bedded dk Slt/st with district foliation at 35° to core + bedding 50° to core.	
						52.09 - 52.83 Dk Slt/st garnet-clasted banded towards base	
						52.83 - 52.91 Coarse tuff band	
53		1.80				white qtz veins @ 53.09 - 53.20 52.91 - 53.0	
	53.20		1.73				

DEPTH m	SAMPLE NUMBER	INTER-VAL m	WIDTH m	ANALYSES
50	7349	2		
52	7350	2		

GEONORTH

DRILLHOLE LOG

Drillhole No. 2 ZAP23
Page 5 of 17

PROJECT: ZAPOPAN
COMPANY:
CONTRACTOR:
DRILL:
COMMENCED:
COMPLETED:
COORDINATES:
ELEVATION:
AZIMUTH:
DECLINATION:
LOGGED BY: D.S.H.

DEPTH m	RUN m	INTER-VAL m	RECOV-ERY m	%	SURVEY	DESCRIPTION	STRUCT-URE	DEPTH m	SAMPLE NUMBER	INTER-VAL m	WIDTH m	ANALYSES
53												
	53.20	1.80	1.73			53.46 – 8cm silicic band with 10 cm coarse milky qtz vein + minor pyr ± ≤ 3% asp – both subhedral vuggy qtz gouth.						
						53.51-53.61 chl. alt banded seq // to bedding @ 65°. Silicic bands & pyr bands on mm scale						
54	54.0	0.80	0.80					54	7351	2		
						54.53. 12cm mm pyr, chl, silicic bands + minor scattered 9yr cm size pyr abundant & heavily gossanous dusted.						
	54.60	0.60	0.56									
						Similar bands @ 54.21 - 55.71 (4cm bands)						
55												
						Dk grey METASILTSTONE:						
	55.40	0.80	0.81			55.90-55.99 Crush zone.						
56								56	7352	2		
	56.10	0.70	0.40			56.31 – 57.83. Dk grey METASILTSTONE grades into green/grey black spec clasts NFF with foliation @ 30° to core						
						Beddeu 55°. minor gossanous dusted.						
57	57.90	0.80	0.71			57.63 – 3cm Qtz milky vein // to bedding						
						Dk grey METASILTSTONE						
	57.90	1.0	0.82									
58								58	7353	2		
	58.80	0.90	0.89									

GEONORTH

DRILLHOLE LOG

Drillhole No. Z ZAP23
Page 6 of 17

PROJECT: ZAPOPAN
DRILL:
COORDINATES:

COMPANY:
COMMENCED:
ELEVATION:

CONTRACTOR:
COMPLETED:
AZIMUTH:

DECLINATION:
LOGGED BY: D.J.H.

DEPTH m	RUN m	INTER-VAL m	RECOV-ERY m	%	SURVEY	DESCRIPTION	STRUCT-URE	DEPTH m	SAMPLE NUMBER	INTER-VAL m	WIDTH m	ANALYSES
58												
	58.80	0.90	0.89									
59						Dk grey bedded METASILTSTONE						
60						Minor silica boudins @ 60.0 & 60.38 60.08 – 60.16 Bundles chl/dk brns silica/pyr. asp & garnets all approx sub ∥ to bedding		60	7354	2		
	60.50	1.20	1.43									
61												
	61.30	0.80	0.74			minor CO_3 within dk grey METASILTSTONE						
62	61.90	0.60	0.33					62	7355	2		
						62.96 minor stz/pyr veining (2mm)						

DRILLHOLE LOG

Drillhole No. Z-ZAR23
Page 7 of 17

PROJECT: ZAPOPAN
COMPANY:
CONTRACTOR:
DRILL:
COMMENCED:
COMPLETED:
COORDINATES:
ELEVATION:
AZIMUTH:
DECLINATION:
LOGGED BY: D.J.H.

DEPTH m	RUN m	INTER-VAL m	RECOV-ERY m	%	SURVEY	DESCRIPTION	STRUCT-URE
63							
	63.10	1.20	0.88			63.14. Qtz/pgr <cm vein.	
						63.27 - 65.57 18cm banded scg // to bedding lgt/dark mm bands ± pgr/chl + cub asb. - nct zone near top. + bleached edges. Xcuts bedding 60° to cor. Cross-cut by (O3, (? Odenite / Anhedrite) vein ½cm wide 25° to core.	
64							
	64.30	1.20	0.92				
						64.44 - 65.0 Qtz coarse ± pgr ± asb. occasional silicic boudins plus minor pgr 40° to core.	
65	65.0	0.90	0.61				
66	65.90	0.90	0.84			66.07 - 66.12. Silicic banding chl ± epidote pgr. parallel to bedding.	
						Dk silst grades into dk silicic tuff.	
						66.42; Fine silicic banding on mm scale with x-cutting dolomite vein 2mm wide. Imp. ment foliation 35° to core axis.	
67	66.90	1.0	0.94				
	67.10	0.20	0.18			66.89 Tuff grades to DI fine METASEDIMENT occasional chl wisps chl-rich bands, 2cm wide lgt/dk silicic banding on mm scale ± pgr ± chl at?	
68	68.0	0.90	0.76			67.91 - 68.0m crush zone	

DEPTH m	SAMPLE NUMBER	INTER-VAL m	WIDTH m	ANALYSES
64	7356	2		
66	7357	2		
68	7358	2		

GEONORTH

DRILLHOLE LOG

Drillhole No. Z-2A23
Page 8 of 17

PROJECT: ZAPOPAN
COMPANY:
CONTRACTOR:
DRILL:
COMMENCED:
COMPLETED:
COORDINATES:
ELEVATION:
AZIMUTH:
DECLINATION:
LOGGED BY: D.J.H.

DEPTH m	RUN m	INTER-VAL m	RECOV-ERY m	%	SURVEY	DESCRIPTION	STRUCT-URE
68							
						68.60 - 68.63. Qtz vein massive ppy is filling small vugs & fractures. Also @ 68.71-68.74.	
	68.80	0.80	0.78				
69							
	69.40	0.60	0.61				
70							
						70.12 - 70.18. Intensly deformed silicic alt fpgr zone - brecciated. Core 45° to core.	
	70.80	1.40	0.99			70.23 - 70.34. Massive coarse milky qtz vein & part brecciating dk Sltst. Sltst becomes silicic @ 70.35.	
71							
						71.01 - 71.18 Banded zone ?alt green/pale silicic light/dk mm bands. off set by 2 Ankerite veins.	
	71.90	1.10	1.08				
72						72.11. 13cm Alt. banded zone with foliation @ 35° to core. Bands 1-2 cm wide & 1-1cm apart Light/dk silicic bands. also @ 72.42 - 72.44. 72.52 - 72.56	
	72.90	1.0	0.93			Grades into dk sltst by 72.96	
73	73.90	1.0	0.91				

DEPTH m	SAMPLE NUMBER	INTER-VAL m	WIDTH m	ANALYSES
70	7359	2		
72	7360	2		

GEONORTH

DRILLHOLE LOG

Drillhole No. Z-ZAP
Page 9 of 17

PROJECT: ZAPOPAN.
DRILL:
COORDINATES:

COMPANY:
COMMENCED:
ELEVATION:

CONTRACTOR:
COMPLETED:
AZIMUTH:

DECLINATION:
LOGGED BY: D.S.H.

DEPTH m	RUN m	INTER-VAL m	RECOV-ERY m	%	SURVEY	DESCRIPTION	STRUCT-URE	DEPTH m	SAMPLE NUMBER	INTER-VAL m	WIDTH m	ANALYSES
73						Bedded dk METASILTSTONE occasional silicic bands, dk light banding + chl 20 cm wavelength 2-5cm wide.						
74	73.90	1.0	0.79					74	7361	2		
						74.79 - 7cm chl band						
75												
	75.90	2.0	1.76			75.91 - 75.99 CO_3-rich band.		76	7362	2		
76												
	76.70	0.80	0.79			76.81 Silicic bands + leucocratic boudins 4cm wide Chloritic bands at base with very scarce pyr. to 77.57						
77												
78	78.0	1.30	1.18					78	7363	2		

GEONORTH

DRILLHOLE LOG

Drillhole No.
Page 10 of

PROJECT:
COMPANY:
CONTRACTOR:
DRILL:
COMMENCED:
COMPLETED:
COORDINATES:
ELEVATION:
AZIMUTH:
DECLINATION:
LOGGED BY:

DEPTH m	RUN m	INTER-VAL m	RECOV-ERY m	%	SURVEY	DESCRIPTION	STRUCT-URE	DEPTH m	SAMPLE NUMBER	INTER-VAL m	WIDTH m	ANALYSES
78												
79						79.29 - 79.31 Qtz + pink ?k.spar. minor pyr. along contact margins.						
	79.40	1.40	1.31									
80								80	7364	2		
	80.10	0.70	0.70									
81	81.0	0.90	0.63			D/L grey METASILTSTONE. bedded coarse/fine v. occasional mm pyr bands + silicic or chl bands.	Broken core					
	81.70	0.70	0.52									
82	81.40	0.20	0.21					82	7365	2		
	82.30	0.40	0.31									
	82.60	0.30	0.16									
83	83.0	0.40	0.33									

GEONORTH

DRILLHOLE LOG

Drillhole No. Z-ZAP 23
Page 11 of 17

PROJECT: ZAPOPAN
DRILL:
COORDINATES:

COMPANY:
COMMENCED:
ELEVATION:

CONTRACTOR:
COMPLETED:
AZIMUTH:

DECLINATION:
LOGGED BY: D.S.H.

DEPTH m	RUN m	INTER-VAL m	RECOV-ERY m	%	SURVEY	DESCRIPTION	STRUCT-URE	DEPTH m	SAMPLE NUMBER	INTER-VAL m	WIDTH m	ANALYSES
83						83.13 - 83.15 Minor silicic/cal. band. distinct foliation @ 35° to core bedding @ 55° to core.						
	83.90	0.90	0.72					84	7366	2		
84						METASILTSTONE.						
	84.70	0.10	0.73									
85						84.89. - 85.0 CNSR zone fresh clays/pug.						
	85.10	0.40	0.29									
						85.82. 10cm silicic/pyr zone with CO_3 veining in top 2-3cm + light/dark mm bands		86	7367	2		
86												
	86.40	1.30	1.22									
87						METASILTSTONE - minor silicic bands						
						87.73 - 87.79 Deformed silicic light/dark bands & boudins. folded about 35° to core // for foliation.						
88								88	7368	2		

GEONORTH

DRILLHOLE LOG

Drillhole No. Z-ZAP 23
Page 12 of 17

PROJECT: ZAPOPAN
DRILL:
COORDINATES:

COMPANY:
COMMENCED:
ELEVATION:

CONTRACTOR:
COMPLETED:
AZIMUTH:

DECLINATION:
LOGGED BY: D.

DEPTH m	RUN m	INTER-VAL m	RECOV-ERY m	%	SURVEY	DESCRIPTION	STRUCT-URE	DEPTH m	SAMPLE NUMBER	INTER-VAL m	WIDTH m	ANALYSES
88						88.94 - 88.96 Qtz/f.k. spar (pink) vein upper most to tuff zone						
89	89.30	2.90	2.74			89.08: Chl. dk speck, green coarse tuff. banded grdes back to dk sltst. Mnr CO_2 10cm wavelength < cm silicic / pyr bands ∥ to bedding @ 45° to core						
90								90	7369	2		
	90.60	1.30	1.21			90.60: Banded dk sltst foliate @ 30° bedding 55°. Qtz-rich zones @ 92.21 - 92.27						
91												
	91.50	0.90	0.59									
92	92.0	0.50	0.38					92	7370	2		
	92.60	0.60	0.31									
93	93.20	0.60	0.59									

GEONORTH

DRILLHOLE LOG

Drillhole No. Z-ZAP27
Page 13 of 17

PROJECT: ZAPOPAN
COMPANY:
CONTRACTOR:
DRILL:
COMMENCED:
COMPLETED:
COORDINATES:
ELEVATION:
AZIMUTH:
DECLINATION:
LOGGED BY: D.J.H.

DEPTH m	RUN m	INTER-VAL m	RECOV-ERY m	%	SURVEY	DESCRIPTION	STRUCT-URE	DEPTH m	SAMPLE NUMBER	INTER-VAL m	WIDTH m	ANALYSES
93	93.20	0.60	0.59									
						93.54 - 93.77 & 93.95 - 94.15. Qtz-rich zone within broken core. Badly fract. & coz invaded. sl/st. inclusions within Qtz.	broken core					
94	94.20	1.0	0.84			Crush zones @ 93.95 - 93.99 and 94.09 - 94.27.		94	7371	2		
						94.34 - 94.79. Coarse chl hff. alt: clay-rich pitted appearance. Basal 10 cm is hi in coz & fract. grades into silicic zone 15 cm wide → dk gray sl/st.						
95	95.10	0.90	0.86									
96	95.90	0.80	0.62					96	7372	2		
						Chl-rich bands @ 96.27 - 96.31 with intense coz veining						
	96.50	0.60	0.53									
97	96.90	0.30	0.30									
						97.86 - 97.94. Intense coz veining						
	97.60	0.70	0.59									
98	98.30	0.70	0.57					98	7373	2		

GEONORTH

DRILLHOLE LOG

Drillhole No. Z-ZAP23
Page 14 of 17

PROJECT: ZAPOPAN
DRILL:
COORDINATES:

COMPANY:
COMMENCED:
ELEVATION:

CONTRACTOR:
COMPLETED:
AZIMUTH:

DECLINATION:
LOGGED BY: D.J.H.

DEPTH m	RUN m	INTER-VAL m	RECOV-ERY m	%	SURVEY	DESCRIPTION	STRUCT-URE		DEPTH m	SAMPLE NUMBER	INTER-VAL m	WIDTH m	ANALYSES			
98	98.30	0.70	0.57			98.42 – 98.58 Intense calcite zone.	ore									
						Dk slst. largely massive v. little bedding. minor silicic mm bands.	protein									
99																
	99.50	1.20	1.07													
									100	7374	2					
100																
						METASILTSTONE										
101																
	101.50	2.0	2.0													
									102	7375	2					
102	102.20	0.70	0.51			102.20 v. fine-grained silicified METASILTSTONE										
103																

GEONORTH

DRILLHOLE LOG

Drillhole No. 2-ZAP23
Page 15 of 17

PROJECT: ZAPOPAN
COMPANY:
CONTRACTOR:
DRILL:
COMMENCED:
COMPLETED:
COORDINATES:
ELEVATION:
AZIMUTH:
DECLINATION:
LOGGED BY: D. J. H.

DEPTH m	RUN m	INTER-VAL m	RECOV-ERY m	%	SURVEY	DESCRIPTION	STRUCT-URE	DEPTH m	SAMPLE NUMBER	INTER-VAL m	WIDTH m	ANALYSES
103						METASILTSTONE						
104	104.10	1.90	1.81			104.18 – 106.24 Alteration zone pink & lt silicic bedded & fractured Bedding 50° to core		104	7376	2		
105						Green chert-like band + garnets @ 104.36 – 104.46. 1cm silicic bands x-cut @ 20° to core.						
						CO3 - fracture zones @ 105.81 – 105.89, 105.24 – 105.31, 105.46 – 105.47						
106	105.90	1.80	1.81			6-8 cm finely banded dk/light non bands + silicic centre @ 105.37 – 105.39, 105.64, 105.73 & 106.16 – 106.22.		106	7377	2		
107						Dk. v.fine stst. with silicic bands at 107.97 & 108.04. Chl-rich at top. Scattered & crudely banded pyr. foliated // to elongate pyr. ? foliation @ 40°.						
108	108.0	2.10	2.02					108	7378	2		

GEONORTH

DRILLHOLE LOG

Drillhole No. Z-ZAP23
Page 16 of 17

PROJECT: ZAPOPAN
DRILL:
COORDINATES:

COMPANY:
COMMENCED:
ELEVATION:

CONTRACTOR:
COMPLETED:
AZIMUTH:

DECLINATION:
LOGGED BY: D.J.H.

DEPTH m	RUN m	INTER-VAL m	RECOV-ERY m	%	SURVEY	DESCRIPTION	STRUCT-URE	DEPTH m	SAMPLE NUMBER	INTER-VAL m	WIDTH m	ANALYSES
108						108.39 - 108.44 as above chl. pyr band with silicic bands & cross-cut by calcite. & @ 110.35 - 110.42.						
109	109.30	1.30	1.27			alt. silicic & S/Bst defines green/pink - scattered garnets 109.30 - 109.96. Core chl zone bedded 80° to core.						
110						DK grey METASILTSTONE		110	7379	2		
111	111.60	2.30	2.18			light/dk silicic bands @ 111.74 - 111.80. 112.30 - 112.42						
112						Pyr defines foliation @ 30° + bedding also seen @ 65° to core 112.34		112	7380	2		
113	113.70	2.10	1.94									

GEONORTH

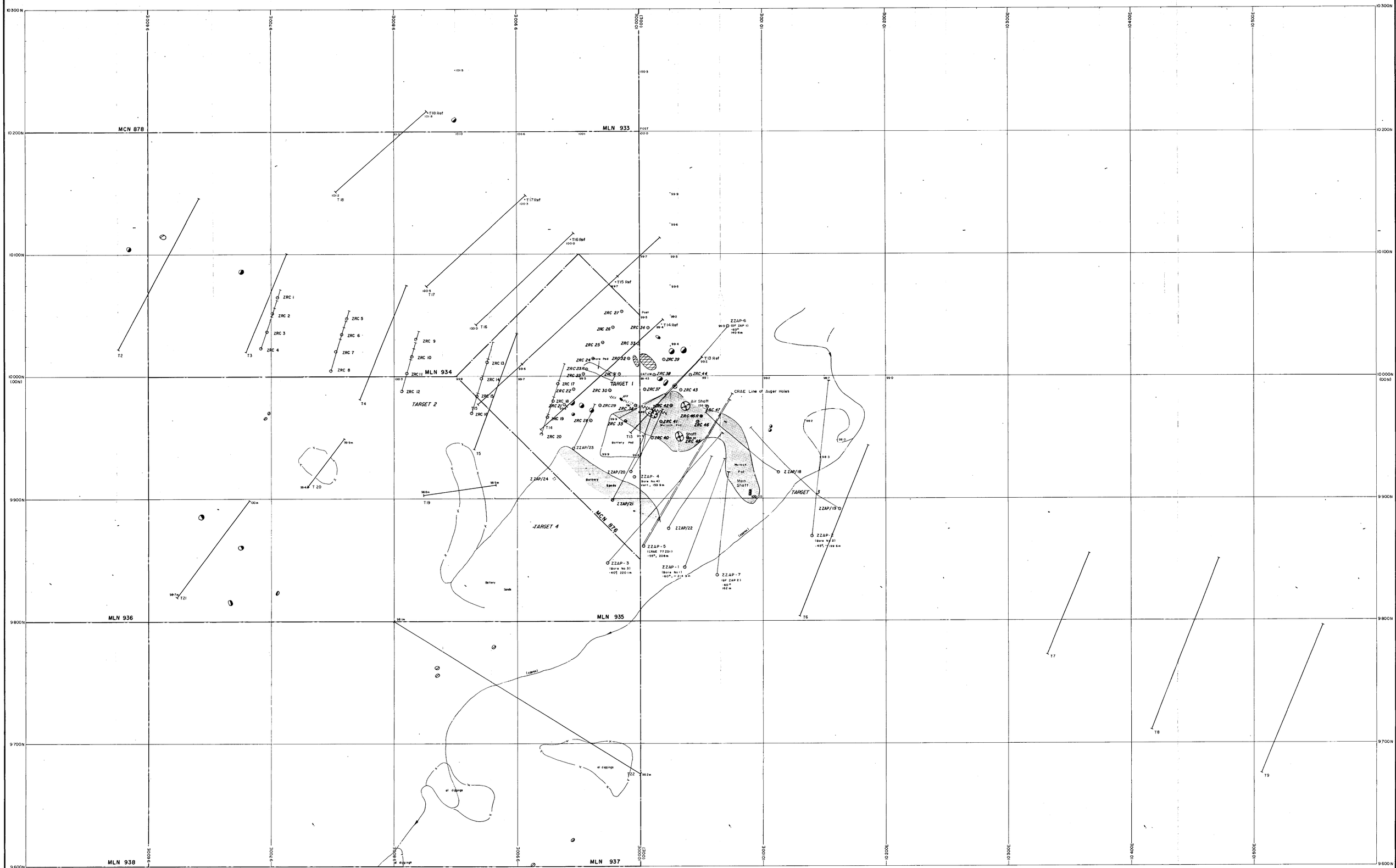
DRILLHOLE LOG

Drillhole No. Z-ZAP 27
Page 17 of 17

PROJECT: ZAPOPAN
COMPANY:
CONTRACTOR:
DRILL:
COMMENCED:
COMPLETED:
COORDINATES:
ELEVATION:
AZIMUTH:
DECLINATION:
LOGGED BY: D.S.H.

DEPTH m	RUN m	INTER-VAL m	RECOV-ERY m	%	SURVEY	DESCRIPTION	STRUCT-URE		DEPTH m	SAMPLE NUMBER	INTER-VAL m	WIDTH m	ANALYSES			
113																
	113.70	2.10	1.94													
114									114	7381	2.					
						light dk silicic bands at 114.03 - 114.12										
						v. occasional bgr & x-cutting mm calcite veins										
115																
	115.30	1.60	1.49					T.D.	115.30	7382	1.30					
116						T.D.										
117																
118																

GEONORTH



ABBREVIATIONS

abn	abundant	fr	vein	gp	epidote	gyp	gypsum	mag	magnetite	rdle	rhodonite
actn	actinolite	ggc	conglomerate	gt	talc	hd	hard	mgt	martite	rt	rutile
adm	admixture	gs	sandstone	hbl	hornblende	hem	hematite	mod	medium	rtd	rendmast(-ary)
agg	aggregate	gsh	siltstone/mudstone	hem	hematite	hex	hexagonal	mol	molybdenite	rtl	rutilated
amph	amphibolite	gtz	quartzite	hf	hornfelsed	hnbl	hornblende	mt	millerite	rtlzd	silicified
andes	andesite	GSR/Cpk	carbonate	hyp	hypersthene	ind	indurated	nd	nodular	rz	rhyolite
anhd	anhydrite		rock	ign	igneous	ipx	ilmenite	nod	nodule	sch	schistose
ap	apatite	anh	anhydrite	impg	impregnated	kln	kaolin	nrite	norite	sd	sand
A.P.	axial plane	chl	chlorite	in	intense	lbd	labradorite	obs	obsidian	sdg	sanding
arg	argillized	cly	clay	ingr	ingrained	lgr	lherzolite	oct	octahedral	sdy	sandstone
argy	argillaceous	clz	clinozoisite	intr	intrusive	lmt	limonite	ol	olivine	sh	shale
ark	arkose	cm	cm	ir	iron	lp	lapis	opx	orthopyroxene	sil	siliceous
ash	ashstone	cnd	conformable	irr	irregular	lpy	lapilli tuff	pgt	pegmatite	sl	slight
bas	basalt	cnt	concretion	jas	jasper	ls	limestone	phy	phyllite	slt	siltstone
bcc	brecciated	cnt	contact	jt	joint	lst	limestone	pink	pink	sm	smoky
bdd	bedded	cngl	conglomerate	kf	k-feldspar	lt	light	purp	purple	spl	splintery
b.l.l.	limited vert formation	cpy	chalcopyrite	kfd	kaolinized	mbl	medium	pyrg	pyrgmorphism	tgt	tuffaceous
bmf	bedding	crb	carbon	lam	laminated	mdu	moderate	qtz	quartz	tr	trace
bn	bornite	cst	crystal	lap	lapilli	mdy	mudstone	qtzy	quartzy (-ose)	tuff	tuff
bx	breccia/bx	cv	calcite	lf	leucoxene	mel	melanocratic	qtzp	quartz	tuffc	tuffaceous
bx	box	dk	dark	lfd	leucoxenized	mgt	magnetite	qtz/fsp	quartz	v	very
br	brown	dkn	darkened	lm	limonite	mic	micro	rd	rod	vcl/	vein/
bx	breccia	dol	dolomite	lmd	limonitized	mod	moderate	rhy	rhyolite	vcls	veinlets
brg	bearing	dsm	dissemin	lpr	lapis/pyrite	mtx	matrix	rk	rock	vcl	vein/
br	breccia	elvn	elevation	lt	light	mtz	monzonite	rkd	rocked	vert	vertical

Legend

- Drill hole and direction
- Creek
- Boundary of target area
- Boundary of alluvial diggings
- T8 Excavator trench
- Lease/Claim boundary
- Old alluvial pit
- Old hard rock shaft
- XXXXX Main lode on surface

G.N. M.N. 3.5°

ZAPOPAN N.L.

