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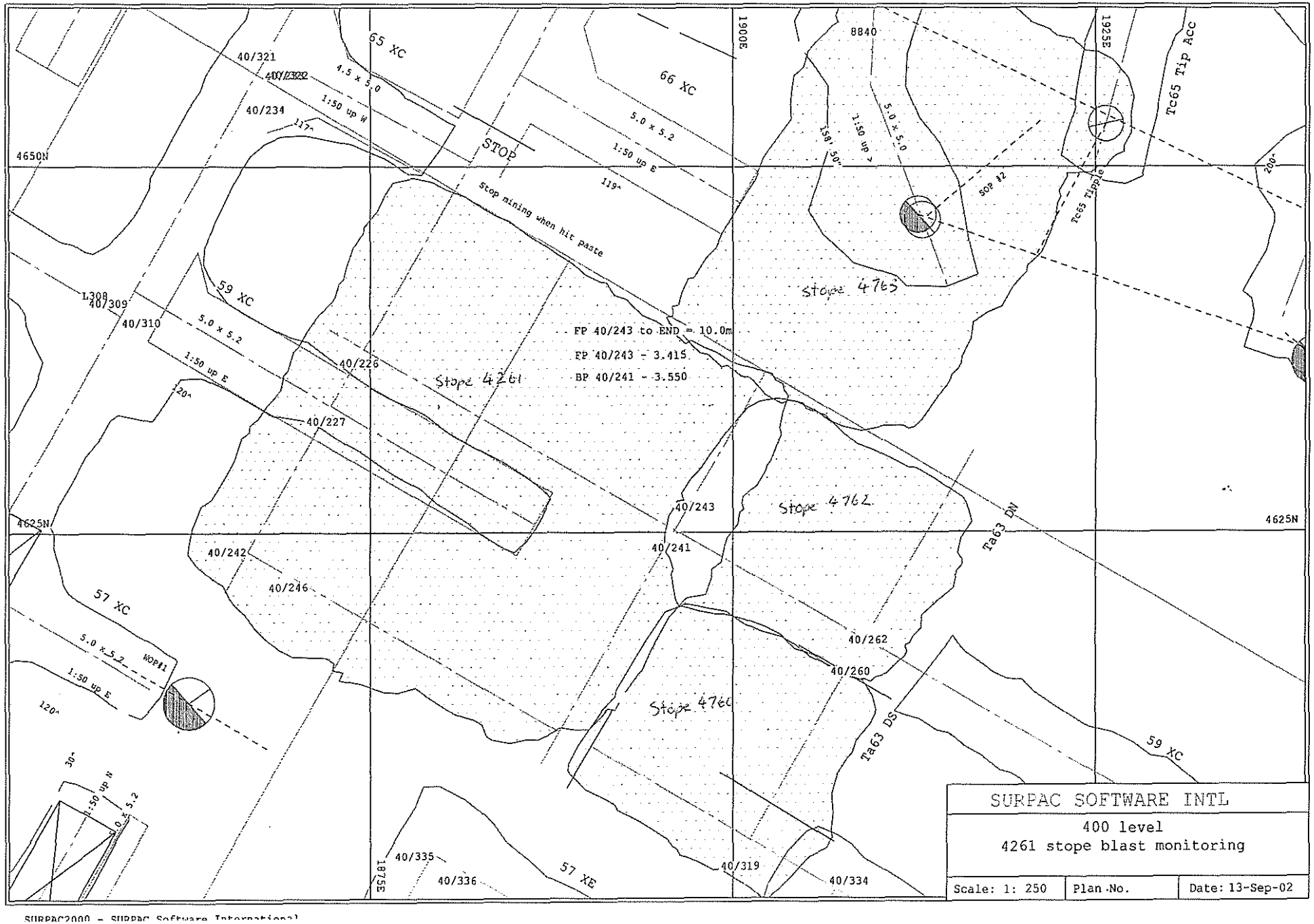
Appendix A - Plan of Stopes in Monitoring Program

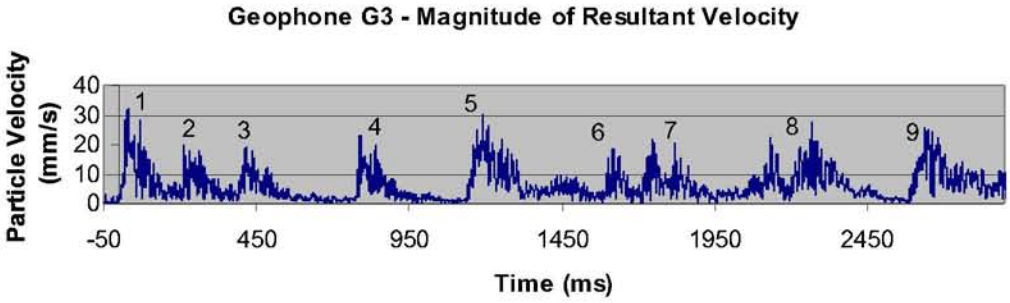


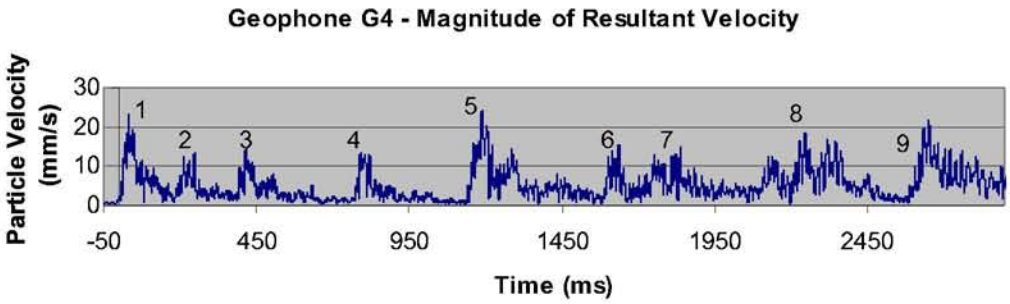
400mapd.pf

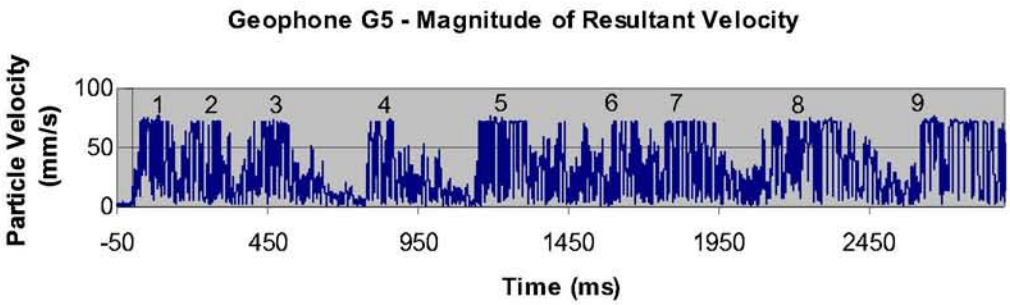
SURPAC2000 - SURPAC Software International

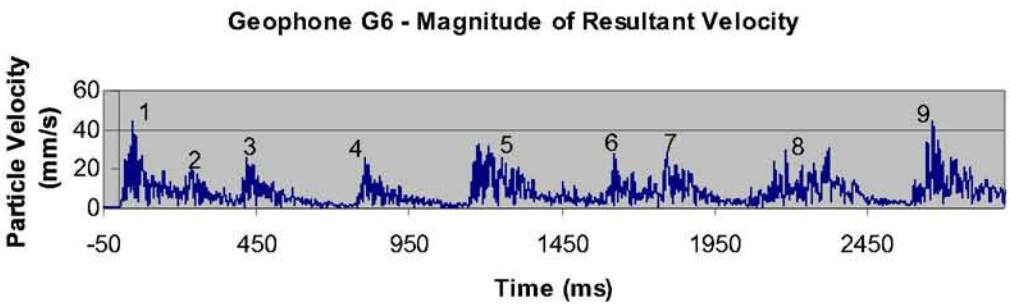
Appendix B - Stope 4760

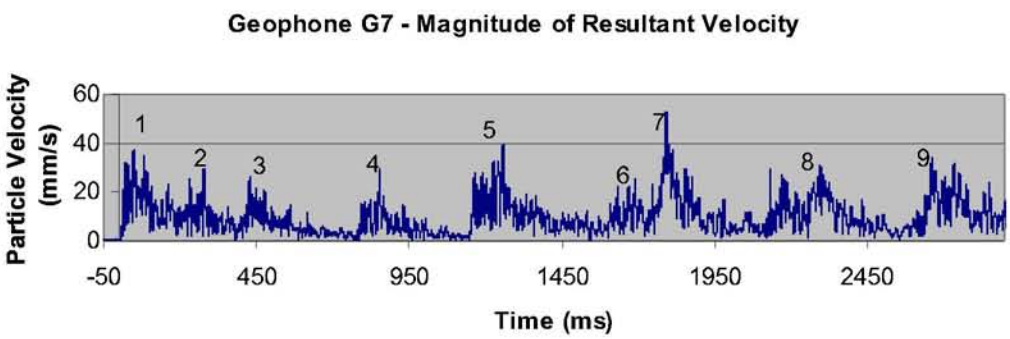
Waveforms Recorded - 904064


Geophone G3 - Magnitude of Resultant Velocity
Particle Velocity (mm/s)
40
30
20
10
0
1
2
3
4
5
6
7
8
9
-50
450
950
1450
1950
2450
Time (ms)

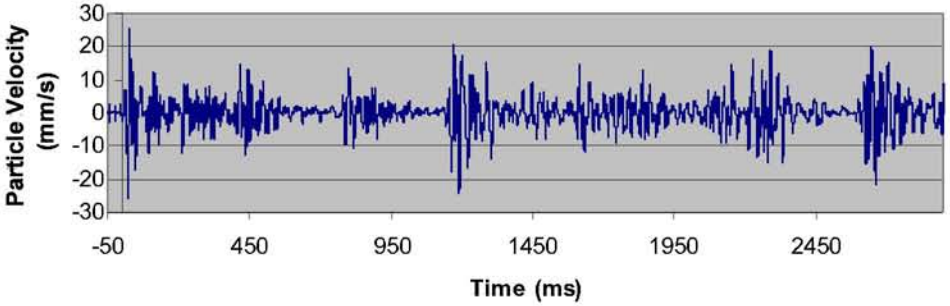

Geophone G4 - Magnitude of Resultant Velocity
Particle Velocity (mm/s)
30
20
10
0
1
2
3
4
5
6
7
8
9
-50
450
950
1450
1950
2450
Time (ms)


Geophone G5 - Magnitude of Resultant Velocity
Particle Velocity (mm/s)
100
50
0
1
2
3
4
5
6
7
8
9
-50
450
950
1450
1950
2450
Time (ms)

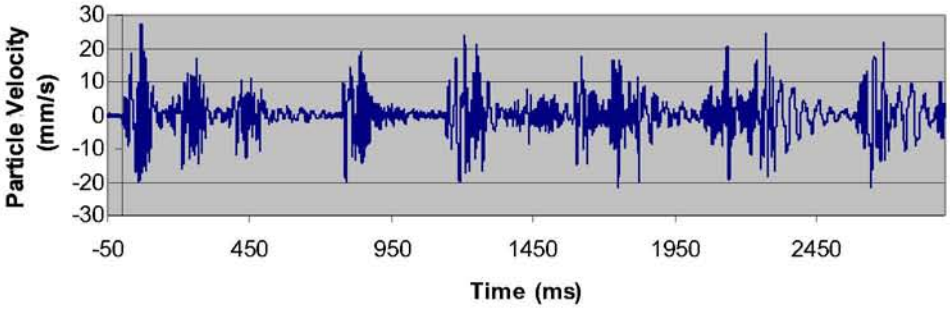

Geophone G6 - Magnitude of Resultant Velocity
Particle Velocity (mm/s)
60
40
20
0
1
2
3
4
5
6
7
8
9
-50
450
950
1450
1950
2450
Time (ms)


Geophone G7 - Magnitude of Resultant Velocity
Particle Velocity (mm/s)
60
40
20
0
1
2
3
4
5
6
7
8
9
-50
450
950
1450
1950
2450
Time (ms)

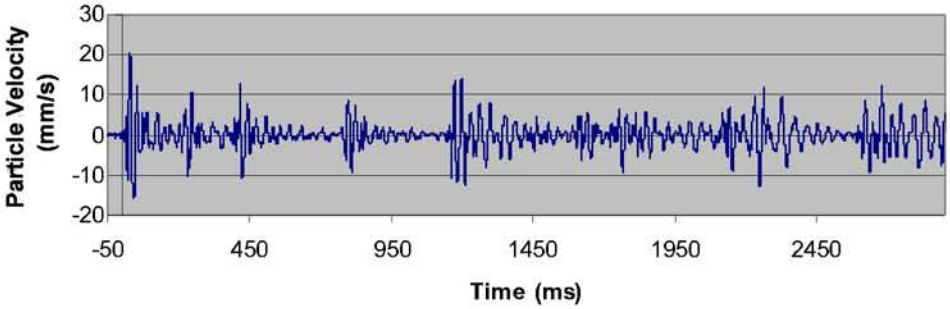
Geophone G3 - Radial Direction



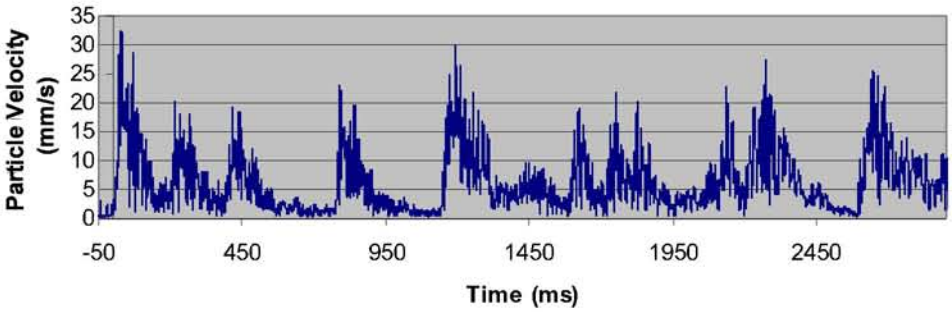
Geophone G3 - Transverse Direction



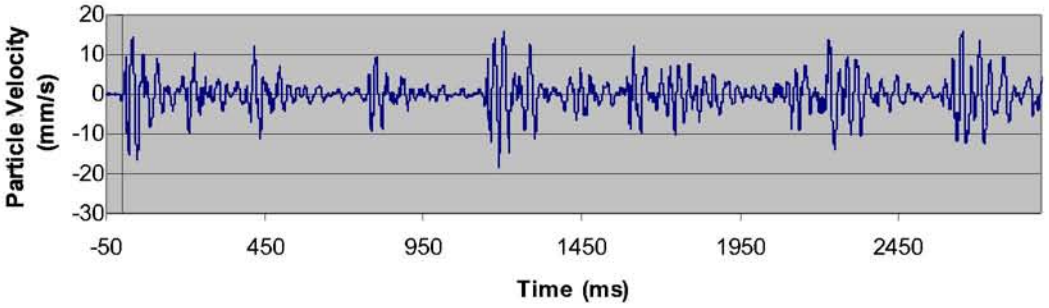
Geophone G3 - Vertical Direction



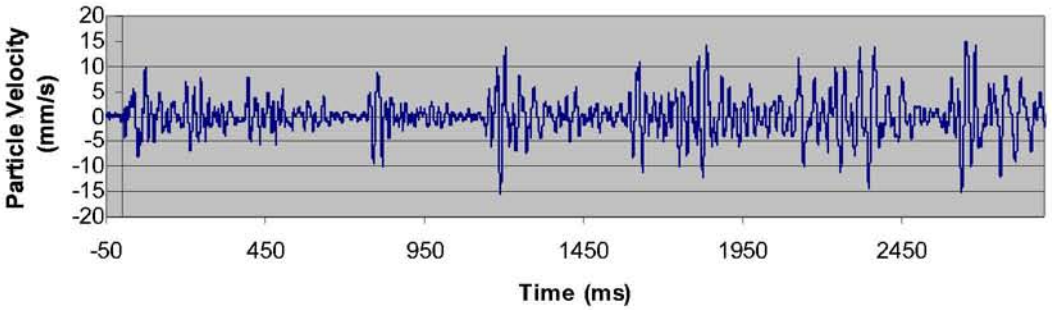
Geophone G3 - Magnitude of Resultant Velocity



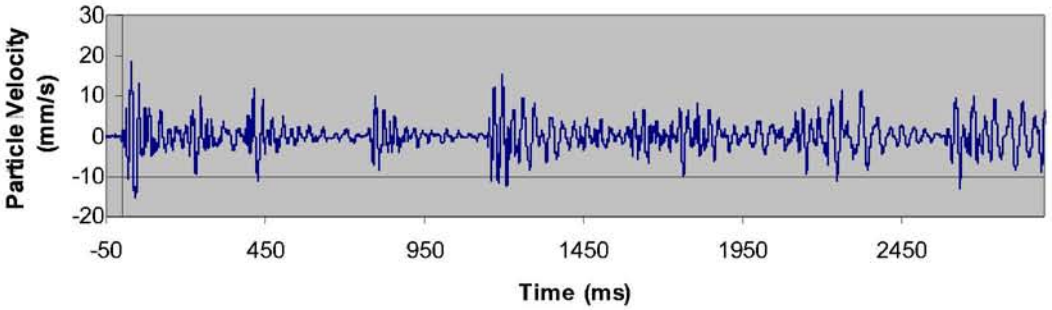
Geophone G4 - Radial Direction



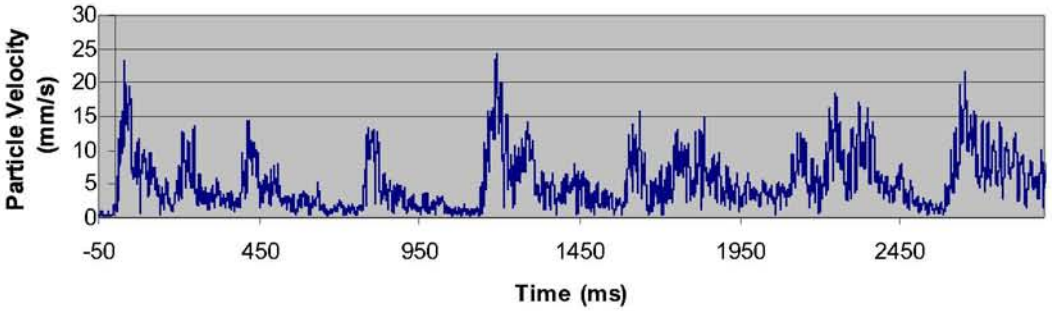
Geophone G4 - Transverse Direction

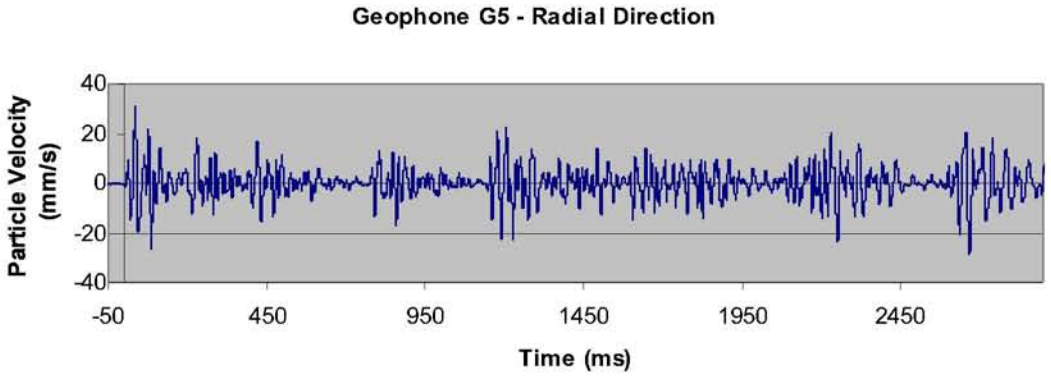


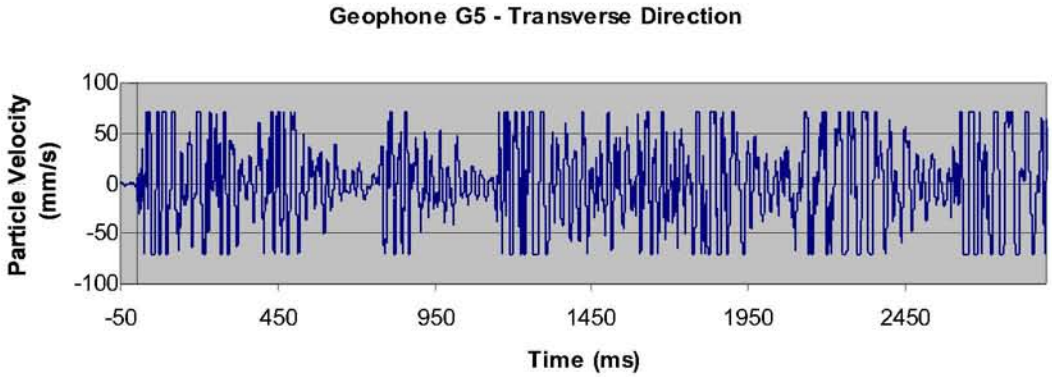
Geophone G4 - Vertical Direction

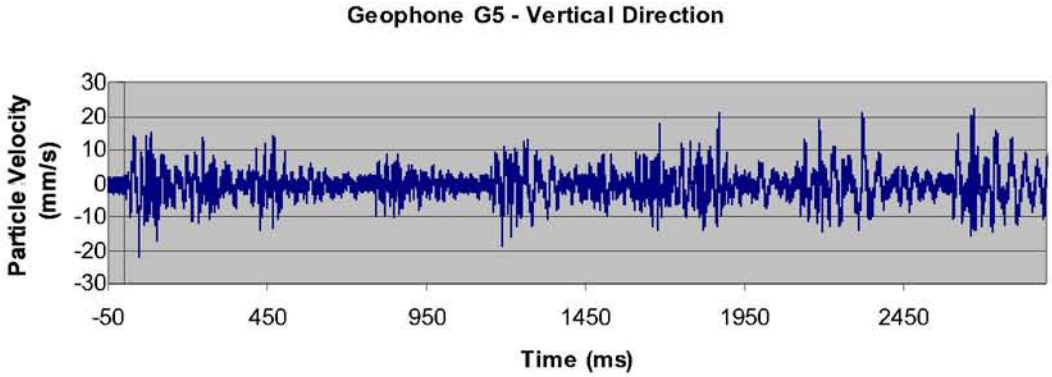


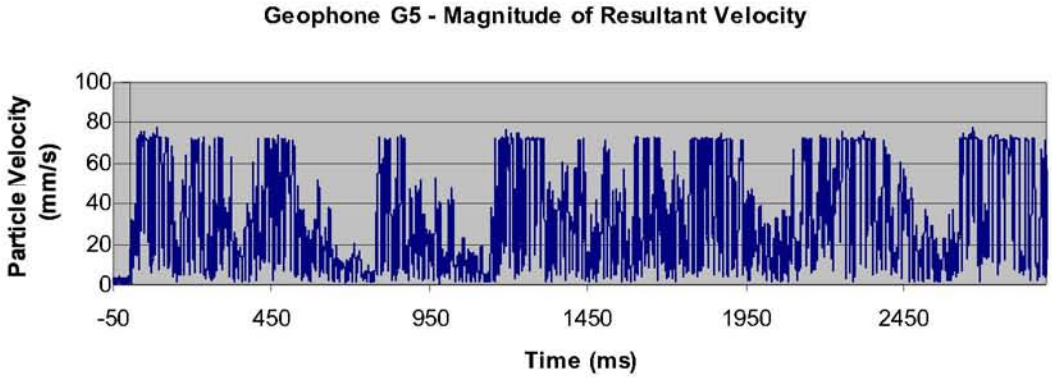
Geophone G4 - Magnitude of Resultant Velocity

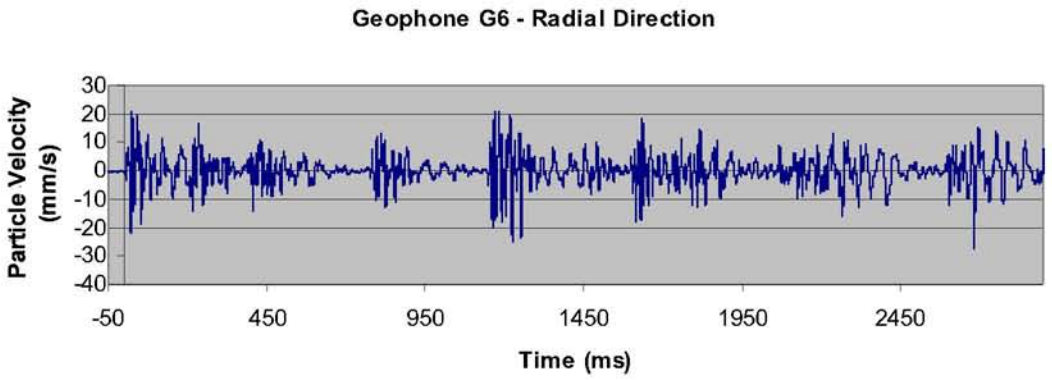


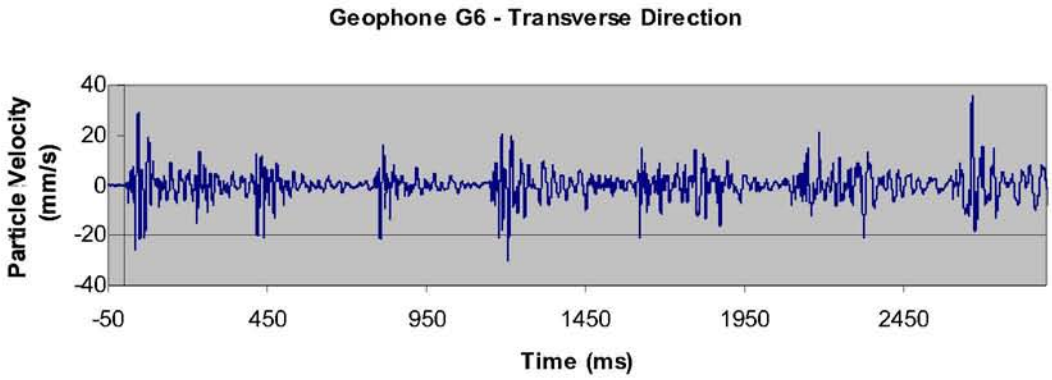

Geophone G5 - Radial Direction
Particle Velocity (mm/s)
40
20
0
-20
-40
-50
450
950
1450
1950
2450
Time (ms)

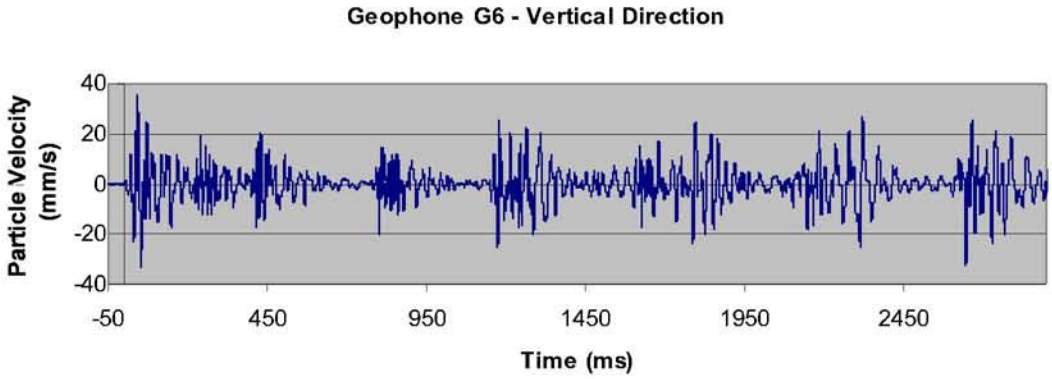

Geophone G5 - Transverse Direction
Particle Velocity (mm/s)
100
50
0
-50
-100
-50
450
950
1450
1950
2450
Time (ms)

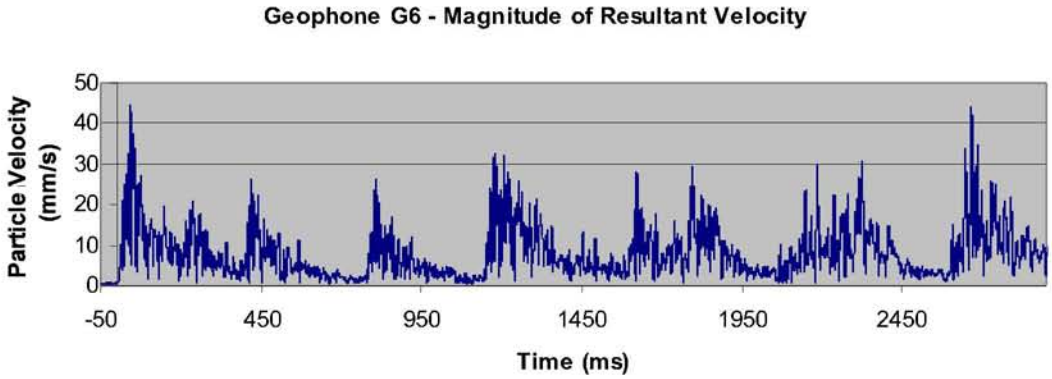

Geophone G5 - Vertical Direction
Particle Velocity (mm/s)
30
20
10
0
-10
-20
-30
-50
450
950
1450
1950
2450
Time (ms)

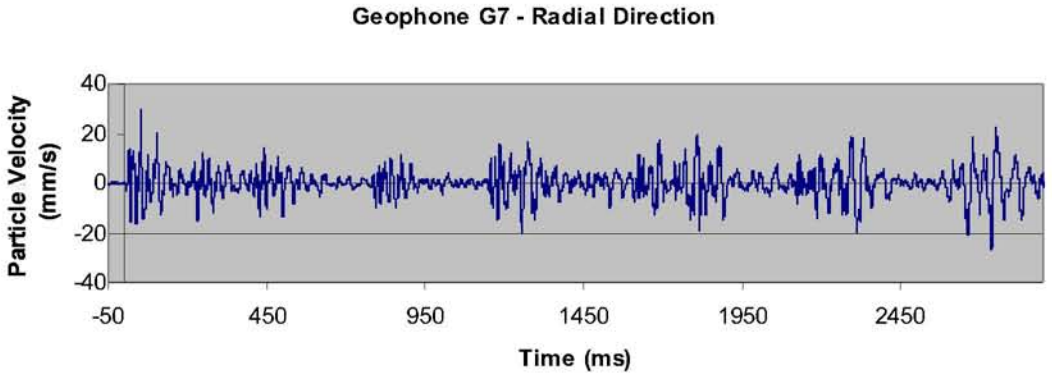

Geophone G5 - Magnitude of Resultant Velocity
Particle Velocity (mm/s)
100
80
60
40
20
0
-50
450
950
1450
1950
2450
Time (ms)

