

BLAST MONITORING REPORT

HM8 Hard stone quarry at Wied iz-Ziju, I/o Żejtun

12th January 2011

Details

Date	12-01-2011
Quarry number	HM8 – Hard stone Quarry at Wied iz-Ziju, I/o Żejtun
Quarry operator	Saliba Bros. Ltd
ANFO Supplier	Framegrip Ltd.
Police escort	PC 87 – G Galea

Location and time of blasting

One blast was carried out at 10:37 at approximately the point as indicated on the attached site diagram.

Summary of blasting conditions

Max charge per delay: 50Kg

Recommended vibration limit: <8 mm/s at the nearest building.

Site Specific Permit

Holes were within quarry boundaries and within the permitted depths.

The maximum charge per delay was in the limits of permissible quantities.

Comments

Holes are at the top shelf of the quarry.

Notes

Seismograph was placed at the entrance of "Sqaq Wied il-Ghajn, Nru 1" as indicated on the attached site diagram.

Seismograph was set to trigger at 0.51 mm/s. Instrument used was a Minimate Plus s/n BE9488.

Readings

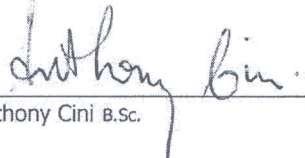
Blast number	1
Time	10:37
No. of holes	10
No. of delays	10
Depth of holes (m)	15
Max. Charge per delay (kg)	43
Total charge (kg)	425
Dist. from seismograph (m)	400
PPV (mm/s)	0.78
Frequency (Hz)	4.9
Air Overpressure (dB)	121.4
Scaled Distance (m kg^{-1/2})	61.0

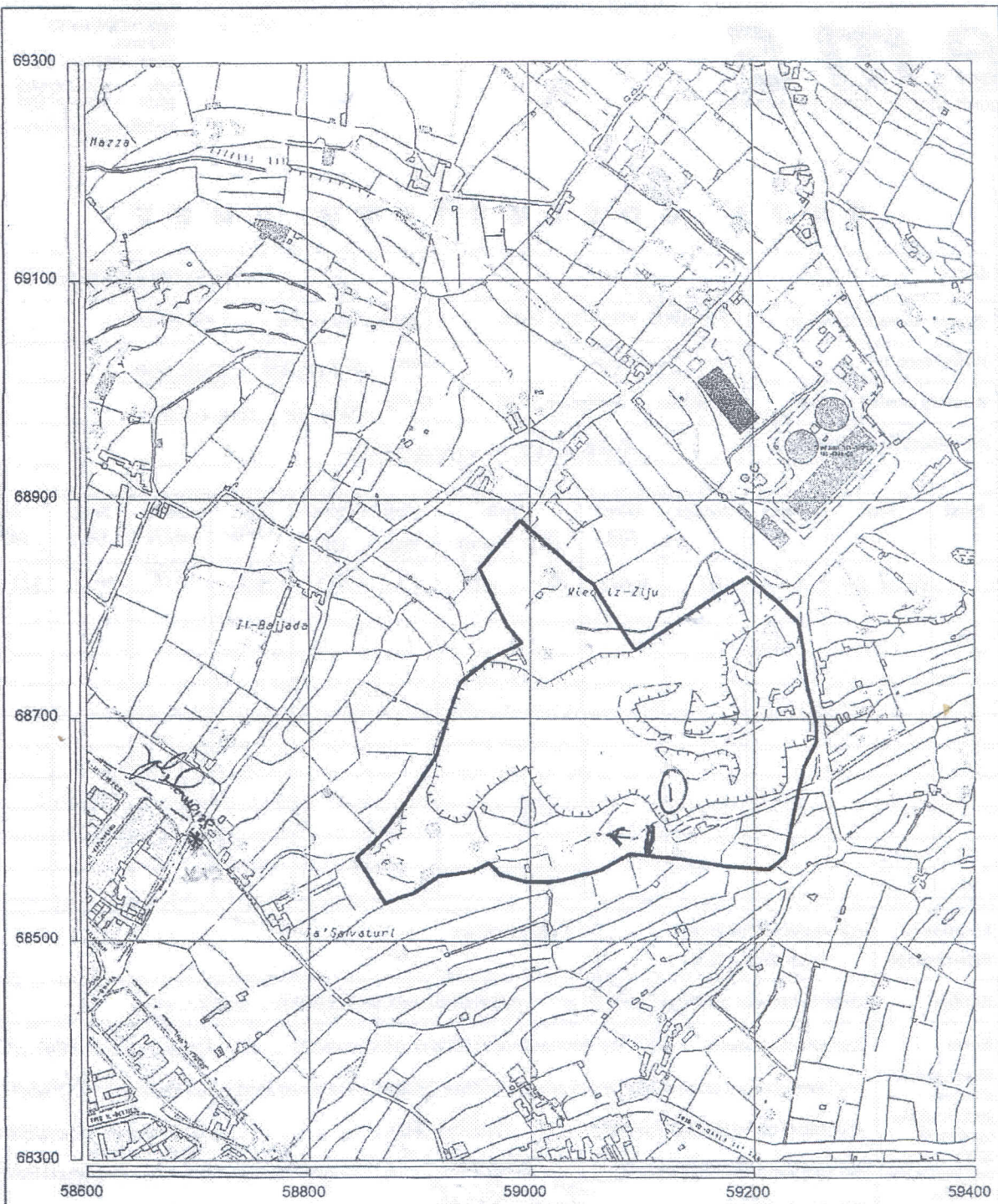
Burden is 2m and distance between holes is 2.5m.


