BLAST REPORT **BLAST REPORT #** WS 09

☐ Sanders Construction, Inc. ☒ Western States Drilling & Blasting, Inc.

DATE: JULY 19, 2010 EXACT TIME OF SHOT: 8:08

CUSTOMER: KLB JOB NO.: WS 21005

SHOT LOCATION WITH GPS COORDINATES: STA 1337+00 TICKET NO.:

CHECK LIST COMPLETED: (YES) NO

TYPE OF ROCK: LAPILLI TUFF FACE HEIGHT: 10 FT. POUNDS PER DELAY: 22#

TOTAL HOLES: 90*

NUMBER OF HOLES: 53 HOLE DIA: 2½ BxS 4 x 4 STEMMING: 6 DEPTH: 10

NUMBER OF HOLES: HOLE DIA: BxS x STEMMING: DEPTH:

POWDER FACTOR: 0.97 LBS. OF EXPLOSIVES: 515# YARDS OF ROCK: 533

WEATHER: CLEAR WIND: W 5-7

EXACT MONITOR LOCATION(GPS): N/A DIRECTION OF BLAST: MONITOR TYPE:

MONITOR: L/R T V PVS Db MONITOR SERIAL NO.:

DISTANCE TO BLAST: AVERAGE POUNDS PER HOLE: OPERATOR:

EXACT MONITOR LOCATION(GPS): DIRECTION OF BLAST: MONITOR TYPE:

MONITOR: L/R T V PVS Db MONITOR SERIAL NO.:

DISTANCE TO BLAST: AVERAGE POUNDS PER HOLE: OPERATOR:

EXPLOSIVES

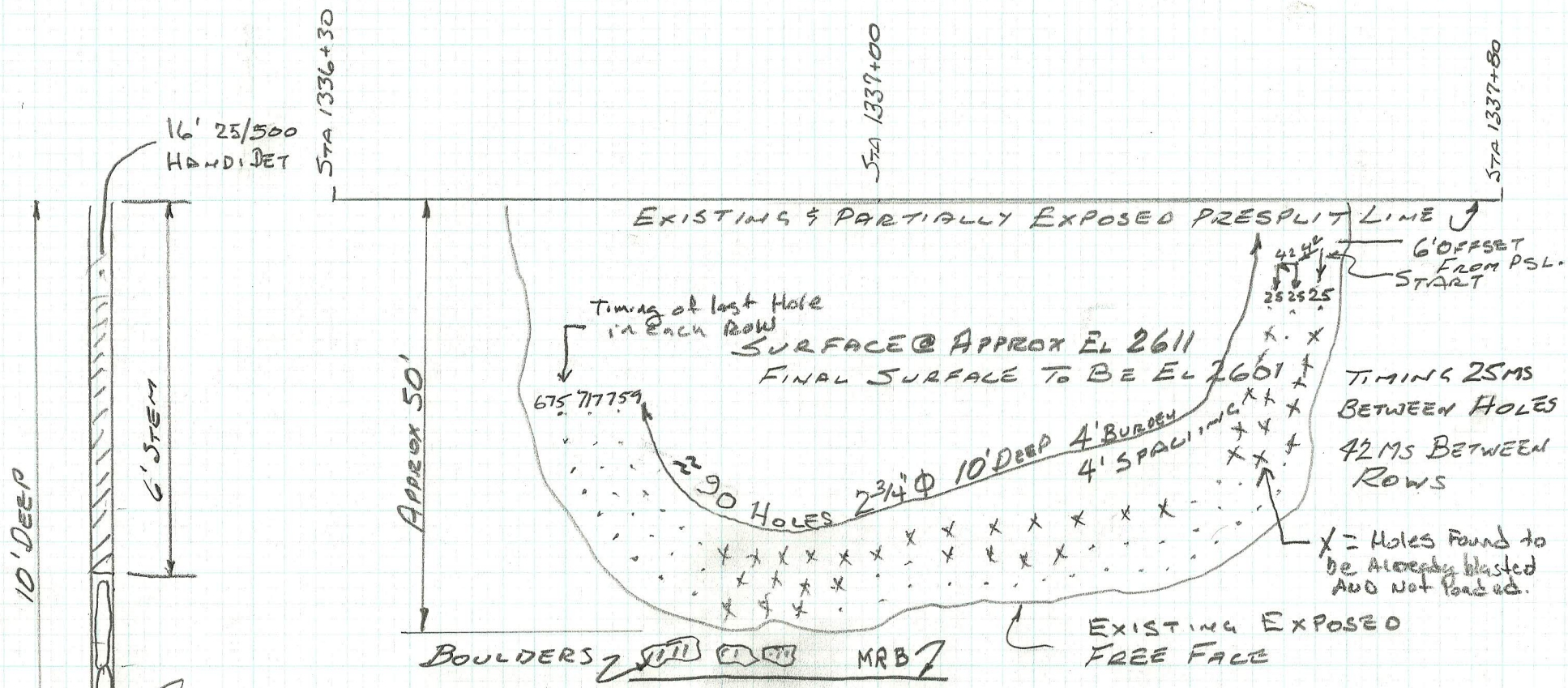
DESCRIPTION	QUANTITY USED	DATE CODE	MAGAZINE	REMOVED	RETURNED
LOCATION:					
BULK A/N	Lbs				
BAG ANFO AMEX	5 Bags	JAN2510	ORICA		
POWDER 2x16 DETAGEL	~~265# ea.~~	~~JAN25~~			
POWDER 2x16 DETAGEL	265# ea.	21MY10x2	ORICA		
lb. BOOSTER	ea.				
lb. BOOSTER	ea.				
16 ft. HDET	54 ea.	22JU09B4	ORICA		
12 ft. MS42HD	8 ea.	25JA10B4	ORICA		
ft.	ea.				
ft.	ea.				
ft.	ea.				
ft.	ea.				
ft. ms	ea.				
	ft.				
GRAIN CORD	ft.				
GRAIN CORD	ft.				
MISCELLANEOUS					
LIL	1 RL	05AP10B4	ORICA		