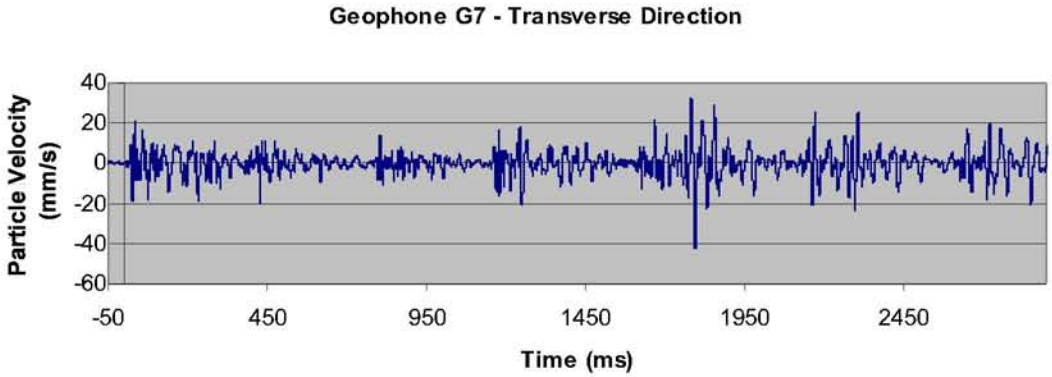

Geophone G6 - Radial Direction
Particle Velocity (mm/s)
30
20
10
0
-10
-20
-30
-40
-50
450
950
1450
1950
2450
Time (ms)

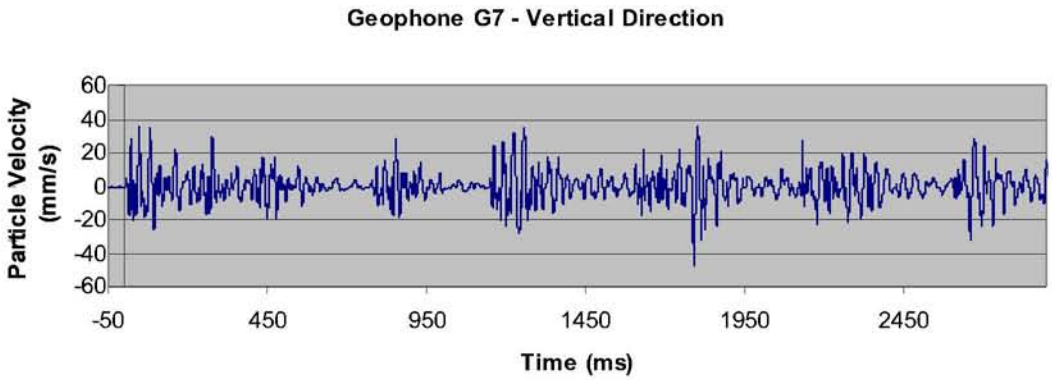

Geophone G6 - Transverse Direction
Particle Velocity (mm/s)
40
20
0
-20
-40
-50
450
950
1450
1950
2450
Time (ms)

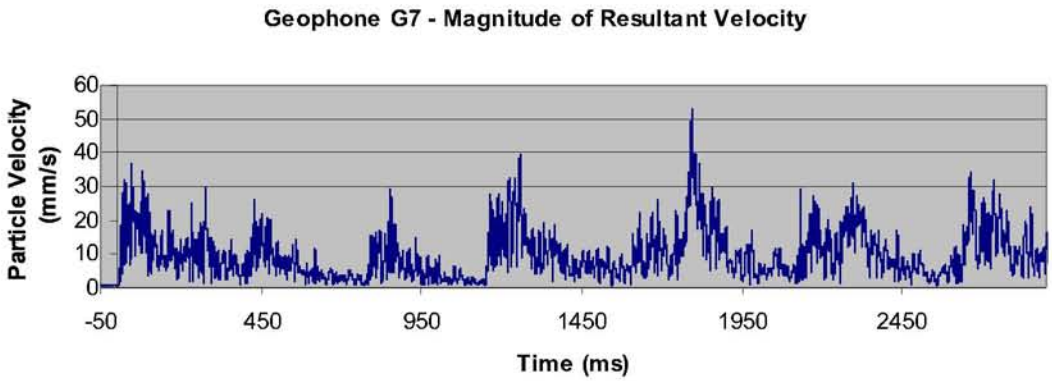

Geophone G6 - Vertical Direction
Particle Velocity (mm/s)
40
20
0
-20
-40
-50
450
950
1450
1950
2450
Time (ms)


Geophone G6 - Magnitude of Resultant Velocity
Particle Velocity (mm/s)
50
40
30
20
10
0
-50
450
950
1450
1950
2450
Time (ms)


Geophone G7 - Radial Direction
Particle Velocity (mm/s)
40
20
0
-20
-40
-50
450
950
1450
1950
2450
Time (ms)

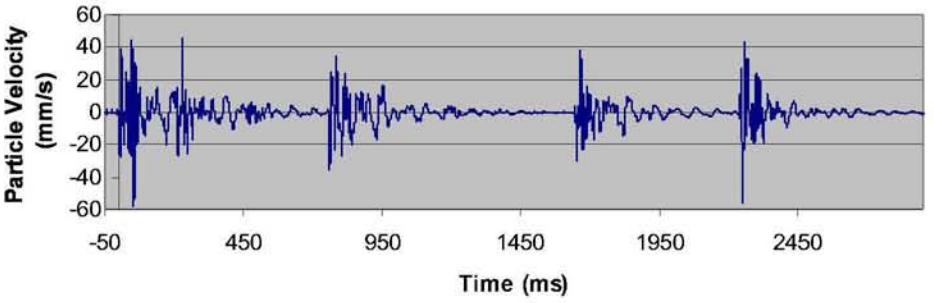

Geophone G7 - Transverse Direction
Particle Velocity (mm/s)
40
20
0
-20
-40
-60
-50
450
950
1450
1950
2450
Time (ms)


Geophone G7 - Vertical Direction
Particle Velocity (mm/s)
60
40
20
0
-20
-40
-60
-50
450
950
1450
1950
2450
Time (ms)

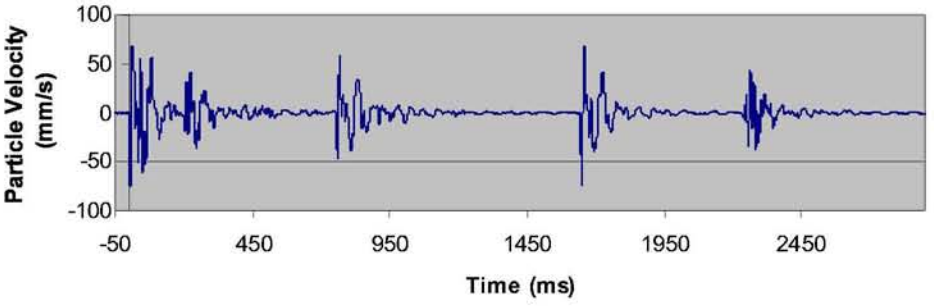

Geophone G7 - Magnitude of Resultant Velocity
Particle Velocity (mm/s)
60
50
40
30
20
10
0
-50
450
950
1450
1950
2450
Time (ms)

Waveforms Recorded - 904068

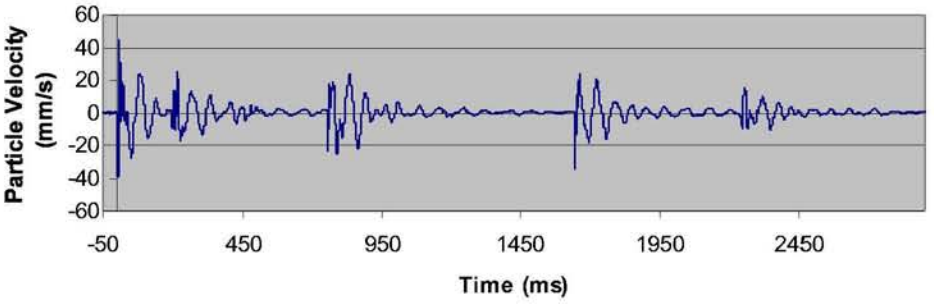
Geophone G3 - Radial Direction



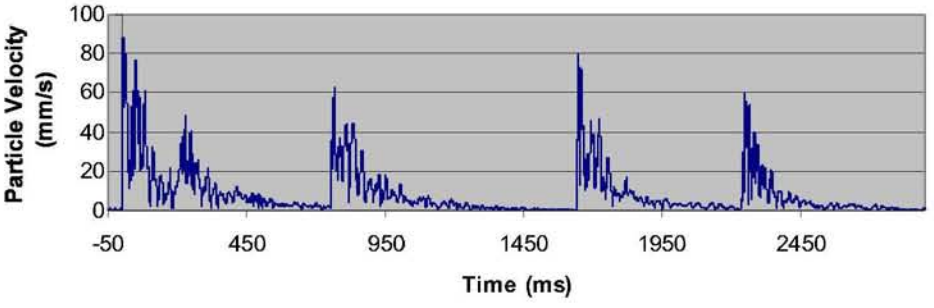
Geophone G3 - Transverse Direction



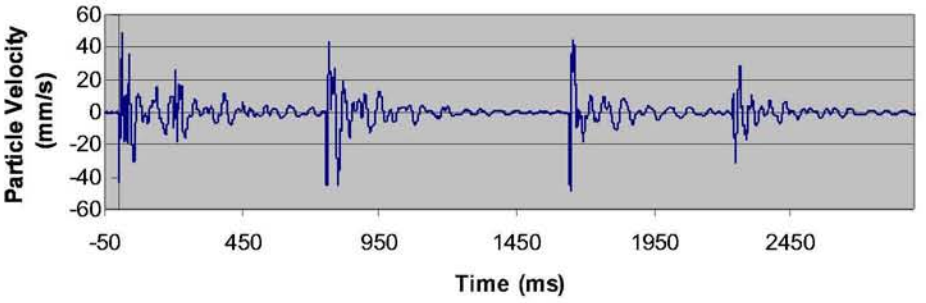
Geophone G3 - Vertical Direction



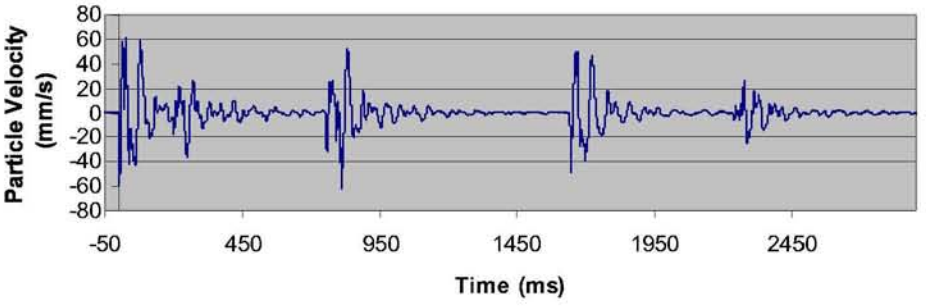
Geophone G3 - Magnitude of Resultant Velocity



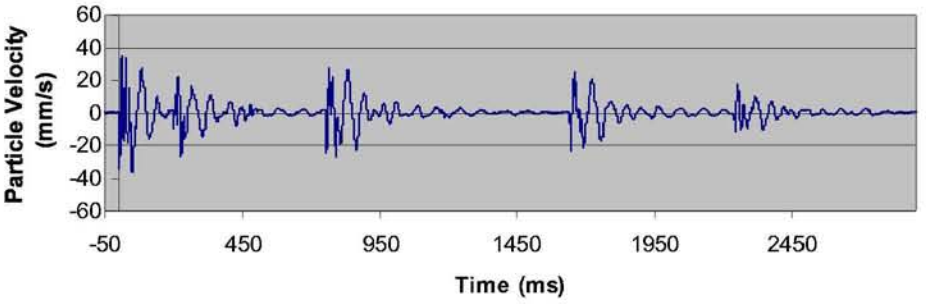
Geophone G4 - Radial Direction



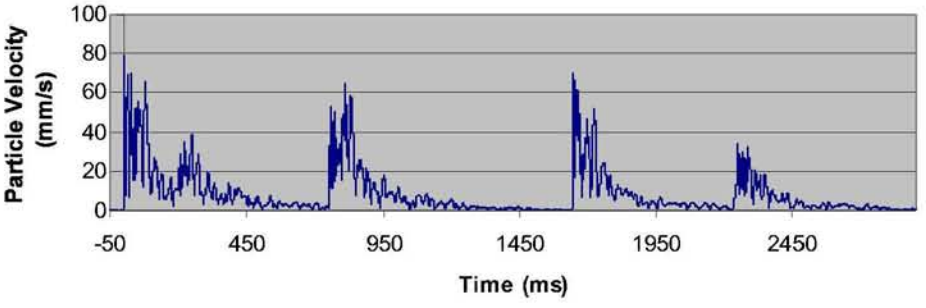
Geophone G4 - Transverse Direction



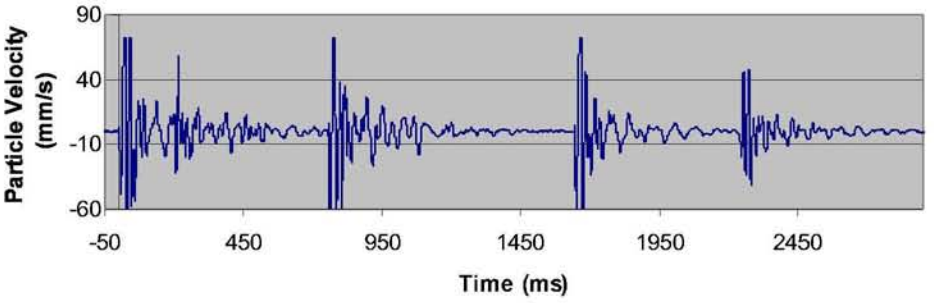
Geophone G4 - Vertical Direction



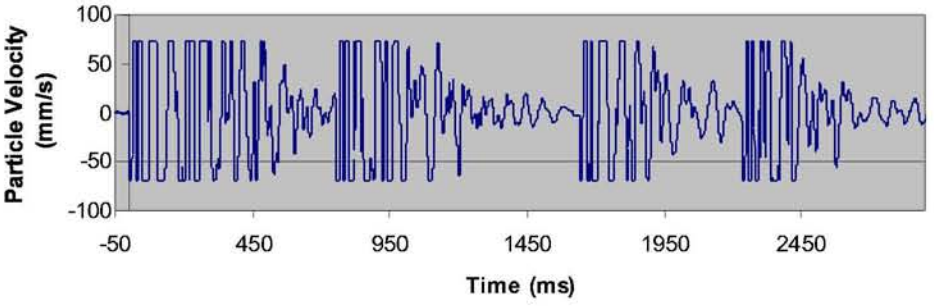
Geophone G4 - Magnitude of Resultant Velocity



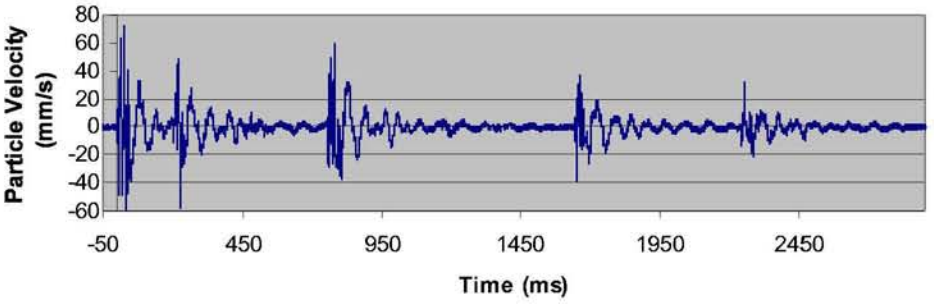
Geophone G5 - Radial Direction



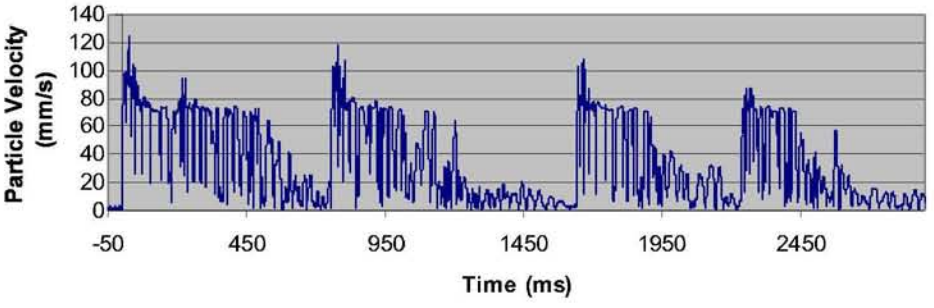
Geophone G5 - Transverse Direction



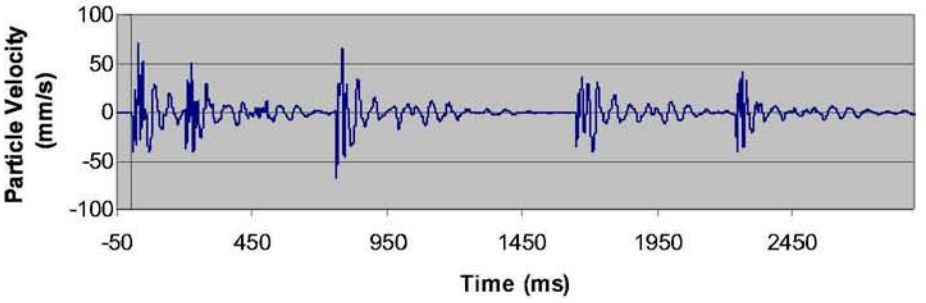
Geophone G5 - Vertical Direction



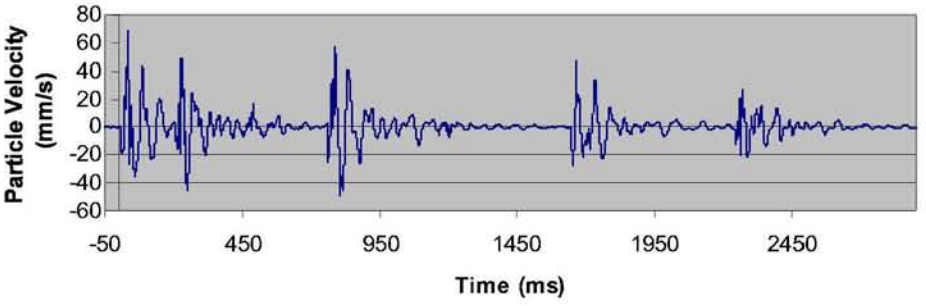
Geophone G5 - Magnitude of Resultant Velocity



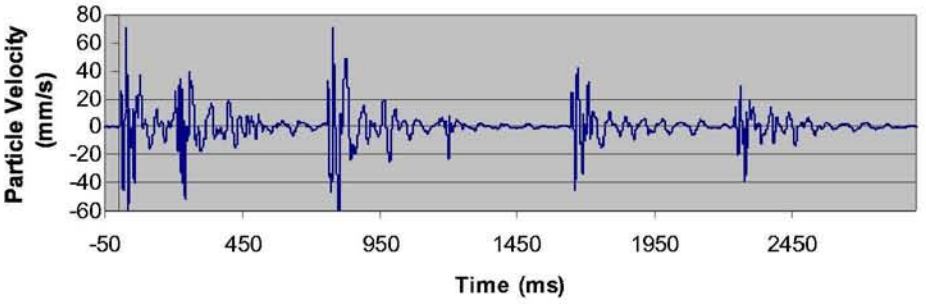
Geophone G6 - Radial Direction



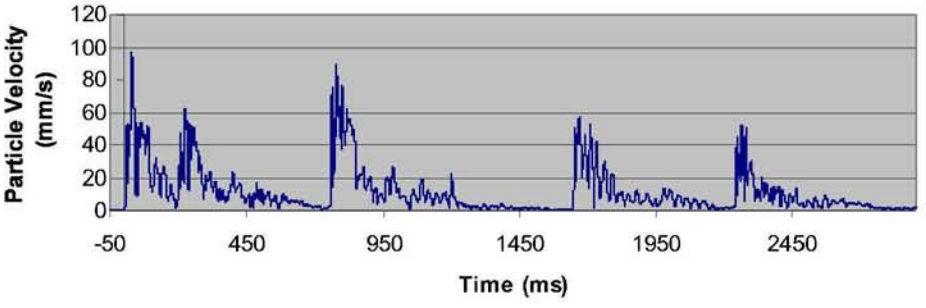
Geophone G6 - Transverse Direction



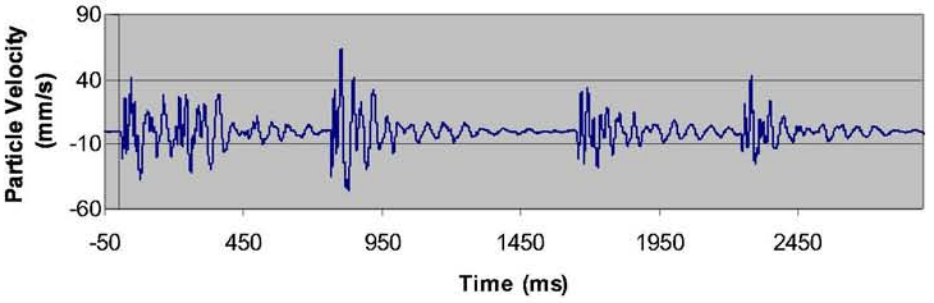
Geophone G6 - Vertical Direction



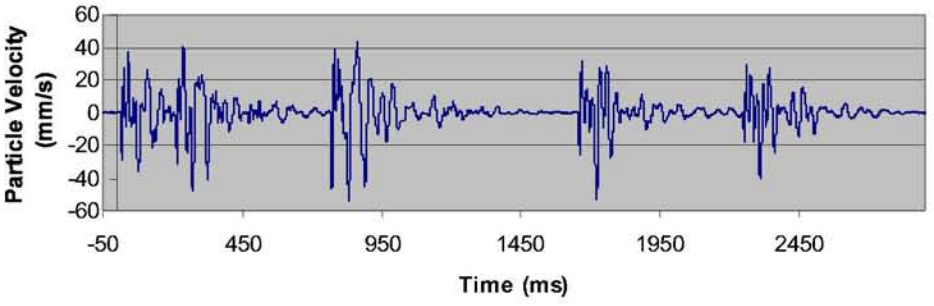
Geophone G6 - Magnitude of Resultant Velocity



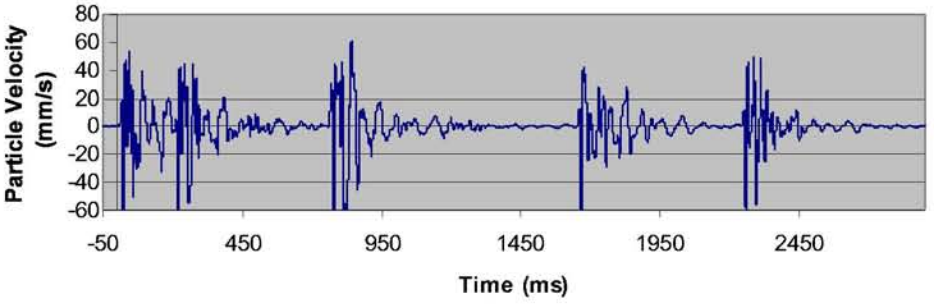
Geophone G7 - Radial Direction



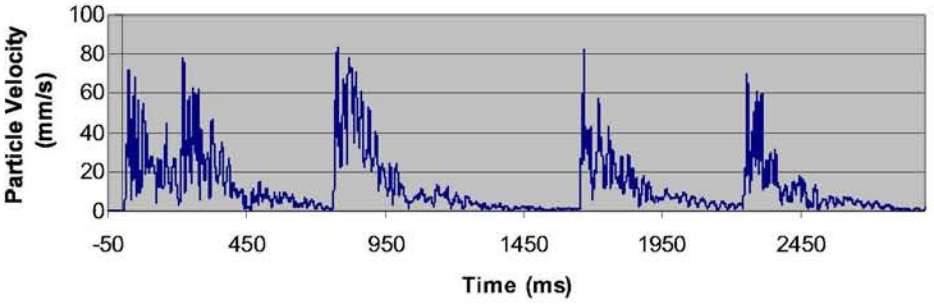
Geophone G7 - Transverse Direction

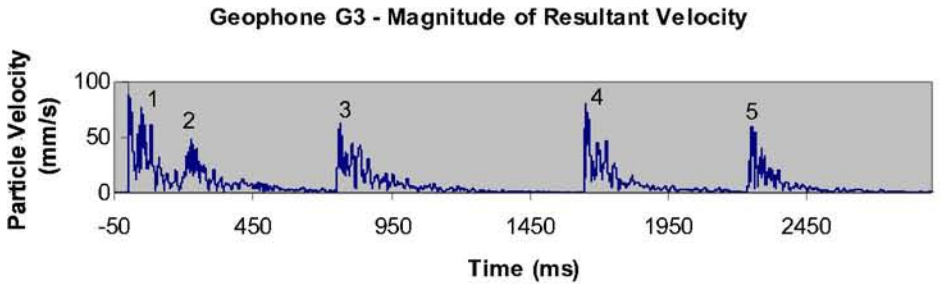


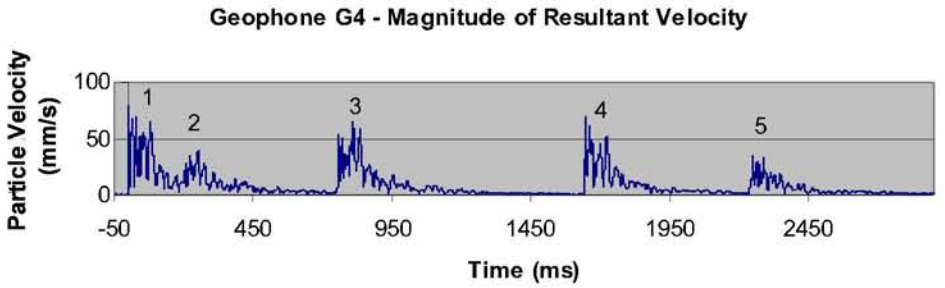
Geophone G7 - Vertical Direction

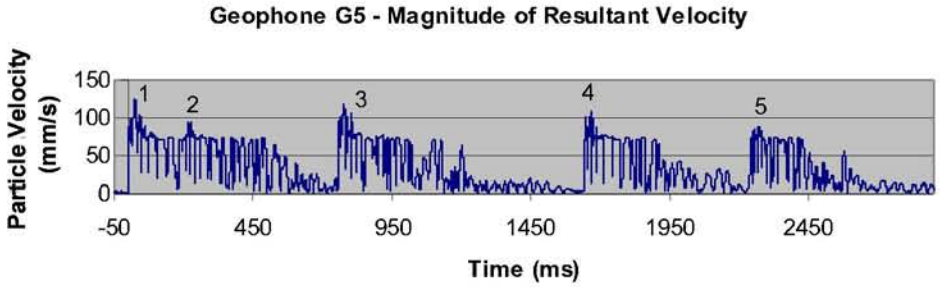


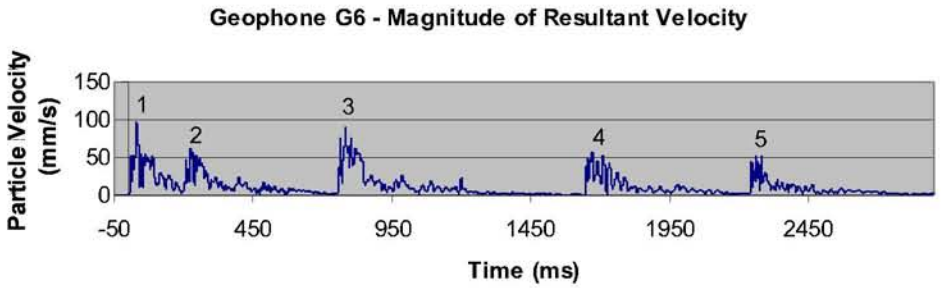
Geophone G7 - Magnitude of Resultant Velocity

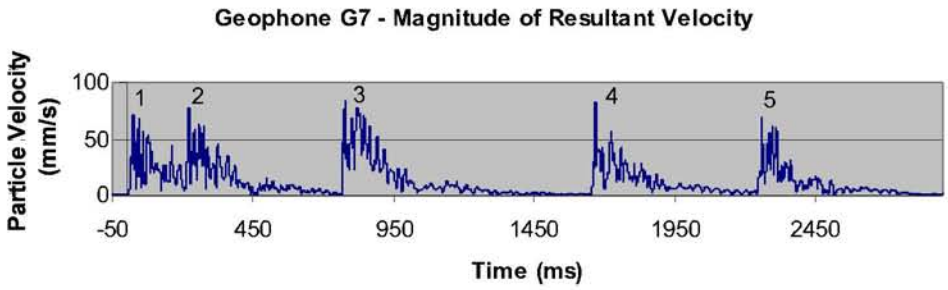



Geophone G3 - Magnitude of Resultant Velocity
Particle Velocity (mm/s)
100
50
0
1
2
3
4
5
-50
450
950
1450
1950
2450
Time (ms)

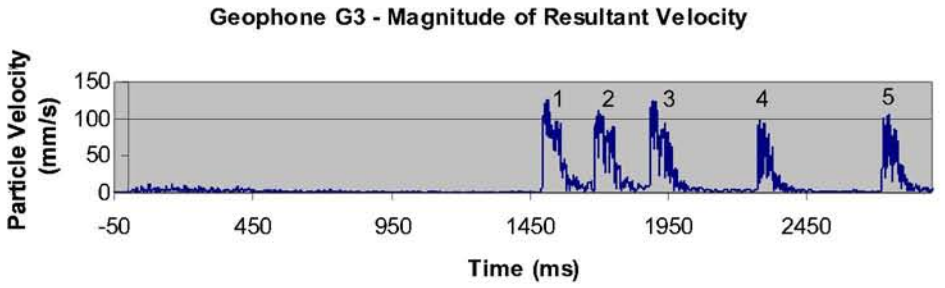

Geophone G4 - Magnitude of Resultant Velocity
Particle Velocity (mm/s)
100
50
0
1
2
3
4
5
-50
450
950
1450
1950
2450
Time (ms)

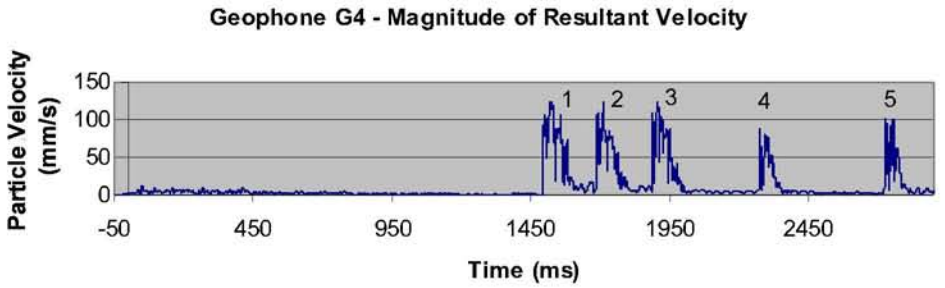

Geophone G5 - Magnitude of Resultant Velocity
Particle Velocity (mm/s)
150
100
50
0
1
2
3
4
5
-50
450
950
1450
1950
2450
Time (ms)

