PROPOSED BLASTING PLAN

Hyak Wa. I 90

Company WESTERN STATES Date SEPT 25 Shot # SN1A

Location of Blast 1343 +00 — 1343+40

Date of Blast Planned SEPT 28 Time of Blast 6:00 Rock Type LAPILLI TUFF

Name of Blaster CHARLES MURPHY License Number UP 21262

Direction NORTH Distance ~150' Feet From I-90 WEST BOUND

# of Pre-Split Holes 0 Spacing ____ Depth ____ Slope ____ Charge WT ____ LF Drilled ____

Holes 99 Burden 4 ft Spacing 5 ft Depth 12 Diameter 2 1/2 Stemming 6

Holes ____ Burden ____ ft Spacing ____ ft Depth ____ Diameter ____ Stemming ____

Holes ____ Burden ____ ft Spacing ____ ft Depth ____ Diameter ____ Stemming ____

Rows ____ Bench Height ____ ft Yield ____ cu/yds Subdrilling ____

Type Stemming CRUSHED STONE Max Weight of Explosives per Delay 11#

Explosives Type and Estimated Quantity's

Anfo 990# lbs Primer's 3/4 lbs/ea Pre-Split Powder — lbs

Stick Powder Type — Amount — lbs

Stick Powder Type — Amount — lbs

Stick Powder Type — Amount — lbs

Hole to Hole Delay ____ MS Row to Row Delay ____ MS

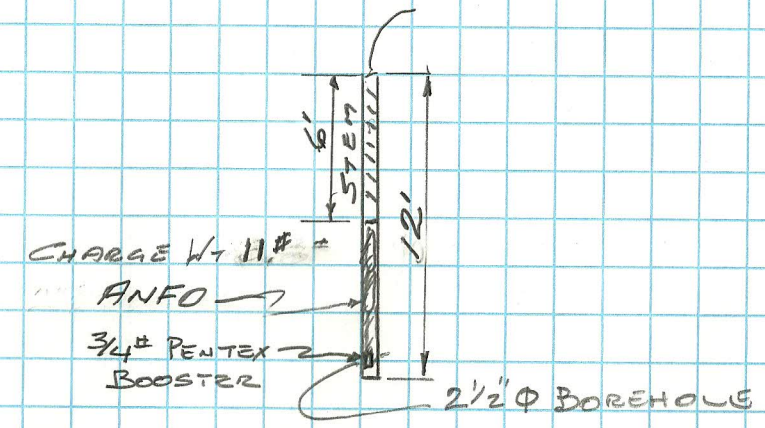
Total Weight of Explosives 1064 lbs Estimated Powder Factor ____ lbs cu/yd

Method of Initation NON ELECTRIC Type of Detonator & Delay 25/500 HANDIDETS

Notes: SEE APPROVED PLAN FOR BLAST SN1 WHICH HAS FULL DETAIL OF BLAST DESIGN FOR THIS BLAST

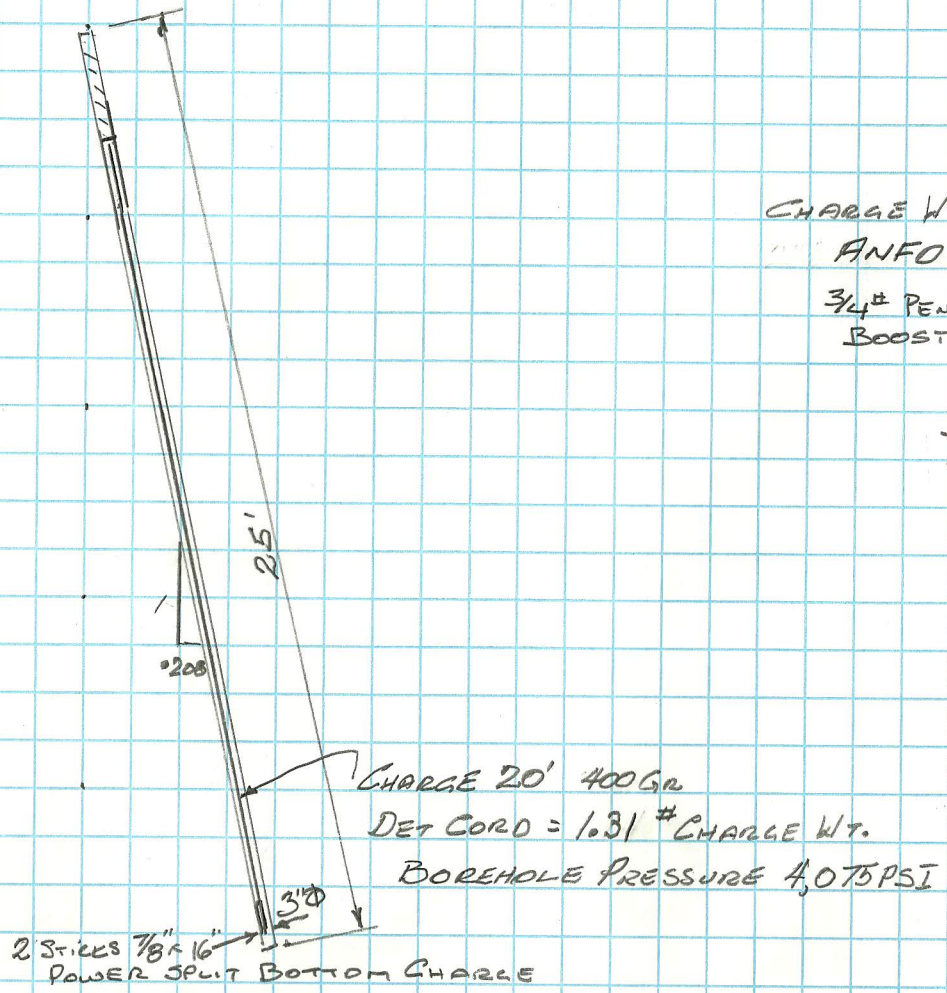
Plan Submitted By [signature] Date SEPT 25, 2010