COMMENTS: NINETY HOLES WERE DRILLED 37 WERE FOUND TO BE ALREADY BLASTED AND WERE NOT LOADED. PRODUCT DELIVERED BY NW ENERGY

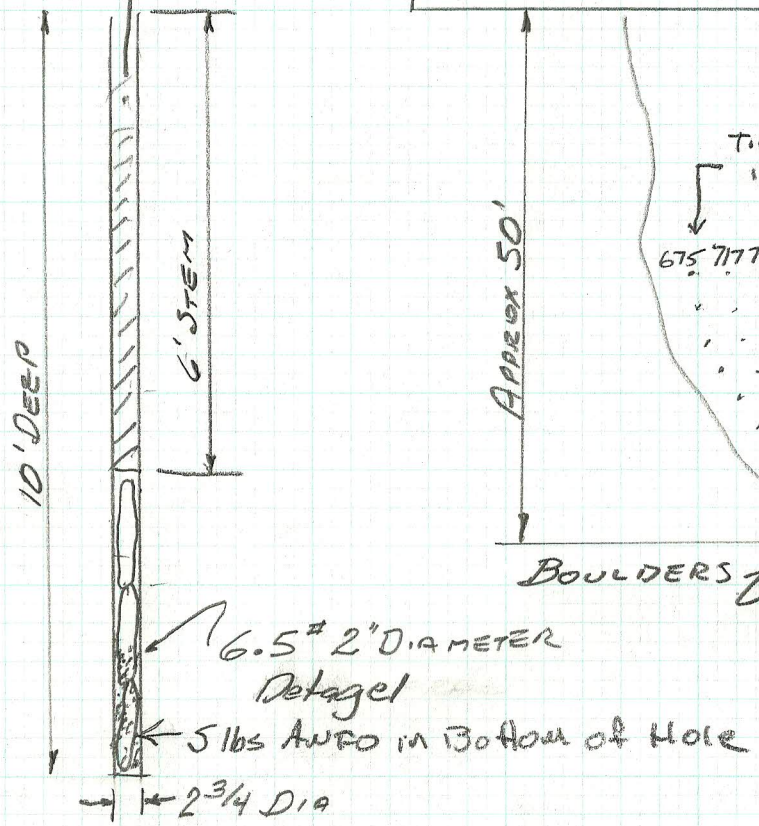
BLASTER'S SIGNATURE: LICENSE NO.: U21262

Revised 03/04 **ATTACH SKETCH OF SHOT** THIS FORM MUST BE FILLED OUT COMPLETELY

BLAST PLAN SHOT #WS09



PLAN VIEW
SCALE 1" = 20'



TYPICAL BOREHOLE
SCALE 1" = 2'-6"

TYPICAL: SECONDARY BLAST PLAN FOR BOULDERS
PROPOSED DATE: JULY 19, 2010

SPECIAL NOTE: SEVERAL LARGE BOULDERS WILL BE BLASTED AT THE BASE JENKINS KNOB BEHIND THE MRB.

