

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

OFFICE USE ONLY
Log No. 113305
Permit No. _____
Basin _____

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. 32288

1. OWNER National Nuclear Security Administration ADDRESS AT WELL LOCATION Nevada Test and Training Range
MAILING ADDRESS P.O. Box 98518, Las Vegas, NV 89193 Well ER-EC-15
Subdivision Name: N/A County: Nye

2. LOCATION SE ¼ NE ¼ Sec 5 T 09S N/S R 49 E Latitude 37 11' 09.90" UTM E 542,689.2 NAD 27
PERMIT/WAIVER No. R-1024G N/A Longitude 116 31' 08.56" N 4,115,624.0 NAD 83/WGS 84
Issued by Water Resources Parcel No. _____

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

LITHOLOGIC LOG				
Material	Water Strata	From	To	Thick-ness
Alluvium: Tuffaceous	N	0	70	70
Nonwelded Tuff: Zeolitic	N	70	140	70
Rhyolite Lava: Pumiceous, Zeol.	N	140	220	80
Rhyolite Lava: Glassy to devitrified	N	220	625	405
Bedded Tuff: Zeolitic	N	625	1180	555
Rhyolite Lava: Pumiceous, zeol.	Y	1180	1305	125
Rhyolite Lava: Glassy to devitrified	Y	1305	1580	275
Rhyolite Lava: Vitrophyre, black	Y	1580	1730	150
Rhyolite Lava: Flow breccia	Y	1730	1755	25
Nonwelded Tuff: Zeolitic	Y	1755	1790	35
Rhyolite Lava: Pumiceous, zeol.	Y	1790	1835	45
Rhyolite Lava: Glassy to devitrified	Y	1835	1895	60
Rhyolite Lava: Flow breccia	Y	1895	2020	125
Bedded Tuff: Zeolitic	Y	2020	2115	95
Ash-Flow Tuff: Partially welded	Y	2115	2125	10
Ash-Flow Tuff: Mod to densely welded, devitrified to glassy				
Bedded Tuff: Zeolitic	Y	2385	2745	360
Ash-Flow Tuff: Partially welded strongly altered	Y	2745	2810	65
Ash-Flow Tuff: Mod to densely welded, altered, fault at ~3000 ft	Y	2810	3060	250
Bedded Tuff: altered	Y	3060	3254	194
			TD	

WELL CONSTRUCTION					
Depth Drilled	3000	Feet	Depth Cased	2731	Feet
HOLE DIAMETER (BIT SIZE)					
	From		To		
42	Inches	surface	Feet	80	Feet
20.50	Inches	80	Feet	1220	Feet
14.75	Inches	1220	Feet	3254	Feet
CASING SCHEDULE					
Size O.D. (Inches)	Weight/Ft. (Pounds)	Wall Thickness (Inches)	From (Feet)	To (Feet)	
30	157.30	0.500	surface	78	
16.00	75.00/65.00	0.438/0.375	surface	1189	
7.625	26.40	0.328	surface	1173	
Perforations:					
Type of perforation	slotted 0.076 to 0.080 inches wide				
Size of perforation	2" long, spaced on 6 inch centers				
From	for 7-5/8" csg, 1393	feet to	1739	feet	
From	for 5-1/2 csg, 2156	feet to	2408	feet	
From	for 5-1/2 csg, 2807	feet to	3122	feet	
From	1st tbg behind csg, 2799	feet to	3141	feet	
From	2nd tbg behind csg, 2156	feet to	2395	feet	
Annular Seal: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No					
<input type="checkbox"/> Neat Cement	to	<input type="checkbox"/> Pumped	<input type="checkbox"/> Poured		
<input checked="" type="checkbox"/> Cement Grout	surf to 78	<input type="checkbox"/> Pumped	<input checked="" type="checkbox"/> Poured		
<input type="checkbox"/> Concrete Grout	to	<input type="checkbox"/> Pumped	<input type="checkbox"/> Poured		
<input type="checkbox"/> ≥30% Bentonite Grout	to	<input type="checkbox"/> Pumped	<input type="checkbox"/> Poured		
Gravel Pack: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	to	<input checked="" type="checkbox"/> Pumped	<input type="checkbox"/> Poured		
Type:	see attached page 3 with details of gravel pack & stemming				
Bentonite Chips: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	to	<input type="checkbox"/> Pumped	<input type="checkbox"/> Poured		
Type:					

