WHITE—DIVISION OF WATER RESOURCES
CANARY—CLIENT'S COPY
PINK—WELL DRILLER'S COPY

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DO NOT WRITE ON BACK

STATE OF NEVADA
DIVISION OF WATER RESOURCES

WELL DRILLER'S REPORT

Please complete this form in its entirety in accordance with NRS 534.170 and NAC 534.340

OFFICE USE ONLY
Log No. 83385
Permit No.
Basin 110C

NOTICE OF INTENT NO. 40592

1. OWNER US ARMY Hawthorne Army Depot
MAILING ADDRESS 1- Smaine St
Hawthorne NV 89415-9407

ADDRESS AT WELL LOCATION

2. LOCATION SW ¼ NE ¼ Sec. 5 T 8 N/S R 30 E Mineral County
PERMIT NO. 6-30032
Issued by Water Resources | Parcel No. | Subdivision Name

3. WORK PERFORMED
☑ New Well ☐ Replace ☐ Recondition
☐ Deepen ☐ Abandon ☒ Other VAPOR

4. PROPOSED USE Vapor extr.
☐ Domestic ☐ Irrigation ☐ Test
☐ Municipal/Industrial ☑ Monitor ☐ Stock

5. WELL TYPE
☐ Cable ☐ Rotary ☐ RVC
☐ Air ☒ Other Auger

6. LITHOLOGIC LOG SB02

Material	Water Strata	From	To	Thickness
Clayey Silty Sand		0	5	5
Bedded Med Sand		5	10	5
Silty Sand		10	15	5
Silty Clayey Gravel		15	20	5
Silty Fine Sand		20	25	5
Silty Clayey Fine Sand		25	30	5
Silty Sandy Clay		30	35	5
Silty Sandy Clay		35	40	5
Fine Sand		40	45	5
Fine Sand		45	50	5
Silty Clayey Sand		50	55	5
Gravelly Coarse Sand		55	60	5
Silty Sandy Clay		60	65	5
Silty Sandy Clay		65	70	5
Sand Silty Med Sand		70	75	5

Date started 2-10, 2001
Date completed 2-10, 2001

7. WELL TEST DATA
TEST METHOD: ☐ Bailer ☐ Pump ☐ Air Lift

G.P.M.	Draw Down (Feet Below Static)	Time (Hours)
NA		

8. WELL CONSTRUCTION
Depth Drilled 75 Feet Depth Cased 74 Feet

HOLE DIAMETER (BIT SIZE)

	From	To
8 Inches	75 Feet	Feet
Inches	Feet	Feet
Inches	Feet	Feet

CASING SCHEDULE

Size O.D. (Inches)	Weight/Ft. (Pounds)	Wall Thickness (Inches)	From (Feet)	To (Feet)
4½		Sch 40 PVC	0	44

Perforations:
Type perforation mill slot
Size perforation 020
From 44 feet to 74 feet
From feet to feet
From feet to feet
From feet to feet
From feet to feet

Surface Seal: ☒ Yes ☐ No
Depth of Seal 38
Placement Method: ☒ Pumped ☐ Poured
Seal Type: ☒ Neat Cement ☐ Cement Grout ☐ Concrete Grout
Bentonite Chips 38-43
Gravel Packed: ☒ Yes ☐ No
From 74 feet to 43 feet

9. WATER LEVEL
Static water level NA feet below land surface
Artesian flow G.P.M. P.S.I.
Water temperature °F Quality

10. DRILLER'S CERTIFICATION
This well was drilled under my supervision and the report is true to the best of my knowledge.
Name Water Development
Contractor
Address PO Box 141
Contractor
Zamora CA 95698
Nevada contractor's license number issued by the State Contractor's Board 0012852
Nevada driller's license number issued by the Division of Water Resources, the on-site driller 2111
Signed James Whitley
By driller performing actual drilling on site or contractor
Date 3-1-01