Scale 1:1000
0 20 40 60 80 100
metres

ZAPOPAN MINE
SHEET 095/096

SURVEY

CR88/413E

Rpt EPL 88/22 plate 1
Rpt EPL 87/6 plate 1

Date : 10-8-1987
Geol : J.G.
Drawn : S.B./A.P.H.
Revision : 4-2-1988

BAT 204

MCN 878
MLN 933
MCN 577
MLN 934
MLN 936
MLN 935
MLN 938
MLN 937
MCN 876
ERL 58
ZAPOPAN
ANTICLINE
TARGET 1
TARGET 2
TARGET 3
TARGET 4
TARGET 5
Battery Sands
(approx)
drain
10 300N
10 200N
10 100N
10 000N
9 900N
9 800N
9 700N
9 600N
9 300E
9 400E
9 500E
9 600E
9 700E
9 800E
9 900E
10 000E
10 100E
10 200E
10 300E
10 400E
10 500E
10 600E

ABBREVIATIONS

abun	abundant	f	with	sp	spodum	gyp	gypsum	mob	molybdenite	sche	scheelite
actn	actinolite	calc	calcareous	qtz	quartz	hd	hard	mot	mottled	sch	schist
adm	admixture	cb	cobble	fe/ferr	ferruginous	hem	hematite	mot	moderate	sd	sediment(-ary)
all/Qa	alluvium	conc	concrete	fol	foliation	hnfls	hornfels	mscs	muscovite	sh	shale
amph	amphibole	cbl	carbonaceous	fol	foliated	hbl	hornblende	mscs	muscovite	sil	siltstone
and	andesite	carbonate	fract	fractured	ign	igneous	mod	moderate	sl	slate
anhd	anhydrite	cbl/cc	conglomerate	frag	fragmented	kao	kaolin	mt	quartz	slt/st	siltstone
A.P.	aerial photo	clst	claystone	intr	intermed	plag	plagioclase	Qa	bedding	sme	smelge
arg	argillaceous	cal	chert	gab	gabbro	ser	sericite	qbh	kaolinite	sp	spinel
ash	arsenopyrite	cly	clay	gd	granodiorite	sh	shale	qtz	quartz		
atz	azurite	clv	cleavage	gr	granite	sil	silicified	rhy	rhyolite		
bas	basalt	c.m.	cream	gn	gneiss	sm	smoky	rock	rock		
bed	bedding	col	colluvial	gn	green	sst	sandstone	rock	rock		
bfrac	brecciated	cryst	crystal	gr	grain	st	stone	sch	schist		
bdd	bedded	cmbn	combination	gr	granular	sulf	sulphide	sch	schistose		
b.l.f.	banded iron formation	conc	concentrate	gr	gravel	sulph	sulphurous	sch	schistose		
bsalt	basalt	cgl	conglomerate	gab	gabbro (-ic)	pb	galena	sch	schistose		
bismuth	bismuthinite	cpy	chalcopyrite	grd	granodiorite	mag	magnetite	sch	schistose		
bl	black	cbl	coarse	grd	granodiorite	mal	malachite	sch	schistose		
bl	blue	dac	dacite	grn	granulite	mn	manganese	sch	schistose		
br	brown	dissem	disseminated	grn	granite	mar	marble	sch	schistose		
brg	bearing	dol	dolerite	gr	greywacke	mic	micaceous	sch	schistose		
br	breccia	dun	dunnite	grn	grain	min	mineral	sch	schistose		
		elon	elongate	gy	grey						

NOTE

1. Target area 1 & 2 constitute shallow exploration
2. Target area 3, 4 & 5 constitute deeper exploration

LEGEND

- Old hard rock shaft
- Old alluvial pit
- Drill hole and direction
- Lease / Claim boundary
- As (ppm) from augur drilling
- 100 ppm As contour
- T8 Excavator Trench
- Main lode on surface
- Creek
- Boundary of target area
- Plunge of folded So (eg 35°)
- Dip of cleavage / foliation (Sl)
- Dip of bedding (So)
- 54m RL Level
- 24m RL Level
- Boundary of alluvial diggings

GN
MN
3.5°

ZAPOPAN N.L.

Scale 1:1000
0 20 40 60 80 100
metres

ZAPOPAN MINE
SHEET 095/096

GEOLOGY

CR 88/411 E

Rpt EPL 88/22 plate 2
Rpt EPL 87/16 plate 2

Date 10-8-1987
Geol J.G.
Drawn S.H./A.P.H.
Revision 20-7-1988

BAT 205

9875 E 9900 E 9925 E 9950 E 9975 E 10000 E 10025 E 10050 E 10075 E 10100 E 10125 E 10150 E

10075 N 10050 N 10025 N 10000 N 9975 N 9950 N 9925 N 9900 N

MLN 934

ERL 58

ZRC 27 ZRC 26 ZRC 25 ZRC 24 ZRC 25R ZRC 23 ZRC 22 ZRC 21 ZRC 20 ZRC 19 ZRC 18 ZRC 17 ZRC 28 ZRC 29 ZRC 30 ZRC 31 ZRC 32 ZRC 33 ZRC 34 ZRC 35 ZRC 36 ZRC 37 ZRC 38 ZRC 39 ZRC 40 ZRC 41 ZRC 42 ZRC 43 ZRC 44 ZRC 45 ZRC 46 ZRC 46R ZRC 47

T15 T14 T13

AIR SHAFT

No.1 SHAFT

MAIN SHAFT

ZZAP 23 ZZAP 20 ZZAP 4 ZZAP 18 ZZAP 19 ZZAP 21 ZZAP 3 ZZAP 6 ZZAP 22 ZZAP 1 ZZAP 7

ERL 58

MCN 876
MLN 939

LEGEND

- Reverse circulation drillhole and direction
- Diamond drillhole and direction
- T14 Excavator trench
- Old hard rock shaft
- Air shaft
- Dip and cleavage / foliation (Si)
- Dip of bedding (So)
- 54 m RL level
- 24 m RL level
- Lease / claim boundary

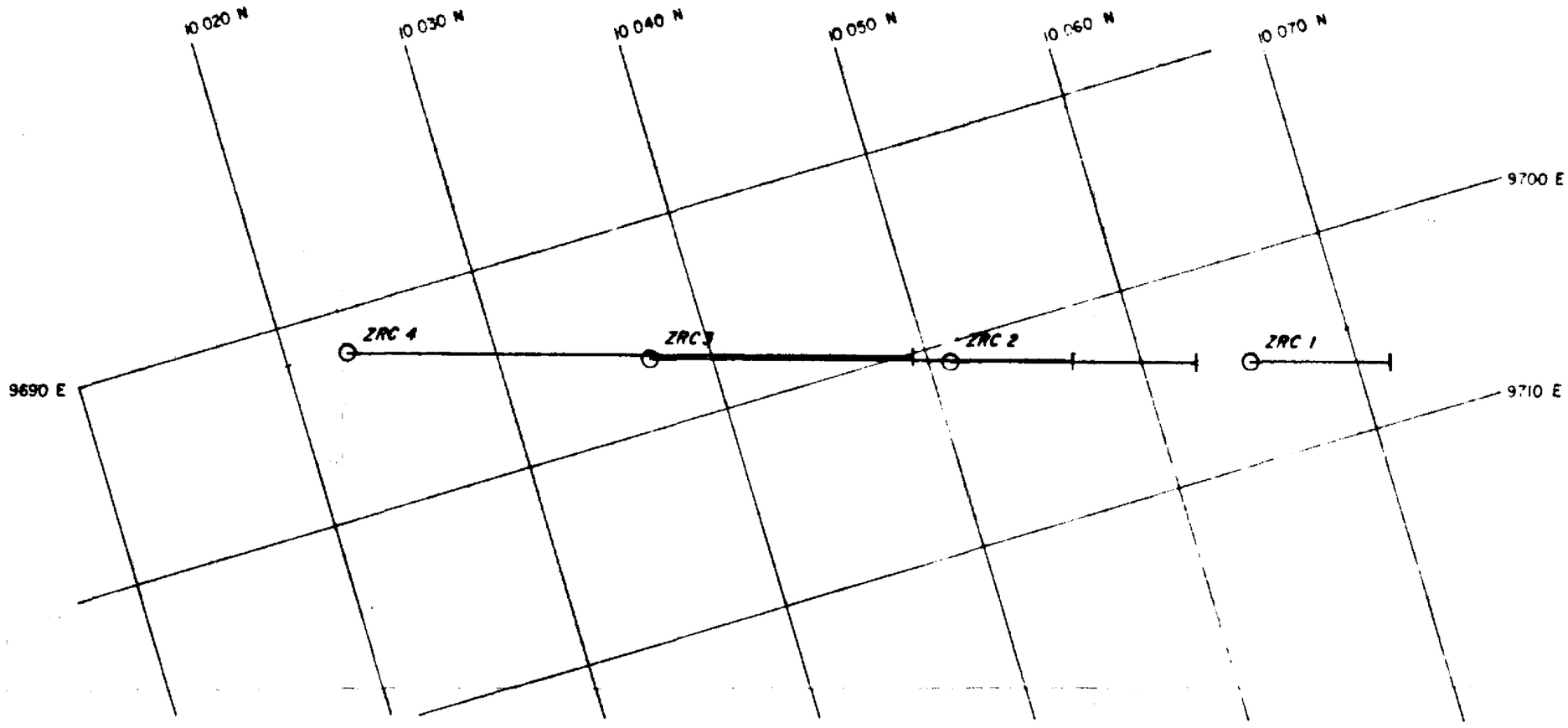
GN MN 3.5°

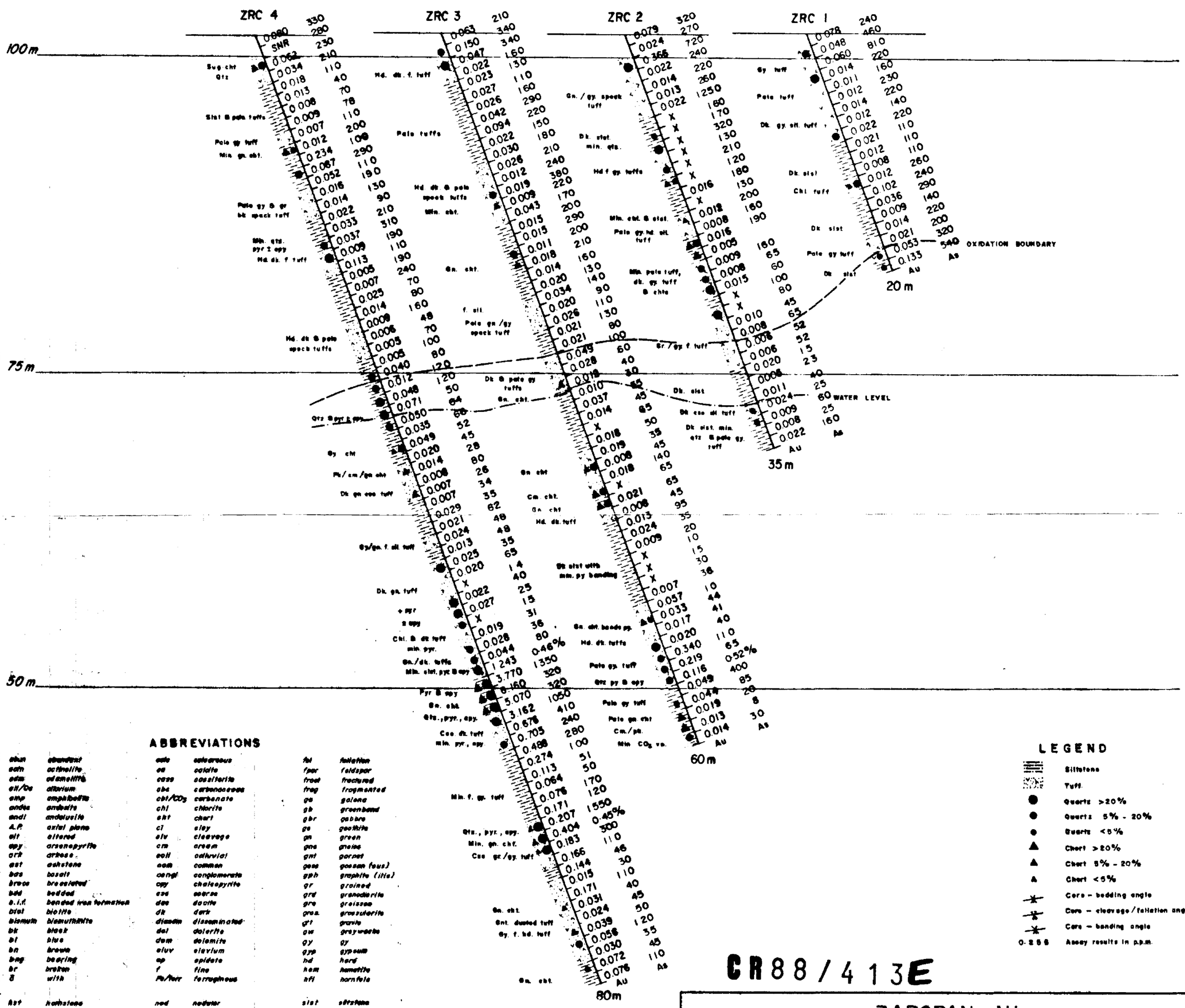
EXPLOREMIN PTY. LTD.

SCALE 1:250

ZAPOPAN MINE
TARGET 1 DRILLING
CR88/413E

GEOLOGIST	J.G.	Rept. EPL 98/22	PLATE 3
DRAWN	J.C.		
DATE	OCTOBER 1988		
CLIENT	ZAPOPAN N.L.	MAP REFERENCE	PLAN NO.





ABBREVIATIONS

abun	abundant	calc	calcareous	fol	foliation
actin	actinolite	ca	calcite	fspr	feldspar
adm	adamellite	cass	cassiterite	fract	fractured
alt/Ox	alterium	cbs	carbonaceous	frag	fragmented
amp	amphibolite	cbt/CO_3	carbonate	ga	galena
andlu	andalite	chl	chlorite	gb	greenband
andl	andalusite	cht	chert	gbr	gabbro
A.P.	axial plane	cl	clay	ge	geothite
alt	altered	clv	cleavage	gn	green
apy	arsenopyrite	cm	cream	gns	gneiss
ark	arkose	coll	colluvial	gnt	garnet
ast	ashstone	com	common	goss	gossan (ous)
bas	basalt	congl	conglomerate	gph	graphite (itic)
breco	brecciated	cpy	chalcopyrite	gr	grained
bdd	bedded	cse	coarse	grd	granodiorite
b.i.f.	banded iron formation	dac	dacite	gre	greisse
biot	biotite	dk	dark	grss	grossularite
bismuth	bismuthinite	dissem	disseminated	grt	granite
bk	black	dol	dolerite	gw	greywacke
bl	blue	dom	dolomite	gy	gy
bn	brown	eluv	elevium	gyp	gypsum
brg	bearing	ep	epidote	hd	hard
br	broken	f	fine	hem	hematite
&	with	Fe/ferr	ferruginous	hfl	hornfels

kst	kaolinstone	nod	nodular	slst	siltstone
ign	igneous	nor	norite	Se	bedding
kao	kaolin	obs	obsidian	sph	sphalerite
knl	knotted	oer	outcrop	sst	sandstone
lam	laminated	og	orange	stipo	stilpnomelane
lap	lapilli	orth	orthoclase	stk	stockwork
lin	lineated	phy	phyllite	sulph/Ss	sulphide
lith	lithic	pk	pink	syen	syenite
lst	limestone	pl	purple	tour	tourmaline
lt	light	plag	plagioclase	tpz	topaz
med	medium	po	pyrrohite	tr	trace/s
mds	mudstone	porph	porphyry (itic)	trem	tremolite
metafmds	metamorphic	py	pyrite	tuff	tuffaceous
m	micro	qtz	quartz	v	very
mot	matrix	rd	red	vn/l	vein/lets
mer	interaline	rhy	rhyolite	volc	volcanic
mic	micaceous	rk	rock	wt	vitric
min	miner	se	terce	vert	vertical
moly	molybdenite	scht	schistite	wthm	weathered
mot	mottled	sch	schist	wt	white
mav	meteoric	sed	sediment (ary)	xtal	crystal
monz	monzonite	sh	shale	yw	yellow
musc	muscovite	sil	siliceous		
magn	magnetite	sl	slate		

LEGEND

- Siltstone
- Tuff
- Quartz >20%
- Quartz 5% - 20%
- Quartz <5%
- Chert >20%
- Chert 5% - 20%
- Chert <5%
- Core – bedding angle
- Core – cleavage/foliation angle
- Core – banding angle
- 0.255 Assay results in p.p.m.

CR88/413E

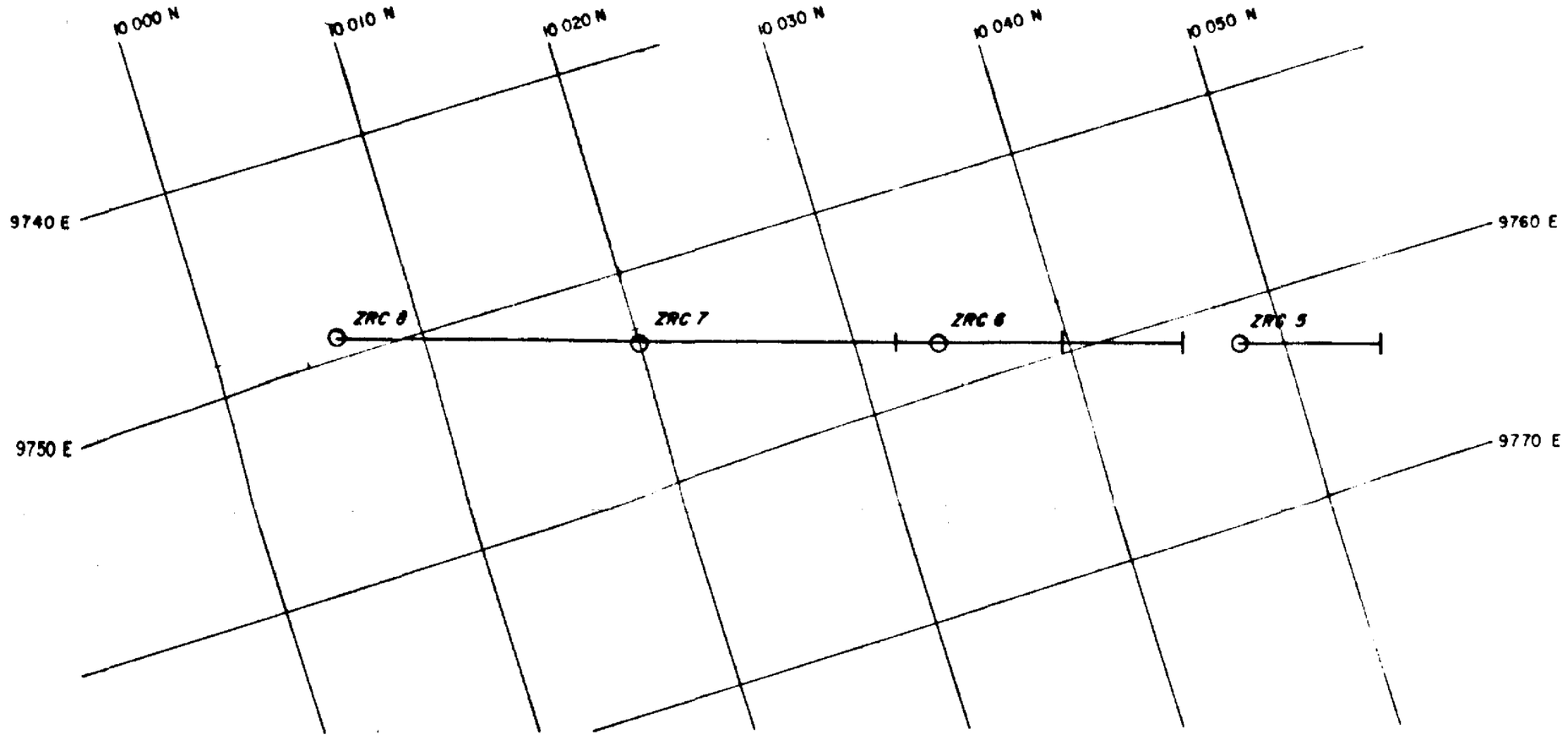
ZAPOPAN N.L.

