TO: Water Rights Section FEB 12, 2001 ~~199~~

FROM: Groundwater/Hydrology Section IVAN GALL - GRANTS PASS
Reviewer's Name

SUBJECT: Application G- 15253

GROUNDWATER/SURFACE WATER CONSIDERATIONS

1. ~~PER THE _____ Basin rules, one or more of the proposed POA's is/is not within _____ feet/mile of a surface water source (_____) and taps a groundwater source hydraulically connected to the surface water.~~

2. BASED UPON 0AR 690-09 currently in effect, I have determined that the proposed groundwater use
   a. ___ will, or have the potential for substantial interference with the nearest
   b. X will not surface water source, namely WILLIAMS CREEK ; or
   c. ___ will if properly conditioned, adequately protect the surface water from interference:
      i. ___ The permit should contain condition #(s)_____;
      ii. ___ The permit should contain special condition(s) as indicated in "Remarks" below;
      iii. ___ The permit should be conditioned as indicated in item 4 below; or
   d. will, with well reconstruction, adequately protect the surface from substantial interference.

GROUNDWATER AVAILABILITY CONSIDERATIONS

3. BASED UPON available data, I have determined that groundwater for the proposed use
   a. X will, or likely be available in the amounts requested without injury to prior rights
   b. ___ will not and/or within the capacity of the resource; or
   c. ___ will if properly conditioned, avoid injury to existing rights or to the groundwater resource:
      i. ___ The permit should contain condition #(s) * ;
      ii. ___ The permit should contain special condition(s) as indicated in "Remarks" below;
      iii. ___ The permit should be conditioned as indicated in item 4 below; or

* SEE ATTACHED MEMO

4. a. ___ THE PERMIT should allow groundwater production from no deeper than _____ ft. below land surface;
   b. ___ The permit should allow groundwater production from no shallower than _____ ft. below land surface;
   c. ___ The permit should allow groundwater production only from the _____ groundwater reservoir between approximately _____ ft. and _____ ft. below land surface;
   d. ___ Well reconstruction is necessary to accomplish one or more of the above conditions.
   e. ___ One or more POA's commingle 2 or more sources of water. The applicant must select one source of water per POA and specify the proportion of water to be produced from each source.

REMARKS: _____

G-15253

(Well Construction Considerations on Reverse Side)

WELL CONSTRUCTION (If more than one well doesn't meet standards, attach an additional sheet.)

5. THE WELL which is the point of appropriation for this application does not meet current well construction standards based upon:
   a.____review of the well log;
   b.____field inspection by _____;
   c.____report of CWRE _____;
   d.____other: (specify) _____

N/A

6. THE WELL construction deficiency:
   a.____constitutes a health threat under Division 200 rules;
   b.____commingles water from more than one groundwater reservoir;
   c.____permits the loss of artesian head;
   d.____permits the de-watering of one or more groundwater reservoirs;
   e.____other: (specify) _____

7. THE WELL construction deficiency is described as follows: _____

8. THE WELL
   a.____was, or
   b.____was not
   constructed according to the standards in effect at the time of original construction or most recent modification.
   c.____I don't know if it met standards at the time of construction.

RECOMMENDATION:

A.____I recommend including the following condition in the permit:
"No water may be appropriated under terms of this permit until the well(s) has been repaired to conform to current well construction standards and proof of such repair is filed with the Enforcement Section of the Water Resources Department."

B.____I recommend withholding issuance of the permit until evidence of well reconstruction is filed with the Enforcement Section of the Water Resources Department.

C.____REFER this review to Enforcement Section for concurrence.

THIS SECTION TO BE COMPLETED BY ENFORCEMENT PERSONNEL

I concur in G/H's recommendation A or B above relating to conditioning or withholding the permit

_____ _____, 199__.
(Signature)

I do not concur in G/H's recommendation A or B above relating to conditioning or withholding the permit for the following reasons: _____

_____ _____, 199__.
(Signature)

Water Resources Department

MEMO 2-12, 2001

TO **Application G-** 15253

FROM **GW:** JUAN GALL
(Reviewer's Name)

SUBJECT **Scenic Waterway Interference Evaluation**

☑ Yes
☐ No

The source of appropriation is within or above a Scenic Waterway

☑ Yes
☐ No

Use the Scenic Waterway condition (Condition 7J).

