

OFFICE USE ONLY
 Log No. 43816
 Permit No. 10-154
 Basin 10-154

PRINT OR TYPE ONLY
 DO NOT WRITE ON BACK

WELL DRILLER'S REPORT

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

NOTICE OF INTENT NO. 18515

1. OWNER TOiyabe NATIONAL FOREST ADDRESS AT WELL LOCATION None
 MAILING ADDRESS 100 Midas Canyon Road
Austin, NV 89310

2. LOCATION NE 1/4 SE 1/4 Sec 32 T 18 S R 56 E LANDER County
 PERMIT NO. Issued by Water Resources Parcel No. Subdivision Name

3. WORK PERFORMED
 New Well Replace Recondition
 Deepen Abandon Other
 4. PROPOSED USE
 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
<i>Originally reported as being in LN (Unsurveyed)</i>				
<i>Well did not need cleaning out. Needs new well with old one abandoned. However, this one can be salvaged. See enclosed report.</i>				

8. WELL CONSTRUCTION
 Depth Drilled.....Feet Depth Cased.....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)
<u>5 9/16</u>			<u>0</u>	<u>20?</u>
<u>4 1/2 or 3 1/2</u>	<u>From</u>		<u>18 1/2</u>	<u>210</u>

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...152.....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 MUTH DRILLING Co. Contractor
 Address 203 PINE ST. 89801 Contractor
 Nevada contractor's license number issued by the State Contractor's Board 10819
 Nevada driller's license number issued by the Division of Water Resources, the on-site driller 632
 Signed James V. Muth
 By driller performing actual drilling on site or contractor
 Date 1-17-94

Date started 1-6, 1994
 Date completed 1-6, 1994

7. WELL TEST DATA

TEST METHOD: Bailer Pump Air Lift

G.P.M.	Draw Down (Feet Below Static)	Time (Hours)
<u>2.5</u>	<u>?</u>	<u>1/2</u>
<u>8</u>	<u>?</u>	<u>100 min.</u>

MUTH DRILLING COMPANY

JAMES V. MUTH
203 Pine St.
Elko, Nevada 89801
Ph. 702-738-7527

JANUARY 10, 1994



REPORT ON WORK COMPLETED AT THE PETERSON WELL

Conditions at the Site

Muth Drilling Co. (MDC) arrived at the well site at 9:30 a.m. Thursday, January 6, 1994. The site was in disarray.

The windmill tower had buckled. The legs were still attached and the head rested on the ground. A pump jack was connected to sucker rods in the well. A crow's nest had existed in the windmill tower and debris ~~and feces from the nest were all~~ over the pump jack & concr

Can you believe this?

The well was located in th
inch thick concrete slab.
inch nominal diameter was
the slab. The concrete su
and disintegrated for seve
vertically. 2" (nominal)
of the casing approximatel
heavy steel clamp. The cl
steel plate that covered t

*He flushed the
rat nest down the
annulus!*

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On the southern edge of th
several feet in diameter that extended under the slab
completely exposing the casing. A large pack rat nest
surrounded the casing. The top of the nest was about 3 ft.
below the bottom of the slab. 21 gallons of water that was
subsequently bailed from the well and discharged into the
cavern disappeared immediately, suggesting that there is an
open annulus around the casing.

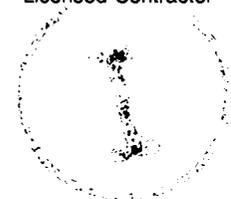
There was also, at the site, a corral with two large circular watering troughs, none of which had been maintained.

Work Accomplished

Muth Drilling Co. removed, intact, the windmill tower and pump jack. Next, the sucker rods were pulled, estimating the static water level to be 150 ft. The tubing, which was in random lengths, was then pulled. None of the above was actually measured.

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A 3 1/2 inch diameter bailer was lowered into the casing. The bailer set down on something at 18 ft, then dropped off and went another 2 1/2 ft. The bailer had been welded several times and was not straight but it had been through 4 inch diameter casing on many other occasions. A 2 3/8" diameter bailer was then lowered into the hole. It went to bottom which was measured to be 210 ft. The well did not need cleaning out.

Only 6 bailers full of water were removed. There was no foul smell and no heavy particulate matter. It was determined that pumping would provide the best results.

A 2 13/16 inch diameter pump was set at 175 ft, connected to a flow meter and a discharge line which was extended into the corral and discharged into one of the circular troughs. The well was pumped for 100 minutes and produced 800 gallons of water. After one hour the water began to clear and at the end of the test it was only slightly cloudy.

No attempt was made to measure drawdown or recovery levels because the small diameter of the casing would not allow the use of the probe.

The pump was pulled and the well was chlorinated by passing a perforated tube filled with HTH granules down and up twice through the water zone.

RECOMMENDATIONS

1. A check with the State Engineer's office indicates that no permit exists for a well at this location. The most important item, therefore, is to rectify this matter.
2. The rat's nest beneath the concrete slab should be removed completely. There is an obvious conduit around the casing that would allow contaminants to reach the aquifer. A waiver should be sought to allow a packer to be placed, as deep as possible, around the casing and the annulus filled with bentonite or neat cement.
3. The casing should be extended so that it is at least one foot above ground level, in compliance with Nevada Regulations. I suggest that a 6" x 5" reducer be welded onto the existing casing and a short 6" nipple be welded to the reducer. Six inch diameter well completion materials are far more plentiful and adaptable than are 5 inch.
4. The well is so small in diameter that a standard 4 inch (nominal; 3 7/8" actual) diameter submersible pump will not fit inside the casing.

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A positive displacement type pump cylinder can be used effectively with a windmill or a pump jack.

However, a packing gland should be installed at the top to prevent windblown sand and small gravel from getting inside the tubing. The leathers on the working valve of the pump that was removed indicated severe damage from abrasive material. In fact, a small gravel-sized particle was removed from that pump.

The Grundfos and GMP companies manufacture small diameter submersible pumps that will fit in this well but require a generator to operate. I recommend the Grundfos pump for this application. A good generator set (1800 rpm) operated with L.P. gas complete with remote controls and protected with a concrete block building would be ideal.

A pump jack operated by solar power is also an option. So too, is another windmill.

Any of these systems properly installed and maintained should provide years of reliable service.