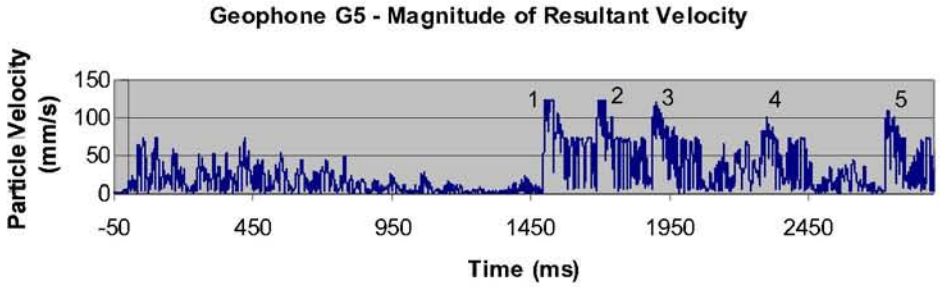

Geophone G6 - Magnitude of Resultant Velocity
Particle Velocity (mm/s)
150
100
50
0
1
2
3
4
5
-50
450
950
1450
1950
2450
Time (ms)

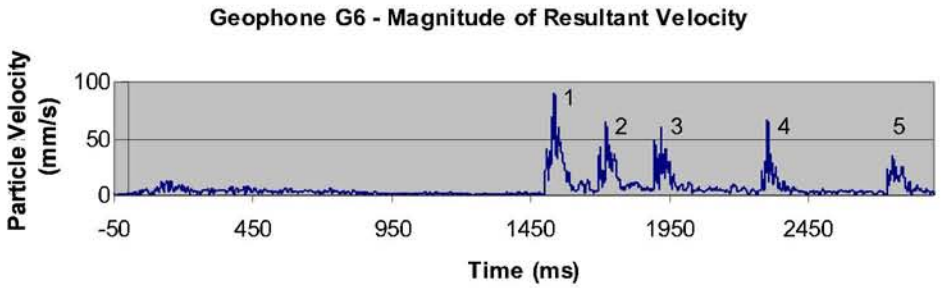

Geophone G7 - Magnitude of Resultant Velocity
Particle Velocity (mm/s)
100
50
0
1
2
3
4
5
-50
450
950
1450
1950
2450
Time (ms)

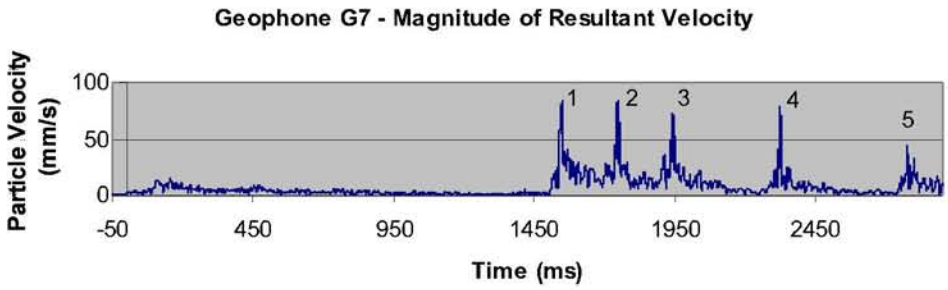
Waveforms Recorded - 904072

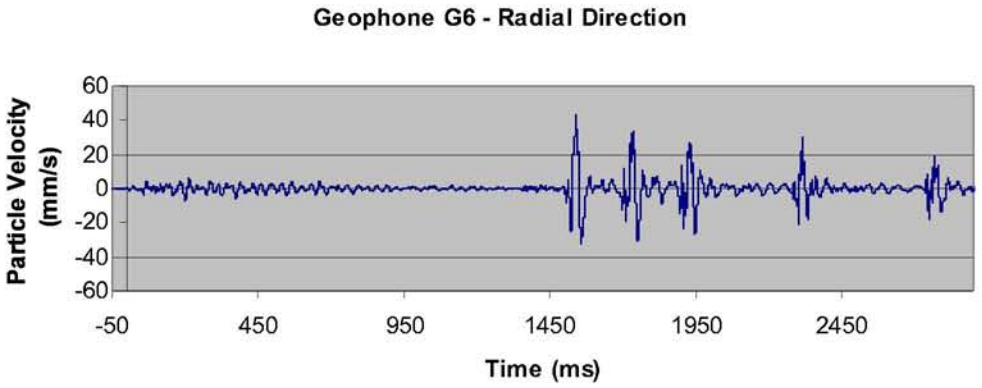

Geophone G3 - Magnitude of Resultant Velocity
Particle Velocity (mm/s)
150
100
50
0
1
2
3
4
5
-50
450
950
1450
1950
2450
Time (ms)

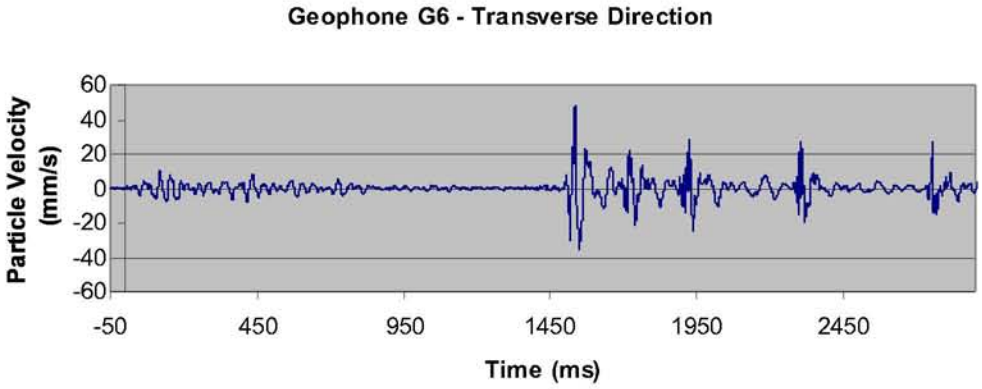

Geophone G4 - Magnitude of Resultant Velocity
Particle Velocity (mm/s)
150
100
50
0
1
2
3
4
5
-50
450
950
1450
1950
2450
Time (ms)

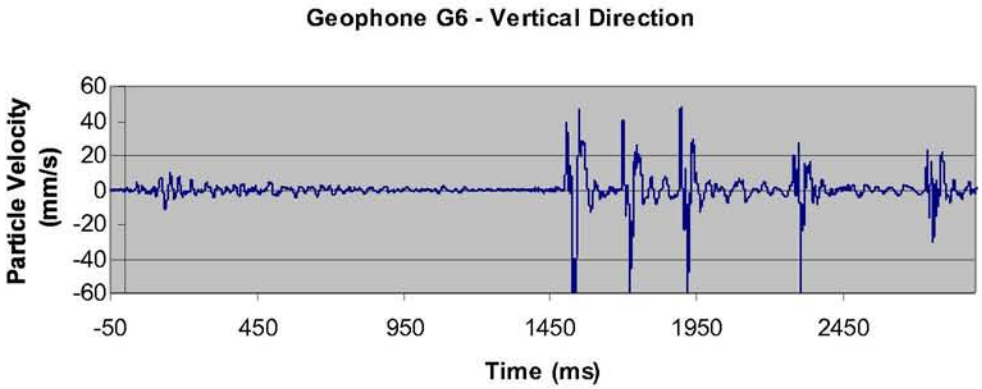

Geophone G5 - Magnitude of Resultant Velocity
Particle Velocity (mm/s)
150
100
50
0
1
2
3
4
5
-50
450
950
1450
1950
2450
Time (ms)

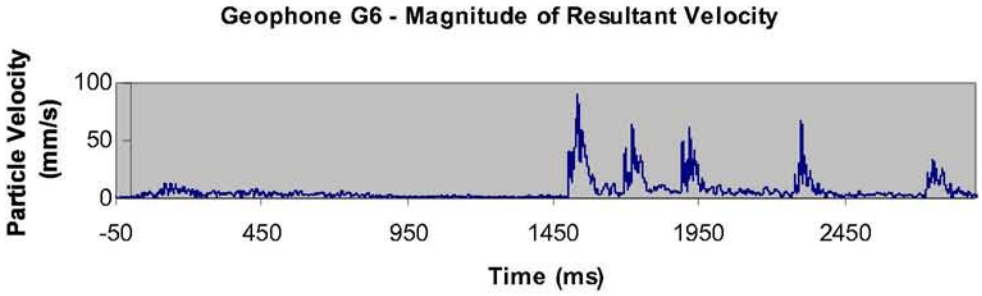

Geophone G6 - Magnitude of Resultant Velocity
Particle Velocity (mm/s)
100
50
0
1
2
3
4
5
-50
450
950
1450
1950
2450
Time (ms)

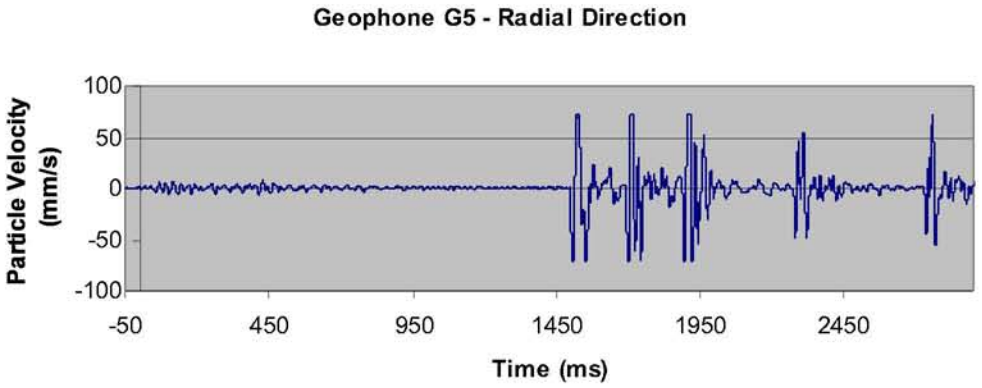

Geophone G7 - Magnitude of Resultant Velocity
Particle Velocity (mm/s)
100
50
0
1
2
3
4
5
-50
450
950
1450
1950
2450
Time (ms)

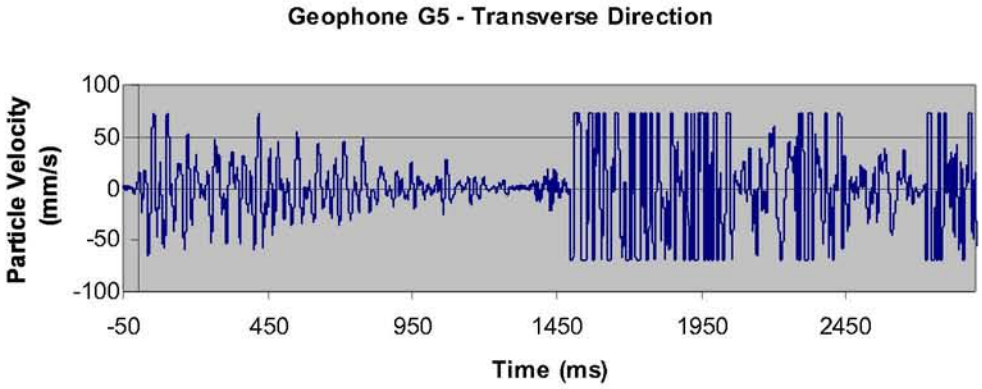

Geophone G6 - Radial Direction
Particle Velocity (mm/s)
60
40
20
0
-20
-40
-60
-50
450
950
1450
1950
2450
Time (ms)

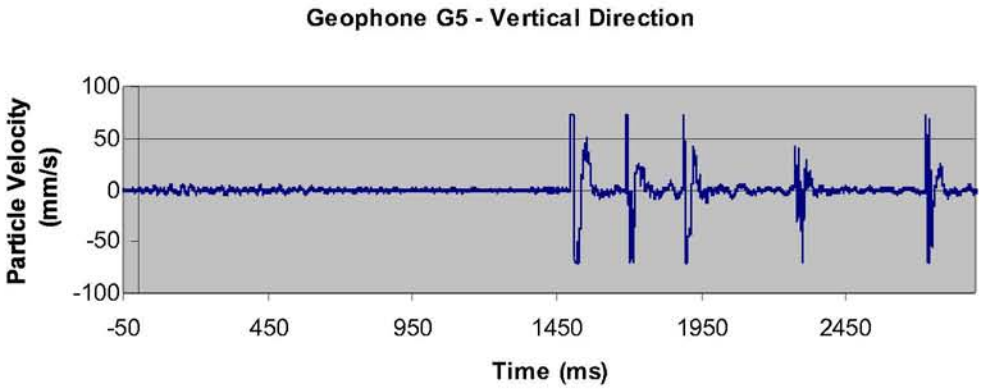

Geophone G6 - Transverse Direction
Particle Velocity (mm/s)
60
40
20
0
-20
-40
-60
-50
450
950
1450
1950
2450
Time (ms)

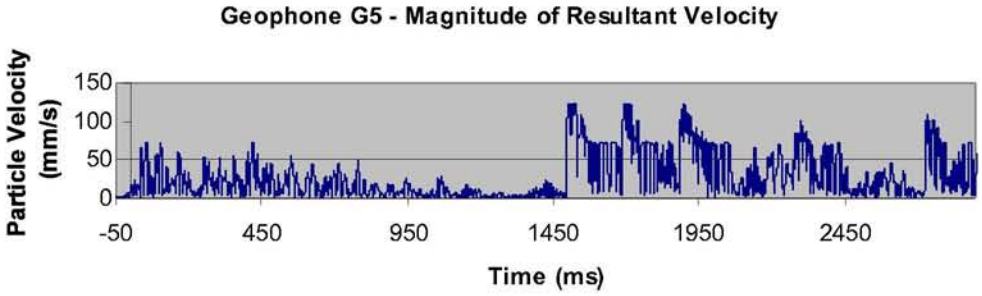

Geophone G6 - Vertical Direction
Particle Velocity (mm/s)
60
40
20
0
-20
-40
-60
-50
450
950
1450
1950
2450
Time (ms)

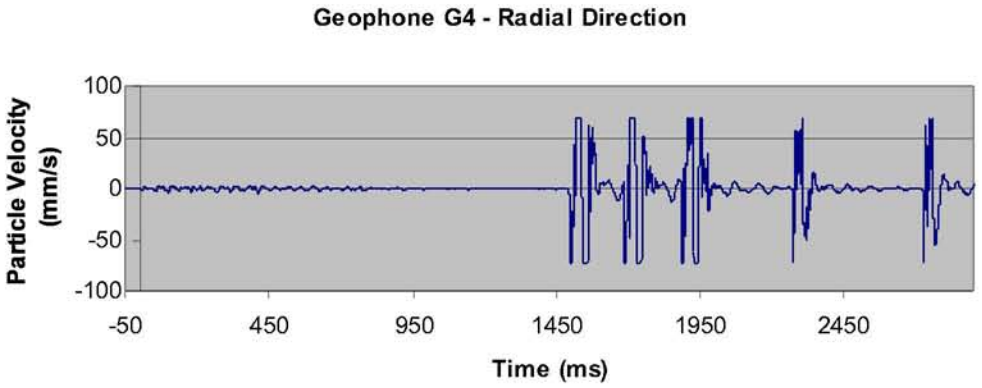

Geophone G6 - Magnitude of Resultant Velocity
Particle Velocity (mm/s)
100
50
0
-50
450
950
1450
1950
2450
Time (ms)

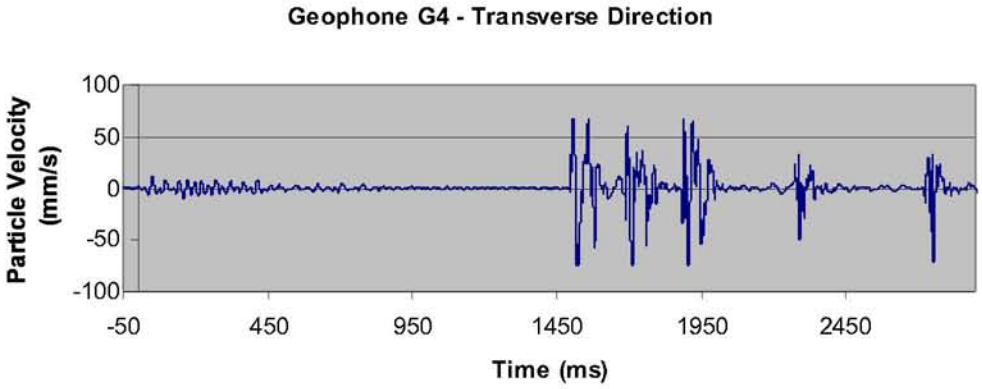

Geophone G5 - Radial Direction
Particle Velocity (mm/s)
100
50
0
-50
-100
-50
450
950
1450
1950
2450
Time (ms)

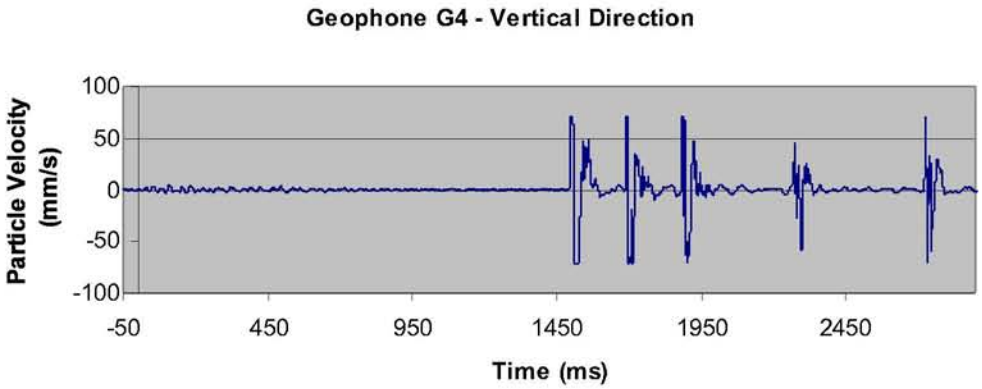

Geophone G5 - Transverse Direction
Particle Velocity (mm/s)
100
50
0
-50
-100
-50
450
950
1450
1950
2450
Time (ms)

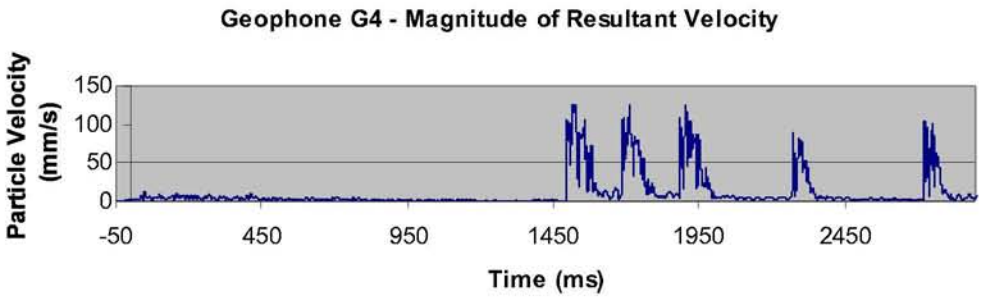

Geophone G5 - Vertical Direction
Particle Velocity (mm/s)
100
50
0
-50
-100
-50
450
950
1450
1950
2450
Time (ms)

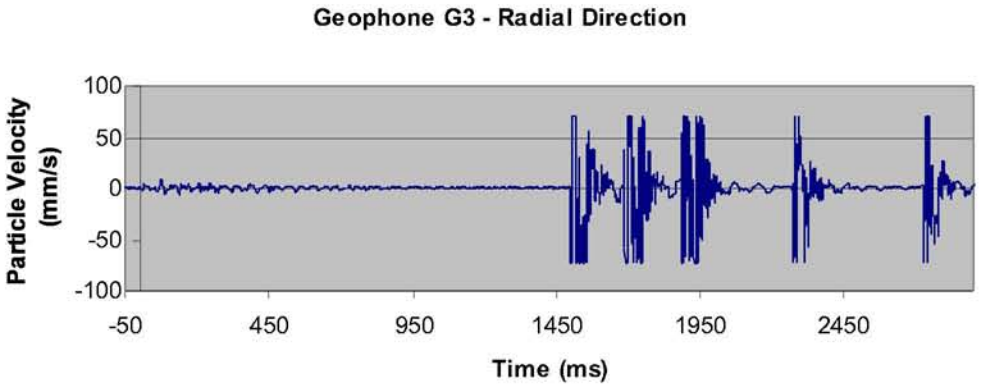

Geophone G5 - Magnitude of Resultant Velocity
Particle Velocity (mm/s)
150
100
50
0
-50
450
950
1450
1950
2450
Time (ms)

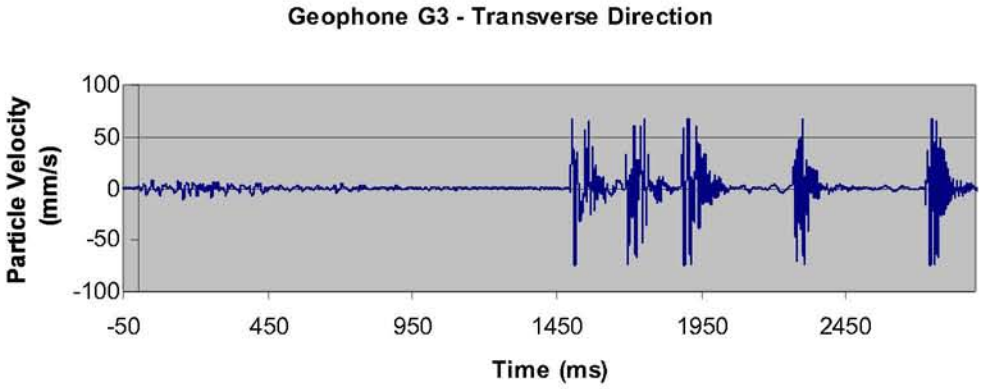

Geophone G4 - Radial Direction
Particle Velocity (mm/s)
100
50
0
-50
-100
-50
450
950
1450
1950
2450
Time (ms)

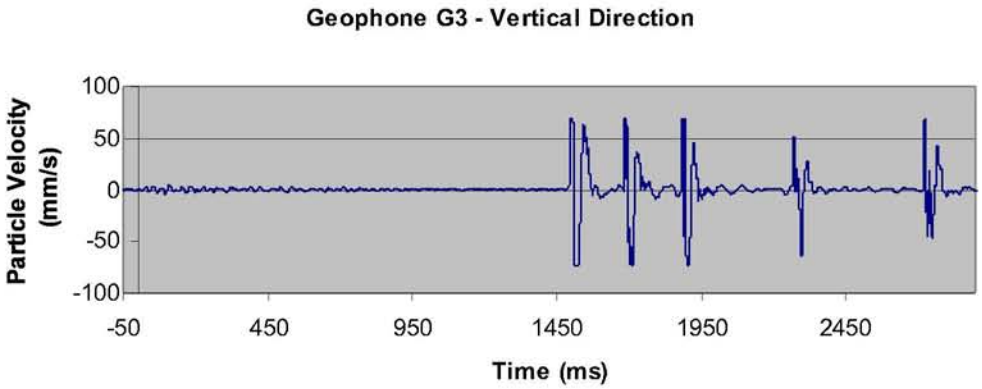

Geophone G4 - Transverse Direction
Particle Velocity (mm/s)
100
50
0
-50
-100
-50
450
950
1450
1950
2450
Time (ms)

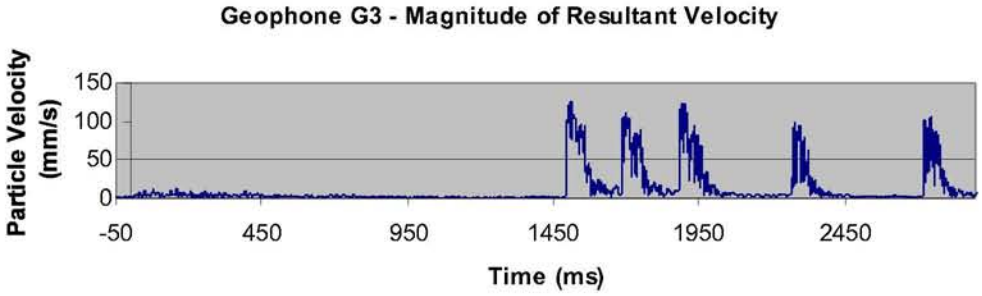

Geophone G4 - Vertical Direction
Particle Velocity (mm/s)
100
50
0
-50
-100
-50
450
950
1450
1950
2450
Time (ms)

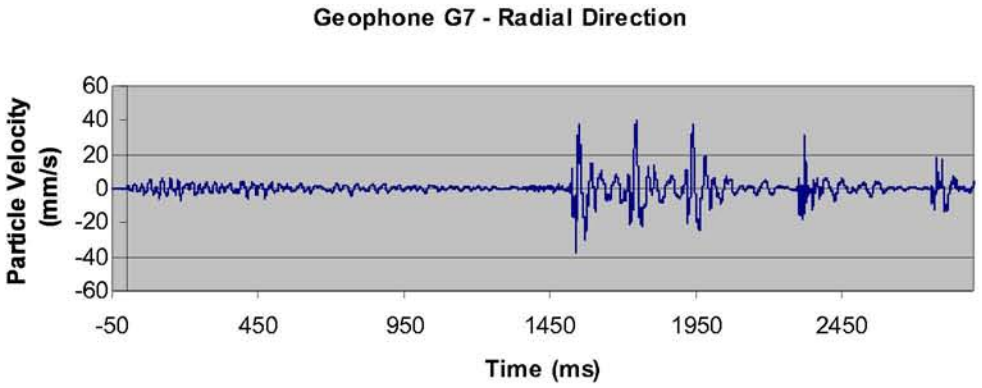

Geophone G4 - Magnitude of Resultant Velocity
Particle Velocity (mm/s)
150
100
50
0
-50
450
950
1450
1950
2450
Time (ms)

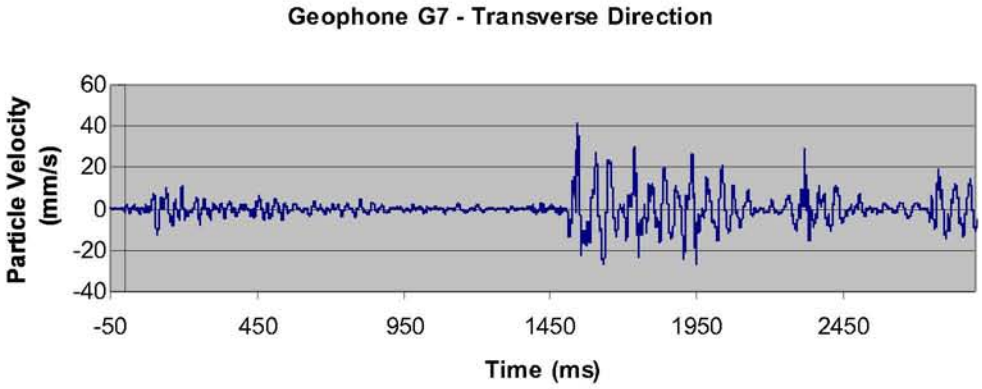

Geophone G3 - Radial Direction
Particle Velocity (mm/s)
100
50
0
-50
-100
-50
450
950
1450
1950
2450
Time (ms)

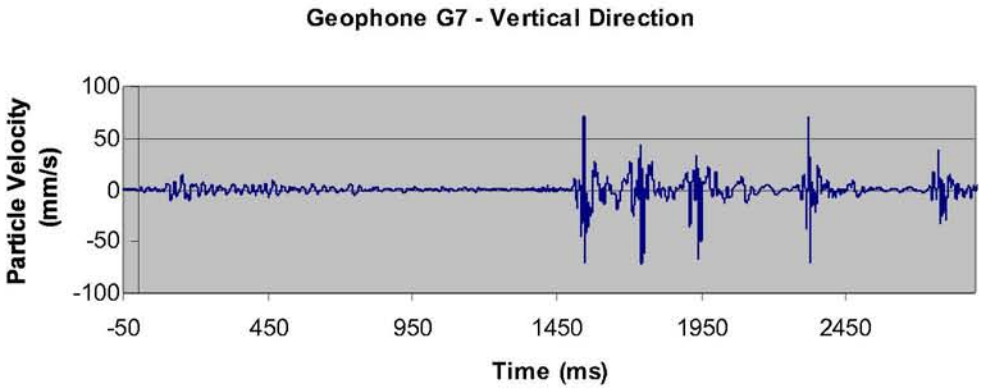

Geophone G3 - Transverse Direction
Particle Velocity (mm/s)
100
50
0
-50
-100
-50
450
950
1450
1950
2450
Time (ms)

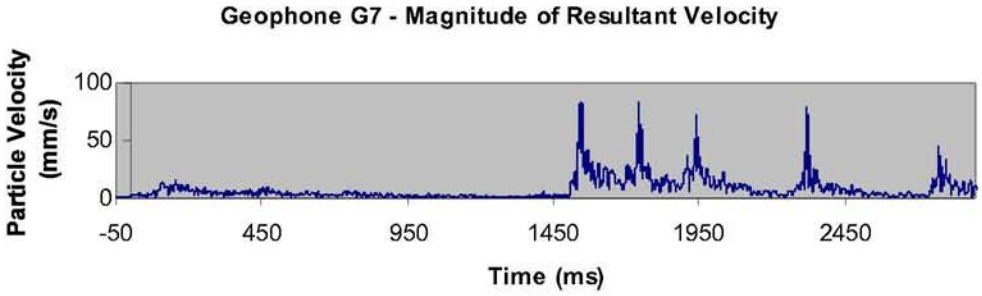

Geophone G3 - Vertical Direction
Particle Velocity (mm/s)
100
50
0
-50
-100
-50
450
950
1450
1950
2450
Time (ms)


Geophone G3 - Magnitude of Resultant Velocity
Particle Velocity (mm/s)
150
100
50
0
-50
450
950
1450
1950
2450
Time (ms)

