# Appendix A

## Well Completion Reports

FV Well #2

**DUPLICATE**
**Driller's Copy**

STATE OF CALIFORNIA
THE RESOURCES AGENCY
DEPARTMENT OF WATER RESOURCES

# WATER WELL DRILLERS REPORT

*Do not fill in*

No. 276926

Notice of Intent No. _____
Local Permit No. or Date San Luis Obispo County Permit #88-204

State Well No. _____
Other Well No. _____

(1) OWNER: Name Piccho Vineyards C/O Hampton Farming
Address 3201 Skyway, Suite 103
City Santa Maria, CA ZIP 93455

(2) LOCATION OF WELL (See instructions):
County San Luis Obispo Owner's Well Number 3
Well address if different from above APN 47-310-310
Township 12N Range 35W Section 26
Distance from cities, roads, railroads, fences, etc. Off U.S. Highway 101, North of Los Berros Road, Maison Deutz Winery, 453 Deutz Drive, Arroyo Grande, 4/10 Mile North of 101

(SEE ATTACHED MAP)

WELL LOCATION SKETCH

(3) TYPE OF WORK:
New Well ☒ Deepening ☐
Reconstruction ☐
Reconditioning ☐
Horizontal Well ☐
Destruction ☐ (Describe destruction materials and procedures in Item 12)

(4) PROPOSED USE:
Domestic ☒
Irrigation ☒
Industrial ☐
Test Well ☐
Municipal ☐
Other ☒
(Describe)

(5) EQUIPMENT:
Rotary ☒ Reverse ☐
Cable ☐ Air ☐
Other ☐ Bucket ☐

(6) GRAVEL PACK: Sisquoc
Yes ☒ No ☐ Size 1/4X1/8
Diameter of bore 22"
Packed from 50 to 525 ft.

(7) CASING INSTALLED:
Steel ☐ Plastic ☒ Concrete ☐

(8) PERFORATIONS: .040X2 Screen
Type of perforation or size of screen

| From ft. | To ft. | Dia. in. | Gage or Wall | From ft. | To ft. | Slot size |
|---|---|---|---|---|---|---|
| 0 | 525 | 12 | .006 | 185 | 310 | .040 Horiz Slot Full Flow Well Screen |
| | | | | 445 | 520 | .040 Horiz Slot Full Flow Well Screen |

(9) WELL SEAL:
Was surface sanitary seal provided? Yes ☒ No ☐ If yes, to depth _____ ft.
Were strata sealed against pollution? Yes ☒ No ☐ Interval * ft.
Method of sealing Top 50' Cement Sealed In 22" Borehole

(10) WATER LEVELS:
Depth of first water, if known _____ ft.
Standing level after well completion _____ ft.

(11) WELL TESTS:
Was well test made? Yes ☐ No ☐ If yes, by whom? _____
Type of test Pump ☐ Bailer ☐ Air lift ☐
Depth to water at start of test _____ ft. At end of test _____ ft.
Discharge _____ gal/min after _____ hours Water temperature _____
Chemical analysis made? Yes ☐ No ☒ If yes, by whom? _____
Was electric log made Yes ☒ No ☐ If yes, attach copy to this report

(12) WELL LOG: Total depth 550 ft. Completed depth 525 ft.

| from ft. | to ft. | Formation (Describe by color, character, size or material) |
|---|---|---|
| | | (SEE ATTACHED LOG) |
| | | * Hole Plug Seal Placed At 310' To 314' & 441' To 445' |

Work started June 16, 19 88 Completed July 1, 19 88

WELL DRILLER'S STATEMENT:
*This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.*

Signed Charles C Wells (Well Driller)
NAME FOR FLOYD V. WELLS, INC. (Person, firm, or corporation) (Typed or printed)
Address P.O. Box 1007
City Santa Maria, CA ZIP 93455
License No. C57-229570 Date of this report July 6, 1988

CONFIDENTIAL
NOT FOR PUBLIC USE
WATER CODE SEC. 13752

IF ADDITIONAL SPACE IS NEEDED, USE NEXT CONSECUTIVELY NUMBERED FORM

86 96355

**FLOYD V. WELLS, INC.**
*"Depend on Wells for Water"*
1337 WEST BETTERAVIA ROAD
SANTA MARIA, CALIFORNIA 93455
(805) 925-8626
CALIFORNIA LICENSE NO. C57-229570

# WATER WELL DRILLING LOG

Owner: Piccho Vineyards — Company: C/O Hampton Farming

Well No.: 3 — Rig: No. 8

Location of Well: 4/10 of a mile North of Highway 101
453 Deutz Road
APN 47-310-10
T-12N, R-35W, Section 26

Surface Pipe or Seal: Cemented Casing in Borehole — Size: 22" — Depth: 50' — Gauge:

Well Bore Diameter: 22" — Depth of Casing Set: 525'

Casing Size: 12-3/4" O.D. — Gauge: .606 — Type: Class 200 PVC

Perforations: Size: 2"X.040 — Type: Horizontal Screen — Number: Full Flow

Perforation Location from Ground Level: 185' — From: 0' — To: 185' Blank
185' — 310' Screen
310' — 445' Blank
445' — 520' Screen
520' — 525' Blank
With Cap On Bottom

Gravel Pack: Type: Sisquoc — Size: 1/4X1/8 — Quantity: 39 Tons

Bits: No. Used: 2 — Size: 17½", 22"

Drilling Method: Air: — Foam: — Mud: X

Material Used: Gel.: 145-50# Sack Quick Gel — Foam: 25# Drispac — Other: 20 Bags Hole Plug

Well Started: June 16, 1988 — Well Completed: July 1, 1988 — Driller: Mark

Hole Plug Seal Placed 310' To 314' And 441' To 445'

TEST PUMPING INFORMATION:

Production Test:

Standing Water Level: — Pumping Level:

G.P.M.: — Pumping Level

REMARKS:

**FLOYD V. WELLS, INC.**
*"Depend on Wells for Water"*
1337 WEST BETTERAVIA ROAD
SANTA MARIA, CALIFORNIA 93455
(805) 925-8626
CALIFORNIA LICENSE NO. C57-229570

# FORMATION LOG

Piccho Vineyads Well No. 3

| FROM | TO | DESCRIPTION |
|---|---|---|
| 0' | 45' | Tan And Brown Shale |
| 45' | 64' | Blue Clay |
| 64' | 89' | Blue Clay And Shale |
| 89' | 135' | Blue Clay, Shale And Fine Sand |
| 135' | 208' | Shale, Blue Clay And Coarse To Fine Sand |
| 208' | 330' | Volcanic, Gray Shale, Fine Sand |
| 330' | 493' | Gray Shale, Some Clay, Fine Sand |
| 492' | 528' | Volcanic, Shale With Sticky Clay, Fine Sand |
| 528' | 550 | Sticky Clay |

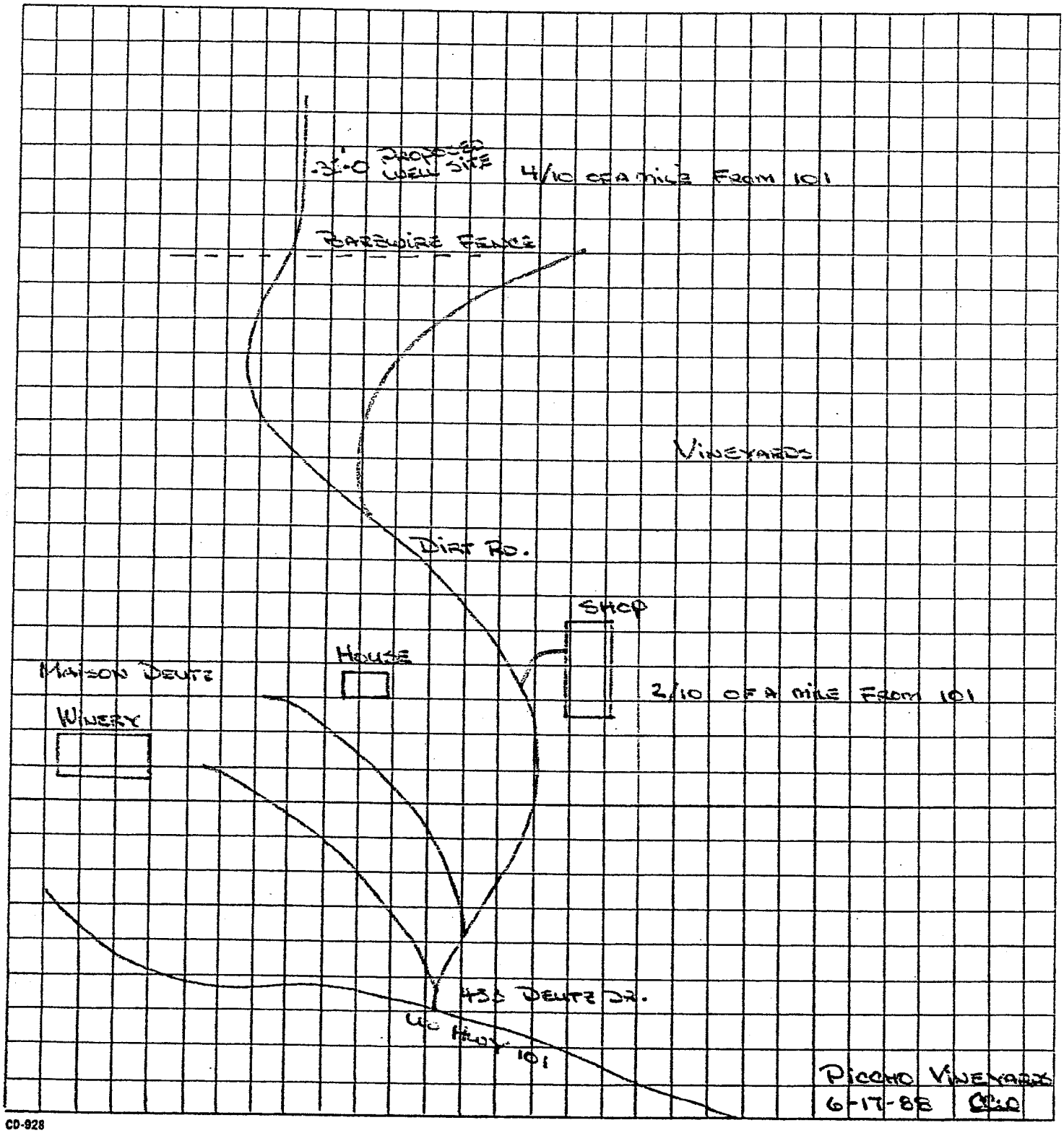
# WELL PERMIT PLOT PLAN

SAN LUIS OBISPO COUNTY HEALTH DEPARTMENT
2191 Johnson Avenue
San Luis Obispo, California 93401
Telephone: 805/543-1200