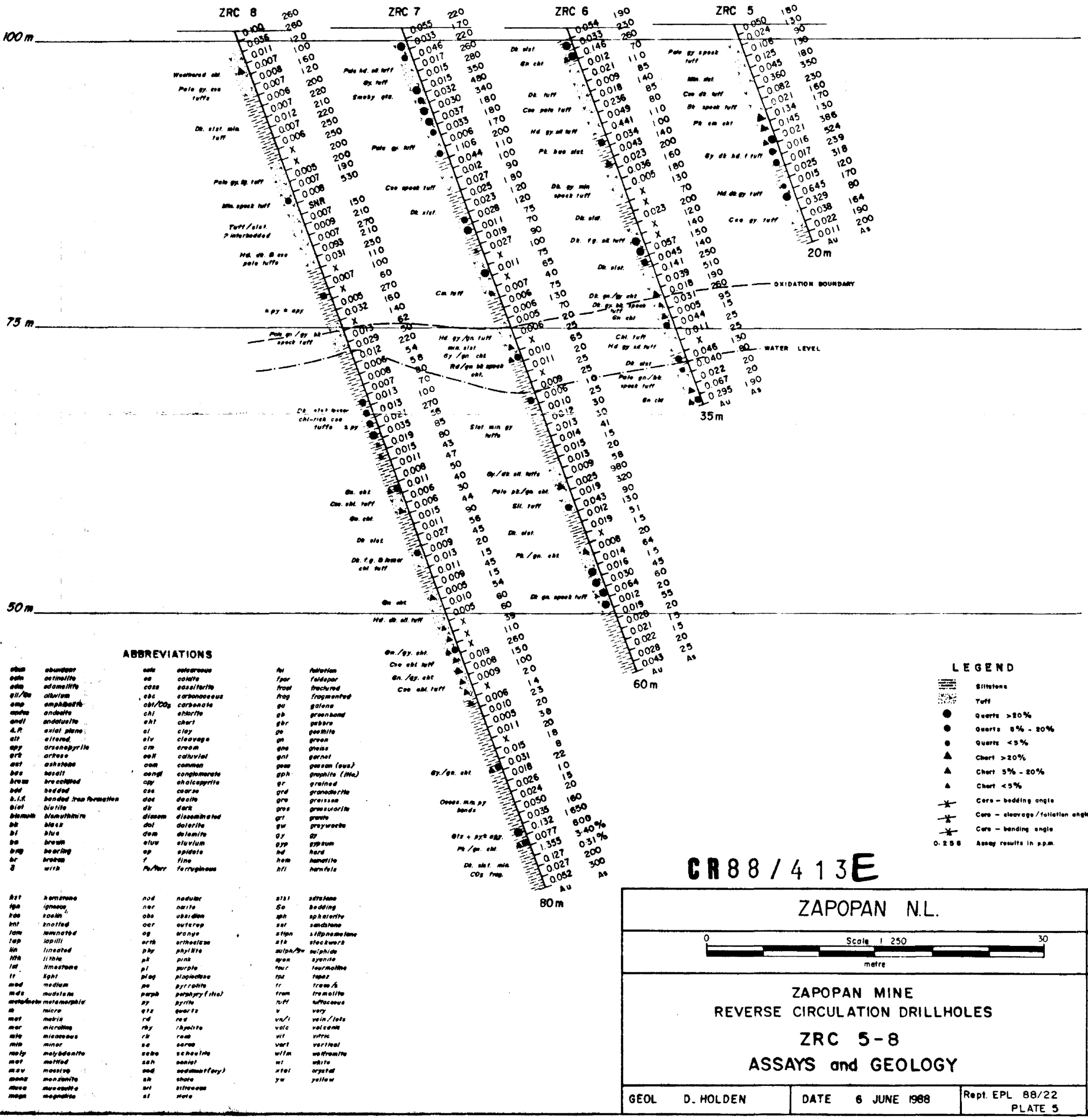
0 Scale 1:250 30
metre

ZAPOPAN MINE
REVERSE CIRCULATION DRILLHOLES
ZRC 1 - 4
ASSAYS and GEOLOGY

GEOL D. HOLDEN	DATE 6 JUNE 1988	Rept. EPL 88/22 PLATE 4

BAT 014





ABBREVIATIONS

abun	abundant	calc	calcareous	fol	foliation
actn	actinolite	ca	calcite	fpar	feldspar
adm	adamellite	cass	cassiterite	fract	fractured
all/lla	alluvium	cbc	carbonaceous	frag	fragmented
amp	amphibolite	cbt/CO_3	carbonate	ga	galena
andes	andesite	chl	chlorite	gb	greenbond
andl	andalusite	cht	chert	gbr	gabbro
A.P.	axial plane	cl	clay	go	goethite
alt	altered	clv	cleavage	gn	green
apy	arsenopyrite	cm	cream	gns	gneiss
grt	artese	coll	colluvial	gnt	garnet
ast	ashstone	com	common	goss	gossan (eus)
bas	basalt	congl	conglomerate	gph	graphite (lite)
brecc	brecciated	cpy	chalcopyrite	gr	grained
bdd	bedded	cse	coarse	grd	granodiorite
b.i.f.	banded iron formation	dac	dacite	gre	greisson
biot	biotite	dk	dark	grss	grassuorite
bismuth	bismuthinite	dissem	disseminated	grt	granite
bk	black	dol	dolerite	gw	greywacke
bl	blue	dom	dolomite	gy	gy
br	brown	eluv	eluvium	gyp	gypsum
brg	bearing	ep	epidote	hd	hard
br	breccia	f	fine	hem	hematite
3	with	Fe/ferr	ferruginous	hfl	hornfels

hst	hematone	nod	nodular	stst	siltstone
ign	igneous	nor	norite	So	bedding
kao	kaolin	obs	obsidian	sph	sphalerite
knt	knotted	oer	outcrop	sst	sandstone
lam	laminated	og	orange	stipn	stippnemstone
lap	lapilli	orth	orthoclase	stk	stockwork
lin	lineated	phy	phyllite	sulph/S_2	sulphide
lith	lithic	pk	pink	syen	syenite
lst	limestone	pl	purple	tour	tourmaline
lt	light	plag	plagioclase	tpz	topaz
med	medium	po	pyrrotite	tr	trace/s
mds	mudstone	perph	porphyry (ritic)	trem	tremolite
metaSed/m	metamorphic	py	pyrite	tuff	tuffaceous
m	micro	qtz	quartz	v	very
met	metric	rd	red	vn/l	vein/lets
mer	microline	rhy	rhyolite	volc	volcanic
mic	micaceous	rk	rock	vit	vitric
min	minor	se	sericite	vert	vertical
moly	molybdenite	sche	scheelite	wlfm	wolframite
mot	mottled	sch	schist	wt	white
mav	massive	sed	sedimentary	xtal	crystal
mons	monzonite	sh	shale	yw	yellow
musc	muscovite	sil	siliceous		
magn	magnetite	sl	slate		

LEGEND

- Siltstone
- Tuff
- Quartz >20%
- Quartz 5% - 20%
- Quartz <5%
- Chert >20%
- Chert 5% - 20%
- Chert <5%
- Core – bedding angle
- Core – cleavage/foliation angle
- Core – banding angle
- 0.256 Assay results in p.p.m.

CR88/413E

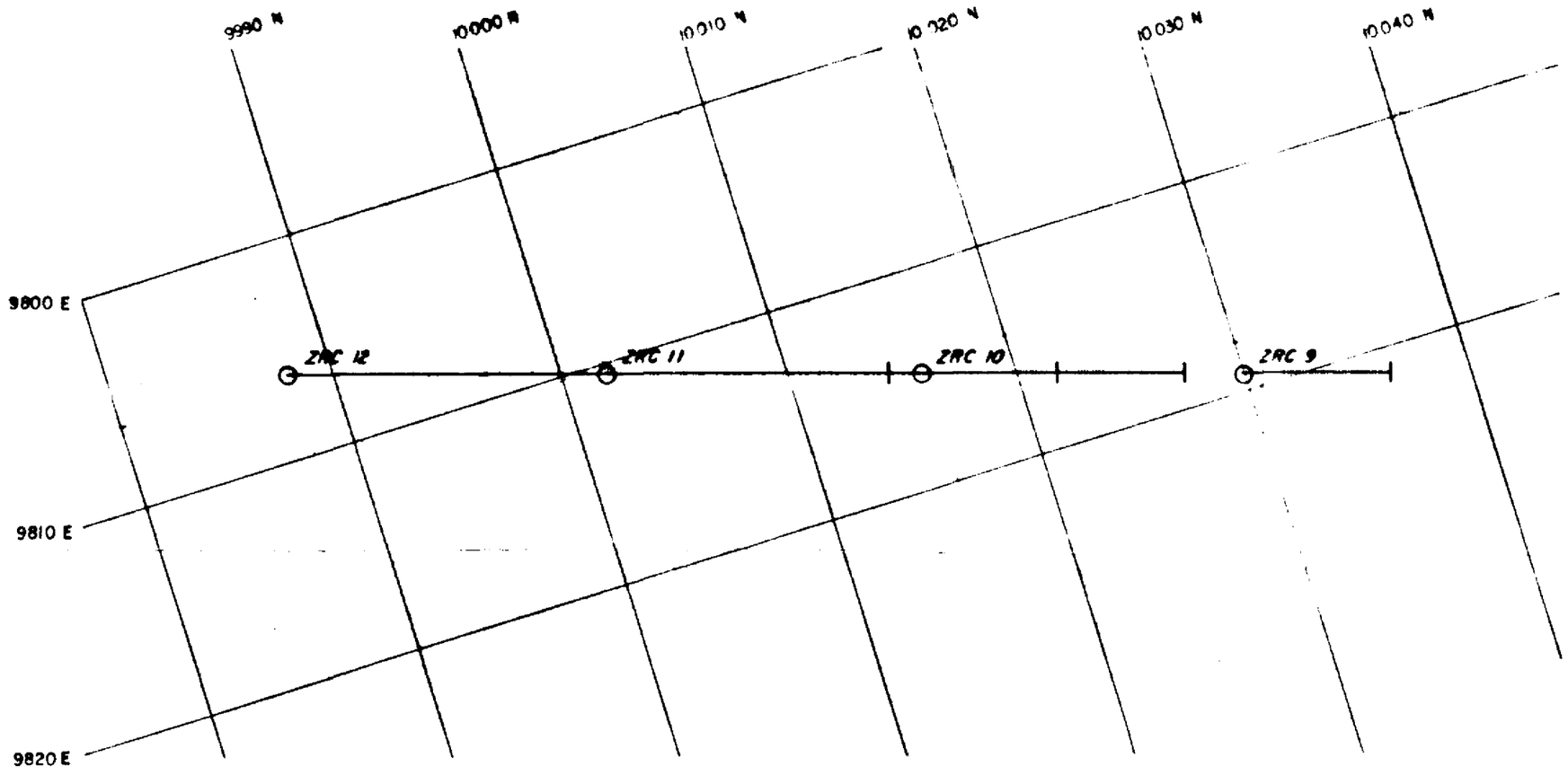
ZAPOPAN N.L.

0 Scale 1 250 30
metre

ZAPOPAN MINE
REVERSE CIRCULATION DRILLHOLES
ZRC 5-8
ASSAYS and GEOLOGY

GEOL D. HOLDEN | DATE 6 JUNE 1988 | Rept. EPL 88/22 PLATE 5

BAT 015



ABBREVIATIONS

abun	abundant	calc	calcareous	fol	foliation	hst	hornstone	nod	nodular	slst	siltstone
actn	actinolite	ca	calcite	fspr	feldspar	ign	igneous	nor	norite	Se	bedding
adm	adamellite	cass	cassiterite	frast	fractured	kao	kaolin	obs	obsidian	sph	sphalerite
all/Qe	alluvium	cbs	carbonaceous	frag	fragmented	knt	knotted	ocr	outcrop	sst	sandstone
amp	amphibolite	cbt/CO_3	carbonate	ga	galena	lam	laminated	og	orange	stipn	stilpnomelane
andes	andesite	chl	chlorite	gb	greenbend	lap	lapilli	orth	orthoclase	strk	structure/s
andl	andalusite	cht	chert	gbr	gabbro	lim	limonite	phy	phyllite	sulph/Sz	sulphide
A.P.	axial plane	cl	clay	ge	goethite	lith	lithic	pk	pink	syen	syenite
alt	altered	clv	cleavage	gn	green	lst	limestone	pl	purple	tour	tourmaline
apy	arsenopyrite	cm	cream	gne	gneiss	lt	light	plag	plagioclase	vag	vapor
ark	arkose	colt	coluvial	gnt	garnet	med	medium	po	pyrrotite	tr	trace/s
ast	asbestos	com	common	gos	gossan (eus)	mds	mudstone	porph	porphyry (ritic)	trem	tremolite
bes	beesit	congl	conglomerate	gph	graphite (itic)	meta/morph	metamorphic	py	pyrite	tuff	tuffaceous
bxcs	brecciated	cpy	chalcopyrite	gr	grained	m	micro	qtz	quartz	v	very
bdd	bedded	cse	coarse	grd	granodiorite	mot	motrix	rd	red	vn/l	vein/lets
b.i.f.	banded iron formation	dac	dacite	gre	greisson	mer	mineline	rhy	rhyolite	volc	volcanic
biot	biotite	dk	dark	gres	greisuerite	mic	micaceous	rk	rock	vtrn	vitrin
bismuth	bismuthinite	dissem	disseminated	grt	granite	min	mineral	sc	scree	vert	vertical
blk	black	dol	dolerite	gw	greywacke	moly	molybdenite	scha	schaerite	wlfm	wulfenite
bl	blue	dsm	dolomite	gy	gy	mot	mottled	sch	schist	wt	white
bn	brown	eluv	eluvium	gyp	gypsum	mass	massive	sed	sediment(ary)	xtal	crystal
brg	bearing	ep	epidote	hd	hard	mons	monzonite	sh	shale	yw	yellow
br	broken	f	fine	hem	hematite	muse	muscovite	sil	siliceous		
&	with	Fe/ferr	ferruginous	hbl	hornbole	mags	magnetite	st	vein		

LEGEND

- Siltstone
- Tuff
- Quartz >20%
- Quartz 5% - 20%
- Quartz <5%
- Chert >20%
- Chert 5% - 20%
- Chert <5%
- Core – bedding angle
- Core – cleavage/foliation angle
- Core – banding angle
- 0.258 Assay results in p.p.m.

CR88/413E

ZAPOPAN N.L.

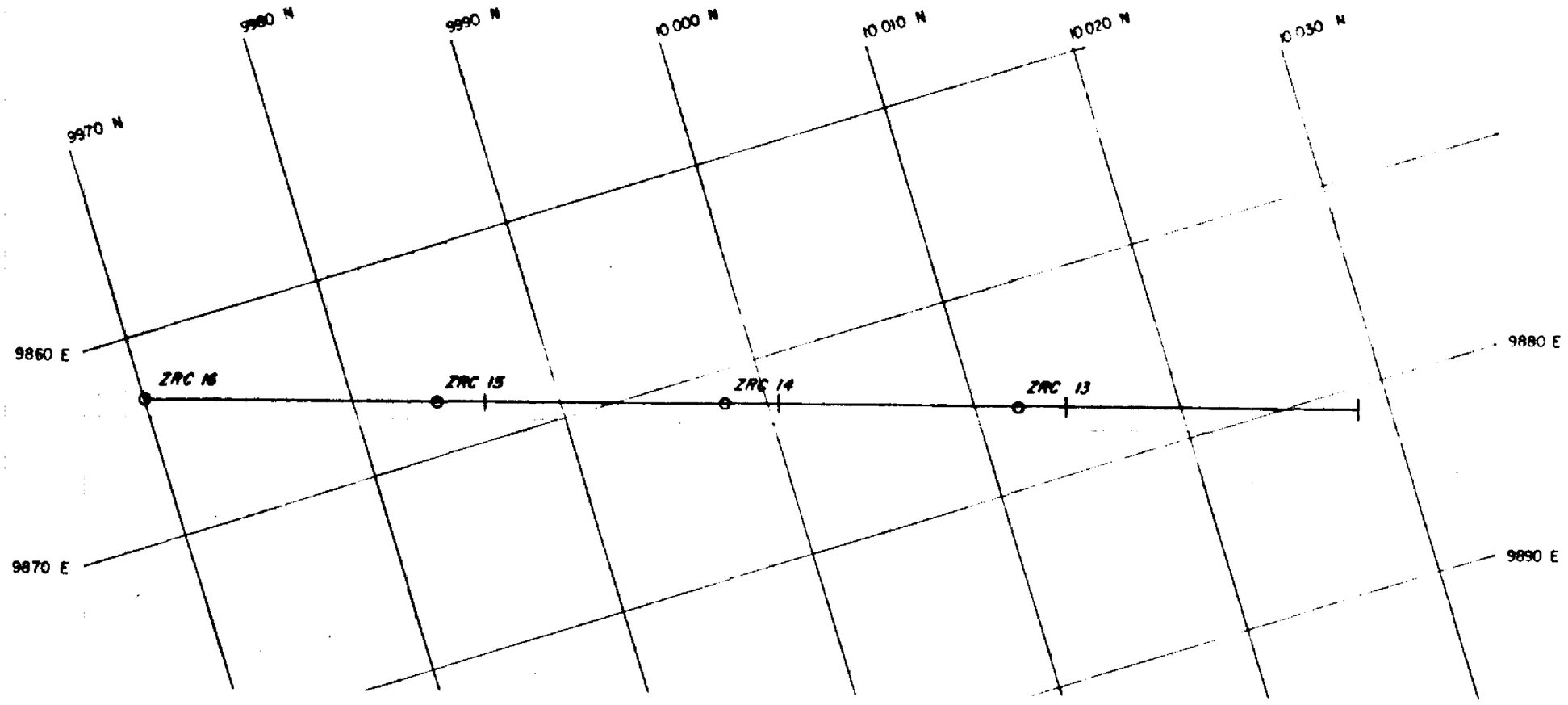
Scale 1 250

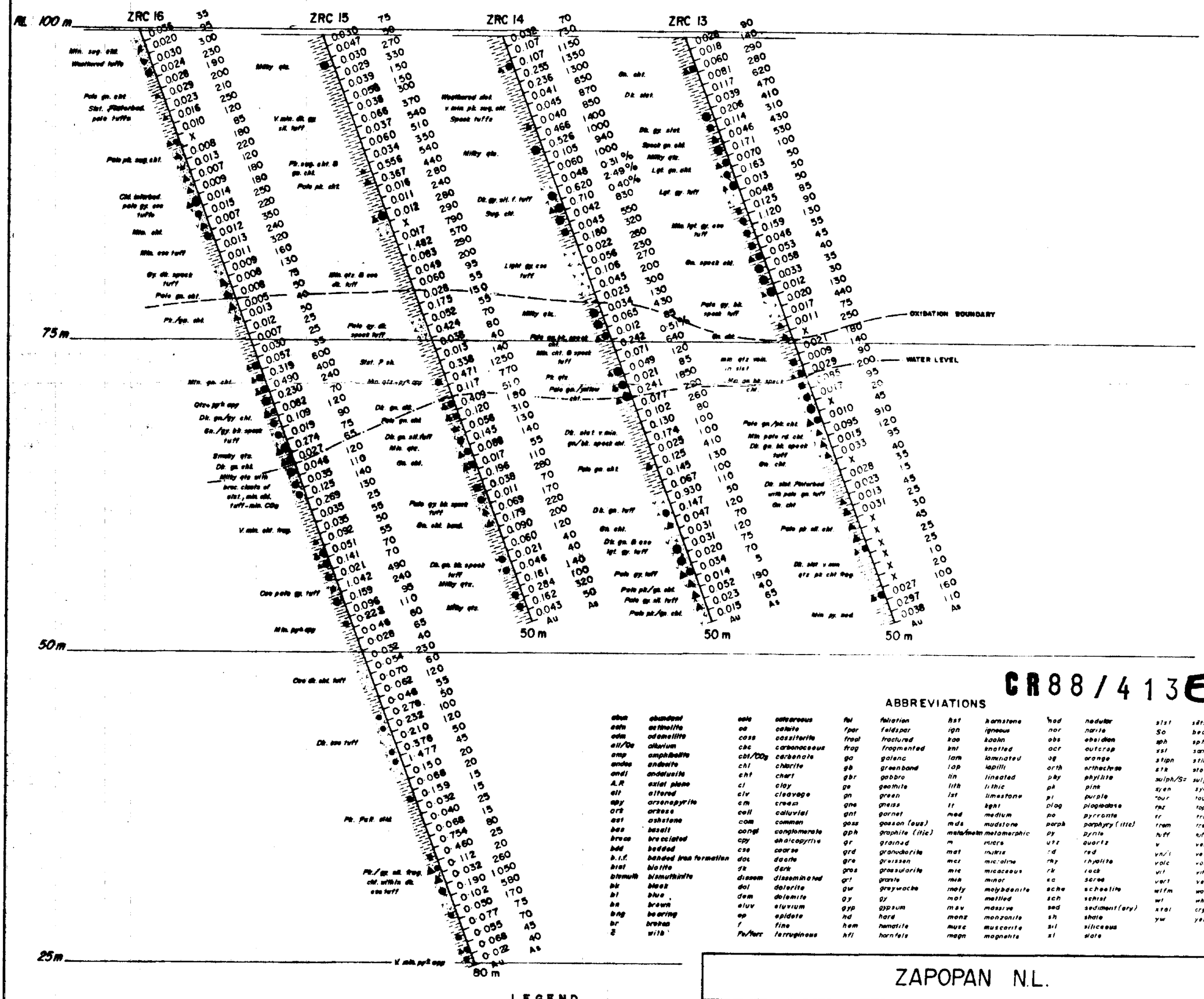
metre

ZAPOPAN MINE
REVERSE CIRCULATION DRILLHOLES
ZRC 9 - 12
ASSAYS and GEOLOGY

GEOL D. HOLDEN	DATE 6 JUNE 1988	Rept. EPL 88/22 PLATE 6

BAT 016





CR88/413E

ABBREVIATIONS

abun	abundant	calc	calcareous	fol	foliation	hst	hornstone	nod	nodular	slst	siltstone
actn	actinolite	ca	calcite	fper	feldspar	ign	igneous	nor	norite	So	bedding
adm	adamellite	cass	cassiterite	fract	fractured	kao	kaolin	obs	obsidian	sph	sphalerite
all/Qa	alluvium	cbc	carbonaceous	frag	fragmented	knt	knotted	ocr	outcrop	sst	sandstone
amp	amphibolite	cbt/CO3	carbonate	ga	galena	lam	laminated	og	orange	stipn	stilpnomelane
andes	andesite	chl	chlorite	gb	greenband	lap	lapilli	orth	orthoclase	stk	stockwork
andl	andalusite	cht	chert	gbr	gabbro	lin	lineated	phy	phyllite	sulph/Sz	sulphide
A.P	axial plane	cl	clay	ge	geothite	lith	lithic	pk	pink	syen	syenite
alt	altered	clv	cleavage	gn	green	lst	limestone	pl	purple	*our	tourmaline
apy	arsenopyrite	cm	cream	gne	gneiss	lt	light	plag	plagioclase	tpz	topaz
ort	artese	coll	colluvial	gnt	garnet	med	medium	po	pyrrotite	tr	trace/s
ash	ashstone	com	common	goss	gossan (ous)	mds	mudstone	porph	porphyry (litic)	trem	tremolite
bas	basalt	congl	conglomerate	gph	graphite (itic)	meta/metm	metamorphic	py	pyrite	tuff	tuffaceous
brecc	brecciated	cpy	chalcopyrite	gr	grained	m	micro	qtz	quartz	v	very
bdd	bedded	cse	coarse	grd	granodiorite	mat	matrix	rd	red	vn/l	vein/lets
b.i.f.	banded iron formation	dac	dacite	gre	greissen	mcr	microline	rhy	rhyolite	volc	volcanic
biot	biotite	dk	dark	gros	grossularite	mic	micaceous	rk	rock	vit	vitric
bismuth	bismuthinite	dissem	disseminated	grt	granite	min	minor	sc	scree	vert	vertical
blk	black	dol	dolerite	gw	greywacke	moly	molybdenite	sche	scheelite	wlfm	wolframite
bl	blue	dem	dolomite	gy	gy	mot	mottled	sch	schist	wt	white
bn	brown	eluv	eluvium	gyp	gypsum	mav	massive	sed	sediment(ary)	xtal	crystal
bng	bearing	ep	epidote	hd	hard	monz	monzonite	sh	shale	yw	yellow
br	broken	f	fine	hem	hematite	musc	muscovite	sil	siliceous		
c	with	Fe/ferr	ferruginous	hfl	hornfels	magn	magnetite	sl	slate		

LEGEND

- Siltstone
- Tuff
- Quartz >20%
- Quartz 5% - 20%
- Quartz <5%
- Chert >20%
- Chert 5% - 20%
- Chert <5%
- Core - bedding angle
- Core - cleavage/foliation angle
- Core - banding angle
- 0.256 Assay results in g.p.m.

