STATE OF NEVADA
DIVISION OF WATER RESOURCES
WELL DRILLER'S REPORT

OFFICE USE ONLY
Log No. 119747
Permit No.
Basin 087

PRINT OR TYPE ONLY
DO NOT WRITE ON BACK

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

NOTICE OF INTENT NO. 6905 (69065)

1. OWNER WASHOE COUNTY
MAILING ADDRESS 4930 ENERGY WAY
RENO NV 89502

ADDRESS AT WELL LOCATION EAST SIDE of KIETZKE BETWEEN PROSPERITY & MILL
Subdivision Name: County:

2. LOCATION SW ¼ SW ¼ Sec 7 T 19 N S R 20 E
PERMIT/WAIVER No. NDOT RIGHT of WAY
Issued by Water Resources Parcel No.

Latitude 39.5229325 UTM E ☐ NAD 27
Longitude -119.7890439 N ☒ NAD 83/WGS 84

3. WORKED PERFORMED
☒ New Well ☐ Replace ☐ Recondition
☐ Deepen ☐ Other

4. PROPOSED USE
☐ Domestic ☐ Irrigation ☐ Test
☐ Municipal/Industrial ☒ Monitor ☐ Stock

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

6. LITHOLOGIC LOG

Material	Water Strata	From	To	Thickness
SEE ATTACHED				
Nad 27				
39.523022°N				
119.7880220°W				

Date started: 3-6, 20 14
Date completed: 3-13, 20 14

9. WELL CONSTRUCTION
Depth Drilled 71 Feet Depth Cased 70 Feet

HOLE DIAMETER (BIT SIZE)

		From		To	
10	Inches	0	Feet	71	Feet
	Inches		Feet		Feet
	Inches		Feet		Feet

CASING SCHEDULE

Size O.D. (Inches)	Weight/Ft. (Pounds)	Wall Thickness (Inches)	From (Feet)	To (Feet)
2	.932	.218	0	45
2	.932	.218	0	70

Perforations:
Type of perforation SLOT
Size of perforation .020
From 40 feet to 45 feet
From 60 feet to 70 feet
From feet to feet
From feet to feet
From feet to feet

Annular Seal: ☒ Yes ☐ No
☒ Neat Cement 2 to 36 ☒ Pumped ☐ Poured
☐ Cement Grout to ☐ Pumped ☐ Poured
☐ Concrete Grout to ☐ Pumped ☐ Poured
☐ ≥30% Bentonite Grout to ☐ Pumped ☐ Poured

Gravel Pack: ☒ Yes ☐ No 38 to 46 ☐ Pumped ☒ Poured
Type: #3 SAND 58 71
Bentonite Chips: ☒ Yes ☐ No 36 to 38 ☐ Pumped ☒ Poured
Type: 3/8 46 58

7. Water Level
Static water level: feet below land surface
Artesian Flow: G.P.M. P.S.I.
Water Temperature: °F
Quality:

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

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

10. DRILLER'S CERTIFICATION
This well was drilled under my supervision and the report is true to the best of my knowledge.
Name CASCADE DRILLING LP
Contractor
Address 3000 DELUTH ST
Contractor
W. SACRAMENTO CA 95691
Nevada contractor's license number issued by the State Contractor's Board 73966
Nevada driller's license number issued by the Division of Water Resources, the on-site driller 2425
Signed Jason Hernandez
By driller performing actual drilling on-site or contractor
Date 3-14-2014

(Rev 06-06)