PREPONDERANCE OF EVIDENCE FINDING: (Check box only if statement is true)

☑ At this time the Department is unable to find that there is a preponderance of evidence that the proposed use of ground water will measurably reduce the surface water flows necessary to maintain the free-flowing character of a scenic waterway in quantities necessary for recreation, fish and wildlife.

FLOW REDUCTION: *(To be filled out only if Preponderance of Evidence box is not checked)*

Exercise of this permit is calculated to reduce monthly flows in _____ Scenic Waterway by the following amounts expressed as a proportion of the consumptive use by which surface water flow is reduced.

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec

Oregon
John A. Kitzhaber, M.D., Governor

Water Resources Department
942 SW 6th Street
Suite E
Grants Pass, OR 97526
(541) 471-2886
FAX (541) 471-2876

WATER RESOURCES DEPARTMENT MEMORANDUM

Date: February 12, 2001

To: Groundwater/Hydrology

From: Ivan Gall – Grants Pass

Subject: GW Application ***G-15253***

Applicant: Lawrence Wendell and Noretta Lynn Baker
Seek: 60 gpm for 13.5 acres; 33.75 acre-feet
From: 1 drilled well, Williams Creek sub-basin, Rogue Basin
Proposed Use: Supplemental Irrigation (Hay during April-October)
Quad Name: Williams

Well # 1 ***(JOSE 17473 and Jose 51032, L15969)***
39S/05W-5cd (SE of the SW), Tax Lot 500 Josephine County
Well elevation at site is ~1,630 ft (NGVD 1929)
Williams Creek elevation is ~1,540 ft (NGVD 1929)
Well is ~1,500 ft North from Williams Creek
Well is 2,000 ft Southeast from Munger Creek
Well is 210 ft deep with WBZs at 212-213 ft bgs (see amended log)
SWLs: 8-7-1994 43 ft (well log); 10-2-1997 15 ft bgs (well log);
9-22-2000 22.77 ft bgs (Aquifer test data, Gall and Daft)

Evaluation Summary

The subject property is located at 3065 Cedar Flat Road. The well is located approximately halfway between Munger Creek to the north and Williams Creek to the south. Topography is relatively subdued, sloping to the east and towards both drainages. Land use is scattered homes with irrigated pasture and fields.

The applicant is applying for 60 gallons per minute with a total duty of 33.75 acre-feet for supplemental irrigation of hay.

The bedrock geology in the area is composed of both granitic rocks and metamorphic rocks of the Applegate Group. Based on well locations and material on the well logs, it appears that the subject well is completed in the fractured granitic bedrock, with the water-bearing

zone at approximately 212-213 feet below ground surface (bgs). Based on the bedrock source of ground water, and the distances of 1,500 and 2,000 ft to Williams and Munger Creek, respectively, it is unlikely that significant interference with surface water flows would occur from the proposed use of the well. However, it should be recognized that alluvium overlying the bedrock aquifer may be hydraulically connected such that ground water use in the bedrock aquifer could cause or increase downward leakage of ground water.

Ground water occurrence in the area appears to be good, with most wells in sections 5-8 being less than 200 feet deep and producing greater than 5 gpm. GRID lists a total of 108 well logs for these four sections. Of these 108 logs, only 7 well deepenings are listed. These data suggest that the combination of saturated alluvium overlying fractured bedrock has been a relatively reliable source of ground water for the area.

Some long-term water level data from a state observation well (#261, Steve Miller Shop Well) exist for this area (hydrograph is attached). This well is located approximately 6 miles from the subject wells. Water level data collected at well #261, from approximately 1981 to present, indicate a seasonal fluctuation of approximately four to six feet, with no long-term water level declines. Unfortunately, this data is of limited value due to the distance between the subject wells and well #261, and the uncertainty of a well log for well #261.