ZAPOPAN N.L.

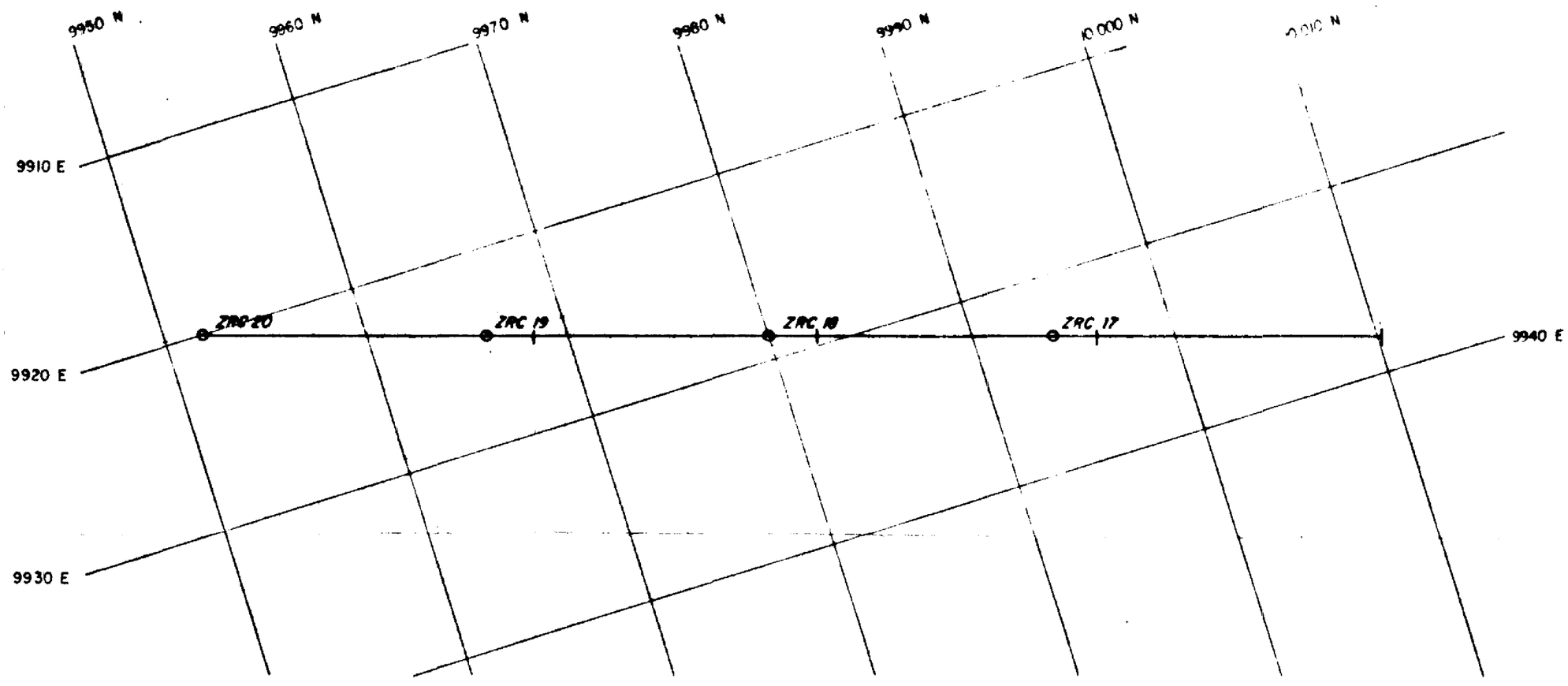
0 Scale 1:250 30

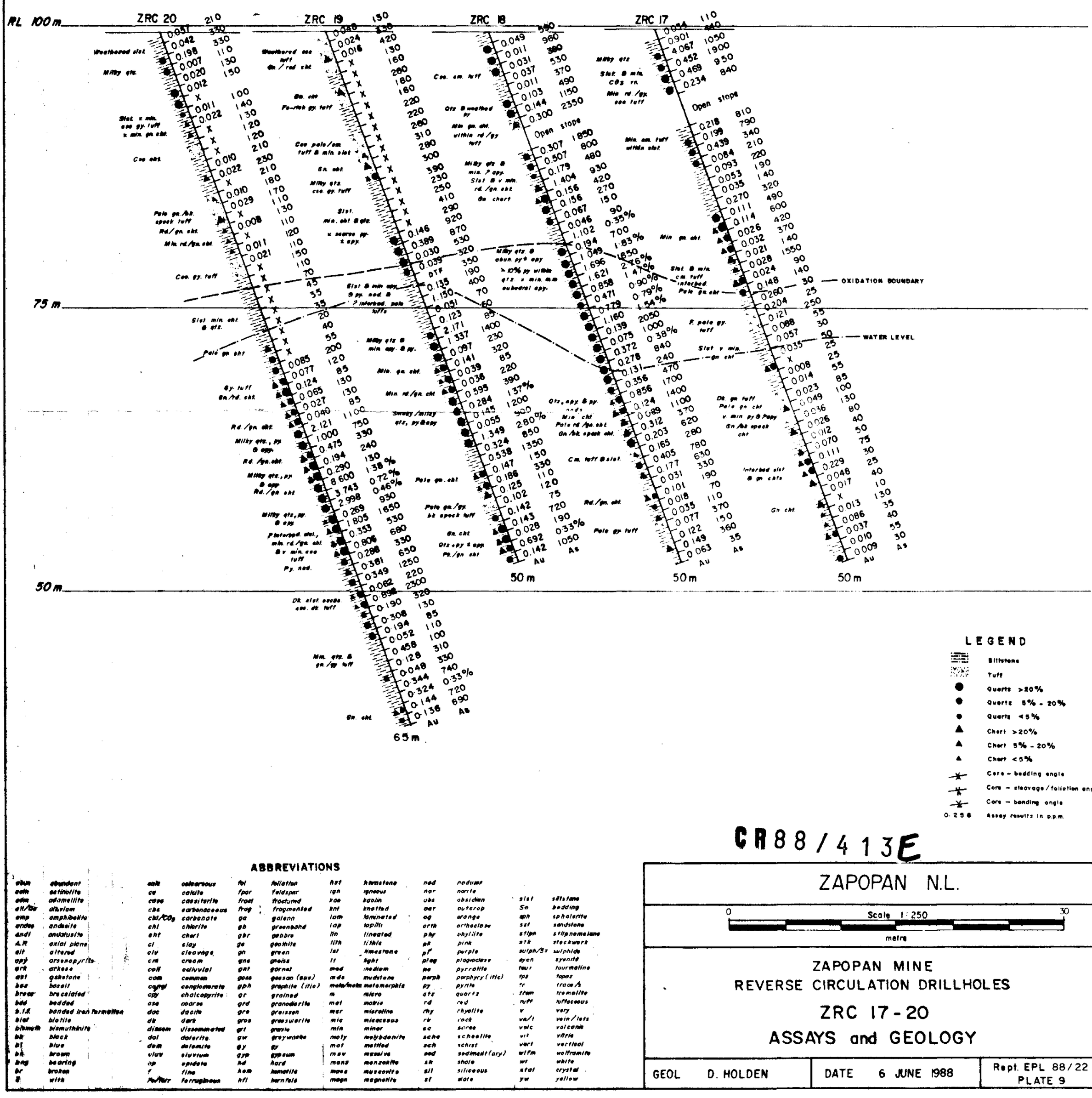
metre

ZAPOPAN MINE
REVERSE CIRCULATION DRILLHOLES
ZRC 13 - 16
ASSAYS and GEOLOGY

GEOL D. HOLDEN	DATE 6 JUNE 1988	Rept. EPL 88/22 PLATE 7

BAT 017





ABBREVIATIONS

abun	abundant	calc	calcareous	fol	foliation	hst	hornstone	nod	nodules		
actn	actinolite	ce	calcite	fpar	feldspar	ign	igneous	nor	norite		
adm	adamellite	cass	cassiterite	fract	fractured	kao	kaolin	obs	obsidian	sist	siltstone
all/lle	alluvium	cbs	carbonaceous	frag	fragmented	knt	knotted	oor	outcrop	So	bedding
amp	amphibolite	cbt/CO_3	carbonate	ga	galena	lam	laminated	og	orange	sph	sphalerite
andes	andesite	chl	chlorite	gb	greenband	lap	lapilli	orth	orthoclase	sst	sandstone
andl	andalusite	cht	chert	gbr	gabbro	lin	lineated	phy	phyllite	stlpn	stilpnomelane
A.R	axial plane	cl	clay	ge	geothite	lith	lithic	pk	pink	stk	stockwork
alt	altered	clv	cleavage	gn	green	ls	limestone	pl	purple	sulph/Ss	sulphide
apy	arsenopyrite	cnt	cream	gne	gneiss	lt	light	plag	plagioclase	syen	syenite
ark	arkose	coll	colluvial	gnt	garnet	med	medium	po	pyrrotite	tour	tourmaline
ast	ashstone	com	common	goss	goesan (sus)	mds	mudstone	perph	porphyry (itic)	tps	topaz
bas	basalt	cong	conglomerate	gph	graphite (itic)	mets/mets	metamorphic	py	pyrite	tr	trace/s
breer	brecciated	cpy	chalcopyrite	gr	grained	m	micro	qtz	quartz	trem	tremolite
bed	bedded	cse	coarse	grd	granodiorite	mat	matrix	rd	red	tuff	tuffaceous
b.i.f	banded iron formation	dac	dacite	gre	greisson	mer	microline	rhy	rhyolite	v	very
biot	biotite	dk	dark	gros	greesuerite	mic	micaceous	rk	rock	vn/l	vein/lets
bhmuth	bismuthinite	dissem	disseminated	grt	granite	min	miner	sc	scree	volc	volcanic
blk	black	dol	dolerite	gw	greywacke	moly	molybdenite	sche	scheelite	vit	vitric
bl	blue	dom	dolomite	gy	gy	mot	mottled	sch	schist	vert	vertical
brn	brown	eluv	eluvium	gyp	gypsum	mav	massive	sed	sedimentary	wlfm	wolframite
bng	bearing	sp	epidote	hd	hard	mons	monzonite	sh	shale	wt	white
br	broken	f	fine	hem	hematite	musc	muscovite	sil	siliceous	xtal	crystal
w	with	Fe/ferr	ferruginous	hfl	hornfels	magn	magnetite	st	slate	yw	yellow

CR88/413E

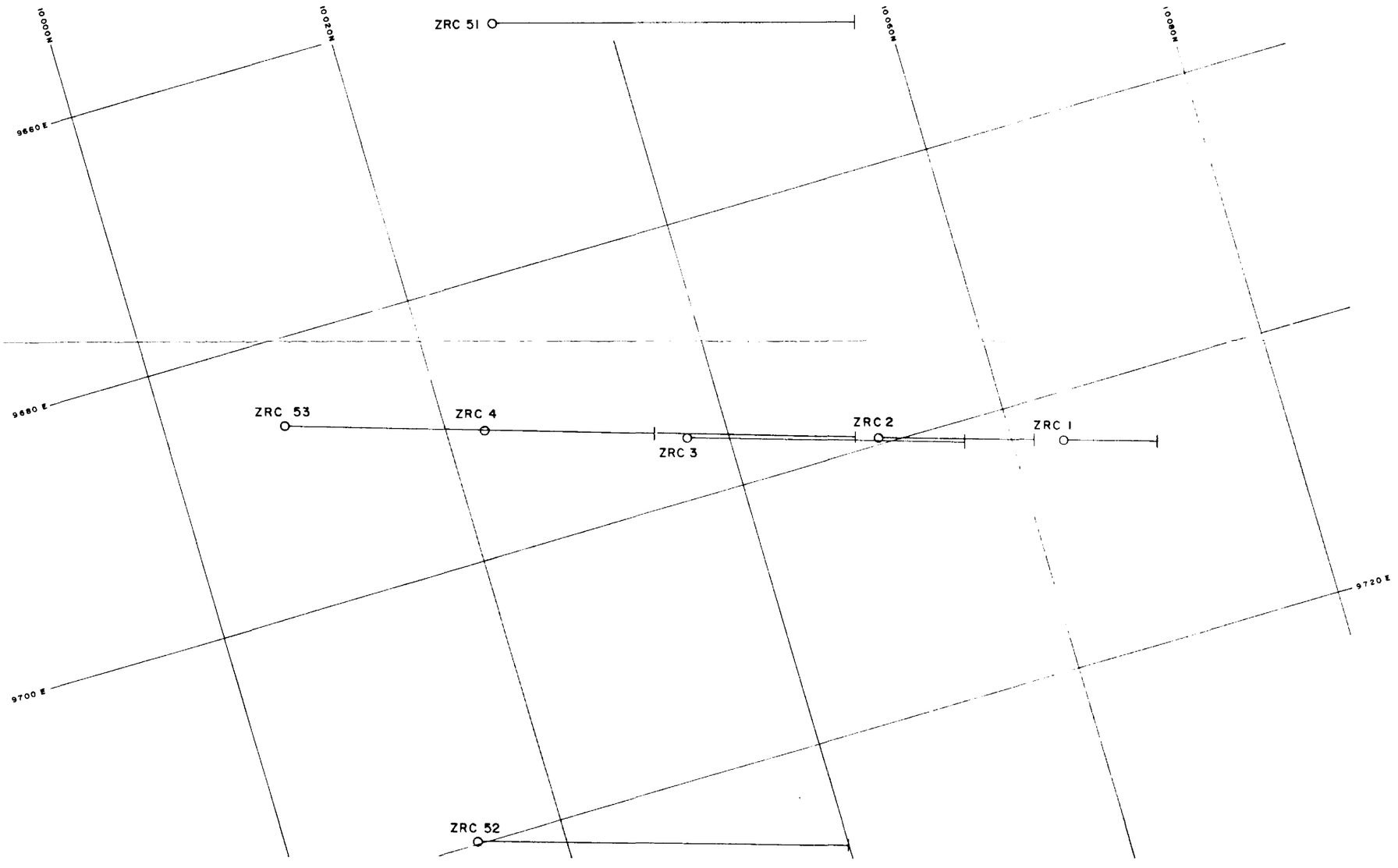
ZAPOPAN N.L.

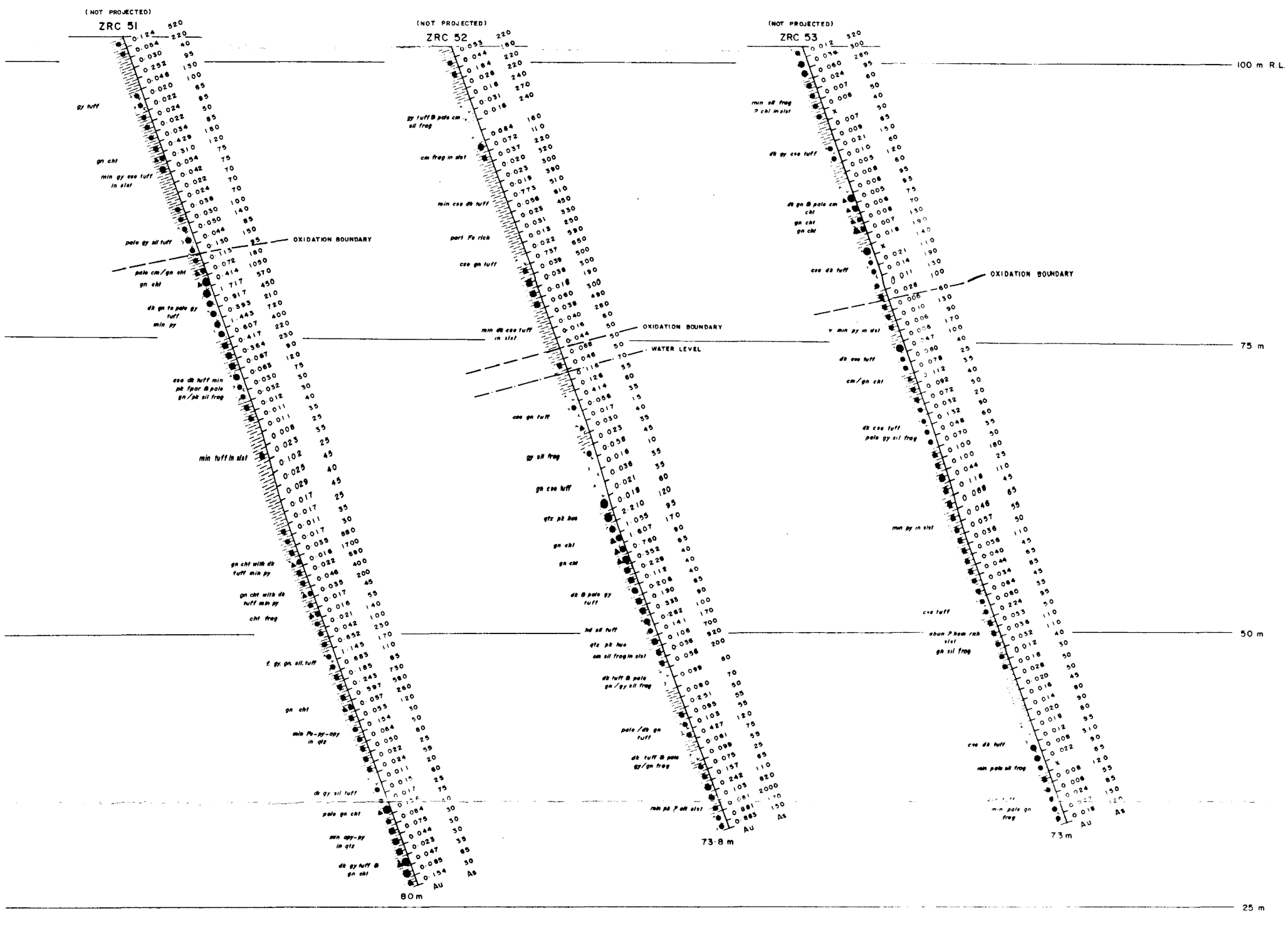
0 Scale 1:250 30
metre

ZAPOPAN MINE
REVERSE CIRCULATION DRILLHOLES
ZRC 17 - 20
ASSAYS and GEOLOGY

GEOL D. HOLDEN | DATE 6 JUNE 1988 | Rept. EPL 88/22 PLATE 9

BAT 018





ABBREVIATIONS

abun	abundant	calc	calcareous	fol	foliation	hst	hornstone	nod	nodular	slst	siltstone
actn	actinolite	ca	calcite	fpar	feldspar	ign	igneous	nor	norite	So	bedding
adm	adamellite	cass	cassiterite	fract	fractured	kao	kaolin	obs	obsidian	sph	sphalerite
all/Qa	alluvium	cbc	carbonaceous	frag	fragmented	knt	knotted	ocr	outcrop	sst	sandstone
amp	amphibolite	cbt/CO_3	carbonate	ga	galena	lam	laminated	og	orange	stlpn	stilpnomelane
andes	andesite	chl	chlorite	gb	greenbond	lap	lapilli	orth	orthoclase	stk	stockwork
andl	andalusite	cht	chert	gbr	gabbro	lin	lineated	phy	phyllite	sulph/$S^{=}$	sulphide
A.P.	axial plane	cl	clay	ge	goethite	lith	lithic	pk	pink	syen	syenite
alt	altered	clv	cleavage	gn	green	ls	limestone	pl	purple	tour	tourmaline
apy	arsenopyrite	cm	cream	gne	gneiss	lt	light	plag	plagioclase	tpz	topaz
ark	arkose	coll	colluvial	gnt	garnet	med	medium	po	pyrrotite	tr	trace/s
ast	ashstone	com	common	goss	goassan (ous)	mds	mudstone	qtzph	porphyry(ritic)	trem	tremolite
bas	basalt	congl	conglomerate	gph	graphite (itic)	meta/mstm	metamorphic	py	pyrite	tuff	tuffaceous
brec ac	brecciated	cpy	chalcopyrite	gr	grained	m	misce	qtz	quartz	v	very
bdd	bedded	crse	coarse	grd	granodiorite	mat	matrix	rd	red	vn/l	vein/lets
b.i.f.	banded iron formation	dac	dacite	gre	greissen	mcr	microline	rhy	rhyolite	volc	volcanic
biot	biotite	dk	dark	gros	grossularite	mic	micaceous	rk	rock	vit	vitric
bismuth	bismuthinite	dissem	disseminated	grt	granite	min	minor	sc	scree	vert	vertical
blk	black	dol	noierite	gw	greywacke	moly	molybdenite	sche	scheelite	wlfm	wolframite
bl	blue	dom	dolomite	gy	gy	mot	mottled	sch	schist	wt	white
brn	brown	eluv	eluvium	gyp	gypsum	msv	massive	sed	sediment(ary)	xtal	crystal
bhg	bearing	ep	epidote	hd	hard	monz	monzonite	sh	shale	yw	yellow
br	broken	f	fine	hem	hematite	musc	muscovite	sil	siliceous		
$\bar{5}$	with	Fe/ferr	ferruginous	hfl	hornfels	magn	magnetite	sl	slate		

LEGEND

- Siltstone
- Tuff
- Quartz >20%
- Quartz 5% - 20%
- Quartz <5%
- Chert >20%
- Chert 5% - 20%
- Chert <5%
- Core - bedding angle
- Core - cleavage/foliation angle
- Core - banding angle
- 0·256 Assay results in p.p.m.

CR88/413E

ZAPOPAN N.L.