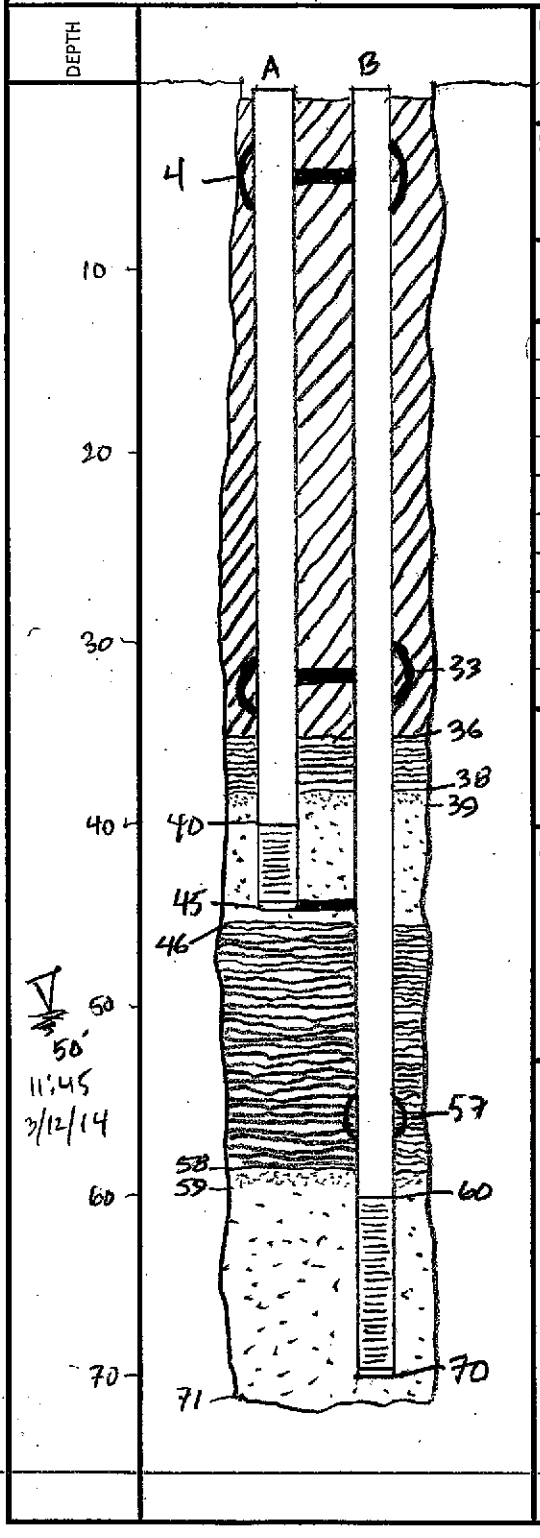
USE ADDITIONAL SHEETS IF NECESSARY

(NSPO 3-08) (O) 627

Log 119747

CONSTRUCTION SUMMARY FOR WELL

Project: Mill Kietzke PSA	Job #: 13534.07	Well: CTM133
Location / Coords: E. side of Kietzke, btw. Prosperity & Mill		
Driller / Rig: Cascade / Spider	Personnel: B. Kearney	Elevation: —
Water Level:		Borehole Depth: 71
Borehole Diameter: 10"		Drilling Fluid: N/A
Bit(s): Sonic core barrel		



Casing: 2" dia. Sch. 80 PVC

Screen: 2" dia. Sch. 80 PVC w/ 0.020-inch aperture slots

Casing String(s):

	From -- To	Screened Interval
(A)	0.5-45	40-45
(B)	0.5-70	60-70

Filter Pack: #3 Cemex Lapis Lustre (39-46, 59-71) 10, lb sacks; #0/30 (38-39, 58-59) 1.5, 2 sacks

Annular Seal(s): cetco medium chips (36-38, 46-58)
36-38: 2 sacks
46-58: 8 sacks

Notes: ① hand dug 0-5'.
② threaded end caps on bottom of casing strings
③ centralizer at 57', spacer at 45', spacer & 2 centralizers at 33', spacer & 2 cents. at 4'
④ heat cement grout 1-36'

CTMRD PROGRAM MONITORING WELL STRATIGRAPHIC LOG

Drilling Specifications:

Drilling Contractor: Cascade
Drilling Method: Sonic
Rig: Spider
Driller: Jason Hernandez
Boring Diam.: 10 in TD: 71 ft
Development Method:
Date Start: 3/3/14 End: 3/13/14

Well Specifications:

Location Description: E. side of Kietzke, btw. Prosperity & Mill
Coordinates: — ft N — ft E
Elevation: — ft Survey Method: —
Reference Pt. Description: —
Well TD: (45, 70) ft bgs Well Diameter: 2 in
Screen Interval: (40-45, 60-70) ft bgs
First Water: 50 ft bgs Static Water at completion: ft bgs