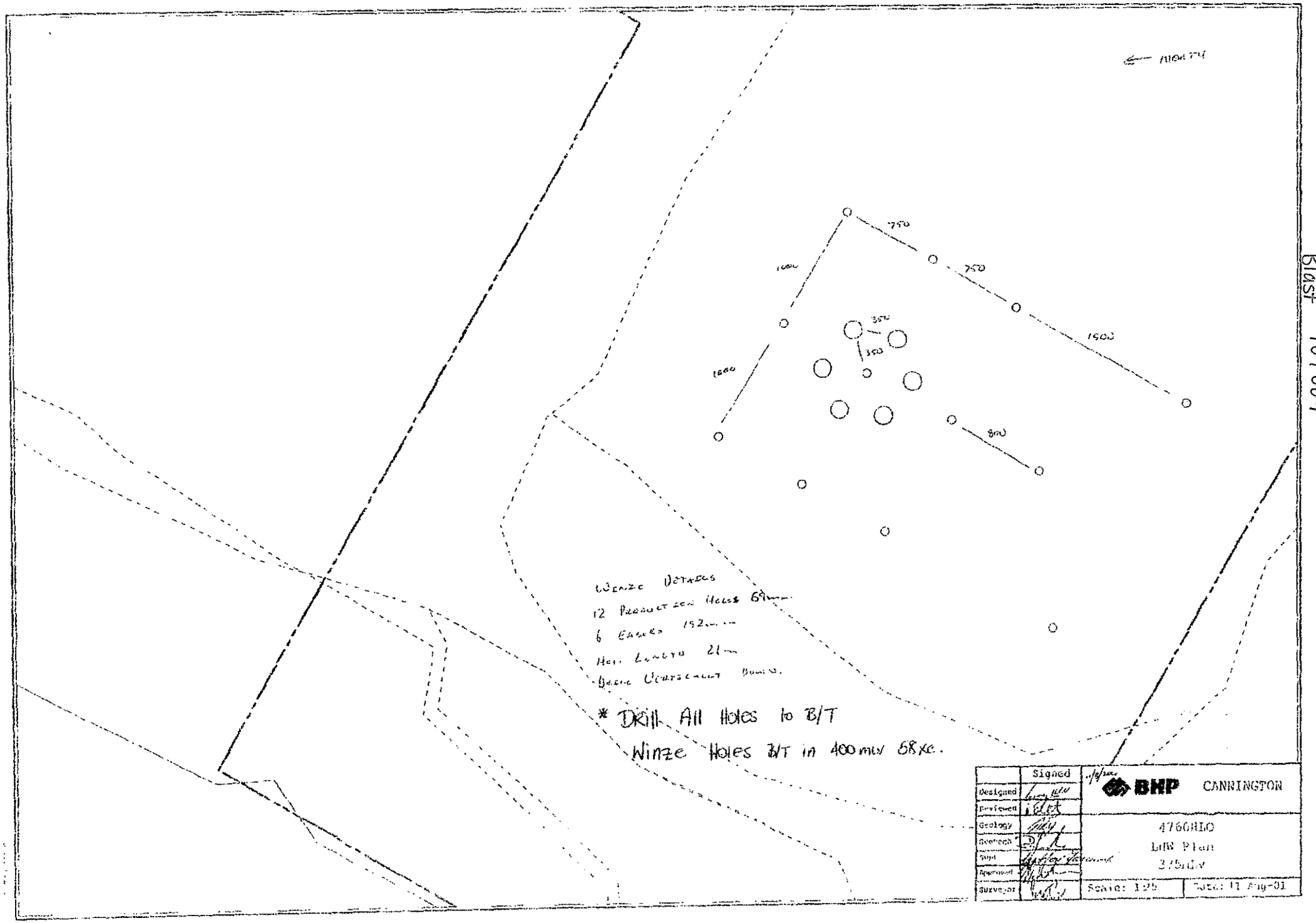

Geophone G7 - Radial Direction
Particle Velocity (mm/s)
60
40
20
0
-20
-40
-60
-50
450
950
1450
1950
2450
Time (ms)


Geophone G7 - Transverse Direction
Particle Velocity (mm/s)
60
40
20
0
-20
-40
-50
450
950
1450
1950
2450
Time (ms)


Geophone G7 - Vertical Direction
Particle Velocity (mm/s)
100
50
0
-50
-100
-50
450
950
1450
1950
2450
Time (ms)

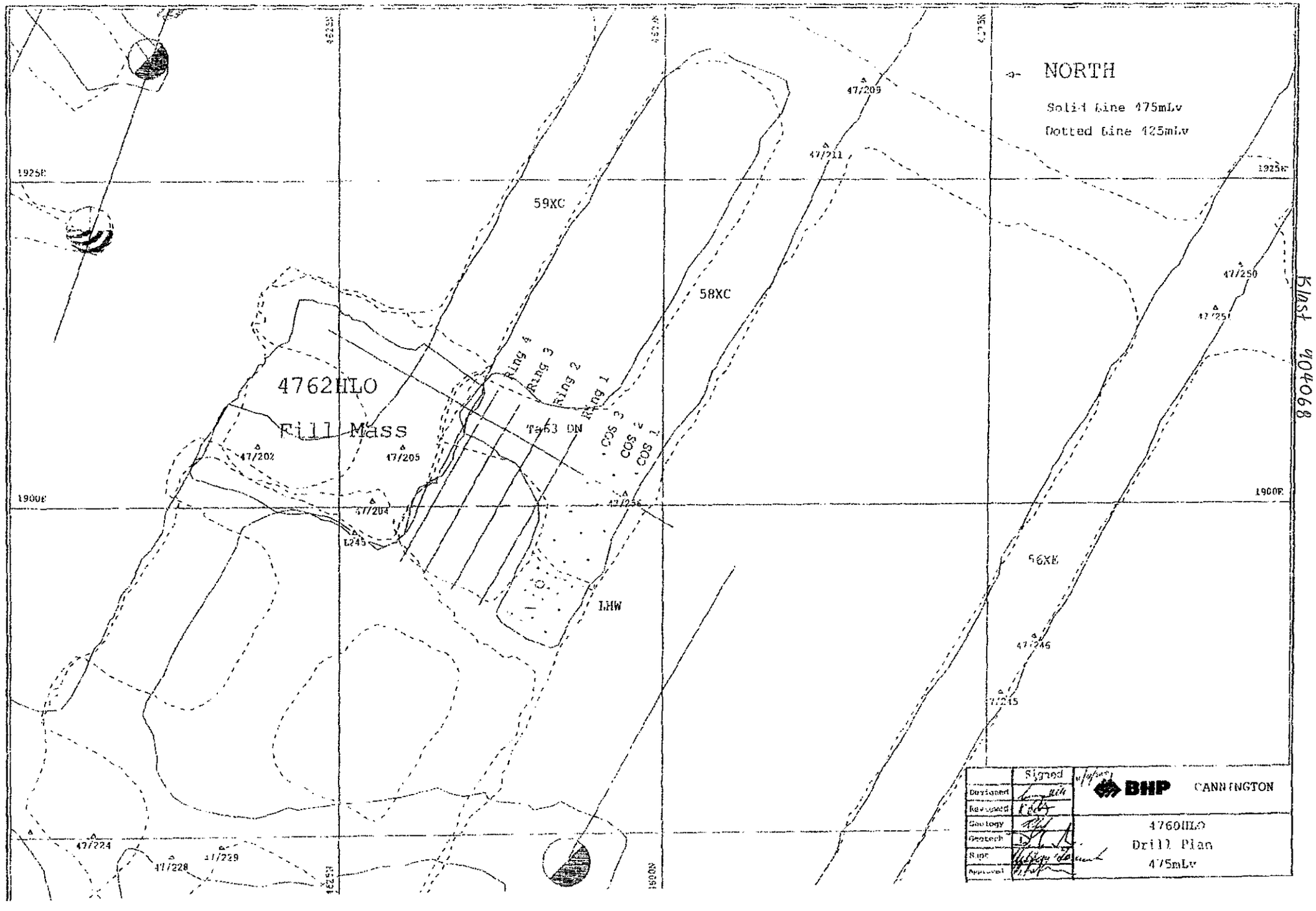

Geophone G7 - Magnitude of Resultant Velocity
Particle Velocity (mm/s)
100
50
0
-50
450
950
1450
1950
2450
Time (ms)

Blasting Plans - 904064



Blast 904064

Blasting Plans - 904068


NORTH
Solid Line 475mLv
Dotted Line 425mLv
4762HLO
Fill Mass
59XC
58XC
56XE
Ring 4
Ring 3
Ring 2
Ring 1
COS 3
COS 2
COS 1
T=63 DN
LHW
1925E
1900E
1925N
1900N
47/202
47/204
47/205
47/206
47/211
47/224
47/228
47/229
47/245
47/246
47/250
47/251
L245
4760HLO
Drill Plan
475mLv
CANNINGTON
Signed
Designed
Reviewed
Geology
Geotech
Rigs
Approved

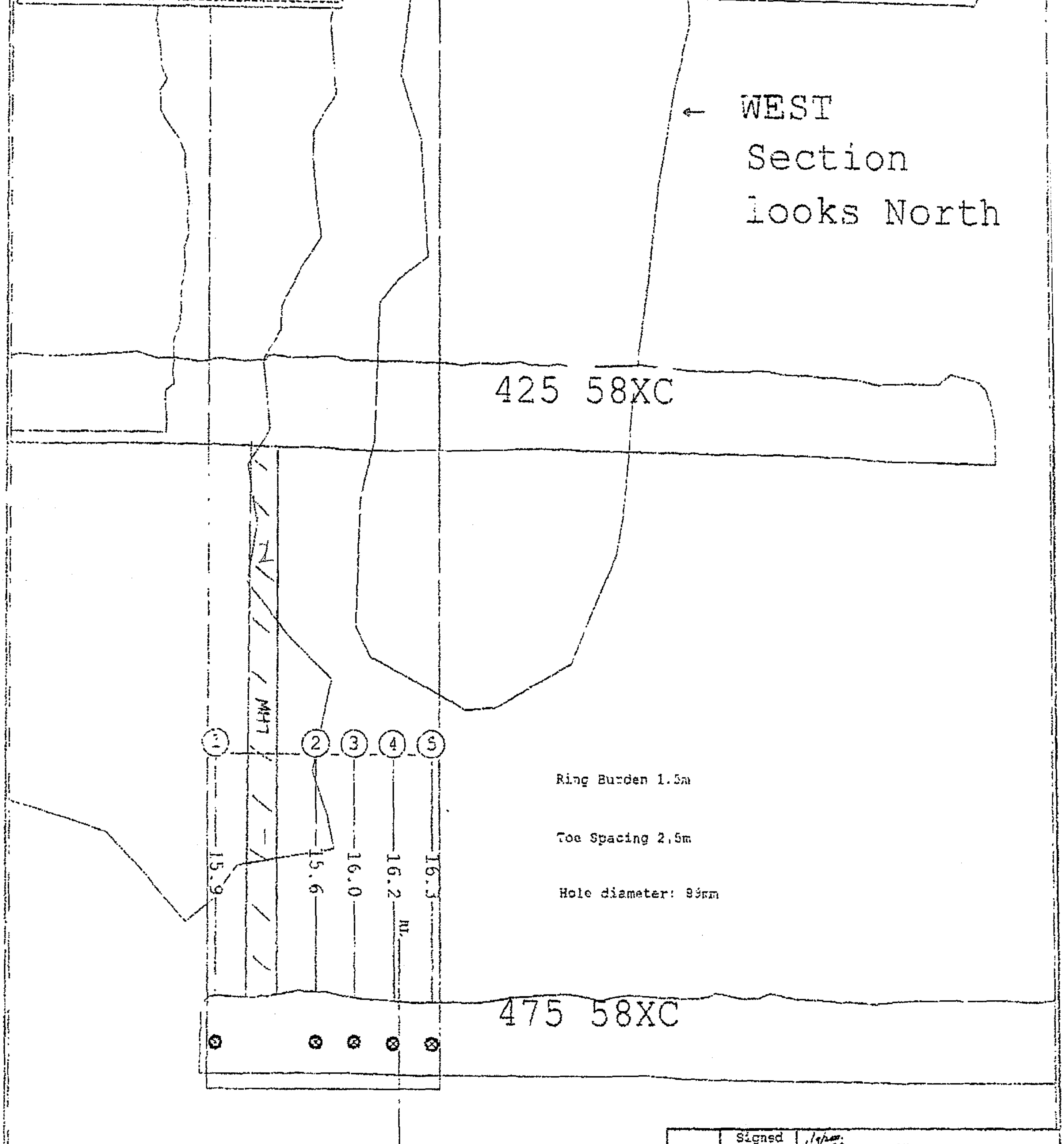
Blast 404068

Ring Lesson drilling report.

Date: 10-Aug-01

Ring: COS 1

No.	RL OS	Collar OS	Dip	Dump	Length	b/t
1	11.9W	11.9W	0	90	15.9	N
2	5.4W	5.4W	0	90	15.6	N
3	2.9W	2.9W	0	90	16.0	N
4	0.4W	0.4W	0	90	16.2	N
5	2.1E	2.1E	0	90	16.3	N
					80.0	



	Signed
Designed	
Reviewed	
Geology	
Geotech	
Supt	
Approved	
Surveyor	

BHP CANNINGTON

476GHLO

COS 1, 475 mLv

Looking Looking NORTH

Scale: 1:250 Date: 11-Aug-01

SURPAC2000 - SURPAC Software International

Blast 904068

Ring Design drilling report:

Date: 10-Aug-01

Ring: COS 2

No.	RL Of Collar	GE	Dip	Dump	length	b/t
1	11.4W	11.4W	0	90	15.4	N
2	8.4W	8.4W	0	90	15.4	N
3	5.9W	5.9W	0	90	15.4	N
4	3.4W	3.4W	0	90	15.6	N
5	1.1E	1.1E	0	90	15.6	N
					77.4	

COS 2

400 58XC

← WEST

Section
looks North

425 58XC

1 2 3 4 5

15.4 15.4 15.4 15.6 15.6 RL

Ring Burden 1.5m

Toe Spacing 2.5m

Hole diameter: 89mm

475 58XC

	Signed
Designed	
Reviewed	
Geology	
Geotech	
Supt	
Approved	
Surveyor	

BHP CANNINGTON

4760HLO
COS 2, 475 mLv
Looking Looking NORTH

Scale: 1:250 Date: 11-Aug-01

SURPAC2005 - SURPAC Software International

Blast 904068

Ring Design drilling report:

Date: 10-Aug-01

Ring COS 3

No	RL OS Collar	OS Dip	Dump	Length b/t	
1	11.9W	11.9W	0 90	15.9	W
2	5.4W	5.4W	0 90	15.7	W
3	2.9W	2.9W	0 90	15.6	W
4	1.4W	0.6H	0 90	15.7	W
5	2.1E	2.1E	0 90	15.8	W
				78.6	

COS 3

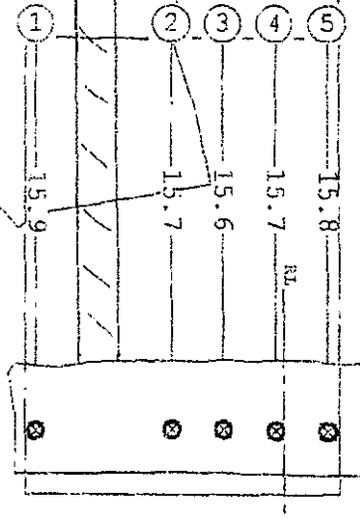
400 58XC

← WEST

Section

looks North

425 58XC



Ring Burden 1.8m

Toe Spacing 2.5m

Hole diameter: 89mm

475 58XC

	Signed	
Designed		BHP CANNINGTON
Revised		
Geology		4760MLO
Geotech		COS 3, 475 mlv
Supt		Looking Looking NORTH
Approved		
Surveyor		Scale: 1:250 Date: 11-Aug-01

SURPAC2000 - SURPAC Software International

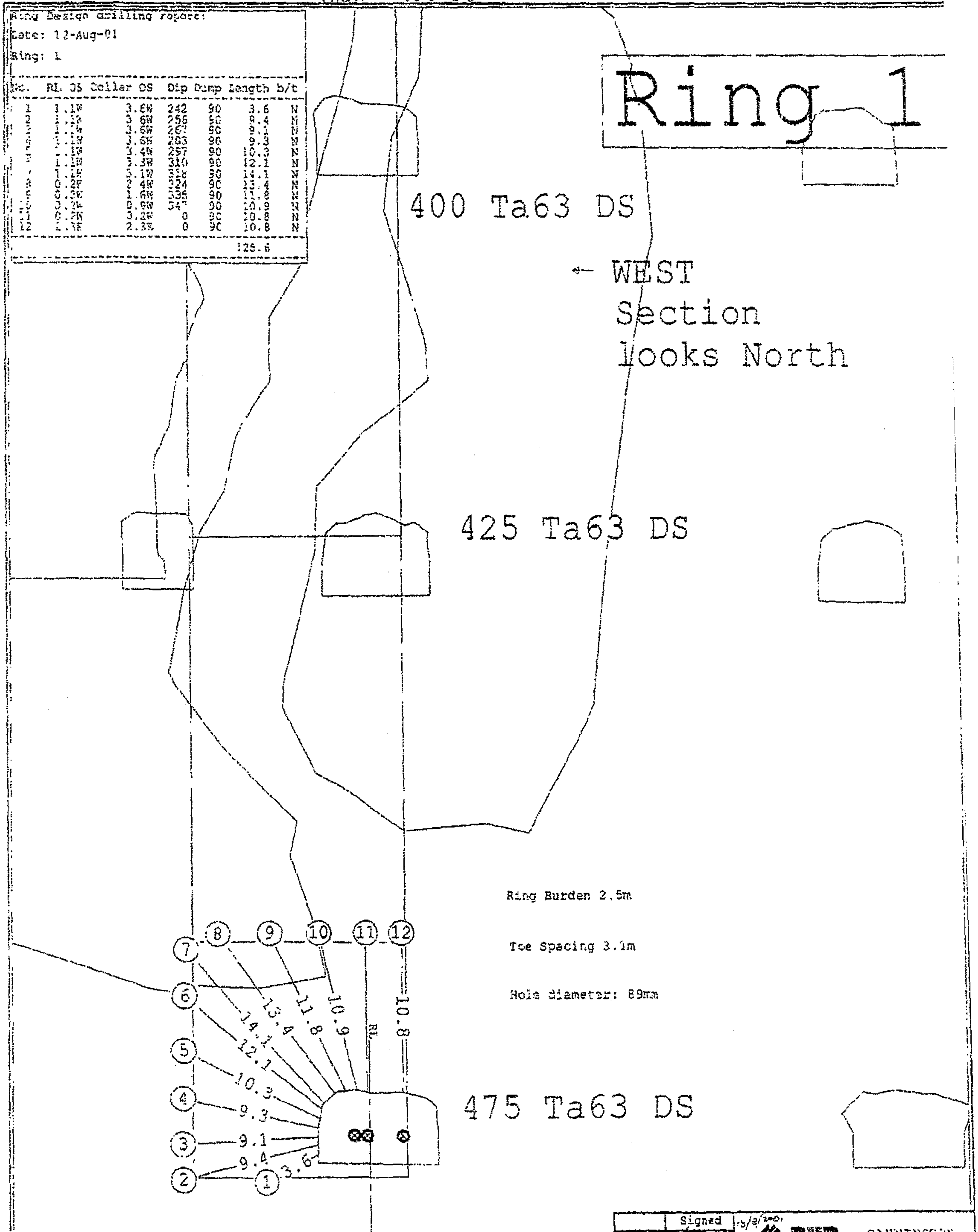
Blast 904068

Ring Design drilling report:

Date: 12-Aug-01

Ring: 1

No.	RL DS	Collar DS	Dip	Dump	Length	b/t
1	1.1W	3.6W	242	90	3.6	N
2	1.1W	3.6W	256	90	9.4	N
3	1.1W	3.5W	267	90	9.1	N
4	1.1W	3.5W	283	90	9.3	N
5	1.1W	3.4W	297	90	10.3	N
6	1.1W	3.3W	310	90	12.1	N
7	1.1E	3.1W	318	90	14.1	N
8	0.2E	2.4W	324	90	13.4	N
9	0.3W	1.6W	335	90	11.8	N
10	0.2W	0.9W	347	90	10.9	N
11	0.2W	3.2W	0	90	10.8	N
12	2.3E	2.3E	0	90	10.8	N
					125.6	



Ring Burden 2.5m

Toe Spacing 3.1m

Hole diameter: 89mm

	Signed	13/8/2001	BHP CANNINGTON
Designed			4760RLO
Reviewed			Ring 1, 475 mLv
Geology			Looking Looking NORTH
Geotech			
Supt			
Approved			
Surveyor		Scale: 1:250	Date: 12-Aug-01

SURPAC2000 - SURPAC Software International

Blast 904068

Drlg Design drilling report:
Date: 12-Aug-01
Ring: 2

No.	RL	OS Collar	DS	Dip	Dump	Length	b/t	
1	0.0W		2.0W	240	90	5.5	M	
2	0.0W		2.0W	257	90	10.5	M	
3	0.0W		2.0W	263	90	10.7	M	
4	0.0W		2.0W	276	90	10.7	M	
5	0.0W		2.0W	290	90	11.3	M	
6	0.0W		1.9W	303	90	12.7	M	
7	0.0W		1.8W	314	90	14.8	M	
8	0.0E		1.5W	320	90	15.3	M	
9	0.0E		1.7W	327	90	13.4	M	
10	0.0E		1.2W	339	90	11.6	M	
11	0.0E		0.6W	349	90	10.9	M	
12	0.0E		0.1E	0	90	10.6	M	
13	1.5E		1.7E	8	90	10.8	M	
						148.9		

Ring 2

400 Ta63 DS

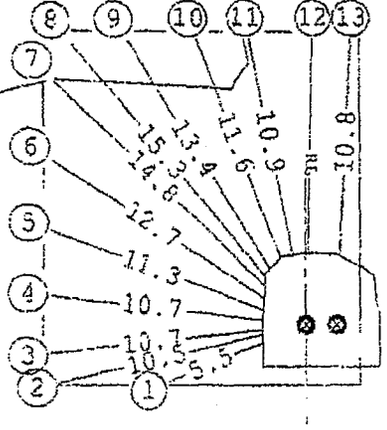
← WEST
Section
looks North

425 Ta63 DS

Ring Burden 2.5m

Toe Spacing 3.1m

Hole diameter: 89mm



475 Ta63 DS

	Signed
Designed	
Reviewed	
Geology	
Geotech	
Supt	
Approved	
Surveys:	

BHP CANNINGTON

4750HLO
Ring 2, 475 mLv
Looking Looking NORTH

Scale: 1:250 | Date: 12-Aug-01

SURPAC2000 - SURPAC Software International

Blast 404068

Ring Design Drilling Report:

Date: 12-Aug-01

Ring: 3

No	RL	OS Collar	OS	Dip	Dump	Length	b/c
1	0.1E	1.7W	247	90	5.6		W
2	0.1E	1.7W	258	90	11.2		W
3	0.1E	1.7W	267	90	10.9		W
4	0.1E	1.7W	281	90	11.1		W
5	0.1E	1.7W	294	90	11.9		W
6	0.1E	1.7W	307	90	13.6		W
7	0.1E	1.7W	321	90	16.0		W
8	0.2E	1.7W	334	90	14.2		W
9	0.0W	1.3W	333	90	12.1		W
10	0.3W	1.7W	347	90	11.0		W
11	0.6W	2.0W	0	90	10.5		W
12	1.5E	1.7E	4	90	10.6		W
					138.9		

Ring 3

400 Ta63 DS

← WEST

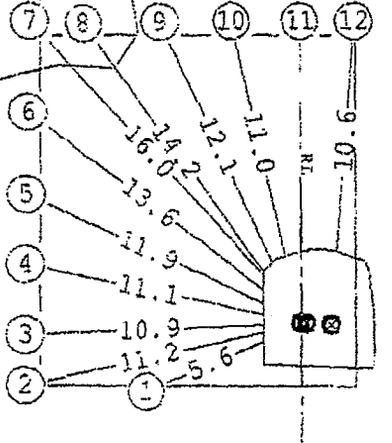
Section
looks North

425 Ta63 DS

Ring Burden 2.5m

Toe Spacing 3.1m

Hole diameter: 89mm



475 Ta63 DS

	Signed
Designed	
Reviewed	
Geology	
Geotech	
Supt	
Approved	
Surveyor	

BHP CANNINGTON

4760HLO
Ring 3, 475 mLv
Looking Looking NORTH

Scale: 1:250 Date: 12-Aug-01

SURPAC2000 - SURPAC Software International

Blast 904068

Ring Design Drilling Report:

Date: 12-Aug-01

Ring: 4

No.	RL	CS Collar	OS	Dip	Dump	Length	b/t	
1	0.2m		1.6m	335	90	4.7	N	
2	0.2m		1.6m	350	90	11.2	N	
3	0.2m		1.6m	351	90	11.2	N	
4	0.2m		1.6m	1	90	11.1	N	
5	0.2m		1.6m	11	90	11.4	N	
6	0.2m		1.6m	20	90	12.1	N	
7	0.2m		1.6m	35	90	13.4	N	
8	0.2m		1.6m	44	90	15.2	N	
9	0.3m		1.6m	50	90	14.8	N	
10	0.3m		1.4m	59	90	12.8	N	
11	0.3m		1.9m	66	90	11.5	N	
12	0.3m		0.3m	76	90	11.0	N	
13	1.4m		1.3m	83	90	10.6	N	
14	1.4m		1.9m	91	90	10.5	N	
						161.6		

Ring 4

400 Ta63 DS

← WEST

Section
looks North

425 Ta63 DS

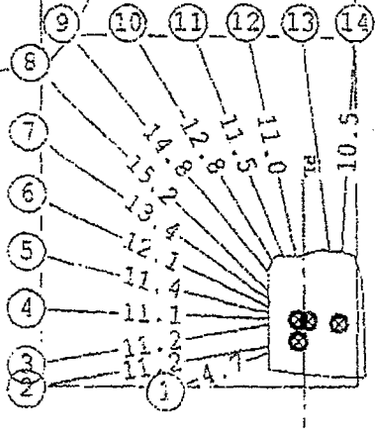
620Drilling Only

Ring Burden 2.0m

Toe Spacing 2.5m

Hole diameter: 76mm

475 Ta63 DS



	Signed	
Designed		13/8/01
Reviewed		
Geology		
Geotech		
Supt		
Approved		
Surveyor		

BHP CANNINGTON

4760HLO

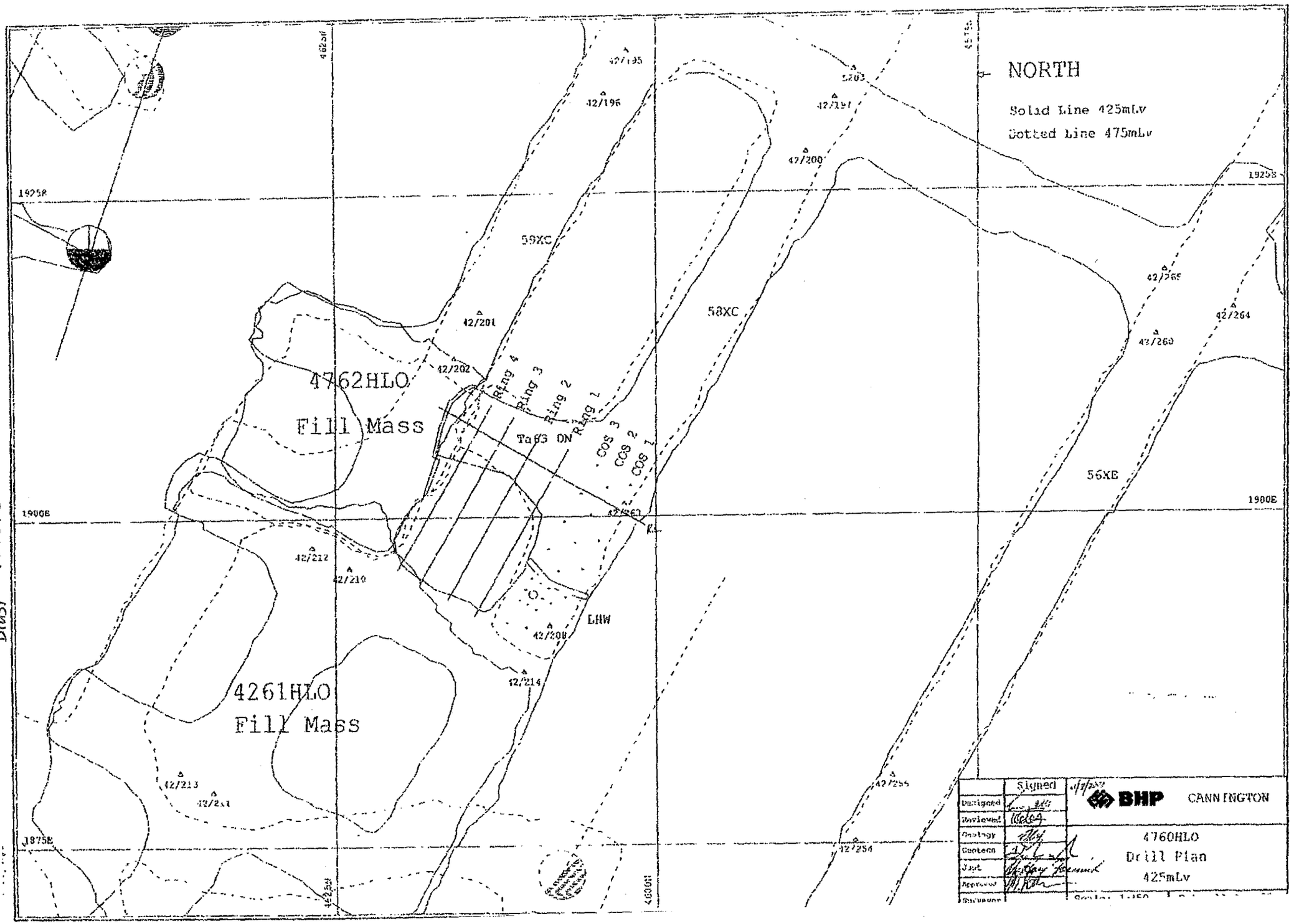
Ring 4, 475 mLv

Looking Looking NORTH

Scale: 1:250 | Date: 12-Aug-01

SURPAC2000 - SURPAC Software International

Blasting Plans - 904072


NORTH
Solid Line 425mLv
Dotted Line 475mLv
4762HLO
Fill Mass
4261HLO
Fill Mass
59XC
58XC
56XE
Ring 4
Ring 3
Ring 2
Ring 1
COS 3
COS 2
COS 1
Tags ON
LHW
19258
19008
J875E
42/195
42/196
42/197
42/200
42/201
42/202
42/203
42/204
42/205
42/206
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42/208
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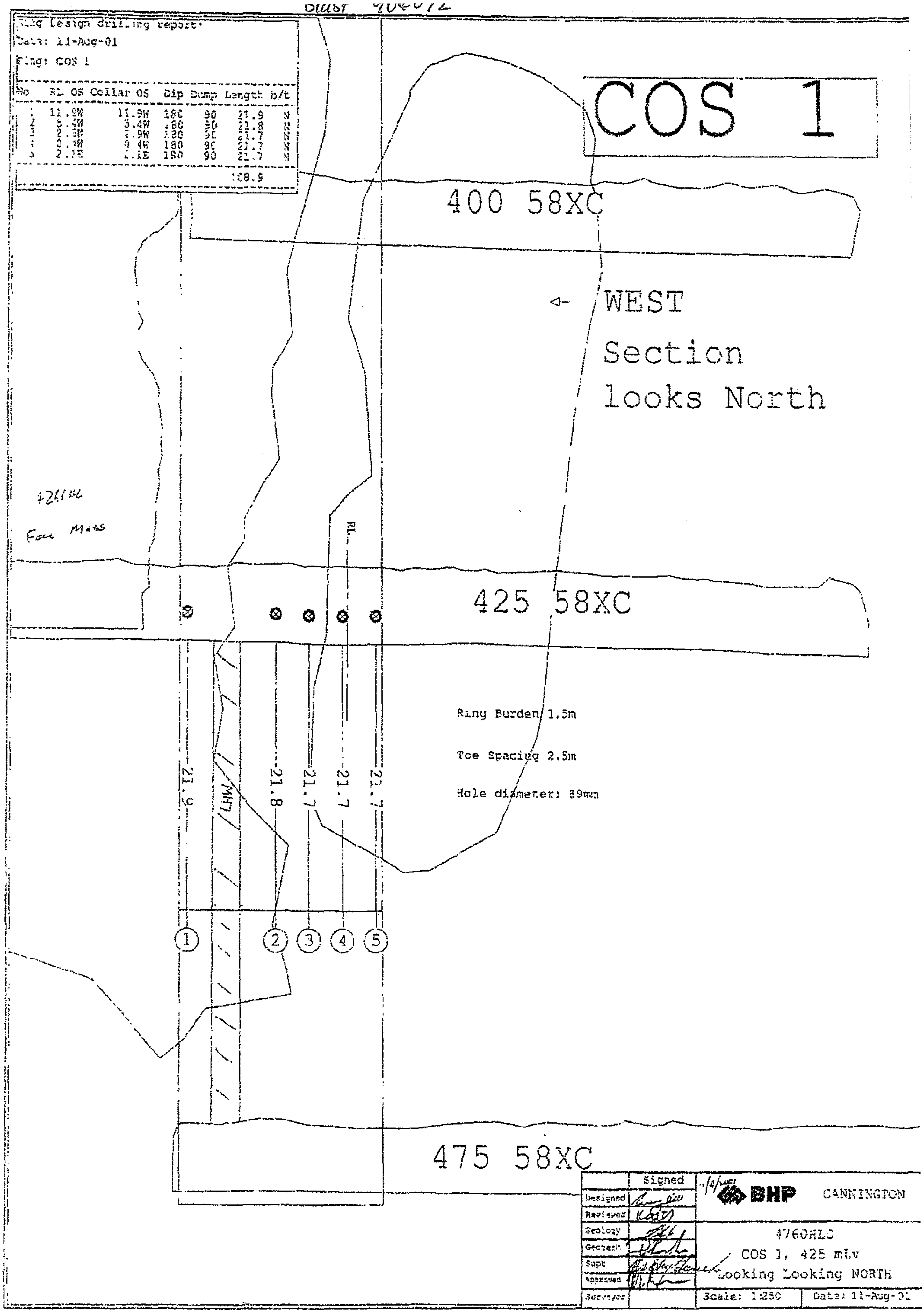
42/212
42/213
42/214
42/254
42/255
42/260
42/264
42/265
Signed
Designed
Reviewed
Geology
Geotech
Surv
Approved
BHP
CANNINGTON
4760HLO
Drill Plan
425mLv
Blast 404072