SUBMITTED BY [signature]
DATE JULY 20, 2010

Western States Drilling Blasting Drill Log

Shot #: 69 Date: 7-18-10

Drill # 062 Driller Name Jake Sanders

Hole #	P=Production S=Presplit E=Explore B=Bolders	Depth Drilled	Depth to Rock	Voids at What Depth	Notes W=Water ✓= Good Hole
1	P	10'	0		✓
2	P	10'			✓
3		10'			✓
4		10'			✓
5					✓
6					✓
7		10'			✓
8		10'			✓
9					✓
10					✓
11					✓
12		10'			✓
13		10'			✓
14					✓
15					✓
16					✓
17					✓
18		10'			✓
19		10'			✓
20					✓
21					✓
22					✓
23		10'			✓
24		10'			✓
25		10'	0		✓
26		10'	10		Shot Rock
27					
28					
29					
30					
31					
32					
33					
34					
35					
36					
37					
38		10'	0		✓
39					Shot Rock
40		10'	0		✓

Shot #: 09 Date: 7-18-10

Drill # 062 Driller Name: Jake Sanders

Hole #	P=Production S=Presplit E=Explore B=Bolders	Depth Drilled	Depth to Rock	Voids at What Depth	Notes W=Water
41	P	10	0		✓
42	P	—	—		SHot
43		10	0		~~Shot~~ ✓
44		10	0		✓
45		—	—		Bad
46		—	—		Bad
47		10	0		✓
48		—	—		Bad
49		—	—		Bad
50		10	0		✓
51		—	—		Bad
52		—	—		Bad
53		10	0		✓
54		—	—		Bad
55		—	—		Bad
56		10	0		✓
57		10	0		✓
58		10	0		✓
59		—	—		Bad
60		10	0		✓
61		10	0		✓
62		—	—		Bad wont stay open
63		10	0		✓
64		10			✓
65		10			✓
66		10			✓
67		10			✓
68		10			✓
69		10			✓
70		10			✓
71		10			✓
72		10			✓
73		10			✓
74		10			✓
75		10			✓
76		10			✓
77		—	—		Bad No hole
78		—	—		B " " "
79		—	—		B " " "
80		—	—		B " " "

Shot #: 09

Drill # 062

Date: July 19, 10

Driller Name: Jake Sanders

Hole #	P=Production S=Presplit E=Explore B=Bolders	Depth Drilled	Depth to Rock	Voids at What Depth	Notes W=Water
81	P	8	—		B.
82		10	—		B
83		10	—		B
84		10	—		B
85		10	—		B
86		10	—		B
87		~~10'~~	Ø		✓
88	P	10'	Ø		✓
89		10'	Ø		✓
90	P	10'	Ø		✓
91					
92					
93					
94					
95					
96					
97					
98					
99					
100					
101					
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113					
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116					
117					
118					
119					
120					

Check List

Date 7-19-10

Job Number WS 21005

Shot Number WS 09

1. BEFORE BLASTING

NOTIFICATION

- [ ] Fire Department
- [ ] Utilities
- [ ] Businesses & Home Owners
- [ ] ~~Seismograph~~ Tech

Other (List)

_____
_____
_____
_____

MATERIAL & EQUIPMENT

- [ ] Adequate Stemming Material
- [ ] Warning Signs
- [ ] Warning Signals
- [ ] Safe Amount of Lead Line
- [ ] Seismograph Paper, Pens, etc.
- [ ] Fire Extinguishers (charged)
- [ ] Adequate Blasting Shelter
- [ ] ~~Mats (If Applicable)~~

SHOT DESIGN

- [ ] Pattern OK for Area
- [ ] Sufficient Burden to Face
- [ ] Reviewed drill logs
- [ ] Measured Depth, Burden & & Spacing
- [ ] Shot Area Posted & Secure
- [ ] Shot Diagramed on Back

2. DURING LOADING

CONSTANT CHECKS

- [ ] Explosives
- [ ] Running Inventory
- [ ] Access Row Empty
- [ ] Drills & Traffic 50' Away
- [ ] Shot can be fired in case of emergency

All Holes to be checked & approved

- [ ] Blaster initial
- [ ] Supt initial

3. DETONATION

HOOK - UP

- [ ] All Unnecessary Crew Cleared
- [ ] All Holes Loaded & Stemmed
- [ ] Hand Check tubing Before Each Connection
- [ ] Visually Insured That Each Connection is Snapped

SECURE AREA

- [ ] Set up Seismograph
- [ ] Est. Checkpoints at Each Access
- [ ] Radio Communication with Checkpoints.
- [ ] Cleared People, Vehicles & Equipment
- [ ] Visual Coverage of Entire Site
- [ ] Five Minute Warning
- [ ] One Minute Warning

4. AFTER DETONATION

POST BLAST CHECK

- [ ] Waited for Dust & Funes to Dissipate
- [ ] Walked Entire Area of Shot
- [ ] Insured that tail Surface Delays Fired at the End of Each Row
- [ ] Sounded All Clear Signal

LEGAL DOCUMENTATION

- [ ] Completed Shot Report
- [ ] Diagramed Shot w/ Seismograph Location (Direction & Distance)
- [ ] Recorded Seismic Results on Blast Report
- [ ] Final Inventory of Explosives Recorded
- [ ] Ticket Number Assigned By Job Supervisor
- [ ] Signed Blast Report w/ License No.

Supt has checked and verified that all has been completed and shot area is ready for loading

Supt initial