Date started: 5-Nov, 20 10
Date completed: 1-Dec, 20 10

7. Water Level
Static water level: 1,192.00 feet below land surface
Artesian Flow: _____ G.P.M. _____ P.S.I.
Water Temperature: 147 °F
Quality: _____

8. WELL TEST DATA			
TEST METHOD:	G.P.M.	Draw Down (Feet Below Static)	Time (Hours)
<input type="checkbox"/> Bailor <input type="checkbox"/> Pump <input type="checkbox"/> Air Lift			

10. DRILLER'S CERTIFICATION
This well was drilled under my supervision and the report is true to the best of my knowledge.
Name National Security Technologies, LLC
Contractor
Address P. O. Box 98521
Contractor
Las Vegas, NV 89193-8521
Nevada contractor's license number _____
issued by the State Contractor's Board
Nevada driller's license number issued by the _____
Division of Water Resources, the on-site driller FP 2219
Signed Michael W. Walker
By driller performing actual drilling on site or contractor
Date 3-Jan-11

WELL DRILLER'S REPORT (cont)

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Well ER-EC-15

Perforations (cont.):

From	3rd tbg behind csg, 1381	feet to	1741	feet
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CASING SCHEDULE (cont.)				
Size O.D. (Inches)	Weight/Ft. (Pounds)	Wall Thickness (Inches)	From (Feet)	To (Feet)
7-5/8" stainless steel (SS)	23.6	0.301	1173	1741
5-1/2" stainless steel (SS)	18.99	0.258	1741	3144
1 st 2-7/8" SS tbg behind the casing	7.66	0.276	1150	3141
1 st 2-3/8" CS tbg behind the casing	4.70	0.190	surface	1150
2 nd 2-7/8" SS tbg behind the casing	7.66	0.276	1182	2395
2 nd 2-3/8" CS tbg behind the casing	4.70	0.190	surface	1182
3 rd 2-7/8" SS tbg behind the casing	7.66	0.276	1150	1741
3 rd 2-3/8" CS tbg behind the casing	4.70	0.190	surface	1150

DCNR/DWR
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WELL DRILLER'S REPORT (cont)