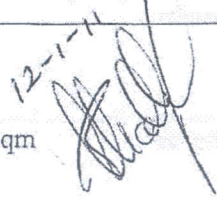
Weights in kilograms are rounded to the nearest unit, and depths in metres are rounded to the nearest ½ unit.

Observations:

No damaged was observed during a brief visual inspection of the surroundings of the quarry after the blast.


Anthony Cini B.Sc.



Malta Environment & Planning Authority hardstone (LC) Quarry Site Plan		St. Francis Ravelin Floriana PO Box 200, Valletta Tel:240976 Fax:224846	
Quarry No. :- HM 8	Location :- Wied Iz-Ziju, Zejtun		
Scale :- 1:5000	Permitted Quarry Area :- 82690.96 sqm Permitted Quarry Depth :- 15 m amsl		
Part of Survey Sheet(s): 5868 5869		Date :- 6/5/03	

D A T A C O L L E C T I O N S H E E T

Date:	12-1-11	MIC for HM08 is: 50Kg
Quarry Name & Number:	HM08 - Wied iz-Ziju, Zejtun	Quarry Operator: Saliba Bros Ltd.
Police Escort:	No: PC 37	Name: GEORGE GALEA
Blasting carried out by:	Company: FrameGrip Ltd.	Name: MARIO CALLEJA
Seismograph readings by:	RAPHAEL MICALEF	

Blast	Time	Holes	Delays	Dist. (m)	Depth		Total charge		Max. Chrg.	PPV mm/s	Freq. (Hz)	Air (dB)
					(ft)	(m)	Bags	(kg)				
1	10:37.22	10	10	400	50	15	17	325	43	0.78	4.9	121.4
2												
3												
4												
5												
6												
7												
8												
9												
10												
11												

Location of Seismograph	<input checked="" type="checkbox"/> At the beginning of 'Sqaq Wied il-Ghajj' <input type="checkbox"/> Other location: _____
Burden	Distance between boreholes: 2.5 m Distance from rock face (burden): 2 m
Notes	Any horizontal holes? <u>No</u> Any blast made up of holes of different-depth? <u>No</u> Why? <u>✓</u> Any blasts grouped together and detonated using multiple (almost simultaneous) short-circuit exploders? <u>No</u> Why? <u>✓</u> Any visitors before/during/after blast? <u>Nobody</u> (note names and organizations) Any complaints from neighbours? <u>None</u> (note names, number of persons/households?) Note levels of holes: <u>Top Shelf</u> Flyrock observation: <u>None Outside</u> Any damage to quarry surroundings? <u>None Observed</u>
Further Comments	