SCALE: ~~1/4" = 25'~~

INDICATE BELOW THE **EXACT LOCATION** OF WELL WITH RESPECT TO THE FOLLOWING ITEMS: PROPERTY LINES, WATER BODIES OR WATER COURSES, DRAINAGE PATTERN, ROADS, EXISTING WELLS, SEWERS AND PRIVATE SEWAGE DISPOSAL SYSTEMS. **INCLUDE DIMENSIONS.**




CD-928

DUPLICATE
Driller's Copy

FV WELL #3

Page ____ of ____

Owner's Well No. #93-01

Date Work Began 07-01-93, Ended 07-15-93

Local Permit Agency SLO COUNTY ENVIRONMENTAL HEALTH

Permit No. #93-086 Permit Date 06-02-93

STATE OF CALIFORNIA

# WELL COMPLETION REPORT

*Refer to Instruction Pamphlet*

No. 402070

DWR USE ONLY — DO NOT FILL IN

STATE WELL NO./STATION NO.

LATITUDE LONGITUDE

APN/TRS/OTHER

## GEOLOGIC LOG

ORIENTATION (✓) X VERTICAL ___ HORIZONTAL ___ ANGLE ___ (SPECIFY)

DEPTH TO FIRST WATER ___ (Ft.) BELOW SURFACE

| DEPTH FROM SURFACE Ft. to Ft. | DESCRIPTION *Describe material, grain size, color, etc.* |
|---|---|
| | (SEE ATTACHED LOG) |

TOTAL DEPTH OF BORING 531 (Feet)

TOTAL DEPTH OF COMPLETED WELL 505 (Feet)

## WELL OWNER

Name PICCHO VINEYARDS c/o HAMPTON FARMING

Mailing Address 2515 S. PROFESSIONAL PARKWAY

SANTA MARIA (CITY) CA (STATE) 93455 (ZIP)

## WELL LOCATION

Address HWY 101 & THOMPSON RD

City ARROYO GRANDE

County SAN LUIS OBISPO

APN Book ___ Page ___ Parcel 47-311-07

or Township 12 N Range 35W Section 36

or Latitude ___ DEG. MIN. SEC. NORTH Longitude ___ DEG. MIN. SEC. WEST

## LOCATION SKETCH

NORTH

(SEE ATTACHED MAP)

WEST EAST

SOUTH

*Illustrate or Describe Distance of Well from Landmarks such as Roads, Buildings, Fences, Rivers, etc. PLEASE BE ACCURATE & COMPLETE.*

## ACTIVITY (✓)

X NEW WELL

MODIFICATION/REPAIR

___ Deepen

___ Other (Specify)

___ DESTROY *(Describe Procedures and Materials Under "GEOLOGIC LOG")*

## PLANNED USE(S) (✓)

___ MONITORING

WATER SUPPLY

___ Domestic

___ Public

X Irrigation

___ Industrial

___ "TEST WELL"

___ CATHODIC PROTECTION

___ OTHER (Specify)

DRILLING METHOD DIRECT ROTARY FLUID FOAM/MUD

## WATER LEVEL & YIELD OF COMPLETED WELL

DEPTH OF STATIC WATER LEVEL ___ (Ft.) & DATE MEASURED ___

ESTIMATED YIELD* ___ (GPM) & TEST TYPE ___

TEST LENGTH ___ (Hrs.) TOTAL DRAWDOWN ___ (Ft.)

** May not be representative of a well's long-term yield.*

## CASING(S)

| DEPTH FROM SURFACE Ft. to Ft. | BORE-HOLE DIA. (Inches) | TYPE (✓) BLANK | SCREEN | CON-DUCTOR | FILL PIPE | MATERIAL/GRADE | INTERNAL DIAMETER (Inches) | GAUGE OR WALL THICKNESS | SLOT SIZE IF ANY (Inches) |
|---|---|---|---|---|---|---|---|---|---|
| 0 - 505 | 17½ | X | | | | PVC | 10 | .511W | |
| 150 - 180 | 17½ | | X | | | PVC | 10 | .511W | .040" x2" |
| 200 - 250 | 17½ | | X | | | PVC | 10 | .511W | " " |
| 280 - 340 | 17½ | | X | | | PVC | 10 | .511W | " " |
| 360 - 500 | 17½ | | X | | | PVC | 10 | .511W | " " |

## ANNULAR MATERIAL

| DEPTH FROM SURFACE Ft. to Ft. | TYPE: CEMENT (✓) | BENTONITE (✓) | FILL (✓) | FILTER PACK (TYPE/SIZE) |
|---|---|---|---|---|
| 0 - 50 | X | | | |
| 50 - 505 | | | X | (LONE S |
| | | | | LAPIS# |
| | | | | GRAVEL |

## ATTACHMENTS (✓)

X Geologic Log

___ Well Construction Diagram

X Geophysical Log(s)

___ Soil/Water Chemical Analyses

___ Other ___

## CERTIFICATION STATEMENT

I, the undersigned, certify that this report is complete and accurate to the best of my knowledge and belief

NAME FLOYD V. WELLS, INC./CHARLES C. WELLS
(PERSON, FIRM, OR CORPORATION) (TYPED OR PRINTED)

ADDRESS 1337 W. BETTERAVIA ROAD (CITY) SANTA MARIA (STATE) CA (ZIP) 93455

Signed Charles C. Wells CHARLES C. WELLS 07/26/93 2295

**FLOYD V. WELLS, INC.**
*DEPEND ON WELLS FOR WATER*

# WATER WELL DRILLING LOG

PUMP SALES & SERVICE
WATER WELL DRILLING CONTRACTOR
1337 W. BETTERAVIA RD.
SANTA MARIA, CA 93455
805/925-8626 FAX 805/928-7826
CA LIC.#C57-229570

Owner: PICCHO VINEYARDS c/o HAMPTON FARMING Company:

Well No.: #93-01 Rig: #7

Location of Well: PICCHO VINEYARDS, APPROX 1 MILE NORTH OF LOS BERROS/THOMPSON RD INTERSECTION ON HWY 101 IN VINEYARD & APPROX 1.1 MILE WEST OF HWY 101

APN 47-311-07 T-12N, R-35W, SECTION 36

SAN LUIS OBISPO COUNTY PERMIT #93-086

~~Surface Pipe~~ or Seal: TOP CEMENTED IN 17½"BOREHOLE Size: - Depth: 50' Gauge: -

Well Bore Diameter: 17½" Depth of Casing Set: 505'

Casing Size: 10" SDR21/F-480 Gauge: .511 W Type: PVC

Perforations: Size: .040" X 2" Type: HORIZ.SLOT WELL SCREEN Number: 8 ROWS/FULL FLO

Perforation Location from Ground Level: 150'

| From: | To: | |
|---|---|---|
| 0' | 150' | BLANK |
| 150' | 180' | SCREEN |
| 180' | 200' | BLANK |
| ~~200'~~ | ~~250'~~ | ~~SCREEN~~ |
| 250' | 280' | BLANK |
| 280' | 340' | SCREEN |
| ~~340'~~ | ~~360'~~ | ~~BLANK~~ |
| 360' | 500 | SCREEN |
| 500' | 505' | BLANK |

Gravel Pack: Type: LONE STAR Size LAPIS #3 Quantity: ~~29 TONS~~

Bits: No. Used: 3 Size: 1-9 7/8",1-14 3/4" & 1-17½"

Drilling Method: Air: Foam: X Mud: X

Material Used: Gel.: 160-50#QUIK GEL P-95: 10-GALLONS VERSA FOAM Foam:

Well Started: JULY 1, 1993 Well Completed: JULY 15, 1993 Driller: CLARENCE BEVIER

TEST PUMPING INFORMATION:

Production Test:

Standing Water Level: Pumping Level:

G.P.M.: Pumping Level

REMARKS:

FLOYD V. WELLS, INC.
DEPEND ON WELLS FOR WATER

PUMP SALES & SERVICE
CA LIC. #C57-229570
WATER WELL DRILLING CONTRACTOR

# FORMATION LOG

JOB NAME:PICCHO VINEYARDS
JOB DATE:JULY 8, 1993

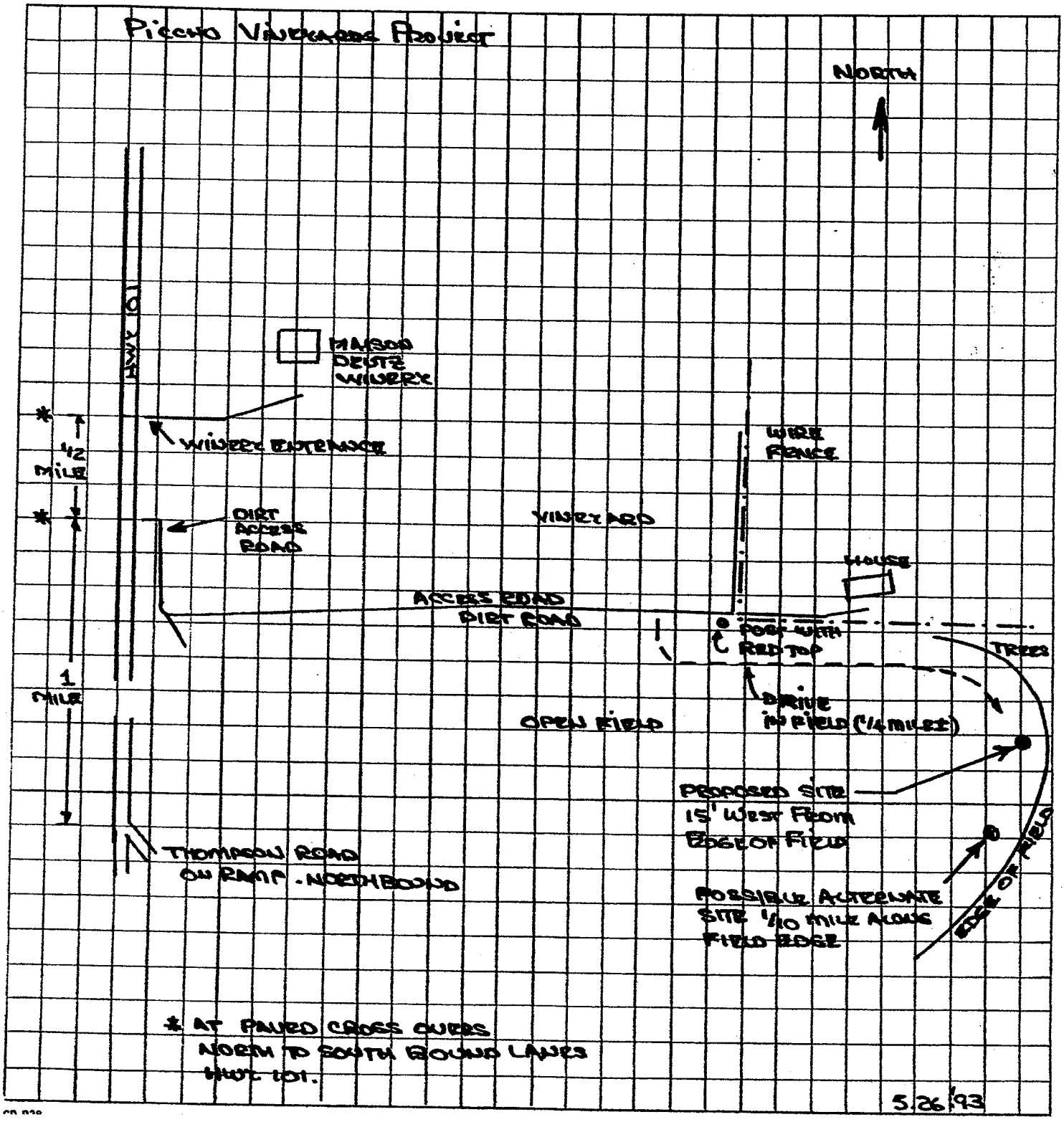
| FROM - TO | FORMATION RECORD |
|---|---|
| 0'- 1' | ADOBE |
| 1'- 95' | REDROCK |
| 95'-155' | GREY ROCK |
| 155'-181' | GREY-BROWN MONTEREY SHALE |
| 181'-240' | GREY SANDSTONE SHALE |
| 240'-281' | GREY-BROWN ROCK |
| 281'-301' | LOOSE GREY SHALE |
| 301'-541' | MONTEREY SHALE W/GREY MUDSTONE 301'-321' |
| | HARD & SOFT FORMATIONS THROUGHOUT TO 541' |

# WELL PERMIT PLOT PLAN

SAN LUIS OBISPO COUNTY HEALTH DEPARTMENT
2191 Johnson Avenue
San Luis Obispo, California 93401
Telephone: 805/543-1200



INDICATE BELOW THE **EXACT LOCATION** OF WELL WITH RESPECT TO THE FOLLOWING ITEMS: PROPERTY LINES, WATER BODIES OR WATER COURSES, DRAINAGE PATTERN, ROADS, EXISTING WELLS, SEWERS AND PRIVATE SEWAGE DISPOSAL SYSTEMS. **INCLUDE DIMENSIONS.**



**DUPLICATE**
**Driller's Copy**

Page 1 of 1

Owner's Well No. #1

Date Work Began 10/23/98, Ended 11/3/98

Local Permit Agency San Luis Obispo

Permit No. 98-256 Permit Date 10/15/98

STATE OF CALIFORNIA

# WELL COMPLETION REPORT

*Refer to Instruction Pamphlet*

No. 511274

DWR USE ONLY — DO NOT FILL IN

STATE WELL NO./STATION NO.

LATITUDE LONGITUDE

APN/TRS/OTHER

## GEOLOGIC LOG

ORIENTATION (✓) ___ VERTICAL ___ HORIZONTAL ___ ANGLE ___ (SPECIFY)

DEPTH TO FIRST WATER ___ (Ft.) BELOW SURFACE

| DEPTH FROM SURFACE Ft. | to Ft. | DESCRIPTION *Describe material, grain size, color, etc.* |
|---|---|---|
| 0 | 1 | TOP SOIL |
| 1 | 3 | FRACTURED ROCK |
| 3 | 42 | BROWN SHALE |
| 42 | 43 | DARD GREY SHALE |
| 43 | 94 | BROWN SHALE |
| 94 | 435 | GREY SHALE |
| 435 | 480 | BROWN SHALE |

TOTAL DEPTH OF BORING 480 (Feet)

TOTAL DEPTH OF COMPLETED WELL 445 (Feet) GF

## WELL OWNER

Name Bilo Zarif

Mailing Address 453 Deutz Drive

Arroyo Grande CA 93400

CITY STATE ZIP

## WELL LOCATION

Address Laetitia Vineyard

City Arroyo Grande

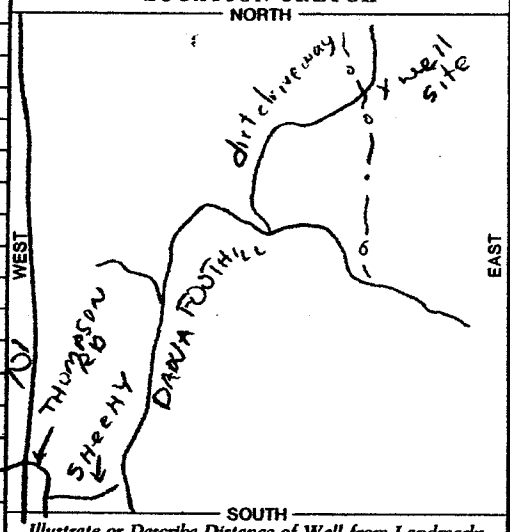
County San Luis Obispo

APN Book 047 Page 030 Parcel 003

or Township 12N Range 13E Section 30

or Latitude ___ DEG. ___ MIN. ___ SEC. NORTH Longitude ___ DEG. ___ MIN. ___ SEC. WEST

## LOCATION SKETCH




*Illustrate or Describe Distance of Well from Landmarks such as Roads, Buildings, Fences, Rivers, etc. PLEASE BE ACCURATE & COMPLETE.*

## ACTIVITY (✓)

X NEW WELL

MODIFICATION/REPAIR

___ Deepen

___ Other (Specify)

___ DESTROY *(Describe Procedures and Materials Under "GEOLOGIC LOG")*

## PLANNED USE(S) (✓)

___ MONITORING

WATER SUPPLY

___ Domestic

___ Public

X Irrigation

___ Industrial

___ "TEST WELL"

___ CATHODIC PROTECTION

___ OTHER (Specify)

DRILLING METHOD Rotary FLUID Air

## WATER LEVEL & YIELD OF COMPLETED WELL

DEPTH OF STATIC WATER LEVEL ___ (Ft.) & DATE MEASURED 11/3/98

ESTIMATED YIELD* 500 (GPM) & TEST TYPE ___

TEST LENGTH 3 (Hrs.) TOTAL DRAWDOWN ___ (Ft.)

** May not be representative of a well's long-term yield.*

## CASING(S)

| DEPTH FROM SURFACE Ft. | to Ft. | BORE-HOLE DIA. (Inches) | TYPE (✓) BLANK | SCREEN | CON-DUCTOR | FILL PIPE | MATERIAL / GRADE | INTERNAL DIAMETER (Inches) | GAUGE OR WALL THICKNESS | SLOT SIZE IF ANY (Inches) |
|---|---|---|---|---|---|---|---|---|---|---|
| 0 | 325 | 13 | Blank | | | | PVC | 8 | SDR 21 | |
| 325 | 425 | 13 | | Screen | | | PVC | 8 | SDR 21 | .040 |

## ANNULAR MATERIAL

| DEPTH FROM SURFACE Ft. | to Ft. | TYPE: CEMENT (✓) | BENTONITE (✓) | FILL (✓) | FILTER PACK (TYPE/SIZE) |
|---|---|---|---|---|---|
| 0 | 50 | X | | | |
| 50 | 425 | | | | Monterey Sand |

## ATTACHMENTS (✓)

___ Geologic Log

___ Well Construction Diagram

✓ Geophysical Log(s)

___ Soil/Water Chemical Analyses

___ Other ___

*ATTACH ADDITIONAL INFORMATION, IF IT EXISTS.*

## CERTIFICATION STATEMENT

I, the undersigned, certify that this report is complete and accurate to the best of my knowledge and belief.