(Rev. 3-91) USE ADDITIONAL SHEETS IF NECESSARY (O)-627

TETRA TECH, INC.
FIELD LOG OF BORING

Boring #: SB 02
Sheet 1 of 4

Project Name and Location: Bldg 336			TC Number: 11377-0202
Elevation: ~ 4000'	Date and Time Started: 2/10/01 8:30	Date and Time Completed: 2/10/01 12:40	
Completion Depth: 75' bgs	Samples:	Drive:	1-liter:
VOA:	Other: 5 1½" sleeves		
Boring Diameter & Drilling Method: Hollow Stem Auger	Water Level:	First (date/time):	Second (date/time):
Sample Type: cont. core	Hammer Wt.:	Drop:	Boring Location: NW Corner of vent field
Drilling Co: Water Dev. Corp	Driller: Jimmy	Geologist: R. Marvin	

Depth (ft.)	Sample No.	Sample Interval	Recovery	Blow Count	Description	Graphic Symbol	USCS Symbol	Estimated % of Gr	Sa	Si	Cl	P.I.D. Reading	Comments
0	0-5		25		Poorly sorted clayey, silty sand grading down into med. indurated, rounded, coarse sand with clay rich zones. Interval is damp. Tan to orange-tan color				50	30	20	1.6	
1													
2													
3													
4	5-10		22"		Coarsely bedded med. sand, gravelly coarse sand, well sorted medium sand and clayey-silty fine sand. Interval is loose to moderately indurated and damp. Tan to brown color			5	70	15	10	1.1	
5													
6													
7													
8													
9	10-15		21"		Coarsely bedded med. silty sand, gravelly coarse sand and silty fine sand. Interval is loose to poorly indurated.			5	70	20	5	1.2	
10													
11													
12	15-20		22"		Silty-clayey gravel grading down into silty fine sand and into silty gravelly coarse sand. Silty-clayey fine sand @ end of interval. Rose-pink zones in upper portion of interval. Damp. Loose			20	60	10	10	.5	
13													
14													
15													
16													

BORING LOG FORM

Boring #: SB 02
Sheet 2 of 4

Project Name and Location: Bldg 336 Phase 3 G.W. Inv.
TC Number: 11377-0202

Depth	Sample No.	Sample Interval	Recovery	Blow Count	Description	Graphic Symbol	USCS Symbol	Estimated % of Gr	Sa	Si	Cl	P.I.D. Reading	Comments
	20-25		40"		Silty fine sand grading down into coarse sand for first 16" of interval. Sharp basal contact with interbedded silty clay and sand sequence. Interval is loose to mod. indurated. Damp to dry. Light olive brown to tan color.				60	20	20	1.7	
	25-30		28"		Silty-clayey fine sand grading downward into coarsely bedded, gravelly coarse sand. Interval is loose to weakly indurated. Yellow-olive to tan to rusty orange color.			10	60	15	15	6.5	
	30-35		48"		Silty-sandy clay, shallow bedding for first 36" of interval. Sharp basal contact with finely bedded coarse to fine sand and clayey fine sand. Interval is weakly to mod. indurated. Olive to light tan color with local rusty stained zones.				30	40	30	2.3	
	35-40		46"		Silty-sandy clay, tan to olive to yellow olive, damp - first 36" of interval. Rose-pink staining @ lower contact (Sample 01)			10	40	30	20	~~368~~ RDM 36.3 22 19 37	Sample SB02-01