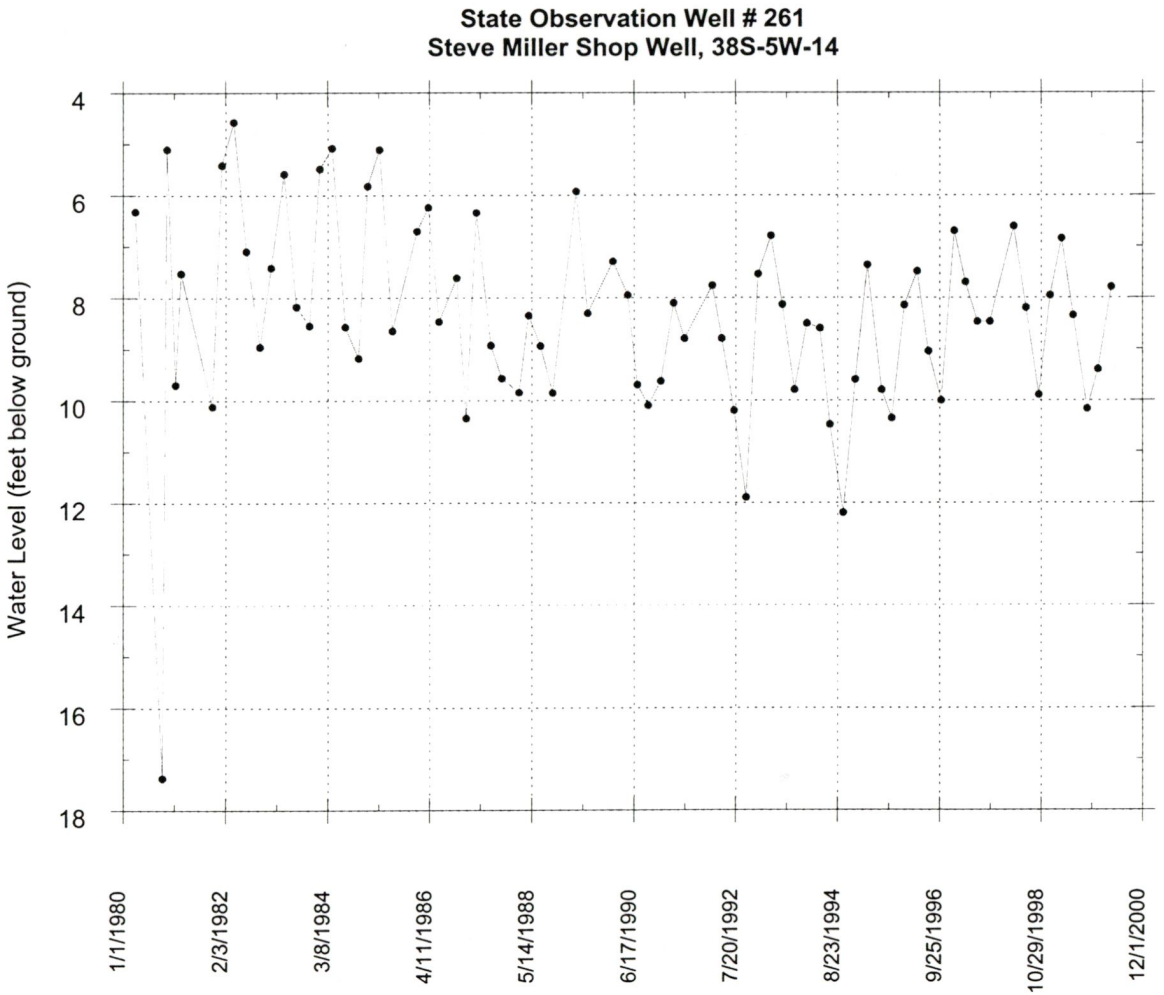
Gall and Daft conducted an aquifer test on the Baker well on September 22, 2000, pumping 50 gpm for 326 minutes. A summary of the aquifer test results is attached. No boundary conditions were observed in the drawdown data, and no influence on water levels in two nearby observation wells was observed. The aquifer test was conducted using a discharge of 50 gpm, and the applicant is applying for 60 gpm. Although the short duration of the aquifer test is sufficient to help characterize the response of water levels in nearby wells to short-term pumping at the Baker well, it is not sufficient to estimate the effects of long-term pumping. However, based on the results of the short-term aquifer test, it appears that increasing the discharge rate approximately 15% is not likely to result in substantial interference with nearby wells or surface water.