NAME Filipponi & Thompson Drilling, Inc.
(PERSON, FIRM, OR CORPORATION) (TYPED OR PRINTED)

P.O. Box 845 Atascadero CA 93423
ADDRESS CITY STATE ZIP

Signed ___ (WELL DRILLER/AUTHORIZED REPRESENTATIVE) DATE SIGNED 12/23-98 C-57 LICENSE NUMBER 432680

DUPLICATE
Driller's Copy

Page 1 of 1

Owner's Well No. #3

Date Work Began 11/09/98, Ended 11/13/98

Local Permit Agency San Luis Obispo

Permit No. 98-312 Permit Date 12/02/98

STATE OF CALIFORNIA
# WELL COMPLETION REPORT
*Refer to Instruction Pamphlet*

No. 511275

DWR USE ONLY — DO NOT FILL IN
STATE WELL NO./STATION NO.
LATITUDE LONGITUDE
APN/TRS/OTHER

## GEOLOGIC LOG

ORIENTATION (✓) ___ VERTICAL ___ HORIZONTAL ___ ANGLE ___ (SPECIFY)

DEPTH TO FIRST WATER ___ (Ft.) BELOW SURFACE

| DEPTH FROM SURFACE Ft. | to Ft. | DESCRIPTION *Describe material, grain size, color, etc.* |
|---|---|---|
| 0 | 3 | TOP SOIL |
| 3 | 8 | BROWN CLAY |
| 8 | 15 | CLAY & GRAVEL MIX |
| 15 | 18 | BROWN CLAY |
| 18 | 30 | FINE BROWN SAND |
| 30 | 35 | BROWN CLAY & SHALE GRAVEL |
| 35 | 47 | BROWN CLAY |
| 47 | 57 | GREEN SHALE |
| 57 | 64 | SOFT GREY SHALE |
| 64 | 110 | BROWN SHALE |
| 110 | 212 | SOFT GREY SHALE |
| 212 | 226 | BROWN SHALE |
| 226 | 233 | GREY SHALE |
| 233 | 256 | BRWN SHALE |
| 256 | 307 | GREY SHALE |
| 307 | 360 | SOFT GREEN/BROWN SHALE |
| 360 | 397 | GREENISH SHALE |
| 397 | 450 | BLUE SHALE |
| 450 | 470 | BROWN SHALE |

AIR LIFT TEST IS ONLY APPROXIMATE.
A TEST PUMP IS RECOMMENDED FOR AN
ACCURATE ACCOUNT.

TOTAL DEPTH OF BORING 470 (Feet)
TOTAL DEPTH OF COMPLETED WELL 320 (Feet) MT

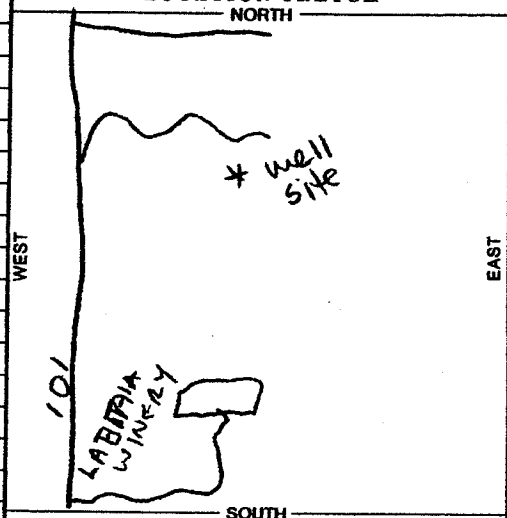
## WELL OWNER

Name Bilo Zarif
Mailing Address 453 Deutz Drive
Arroyo Grande CA 93420
CITY STATE ZIP

## WELL LOCATION

Address Laetitia Vineyards
City Arroyo Grande
County San Luis Obispo
APN Book 047 Page 030 Parcel 005
or Township 32S Range 13E Section 35
or Latitude ___ DEG. ___ MIN. ___ SEC. NORTH Longitude ___ DEG. ___ MIN. ___ SEC. WEST

## LOCATION SKETCH




*Illustrate or Describe Distance of Well from Landmarks such as Roads, Buildings, Fences, Rivers, etc.*
*PLEASE BE ACCURATE & COMPLETE.*

## ACTIVITY (✓)

X NEW WELL
MODIFICATION/REPAIR
___ Deepen
___ Other (Specify)
___ DESTROY *(Describe Procedures and Materials Under "GEOLOGIC LOG")*

## PLANNED USE(S) (✓)

___ MONITORING
WATER SUPPLY
___ Domestic
___ Public
X Irrigation
___ Industrial
___ "TEST WELL"
___ CATHODIC PROTECTION
___ OTHER (Specify)

DRILLING METHOD Rotary FLUID Bentonite

## WATER LEVEL & YIELD OF COMPLETED WELL

DEPTH OF STATIC WATER LEVEL 90 (Ft.) & DATE MEASURED 11/13/98
ESTIMATED YIELD* 300 (GPM) & TEST TYPE Air Lift
TEST LENGTH 1 (Hrs.) TOTAL DRAWDOWN ___ (Ft.)
** May not be representative of a well's long-term yield.*

## CASING(S)

| DEPTH FROM SURFACE Ft. | to Ft. | BORE-HOLE DIA. (Inches) | TYPE (✓) BLANK | SCREEN | CON-DUCTOR | FILL PIPE | MATERIAL/GRADE | INTERNAL DIAMETER (Inches) | GAUGE OR WALL THICKNESS | SLOT SIZE IF ANY (Inches) |
|---|---|---|---|---|---|---|---|---|---|---|
| 0 | 250 | 14 | Blank | | | | PVC | 8 | SDR 21 | |
| 250 | 310 | 14 | | Screen | | | PVC | 8 | SDR 21 | .040 |
| 310 | 320 | 14 | Blank | | | | PVC | 8 | SDR 21 | |

## ANNULAR MATERIAL

| DEPTH FROM SURFACE Ft. | to Ft. | TYPE: CEMENT (✓) | BENTONITE (✓) | FILL (✓) | FILTER PACK (TYPE/SIZE) |
|---|---|---|---|---|---|
| 0 | 52 | X | | | |
| 52 | 320 | | | | Monterey Sand |

## ATTACHMENTS (✓)

___ Geologic Log
___ Well Construction Diagram
___ Geophysical Log(s)
___ Soil/Water Chemical Analyses
___ Other ___

*ATTACH ADDITIONAL INFORMATION, IF IT EXISTS.*

## CERTIFICATION STATEMENT

I, the undersigned, certify that this report is complete and accurate to the best of my knowledge and belief.

NAME Filipponi & Thompson Drilling, Inc.
(PERSON, FIRM, OR CORPORATION) (TYPED OR PRINTED)

ADDRESS P.O. Box 885 Atascadero CA 93423
CITY STATE ZIP

Signed [signature]
WELL DRILLER/AUTHORIZED REPRESENTATIVE

DATE SIGNED 12/20/98 C-57 LICENSE NUMBER 432680

**Campodonico Ranch Domestic Well**
**Los Berros Creek Road**

Date: October 27, 1999
Location: Los Berros Creek Rd. at Ranch Headquarters
Geologists: S. Harris, Cleath & Assoc.
Drilling Company/Method: Enloe Well Drilling / Mud Rotary
Total depth: 65 feet

**Lithologic Log**

| Depth (ft) | Description |
|---|---|
| 10 | **Sand and Gravel**; brown, fine to coarse grained sand, fine angular to subangular gravel. |
| 20 | **Sandy Gravel**; light reddish brown, fine to coarse grained sand, gravel to 3/4-inch, mostly angular to subangular shale and chert clasts. |
| 30 | **Sandy Gravel**; trace silt, light reddish brown, fine to coarse grained sand, gravel to 1-inch, mostly angular to subrounded shale clasts to ½-inch. |
| 40 | **Sandy Gravel**; as above, gravel increasing to 1½-inch, silt inferred as thin stringers. |
| 50 | **Gravel**; with sand, tan and gray shale, red cherts, angular to subangular clasts mostly 1 to 2-inch. |
| 60 | **Gravel**; with sand, as above. |
| 65 | Blue clay. |

**Well Construction**

Casing type: 8-inch diameter PVC, Class 200 water well casing
Perforations: 0.040-inch slots, high density spacing
Gravel Pack: pea gravel
Borehole diameter: 15-inch

| Depth (ft) | Description |
|---|---|
| 0 - 25 | Blank casing |
| 25 - 65 | Perforated casing with end cap |
| (Annular space) | |
| 0 - 23 | Sanitary seal |
| 23 - 65 | Gravel pack |

Total well depth 65 feet

# Appendix B

## Irrigation Schedules for Year 1994

IRRIGATION RECORD

# 1994

ANCH Piccho vineyards

| OCK | DATE & SET TIME | DATE & SET TIME | DATE & SET TIME | DATE & SET TIME | DATE & SET TIME | DATE & SET TIME | |
|---|---|---|---|---|---|---|---|
| 4 = 19.35 | 6-14-94 28 HRS | 6-20-94 14 HRS | 6-28-94 24 HRS | 7-6-94 24 HRS | 8-4-94 30 HRS | 8-17-94 24 HRS | |
| + C = 27.0 | 6-15-94 9 HRS | 6-21-94 14 HRS | 6-29-94 24 HRS | 7-7-94 29 HRS | 8-3-94 24 HRS | 8-28-94 24 HRS | |
| D 32.21 | 6-18-94 14 HRS | 6-24-94 14 HRS | 7-2-94 24 HRS | 7-8-94 24 HRS | 8-2-94 24 HRS | 8-27-94 24 HRS | |
| E 21.45 | 6-17-94 14 HRS | 6-23-94 14 HRS | 6-30-94 24 HRS | 7-12-94 24 HRS | 7-29-94 24 HRS | 8-11-94 24 HRS | 8-27-9 24 HRS |
| F 13.46 | 6-17-94 14 HRS | 6-23-94 14 HRS | 6-30-94 24 HRS | 7-12-94 24 HRS | 7-29-94 24 HRS | 8-27-94 24 HRS | |
| 39.82 H-1 | 6-16-94 14 HRS | 6-22-94 14 HRS | 7-1-94 24 HRS | 7-14-94 24 HRS | 8-10-94 24 HRS | 8-30-94 24 HRS | |
| J 8.77 | | | 7-1-94 48 HRS | 7-19-94 24 HRS | | | |
| 22.5 .L. | 4-16-94 12 HRS | 5-7-94 12 HRS | 5-25-94 12 HRS | 6-15-94 7 HRS | 6-25-94 14 HRS | 7-3-94 24 HRS | 7-13-94 24 HRS |
| emons 4.78 | 5-15-94 24 HRS | 5-28-94 24 HRS | 6-11-94 24 HRS | 6-18-94 24 HRS | 6-25-94 24 HRS | 7-2-94 24 HRS | 7-13-9 24 HR |
| Y-L | 7-26-94 24 HRS | 8-9-94 24 HRS | 8-24-94 24 HRS | 9-26-94 48 HRS | 9-24-94 12 HRS | 11-1-94 12 HRS | 9 |
| mons | 7-23-94 24 HRS | 8-6-94 24 HRS | | | | | |
| A | 10-25-94 12 HRS | 10-31-94 12 HRS | | | | | |
| + C | 10-26-94 12 HRS | 11-2-94 12 HRS | | | | | |
| D | 10-29-94 12 HRS | 11-5-94 12 HRS | | | | | |
| E | 10-27-94 12 HRS | 11-3-94 12 HRS | | | | | |
| F | 10-27-94 12 HRS | 11-3-94 12 HRS | | | | | |
| | 10-28-94 12 HRS | 11-4-94 12 HRS | | | | | |
| H | 10-28-94 12 HRS | 11-4-94 12 HRS | | | | | |
| | 10-28-94 | 11-4-94 | | | | | |