BORING LOG FORM

Boring #: SB 02
Sheet 3 of 4

Project Name and Location: Bldg 336 Phase III GW.
TC Number: 11377-0202

Depth (ft)	Sample No.	Sample Interval	Recovery	Blow Count	Description	Graphic Symbol	USCS Symbol	Estimated % of Gr	Sa	Si	Cl	P.I.D. Reading	Comments
	35-40 (cont)				Poorly sorted fine sand, and gravelly coarse sand for remainder of interval. Large, angular basalt rock drilled through.								
	40-45		23"		Coarsely bedded fine sand (silty) and gravelly coarse sand. Cobbles upto 2 int some crushed by drill. Interval is loose and barely damp to dry. Black oride clast coating in center of interval.			30	60	10		18	
	45-50		14"		Coarsely bedded fine sand and gravelly sand and silty-clayey med. sand. Damp (TPH??). olive to grey to tan. Loose to poorly indurated.			10	40	30	20	242 163 211	Sample SB02-02 11:10 46 bgs
	50-55		26"		Gravelly coarse silty-clayey sand with ~~fine~~ cm scale sandy clay interbeds. Interval is loose to mod. indurated. Damp (TPH?) to dry. Lowest clay bed is blue-green.			20	40	20	20	696 279 313	Sample SB02-03 51' bgs 11:20
	55-60		25"		Gravelly coarse sand grading down into medium sand then fine sand then sandy clay and finally massive plastic clay.			10	60	15	15	322 190 214 57	

BORING LOG FORM

Boring #: SB 02
Sheet 4 of 4

Project Name and Location: Bldg 336 Phase 3 G-W. Invest.
TC Number: 11377-0202

Depth	Sample No.	Sample Interval	Recovery	Blow Count	Description	Graphic Symbol	USCS Symbol	Estimated % of Gr	Sa	Si	Cl	P.I.D. Reading	Comments
60-65			49"		Silty Sandy clay with				10	15	75	687	
					cm scale clayey sand							1219	Sample SB02-04
					interbeds and massive							813	61' 67' bgs
					plastic clay interbeds.							922	11:25
					Chocolate brown to								
					olive-yellow-brown.							612	
					Damp. High PID reading								
					throughout.							973	
65-70			28"		Bright white silty layer				40	30	30		
					4 cm thick (ash??)							>2500	Sample SB02-05
					Silty-sand clay to								66' bgs 11:50
					sharp basal contact							1192	
					@ 16" into interval.								
					Underlying calcareous							617	
					fine sand. TPH soaked.								
					Brickred to olive-							1402	
					yellow color. Interval								
					is poorly to well								
					indurated.								
70-75			38"		Sandy-silty finely				20	40	40	25	
					bedded clay for first								
					16 inches of interval.							37.7	
					3 cm thick carbonate								
					cemented silty sand							696	
					@ base of clay. Silty								
					medium sand ~~beneat~~								
					beneath carbonate for								
					last 18 inches of								
					interval. Strong TPH								
					readings with PID								
					in lower sand.								
					END								
					OF								
					Hole R.D.								

Monitoring Well Construction Data
Hawthorne Army Depot, Hawthorne, Nevada

Monitoring Well: SB 02 **Date:** 2/10/01

Date of well construction: 2/10/01 Time of well construction: 18:00
Reference elevation during construction: ~4000'
Depth ground water first encountered: not encountered
Depth of static ground water before construction: _____
Depth of static ground water after construction: _____
Boring depth: 75 feet Casing length: 74 feet
Borehole diameter: 8 inch Well casing diameter: 2 inch

Blank Casing:
Type Schedule 40 Interval 44 feet bgs to surface
Material PVC Joint type flush thread

Screen Casing:
Type Schedule 40 Interval 74' bgs to 44' bgs
Material PVC Slot size/design 0.02