Recommendation:

The ground water resource appears to be available at this location to support supplemental irrigation of 13.5 acres without the potential for substantial interference with neighboring wells. The permit shall include the following conditions:
7B, 7C, 7F. Additionally, a condition shall be added to specify the source of appropriated ground water. For example, "Ground water shall be appropriated from a single drilled well, Well #1 (JOSE 17473 and JOSE 51032, L15969) located 860 feet North and 2,208 feet East from the S.W. Corner of Section 5 in the fractured granite aquifer, with total well depth not to exceed 210 feet below ground surface, and being cased and sealed to a depth of 68 feet below ground surface".

References:

1. Aquifer test data, conducted by Gall and Daft, 9-22-2000.
2. WRD GRID well log database.
3. USGS topographic map, Williams, OR 1:24,000 sheet.
4. Geohydrologic Map, Josephine County, Oregon. Paul W. Hughes, 1979.


State Observation Well # 261
Steve Miller Shop Well, 38S-5W-14
Water Level (feet below ground)
4
6
8
10
12
14
16
18
1/1/1980
2/3/1982
3/8/1984
4/11/1986
5/14/1988
6/17/1990
7/20/1992
8/23/1994
9/25/1996
10/29/1998
12/1/2000

WATER RESOURCES DEPARTMENT MEMORANDUM

Date: September 26, 2000

To: Groundwater/Hydrology

From: Ivan Gall – Grants Pass

Subject: Wendall Baker Aquifer Test, 3065 Cedar Flat Road, Williams, OR

Ivan Gall and Norm Daft conducted a short aquifer test on September 22, 2000, at the property of Wendall Baker, 3065 Cedar Flat Road, Williams, OR. The purpose of the aquifer test was to evaluate the ability of the aquifer to provide Mr. Baker with ground water without substantial interference to Williams Creek and other nearby wells. Mr. Baker intends to apply for 45 gpm of ground water, supplemental to his surface water right on Williams Creek. A brief summary of the aquifer test is provided below and on attached data sheets and plots.

Pumping Well:	JOSE 17473, JOSE 51032 (amended log), L15969
Observation Well #1:	JOSE 52587, owner Dan Vidlak
Observation Well #2:	JOSE 10058, owner Trent Dashiell (Permit G12752)
Discharge Rate:	50 gpm
Pumping Duration:	326 minutes; Pump on 07:50, pump off 13:20

Groundwater was discharged into a nearby pond approximately 50 feet from the pumping well. The pond contained water prior to beginning the aquifer test. Observation wells 1 and 2 were located (very) approximately 200 and 350 feet from the pumping well, respectively. All three wells were in a line trending approximately east-west, and for the most part, are constructed similarly to one another. All three wells are completed into a fractured granitic aquifer. Most wells in this area tend to have good yields and water quality.