Note: Production blast holes will only be fired if pre-split line is blasted in combination or prior to the blast for a distance of 30 feet at the beginning and end of production blasting.



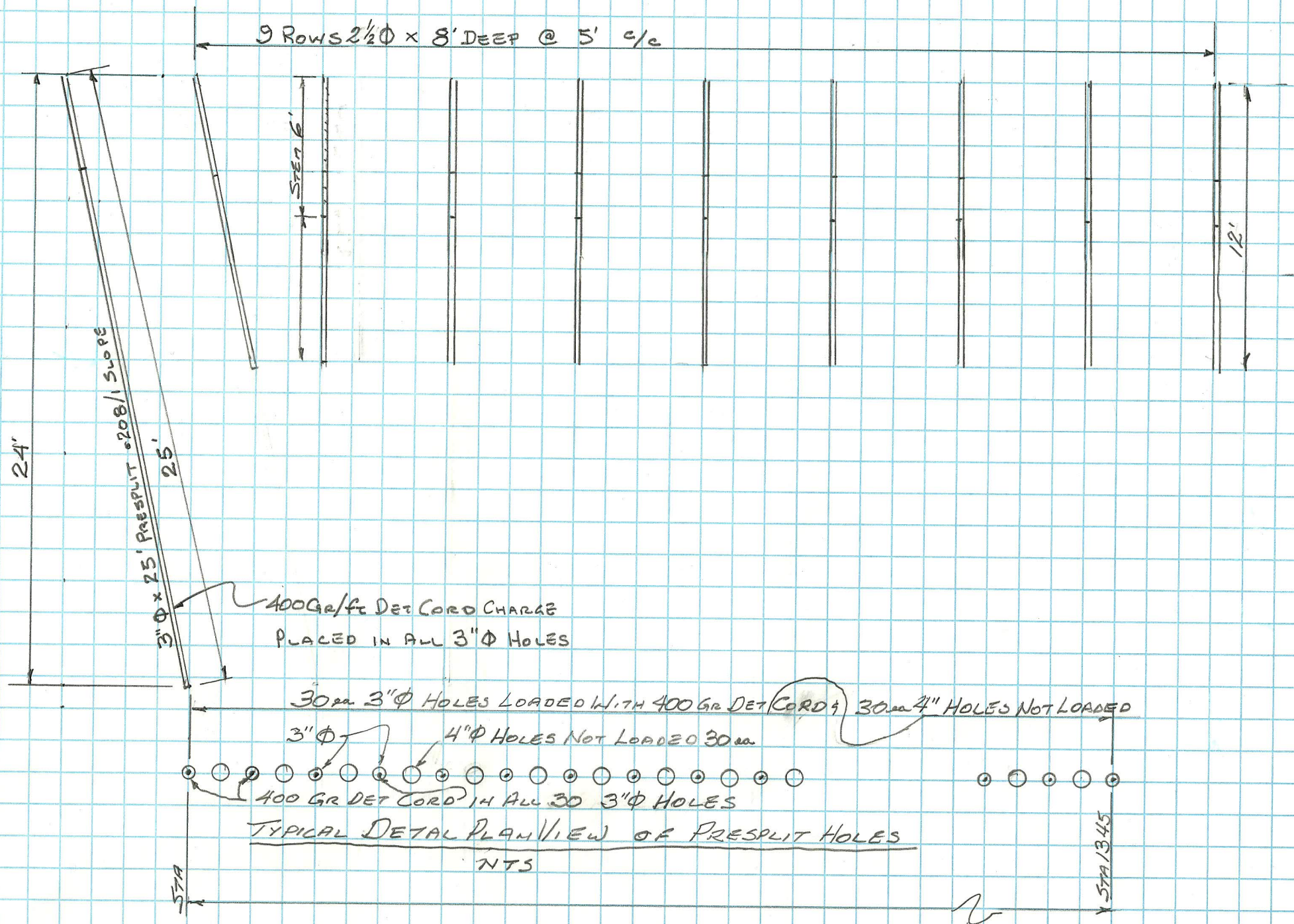
TYPICAL LOADED PRODUCTION HOLE

SCALE 1" = 5'