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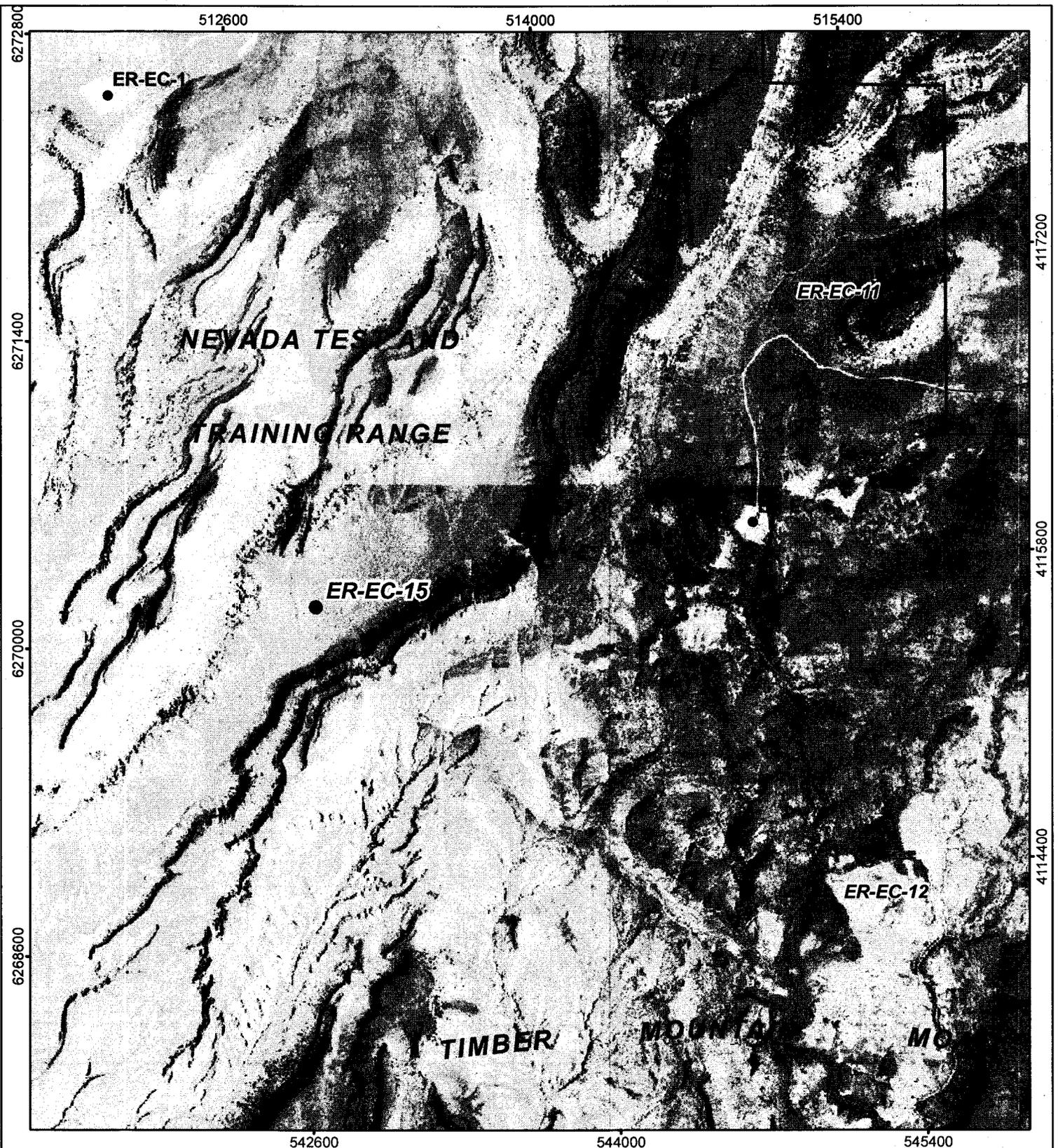
Well ER-EC-15

GRAVEL PACK (cont.)							
Gravel Pack:	<input checked="" type="checkbox"/>	Yes	No	to	<input checked="" type="checkbox"/>	Pumped	Poured
Type: 3/8 inch gravel,				2784' - 3189'			
Type: 6/9 silica sand,				2784' - 2765'			
Type: 20/40 sand,				2765' - 2752'			
Type: Portland Type II neat cement,				2752' - 2427'			
Type: 3/8 inch gravel,				2427' - 2139'			
Type: 6/9 silica sand,				2139' - 2121"			
Type: 20/40 sand,				2121' - 2108'			
Type: Portland Type II neat cement,				2108' - 1769'			
Type: 3/8 inch gravel,				1769' - 1334'			

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● Existing drill hole
 ● Proposed well location
 — NTS boundary
 — Unpaved road

