

PRINT OR TYPE ONLY
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WELL DRILLER'S REPORT

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

Page 1 of 4 pages
 NOTICE OF INTENT NO.30611

1. Consultant: MONTGOMERY WATSON Client: ADDRESS AT WELL LOCATION Rocketdyne Former
365 Lennon Lane Nevada Field Laboratory Area B
Walnut Creek, CA 94598 800 Axe Handle Canyon Road, Palomino Valley
 2. LOCATION SW 1/4 SE 1/4 Sec. 29 T. 22N N/S R. 21 E. Washoe County
 PERMIT NO. M/O 708 MW B-5B 076-150-01 Palomino Valley Unit 4 29.2.1.2
Issued by Water Resources Parcel No. Subdivision Name

3. WORK PERFORMED 4. PROPOSED USE 5. WELL TYPE
 New Well Replace Recondition Domestic Irrigation Test Cable Rotary RVC
 Deepen Abandon Other..... Municipal/Industrial Monitor Stock Air Other.....

6. LITHOLOGIC LOG

Material	Water Strata	From	To	Thick-ness
SILTY SAND, yellowish brown, moist, fine to medium sand, micaceous.		0	3	3
ANDESITE: Porphyritic andesite, light olive gray, aphanitic groundmass w/ altered plagioclase phenocrysts, & trace biotite phenocrysts, weathered & altered in some intervals to reddish gray color, localized iron oxide staining of joint surfaces @26' groundmass is yellowish gray, changing to pinkish gray below 30'		3	171	168
40-75' rock is much harder & less weathered than above, striations visible on plagioclase crystals, groundmass is light brownish gray, trace crystals of hornblende & biotite, fractures have iron oxide staining.				
75-115' softer rock, fractured & weathered w/iron oxide staining.				
104' small clayey material present in the fracture planes.				
115-126' harder rock, only traces of fracturing.				
126-138' softer, fractured zone that locally contains hornblende crystals.				
138-164' harder rock, only traces of fracturing.				
164-171' softer zone, slightly weathered and fractured w/iron staining, groundmass is gray to dark gray, hornblende crystals common in the lighter colored rock.				

8. WELL CONSTRUCTION
 Depth Drilled.....395 Feet Depth Cased.....393 Feet
 HOLE DIAMETER (BIT SIZE)
 From To
 Inches Feet Feet
9 Inches 0 Feet 395 Feet
 Inches Feet Feet

CASING SCHEDULE

Size O.D. (Inches)	Weight/Ft. (Pounds)	Wall Thickness (Inches)	From (Feet)	To (Feet)
5"OD steel		.188	+2	343
1" Galvanized steel pipe			+2	370
1" Sounding Tube sch 40 PVC			+2.5	370

Continued page 2
 Perforations:
 Type perforation factory sawed vertical slots
 Size perforation 5" OD steel x0.064 w/double row
 From 343 feet to 393 feet perfs
 From.....feet to.....feet
 From.....feet to.....feet
 From.....feet to.....feet
 From.....feet to.....feet
 Surface Seal: Yes No Seal Type:
 Depth of Seal 0-334 ft. Neat Cement
 Placement Method: Pumped Cement Grout
 Poured Concrete Grout
 Bentonite seal 334-338/#0/30 Lonestar filter
 Gravel Packed: Yes No sand 338-339 ft.
 From 339-395 ft. with Coarse Aquarium sand

Date started 8-12-96 19.....
 Date completed 8-20-96 19.....

7. WELL TEST DATA

TEST METHOD:	Bailer		Pump		Air Lift	
	G.P.M.	Draw Down (Feet Below Static)	G.P.M.	Draw Down (Feet Below Static)	G.P.M.	Time (Hours)
RECEIVED 98 APR 20 PM 12:03 ENGINEERING DIVISION						

9. WATER LEVEL
 Static water level (10/31-96) 205 ft. feet below land surface
 Artesian flow..... G.P.M. 35 P.S.I.
 Water temperature cold °F Quality not known

10. DRILLER'S CERTIFICATION
 This well was drilled under my supervision and the report is true to the best of my knowledge.
 Name WAYNE DRILLING, INC. Contractor
 Address P.O. BOX 12370 Contractor
RENO, NEVADA 89510
 Nevada contractor's license number issued by the State Contractor's Board 0022549
 Nevada driller's license number issued by the Division of Water Resources, the on-site driller 908
 Signed [Signature] By driller performing actual drilling on site or contractor
 Date February 24, 1997

