

SAN RAFAEL ROCK QUARRY VIBRATION REPORT

BLAST INFORMATION:

Location: RB8 Max. Charge Weight: 520 Date of Blast: 4.29.21
 Northing: 37° 59' 10 N Time of Blast: 11:20
 Easting: 122° 27' 16 W Blast Duration: 394 ms Blast Number: 1718

SEISMOGRAPH INFORMATION:

	UNIT #1	UNIT #2	UNIT #3	UNIT #4	UNIT #5
Seismograph Model	SSG 8000	MICRO	MICRO	MICRO	
Serial Number	2481	4550	4567	4576	
Last Calibration Date	3 24 21	3 25 21	3 25 21	3 25 21	

LOCATION INFORMATION:

Location	San Marcos	Via Mont	M Near Park
Northing	37° 59' 31 N	37° 59' 18 N	37° 59' 30 N
Easting	122° 27' 22 W	122° 27' 53 W	122° 27' 16 W
Distance from Blast	1056	7428	1953
Scaled Distance	46	106	85

VIBRATION INFORMATION:

Longitudinal Peak Particle Velocity (ips)	.09	.07	.11	
Longitudinal Peak Frequency (Hz)	19.2	18.5	17.8	
Transverse Peak Particle Velocity (ips)	.11	.04	.07	
Transverse Peak Frequency (Hz)	18.5	13.8	20.8	
Vertical Peak Particle Velocity (ips)	.08	.05	.06	
Vertical Peak Frequency (Hz)	18.5	17.2	23.8	
Peak Vector Sum (ips)	.12	.08	.12	
Peak Air Overpressure (db)	116	106	106	

GENERAL COMMENTS:

Seismograph Operator: Iron Lopez

Signature: [Signature]

SAN RAFAEL ROCK QUARRY BLAST REPORT

BASE DATA:

Location: PB. 8 Designed Bench Height (ft): 4/5 Date: 4.29.21
Northing: 37° 59' 10 N Rock Density (tyd³): 2.23 Time: 11:30
Easting: 122° 27' 16 W Relative Rock Hardness: 7 Blast Number: 1718

DESIGN DATA:

Number of Holes Shot: 19 Hole Dia. (in.): 6 1/2 Stemming (ft): 18 Loading Time Required (man hrs): 5 Deck Type: -
Ave. Hole Depth (ft): 48 Burden (ft): 15 Stem Type: 3/8 Stems Staggered Pattern (y or n): N Length (ft): -
Relative Confinement: - Spacing (ft): 16 Subdrill (ft): 3 Number of Lost Holes: 6 Tons Shot: 16948

EXPLOSIVES DATA:

Bulk Explosive	Weight	Boosters	Units	Delays	Units	Misc.	Units	Max (lb/hole):	Blast Duration (sec):
Titan 1000	9540	450 grams	38	80' 2-dot	19			520	394 MS
				50' 2-dot	19				
				40 MS	7				

Total Charge Wt.: 9578

VIBRATION DATA:

Nearest Structure: Marin Ag Seismograph Loc.: Sam Temperature: 72° Max. Chrg. (lb/8ms): 520
Northing: 37° 59' 19 N Northing: - Sky Condition: Clear RPPV: .12
Easting: 122° 27' 20 W Easting: - Wind Direction: South Frequency: 19.2
Distance Away: 1056 Distance Away: - Wind Speed: 6 mph Airblast: 116

PERFORMANCE DATA:

Powder Factor (lb/ton): .5 Displacement: good Crushability: _____
Lb/tyd³: 1.3 Vibration: good Fines: _____
Fragmentation: good Dig ability: _____
Comments: 6 lost holes were part of pre shot ramp. Blaster in Charge: [Signature]