

1506-00102



TO: DAN DRAGAN
UTILITY DIVISION
FROM: DON MAHIN
SUBJECT: "BIG WELL"

SPANISH SPRINGS
GEOLOGICAL WATER STUDY REPORT

JOYCE SWEGER

Att., M. Douglas Miller, Consultant

Prepared by: ¹⁹⁷⁹
Dennis B. Nakamoto, Geologist
Northwest Mineral Exploration
(1981)

20/21

The Spanish Springs, Section 7, area is believed to contain two different aquifers. One aquifer lies within the alluvial deposits. Fault structures and impervious clay bodies control the direction of groundwater movement. The second aquifer is believed to lie within the volcanic basement rock.

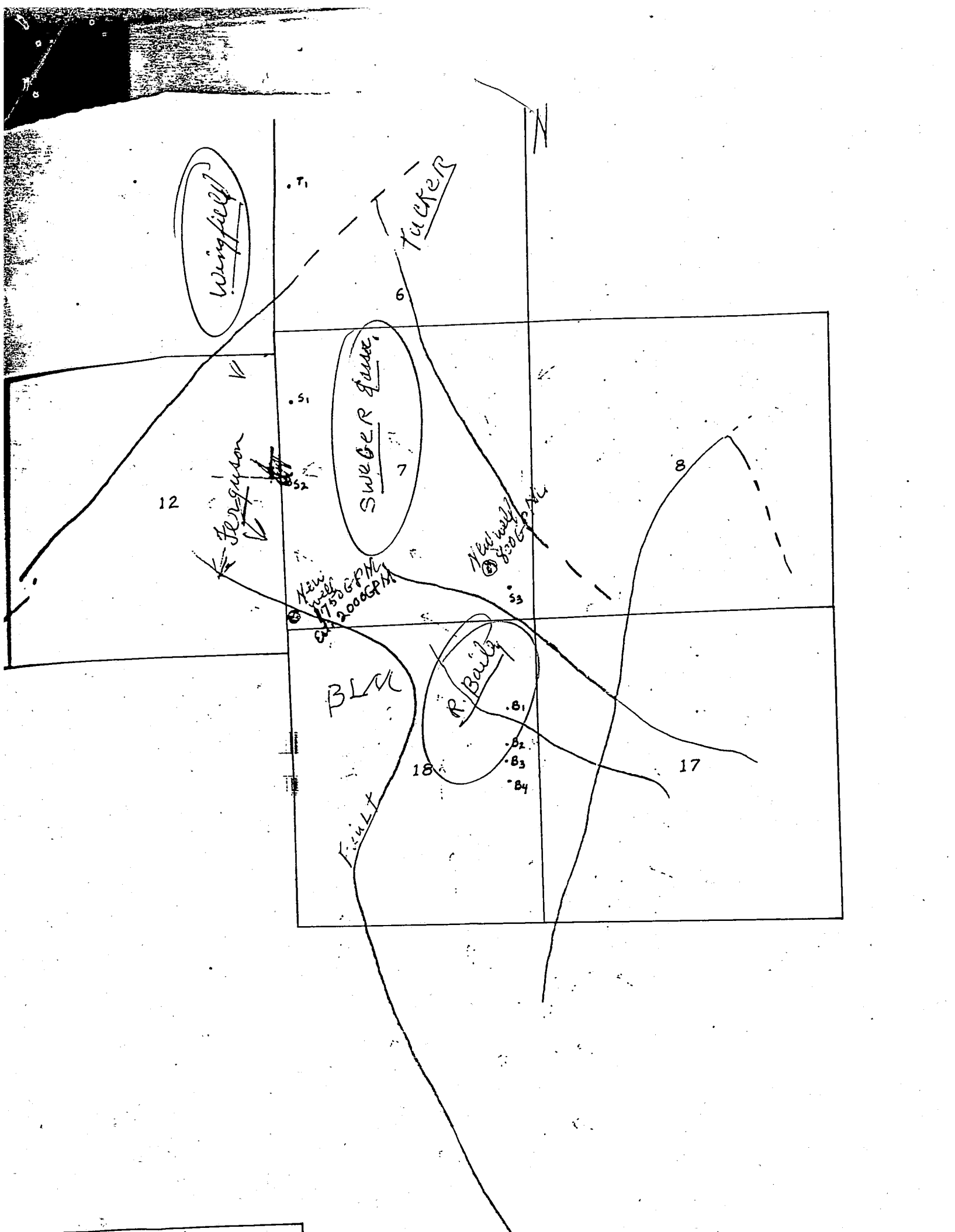
There is, in our opinion, sufficient recharge of the alluvial aquifers to sustain many domestic wells. Wells dug for Bailey and Ignacio, in Sections 18 ^{20/21} and 7 have helped to delineate various clay bodies. In both instances, Bailey and Ignacio wells, other wells in close proximity have not shown the clay thicknesses found in the first wells.