(use overleaf if more space is required)

Signatures

Police escort

f/ Quarry operator

f/ ems

Date/Time Tran at 10:37:22 January 12, 2011
 Trigger Source Geo: 0.500 mm/s
 Range Geo :31.7 mm/s
 Record Time 2.0 sec at 4096 sps

Serial Number BE9488 V 8.01-8.0 MiniMate Plus
 Battery Level 6.1 Volts
 Calibration September 9, 2010 by Datum Monitoring
 File Name K488DL2D.IAO

Notes
 Location: Quarry Blasting
 Client:
 User Name: ems
 General:

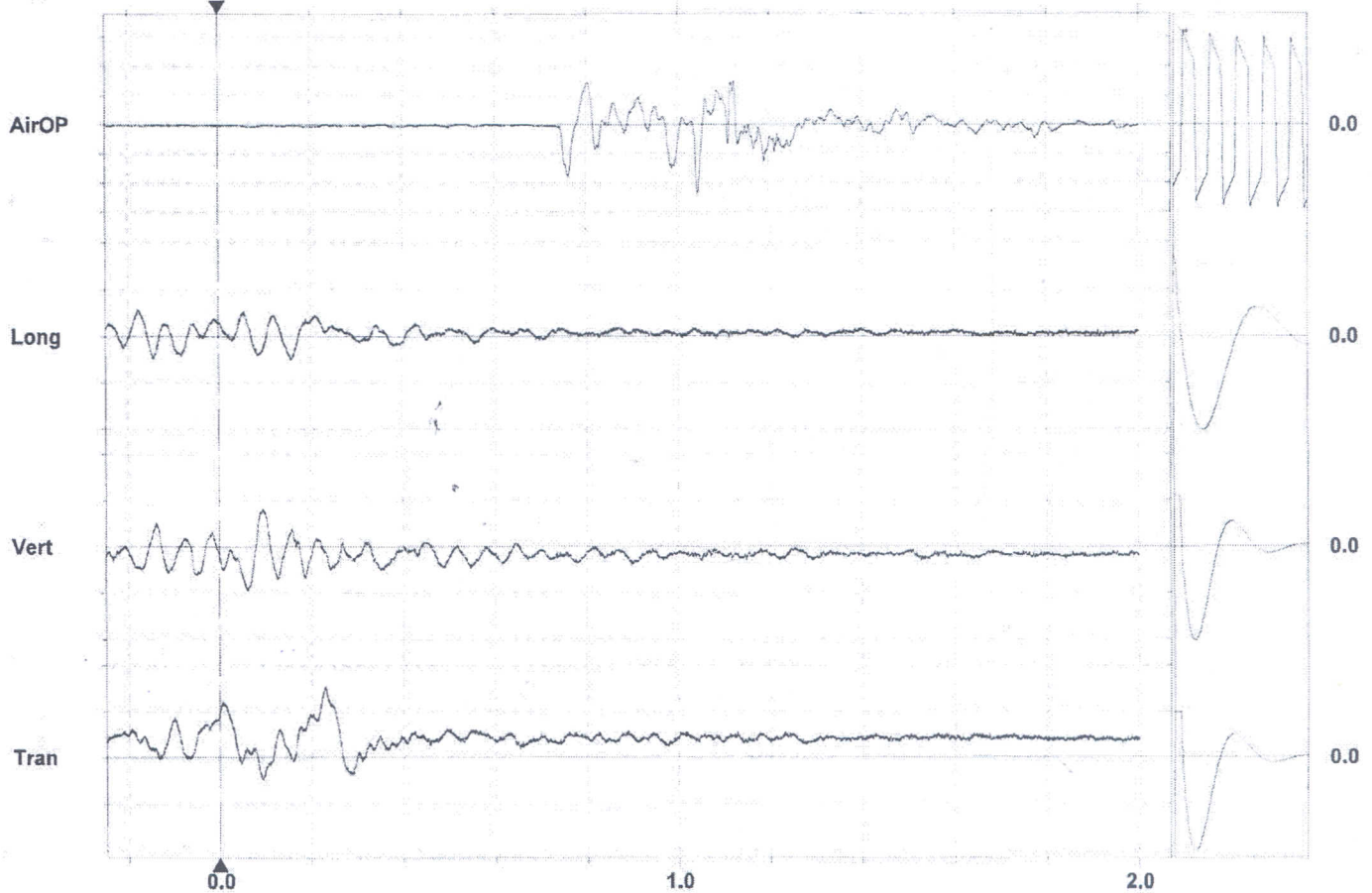
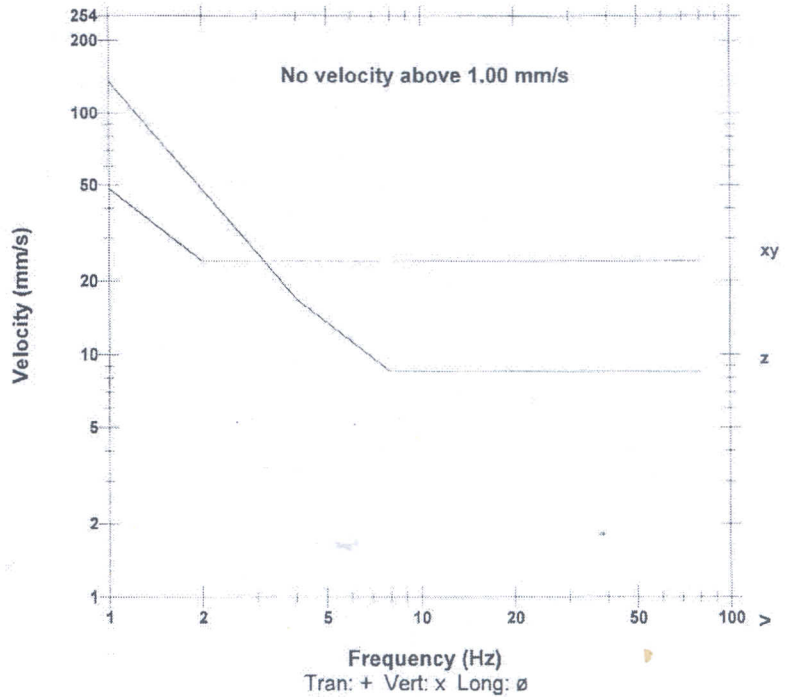
Post Event Notes

Microphone Linear Weighting
 PSPL 121.4 dB(L) at 1.043 sec
 ZC.Freq 24.7 Hz
 Channel Test Passed (Freq = 20.1 Hz Amp = 657 mv)

	Tran	Vert	Long	
PPV	0.778	0.476	0.302	mm/s
ZC Freq	4.9	9.1	13.1	Hz
Time (Rel. to Trig)	0.231	0.062	-0.179	sec
Peak Acceleration	0.0265	0.0199	0.0199	g
Peak Displacement	0.0221	0.0100	0.00576	mm
Sensorcheck	Passed	Passed	Check	
Frequency	7.1	7.5	4.9	Hz
Overswing Ratio	4.1	3.8	3.3	

Peak Vector Sum 0.783 mm/s at 0.231 sec

BS 6472:1992 CURVE 60



Time Scale: 0.20 sec/div Amplitude Scale: Geo: 0.500 mm/s/div Mic: 10.00 pa.(L)/div
 Trigger =

Sensorcheck