SCALE 1:250

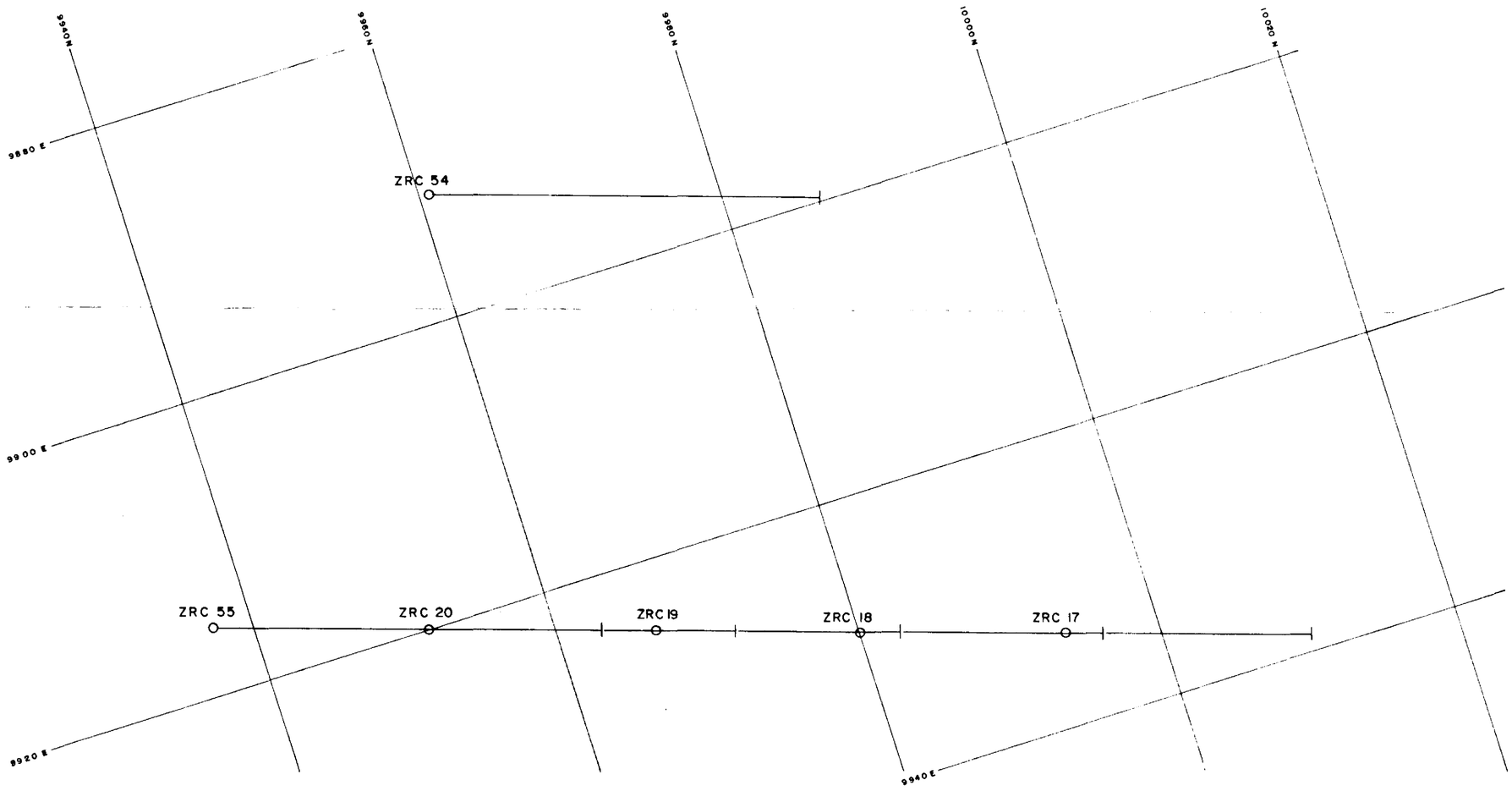
5 0 5 10 15 20 25

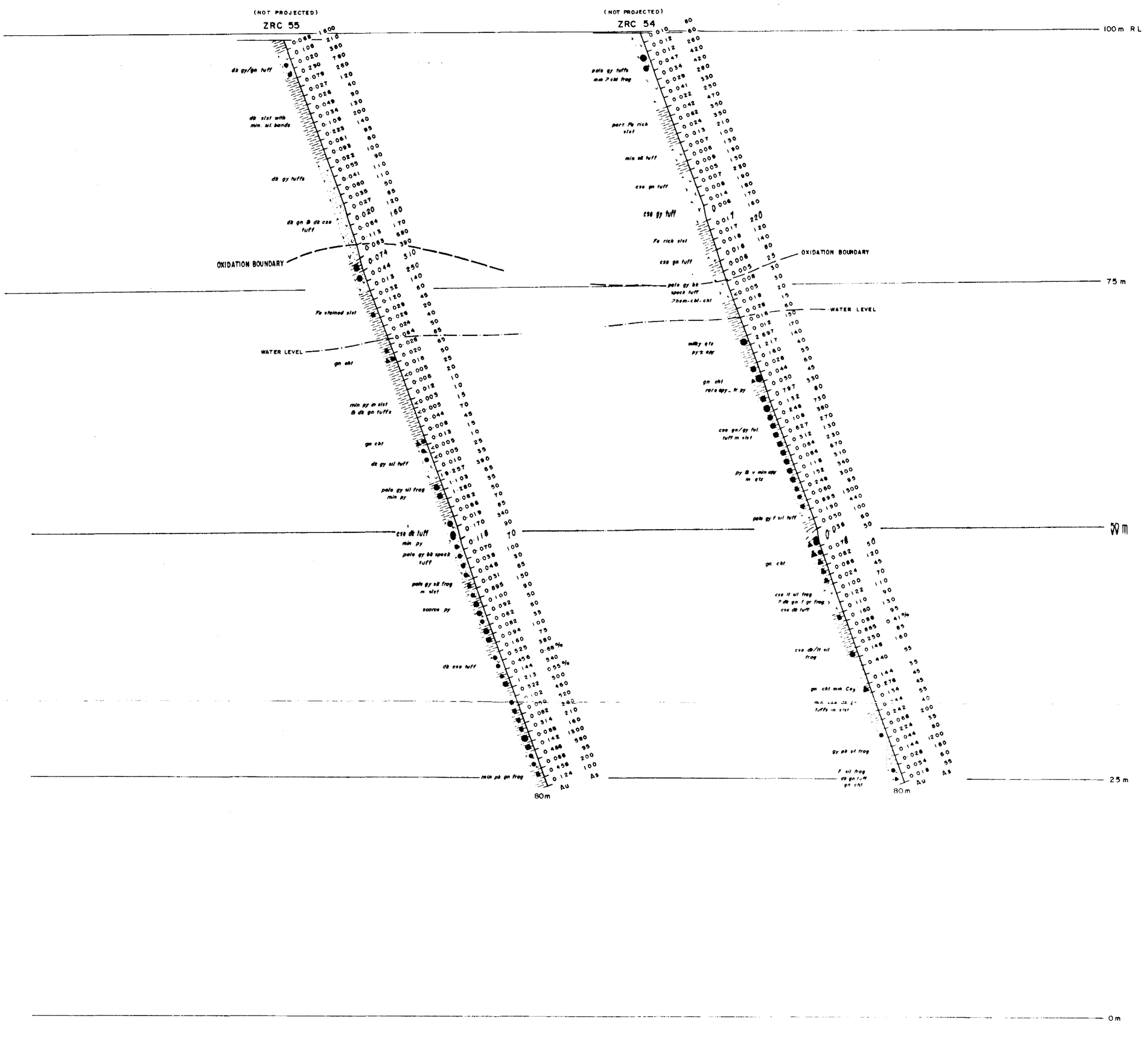
METRES

ZAPOPAN MINE
REVERSE CIRCULATION DRILLHOLES
ZRC 51,52 & 53
ASSAYS and GEOLOGY

GEOLOGIST	DATE	
D HOLDEN	SEPTEMBER 1988	Rept EPL 88/22 PLATE 10

BAT 019





ABBREVIATIONS

abun	abundant	calc	calcareous	fol	foliation	hst	hornstone	nod	nodular	slst	siltstone
actn	actinolite	ca	calcite	fpor	feldspar	ign	igneous	nor	norite	So	bedding
adm	adamellite	cass	cassiterite	fract	fractured	kao	kaolin	obs	obsidian	sph	sphalerite
all/Qe	alluvium	cbc	carbonaceous	frag	fragmented	knt	knotted	ocr	outcrop	sst	sandstone
amp	amphibolite	cbt/CO_3	carbonate	ga	galena	lam	laminated	og	orange	stlpn	stilpnomelane
andes	andesite	cht	chlorite	gb	greenband	lap	lapilli	orth	orthoclase	stk	stockwork
andl	andalusite	cht	chert	gbr	gabbro	lin	lineated	phy	phyllite	sulph/S=	sulphide
A.P	axial plane	cl	clay	ge	geothite	lith	lithic	pk	pink	syen	syenite
alt	altered	clv	cleavage	gn	green	ls	limestone	pl	purple	tour	tourmaline
apy	arsenepyrite	cm	cream	gne	gneiss	lt	light	plag	plagioclase	tpz	topaz
ark	arkose	coll	colluvial	gnt	garnet	med	medium	po	pyrrohite	tr	trace/s
ast	ashstone	com	common	goss	gossan (ous)	mds	mudstone	porph	porphyry (itic)	trem	tremolite
bas	basalt	congl	conglomerate	gph	graphite (itic)	meta/nem	metamorphic	py	pyrite	tuff	tuffaceous
brecc	brecciated	cpy	chalcopyrite	gr	grained	m	micro	qtz	quartz	v	very
bdd	bedded	cse	coarse	grd	granodiorite	mat	matrix	rd	red	vn/l	vein/lets
b.i.f.	banded iron formation	dac	dacite	gre	greissen	mcr	microline	rhy	rhyolite	volc	volcanic
biot	biotite	dk	dark	gros	grossularite	mic	micaceous	rk	rock	wt	vitric
bismuth	bismuthinite	disem	disseminated	grt	granite	min	minor	sc	scree	vert	vertical
blk	black	dol	dolerite	gw	greywacke	moly	molybdenite	sche	scheelite	wolfm	wolframite
bl	blue	dom	dolomite	gy	gy	mot	mottled	sch	schist	wt	white
bn	brown	eluv	eluvium	gyp	gypsum	mav	massive	sed	sediment(ary)	xtal	crystal
brng	bearing	ep	epidote	hd	hard	mons	monzonite	sh	shale	yw	yellow
br	broken	f	fine	hem	hematite	musc	muscovite	sil	siliceous		
℄	with	Fe/ferr	ferruginous	hfl	hornfels	magn	magnetite	sl	slate		

LEGEND

- Siltstone
- Tuff
- Quartz >20%
- Quartz 5% - 20%
- Quartz <5%
- Chert >20%
- Chert 5% - 20%
- Chert <5%
- Core – bedding angle
- Core – cleavage / foliation angle
- Core – banding angle
- 0.256 Assay results in ppm

ZAPOPAN N.L.

SCALE 1:250

5 0 5 10 15 20 25

METRES

ZAPOPAN MINE

REVERSE CIRCULATION DRILLHOLES

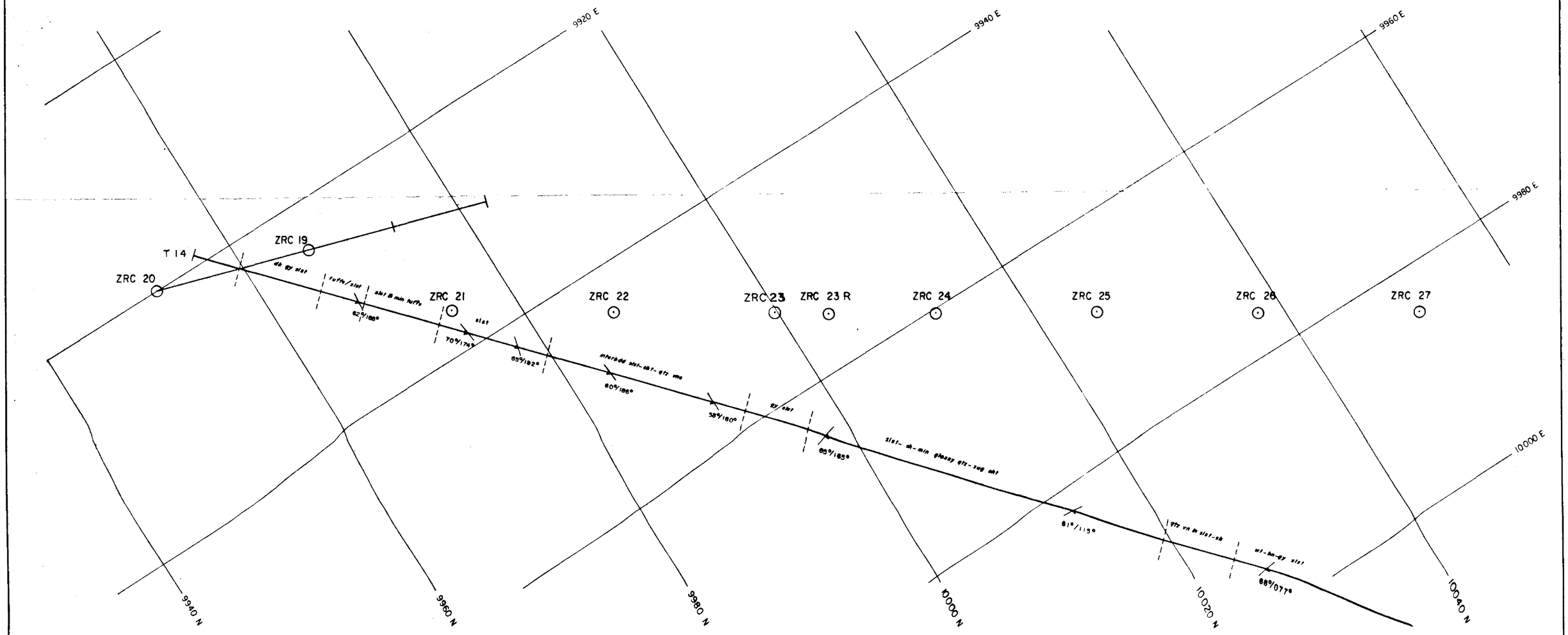
ZRC 54 & 55

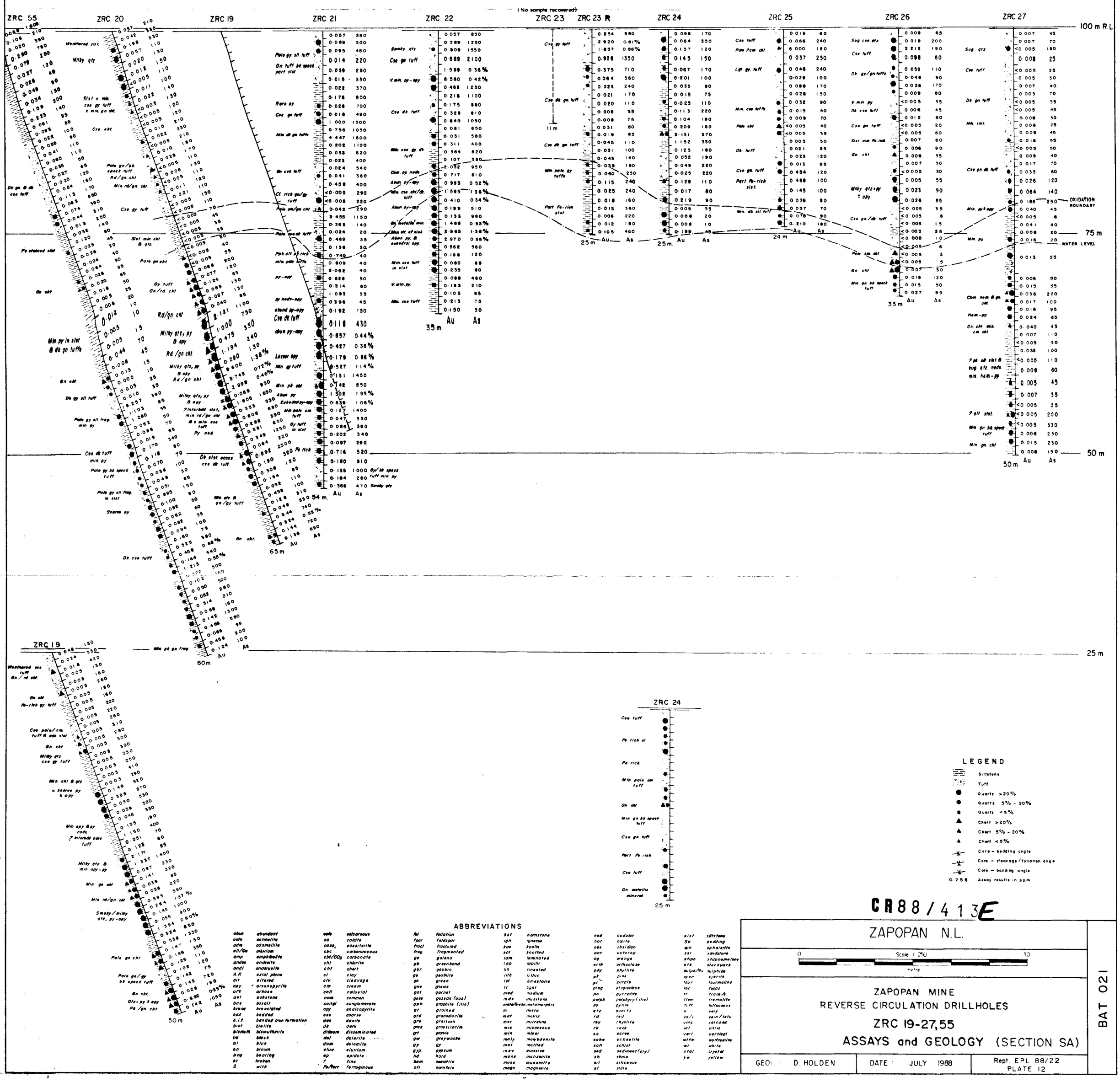
ASSAYS and GEOLOGY

GEOLOGIST	DATE	
D HOLDEN	SEPTEMBER 1988	Rept EPL 88/22 PLATE 11

BAT 020

CR88/413





ABBREVIATIONS

abun	abundant	calc	calcareous	fol	foliation	hst	hornstone	nod	nodular	slst	siltstone
actn	actinolite	ca	calcite	fpar	feldspar	ign	igneous	nor	norite	So	bedding
adm	adamellite	cass	cassiterite	fract	fractured	kao	kaolin	obs	obsidian	sph	sphalerite
all/Qa	alluvium	cbc	carbonaceous	frag	fragmented	knt	knotted	oor	outcrop	sst	sandstone
amp	amphibolite	cbt/CO3	carbonate	ga	galena	lam	laminated	og	orange	stipn	stilpnomelane
andes	andesite	chl	chlorite	gb	greenband	lap	lapilli	orth	orthoclase	stk	stockwerk
andl	andalusite	cht	chert	gbr	gabbro	lin	lineated	phy	phyllite	sulph/S=	sulphide
A.P.	axial plane	cl	clay	ge	geothite	lith	lithic	pk	pink	syen	syenite
alt	altered	clv	cleavage	gn	green	ls	limestone	pl	purple	tour	tourmaline
apy	arsenopyrite	cm	cream	gne	gneiss	lt	light	plag	plagioclase	top	topaz
ark	arkose	coll	colluvial	gnt	garnet	med	medium	po	pyrrotite	tr	trace/s
ast	ashstone	com	common	goss	gossan (ous)	mds	mudstone	porph	porphyry (itic)	trem	tremolite
bas	basalt	congl	conglomerate	gph	graphite (itic)	meta/metam	metamorphic	py	pyrite	tuff	tuffaceous
brec	brecciated	cpy	chalcopyrite	gr	grained	m	micro	qtz	quartz	v	very
bdd	bedded	cse	coarse	grd	granodiorite	mat	matrix	rd	red	vn/-l	vein/lets
b.i.f.	banded iron formation	dac	dacite	gre	greissen	mcr	microline	rhy	rhyolite	volc	volcanic
biot	biotite	dk	dark	grss	grossularite	mic	micaceous	rk	rock	vrt	vitric
bismuth	bismuthinite	dsem	disseminated	grt	garnet	min	minor	sc	scree	vert	vertical
blk	black	dol	dolerite	gw	greywacke	moly	molybdenite	sche	scheelite	wflm	wolframite
bl	blue	dom	dolomite	gy	gy	mot	mottled	sch	schist	wt	white
bn	brown	eluv	eluvium	gyp	gypsum	mav	massive	sed	sediment (ary)	xtal	crystal
brng	bearing	ep	epidote	hd	hard	mons	monzonite	sh	shale	yw	yellow
br	broken	f	fine	hem	hematite	musc	muscovite	sil	siliceous		
c	with	Fe/ferr	ferruginous	hfl	hornfels	magn	magnetite	sl	slate		

LEGEND

- Siltstone
- Tuff
- Quartz >20%
- Quartz 5% - 20%
- Quartz <5%
- Chert >20%
- Chert 5% - 20%
- Chert <5%
- Core – bedding angle
- Core – cleavage / foliation angle
- Core – banding angle
- 0.256 Assay results in p.p.m

CR88/413E

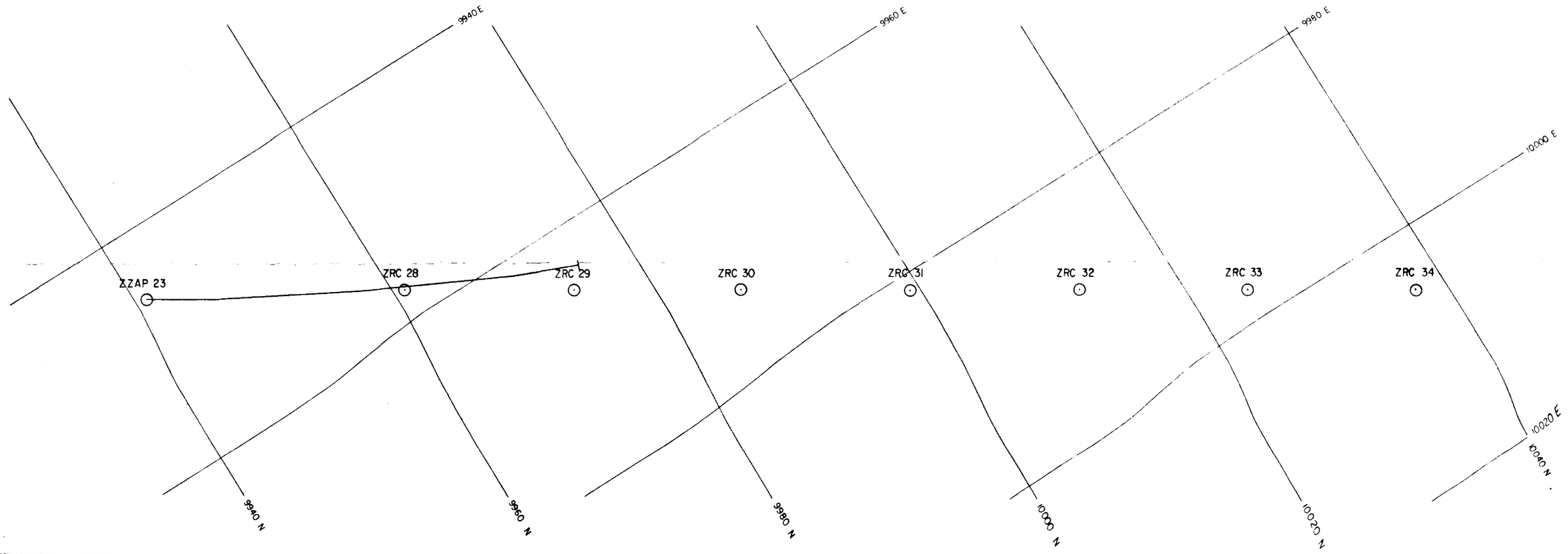
ZAPOPAN N.L.