The discovery of aquifers within the buried volcanics will produce sufficient waters to sustain subdivisions. These groundwaters are moving through the vugs and cavities formed in the volcanics at the time of extrusion. The groundwaters in the lavas appear to be under pressure. A spring located in the SE $\frac{1}{4}$ of Section 12 ^{20/20} is believed to originate from a fracture in the volcanics.

In conclusion, our studies indicate the need to set up a drill rig on Sweger's Well #3 to continue drilling for exploration for the aquifer in the volcanics. After completion of work on Well #3, the drill operation should be moved to the NE $\frac{1}{4}$ of the NE $\frac{1}{4}$, Section 7 to locate the alluvial aquifer and the volcanic aquifer.

Dennis B. Nakamoto, Geologist
Northwest Mineral Exploration
January 16, 1979

Dennis B. Nakamoto



ings, Sec. 7, T. 20N, R. 21E

ter Study Map, Overlay

; Att., M. Douglas Miller, Consultant

pls

here inferred

Proposed Groundwater Movement

B_n Bailey Well

S_n Sweger Well

Prepared by Dennis B. Nakamoto, Geolo
Northwest Mineral Exploration, Reno,
Overlay for Vista 7.5 Minute Map

TRIPPLICATE
(PLEASE PRINT)

Rec'd 8/24/81

BUREAU OF LABORATORIES AND RESEARCH
NEVADA DIVISION OF HEALTH

57225

WATER CHEMISTRY:

1660 N. Virginia Street
Reno, Nevada 89503

Information in box must be completed or analysis will not be performed.

County	Washoe
Township	21N
Range	20E
Section	SE 1/4 sec 7
General location	Spanish Springs
Source address	

COLLECTING INSTRUCTIONS: Laboratory requires a clean sample. Samples which contain dirt or sediment will not be accepted.

Sampled Aug 10 1981 Date submitted 8-10-81
 by Joyce ESWEGER Owner phone no. 882-3534
 Address 1250 Riverside Drive, Reno, Nev
 Report to: M.D. MILLER
 Address 1981 G Street
 City Carson City State Nevada
 882-3534

WATER SOURCE:

Well Spring _____ Surface _____
 Hot _____ Cold Depth 300' Ft.
 Casing diameter 10" in depth 300' Ft.
 Now in use _____ Yes No

ROUTINE DOMESTIC ANALYSIS PLEASE CHECK BOX 0, 267			FOR PARTIAL ANALYSIS CIRCLE CONSTITUENT DESIRED		FOR CONSTITUENTS NOT LISTED BELOW PRINT IN CONSTITUENT DESIRED IN SPACE BELOW			
Constituent	P.P.M.	Constituent	P.P.M.	Constituent	P.P.M.	Constituent	P.P.M.	
137	Chloride	4	Iron	0.05	Copper	0.05		
30	Nitrate	8.1	Manganese	0.05	Zinc	0.05		
7	Alkalinity	74	Color	2	Barium	0.01		
3	Bicarbonate	71	Turbidity	0.2	Boron	0.05		
35	Carbonate	8	p.H.	8.40	Silica	1		
6	Fluoride	0.21						
17	Arsenic	0.000						

RECEIVED
AUG 18 1981

Remarks: _____
 Chemical quality meets the State of Nevada Drinking Water Standards.
 8-14-81