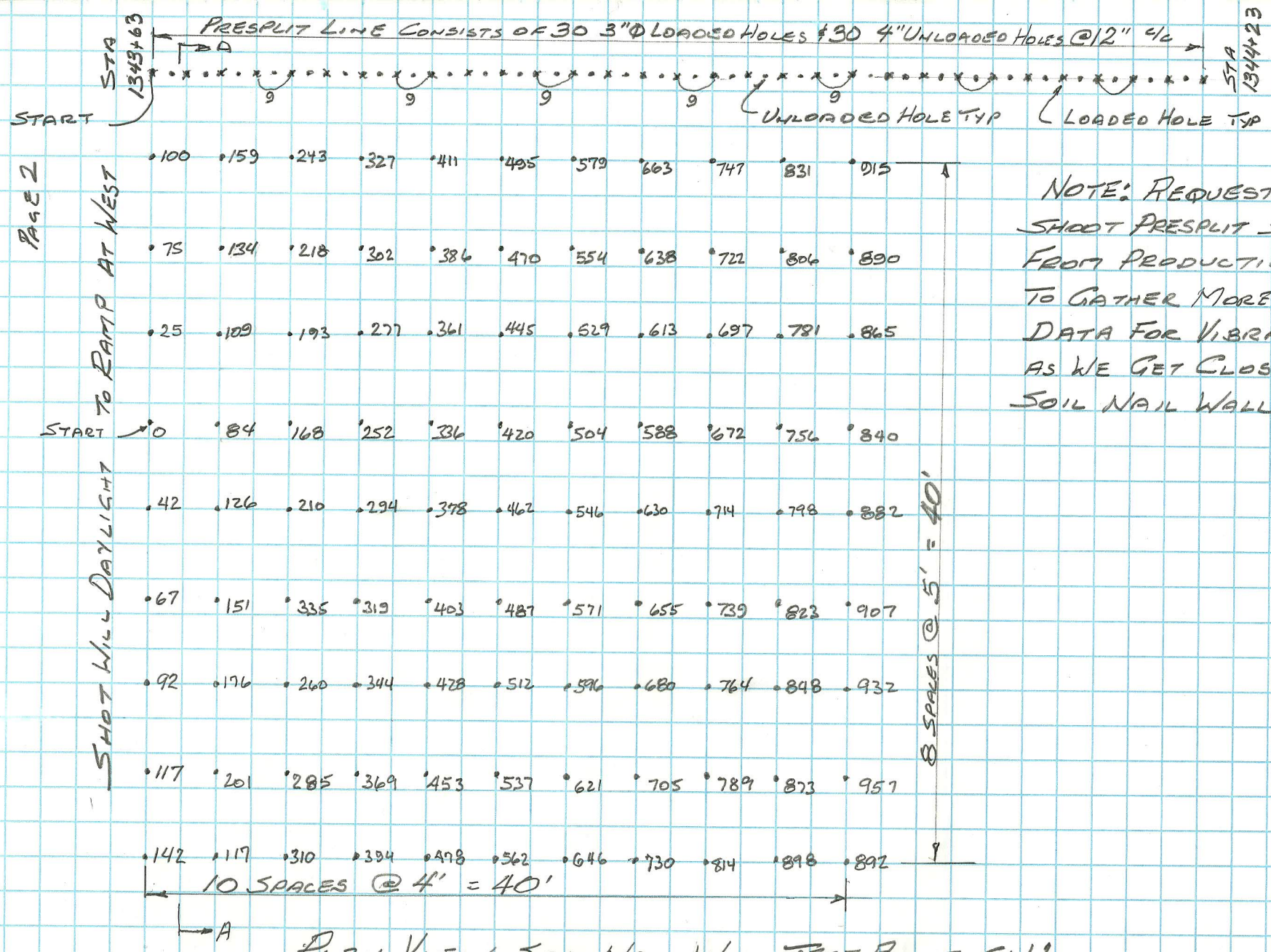
TYPICAL LOADED PRESPLIT HOLE

SCALE 1" = 5'



TYPICAL DETAIL PLAN VIEW OF PRESPLIT HOLES

NTS



NOTE: REQUEST APPROVAL TO SHOOT PRESPLIT SEPARATE FROM PRODUCTION IN ORDER TO GATHER MORE MEANINGFUL DATA FOR VIBRATION PREDICTION AS WE GET CLOSER TO THE SOIL NAIL WALL

PLAN VIEW SOIL NAIL WALL TEST BLAST SN1

SCALE 1" = 8'