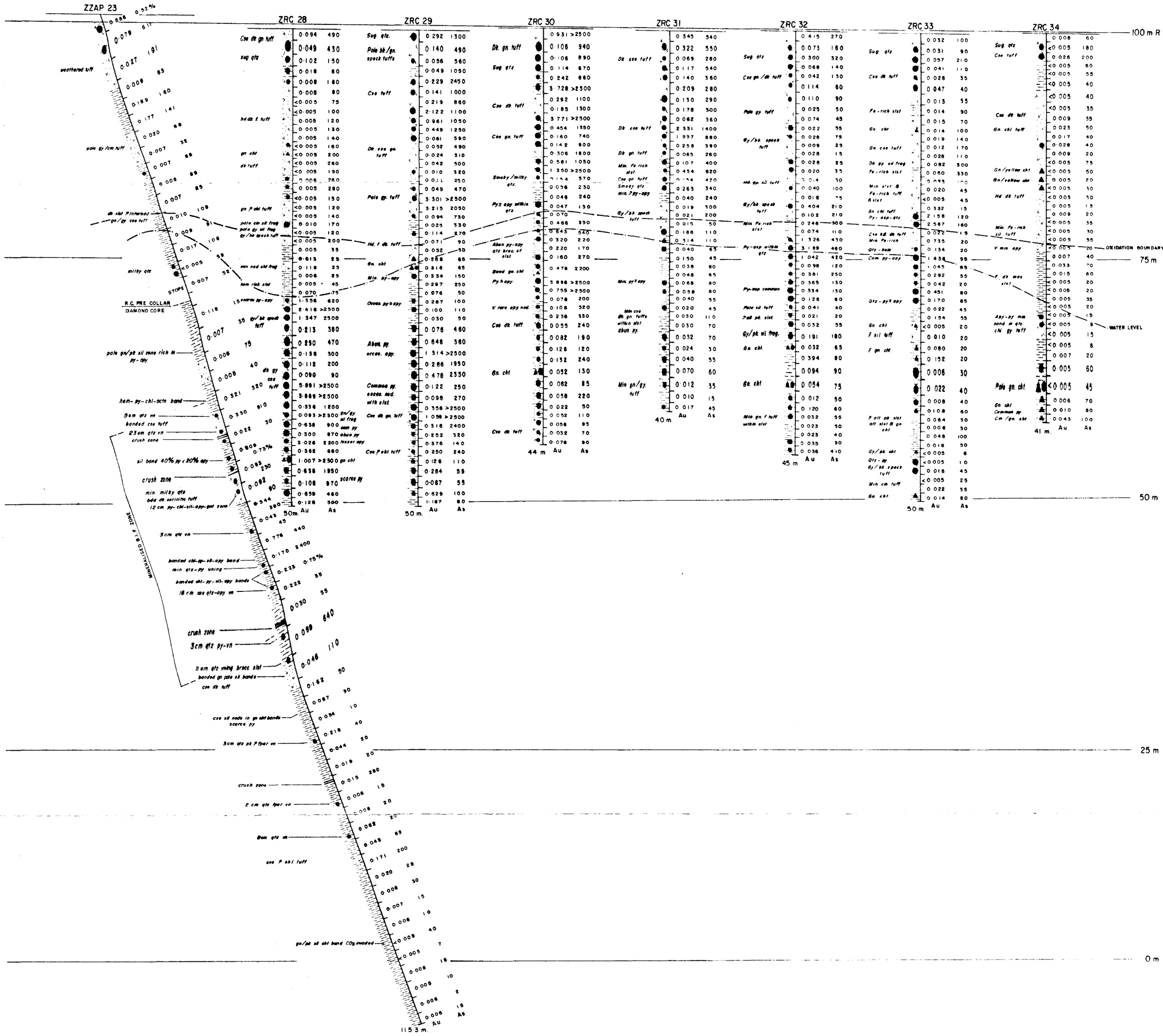
Scale 1:250

ZAPOPAN MINE
REVERSE CIRCULATION DRILLHOLES
ZRC 19-27,55
ASSAYS and GEOLOGY (SECTION SA)

GEOL: D. HOLDEN | DATE: JULY 1988 | Rept. EPL 88/22 PLATE 12

BAT 021





ABBREVIATIONS

abun	abundant	calc	calcareous	fol	foliation	hst	hornstone	ned	nodular	slst	siltstone
actn	actinolite	ca	calcite	fpar	feldspar	ign	igneous	nor	norite	Sa	bedding
adm	adamellite	cass	cassiterite	fract	fractured	kao	kaolin	obs	obsidian	sph	sphalerite
all/Qa	alluvium	cbc	carbonaceous	frag	fragmented	knt	knotted	oct	outcrop	sst	sandstone
amp	amphibolite	cbt/CO_3	carbonate	go	galena	lam	laminated	og	orange	stlpn	stilpnomelane
andes	andesite	chl	chlorite	gh	greenhand	lap	lapilli	orth	orthoclase	stk	stockwork
andt	andalusite	cht	chert	gbr	gabbro	lin	lineated	phy	phyllite	sulph/S=	sulphide
A.P.	axial plane	cl	clay	ge	geothite	lith	lithic	pk	pink	syen	syenite
alt	altered	clv	cleavage	gn	green	lst	limestone	pl	purple	tour	tourmaline
apy	arsenopyrite	cm	cream	gne	gneiss	lt	light	plag	plagioclase	tpz	topaz
ark	arkose	coll	colluvial	gnt	garnet	med	medium	po	pyrrotite	tr	trace /s
ast	ashstone	com	common	goss	gossan (eus)	mds	mudstone	perph	porphyry (itic)	trem	tremolite
bas	basalt	congl	conglomerate	gph	graphite (itic)	meta/metm	metamorphic	py	pyrite	tuff	tuffaceous
breca	brecciated	cpy	chalcopyrite	gr	grained	m	micro	qtz	quartz	v	very
bdd	bedded	cse	coarse	grd	granodiorite	mat	matrix	rd	red	vn/l	vein/lets
b.i.f.	banded iron formation	dac	dacite	gres	greisen	mer	mieroline	rhy	rhyolite	volc	volcanic
biot	biotite	dk	dark	gros	grossularite	mic	micaceous	rk	rock	vit	vitric
bismuth	bismuthinite	dissem	disseminated	grt	granite	min	minor	sc	scree	vert	vertical
blk	black	dol	dolerite	gw	greywacke	moly	molybdenite	sche	schelelite	wlfm	wolframite
bl	blue	dom	dolomite	gy	gy	mot	mottled	sch	schist	wt	white
bn	brown	eluv	eluvium	gyp	gypsum	msv	massive	sed	sediment(ary)	xtal	crystal
brng	bearing	ep	epidote	hd	hard	monz	monzonite	sh	shale	yw	yellow
br	broken	f	fine	hem	hematite	musc	muscovite	sil	siliceous		
w	with	Fe/ferr	ferruginous	hfl	hornfels	magn	magnetite	sl	slate		

LEGEND

- Siltstone
- Tuff
- Quartz >20%
- Quartz 5% - 20%
- Quartz <5%
- Chert >20%
- Chert 5% - 20%
- Chert <5%
- Core - bedding angle
- Core - cleavage/foliation angle
- Core - banding angle
- 0.256 Assay results in p.p.m.

CR88/413E

ZAPOPAN N.L.

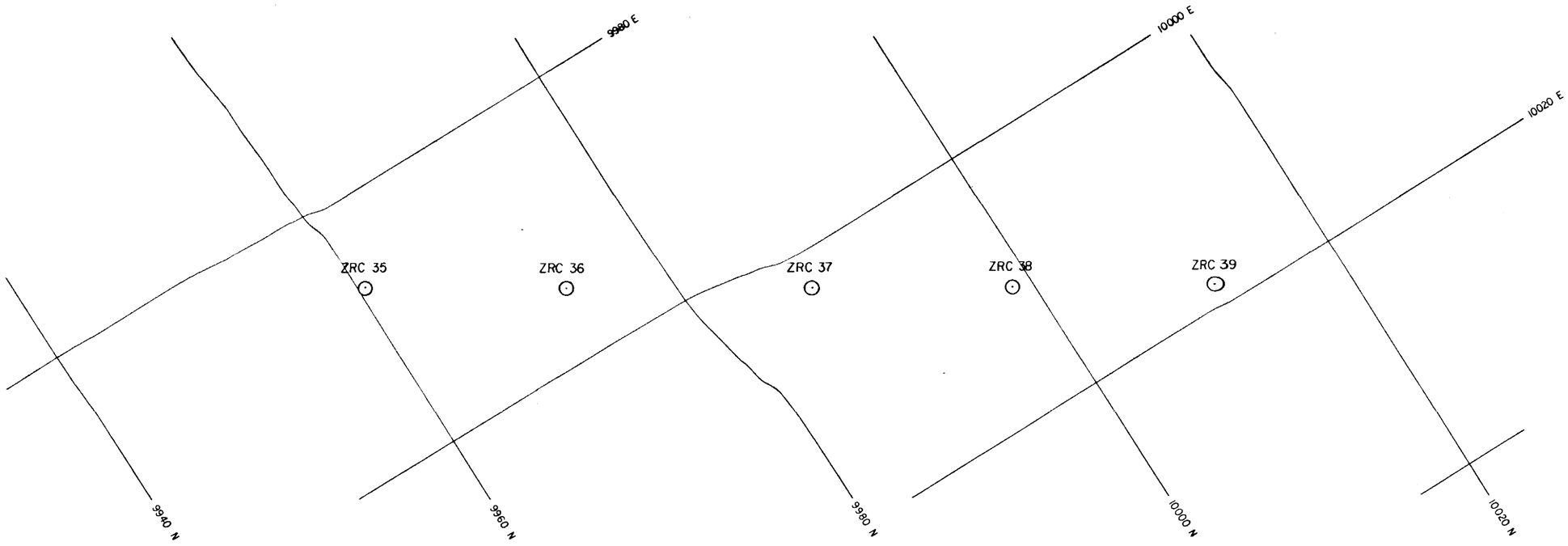
Scale 1:250

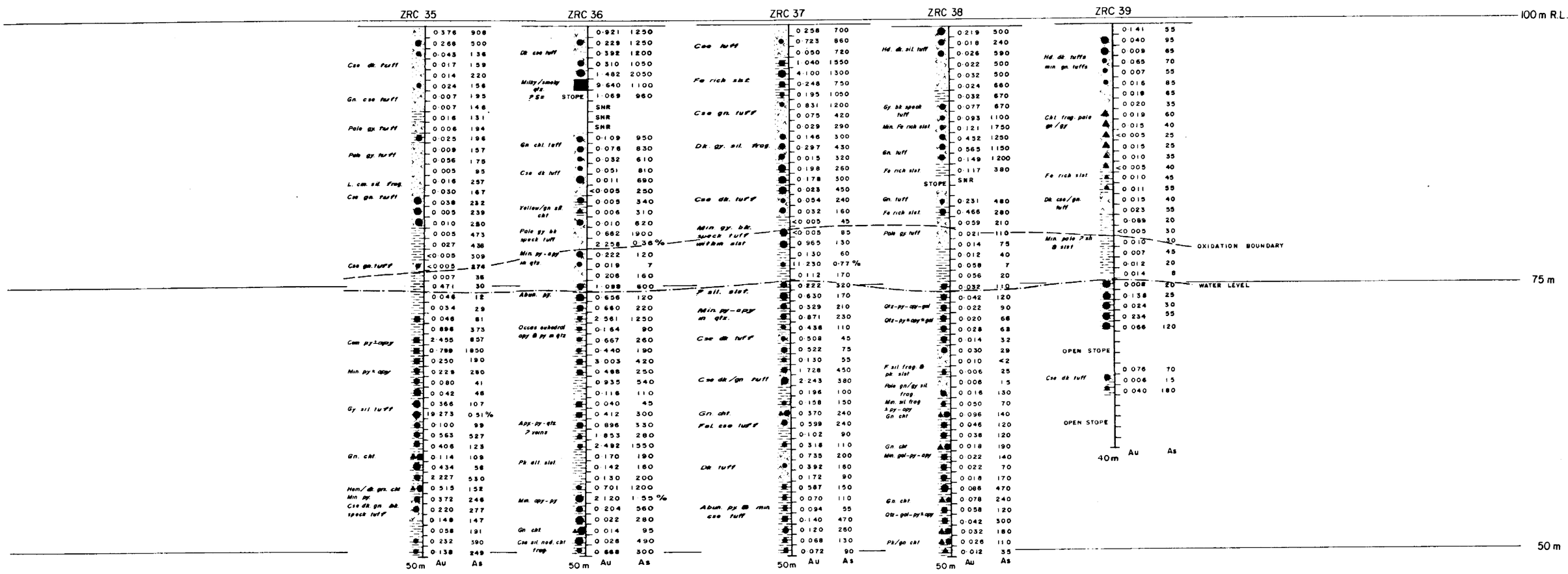
metre

ZAPOPAN MINE
REVERSE CIRCULATION DRILLHOLES
ZRC 28-34, ZZAP 23
ASSAYS and GEOLOGY (SECTION SB)

GEOL D HOLDEN | DATE JULY 1988 | Rept. EPL 88/22 PLATE 13

BAT 022





ABBREVIATIONS

abun	abundant	calc	calcareous	fol	foliation	hst	hornstone	nod	nodular	s/s f	sandstone
actn	actinolite	ca	calcite	fpar	feldspar	ign	igneous	nor	norite	So	bedding
adm	adamellite	cass	cassiterite	fract	fractured	kao	kaolin	obs	obsidian	sph	sphalerite
all/Qa	alluvium	cbc	carbonaceous	frag	fragmented	knt	knotted	ocr	outcrop	sst	sandstone
amp	amphibolite	cbt/CO3	carbonate	ga	galena	lam	laminated	og	orange	stripm	stripnomelane
andes	andesite	chl	chlorite	gb	greenband	lap	lapilli	orth	orthoclase	stk	stockwork
andl	andalusite	cht	chert	gbr	gabbro	lin	lineated	phy	phyllite	sulph/S=	sulphide
A.P.	axial plane	cl	clay	ge	geothite	lith	lithic	pk	pink	syen	syenite
alt	altered	clv	cleavage	gn	green	lst	limestone	pl	purple	tour	tourmaline
apy	arsenopyrite	cm	cream	gne	gneiss	lt	light	plag	plagioclase	tpz	topaz
ark	arkose	coll	colluvial	gnt	garnet	med	medium	po	pyrrohite	tr	trace/s
ast	ashstone	com	common	goss	gossan (eus)	mds	mudstone	porph	porphyritic	tremn	tremolite
bas	basalt	congl	conglomerate	gph	graphite (itic)	meta/mesm	metamorphic	py	pyrite	tuff	tuffaceous
breac	brecciated	cpy	chalcopyrite	gr	grained	m	micro	qtz	quartz	v	very
bdd	bedded	cse	coarse	grd	granodiorite	mat	matrix	rd	red	vn/t	vein/lets
b.i.f.	banded iron formation	dac	dacite	gre	greissen	mcr	microline	rhy	rhyolite	volc	volcanic
biot	biotite	dk	dark	gros	grossularite	mic	micaceous	rk	rock	vit	vitric
bismuth	bismuthinite	dissem	disseminated	grt	granite	min	minor	sc	scree	vert	vertical
blk	black	dol	dolerite	gw	greywacke	moly	molybdenite	sche	schaulite	wolfm	wolframite
bl	blue	dom	dolomite	gy	gy	mot	mottled	sch	schist	wt	white
bn	brown	eluv	eluvium	gyp	gypsum	mav	massive	sed	sediment(ary)	xtal	crystal
bng	bearing	ep	epidote	hd	hard	monz	monzonite	sn	shale	yw	yellow
br	broken	f	fine	hem	hematite	musc	muscovite	sil	siliceous		
c	with	Fe/ferr	ferruginous	hfl	hornfels	magn	magnetite	sl	slate		

LEGEND

- Siltstone
- Tuff
- Quartz >20%
- Quartz 5% - 20%
- Quartz <5%
- Chert >20%
- Chert 5% - 20%
- Chert <5%
- Core – bedding angle
- Core – cleavage/foliation angle
- Core – banding angle
- 0.256 Assay results in p.p.m

CR88/413E

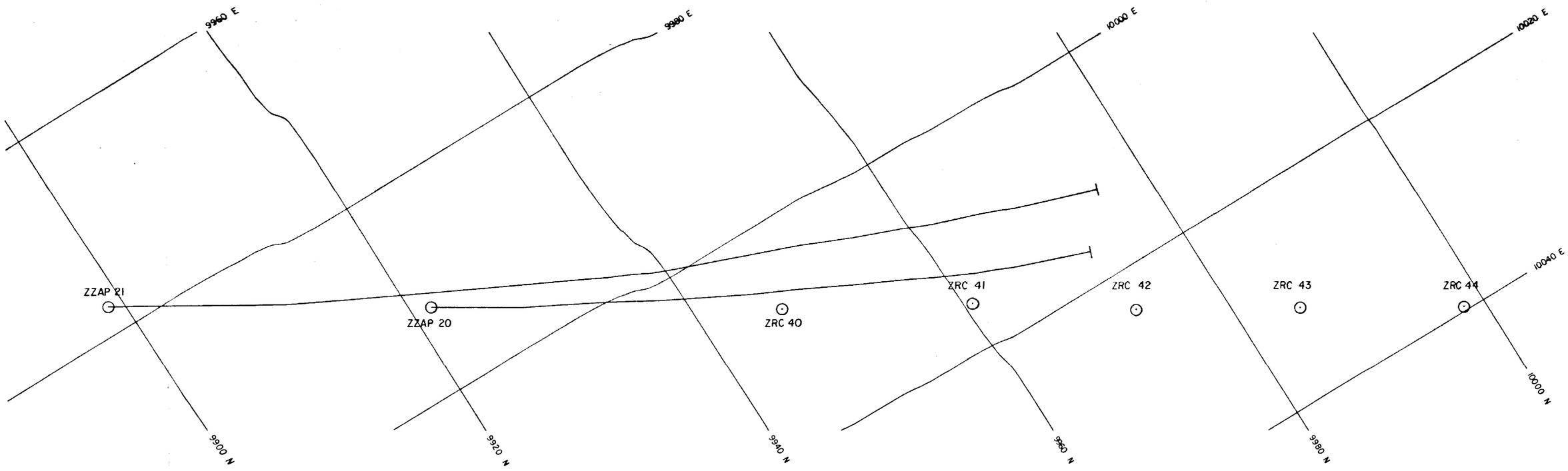
ZAPOPAN N.L.

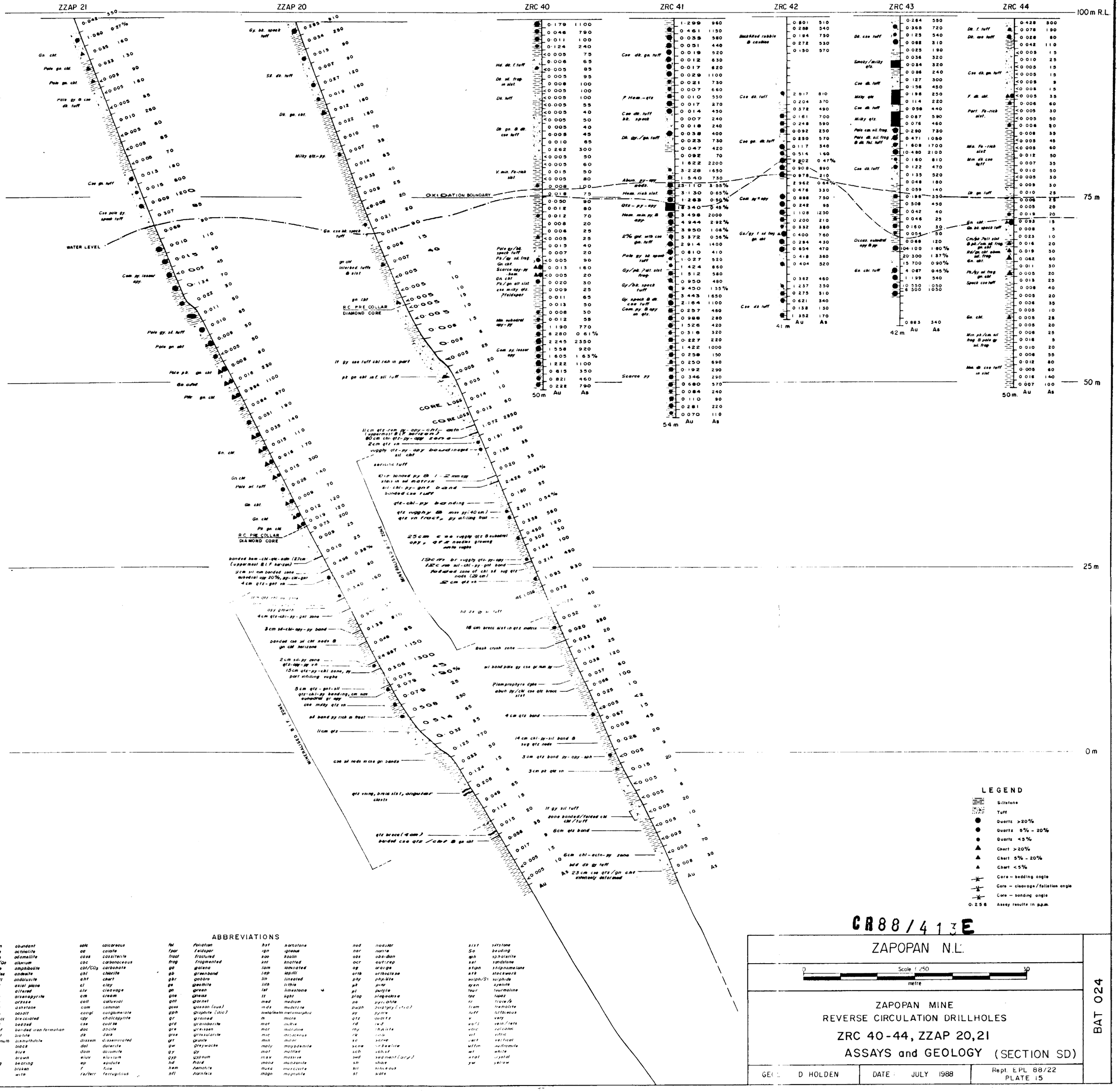
0 Scale 1:250 30 metre

ZAPOPAN MINE
REVERSE CIRCULATION DRILLHOLES
ZRC 35 - 39
ASSAYS and GEOLOGY (SECTION SC)

GEOL D. HOLDEN | DATE: JULY 1988 | Rept. EPL 88/22 PLATE 14

BAT 023





ABBREVIATIONS

abun	abundant	calc	calcareous	fol	foliation	hst	hornstone	nod	nodular	sltst	siltstone
actn	actinolite	cd	calcite	fspr	feldspar	ign	igneous	nor	norite	So	bedding
adm	adamellite	cass	cassiterite	fract	fractured	kao	kaolin	obs	obsidian	sph	spherulite
all/Qa	alluvium	cbc	carbonaceous	frag	fragmented	knt	knotted	ocr	ourstrep	sst	sandstone
amp	amphibolite	cbt/CO_3	carbonate	go	galena	lam	laminated	og	orange	stipn	stilpnomelane
andes	andesite	chl	chlorite	gb	greenband	lap	lapilli	orth	orthoclase	stk	stockwork
andl	andalusite	cht	chert	gbr	gabbro	lin	lineated	phy	phyllite	sulph/S=	sulphide
A.P.	axial plane	cl	clay	ge	geothite	lith	lithic	pk	pink	syen	syenite
alt	altered	clv	cleavage	gn	green	ls	limestone	pl	purple	tour	tourmaline
apy	arsenopyrite	cm	cream	gne	gneiss	lt	light	plag	plagioclase	tpz	topaz
ark	arkose	coll	colluvial	gnt	garnet	med	medium	po	pyrrhotite	tr	trace/s
Ash	ashstone	com	common	goss	glossan (ous)	mds	mudstone	porph	porphyry (itic)	trem	tremolite
bas	basalt	congl	conglomerate	gph	graphite (itic)	meta/metm	metamorphic	py	pyrite	tuff	tuffaceous
brecc	brecciated	cpy	chalcopyrite	gr	grained	m	micro	qtz	quartz	v	very
bds	bedded	cse	coarse	grd	granodiorite	mot	matrix	rd	red	vn(s)	vein/lets
b.i.f	banded iron formation	doc	calcite	gre	greissen	mct	microline	rhy	rhyolite	volc	volcanic
biot	biotite	dk	dark	grss	grossularite	mic	micaceous	rk	rock	vit	vitric
bismuth	bismuthinite	dissem	disseminated	grt	granite	min	mineral	sc	scene	vert	vertical
blk	black	dol	dolerite	gw	greywacke	moly	molybdenite	scne	scheelite	wlfrm	wolframite
bl	blue	dom	dolomite	gy	gy	mot	mottled	sch	schist	wt	white
bn	brown	eluv	eluvium	gyp	gypsum	mav	massive	swd	sedimentary	xtal	crystal
bng	bearing	ep	epidote	hd	hard	inonz	inclinazite	sh	shale	yw	yellow
br	broken	f	fine	hem	hematite	musc	muscovite	sil	siliceous		
C	with	fe/ferr	ferruginous	hfl	hornfels	magn	magnetite	st	scale		

CR88/413E

ZAPOPAN N.L.

