PROPOSED BLASTING PLAN LOG

Project: Hyak to Snowshed I90 Date: 6-25-10

Company: Western States Drilling + Blasting Shot No. WSW 03

Location of Blast: 1337+50 to 1336+54 Production Blast

Rock Type: Granite/Basalt (Tuff)

Time of Blast - Planned or Actual: 8pm

Date of Blast - Planned or Actual: 6-28-10

Name of Blaster: Charley Murphy License Number: U21262

Direction: W Distance: >1000' ft from Forest Service Cabin

No. of Holes: 133 Burden: 6' ft. Spacing: 6' ft. Depth: 6'-22' Diameter: 3"

No. of Rows: 17 Bench Height: 24' ft. Yield: Aprox: 2,800 yd³ Subdrilling: 2' ft.

Types and Height of Stemming: 4'-6' Stemming 5/8" crushed stone ft.

Types of Explosives: 2½x16 Magnafac 3220 lbs. Primer: — — lbs.

— — lbs. — — lbs.

Maximum Weight of Explosive Detonated Within Any 8ft. Delay period: 55 lbs.

Hole to Hole Delay: 25ms 4.1ms ft.
Row to Row Delay: 84ms 14ms ft.

Total Weight of Explosives, Including Primers, this Blast: 3220 lbs.

Estimated Powder Factor or Explosives Ratio: 1.14 lbs/~~cuft~~ yd³
— lbs/Ton

Method of Firing: Shot Shell Primer / Non Electric

No. of Timer Circuits: — Timer Interval: — lbs.

Type of delay detonator used: Hanidets 25/500ms Time Interval: 25ms/ 84ms ~~ft/s~~

RESULTS: Aprox: 56 yds³ Removed from Shot 02R1 to Allow safe access
Hole location is the same as proposed plan 02.
lightly shaded area on plan view is were shot 02R1 was

Submitted by: [signature]

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Resubmission of Blast
Originally Submitted for 6-22-10

PROPOSED BLASTING PLAN LOG

Project: Hyak to Snowshed I90 Date: 6-22-10

Company: Western States Drilling & Blasting Shot No. WSW 02

Location of Blast: 1337+50 to 1336+54 Production

Rock Type: Basalt

Time of Blast - Planned or Actual: 19:30

Date of Blast - Planned or Actual: 6-23-10

Name of Blaster: Charley Murphy License Number: U21262

Direction: W Distance: >1000' ft from Forest Service Cabin

No. of Holes: 133 Burden: 6' ft. Spacing: 6' ft. Depth: 6'-22' Diameter: 3"

No. of Rows: 17 Bench Height: ____ ft. Yield: 2,862 Subdrilling: 2' ft.

Types and Height of Stemming: 4'-6' 2152 LF Drill ft.

Types of Explosives: 2.5x16 3290 lbs. Primer: — — lbs.

— — lbs. — — lbs.

Maximum Weight of Explosive Detonated Within Any 8ft. Delay period: 55 lbs.

Hole to Hole Delay: 25 ms 4.1 ms ft.
Row to Row Delay: 84 ms 14 ms ft.

Total Weight of Explosives, Including Primers, this Blast: Approx. 3290 lbs.

Estimated Powder Factor or Explosives Ratio: 1.15 lbs/cuft
— lbs/Ton

Method of Firing: Shot Shell Primer / Non Electric

No. of Timer Circuits: — Timer Interval: — lbs.

Type of delay detonator used: Nonel detonators 25/500 ms Time Interval: 25ms / 84ms ~~ft/s~~

RESULTS:

Submitted by: [signature]