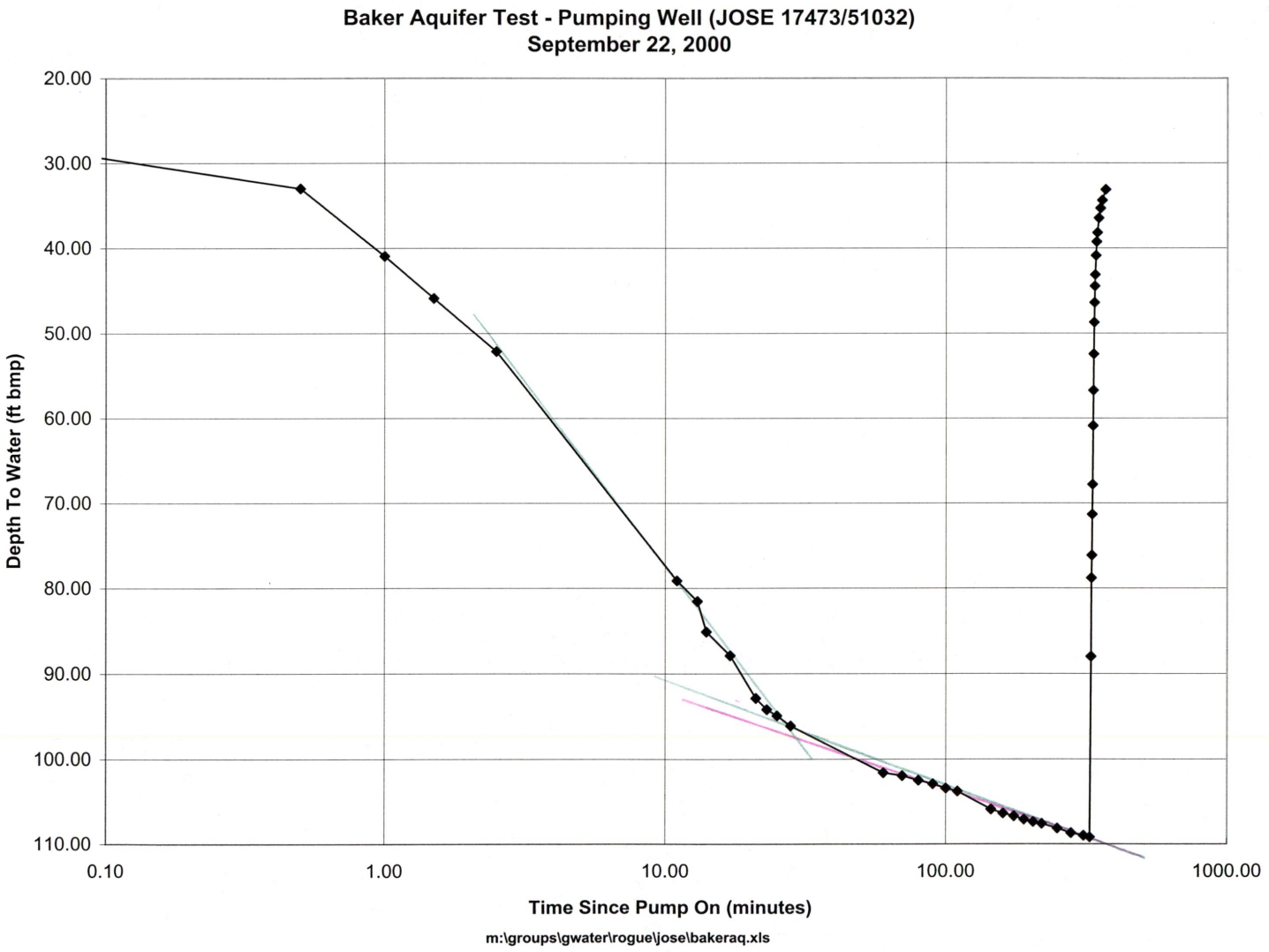
Prior to the test, several water level measurements were collected at each well. Water levels in all three wells were observed to be recovering slowly. The Vidlak observation well had been on earlier that morning running sprinklers, but was turned off at approximately 0630. My initial thought was that all three wells were recovering as a result of the Vidlak pumping, but following the pumping portion of the test, it appears that the Baker pumping well had no hydraulic effect with either the Vidlak or the Dashiell observation wells. The Baker well had been used the evening before for approximately 1.5 hours.

Early time data for the Baker pumping well is sparse due to measurement difficulties. The water level probe hung several times, and several openings in the sanitary seal had to be tried. The southwest bolt hole provided the best measurement access for the probe.

The aquifer test was initially planned for 12 hours of pumping. However, due to lack of response in either observation well, the relatively slow decline of the water level in the pumping well, and staff availability, I decided to terminate the test after approximately 5.4 hours of pumping. At this point in the test, no apparent boundary conditions were evident, and no influence on nearby wells was observed.

Summary

Based on the results of this short aquifer test, it appears that the forth-coming Wendall Baker application for 45 gpm supplemental ground water is not likely to cause substantial interference with Williams Creek or other nearby ground water wells.