OFFICE USE ONLY
 Log No. 71494
 Permit No. _____
 Basin 84

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Consultant: _____ Client: _____
 1. OWNER MONTGOMERY WATSON ADDRESS AT WELL LOCATION Rocketdyne Former Nevada Field Laboratory Area B
 MAILING ADDRESS 365 Lennon Lane Walnut Creek, CA 94598 800 Axe Handle Canyon Road, Palmino Valley
 2. LOCATION SW 1/4 SE 1/4 Sec. 29 T 22N N/S R 21 E Washoe County
 PERMIT NO. M/O 708 MW B-5B 076-150-01 Palomino Valley
Issued by Water Resources Parcel No. Subdivision Name

3. WORK PERFORMED 4. PROPOSED USE 5. WELL TYPE
 New Well Replace Recondition Domestic Irrigation Test Cable Rotary RVC
 Deepen Abandon Other _____ Municipal/Industrial Monitor Stock Air Other _____

6. LITHOLOGIC LOG

Material	Water Strata	From	To	Thickness
Continued from page 1				
GRANODIORITE: Fine-to med-grained granodiorite comprised predominantly of feldspar, quartz, & biotite. Locally contains an unidentified, dark mafic mineral & is weathered, fractured & stained w/iron oxides.				
		171	395	224
190-202' hard fresh rock, a waxy grayish white color, xenoliths common.				
220-224' softer more weathered & fractured than above.				
@204' water encountered. Fractured surfaces have iron oxide build-up, some fractured surfaces appear finer grained w/slightly altered feldspars mineral grains & trace grains of pyrite. Clayey material common in this zone.				
224-248' moderately hard to hard rock w/xenoliths some fracturing w/iron oxide staining.				
242-243' soft, weathered, fractured w/partially altered feldspar mineral grains.				
248-256' soft & fractured w/moderately altered feldspar crystals, large biotite phenocrysts & trace hornblende.				
256-260' moderately hard rock, fractured with slight iron staining, some xenoliths.				
260-268' soft, weathered & fractured, feldspar moderately altered xenolith cuttings common				
268-291' moderately hard to hard rock,				
Continued on page 3				

8. WELL CONSTRUCTION
 Depth Drilled 395 Feet Depth Cased 393 Feet
 HOLE DIAMETER (BIT SIZE)
 From _____ To _____
 _____ Inches _____ Feet _____ Feet
 _____ Inches _____ Feet _____ Feet
 _____ Inches _____ Feet _____ Feet

Continued from CASING SCHEDULE page 1

Size O.D. (Inches)	Weight/Ft. (Pounds)	Wall Thickness (Inches)	From (Feet)	To (Feet)
Steel centralizers at 45', 105', 165', 225', 345', 8" x 5' Monument with lock. Well seal. & 390'.				
3/4 HP Grundfos Sub. Pump: intake set at 375.5'				
Steel end plate at 393'				
Perforations: Type perforation _____ Size perforation _____ From _____ feet to _____ feet From _____ feet to _____ feet				
Surface Seal: <input type="checkbox"/> Yes <input type="checkbox"/> No		Seal Type: <input type="checkbox"/> Neat Cement <input type="checkbox"/> Cement Grout <input type="checkbox"/> Concrete Grout		
Depth of Seal _____		Placement Method: <input type="checkbox"/> Pumped <input type="checkbox"/> Poured		
Gravel Packed: <input type="checkbox"/> Yes <input type="checkbox"/> No		From _____ feet to _____ feet		

Date started 8-12-96, 19____
 Date completed 8-20-96, 19____

7. WELL TEST DATA

TEST METHOD:	Bailer	Pump	Air Lift
G.P.M.	Draw Down (Feet Below Static)	Time (Hours)	

9. WATER LEVEL
 Static water level _____ 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 WAYNE DRILLING, INC. Contractor
 Address P.O. BOX 12370 Contractor
RENO, NEVADA 89510
 Nevada contractor's license number issued by the State Contractor's Board 0022549
 Nevada driller's license number issued by the Division of Water Resources, the on-site driller 908
 Signed [Signature]
 By driller performing actual drilling on site or contractor
 Date February 24, 1997

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 PERMIT NO. M/O 708 MW B-5B 076-150-01 Palomino Valley
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3. WORK PERFORMED 4. PROPOSED USE 5. WELL TYPE
 New Well Replace Recondition Domestic Irrigation Test Cable Rotary RVC
 Deepen Abandon Other Municipal/Industrial Monitor Stock Air Other