1994 Vineyard Production Record

660 plants/acre 1 gal/plant per hour

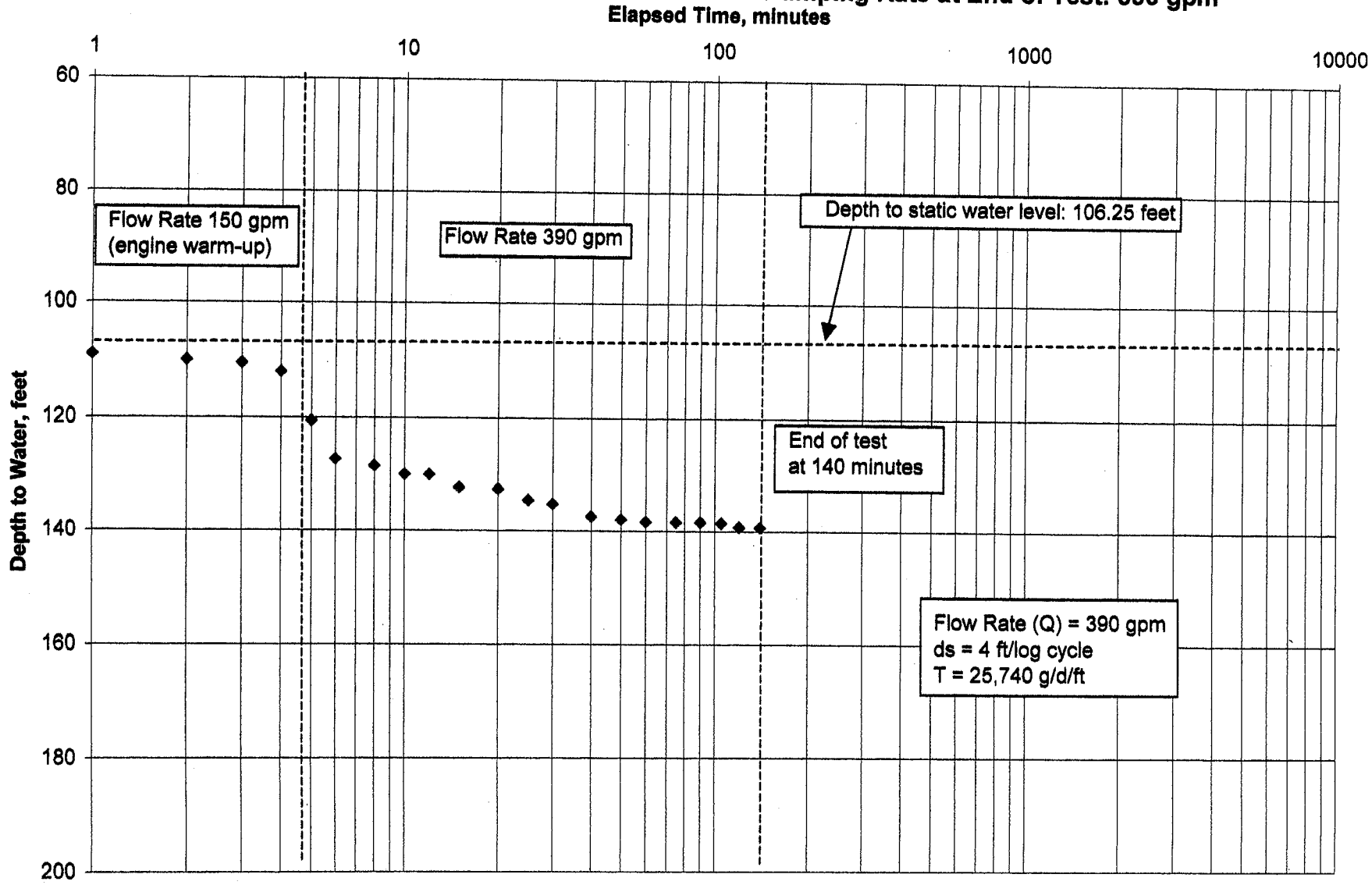
| Block | Acres | Plants | Irrig Hours | gallons | acre-feet |
|---|---|---|---|---|---|
| A | 19.35 | 12771 | 144 | 1839024 | 5.64 |
| B+C | 27 | 17820 | 124 | 2209680 | 6.78 |
| D | 32.21 | 21259 | 124 | 2636116 | 8.09 |
| E | 21.45 | 14157 | 148 | 2095236 | 6.43 |
| F | 13.46 | 8884 | 124 | 1101616 | 3.38 |
| G+H+I | 39.82 | 26281 | 124 | 3258844 | 10 |
| J | 8.77 | 5788 | 72 | 416736 | 1.28 |
| K+L | 22.5 | 14850 | 105 | 1559250 | 4.79 |
| Total | 184.56 | 121810 | 965 | 15116502 | 46.39 |

Applied irrigation = 0.25135 afy/acre

# Appendix C

## Pump Test Data

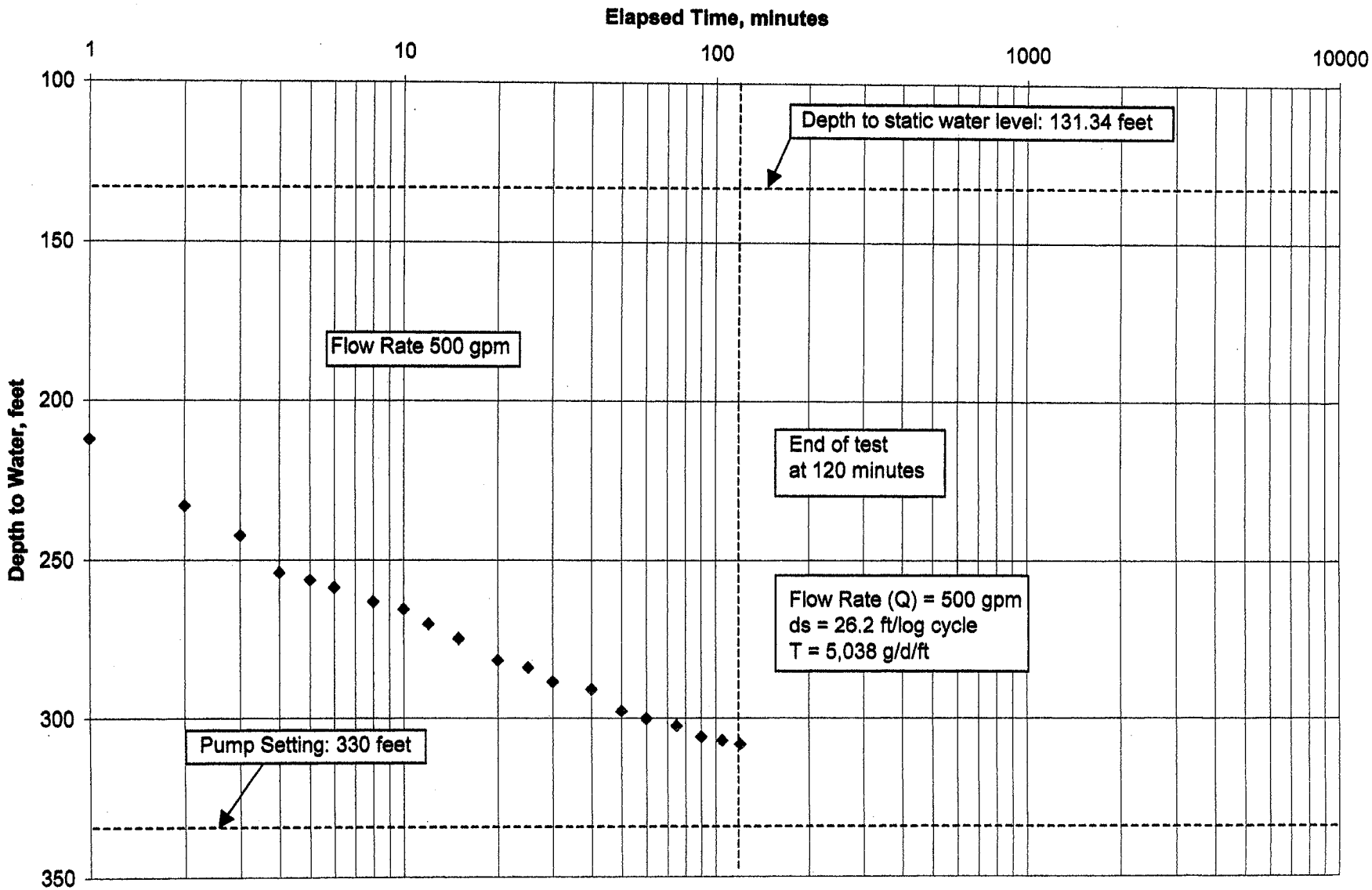
**Pumping Test - F.V. Wells #1, Laetitia Winery, Arroyo Grande, California**
**December 9, 2003**
**Depth to Static Water Level: 106.25 feet** **Pumping Rate at End of Test: 390 gpm**