Baker Aquifer Test - Pumping Well (JOSE 17473/51032)
September 22, 2000
Depth To Water (ft bmp)
20.00
30.00
40.00
50.00
60.00
70.00
80.00
90.00
100.00
110.00
0.10
1.00
10.00
100.00
1000.00
Time Since Pump On (minutes)
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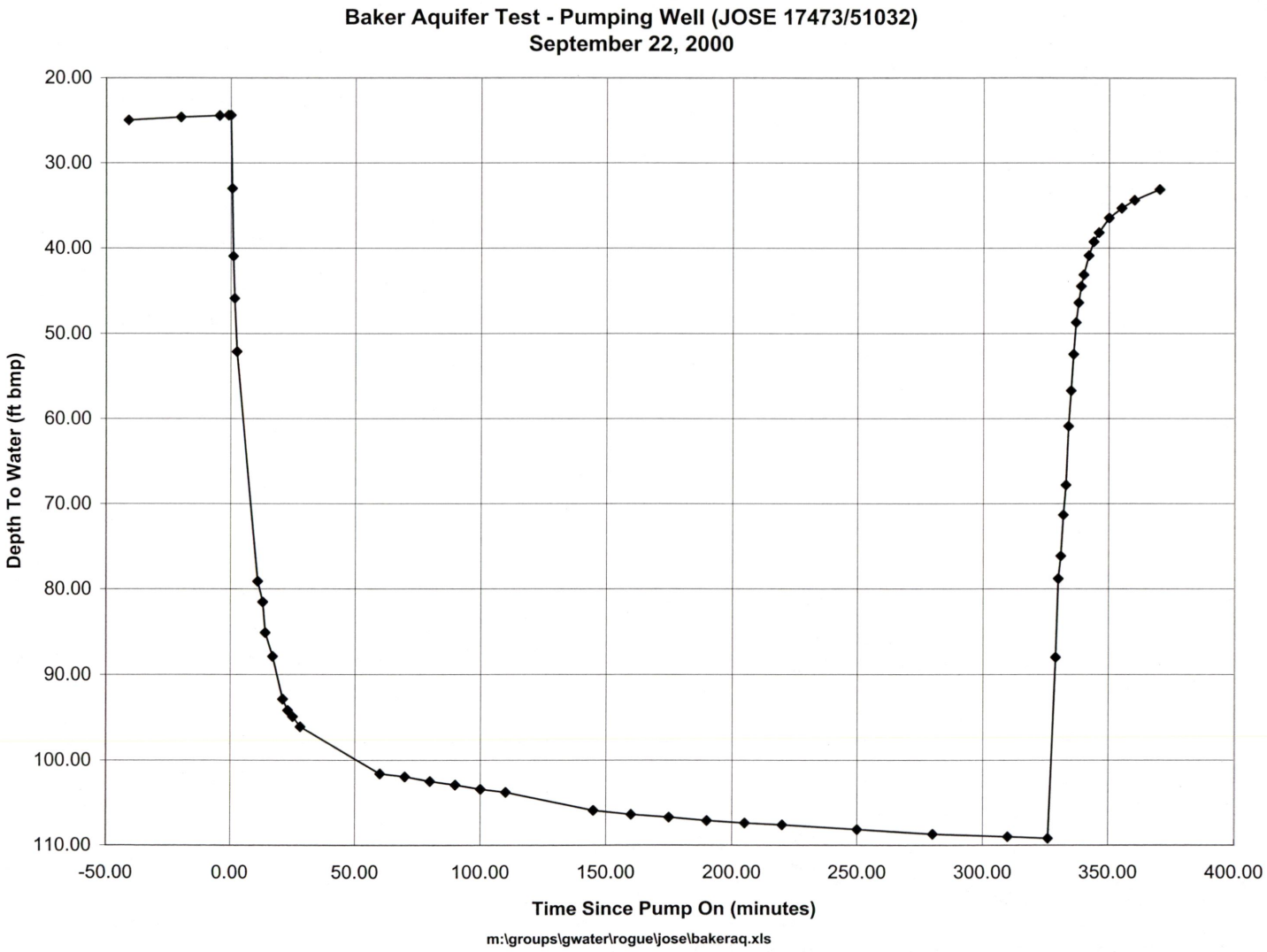
Baker Aquifer Test - Pumping Well (JOSE 17473/51032)