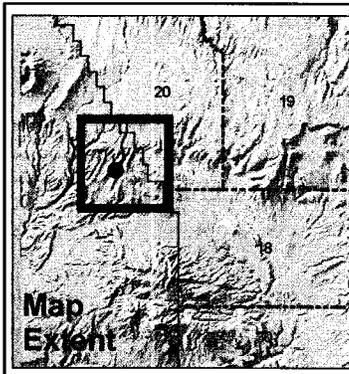
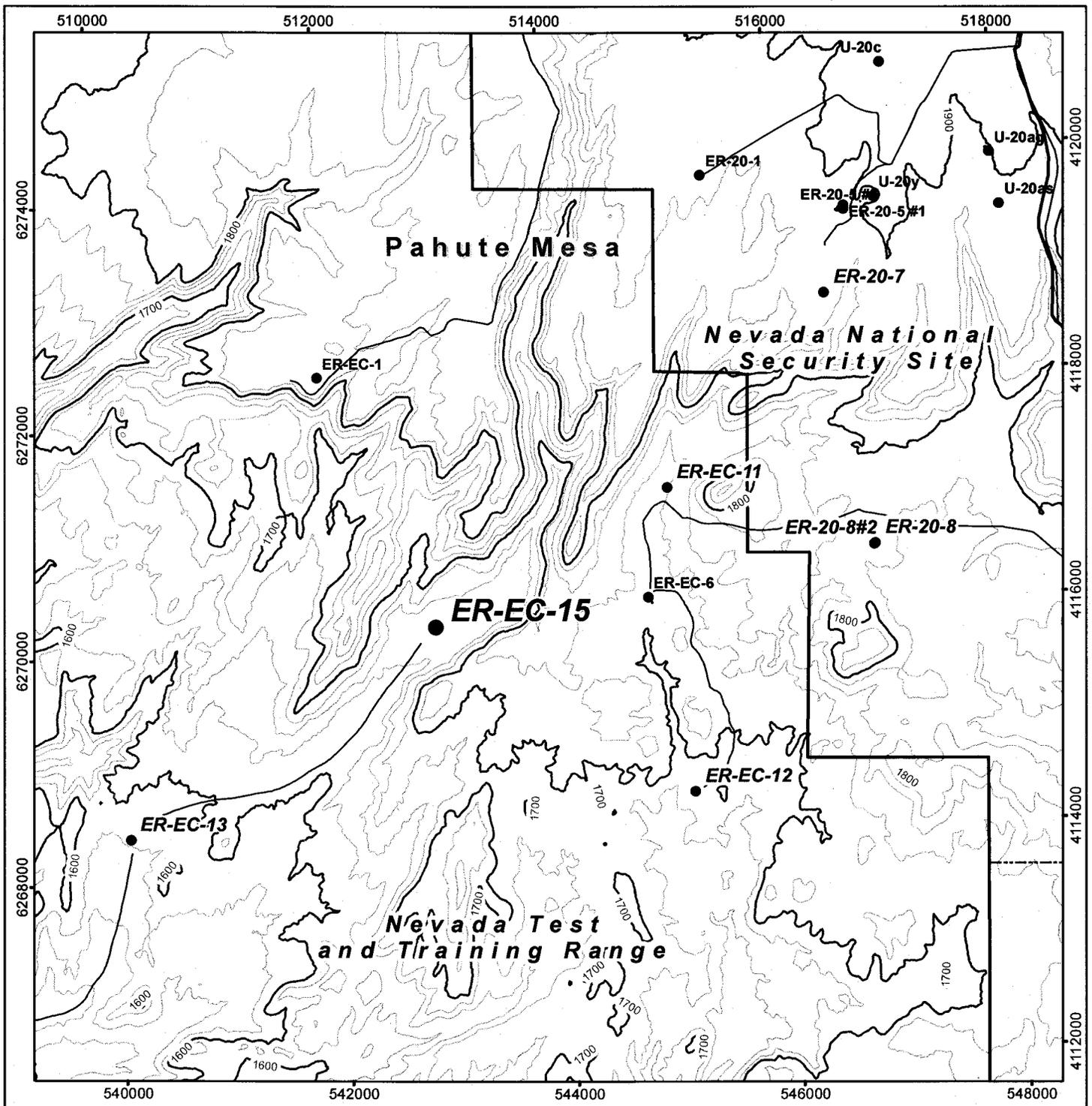
Nevada Central State Plane Projection (meters), North American Datum 1983
 Source: NSTec, 2009

1,500 750 0 1,500 3,000 ft
 500 250 0 500 1,000 m

Background imagery is one-meter resolution orthophoto, acquired in 1998
 Black tick marks are in Nevada State Plane, Central Zone, NAD83, meters
 Blue tick marks are in Universal Transverse Mercator, NAD83, meters

DONOR/DNR
 POSSESSED
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Figure G.3-1
Orthophoto of the Well ER-EC-15 Area



- Existing drill hole
- ER-EC-15 well location
- Paved road
- Unpaved road
- NNSS boundary
- - - - NNSS operational area
- Major elevation contour (100 m)
- Minor elevation contour (25 m)

Nevada Central State Plane Projection (meters), North American Datum 1983

DOWN/DWR
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1,000 500 0 1,000 2,000 m

3,000 1,500 0 3,000 6,000 ft

Black tick marks are in Nevada State Plane, Central Zone, NAD83, meters
Blue tick marks are in Universal Transverse Mercator, NAD83, meters

Figure 1-2

Topographic Map of the Well ER-EC-15 Area Showing the Location of Roads and Nearby Drill Holes