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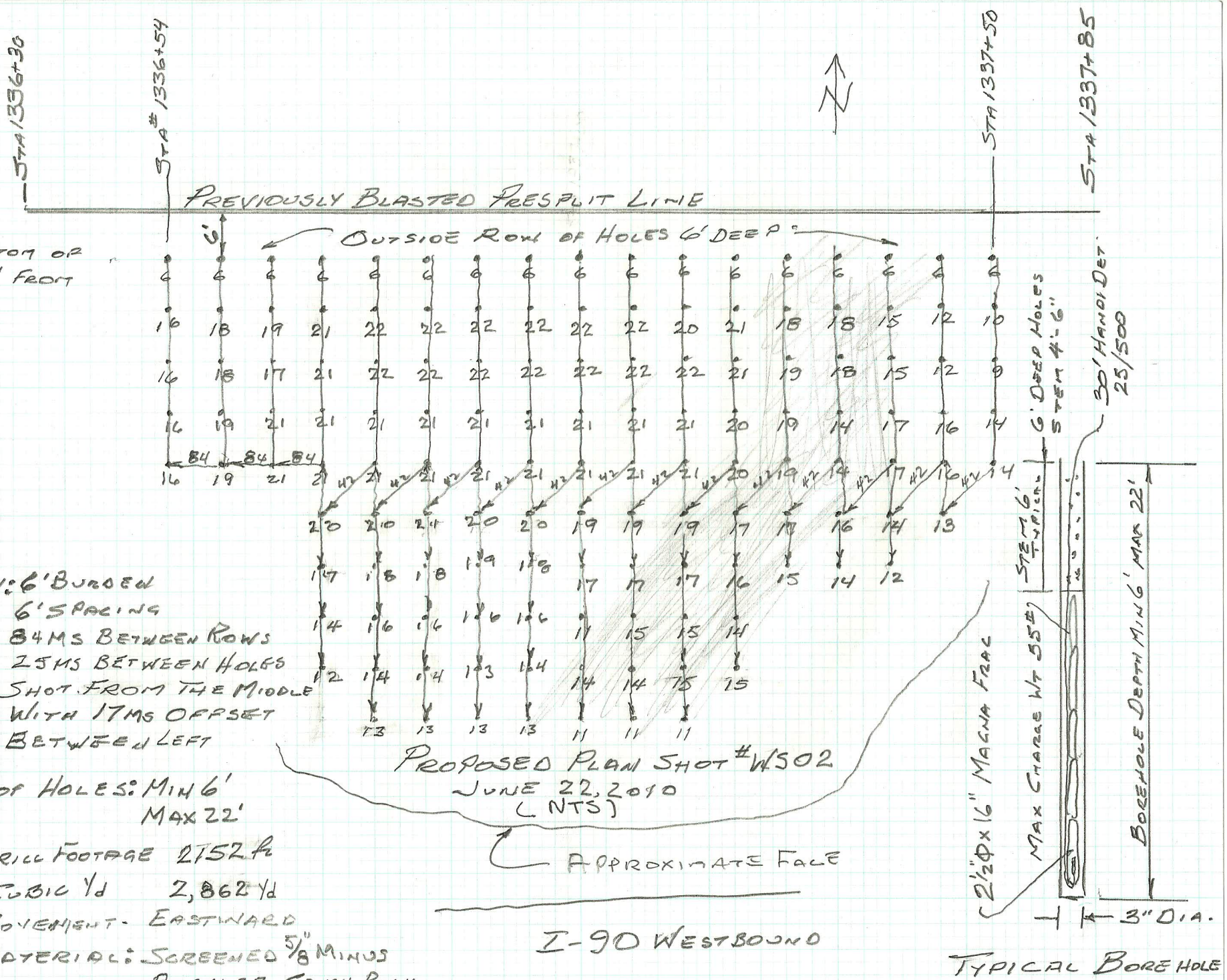

NOTE: BOTTOM OF CHARGE 4½' FROM

PATTERN: 6' BURDEN
6' SPACING

TIMING: 84MS BETWEEN ROWS
25MS BETWEEN HOLES
SHOT FROM THE MIDDLE
WITH 17MS OFFSET
BETWEEN LEFT

DEPTH OF HOLES: MIN 6'
MAX 22'

TOTAL DRILL FOOTAGE 2152 ft

TOTAL CUBIC Yd 2,862 Yd

ROCK MOVEMENT - EASTWARD

STEM MATERIAL: SCREENED 5/8" MINUS ANGULAR CRUSH ROCK

MAX #/DELAY: 55#

TOTAL CHARGE WT 3290#

POWDER FACTOR 1.15#/Yd³