September 22, 2000
Depth To Water (ft bmp)
20.00
30.00
40.00
50.00
60.00
70.00
80.00
90.00
100.00
110.00
-50.00
0.00
50.00
100.00
150.00
200.00
250.00
300.00
350.00
400.00
Time Since Pump On (minutes)
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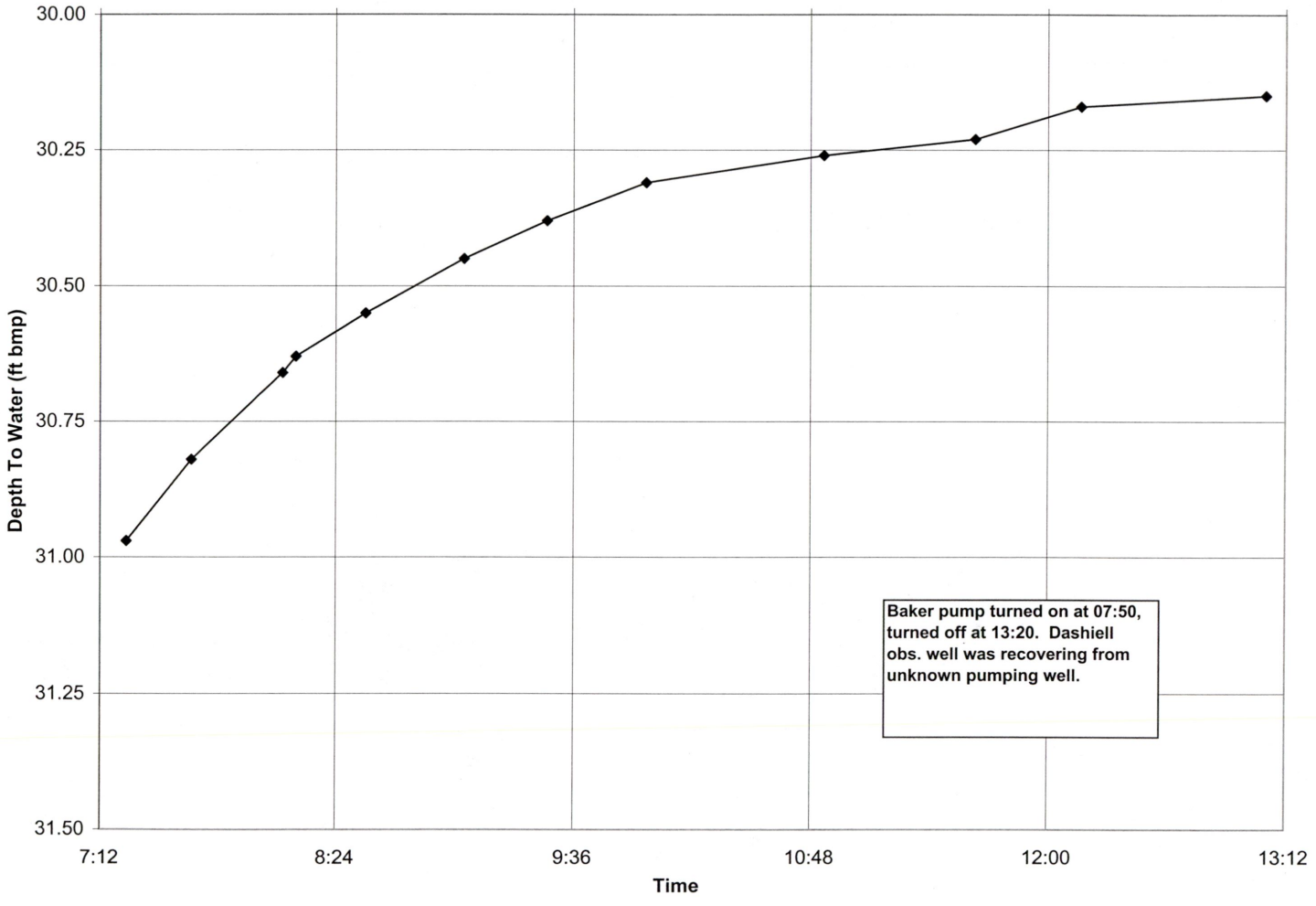
Baker Aquifer Test - Dashiell Observation Well - JOSE 10058