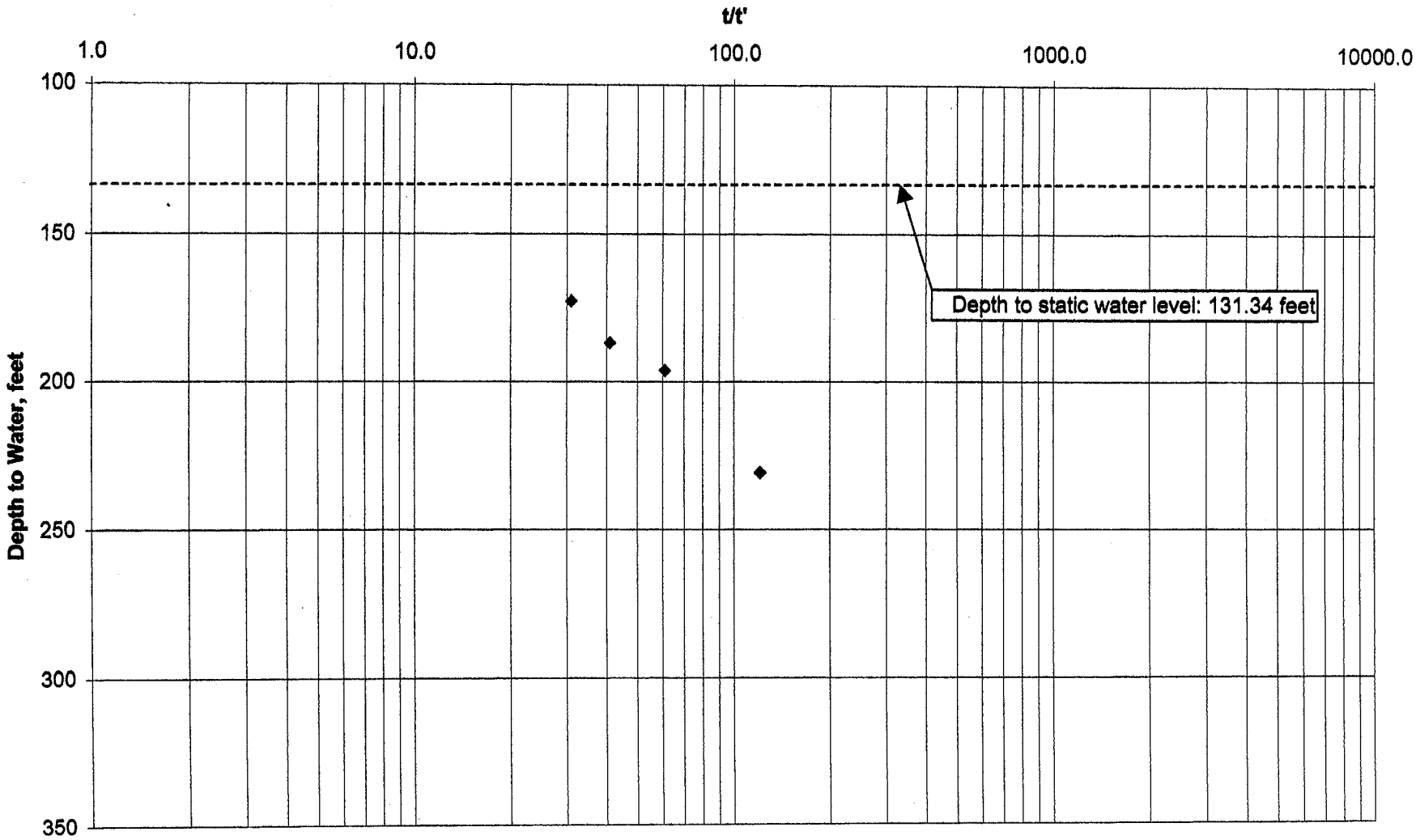
**Pumping Test, F.V. Wells #1, Laetitia Winery, Arroyo Grande, Califorina, December 9, 2003**

| Day | Time | Elapsed Time | Depth to Water | Drawdown | Pumping Rate | Observations |
|---|---|---|---|---|---|---|
| Mo./Day/Yr | hr:min | minutes | feet | feet | gallons per minute | |
| 12/9/2003 | 11:00 AM | 0 | 106.3 | 0.0 | 0 | Pumping Started-Static Water Level |
| | | 1 | 109.0 | 2.8 | 100 | Engine warm up |
| | | 2 | 110.0 | 3.8 | 150 | Engine warm up |
| | | 3 | 110.5 | 4.3 | 150 | Engine warm up |
| | | 4 | 112.0 | 5.8 | 180 | Engine warm up |
| | | 5 | 120.5 | 14.3 | 380 | Engine warm up |
| | | 6 | 127.3 | 21.1 | 390 | |
| | | 8 | 128.5 | 22.3 | 390 | |
| | | 10 | 130.0 | 23.8 | 390 | |
| | | 12 | 130.0 | 23.8 | 390 | |
| | | 15 | 132.3 | 26.0 | 390 | |
| | | 20 | 132.5 | 26.3 | 390 | |
| | | 25 | 134.5 | 28.3 | 390 | |
| | | 30 | 135.2 | 28.9 | 390 | |
| | | 40 | 137.4 | 31.2 | 390 | |
| | | 50 | 137.9 | 31.6 | 390 | |
| | 12:00 PM | 60 | 138.3 | 32.0 | 390 | |
| | | 75 | 138.3 | 32.1 | 390 | |
| | | 90 | 138.4 | 32.1 | 390 | |
| | | 105 | 138.5 | 32.3 | 390 | |
| | 1:00 PM | 120 | 139.2 | 33.0 | 390 | |
| | 1:20 PM | 140 | 139.3 | 33.0 | 390 | |
| Recovery | | t | s | t' | t/t' | |
| 12/9/2003 | | 141 | 112.0 | 1 | 141.0 | |
| | | 142 | 111.0 | 2 | 71.0 | |
| | | 143 | 110.0 | 3 | 47.7 | |
| | | 144 | 109.8 | 4 | 36.0 | |
| | | 145 | 109.0 | 5 | 29.0 | |

**Pumping Test - F.V. Wells #3, Laetitia Winery, Arroyo Grande, California**
**January 5, 2004**
**Depth to Static Water Level: 131.34 feet** **Pumping Rate at End of Test: 500 gpm**



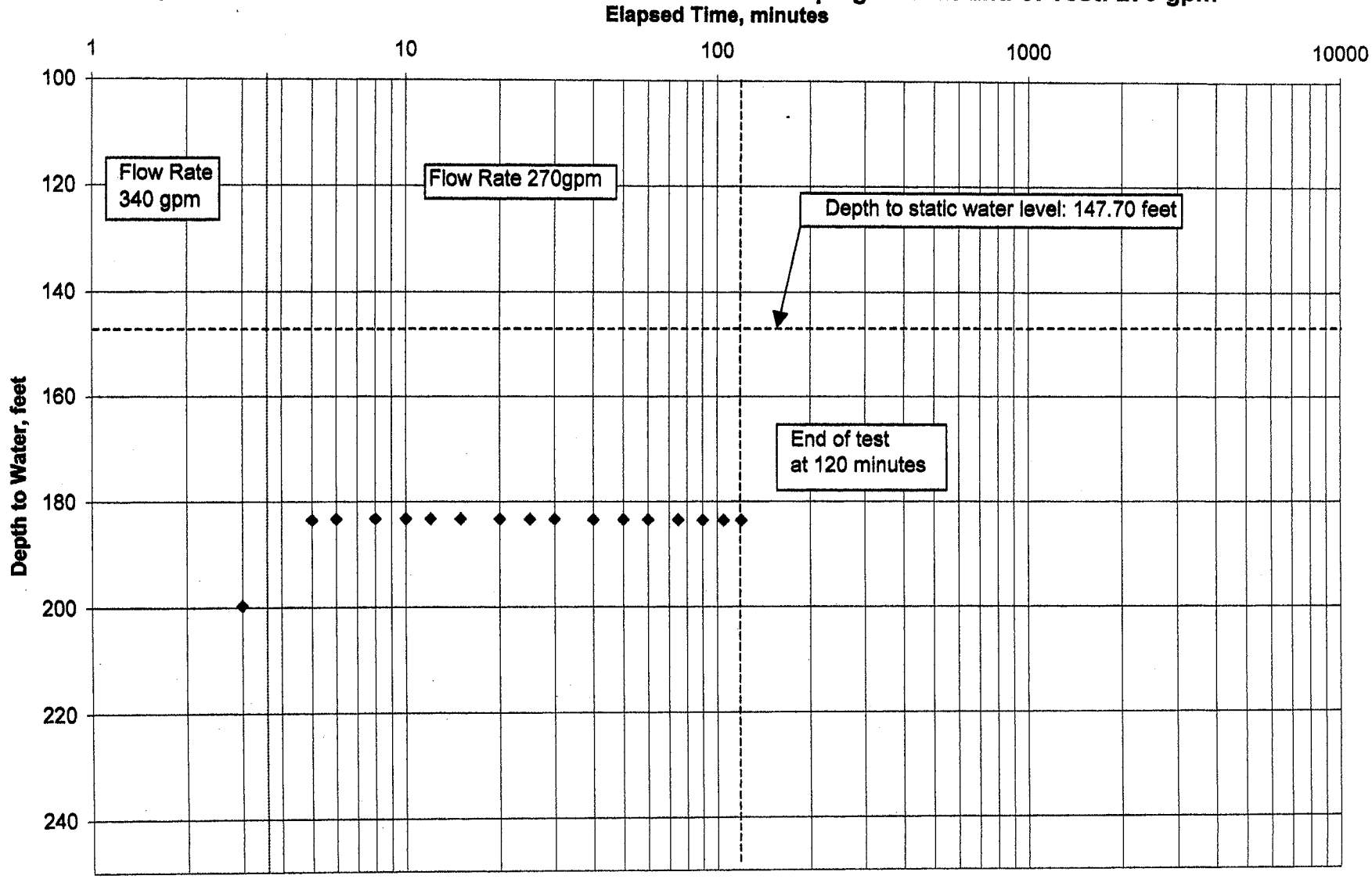
**Recovery Test - F.V. Wells #3, Laetitia Winery, Arroyo Grande, California**
**January 5, 2004**
**Depth to Static Water Level: 131.34 feet**