Centralizer Depths: None

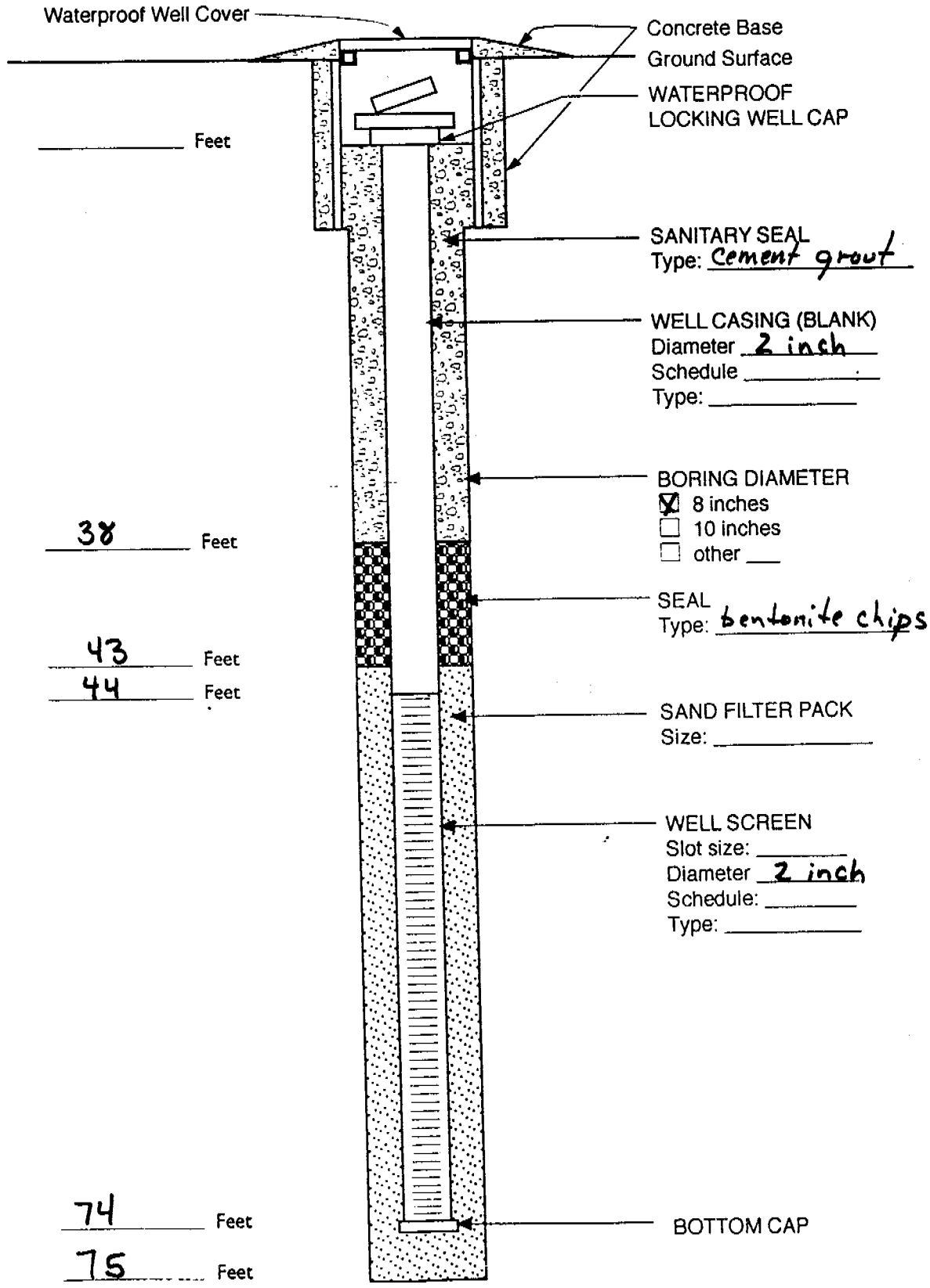
Filter Pack:
Material High Quality Silica Sand Interval 74' bgs to 43' bgs
Gradation _____ Uniformity coefficient _____
Size #3 Volume calculated 9.92 ft³
Volume actual 12.5 ft³ Placement method poured through auger

Transition Sand:
Material _____ Interval _____
Gradation _____ Uniformity coefficient _____
Size _____ Volume calculated _____
Volume actual _____ Placement method _____

Annular Sealant:
Material bentonite chips Interval 43' bgs to 38' bgs
Volume calculated _____ Volume actual 2 1/2 sacks
Placement method poured through auger

Grout:
Material cement with ~1% bentonite Interval 38' bgs to ~6' bgs
Volume calculated _____ Volume actual 84 gallons
Placement method tremie pipe

Comments: _____

Monitoring Well Construction Sheet

Project: Bldg. 336 Phase 3 Ground Water Invest.
Date: 2/10/01
Project No.: 11377-02-02
Driller: W.D.C. - Jimmy F.
Well Number: SB 02
Drilling Method: Hollow Stem Auger
Field Geologist: R. Marvin
Registered Geologist: _____