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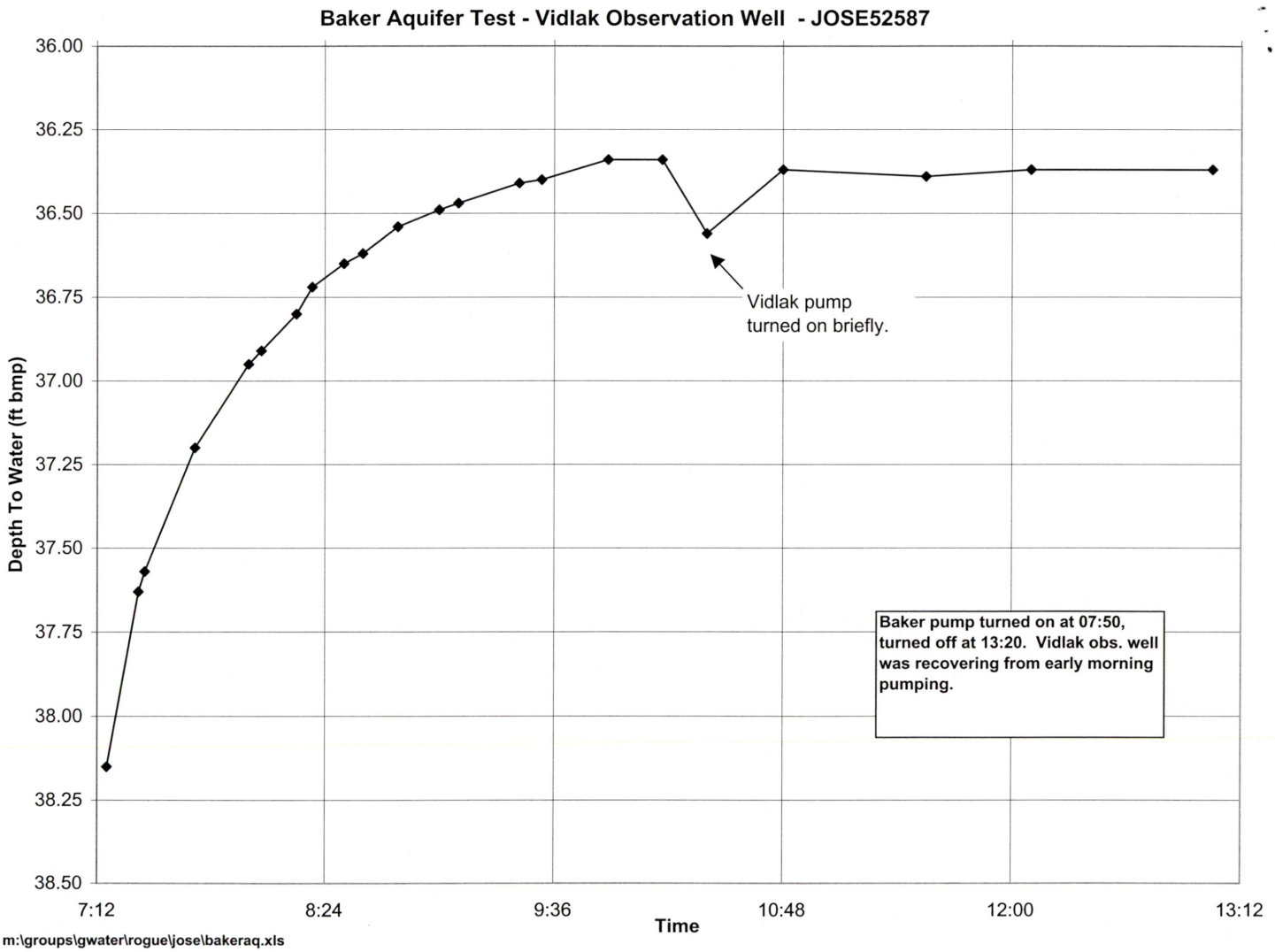
Baker Aquifer Test - Vidlak Observation Well - JOSE52587
36.00
36.25
36.50
36.75
37.00
37.25
37.50
37.75
38.00
38.25
38.50
Depth To Water (ft bmp)
7:12
8:24
9:36
10:48
12:00
13:12
Time
Vidlak pump
turned on briefly.
Baker pump turned on at 07:50,
turned off at 13:20. Vidlak obs. well
was recovering from early morning
pumping.
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