Ring design drilling report

Date: 11-Aug-01

Ring: COS 1

No	RL OS	Collar OS	Dip	Dump	Length	b/t
1	11.9W	11.9W	180	90	21.9	N
2	5.4W	5.4W	180	90	21.8	N
3	2.9W	2.9W	180	90	21.7	N
4	0.4W	0.4W	180	90	21.7	N
5	2.1E	2.1E	180	90	21.7	N
					[illegible]8.9	

	Signed
Designed	
Reviewed	
Geology	
Geotech	
Supt	
Approved	
Surveyor	

BHP CANNINGTON

4760HLC

COS 1, 425 mLv

Looking Looking NORTH

Scale: 1:250 | Date: 11-Aug-01

SURPAC2000 - SURPAC Software International

Blast 904072

Ring Design Drilling report:
Date: 11-Aug-01
Ring COS 2

No.	RL OS Collar	OS	Dip	Dump	Length	b/t
1	11.4W	11.4W	180	90	22.0	W
2	6.4W	6.4W	180	90	21.9	W
3	3.9W	3.9W	180	90	21.7	W
4	1.4W	1.4W	180	90	21.6	W
5	1.1E	1.1E	180	90	21.7	W
					108.9	

COS 2

400 58XC

← WEST
Section
looks North

4261142

425 58XC

RL

22.0 21.9 21.7 21.6 21.7

Ring Burden 1.5m

Toe Spacing 2.5m

Hole diameter: 89mm

1 2 3 4 5

475 58XC

	Signed
Designed	
Reviewed	
Geology	
Geotech	
Supt	
Approved	
Surveyor	

BHP CANNINGTON

4760HIO
COS 2, 425 mLv
Looking Looking NORTH

Scale: 1:250 Date: 11-Aug-01

SURPAC2000 - SURPAC Software International

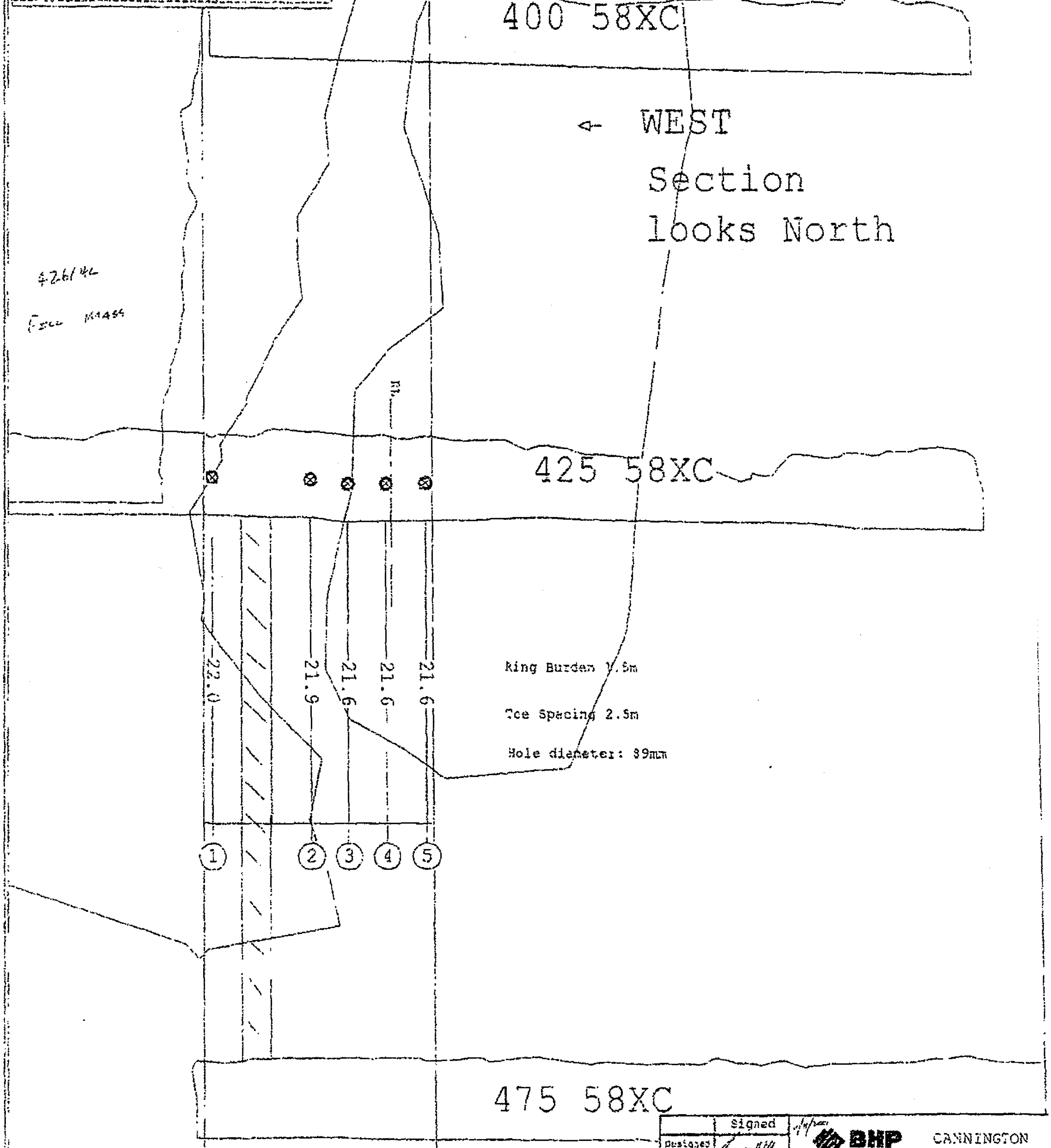
Blast 904072

Ring Design drilling report:

Date: 11-Aug-01

Ring: COS 3

No.	RL OS	Collar OS	Dip	Dump	Length	b/t
1	11.9W	11.9W	180	90	22.0	N
2	5.3W	5.3W	180	90	21.9	N
3	2.8W	2.8W	180	90	21.6	N
4	0.3W	0.3W	180	90	21.6	N
5	2.2E	2.2E	180	90	21.6	N
					108.7	



	Signed
Designed	
Reviewed	
Geology	
Geotech	
Supt	
Approved	
Surveyor	

BHP CANNINGTON

4760HLO

COS 3, 425 mLv

Looking looking NORTH

Scale: 1:250 Date: 11-Aug-01

SURPAC2000 - SURPAC Software International

Blast 904072

KIRO Design drilling report:

Date: 12-Aug-01

Ring: 1

No.	RL	OS Collar	OS Dip	Dump	Length	b/t	
1	0.2E	2.2S	180	90	26.6	N	
2	0.2E	0.3W	180	90	26.5	N	
3	0.3E	0.6W	187	90	26.7	N	
4	0.3E	0.8W	192	90	27.2	N	
5	0.3E	1.0W	198	90	28.0	N	
6	0.3E	1.2W	204	90	27.6	N	
7	0.3E	1.4W	209	90	23.1	N	
8	0.3E	1.7W	215	90	19.8	N	
9	0.3E	2.2W	222	90	15.5	N	
10	0.3E	2.5W	230	90	12.1	N	
11	0.3E	2.9W	236	90	10.7	N	
12	0.3E	2.9W	259	90	9.9	Y	
13	0.3E	2.9W	274	90	9.2	Y	
					262.9		

Ring 1

400 Ta63 DS

← WEST
Section
looks North

RL

425 Ta63 DS

Ring Burden 2.5m

Toe Spacing 3.1m

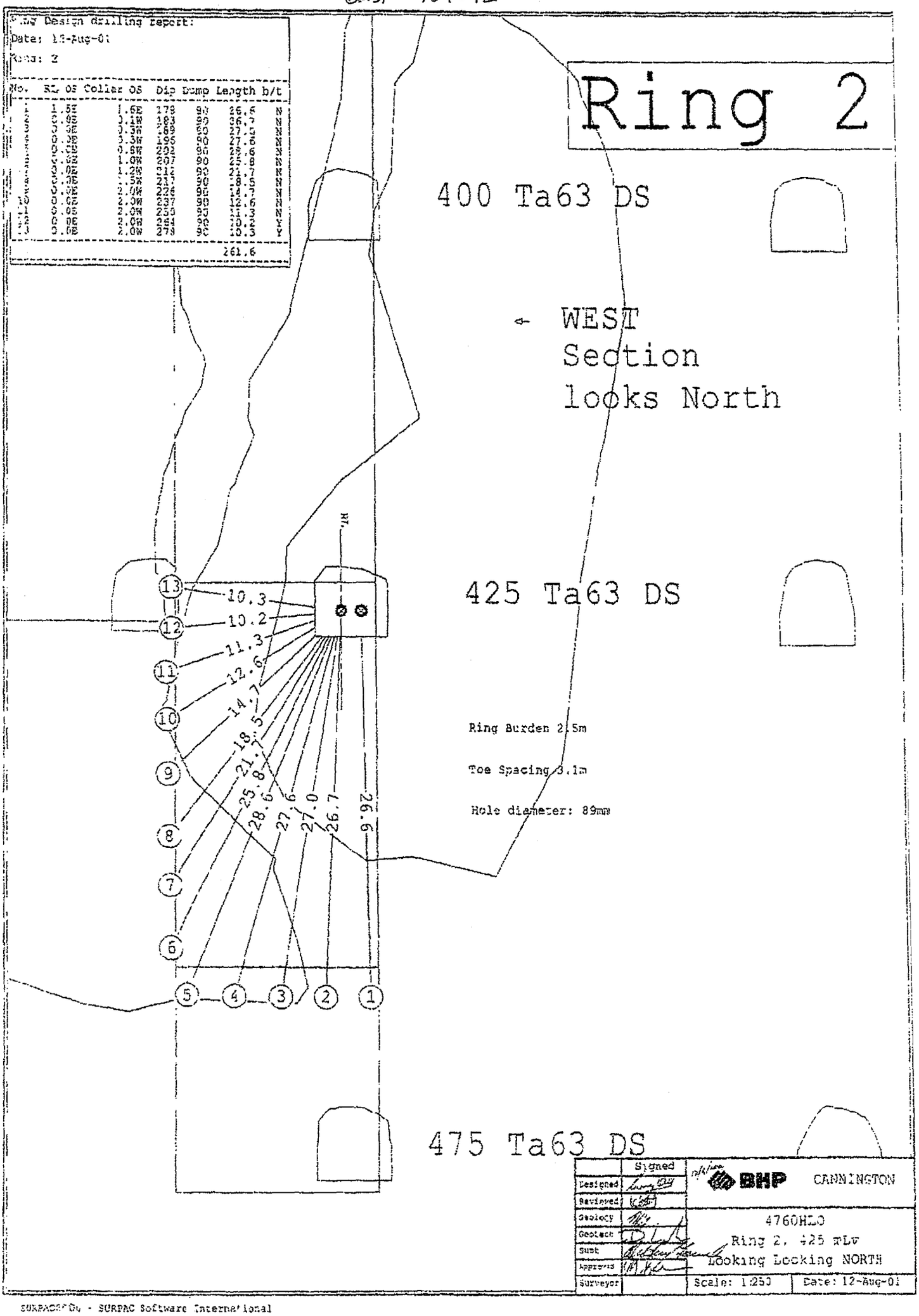
Hole diameter: 89mm

475 Ta63 DS

	Signed	
Designed		BHP CANNINGTON
Reviewed		
Geology		4760MLO
Geotech		Ring 1, 425 mLv
Supt		Looking Looking NORTH
Approved		
Surveyor		Scale: 1:250 Date: 12-Aug-01

SURPAC2000 - SURPAC Software International

Blast 904072



SURPAC Dv - SURPAC Software International

Blast 904072

Ring Design drilling report:

Date: 12-Aug-01

Ring: 3

No.	RL	DS Collar	OS	Dip	Dump	Length	b/t
1	1.5E		1.5E	178	90	26.8	N
2	0.3W		1.3W	180	90	26.8	N
3	0.3W		0.5W	187	90	27.0	N
4	0.3W		0.6W	193	90	27.5	N
5	0.3W		1.0W	198	90	28.4	N
6	0.3W		1.2W	204	90	28.0	N
7	0.3W		1.4W	209	90	23.2	N
8	0.3W		1.6W	215	90	20.1	N
9	0.3W		1.8W	222	90	15.8	N
10	0.3W		2.0W	233	90	13.0	N
11	0.3W		2.3W	245	90	11.4	N
12	0.3W		2.3W	258	90	10.6	N
13	0.3W		2.3W	273	90	9.9	Y
						268.4	

Ring 3

400 Ta63 DS

← WEST
Section
looks North

425 Ta63 DS

RL

9.9
10.6
11.4
13.0
15.8
20.1
23.2
28.0
28.4
27.5
27.0
26.8
28.2

Ring Burden 3.5m

Toe Spacing 3.1m

Hole diameter: 89mm

475 Ta63 DS

	Signed
Designed	
Reviewed	
Geology	
Geotech	
Supt	
Approved	
Surveyor	

BHP CANNINGTON

4760HLO
Ring 3, 425 mlv
Looking Looking NORTH

Scale: 1:250 | Date: 12-Aug-01

SURPAC2000 - SURPAC Software International

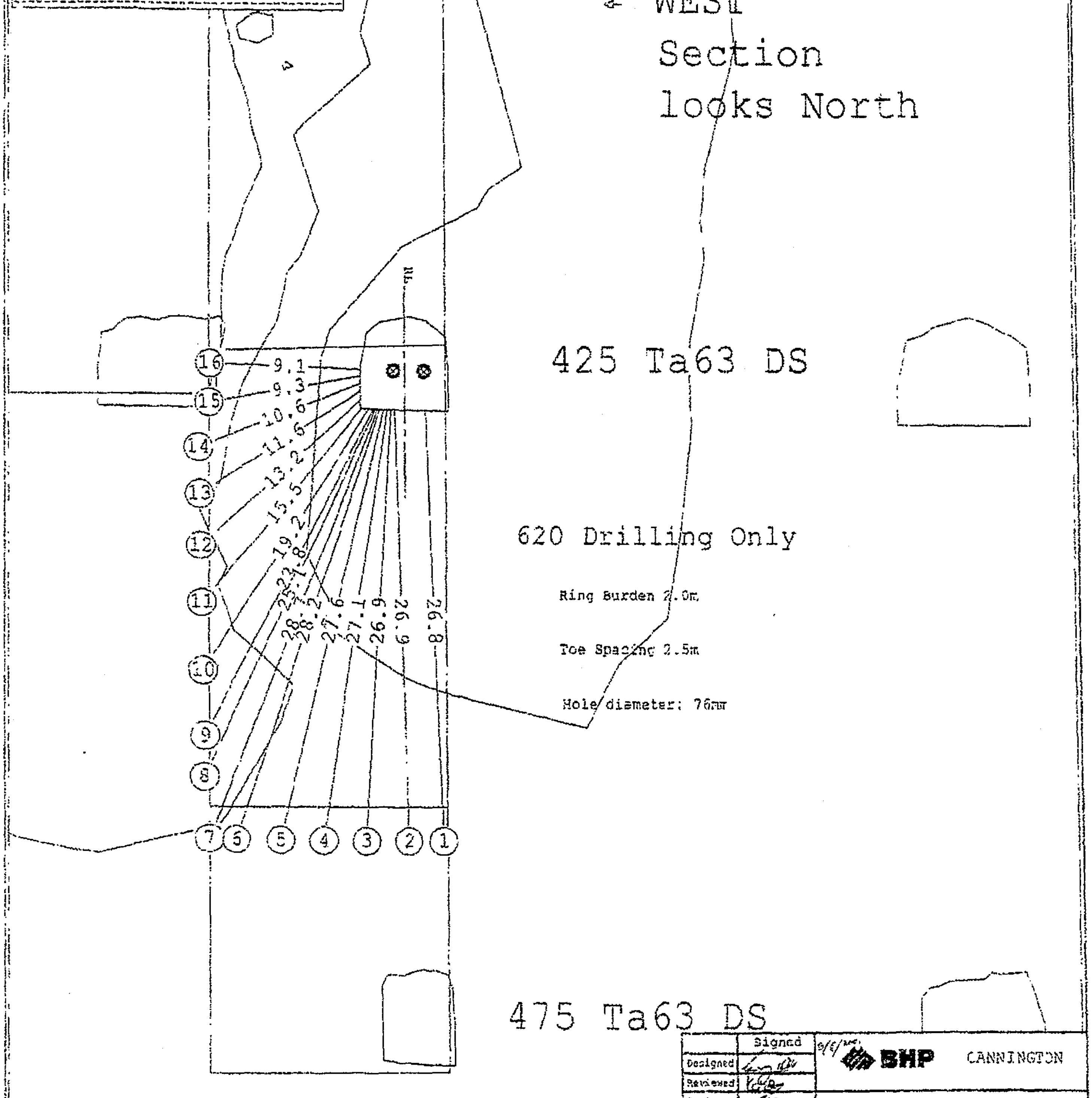
Blast 904072

Ring Design drilling report.

Date: 12-Aug-01

Ring: 4

No	PL OS	Collar OS	Dip	Dump	Length	b/t
1	1.2E	1.4E	268	90	26.8	N
2	0.7W	0.7W	268	90	26.9	N
3	0.7W	0.9W	274	90	26.9	N
4	0.7W	1.1W	279	90	27.1	N
5	0.7W	1.3W	284	90	27.6	N
6	0.7W	1.5W	289	90	28.2	N
7	0.7W	1.7W	292	90	28.7	N
8	0.7W	1.9W	295	90	25.1	N
9	0.7W	2.0W	297	90	22.8	N
10	0.7W	2.3W	302	90	19.2	N
11	0.7W	2.7W	314	90	15.5	N
12	0.7W	2.3W	318	90	13.2	N
13	0.7W	2.3W	326	90	11.6	N
14	0.7W	2.3W	338	90	10.6	N
15	0.7W	2.9W	350	90	9.3	Y
16	0.7W	2.3W	2	90	9.1	Y
					328.4	



	Signed	BHP	CANNINGTON
Designed		4760HLO	
Reviewed		Ring 4, 425 mLv	
Geology		Looking Looking NORTH	
Geotech			
Supt			
Approved			
Surveyor		Scale: 1:250	Date: 12-Aug-01

tcdrlrq.mf

SURPAC2000 - SURPAC Software International

Blasting Records

	Blast	Stope	Level	Ring	Kilos	Date	Metres	Ring no.	Length	Delay Time (ms)
425mLv COS 1	904064	4760HL	425	Winze	893	18/09/2001	143.5	1	21.9	
425mLv COS 2	904064	4760HL	425	Winze	893	18/09/2001	143.5	1	22	
425mLv COS 3	904064	4760HL	425	Winze	893	18/09/2001	143.5	1	22	
475mLv COS 1	904068	4760HL	475	COS, 1, 2, 3, 4	3204	22/09/2001	576	3	16	200
475mLv COS 1	904068	4760HL	475	COS, 1, 2, 3, 4	3204	22/09/2001	576	4	16.2	600
475mLv COS 1	904068	4760HL	475	COS, 1, 2, 3, 4	3204	22/09/2001	576	5	16.3	1400
475mLv COS 2	904068	4760HL	475	COS, 1, 2, 3, 4	3204	22/09/2001	576	4	15.6	400
475mLv COS 2	904068	4760HL	475	COS, 1, 2, 3, 4	3204	22/09/2001	576	5	15.6	1000
475mLv COS 3	904068	4760HL	475	COS, 1, 2, 3, 4	3204	22/09/2001	576	3	15.6	200
475mLv COS 3	904068	4760HL	475	COS, 1, 2, 3, 4	3204	22/09/2001	576	4	15.7	600
475mLv COS 3	904068	4760HL	475	COS, 1, 2, 3, 4	3204	22/09/2001	576	5	15.8	1400
475mLv Ring 1	904068	4760HL	475	COS, 1, 2, 3, 4	3204	22/09/2001	576	1	3.6	3000
475mLv Ring 1	904068	4760HL	475	COS, 1, 2, 3, 4	3204	22/09/2001	576	2	9.4	2650
475mLv Ring 1	904068	4760HL	475	COS, 1, 2, 3, 4	3204	22/09/2001	576	3	9.1	2400
475mLv Ring 1	904068	4760HL	475	COS, 1, 2, 3, 4	3204	22/09/2001	576	4	9.3	2275
475mLv Ring 1	904068	4760HL	475	COS, 1, 2, 3, 4	3204	22/09/2001	576	5	10.3	1950

475mLv Ring 1	904068	4760HL	475	COS, 1, 2, 3, 4	3204	22/09/2001	576	6	12.1	1800
475mLv Ring 1	904068	4760HL	475	COS, 1, 2, 3, 4	3204	22/09/2001	576	7	14.1	1675
475mLv Ring 1	904068	4760HL	475	COS, 1, 2, 3, 4	3204	22/09/2001	576	8	13.4	1400
475mLv Ring 1	904068	4760HL	475	COS, 1, 2, 3, 4	3204	22/09/2001	576	9	11.8	1675
475mLv Ring 1	904068	4760HL	475	COS, 1, 2, 3, 4	3204	22/09/2001	576	10	10.9	1800
475mLv Ring 1	904068	4760HL	475	COS, 1, 2, 3, 4	3204	22/09/2001	576	11	10.8	1950
475mLv Ring 1	904068	4760HL	475	COS, 1, 2, 3, 4	3204	22/09/2001	576	12	10.8	2275
475mLv Ring 2	904068	4760HL	475	COS, 1, 2, 3, 4	3204	22/09/2001	576	1	5.5	4350
475mLv Ring 2	904068	4760HL	475	COS, 1, 2, 3, 4	3204	22/09/2001	576	2	10.5	3900
475mLv Ring 2	904068	4760HL	475	COS, 1, 2, 3, 4	3204	22/09/2001	576	3	10.7	3800
475mLv Ring 2	904068	4760HL	475	COS, 1, 2, 3, 4	3204	22/09/2001	576	4	10.7	3450
475mLv Ring 2	904068	4760HL	475	COS, 1, 2, 3, 4	3204	22/09/2001	576	5	11.3	3050
475mLv Ring 2	904068	4760HL	475	COS, 1, 2, 3, 4	3204	22/09/2001	576	6	12.7	3000
475mLv Ring 2	904068	4760HL	475	COS, 1, 2, 3, 4	3204	22/09/2001	576	7	14.8	2650
475mLv Ring 2	904068	4760HL	475	COS, 1, 2, 3, 4	3204	22/09/2001	576	8	15.3	2400
475mLv Ring 2	904068	4760HL	475	COS, 1, 2, 3, 4	3204	22/09/2001	576	9	13.4	2650
475mLv Ring 2	904068	4760HL	475	COS, 1, 2, 3, 4	3204	22/09/2001	576	10	11.6	3000

475mLv Ring 2	904068	4760HL	475	COS, 1, 2, 3, 4	3204	22/09/2001	576	11	10.9	3050
475mLv Ring 2	904068	4760HL	475	COS, 1, 2, 3, 4	3204	22/09/2001	576	12	10.6	3450
475mLv Ring 2	904068	4760HL	475	COS, 1, 2, 3, 4	3204	22/09/2001	576	13	10.8	3800
475mLv Ring 3	904068	4760HL	475	COS, 1, 2, 3, 4	3204	22/09/2001	576	1	5.6	5600
475mLv Ring 3	904068	4760HL	475	COS, 1, 2, 3, 4	3204	22/09/2001	576	2	11.2	5500
475mLv Ring 3	904068	4760HL	475	COS, 1, 2, 3, 4	3204	22/09/2001	576	3	10.9	4700
475mLv Ring 3	904068	4760HL	475	COS, 1, 2, 3, 4	3204	22/09/2001	576	4	11.1	4600
475mLv Ring 3	904068	4760HL	475	COS, 1, 2, 3, 4	3204	22/09/2001	576	5	11.9	4350
475mLv Ring 3	904068	4760HL	475	COS, 1, 2, 3, 4	3204	22/09/2001	576	6	13.6	3900
475mLv Ring 3	904068	4760HL	475	COS, 1, 2, 3, 4	3204	22/09/2001	576	7	16	3800
475mLv Ring 3	904068	4760HL	475	COS, 1, 2, 3, 4	3204	22/09/2001	576	8	14.2	3450
475mLv Ring 3	904068	4760HL	475	COS, 1, 2, 3, 4	3204	22/09/2001	576	9	12.1	3800
475mLv Ring 3	904068	4760HL	475	COS, 1, 2, 3, 4	3204	22/09/2001	576	10	11	3900
475mLv Ring 3	904068	4760HL	475	COS, 1, 2, 3, 4	3204	22/09/2001	576	11	10.5	4350
475mLv Ring 3	904068	4760HL	475	COS, 1, 2, 3, 4	3204	22/09/2001	576	12	10.6	4600
475mLv Ring 4	904068	4760HL	475	COS, 1, 2, 3, 4	3204	22/09/2001	576	1	4.7	9700
475mLv Ring 4	904068	4760HL	475	COS, 1, 2, 3, 4	3204	22/09/2001	576	2	11.2	9600

475mLv Ring 4	904068	4760HL	475	COS, 1, 2, 3, 4	3204	22/09/2001	576	3	11.2	8600
475mLv Ring 4	904068	4760HL	475	COS, 1, 2, 3, 4	3204	22/09/2001	576	4	11.1	8500
475mLv Ring 4	904068	4760HL	475	COS, 1, 2, 3, 4	3204	22/09/2001	576	5	11.4	7400
475mLv Ring 4	904068	4760HL	475	COS, 1, 2, 3, 4	3204	22/09/2001	576	6	12.1	6400
475mLv Ring 4	904068	4760HL	475	COS, 1, 2, 3, 4	3204	22/09/2001	576	7	13.4	5500
475mLv Ring 4	904068	4760HL	475	COS, 1, 2, 3, 4	3204	22/09/2001	576	8	15.2	4600
475mLv Ring 4	904068	4760HL	475	COS, 1, 2, 3, 4	3204	22/09/2001	576	9	14.8	4350
475mLv Ring 4	904068	4760HL	475	COS, 1, 2, 3, 4	3204	22/09/2001	576	10	12.8	4600
475mLv Ring 4	904068	4760HL	475	COS, 1, 2, 3, 4	3204	22/09/2001	576	11	11.5	5500
475mLv Ring 4	904068	4760HL	475	COS, 1, 2, 3, 4	3204	22/09/2001	576	12	11	6400
475mLv Ring 4	904068	4760HL	475	COS, 1, 2, 3, 4	3204	22/09/2001	576	13	10.6	7400
475mLv Ring 4	904068	4760HL	475	COS, 1, 2, 3, 4	3204	22/09/2001	576	14	10.5	8500
425mLv COS 1	904072	4760HL	425	COS, 1, 2, 3, 4	3902	25/09/2001	727	3	21.7	200
425mLv COS 1	904072	4760HL	425	COS, 1, 2, 3, 4	3902	25/09/2001	727	4	21.7	400
425mLv COS 1	904072	4760HL	425	COS, 1, 2, 3, 4	3902	25/09/2001	727	5	21.7	600
425mLv COS 2	904072	4760HL	425	COS, 1, 2, 3, 4	3902	25/09/2001	727	4	21.6	400
425mLv COS 2	904072	4760HL	425	COS, 1, 2, 3, 4	3902	25/09/2001	727	5	21.7	1000