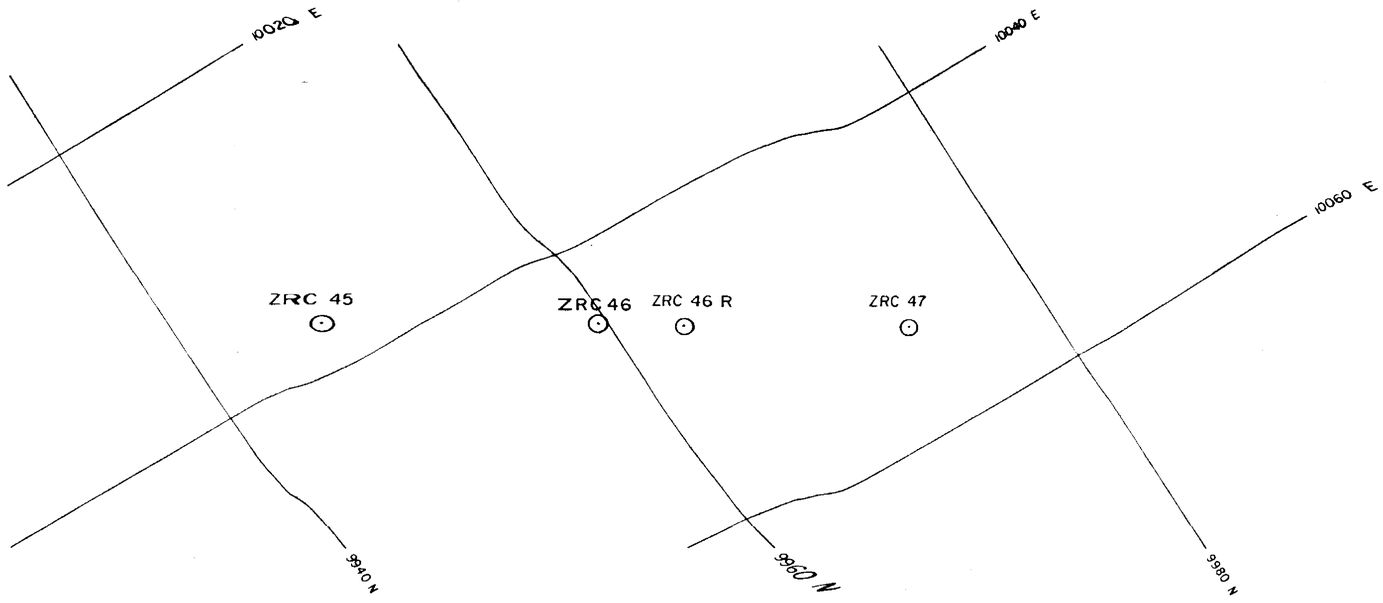
Scale 1:250

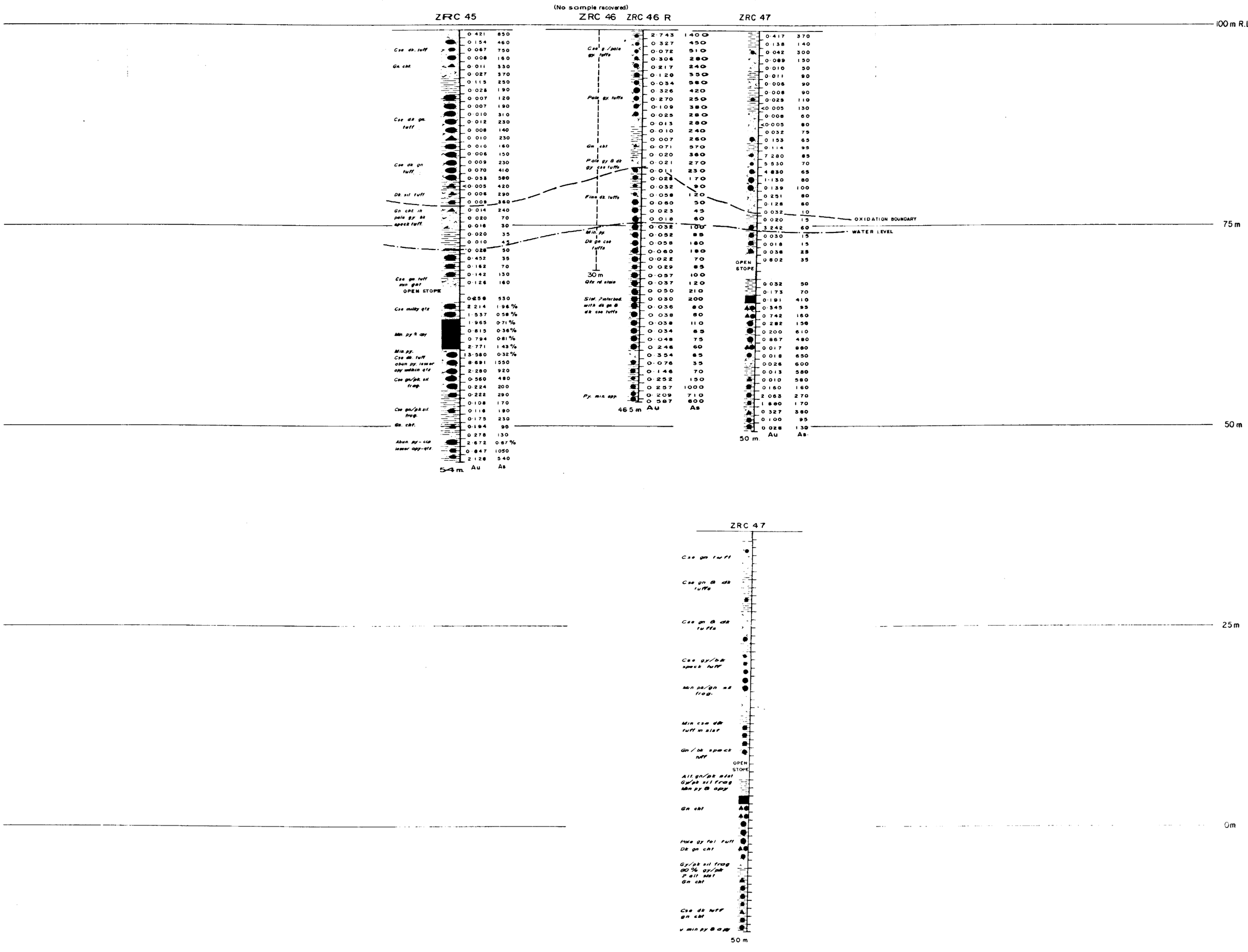
metre

ZAPOPAN MINE
REVERSE CIRCULATION DRILLHOLES
ZRC 40-44, ZZAP 20,21
ASSAYS and GEOLOGY (SECTION SD)

GEOL D HOLDEN | DATE JULY 1988 | Rept. EPL 88/22 PLATE 15

BAT 024





ABBREVIATIONS

abun	abundant	calc	calcareous	fol	foliation	hst	hornstone	nod	nodular	sist	siltstone
actn	actinolite	ca	calcite	fspar	feldspar	ign	igneous	ncr	norite	So	bedding
adm	adamellite	cass	cassiterite	fract	fractured	kao	kaolin	obs	obsidian	sph	sphalerite
all/Qe	alluvium	cbc	carbonaceous	frag	fragmented	knt	knotted	ocr	ocherop.	sst	sandstone
amp	amphibolite	cbt/CO3	carbonate	ga	galena	lam	laminated	og	orange	stipn	stilpnomelane
andes	andesite	chl	chlorite	gb	greenbond	lap	lapilli	orth	orthoclase	stk	stockwork
andl	andalusite	cht	chert	gbr	gabbro	lin	lineated	phy	phyllite	sulph/S	sulphide
A.P	axial plane	cl	clay	ge	geothite	lith	lithic	pk	pink	syen	syenite
alt	altered	clv	cleavage	gn	green	lst	limestone	pl	purple	tour	tourmaline
apy	arsenopyrite	cm	cream	gne	gneiss	lt	light	plag	plagioclase	qtz	quartz
ark	arkose	coll	colluvial	gnt	garnet	med	medium	pe	pyrrhotite	tr	trace/s
ast	asbestos	com	common	goss	gossan (ous)	mds	mudstone	porph	porphyry (+ritic)	trem	tremolite
bas	basalt	congl	conglomerate	gph	graphite (itic)	melu/metn	metamorphic	py	pyrite	tuff	tuffaceous
bracc	brecciated	cpy	chalcopyrite	gr	grained	m	micro	qtz	quartz	v	very
bdd	bedded	cse	coarse	grd	granodiorite	mat	matrix	rd	red	vn/l	vein/lets
b.i.f.	banded iron formation	dac	dacite	gre	greissen	mcr	microline	rhy	rhyolite	volc	volcanic
biot	biotite	dk	dark	gros	grossularite	mic	micaceous	slk	sick	wt	white
bismuth	bismuthinite	dissem	disseminated	grt	granite	min	mineral	sc	screen	vert	vertical
bk	black	dol	dolerite	gw	greywacke	moly	molybdenite	sche	scheelite	wlfm	wolframite
bl	blue	dom	dolomite	gy	gypsum	mot	mottled	sch	schist	wt	white
bn	brown	eluv	eluvium	gyp	gypsum	msv	massive	sed	sediment (ary)	xtal	crystal
brng	bearing	up	epidote	hd	hard	mons	monzonite	sh	shale	yw	yellow
br	broken	f	fine	hem	hematite	musc	muscovite	sil	siliceous		
c	with	Fe/ferr	ferruginous	hfl	hornfels	magn	magnetite	sl	slate		

LEGEND

- Siltstone
- Tuff
- Quartz >20%
- Quartz 5% - 20%
- Quartz <5%
- Chert >20%
- Chert 5% - 20%
- Chert <5%
- Core — bedding angle
- Core — cleavage / foliation angle
- Core — banding angle
- 0.256 Assay results in p.p.m.

CR88/413E

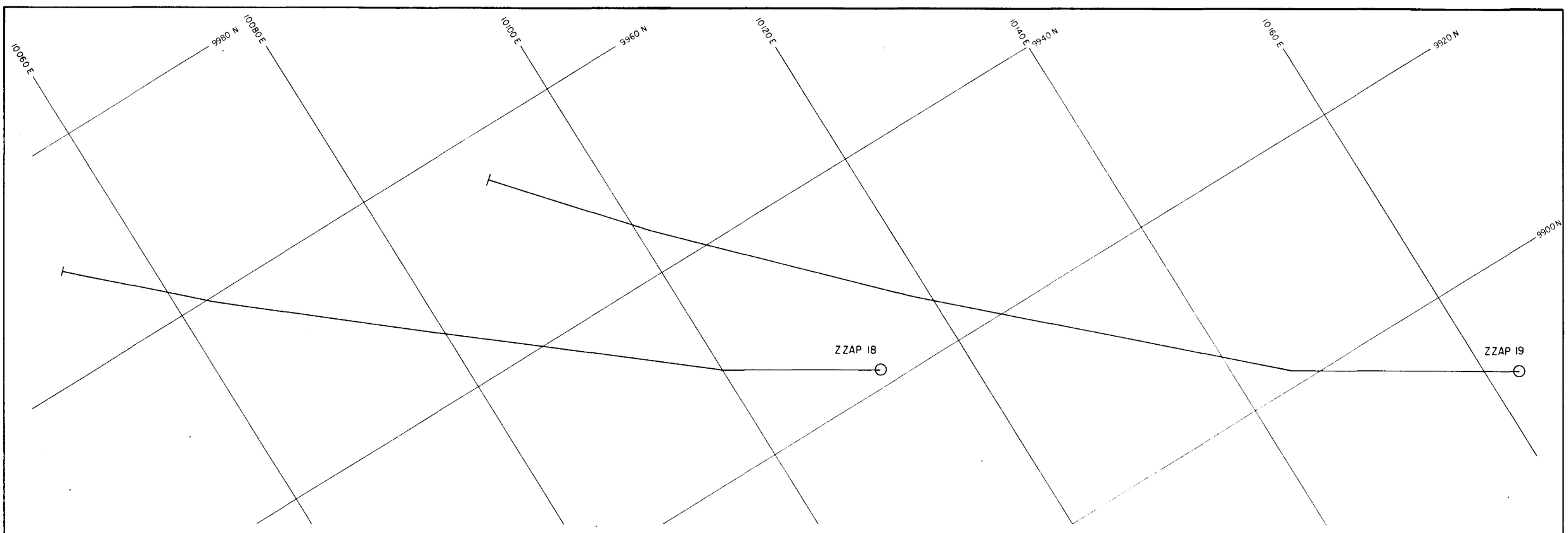
ZAPOPAN N.L.

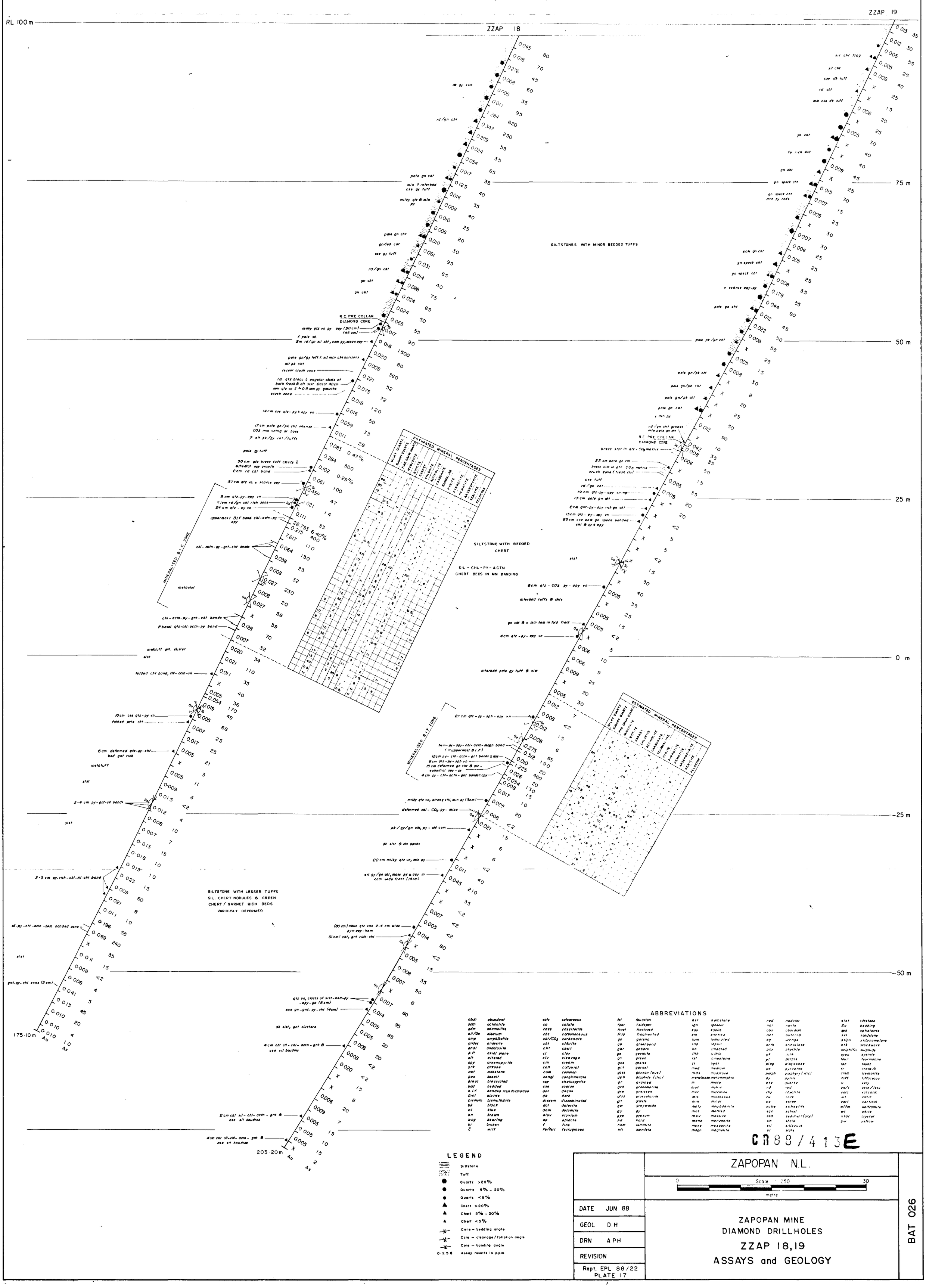
0 Scale 1:250 30
metre

ZAPOPAN MINE
REVERSE CIRCULATION DRILLHOLES
ZRC 45 - 47
ASSAYS and GEOLOGY (SECTION SE)

GEOL D HOLDEN | DATE JULY 1988 | Rept EPL 88/22 PLATE 16

BAT 025





ABBREVIATIONS

abun	abundant	calc	calcareous	fol	foliation	hst	hornstone	nod	nodular	slst	siltstone
actn	actinolite	ca	calcite	fspar	feldspar	ign	igneous	nor	norite	So	bedding
adm	adamellite	cass	cassiterite	fract	fractured	kao	kaolin	obs	obsidian	sph	sphalerite
all/Qa	alluvium	cbc	carbonaceous	frag	fragmented	knt	knotted	oct	outcrop	sst	sandstone
amp	amphibolite	cbt/CO3	carbonate	ga	galena	lam	laminated	org	orange	stlpn	stilpnomelane
andes	andesite	chl	chlorite	gb	greenbond	lap	lapilli	orth	orthoclase	stk	stockwork
andl	andalusite	cht	chert	gbr	gabbro	lin	lineated	phy	phyllite	sulph/S=	sulphide
A.P.	axial plane	cl	clay	ge	geomite	lith	lithic	pk	pink	syen	syenite
alt	altered	clv	cleavage	gn	green	lst	limestone	pl	purple	tour	tourmaline
apy	arsenopyrite	cm	cream	gne	gneiss	lt	light	plag	plagioclase	topz	topaz
ark	arkose	coll	colluvial	gnt	garnet	med	medium	po	pyrrotite	tr	trace/A
ash	ashstone	com	common	goss	gossan (fous)	mds	mudstone	porph	porphyry (itic)	trem	tremolite
bas	basalt	congl	conglomerate	gph	graphite (itic)	meta/mesm	metamorphic	py	pyrite	tuff	tuffaceous
breac	brecciated	cpy	chalcopyrite	gr	grained	m	micro	qtz	quartz	v	very
bdd	bedded	cse	coarse	grd	granodiorite	mat	matrix	rd	red	vn/l	vein/lets
b.i.f.	banded iron formation	dac	dacite	gre	greissen	mcr	microline	rhy	rhyolite	volc	volcanic
Biot	biotite	dk	dark	gros	grossularite	mic	micaceous	rk	rock	vit	vitric
bismuth	bismuthinite	dissem	disseminated	grt	granite	min	minor	sc	scree	vert	vertical
blk	black	dol	dolerite	gw	greywacke	moly	molybdenite	schc	schcelite	wlfrm	wolframite
bl	blue	dom	dolomite	gy	gy	mot	mottled	sch	schist	wt	white
bn	brown	eluv	eluvium	gyp	gypsum	msv	massive	sed	sediment(ary)	xtal	crystal
brng	bearing	ep	epidote	hd	hard	monz	monzonite	sh	shale	yw	yellow
br	broken	f	fine	hem	hematite	musc	muscovite	sil	siliceous		
c	with	Fe/ferr	ferruginous	hfl	hornfels	magn	magnetite	sl	slate		

CR 88/413E

LEGEND

- Siltstone
- Tuff
- Quartz >20%
- Quartz 5% - 20%
- Quartz <5%
- Chert >20%
- Chert 5% - 20%
- Chert <5%
- Core - bedding angle
- Core - cleavage / foliation angle
- Core - banding angle
- 0.258 Assay results in p.p.m.

ZAPOPAN N.L.