HR145 O-2151
 BUREAU OF LABORATORIES AND RESEARCH
 NEVADA DIVISION OF HEALTH
 Reno—Las Vegas

Colif. _____
 FC- _____
 FS- _____

Sampled by M.D. MILLER Date 8-10-81 Hour 7:10 AM
 Location Spanish Springs Well Washoe
 Sample in Well 300' deep Dilution requested _____
 Raw Surface _____ Fecal Colif. 1: _____
 Sewer _____ Fecal Strep 1: _____
 Well Water SE 1/4 sec 7
 T21N R20E

This space for lab use only
 Results: (Membranefilter) Rec'd > 30 Hrs. > 20° C
 Other: _____ MPN _____
 Coliforms 0 /100 ML; Fecal Coli _____ /100 ML
 Fecal Strep _____ 100 ML; > 200 other bacteria _____

YOUR RETURN
 M.D. MILLER
 1981 G. ST.
 CARSON CITY, NV. 89701

NOTE: Coliform counts of 0 (<1) meet USPHS bacteriological standards for drinking water. Call your area sanitarian for explanation of results.

Log No.
Permit No. 36570
Basin.....

Spanish Springs
well 592
WELL DRILLERS REPORT
Please complete this form in its entirety

1. OWNER Mrs. Joyce E. Luzzo ADDRESS 1250 Riverside Dr.
& Assoc. G. Doug Mills Reno Nev.
2. LOCATION S.W. 1/4 S.W. 1/4 Sec. 7 T. 20 N. R. 21 E. Washoe County
PERMIT NO. 592 Permit

3. TYPE OF WORK
New Well Recondition
Deepen Other
4. PROPOSED USE
Domestic Irrigation Test
Municipal Industrial Stock
5. TYPE WELL
Cable Rotary
Other

6. LITHOLOGIC LOG

Material	Water Strata	From	To	Thick-ness
<u>Sand</u>		<u>0</u>	<u>2</u>	
<u>Sandy clay</u>		<u>2</u>	<u>16</u>	
<u>grey clay</u>		<u>16</u>	<u>42</u>	
<u>Volcanic Rock</u>		<u>42</u>	<u>63</u>	
<u>fractured Rock</u>		<u>63</u>	<u>68</u>	
<u>Hard Volcanic Rock</u>		<u>68</u>	<u>75</u>	
<u>fractured Rock</u>		<u>75</u>	<u>84</u>	
<u>Hard Volcanic Rock</u>		<u>84</u>	<u>101</u>	
<u>soft Volcanic Rock</u>		<u>101</u>	<u>124</u>	
<u>hard Rock</u>		<u>124</u>	<u>136</u>	
<u>fractured Vol. Rock</u>	<input checked="" type="checkbox"/>	<u>136</u>	<u>156</u>	
<u>hard Vol. Rock</u>	<input checked="" type="checkbox"/>	<u>156</u>	<u>160</u>	
<u>fractured Rock</u>	<input checked="" type="checkbox"/>	<u>160</u>	<u>165</u>	

8. WELL CONSTRUCTION
Diameter hole 14 inches Total depth 165 feet
Casing record.....
Weight per foot 58.71 Thickness 250
Diameter From To
14 inches 0 feet 165 feet
..... inches feet feet
..... inches feet feet
..... inches feet feet
..... inches feet feet
..... inches feet feet
Surface seal: Yes No Type Cement grout
Depth of seal 56 feet
Gravel packed: Yes No
Gravel packed from 56 feet to 165 feet
Perforations:
Type perforation factory sawed
Size perforation 3/32 x 2 1/2
From feet to feet
From 101 feet to 165 feet
From feet to feet
From feet to feet
From feet to feet

9. WATER LEVEL
Static water level 27 Feet below land surface
Flow..... G.P.M. 2000
Water temperature 51 F. Quality Clear

Date started 7/13 1981
Date completed 7/15/81 1981

7. WELL TEST DATA

Pump RPM	G.P.M.	Draw Down	After Hours Pump

1506-00102

10. DRILLERS CERTIFICATION
This well was drilled under my supervision and the report is true to the best of my knowledge.
Name Paul Williams
Address 2250 Patterson Sparks
Nev.
Nevada contractor's license number 14483
Nevada driller's license number 957
Signed Paul Williams
Date 7/16/81

BAILER TEST

G.P.M.	Draw down	feet	hours