425mLv COS 3	904072	4760HL	425	COS, 1, 2, 3, 4	3902	25/09/2001	727	3	21.6	200
425mLv COS 3	904072	4760HL	425	COS, 1, 2, 3, 4	3902	25/09/2001	727	4	21.6	600
425mLv COS 3	904072	4760HL	425	COS, 1, 2, 3, 4	3902	25/09/2001	727	5	21.6	1400
425mLv ring 1	904072	4760HL	425	COS, 1, 2, 3, 4	3902	25/09/2001	727	1	26.6	1800
425mLv ring 1	904072	4760HL	425	COS, 1, 2, 3, 4	3902	25/09/2001	727	2	26.5	1675
425mLv ring 1	904072	4760HL	425	COS, 1, 2, 3, 4	3902	25/09/2001	727	3	26.7	1400
425mLv ring 1	904072	4760HL	425	COS, 1, 2, 3, 4	3902	25/09/2001	727	4	27.2	1400
425mLv ring 1	904072	4760HL	425	COS, 1, 2, 3, 4	3902	25/09/2001	727	5	28	1400
425mLv ring 1	904072	4760HL	425	COS, 1, 2, 3, 4	3902	25/09/2001	727	6	27.6	1675
425mLv ring 1	904072	4760HL	425	COS, 1, 2, 3, 4	3902	25/09/2001	727	7	23.1	1800
425mLv ring 1	904072	4760HL	425	COS, 1, 2, 3, 4	3902	25/09/2001	727	8	19.8	1950
425mLv ring 1	904072	4760HL	425	COS, 1, 2, 3, 4	3902	25/09/2001	727	9	15.5	2275
425mLv ring 1	904072	4760HL	425	COS, 1, 2, 3, 4	3902	25/09/2001	727	10	12.1	2400
425mLv ring 1	904072	4760HL	425	COS, 1, 2, 3, 4	3902	25/09/2001	727	11	10.7	2650
425mLv ring 1	904072	4760HL	425	COS, 1, 2, 3, 4	3902	25/09/2001	727	12	9.9	3000
425mLv ring 1	904072	4760HL	425	COS, 1, 2, 3, 4	3902	25/09/2001	727	13	9.2	3050
425mLv ring 2	904072	4760HL	425	COS, 1, 2, 3, 4	3902	25/09/2001	727	1	26.6	2650

425mLv ring 2	904072	4760HL	425	COS, 1, 2, 3, 4	3902	25/09/2001	727	2	26.7	2400
425mLv ring 2	904072	4760HL	425	COS, 1, 2, 3, 4	3902	25/09/2001	727	3	27	2275
425mLv ring 2	904072	4760HL	425	COS, 1, 2, 3, 4	3902	25/09/2001	727	4	27.6	1950
425mLv ring 2	904072	4760HL	425	COS, 1, 2, 3, 4	3902	25/09/2001	727	5	28.6	2275
425mLv ring 2	904072	4760HL	425	COS, 1, 2, 3, 4	3902	25/09/2001	727	6	25.8	2400
425mLv ring 2	904072	4760HL	425	COS, 1, 2, 3, 4	3902	25/09/2001	727	7	21.7	2650
425mLv ring 2	904072	4760HL	425	COS, 1, 2, 3, 4	3902	25/09/2001	727	8	18.5	3000
425mLv ring 2	904072	4760HL	425	COS, 1, 2, 3, 4	3902	25/09/2001	727	9	14.7	3050
425mLv ring 2	904072	4760HL	425	COS, 1, 2, 3, 4	3902	25/09/2001	727	10	12.6	3450
425mLv ring 2	904072	4760HL	425	COS, 1, 2, 3, 4	3902	25/09/2001	727	11	11.3	3800
425mLv ring 2	904072	4760HL	425	COS, 1, 2, 3, 4	3902	25/09/2001	727	12	10.2	3900
425mLv ring 2	904072	4760HL	425	COS, 1, 2, 3, 4	3902	25/09/2001	727	13	10.3	4350
425mLv ring 3	904072	4760HL	425	COS, 1, 2, 3, 4	3902	25/09/2001	727	1	26.8	3800
425mLv ring 3	904072	4760HL	425	COS, 1, 2, 3, 4	3902	25/09/2001	727	2	26.8	3450
425mLv ring 3	904072	4760HL	425	COS, 1, 2, 3, 4	3902	25/09/2001	727	3	27	3050
425mLv ring 3	904072	4760HL	425	COS, 1, 2, 3, 4	3902	25/09/2001	727	4	27.5	3000
425mLv ring 3	904072	4760HL	425	COS, 1, 2, 3, 4	3902	25/09/2001	727	5	28.4	3050

425mLv ring 3	904072	4760HL	425	COS, 1, 2, 3, 4	3902	25/09/2001	727	6	28	3450
425mLv ring 3	904072	4760HL	425	COS, 1, 2, 3, 4	3902	25/09/2001	727	7	23.2	3800
425mLv ring 3	904072	4760HL	425	COS, 1, 2, 3, 4	3902	25/09/2001	727	8	20.1	3900
425mLv ring 3	904072	4760HL	425	COS, 1, 2, 3, 4	3902	25/09/2001	727	9	15.8	4350
425mLv ring 3	904072	4760HL	425	COS, 1, 2, 3, 4	3902	25/09/2001	727	10	13	4600
425mLv ring 3	904072	4760HL	425	COS, 1, 2, 3, 4	3902	25/09/2001	727	11	11.4	4700
425mLv ring 3	904072	4760HL	425	COS, 1, 2, 3, 4	3902	25/09/2001	727	12	10.6	5500
425mLv ring 3	904072	4760HL	425	COS, 1, 2, 3, 4	3902	25/09/2001	727	13	9.9	5600
425mLv ring 4	904072	4760HL	425	COS, 1, 2, 3, 4	3902	25/09/2001	727	1	26.8	6400
425mLv ring 4	904072	4760HL	425	COS, 1, 2, 3, 4	3902	25/09/2001	727	2	26.9	5500
425mLv ring 4	904072	4760HL	425	COS, 1, 2, 3, 4	3902	25/09/2001	727	3	26.9	4600
425mLv ring 4	904072	4760HL	425	COS, 1, 2, 3, 4	3902	25/09/2001	727	4	27.1	4350
425mLv ring 4	904072	4760HL	425	COS, 1, 2, 3, 4	3902	25/09/2001	727	5	27.6	3900
425mLv ring 4	904072	4760HL	425	COS, 1, 2, 3, 4	3902	25/09/2001	727	6	28.2	4350
425mLv ring 4	904072	4760HL	425	COS, 1, 2, 3, 4	3902	25/09/2001	727	7	28.7	4450
425mLv ring 4	904072	4760HL	425	COS, 1, 2, 3, 4	3902	25/09/2001	727	8	25.1	4600
425mLv ring 4	904072	4760HL	425	COS, 1, 2, 3, 4	3902	25/09/2001	727	9	22.8	4700

425mLv ring 4	904072	4760HL	425	COS, 1, 2, 3, 4	3902	25/09/2001	727	10	19.2	5500
425mLv ring 4	904072	4760HL	425	COS, 1, 2, 3, 4	3902	25/09/2001	727	11	15.5	5600
425mLv ring 4	904072	4760HL	425	COS, 1, 2, 3, 4	3902	25/09/2001	727	12	13.2	6400
425mLv ring 4	904072	4760HL	425	COS, 1, 2, 3, 4	3902	25/09/2001	727	13	11.6	6500
425mLv ring 4	904072	4760HL	425	COS, 1, 2, 3, 4	3902	25/09/2001	727	14	10.6	7400
425mLv ring 4	904072	4760HL	425	COS, 1, 2, 3, 4	3902	25/09/2001	727	15	9.3	8400
425mLv ring 4	904072	4760HL	425	COS, 1, 2, 3, 4	3902	25/09/2001	727	16	9.1	9600

Appendix C - Stope 4763

Blasting Records

ORICA **CANNINGTON**

PARTNERS FOR PERFORMANCE

DATE	6/05/2002	OPERATOR	NK		LEVEL	375
DELIVERY NO.	904186				STOPE	47 63
					RING	6

HOLE	Diam	Design	Actual	Collar	Charge	80%	Delay	COMMENTS
RING 6								
1	89	5.8	5.8	1	4.8	4.00	720	
2	89	13.9	13.9	4	9.9	8.26	680	
3	89	13.6	13.6	1	12.6	10.51	640	
4	89	13.4	13.4	5	8.4	7.01	620	
5	89	13.7	13.7	1	12.7	10.59	600	
6	89	14.5	14.5	6	8.5	7.09	580	
7	89	15.8	15.8	2	13.8	11.51	560	
8	89	17.6	17.6	8	9.6	8.01	540	
9	89	20.2	20.2	1	19.2	16.01	520	DP
10	89	24.6	24.6	13	11.6	9.67	500	
11	89	27.8	27.8	4	23.8	19.85	495	DP
12	89	26.7	26.7	14	12.7	10.59	515	
13	89	26.1	26.1	1	25.1	20.93	535	DP
14	89	22.7	22.7	11	11.7	9.76	555	
15	89	22.1	22.1	6	16.1	13.43	575	DP
16	89	21.9	21.9	2	19.9	16.60	590	DP
17	89	23.9	23.9	1	22.9	19.10	610	DP
18	89	24	24	9	15	12.51	630	DP
19	89	10.2	10.2	3	7.2	6.00	650	
20	89	3.5	3.5	1	2.5	2.09	670	
Total					268	223.51		

METRES CHARGED	268
EMULSION BATCH NO.	
GASSER BATCH NO.	

KGs	1666.96

CALIBRATIONS	
EP PUMP	OK
GASSER PUMP	
5 kg SCALES	OK
25 kg SCALES	OK

TIME	TIME
CUP WEIGHT	CUP WEIGHT
TEMPERATURE	TEMPERATURE

Density delivered	

Sheet I.d 24/7/98 V1

ORICA **CANNINGTON**

PARTNERS FOR PERFORMANCE

DATE	8/05/2002	OPERATOR		NK		LEVEL	425
DELIVERY NO.	904187					STOPE	47 63
						RING	5

HOLE	Diam	Design	Actual	Collar	Charge	80%	Delay	COMMENTS
RING 5								
1	89	27.9	27.9	1	26.9	22.43	550	DP
2	89	28.3	28.3	13	15.3	12.76	510	DP
3	89	26.6	26.6	2	24.6	20.52	490	DP
4	89	27.1	27.1	1	26.1	21.77	470	DP
5	89	27.9	27.9	10	17.9	14.93	450	DP
6	89	28.9	28.9	16	12.9	10.76	430	
7	89	32	32	3	29	24.19	410	DP
8	89	32.7	32.7	18	14.7	12.26	390	
9	89	28.3	28.3	9	19.3	16.10	370	DP
10	89	23.8	23.8	1	22.8	19.02	350	DP
11	89	20.5	20.5	8	12.5	10.43	330	
12	89	18.3	18.3	2	16.3	13.59	310	
13	89	16.6	16.6	6	10.6	8.84	290	
14	89	15.5	15.5	1	14.5	12.09	270	
15	89	14.9	14.9	6	8.9	7.42	250	
16	89	15	15	2	13	10.84	230	
17	89	15.5	15.5	6	9.5	7.92	210	
18	89	16.5	16.5	1	15.5	12.93	190	DP
19	89	18.4	18.4	8	10.4	8.67	170	
20	89	20	20	3	17	14.18	150	DP
21	89	18.5	18.5	8	10.5	8.76	160	
22	89	16.4	16.4	1	15.4	12.84	180	DP
23	89	15	15	5	10	8.34	200	
24	89	14.2	14.2	1	13.2	11.01	220	
25	89	12.5	12.5	3	9.5	7.92	240	
26	89	13.4	13.4	1	12.4	10.34	280	
Total					408.7	340.86		

METRES CHARGED	408.7
EMULSION BATCH NO.	73
GASSER BATCH NO.	A27

KGs	2542.114

CALIBRATIONS	
EP PUMP	OK
GASSER PUMP	310
5 kg SCALES	OK
25 kg SCALES	OK

TIME	11.00am	TIME	12.00pm
CUP WEIGHT	1999	CUP WEIGHT	1597
TEMPERATURE	35	TEMPERATURE	35

Density delivered	1.0

Sheet I.d 24/7/98 V1

ORICA **CANNINGTON**

PARTNERS FOR PERFORMANCE

DATE	8/05/2002	OPERATOR	Gary		LEVEL	450
DELIVERY NO.	904188				STOPE	47 63
					RING	5

HOLE	Diam	Design	Actual	Collar	Charge	80%	Delay	COMMENTS
RING 5								
2	89	14.7	8	3	5	4.17	130	
3	89	15.1	6	2	4	3.34	110	
4	89	16.1	6	3	3	2.50	90	
5	89	17.5	5	1	4	3.34	70	
6	89	19.6	5	3	2	1.67	50	
7	89	22.6	5	1	4	3.34	30	
8	89	21.9	5					
9	89	20.9	8	1	7	5.84	0	
10	89	22.7	11	2	9	7.51	20	
11	89	23.5	16	4	12	10.01	40	
12	89	22.8	22.8	11	11.8	9.84	60	
13	89	22.1	22.1	1	21.1	17.60	80	DP
14	89	22.1	22.1	9	13.1	10.93	100	
15	89	22.2	22.2	1	21.2	17.68	150	DP
Total					117.2	97.74		

METRES CHARGED	117.2
EMULSION BATCH NO.	73
GASSER BATCH NO.	A27

KGs	728.984

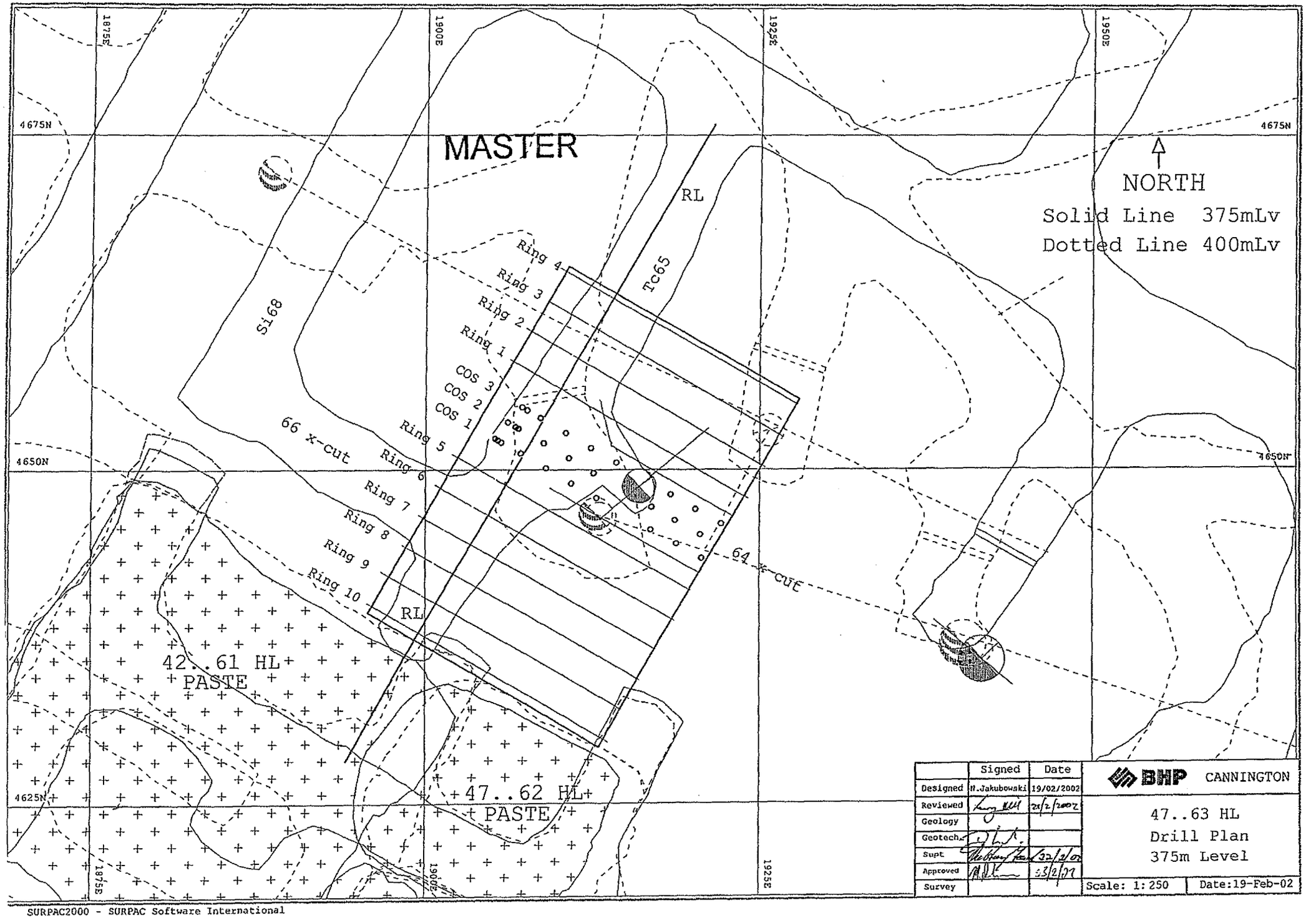
CALIBRATIONS	
EP PUMP	OK
GASSER PUMP	310
5 kg SCALES	OK
25 kg SCALES	OK

TIME	8.00pm	TIME	9.00pm
CUP WEIGHT	1988	CUP WEIGHT	1568
TEMPERATURE	35	TEMPERATURE	35

Density delivered	1.0

Sheet I.d 24/7/98 V1

Blasting Plans



	Signed	Date
Designed	N.Jakubowski	19/02/2002
Reviewed		25/2/2002
Geology		
Geotech		
Supt		22/2/02
Approved		5/3/02
Survey		

BHP CANNINGTON

47..63 HL
Drill Plan
375m Level

Scale: 1:250 | Date:19-Feb-02

SURPAC2000 - SURPAC Software International

Ring Design drilling report:

Date: 11-Feb-02

Ring: 5

No.	RL	OS Collar	OS Dip	Dump	Length	b/t
1	1.7E	4.1E	144	90	3.9	N
2	1.7E	3.7E	165	90	12.8	N
3	1.7E	3.7E	176	90	12.4	N
4	1.7E	3.7E	187	90	12.4	N
5	1.7E	3.7E	198	90	13.0	N
6	1.7E	3.7E	208	90	14.0	N
7	1.7E	3.7E	218	90	15.5	N
8	1.7E	3.7E	226	90	17.7	N
9	1.7E	3.3E	233	90	21.2	N
10	1.7E	2.9E	240	90	25.9	N
11	1.7E	2.8E	244	90	26.1	N
12	1.7E	2.5E	249	90	23.2	Y
13	0.7E	1.4E	252	90	22.5	Y
14	0.7E	1.2E	258	90	21.7	Y
15	0.7E	0.9E	265	90	21.7	Y
16	0.8W	0.7W	268	90	21.8	Y
17	0.8W	0.9W	273	90	23.3	N
18	0.8W	1.1W	278	90	22.5	N
19	0.8W	1.4W	285	90	11.6	N
20	0.8W	2.1W	302	90	4.6	N
					347.9	

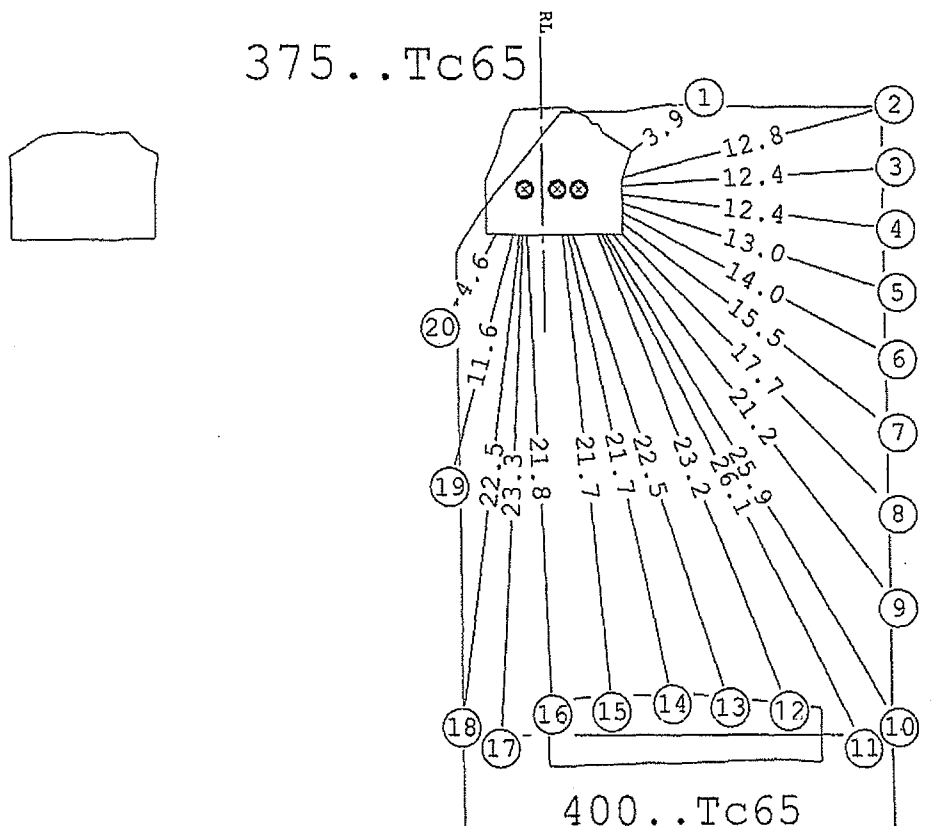
Ring 5

MASTER

←WEST

Section

Looks North



Hole diameter: 89mm

Ring Burden: 2.6m

Toe Spacing: 3.0m

Ensure all down holes are bagged off

425mLv

	Signed	Date
Designed	NJ	
Reviewed		21/2/2002
Geology		
Geotech		
Supt		22/2/02
Approved		7-7/2/02
Survey		

BHP CANNINGTON

47..63 HL

Ring 5, 375 mLv

Looking North

Scale: 1:250 | Date:11-Feb-02

todeletp.pf

SURPAC2000 - SURPAC Software International

Ring Design drilling report:

Date: 11-Feb-02

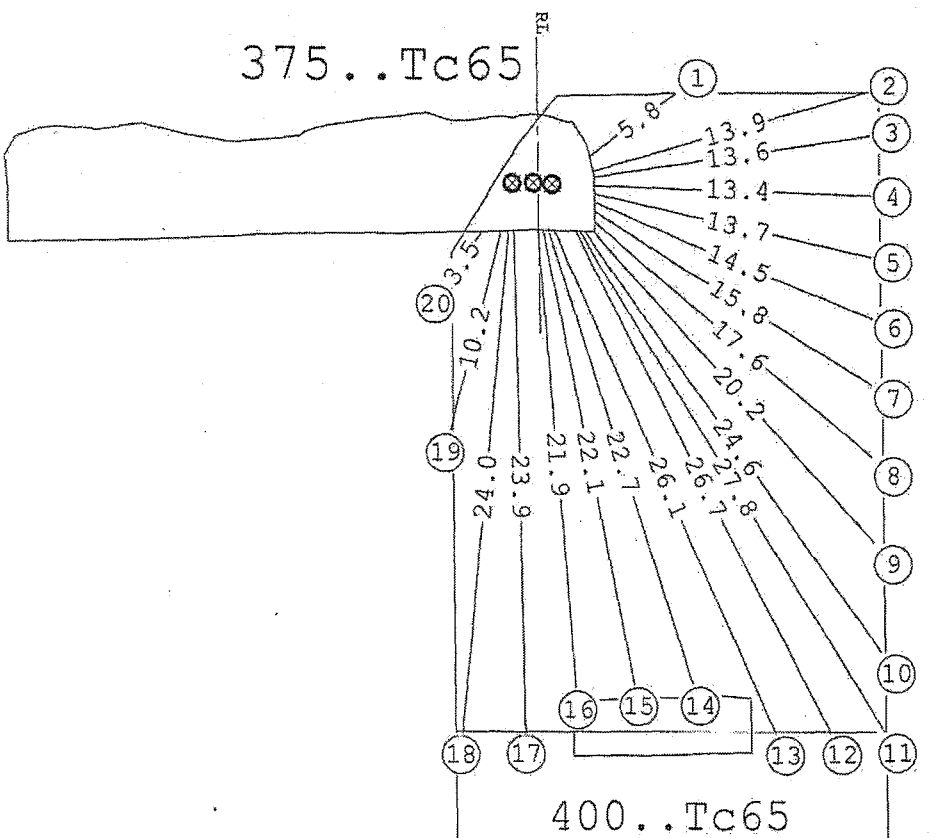
Ring: 6

No.	RL	OS Collar	OS Dip	Dump	Length	b/t
1	0.7E	2.4E	144	90	5.8	N
2	0.7E	2.6E	164	90	13.9	N
3	0.7E	2.7E	172	90	13.6	N
4	0.7E	2.7E	182	90	13.4	N
5	0.7E	2.7E	193	90	13.7	N
6	0.7E	2.7E	203	90	14.5	N
7	0.7E	2.7E	212	90	15.8	N
8	0.7E	2.7E	221	90	17.6	N
9	0.7E	2.6E	228	90	20.2	N
10	0.7E	2.2E	235	90	24.6	N
11	0.7E	1.9E	239	90	27.8	N
12	0.7E	1.7E	244	90	26.7	N
13	0.2W	0.7E	247	90	26.1	N
14	0.2W	0.5E	253	90	22.7	Y
15	0.2W	0.2E	259	90	22.1	Y
16	0.2W	0.0W	266	90	21.9	Y
17	1.2W	1.2W	269	90	23.9	N
18	1.2W	1.4W	276	90	24.0	N
19	1.2W	1.8W	284	90	10.2	N
20	1.2W	2.7W	303	90	3.5	N
					362.2	

Ring 6

MASTER

←WEST
Section
Looks North

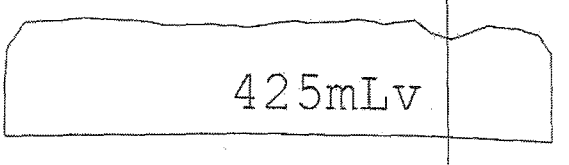


Hole diameter: 89mm

Ring Burden: 2.6m

Toe Spacing: 3.0m

Ensure all down holes are bagged off



	Signed	Date
Designed	NJ	
Reviewed		21/2/2002
Geology		
Geotech		
Supt		22/2/02
Approved		23/2/02
Survey		

BHP CANNINGTON

47..63 HL
Ring 6, 375 mLv
Looking North

Scale: 1:250 | Date: 11-Feb-02

todelstg.pl

SURPAC2000 - SURPAC Software International

Ring Design drilling report:

Date: 11-Feb-02

Ring: 7

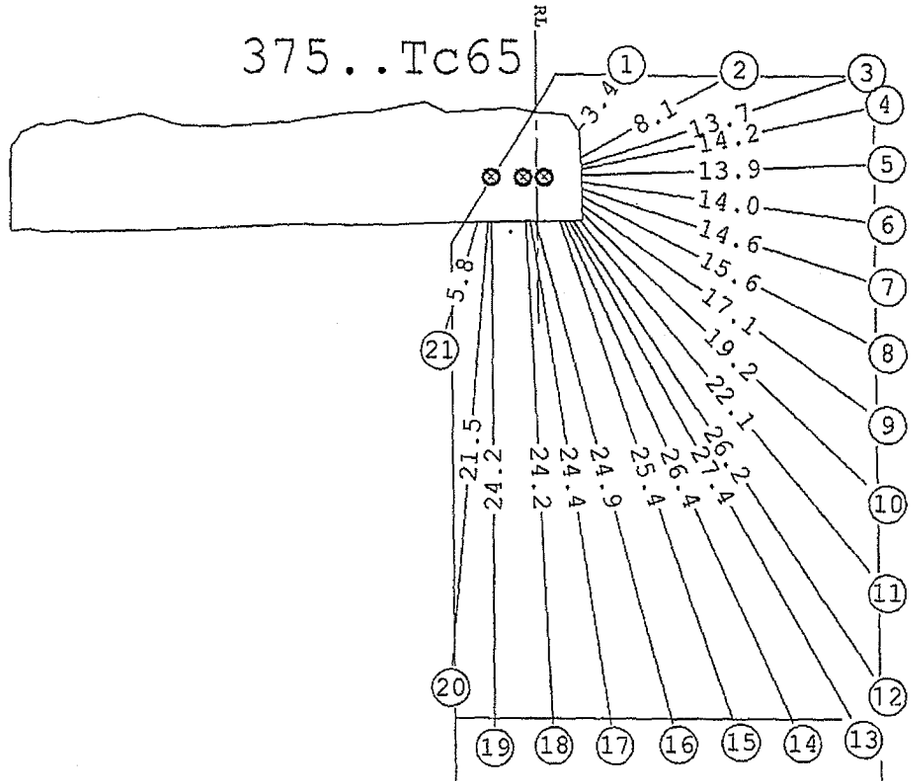
No.	RL OS	Collar OS	Dip	Dump	Length	b/t
1	0.4E	2.0E	127	90	3.4	N
2	0.4E	2.1E	152	90	8.1	N
3	0.4E	2.2E	162	90	13.7	N
4	0.4E	2.2E	168	90	14.2	N
5	0.4E	2.2E	178	90	13.9	N
6	0.4E	2.2E	188	90	14.0	N
7	0.4E	2.2E	198	90	14.6	N
8	0.4E	2.2E	207	90	15.6	N
9	0.4E	2.2E	216	90	17.1	N
10	0.4E	2.2E	224	90	19.2	N
11	0.4E	2.1E	231	90	22.1	N
12	0.4E	1.7E	237	90	26.2	N
13	0.4E	1.5E	241	90	27.4	N
14	0.4E	1.3E	246	90	26.4	N
15	0.4E	1.1E	251	90	25.4	N
16	0.6W	0.1W	255	90	24.9	N
17	0.6W	0.3W	261	90	24.4	N
18	0.6W	0.5W	267	90	24.2	N
19	2.1W	2.1W	270	90	24.2	N
20	2.1W	2.3W	275	90	21.5	N
21	2.1W	2.8W	287	90	5.8	N
					386.2	

Ring 7

MASTER

←WEST

Section
Looks North



Hole diameter: 89mm

Ring Burden: 2.6m

Toe Spacing: 3.0m

Ensure all down holes are bagged off

425mLv

	Signed	Date
Designed		
Reviewed		21/2/2002
Geology		
Geotech		
Supt		22/2/02
Approved		23/2/02
Survey		

BHP CANNINGTON

47..63 HL
Ring 7, 375 mLv
Looking North

Scale: 1:250 | Date:11-Feb-02

todeletr.pf

SURPAC2000 - SURPAC Software International

Ring Design drilling report:

Date: 11-Feb-02

Ring: 8

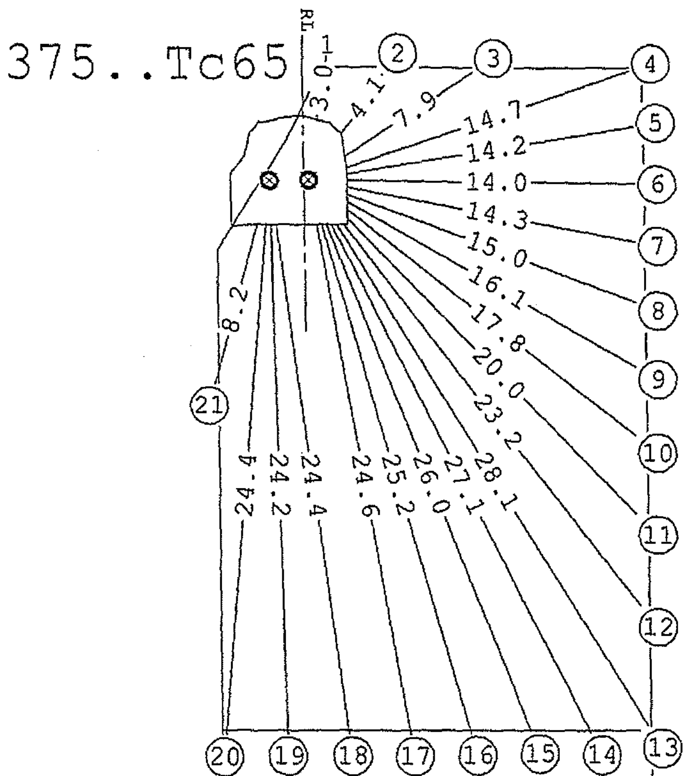
No.	RL OS	Collar OS	Dip	Dump	Length	b/t
1	0.2E	0.7E	99	90	3.0	N
2	0.2E	1.8E	126	90	4.1	N
3	0.2E	1.9E	147	90	7.9	N
4	0.2E	2.0E	161	90	14.7	N
5	0.2E	2.0E	171	90	14.2	N
6	0.2E	2.0E	181	90	14.0	N
7	0.2E	2.0E	191	90	14.3	N
8	0.2E	2.0E	201	90	15.0	N
9	0.2E	2.0E	210	90	16.1	N
10	0.2E	2.0E	218	90	17.8	N
11	0.2E	2.0E	226	90	20.0	N
12	0.2E	1.8E	232	90	23.2	N
13	0.2E	1.5E	239	90	28.1	N
14	0.2E	1.3E	243	90	27.1	N
15	0.2E	1.0E	249	90	25.9	N
16	0.2E	0.8E	254	90	25.2	N
17	0.2E	0.6E	260	90	24.6	N
18	1.6W	1.3W	262	90	24.4	N
19	1.6W	1.6W	269	90	24.2	N
20	1.6W	1.8W	275	90	24.4	N
21	1.6W	2.2W	286	90	8.2	N
					376.5	

Ring 8

MASTER

←WEST

Section Looks North

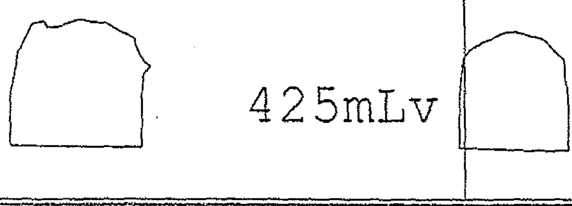


Hole diameter: 89mm

Ring Burden: 2.6m

Toe Spacing: 3.0m

Ensure all down holes are bagged off



	Signed	Date	BHP CANNINGTON
Designed	NV		47..63 HL
Reviewed	[signature]	21/2/2002	Ring 8, 375 mLv
Geology			Looking North
Geotech	[signature]		
Supt	[signature]	22/2/02	
Approved	[signature]	23/2/02	
Survey			Scale: 1:250 Date:11-Feb-02

todelets.pt

SURPAC2000 - SURPAC Software International

Ring Design drilling report:

Date: 14-Feb-02

Ring: 9

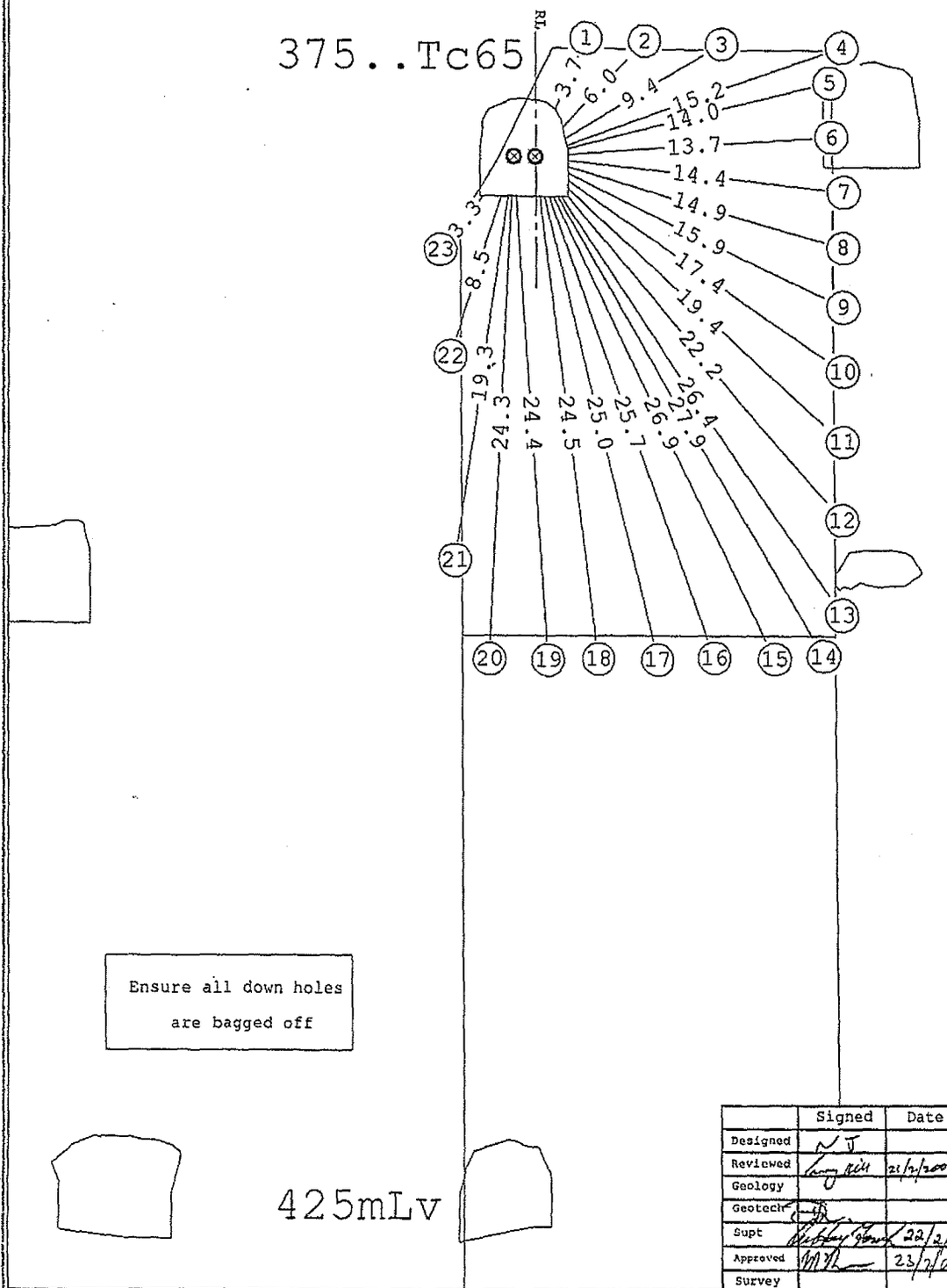
No.	RL	OS Collar	OS Dip	Dump	Length	b/t
1	0.0W	1.1E	114	90	3.7	N
2	0.0W	1.5E	134	90	6.0	N
3	0.0W	1.6E	149	90	9.4	N
4	0.0W	1.7E	160	90	15.2	N
5	0.0W	1.7E	166	90	14.0	Y
6	0.0W	1.8E	176	90	13.7	Y
7	0.0W	1.8E	186	90	14.4	N
8	0.0W	1.8E	196	90	14.9	N
9	0.0W	1.8E	206	90	15.9	N
10	0.0W	1.8E	215	90	17.4	N
11	0.0W	1.8E	223	90	19.4	N
12	0.0W	1.8E	230	90	22.2	N
13	0.0W	1.4E	236	90	26.4	N
14	0.0W	1.2E	240	90	27.9	N
15	0.0W	1.0E	245	90	26.9	N
16	0.0W	0.7E	250	90	25.7	N
17	0.0W	0.5E	256	90	25.0	N
18	0.0W	0.2E	263	90	24.5	N
19	1.2W	1.1W	266	90	24.4	N
20	1.2W	1.3W	273	90	24.3	N
21	1.2W	1.5W	278	90	19.3	N
22	1.2W	1.9W	288	90	8.5	N
23	1.2W	2.8W	308	90	3.3	N
					402.6	

Ring 9

MASTER

←WEST

Section
Looks North



Hole diameter: 89mm

Ring Burden: 2.6m

Toe Spacing: 3.0m

Ensure all down holes are bagged off

	Signed	Date
Designed		
Reviewed		21/2/2002
Geology		
Geotech		
Supt		22/2/02
Approved		23/2/02
Survey		

BHP CANNINGTON

47..63 HL
Ring 9, 375 mLv
Looking North

Scale: 1:250 | Date:14-Feb-02

todelety.pf

SURPAC2000 - SURPAC Software International

Ring Design drilling report:

Date: 11-Feb-02

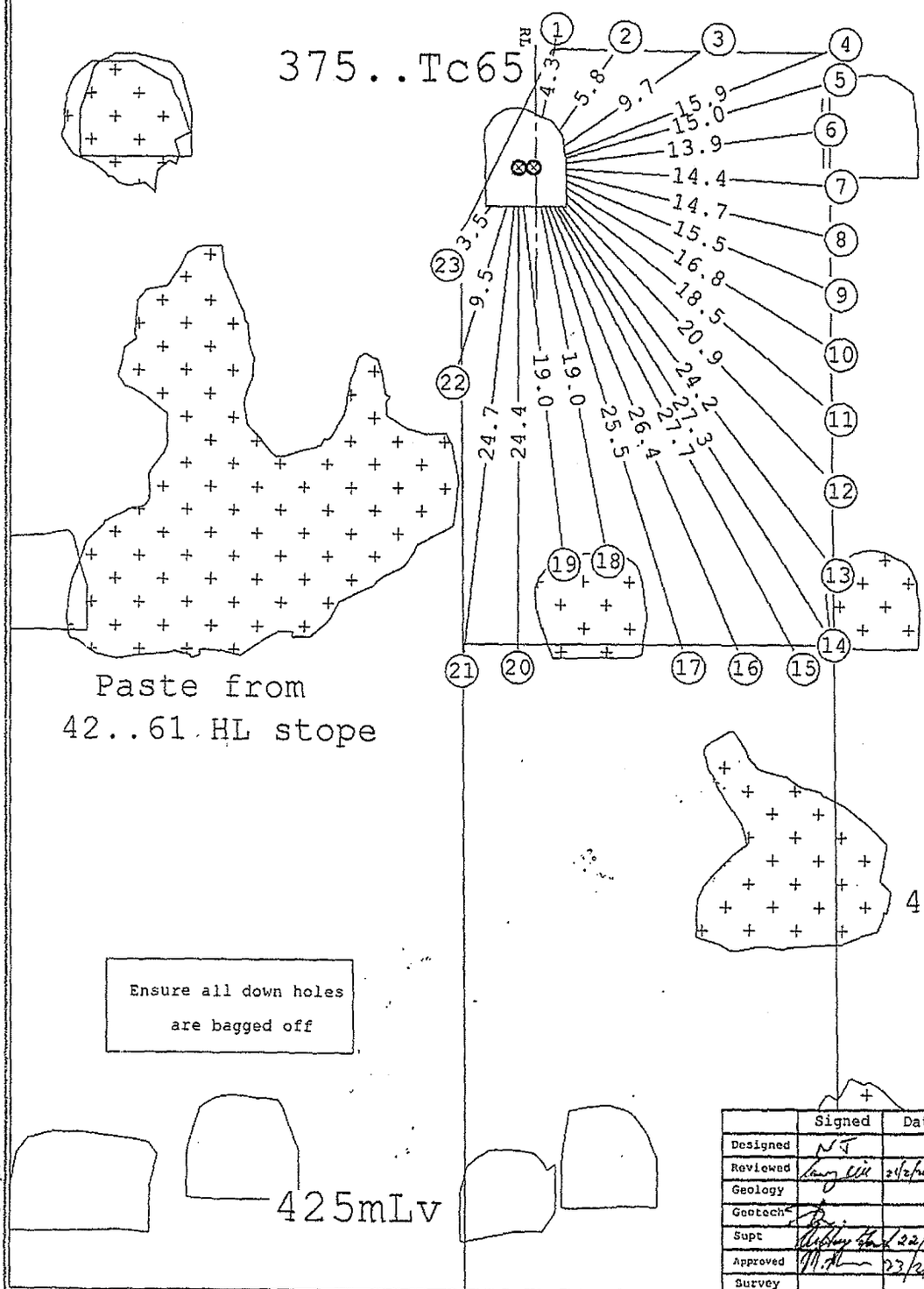
Ring: 10

No.	RL	OS Collar	OS	Dip	Dump	Length	b/t
1	0.1W	0.4E	100	90	4.3	N
2	0.1W	1.3E	126	90	5.8	N
3	0.1W	1.6E	145	90	9.7	N
4	0.1W	1.6E	158	90	15.9	N
5	0.1W	1.7E	164	90	15.0	N
6	0.1W	1.7E	172	90	13.9	N
7	0.1W	1.7E	183	90	14.4	N
8	0.1W	1.7E	193	90	14.7	N
9	0.1W	1.7E	202	90	15.5	N
10	0.1W	1.7E	211	90	16.8	N
11	0.1W	1.7E	219	90	18.5	N
12	0.1W	1.7E	227	90	20.9	N
13	0.1W	1.5E	233	90	24.2	Y
14	0.1W	1.2E	238	90	27.3	Y
15	0.1W	1.0E	242	90	27.7	N
16	0.1W	0.8E	247	90	26.4	N
17	0.1W	0.5E	253	90	25.5	N
18	0.1W	0.3E	259	90	19.0	Y
19	0.9W	0.7W	264	90	19.0	Y
20	0.9W	0.9W	270	90	24.4	Y
21	0.9W	1.2W	277	90	24.7	N
22	0.9W	1.6W	287	90	9.5	N
23	0.9W	2.5W	306	90	3.5	N
					396.4	

Ring 10

MASTER

←WEST
Section
Looks North



Hole diameter: 89mm

Ring Burden: 2.6m

Toe Spacing: 3.0m

Ensure all down holes are bagged off

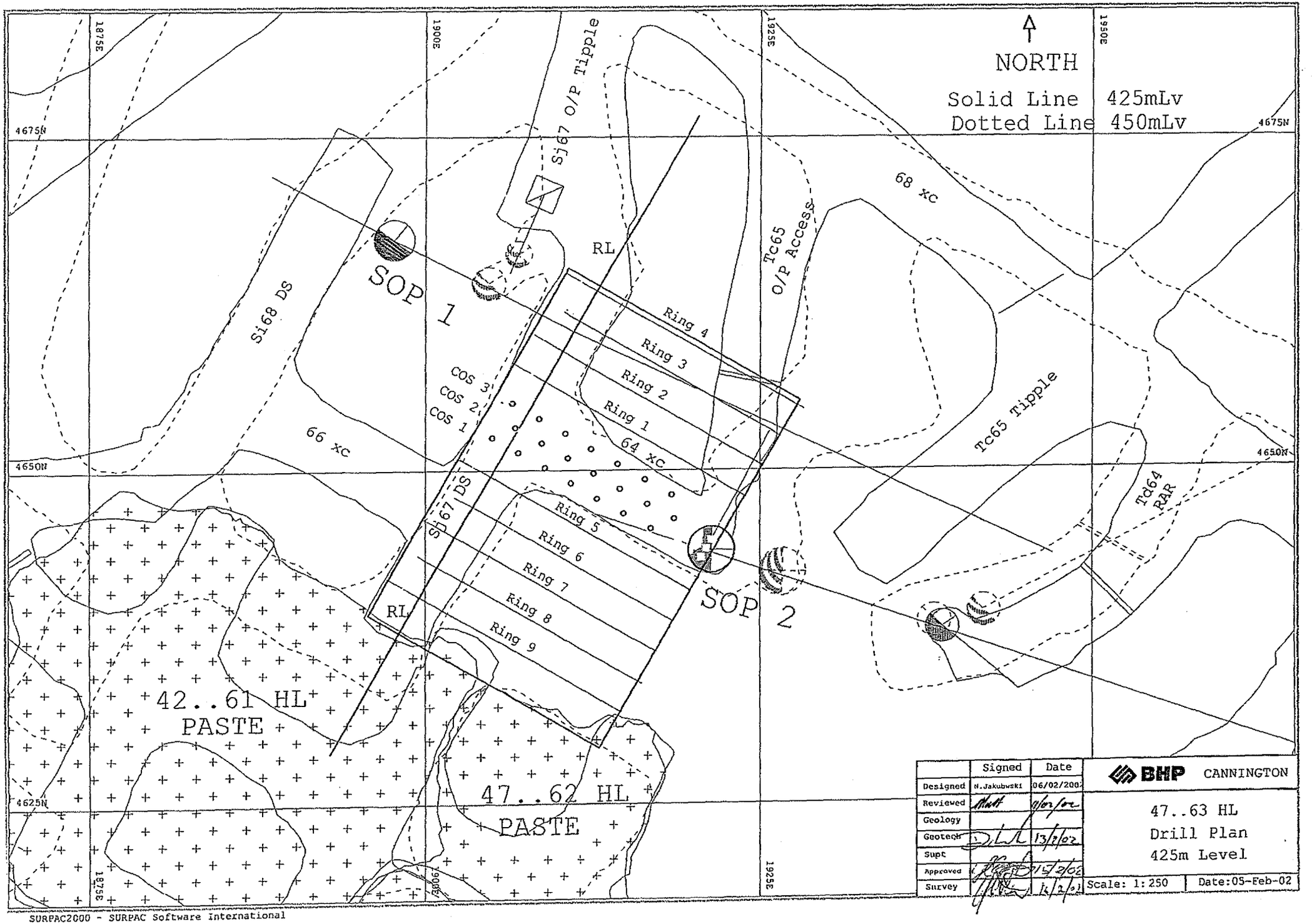
	Signed	Date
Designed		
Reviewed		24/2/2002
Geology		
Geotech		
Supt		22/2/02
Approved		22/2/02
Survey		

BHP CANNINGTON

47..63 HL
Ring 10, 375 mLv
Looking North

Scale: 1:250 | Date:11-Feb-02

SURPAC2000 - SURPAC Software International



	Signed	Date
Designed	N.Jakubwski	06/02/2002
Reviewed		11/02/02
Geology		
Geotech		13/2/02
Supt		
Approved		14/2/02
Survey		14/2/02

BHP CANNINGTON

47..63 HL
Drill Plan
425m Level

Scale: 1:250 | Date:05-Feb-02

SURPAC2000 - SURPAC Software International

Ring Design drilling report:

Date: 11-Feb-02

Ring: 5

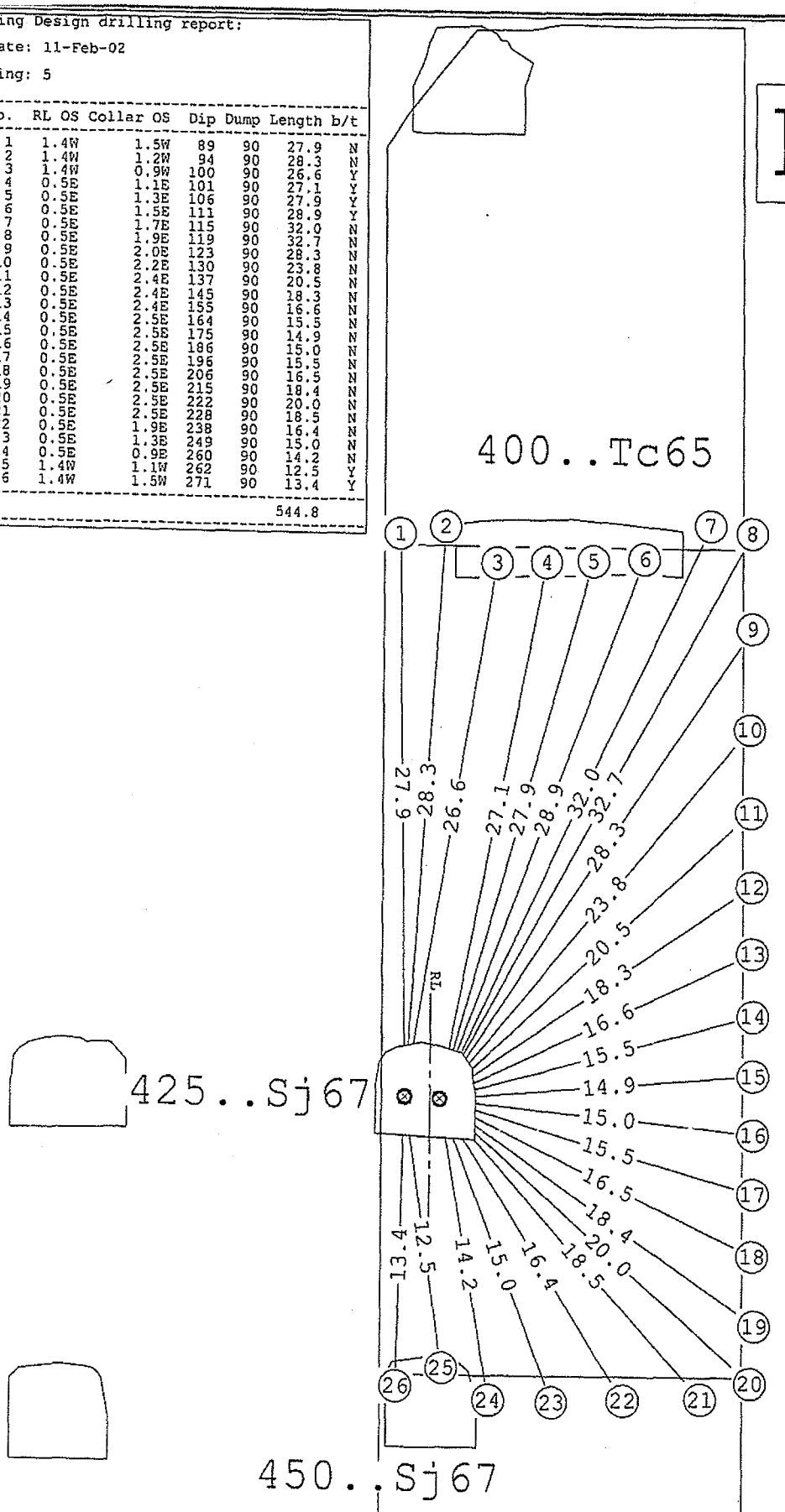
No.	RL OS Collar	OS	Dip	Dump	Length	b/t
1	1.4W	1.5W	89	90	27.9	N
2	1.4W	1.2W	94	90	28.3	N
3	1.4W	0.9W	100	90	26.6	Y
4	0.5E	1.1E	101	90	27.1	Y
5	0.5E	1.3E	106	90	27.9	Y
6	0.5E	1.5E	111	90	28.9	Y
7	0.5E	1.7E	115	90	32.0	N
8	0.5E	1.9E	119	90	32.7	N
9	0.5E	2.0E	123	90	28.3	N
10	0.5E	2.2E	130	90	23.8	N
11	0.5E	2.4E	137	90	20.5	N
12	0.5E	2.4E	145	90	18.3	N
13	0.5E	2.4E	155	90	16.6	N
14	0.5E	2.5E	164	90	15.5	N
15	0.5E	2.5E	175	90	14.9	N
16	0.5E	2.5E	186	90	15.0	N
17	0.5E	2.5E	196	90	15.5	N
18	0.5E	2.5E	206	90	16.5	N
19	0.5E	2.5E	215	90	18.4	N
20	0.5E	2.5E	222	90	20.0	N
21	0.5E	2.5E	228	90	18.5	N
22	0.5E	1.9E	238	90	16.4	N
23	0.5E	1.3E	249	90	15.0	N
24	0.5E	0.9E	260	90	14.2	N
25	1.4W	1.1W	262	90	12.5	Y
26	1.4W	1.5W	271	90	13.4	Y
					544.8	

Ring 5

←WEST

Section

Looks North



Hole diameter: 89mm

Ring Burden: 2.6m

Toe Spacing: 3.0m

	Signed	Date
Designed	N.J.	
Reviewed		11/2/02
Geology		
Geotech		13/2/02
Supt		
Approved		15/2/02
Survey		

BHP CANNINGTON

47..63 HL

Ring 5, 425 mLv

Looking North

Scale: 1:250 | Date:11-Feb-02

Ensure all down holes are bagged off

todelete.pf

SURPAC2000 - SURPAC Software International

Ring Design drilling report:

Date: 11-Feb-02

Ring: 6

No.	RL OS Collar	OS	Dip	Dump	Length	b/t
1	1.5W	1.5W	90	90	28.8	N
2	1.5W	1.2W	95	90	28.7	N
3	0.5W	0.0W	99	90	26.4	Y
4	0.1E	0.8E	104	90	27.3	Y
5	0.1E	1.0E	108	90	28.1	Y
6	0.1E	1.3E	113	90	31.5	N
7	0.1E	1.5E	117	90	32.6	N
8	0.1E	1.6E	121	90	30.5	N
9	0.1E	1.8E	127	90	25.8	N
10	0.1E	2.0E	134	90	22.2	N
11	0.1E	2.1E	142	90	19.5	N
12	0.1E	2.1E	151	90	17.6	N
13	0.1E	2.1E	160	90	16.3	N
14	0.1E	2.1E	170	90	15.5	N
15	0.1E	2.1E	181	90	15.3	N
16	0.1E	2.1E	191	90	15.6	N
17	0.1E	2.1E	202	90	16.5	N
18	0.1E	2.1E	212	90	17.9	N
19	0.1E	2.1E	220	90	19.9	N
20	0.1E	2.1E	225	90	20.7	N
21	0.1E	1.8E	233	90	17.8	N
22	0.1E	1.2E	243	90	16.0	N
23	1.5W	0.6W	248	90	15.4	N
24	1.5W	1.1W	258	90	12.6	Y
25	1.5W	1.5W	271	90	12.5	N
					531.1	

Ring 6

←WEST

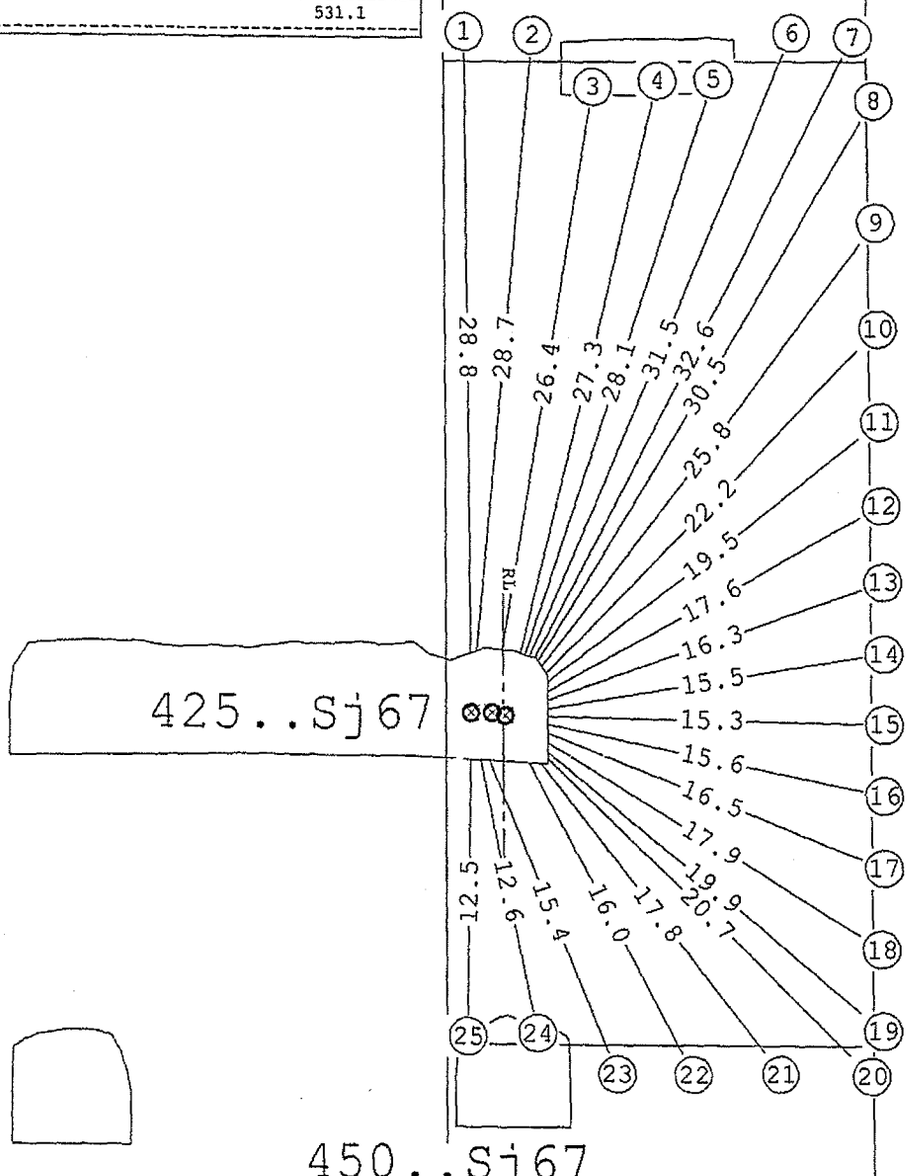
Section

Looks North

400..Tc65

425..Sj67

450..Sj67



Hole diameter: 89mm

Ring Burden: 2.6m

Toe Spacing: 3.0m

Ensure all down holes are bagged off

	Signed	Date
Designed	N.U.	
Reviewed		13/2/02
Geology		
Geotech		13/2/02
Supt		
Approved		15/2/02
Survey		

BHP CANNINGTON

47..63 HL

Ring 6, 425 mLv

Looking North

Scale: 1:250 Date:11-Feb-02

todeletf.pf

SURPAC2000 - SURPAC Software International

Ring Design drilling report:

Date: 11-Feb-02

Ring: 7

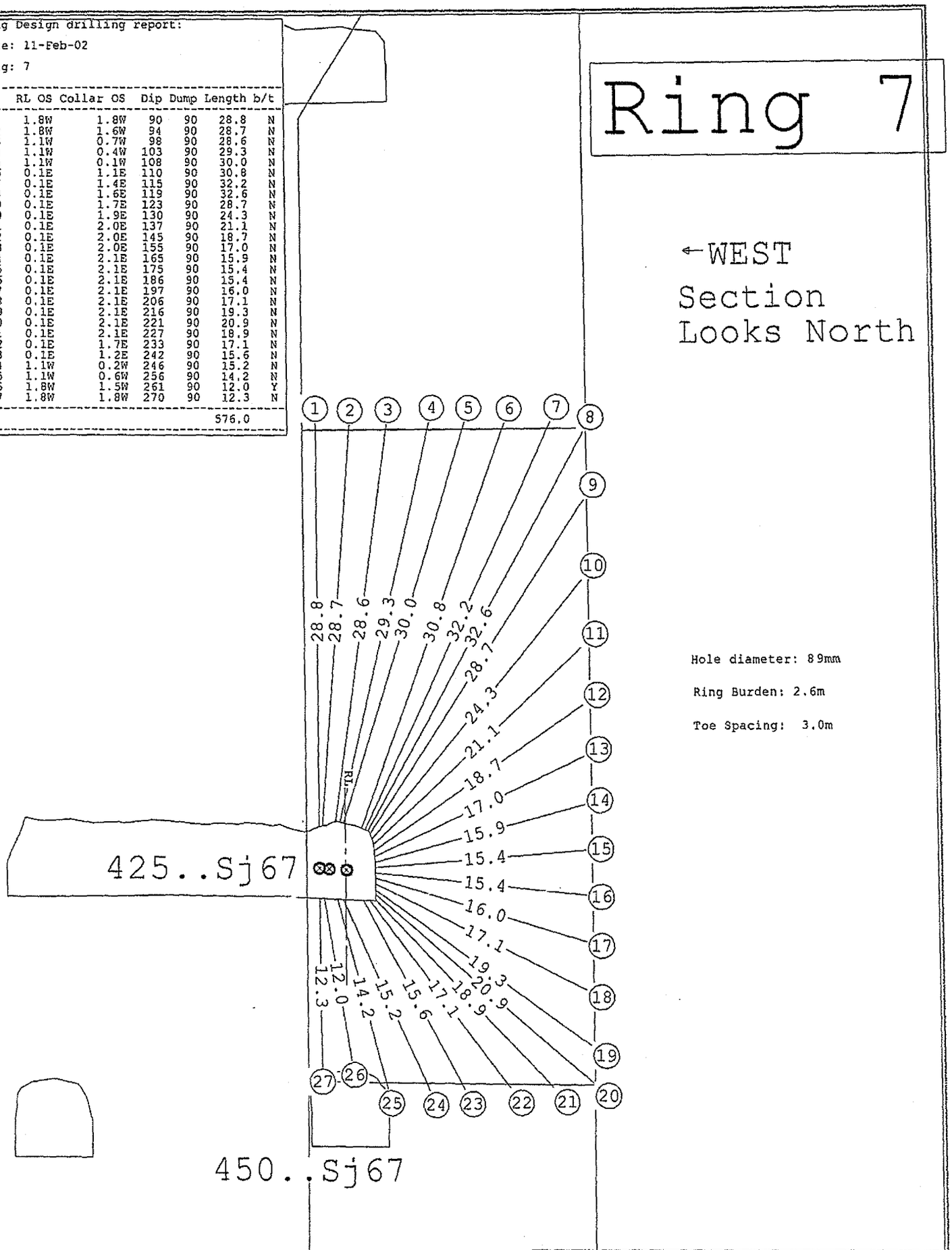
No.	RL OS Collar	OS	Dip	Dump	Length	b/t
1	1.8W	1.8W	90	90	28.8	N
2	1.8W	1.6W	94	90	28.7	N
3	1.1W	0.7W	98	90	28.6	N
4	1.1W	0.4W	103	90	29.3	N
5	1.1W	0.1W	108	90	30.0	N
6	0.1E	1.1E	110	90	30.8	N
7	0.1E	1.4E	115	90	32.2	N
8	0.1E	1.6E	119	90	32.6	N
9	0.1E	1.7E	123	90	28.7	N
10	0.1E	1.9E	130	90	24.3	N
11	0.1E	2.0E	137	90	21.1	N
12	0.1E	2.0E	145	90	18.7	N
13	0.1E	2.0E	155	90	17.0	N
14	0.1E	2.1E	165	90	15.9	N
15	0.1E	2.1E	175	90	15.4	N
16	0.1E	2.1E	186	90	15.4	N
17	0.1E	2.1E	197	90	16.0	N
18	0.1E	2.1E	206	90	17.1	N
19	0.1E	2.1E	216	90	19.3	N
20	0.1E	2.1E	221	90	20.9	N
21	0.1E	2.1E	227	90	18.9	N
22	0.1E	1.7E	233	90	17.1	N
23	0.1E	1.2E	242	90	15.6	N
24	1.1W	0.2W	246	90	15.2	N
25	1.1W	0.6W	256	90	14.2	N
26	1.8W	1.5W	261	90	12.0	Y
27	1.8W	1.8W	270	90	12.3	N
					576.0	

Ring 7

←WEST

Section

Looks North



Hole diameter: 89mm

Ring Burden: 2.6m

Toe Spacing: 3.0m

Ensure all down holes are bagged off

	Signed	Date
Designed	N.J.	
Reviewed	Matt	11/2/02
Geology		
Geotech		13/2/02
Supt		
Approved		13/2/02
Survey		

BHP CANNINGTON

47..63 HL

Ring 7, 425 mLv

Looking North

Scale: 1:250 | Date:11-Feb-02

todeletg.pf

SURPAC2000 - SURPAC Software International

Ring Design drilling report:

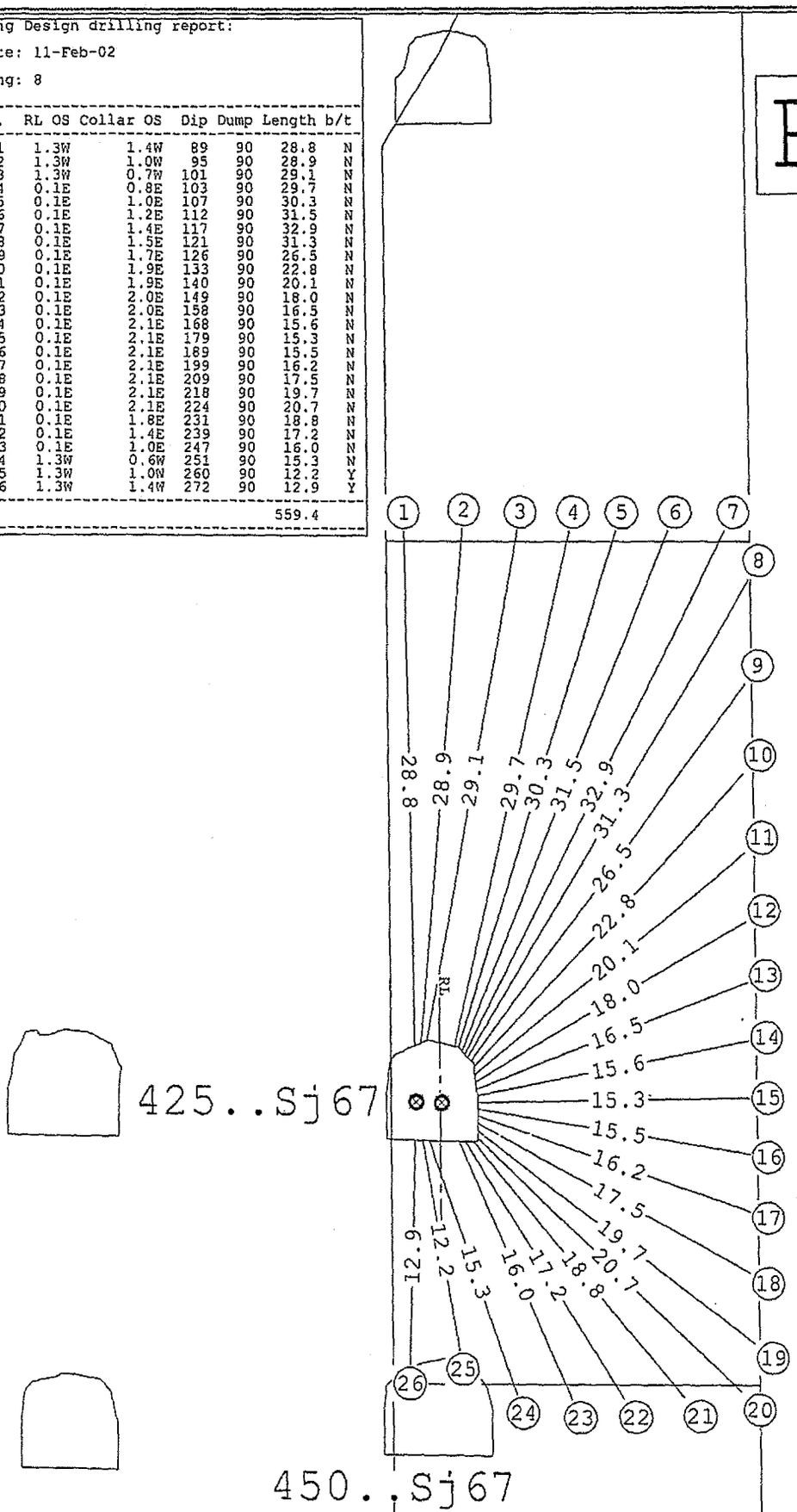
Date: 11-Feb-02

Ring: 8

No.	RL OS Collar	OS	Dip	Dump	Length	b/t
1	1.3W	1.4W	89	90	28.8	N
2	1.3W	1.0W	95	90	28.9	N
3	1.3W	0.7W	101	90	29.1	N
4	0.1E	0.8E	103	90	29.7	N
5	0.1E	1.0E	107	90	30.3	N
6	0.1E	1.2E	112	90	31.5	N
7	0.1E	1.4E	117	90	32.9	N
8	0.1E	1.5E	121	90	31.3	N
9	0.1E	1.7E	126	90	26.5	N
10	0.1E	1.9E	133	90	22.8	N
11	0.1E	1.9E	140	90	20.1	N
12	0.1E	2.0E	149	90	18.0	N
13	0.1E	2.0E	158	90	16.5	N
14	0.1E	2.1E	168	90	15.6	N
15	0.1E	2.1E	179	90	15.3	N
16	0.1E	2.1E	189	90	15.5	N
17	0.1E	2.1E	199	90	16.2	N
18	0.1E	2.1E	209	90	17.5	N
19	0.1E	2.1E	218	90	19.7	N
20	0.1E	2.1E	224	90	20.7	N
21	0.1E	1.8E	231	90	18.8	N
22	0.1E	1.4E	239	90	17.2	N
23	0.1E	1.0E	247	90	16.0	N
24	1.3W	0.6W	251	90	15.3	N
25	1.3W	1.0W	260	90	12.2	Y
26	1.3W	1.4W	272	90	12.9	Y
					559.4	

Ring 8

←WEST
Section
Looks North



Hole diameter: 89mm

Ring Burden: 2.6m

Toe Spacing: 3.0m

Ensure all down holes are bagged off

	Signed	Date
Designed	N.J.	
Reviewed		11/02/02
Geology		
Geotech		13/2/02
Supt		
Approved		15/2/02
Survey		

BHP CANNINGTON

47..63 HL
Ring 8, 425 mLv
Looking North

Scale: 1:250 | Date:11-Feb-02

todeleth.pf

SURPAC2000 - SURPAC Software International

Ring Design drilling report:

Date: 11-Feb-02

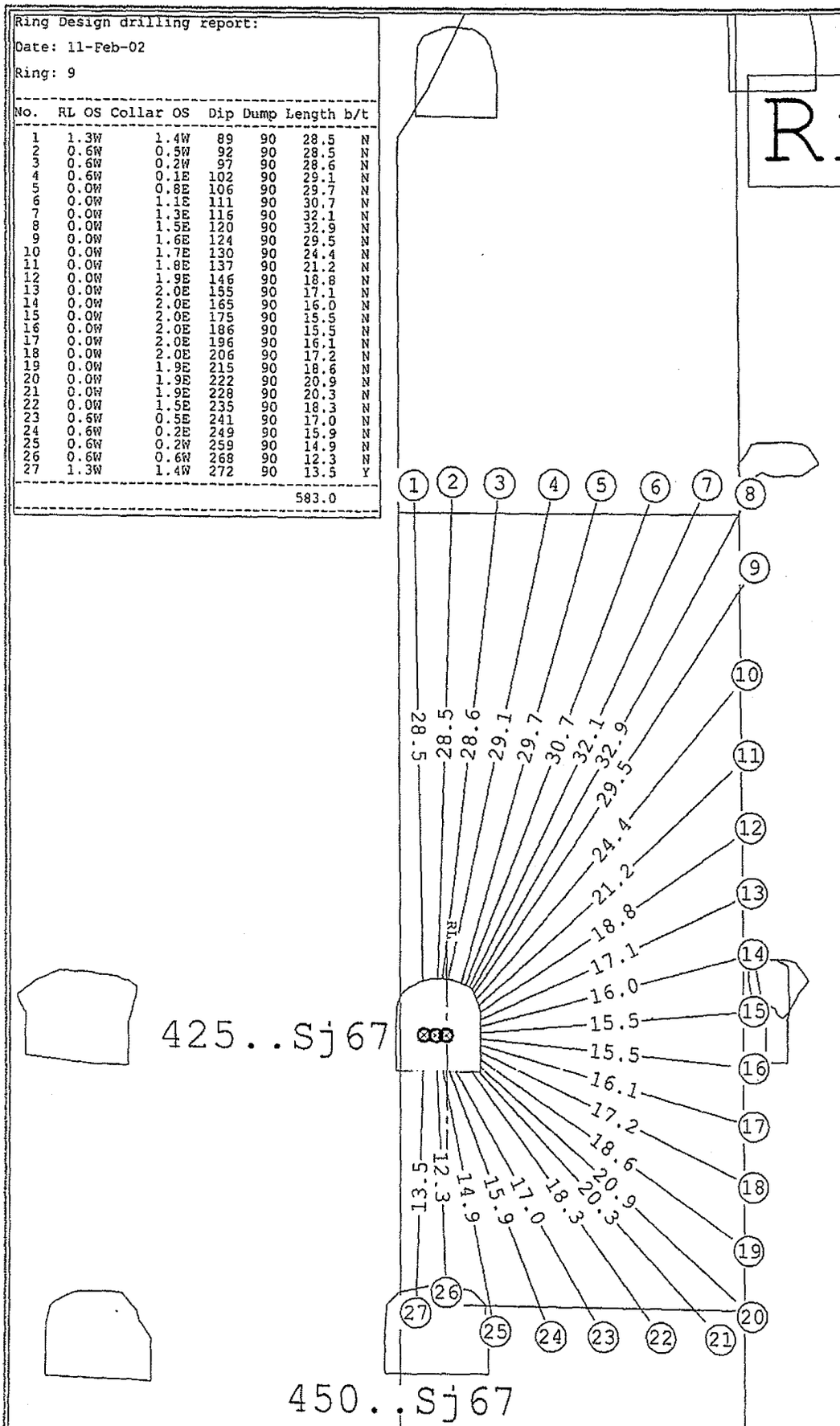
Ring: 9

No.	RL OS Collar	OS	Dip	Dump	Length	b/t
1	1.3W	1.4W	89	90	28.5	N
2	0.6W	0.5W	92	90	28.5	N
3	0.6W	0.2W	97	90	28.6	N
4	0.6W	0.1E	102	90	29.1	N
5	0.0W	0.8E	106	90	29.7	N
6	0.0W	1.1E	111	90	30.7	N
7	0.0W	1.3E	116	90	32.1	N
8	0.0W	1.5E	120	90	32.9	N
9	0.0W	1.6E	124	90	29.5	N
10	0.0W	1.7E	130	90	24.4	N
11	0.0W	1.8E	137	90	21.2	N
12	0.0W	1.9E	146	90	18.8	N
13	0.0W	2.0E	155	90	17.1	N
14	0.0W	2.0E	165	90	16.0	N
15	0.0W	2.0E	175	90	15.5	N
16	0.0W	2.0E	186	90	15.5	N
17	0.0W	2.0E	196	90	16.1	N
18	0.0W	2.0E	206	90	17.2	N
19	0.0W	1.9E	215	90	18.6	N
20	0.0W	1.9E	222	90	20.9	N
21	0.0W	1.9E	228	90	20.3	N
22	0.0W	1.5E	235	90	18.3	N
23	0.6W	0.5E	241	90	17.0	N
24	0.6W	0.2E	249	90	15.9	N
25	0.6W	0.2W	259	90	14.9	N
26	0.6W	0.6W	268	90	12.3	N
27	1.3W	1.4W	272	90	13.5	Y
					583.0	

Ring 9

←WEST

Section
Looks North



Hole diameter: 89mm

Ring Burden: 2.6m

Toe Spacing: 3.0m

Ensure all down holes are bagged off

	Signed	Date
Designed	N.J.	
Reviewed		11/2/02
Geology		
Geotech		13/2/02
Supt		
Approved		25/2/02
Survey		

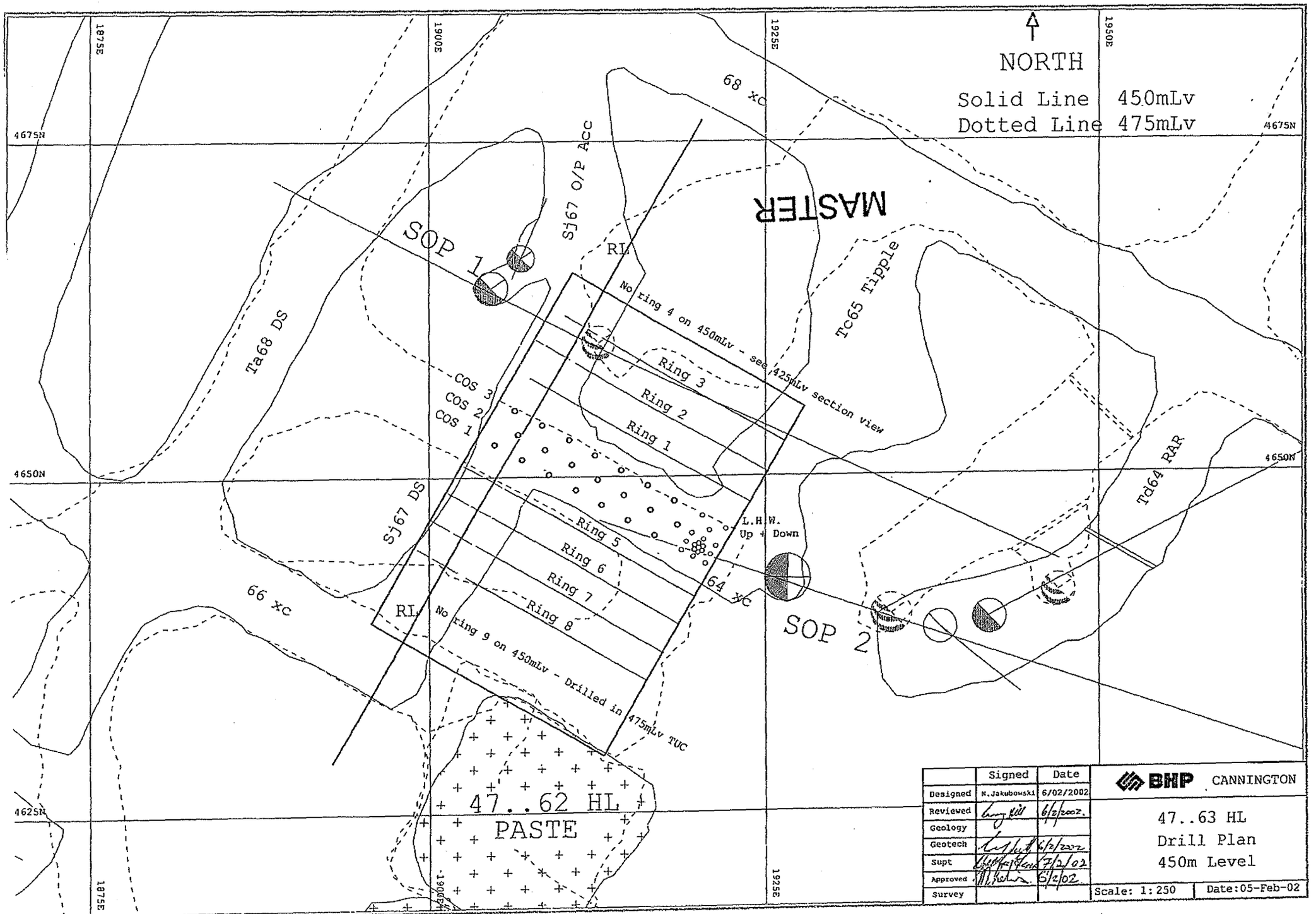
BHP CANNINGTON

47..63 HL
Ring 9, 425 mLv
Looking North

Scale: 1:250 | Date:11-Feb-02

todeleti.pf

SURPAC2000 - SURPAC Software International



	Signed	Date
Designed	N.Jakubowski	6/02/2002
Reviewed		6/2/2002.
Geology		
Geotech		6/2/2002
Supt		7/2/02
Approved		6/2/02
Survey		

BHP CANNINGTON

47..63 HL
Drill Plan
450m Level

Scale: 1:250 | Date:05-Feb-02

Ring Design drilling report:

Date: 06-Feb-02

Ring: 5

No.	RL OS Collar	OS	Dip	Dump	Length	b/t
1	0.7E	2.7E	172	90	14.8	N
2	0.7E	2.7E	183	90	14.7	N
3	0.7E	2.7E	194	90	15.1	N
4	0.7E	2.7E	204	90	16.1	N
5	0.7E	2.7E	213	90	17.5	N
6	0.7E	2.7E	222	90	19.6	N
7	0.7E	2.5E	229	90	22.6	N
8	0.7E	2.2E	234	90	21.9	N
9	0.7E	1.9E	240	90	20.9	N
10	0.7E	1.6E	246	90	22.7	N
11	0.7E	1.4E	253	90	23.5	N
12	0.7E	1.1E	260	90	22.8	N
13	0.7E	0.8E	266	90	22.1	N
14	0.6W	0.5W	270	90	22.1	N
15	0.6W	0.7W	275	90	22.2	N
					298.8	

400..Tc65

Ring 5

←WEST

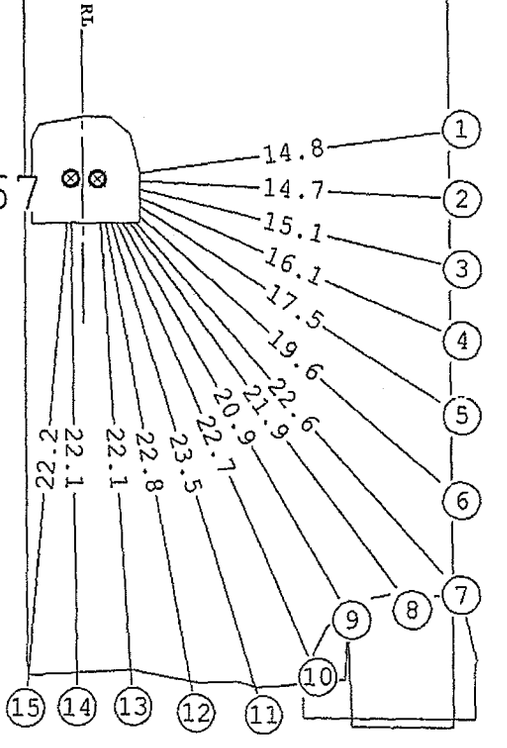
Section

Looks North

MASTER

425..Sj67

450..Sj67



Hole diameter: 89mm

Ring Burden: 2.6m

Toe Spacing: 3.1m

475..Ta64

Ensure all down holes are bagged off

	Signed	Date
Designed	N.J.	
Reviewed		6/2/2002
Geology		
Geotech		6/2/2002
Supt		7/2/02
Approved		6/2/02
Survey		

BHP CANNINGTON

47..63 HL

Ring 5, 450 mLv

Looking North

Scale: 1:250 Date: 06-Feb-02

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SURPAC2000 - SURPAC Software International

Ring Design drilling report:

Date: 05-Feb-02

Ring: 6

No.	RL	OS Collar	OS	Dip	Dump	Length	b/t
1	1.1E	3.1E	176	90	14.4	N
2	1.1E	3.1E	186	90	14.4	N
3	1.1E	3.1E	194	90	14.6	N
4	1.1E	3.1E	204	90	15.7	N
5	1.1E	3.1E	214	90	17.3	N
6	1.1E	3.1E	223	90	19.6	N
7	1.1E	2.7E	231	90	23.2	N
8	1.1E	2.4E	237	90	21.0	Y
9	1.1E	2.1E	242	90	20.5	N
10	1.1E	1.8E	249	90	19.3	N
11	1.1E	1.5E	258	90	17.7	N
12	1.1E	1.2E	266	90	16.8	N
13	0.6W	0.5W	268	90	16.8	N
14	0.6W	0.8W	276	90	16.5	N
					247.8	

400..Tc65

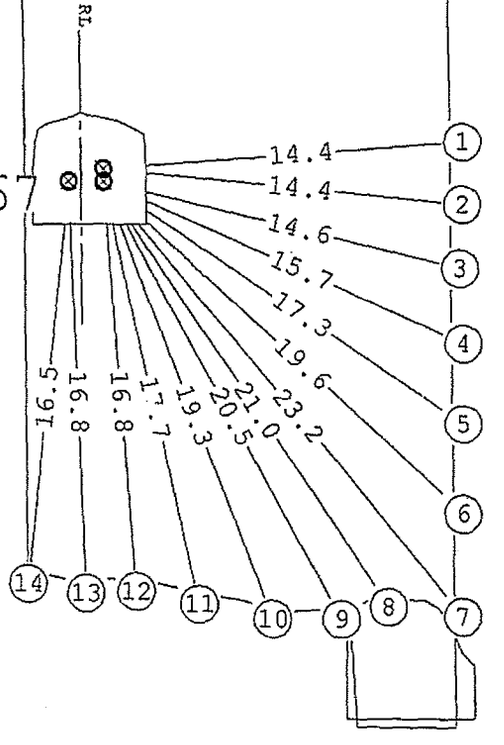
Ring 6

MASTER

←WEST
Section
Looks North

425..Sj67

450..Sj67



Hole diameter: 89mm

Ring Burden: 2.6m

Toe Spacing: 3.1m

475..Ta64

Ensure all down holes are bagged off

	Signed	Date
Designed	N.J	
Reviewed		6/2/2002
Geology		
Geotech		6/2/2002
Supt		7/2/02
Approved		6/2/02
Survey		

BHP CANNINGTON

47..63 HL
Ring 6, 450 mLv
Looking North

Scale: 1:250 | Date:06-Feb-02

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SURPAC2000 - SURPAC Software International

Ring Design drilling report:

Date: 06-Feb-02

Ring: 7

No.	RL OS Collar	OS	Dip	Dump	Length	b/t
1	0.9E	2.9E	176	90	14.5	N
2	0.9E	2.9E	186	90	14.6	N
3	0.9E	2.9E	197	90	15.1	N
4	0.9E	2.9E	206	90	16.1	N
5	0.9E	2.9E	214	90	17.4	N
6	0.9E	2.9E	219	90	18.7	N
7	0.9E	2.9E	226	90	20.5	N
8	0.9E	2.5E	233	90	18.3	N
9	0.9E	2.1E	241	90	16.7	N
10	0.9E	1.6E	251	90	14.6	N
11	0.9E	1.2E	261	90	13.4	N
12	0.7W	0.6W	266	90	12.7	N
13	0.7W	1.0W	278	90	12.1	N
					204.6	

Ring 7

MASTER

←WEST
Section
Looks North

425..Sj67

450..Sj67

RL

14.5 (1)
14.6 (2)
15.1 (3)
16.1 (4)
17.4 (5)
18.7 (6)
20.5 (7)
18.3 (8)
16.7 (9)
14.6 (10)
13.4 (11)
12.7 (12)
12.1 (13)

T.U.C.

475..Ta64

Hole diameter: 89mm

Ring Burden: 2.6m

Toe Spacing: 3.1m

Ensure all down holes are bagged off

	Signed	Date
Designed	N.J.	
Reviewed		6/2/2002
Geology		
Geotech		6/2/2002
Supt		7/2/02
Approved		6/2/02
Survey		

BHP CANNINGTON

47..63 HL
Ring 7, 450 mLv
Looking North

Scale: 1:250 | Date:06-Feb-02

Ring Design drilling report:

Date: 06-Feb-02

Ring: 8

No.	RL OS Collar	OS	Dip	Dump	Length	b/t
1	0.8E	2.8E	175	90	14.7	N
2	0.8E	2.8E	185	90	14.6	N
3	0.8E	2.8E	196	90	15.1	N
4	0.8E	2.8E	205	90	16.1	N
5	0.8E	2.8E	214	90	17.7	N
6	0.8E	2.8E	222	90	15.2	N
7	0.8E	2.8E	232	90	11.7	N
8	0.8E	2.1E	244	90	9.6	N
9	0.8E	1.4E	257	90	7.8	N
10	0.8E	0.7E	273	90	7.4	N
11	1.1W	1.5W	278	90	7.3	N
					137.4	

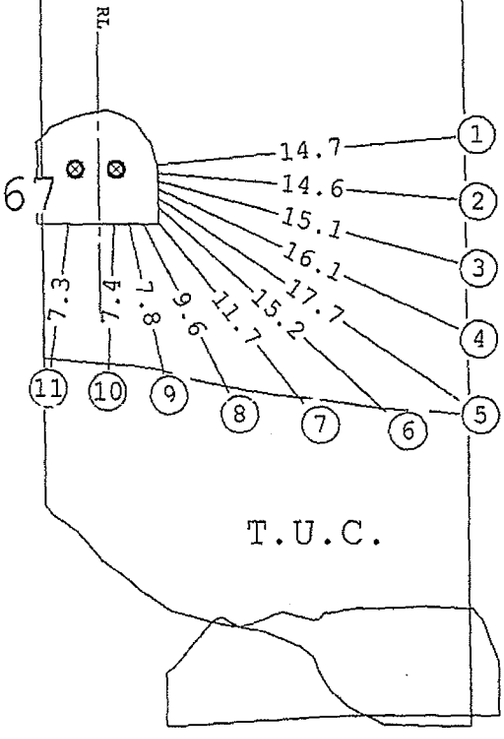
Ring 8

←WEST
Section
Looks North

MASTER

425..Sj67

450..Sj67



T.U.C.

475..Ta64

Hole diameter: 89mm

Ring Burden: 2.6m

Toe Spacing: 3.1m

Ensure all down holes are bagged off

	Signed	Date
Designed	N.J.	
Reviewed		6/2/2002
Geology		
Geotech		6/2/2002
Supt		7/2/02
Approved		6/2/02
Survey		

BHP CANNINGTON

47..63 HL
Ring 8, 450 mLv
Looking North

Scale: 1:250 | Date:06-Feb-02