0 Scale 250 30 metre

DATE JUN 88

GEOL D.H

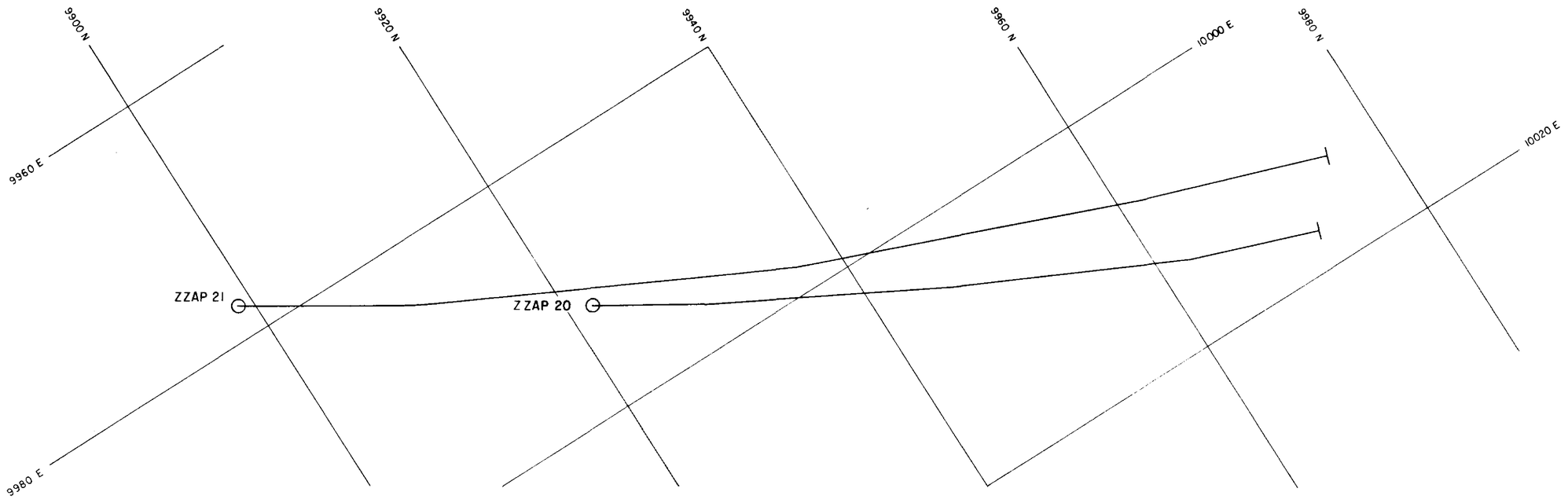
DRN A.P.H

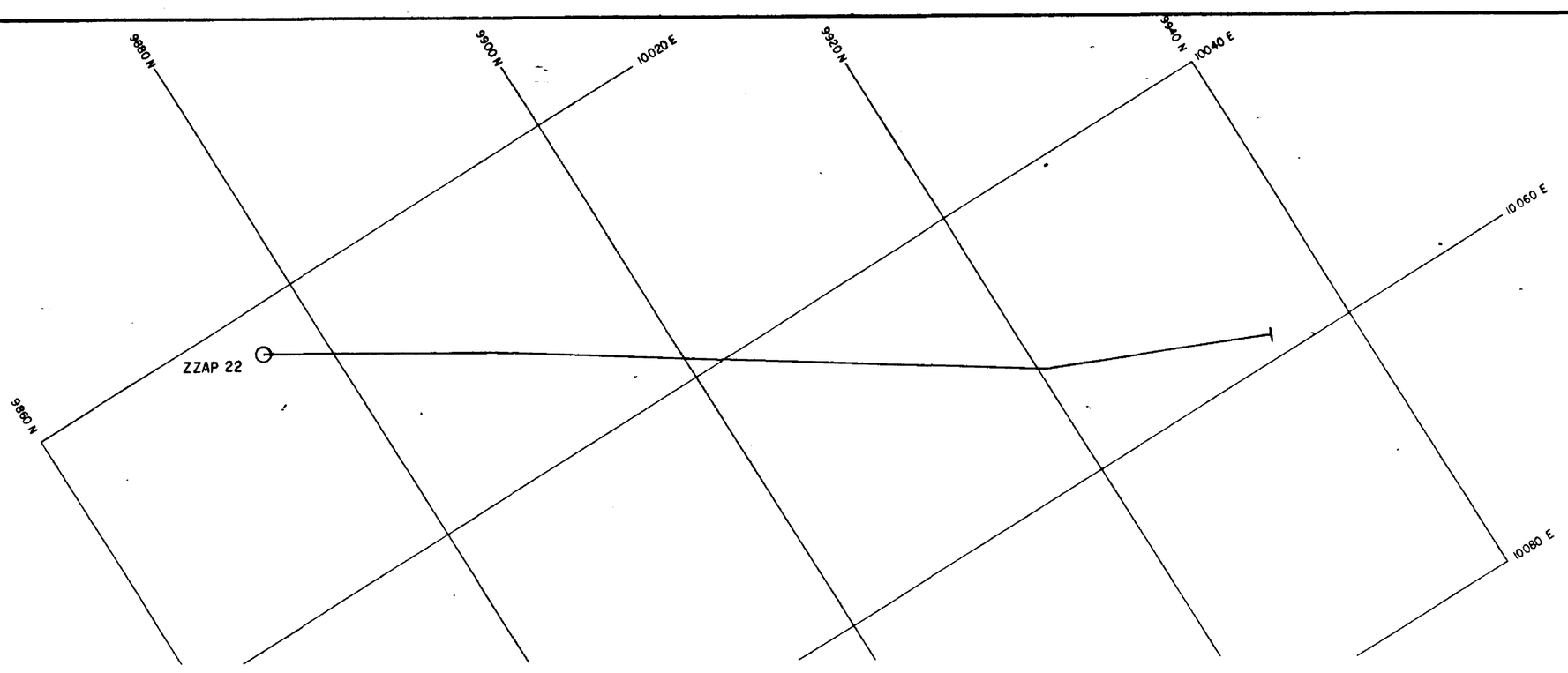
REVISION

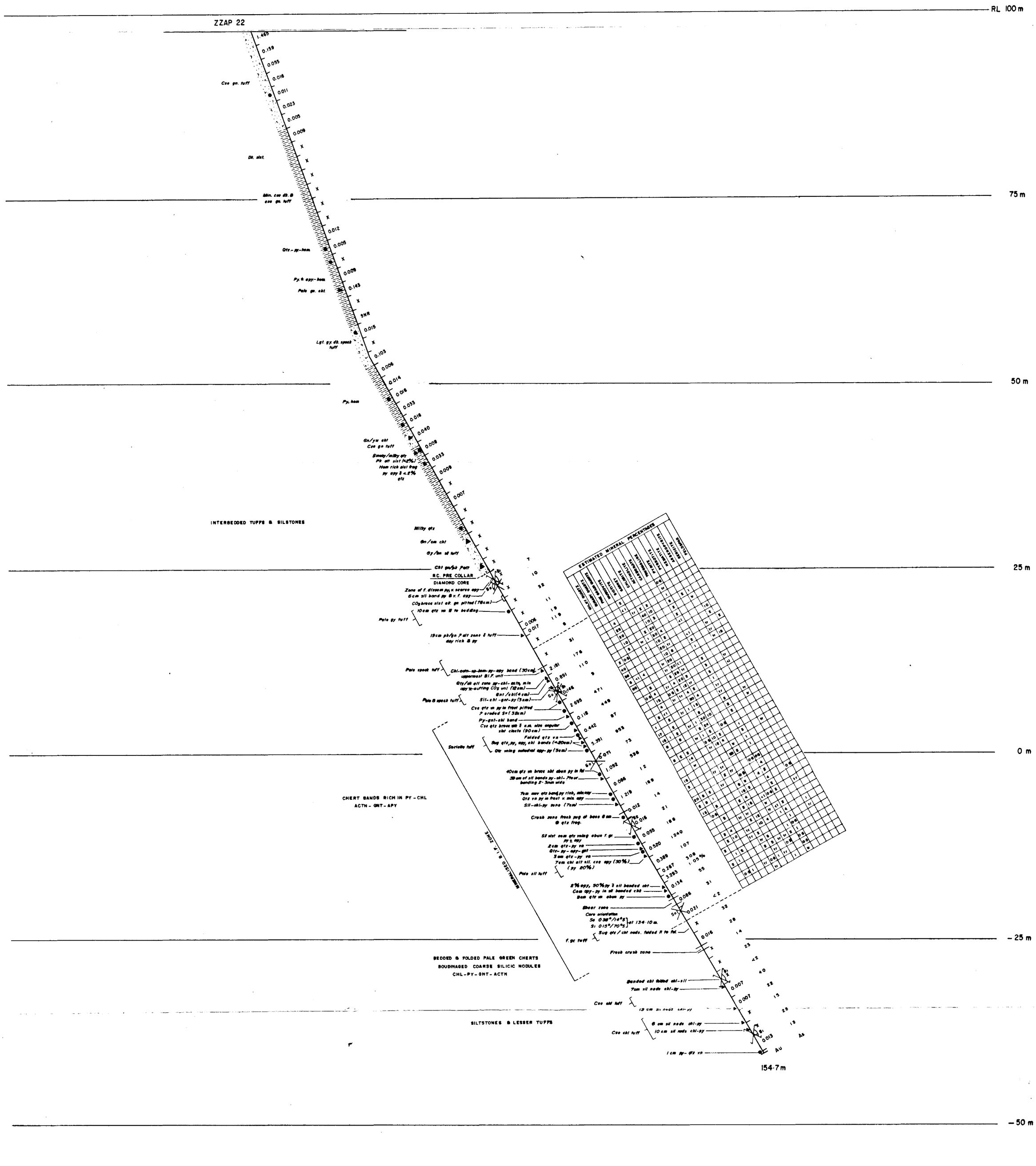
Rept. EPL 88/22
PLATE 17

ZAPOPAN MINE
DIAMOND DRILLHOLES
ZZAP 18,19
ASSAYS and GEOLOGY

BAT 026


9900 N
9920 N
9940 N
9960 N
10000 E
9980 N
10020 E
9960 E
9980 E
ZZAP 21
ZZAP 20





ABBREVIATIONS

abun	abundant	calc	calcareous	fol	foliation	hst	hornstone	nod	nodular	sist	siltstone
actn	actinolite	ca	calcite	fpar	feldspar	ign	igneous	nor	norite	So	bedding
adm	adamsellite	cass	cassiterite	fract	fractured	kao	kaolin	obs	obsidian	sph	Tuff
all/Qal	alluvium	cbs	carbonaceous	frag	fragmented	knt	knotted	oct	outcrop	sst	sandstone
amp	amphibolite	cbt/CO3	carbonate	ga	galena	lam	laminated	og	orange	stkn	stilpnomelane
andes	andesite	chl	chlorite	gb	greenbend	lap	lapilli	orth	orthoclase	stk	stockwork
andl	andalusite	cht	chert	gbr	gabbro	lin	lineated	phy	phyllite	sulph/S=	sulphide
A.P	axial plane	cl	clay	ge	geothite	lith	lithic	pk	pink	syen	syenite
alt	altered	clv	cleavage	gn	green	ls	limestone	pl	purple	tour	tourmaline
apy	arsenopyrite	cm	cream	gne	gneiss	lt	light	plag	plagioclase	toz	topaz
ark	arkose	coll	colluvial	gnt	garnet	med	medium	po	pyrrotite	tr	trace/s
ast	ashstone	com	common	goss	gossan (ous)	mds	mudstone	porph	porphyry (itic)	trem	tremolite
bas	basalt	congl	conglomerate	gph	graphite (itic)	meta/hem	metamorphic	py	pyrite	tuff	tuffaceous
bruc	brecciated	cpy	chalcopyrite	gr	grained	m	micro	qtz	quartz	v	very
bdd	bedded	cse	coarse	grd	granodiorite	met	matrix	rd	red	vn/l	vein/lets
b.i.f.	banded iron formation	dac	dacite	gre	greissen	mer	mineroline	rhy	rhyolite	volc	volcanic
biot	biotite	dk	dark	gros	grossularite	mic	micaceous	rk	rock	wit	vitric
bismuth	bismuthinite	dissem	disseminated	grt	granite	min	minor	sc	scree	vert	vertical
blk	black	dol	dolerite	gw	greywacke	moly	molybdenite	scheel	scheelite	wlfm	wolframite
bl	blue	dom	dolomite	gy	gy	mot	mottled	sch	schist	wt	white
bn	brown	eluv	eluvium	gyp	gypsum	mssv	massive	sed	sediment(ary)	xtal	crystal
bng	bearing	ep	epidote	hd	hard	mons	monzonite	sh	shale	yw	yellow
br	broken	f	fine	hem	hematite	muse	muscovite	sil	siliceous		
c	with	Fe/ferr	ferrugineus	hfl	hornfels	magn	magnetite	sl	slate		

LEGEND

- Siltstone
- Tuff
- Quartz >20%
- Quartz 5% - 20%
- Quartz <5%
- Chert >20%
- Chert 5% - 20%
- Chert <5%
- Core – bedding angle
- Core – cleavage/foliation angle
- Core – banding angle
- 0.256 Assay results in p.p.m.

CR88/413E

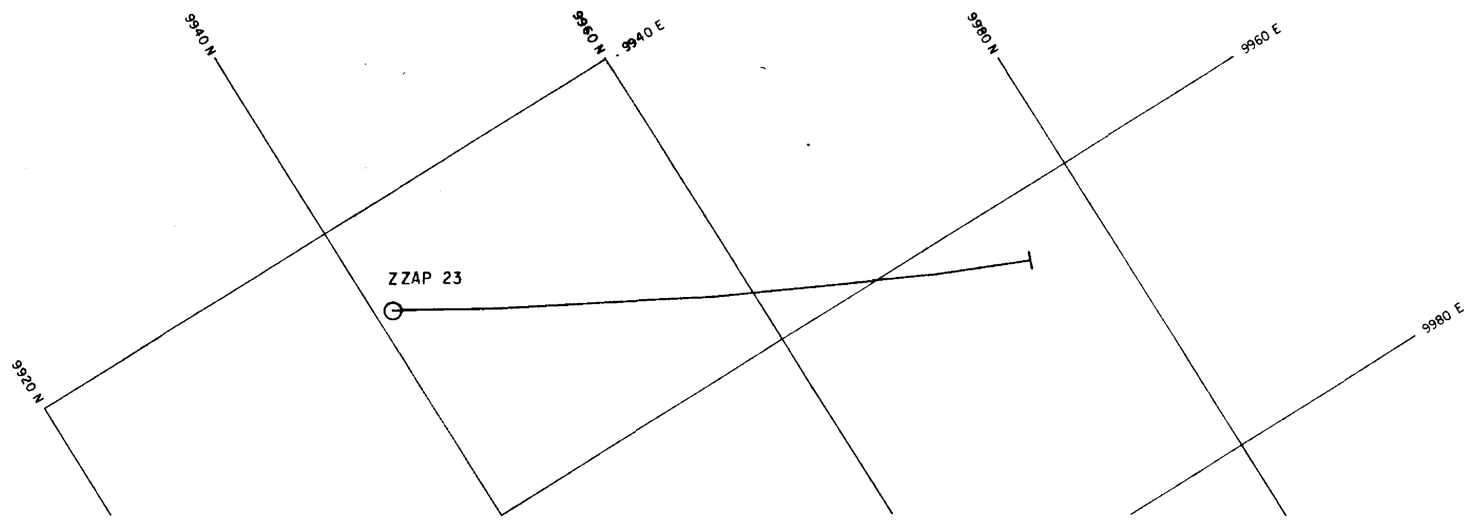
ZAPOPAN N.L.

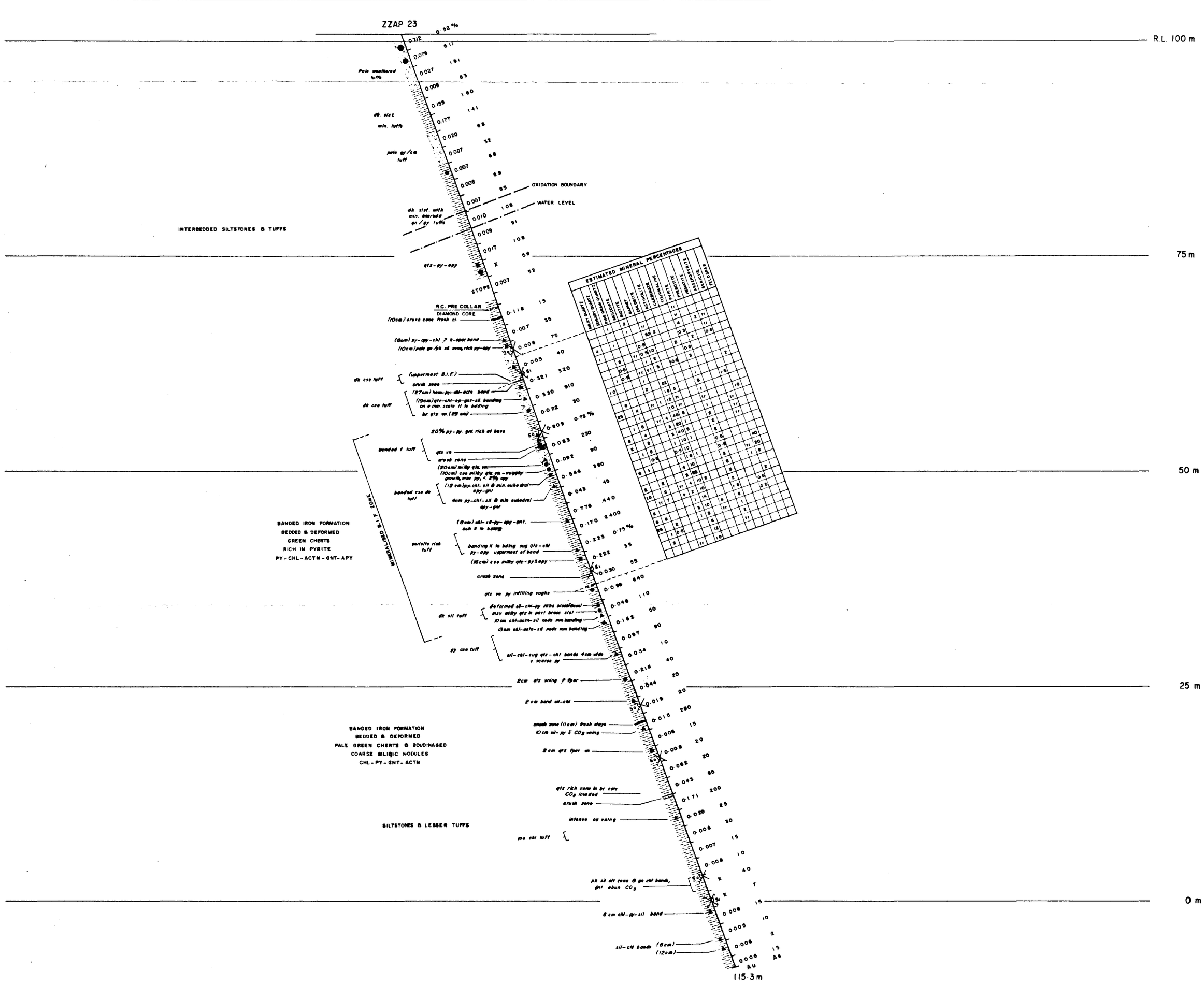
0 Scale 1:250 30
metre

DATE JUN 88
GEOL D.H.
DRN A.P.H.
REVISION
Rept. EPL 88/22
PLATE 19

ZAPOPAN MINE
DIAMOND DRILLHOLES
ZZAP 22
ASSAYS and GEOLOGY

BAT 028





ABBREVIATIONS

abun	abundant	calc	calcareous	fol	foliation	hst	hornstone	nod	nodular	slst	siltstone
actn	actinolite	cc	calcite	fspr	feldspar	ign	igneous	nor	norite	So	bedding
adm	adamellite	cass	cassiterite	fract	fractured	kao	kaolin	obs	obsidian	sph	sphalerite
alt/Qz	alkalivum	carb	carbonaceous	frag	fragmented	knt	knotted	ocr	outcrop	sst	sandstone
amp	amphibolite	cbt/CO_3	carbonate	ga	galena	lam	laminated	og	orange	stlpn	stilpnomelane
andes	andesite	chl	chlorite	gb	greenband	lap	lapilli	orth	orthoclase	stk	stockwork
andl	andalusite	cht	chert	gbr	gabbro	lin	lineated	phy	phyllite	sulph/S	sulphide
A.R	axial plane	cl	clay	ge	geothite	lith	lithic	pt	pink	syen	syenite
alt	altered	clv	cleavage	gn	green	lst	limestone	pl	purple	tour	tourmaline
apy	arsenopyrite	cm	cream	gne	gneiss	lt	light	plag	plagioclase	tpz	topaz
ark	arkose	coll	colluvial	gnt	garnet	med	medium	po	pyrrotite	tr	trace/s
ast	ashstone	com	common	goss	gossan (ous)	mds	mudstone	porph	porphyry (itic)	tremo	tremolite
bas	basalt	congl	conglomerate	gph	graphite (itic)	meta/morph	metamorphic	py	pyrite	tuff	tuffaceous
breec	brecciated	cpy	chalcopyrite	gr	grained	m	micro	qtz	quartz	v	very
bdd	bedded	cse	coarse	grd	granoderite	mat	matrix	rd	red	vn/l	vein/lets
b.i.f.	banded iron formation	dac	decite	grn	greissen	mer	meroline	rhy	rhyolite	volc	volcanic
biot	biotite	dk	dark	gnvc	granularite	mic	micaceous	rk	rock	vit	vitric
bismuth	bismuthinite	disem	disseminated	grt	granite	min	minor	sc	sericite	vert	vertical
blk	black	dol	dolerite	gw	greywacke	moly	molybdenite	sche	scheelite	wlfm	wolframite
bl	blue	dom	dolomite	gy	gy	mot	mottled	sch	schist	wt	white
br	brown	eluv	eluvium	gyp	gypsum	mav	massive	sed	sediment(ary)	xtal	crystal
bng	bearing	ep	epidote	hd	hard	mons	monzonite	sh	shale	yw	yellow
br	broken	f	fine	hem	hamatite	muse	muscovite	sil	siliceous		
⁊	with	Fe/ferr	ferruginous	hfl	hornfels	magn	magnetite	sl	slate		

LEGEND

- Siltstone
- Tuff
- Quartz >20%
- Quartz 5% – 20%
- Quartz <5%
- Chert >20%
- Chert 5% – 20%
- Chert <5%
- Core – bedding angle
- Core – cleavage/fcliation angle
- Core – banding angle
- 0·256 Assay results in p.p.m.

DATE	JUN 88
GEOL	D.H.
DRN	A.P.H.
REVISION	
Rept. EPL 88/22 PLATE 20	

ZAPOPAN N.L.

Scale 1:250

0 30 metre

CR 88/413E

ZAPOPAN MINE
DIAMOND DRILLHOLES
ZZAP 23
ASSAYS and GEOLOGY

BAT 029