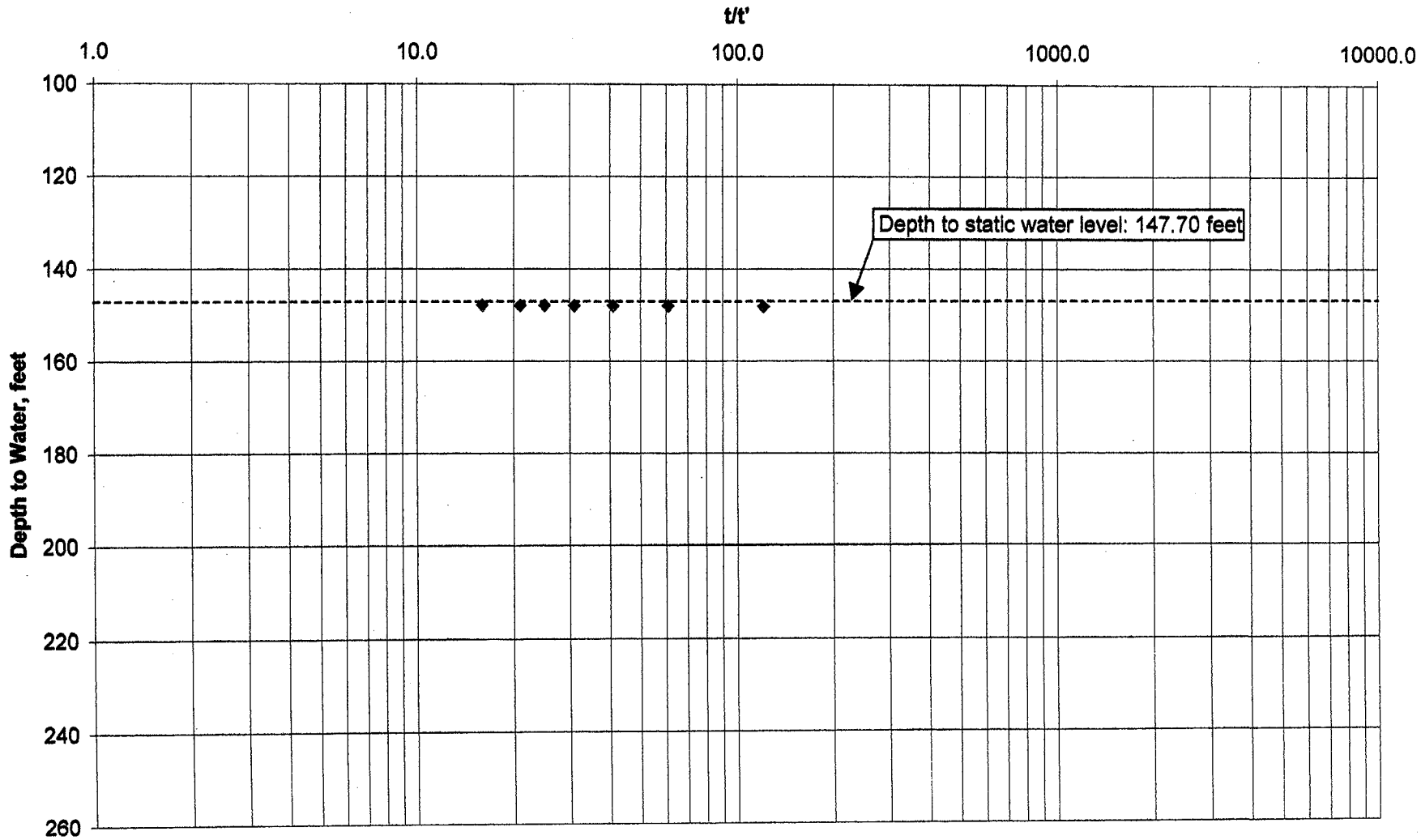
**Pumping Test, FV Wells #3, Laetitia Winery, Arroyo Grande, Califorina, January 5, 2004**

| Day | Time | Elapsed Time | Depth to Water | Drawdown | Pumping Rate | Observations |
|---|---|---|---|---|---|---|
| Mo./Day/Yr | hr:min | minutes | feet | feet | gallons per minute | |
| 1/5/2004 | 11:03 AM | 0 | 131.3 | 0.0 | 0 | Pumping Started-Static Water Level |
| | | 1 | 212.2 | 80.9 | 550 | |
| | | 2 | 233.0 | 101.6 | 550 | |
| | | 3 | 242.2 | 110.9 | 540 | |
| | | 4 | 253.8 | 122.4 | 540 | |
| | | 5 | 256.1 | 124.7 | 540 | |
| | | 6 | 258.4 | 127.1 | 540 | |
| | | 8 | 263.0 | 131.7 | 540 | |
| | | 10 | 265.3 | 134.0 | 530 | |
| | | 12 | 269.9 | 138.6 | 530 | |
| | | 15 | 274.6 | 143.2 | 520 | |
| | | 20 | 281.5 | 150.2 | 520 | |
| | | 25 | 283.8 | 152.5 | 510 | |
| | | 30 | 288.4 | 157.1 | 510 | |
| | | 40 | 290.7 | 159.4 | 510 | |
| | | 50 | 297.7 | 166.3 | 505 | |
| | 12:03 PM | 60 | 300.0 | 168.6 | 505 | |
| | | 75 | 302.3 | 170.9 | 500 | |
| | | 90 | 305.7 | 174.4 | 500 | |
| | | 105 | 306.9 | 175.6 | 500 | |
| | 1:03 AM | 120 | 308.1 | 176.7 | 500 | |
| Recovery | | t | s | t' | t/t' | |
| 1/5/2004 | | 121 | 230.7 | 1 | 121.0 | |
| | | 122 | 196.1 | 2 | 61.0 | |
| | | 123 | 186.9 | 3 | 41.0 | |
| | | 124 | 173.0 | 4 | 31.0 | |

**Pumping Test - F&T #1, Laetitia Winery, Arroyo Grande, California**
**December 10, 2003**
**Depth to Static Water Level: 147.70 feet** **Pumping Rate at End of Test: 270 gpm**



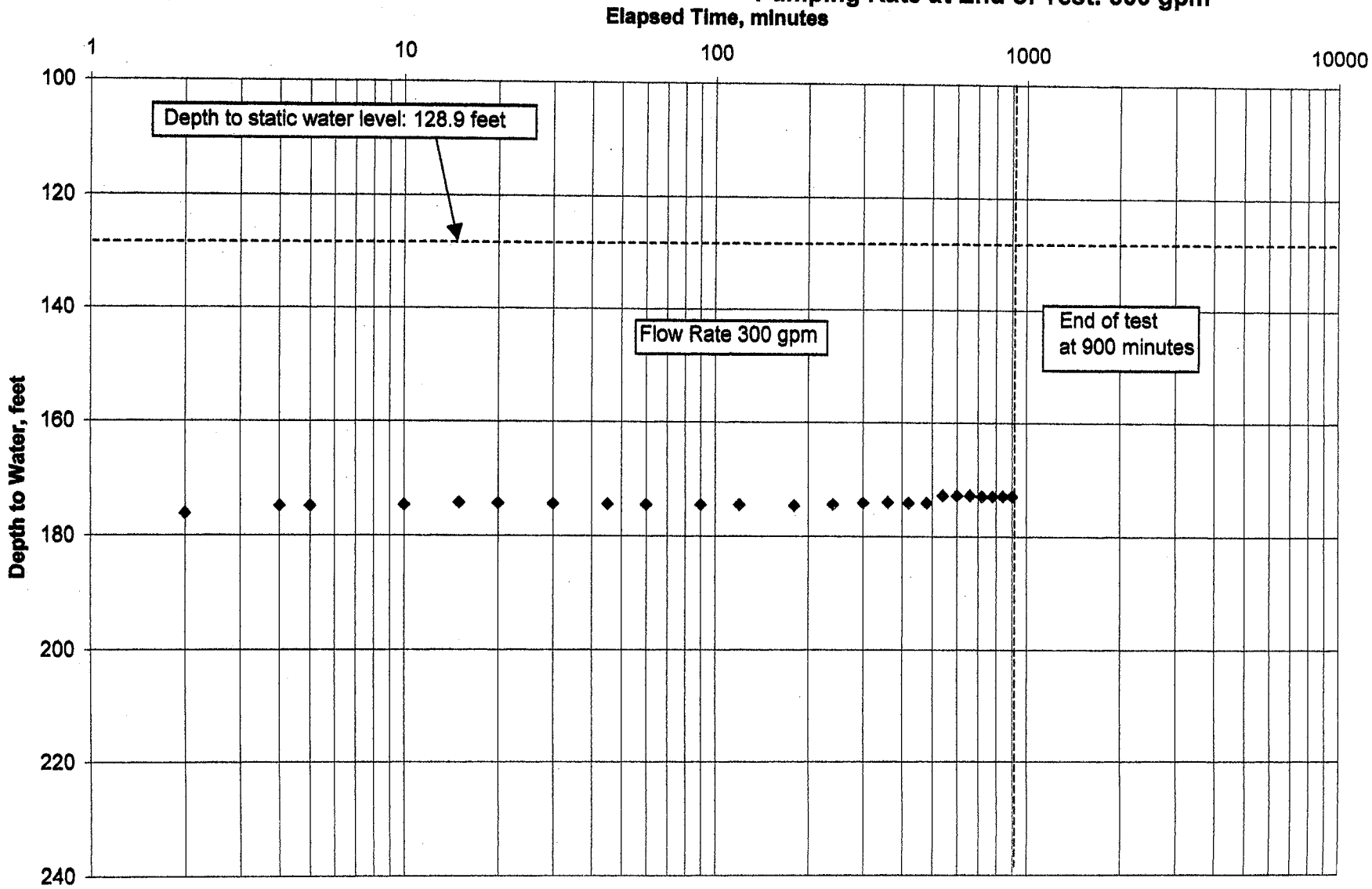
**Recovery Test - F&T #1, Laetitia Winery, Arroyo Grande, California**
**December 10, 2003**
**Depth to Static Water Level: 147.70 feet**