6. LITHOLOGIC LOG

Material	Water Strata	From	To	Thick-ness
Continued from page 2				
slightly fractured w/iron oxide staining & slightly altered feldspars.				
291-293' fractured zone w/a white clayey material observed on joint surfaces.				
293-319' hard rock w/trace grains of hornblende and pyrite.				
@300' Pegmatite dike observed in video log and cuttings, xenoliths common, observed in video log to be up to 6" in diameter.				
@310' water flow from borehole - 5 gpm.				
319-324' softer rock, finer grained, color change to waxy green, xenoliths comprised predominantly of biotite & green mineral, trace pyrite on fracture surfaces.				
324-352' moderately hard to hard rock, common xenoliths.				
@330' water flow from borehole - 10 gpm.				
@350' water flow from borehole - 20 gpm				
352-358' weathered & fractured w/heavy iron oxide staining, feldspars are slightly altered, trace pyrite, producing water.				
358-364' moderately hard to hard rock, trace grains of hornblende, & pyrite, slightly fractured with iron staining.				
364-372' softer, fractured rock, producing water. Medium to coarse mineral grains of quartz, feldspar, & biotite. Rock is				
Continued on page 4				

8. WELL CONSTRUCTION
 Depth Drilled 395 Feet Depth Cased 393 Feet
 HOLE DIAMETER (BIT SIZE)
 From To
 _____ Inches _____ Feet _____ Feet
 _____ Inches _____ Feet _____ Feet
 _____ Inches _____ Feet _____ Feet

CASING SCHEDULE

Size O.D. (Inches)	Weight/Ft. (Pounds)	Wall Thickness (Inches)	From (Feet)	To (Feet)

Perforations:
 Type perforation _____
 Size perforation _____
 From _____ feet to _____ feet
 From _____ feet to _____ feet

Surface Seal: Yes No Seal Type:
 Depth of Seal _____ Neat Cement
 Placement Method: Pumped Cement Grout
 Poured Concrete Grout
 Gravel Packed: Yes No
 From _____ feet to _____ feet

Date started 8-12-96 19____
 Date completed 8-20-96 19____

7. WELL TEST DATA

TEST METHOD:	Draw Down (Feet Below Static)	Time (Hours)
<input type="checkbox"/> Bailer <input type="checkbox"/> Pump <input type="checkbox"/> Air Lift	G.P.M.	
	98 APR 20 PM 12:03	

9. WATER LEVEL
 Static water level _____ 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.
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 Address P.O. BOX 12370 Contractor
 RENO, NEVADA 89510
 Nevada contractor's license number 0022549
 issued by the State Contractor's Board
 Nevada driller's license number issued by the Division of Water Resources, the on-site driller 980
 Signed _____
 By driller performing actual drilling on site or contractor
 Date February 24, 1997

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 Domestic Irrigation Test
 Municipal/Industrial Monitor Stock
 5. WELL TYPE
 Cable Rotary RVC
 Air Other.....

6. LITHOLOGIC LOG

Material	Water Strata	From	To	Thick-ness
Continued from page 3				
weathered yellowish brown color w/iron oxide staining w/calcite veins (up to 1/4" wide) in fractures.				
372-374' harder rock.				
374-376' soft weathered rock, med/coarse grained Rock is dull white color w/iron staining & a calcite on fracture surfaces.				
@370' water flow from borehole - 35 gpm.				
376-379' harder rock, med to coarse grained, trace pyrite grains some large quartz grains have a blue tint.				
379-382' softer, slightly weathered rock.				
382-385' soft, fractured rock w/iron oxide staining.				
385-389' harder & less fractured, trace pyrite & abundant biotite mineral grains.				
389-395' hard rock, very little fracturing or weathering.				
@395 water flow from borehole - 35 gpm.				

8. WELL CONSTRUCTION
 Depth Drilled 395 Feet Depth Cased 393 Feet
 HOLE DIAMETER (BIT SIZE)
 From To
 Inches Feet Feet
 Inches Feet Feet
 Inches Feet Feet

CASING SCHEDULE

Size O.D. (Inches)	Weight/Ft. (Pounds)	Wall Thickness (Inches)	From (Feet)	To (Feet)

Perforations:
 Type perforation.....
 Size perforation.....
 From..... feet to..... feet
 From..... feet to..... feet
 From..... feet to..... feet
 From..... feet to..... feet
 From..... feet to..... feet

Surface Seal: Yes No Seal Type:
 Neat Cement
 Cement Grout
 Concrete Grout
 Depth of Seal.....
 Placement Method: Pumped Poured
 Gravel Packed: Yes No
 From..... feet to..... feet

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

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TEST METHOD:	Bailer	Pump	Air Lift
G.P.M.	Draw Down (Feet Below Static)	Time (Hours)	