WELL ID: CTM 133
Project: Mill Kietzke PSA
Page 1 of 2
LOGGED BY: B. Kearney

Depth	Engineering Properties: Density/ Consistency	Moisture	Plasticity	Cohesiveness	Transmissivity	1° Description: Color	Boulder %	Cobble %	Gravel %	Sand %	Silt %	Clay %	USCS Classification	2° Effects: Weathering/ Oxidization	Depositional Properties: Grading	Angularity	Matrix/Clast-Supported	Clast Lithology	Sedimentary Structure	Depositional Environment	Stratigraphic Contact	Graphics: PID/Samples	Lithology	Description
																								4" concrete, 4" base
0	VL	D	NP	NC	M-H	10YR 4/3	20	20	20	20	10	10	GM		WG	SR-R	MX		M	GOW	G			hand dug 0.5' brown silty gravel w/sand, gravel vf-vc, sand vf-vc
5 3/10																								
																								greyish brown well graded sand w/gravel, sand m-vc, gravel vf-vc
10	VL	D	NP	NC	H	10YR 5/2	-	10	30	60	tr	-	SW		WG	R	MX		M	GOW	G	5.9		
	VL	D	NP	NC	H	10YR 4/2	tr	10	40	20	20	10	GM		WG	R-SR	MX		M	GOW	G			dk. greyish brown silty gravel w/ sand, gravel vf-vc, sand vf-vc
15	VL	D	NP	NC	H	10YR 4/2	-	tr	30	80	tr	-	SP		PG$_u$		MX		M	FLUV	G	20.3		dk. greyish brown poorly graded sand w/ gravel, sand m-vc gravel vf-vc
20	L	D	NP	C	M	10YR 5/2	-	tr	30	40	20	10	SM		WG	SR	MX		M	GOW	G	47.1		greyish brown silty sand w/gravel, sand vf-vc, gravel vf-vc
							100	tr	-	-	-									GOW				granitic boulders 10"+
	L	D	NP	C	H	10YR 4/2	-	10	40	30	20	10	GM		WG	SR-R	MX		M	GOW	G			dk. greyish brown silty gravel w/ sand, gravel vf-vc, sand vf-vc
25	L	D					70	20	10				GP									31.4		boulders, basalt / meta basalt
																						69.2		
30																						27.6		

CTMRD PROGRAM MONITORING WELL STRATIGRAPHIC LOG

WELL LOCATION: E. side of Kietzke, btw. Prosperity & Mill

LOGGED BY: B. Kearney

Well ID: CTM133

Project: Mill Kietzke PSA

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Depth	Density/ Consistency	Moisture	Plasticity	Cohesiveness	Transmissivity	Color	Boulder %	Cobble %	Gravel %	Sand %	Silt %	Clay %	USCS Classification	Weathering/ Oxidization	Grading	Angularity	Matrix/Clast-Supported	Clast Lithology	Sedimentary Structure	Depositional Environment	Stratigraphic Contact	PID/Samples	Lithology	Description
30																								
	L		NP	C	H	10YR 4/2	tr	10	50	20	20	tr	GM		WG	SR	MX		M	GOW	G			dk. greyish brown, silty gravel w/ sand, gravel vf-vc, sand vf-vc
35																						12.9		
	L		NP	C	H	10YR 5/3	tr	10	30	30	20	10	GM		WG	SR	MX	B-60 A-30 G-30	M	GOW	G			brown silty gravel w/ sand, gravel vf-vc, sand vf-vc
40																						8.9		
	VL	M	NP	NC	H	10YR 4/3	-	tr	30	65	5	tr	SP		PGu	WR-SR	MX	B-60 A-30 G-10	M	FLUV	S			brown poorly graded sand w/ gravel, sand m-vc, gravel vf-vc
45																						7.5		
	L	M	NP	C	H	10YR 4/2	-	tr	50	30	15	5	GM		WG	SR-R	MX	B-70 A-30	M	GOW	S			dk. greyish brown silty gravel w/sand, gravel vf-vc, sand vf-vc
50	VL	W	NP	C	H	10YR 4/2	-	5	40	50	5	-	SP		PG	R-SR	MX		M	GOW	G	12.6	50' 11:45 3/12	dk. greyish brown poorly graded sand w/ gravel - core run 50'-55' dropped down the borehole once, before being brought to surface
55	L	W	NP	C	M	10YR 5/3	tr	10	40	20	20	10	GM		WG	SR	MX	B-60 A-40	M	GOW	G	17		brown silty gravel w/ sand, gravel vf-vc, sand vf-vc
60	VL	W	NP	NC	H	10YR 4/2	-	10	35	40	10	5	GM		WG	SR-R	MX	B-70 A-30	M	FLUV	G	15.3		dk. greyish brown silty gravel w/ sand, gravel vf-vc, sand vf-vc
65																						12.1		
	VL	W	NP	NC	H	10YR 5/2	-	tr	15	80	5	-	SP		PGu	R-SR	MX		M	FLUV	S			greyish brown poorly graded sand w/ gravel, sand vf-vc gravel vf-vc
70																						11.1		
	VL	W	NP	NC	H	10YR 3/2	-	-	5	95	-	-			PGu						G			v. dk. greyish brn. poorly graded sand m-c, gravel vf-f

TD well 71' at 10:30, 3/13/14

STATE ENGINEERS OFFICE

U:\JFORTMAN\2013\Projects\CTMRD\Vassar East Plumb PSA\Phase I Drilling - prep docs\Work Plan\Attachment F- Strat Log Form .xlsx