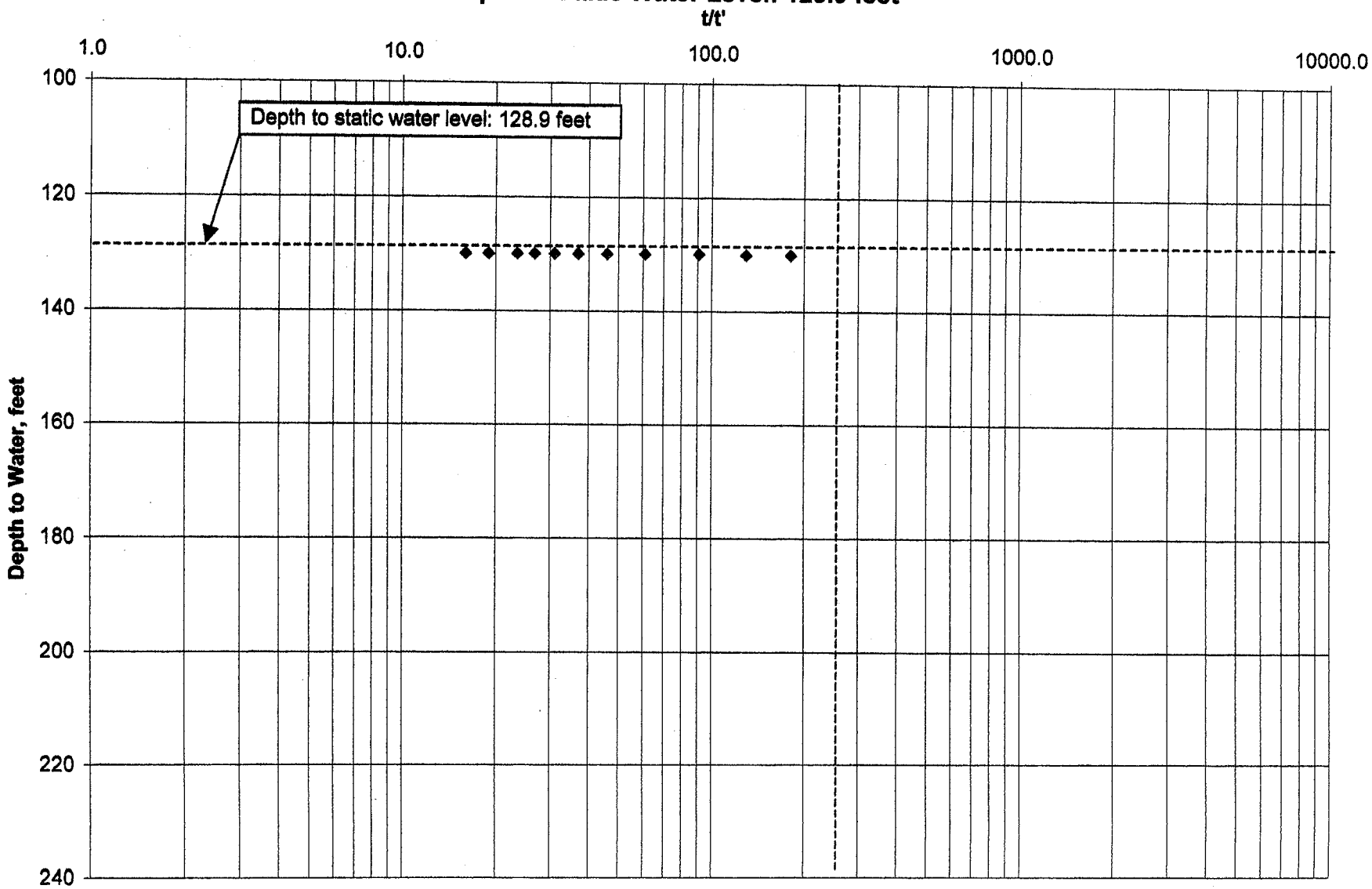
**Pumping Test, F&T #1, Laetitia Winery, Arroyo Grande, Califorina, December 10, 2003**

| Day | Time | Elapsed Time | Depth to Water | Drawdown | Pumping Rate | Observations |
|---|---|---|---|---|---|---|
| Mo./Day/Yr | hr:min | minutes | feet | feet | gallons per minute | |
| 12/10/2003 | 2:20 PM | 0 | 147.7 | 0.0 | 0 | Pumping Started-Static Water Level |
| | | 1 | – | – | 340 | |
| | | 2 | – | – | 340 | |
| | | 3 | 199.6 | 51.9 | 340 | |
| | | 4 | – | – | 270 | |
| | | 5 | 183.5 | 35.8 | 270 | |
| | | 6 | 183.3 | 35.6 | 270 | |
| | | 8 | 183.2 | 35.5 | 270 | |
| | | 10 | 183.2 | 35.5 | 270 | |
| | | 12 | 183.2 | 35.5 | 270 | |
| | | 15 | 183.2 | 35.5 | 270 | |
| | | 20 | 183.3 | 35.6 | 270 | |
| | | 25 | 183.3 | 35.6 | 270 | |
| | | 30 | 183.3 | 35.6 | 270 | |
| | | 40 | 183.4 | 35.7 | 270 | |
| | | 50 | 183.4 | 35.7 | 270 | |
| | 3:20 PM | 60 | 183.4 | 35.7 | 270 | |
| | | 75 | 183.5 | 35.8 | 270 | |
| | | 90 | 183.5 | 35.8 | 270 | |
| | | 105 | 183.5 | 35.8 | 270 | |
| | 4:20 PM | 120 | 183.5 | 35.8 | 270 | |
| Recovery | | t | s | t' | t/t' | |
| 12/10/2003 | | 121 | 148.2 | 1 | 121.0 | |
| | | 122 | 148.1 | 2 | 61.0 | |
| | | 123 | 148.1 | 3 | 41.0 | |
| | | 124 | 148.0 | 4 | 31.0 | |
| | | 125 | 148.0 | 5 | 25.0 | |
| | | 126 | 147.94 | 6 | 21.0 | |
| | | 128 | 147.87 | 8 | 16.0 | |

**Pumping Test - F&T #1, Laetitia Winery, Arroyo Grande, California**
**November 9, 1998**
**Depth to Static Water Level: 128.9 feet** **Pumping Rate at End of Test: 300 gpm**



**Recovery Test - F&T #1, Laetitia Winery, Arroyo Grande, California**
**November 10, 1998**
**Depth to Static Water Level: 128.9 feet**

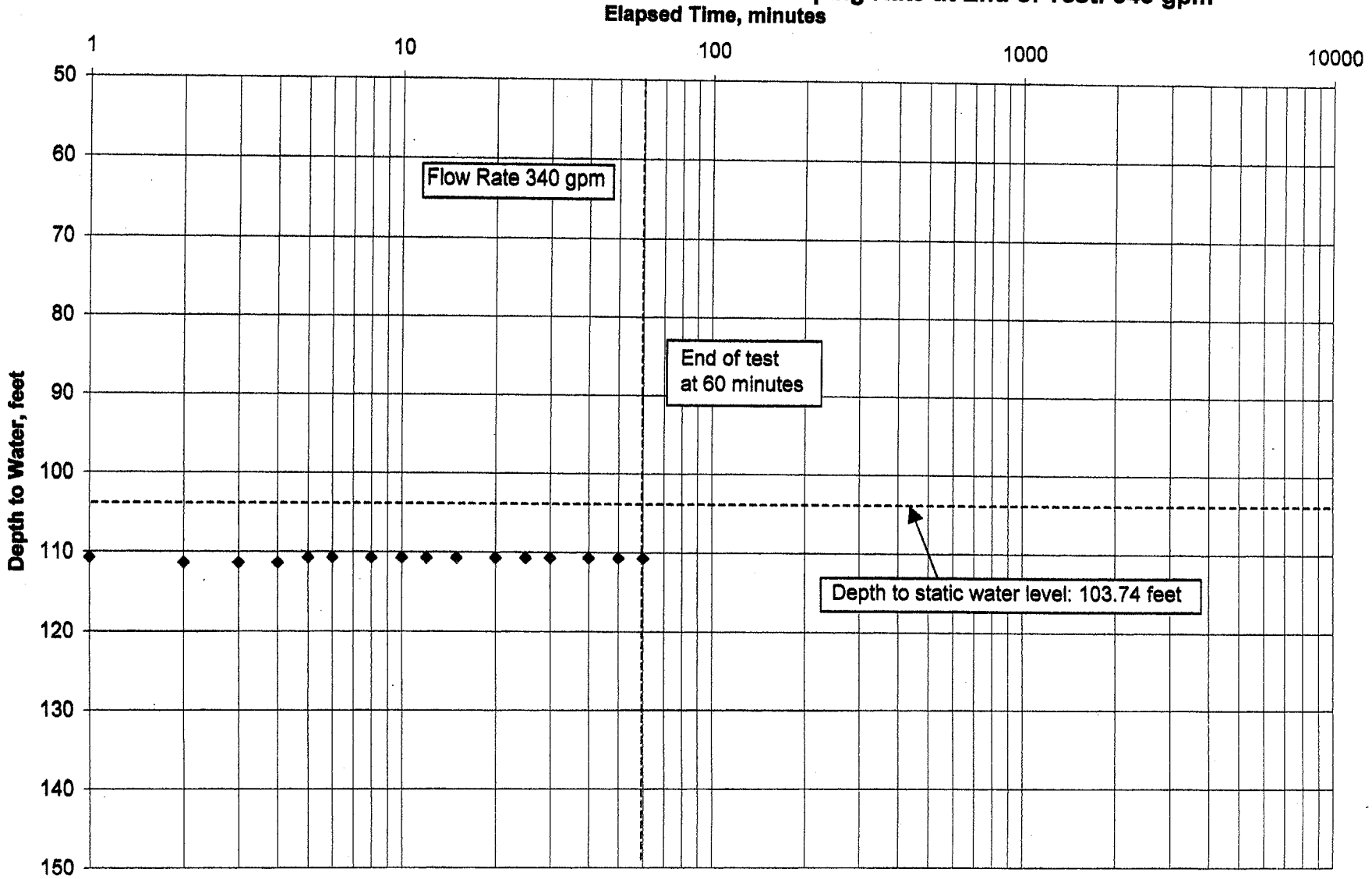


Pumping Test, F&T #1, Laetitia Winery, Arroyo Grande, Califorina, November 9, 1998

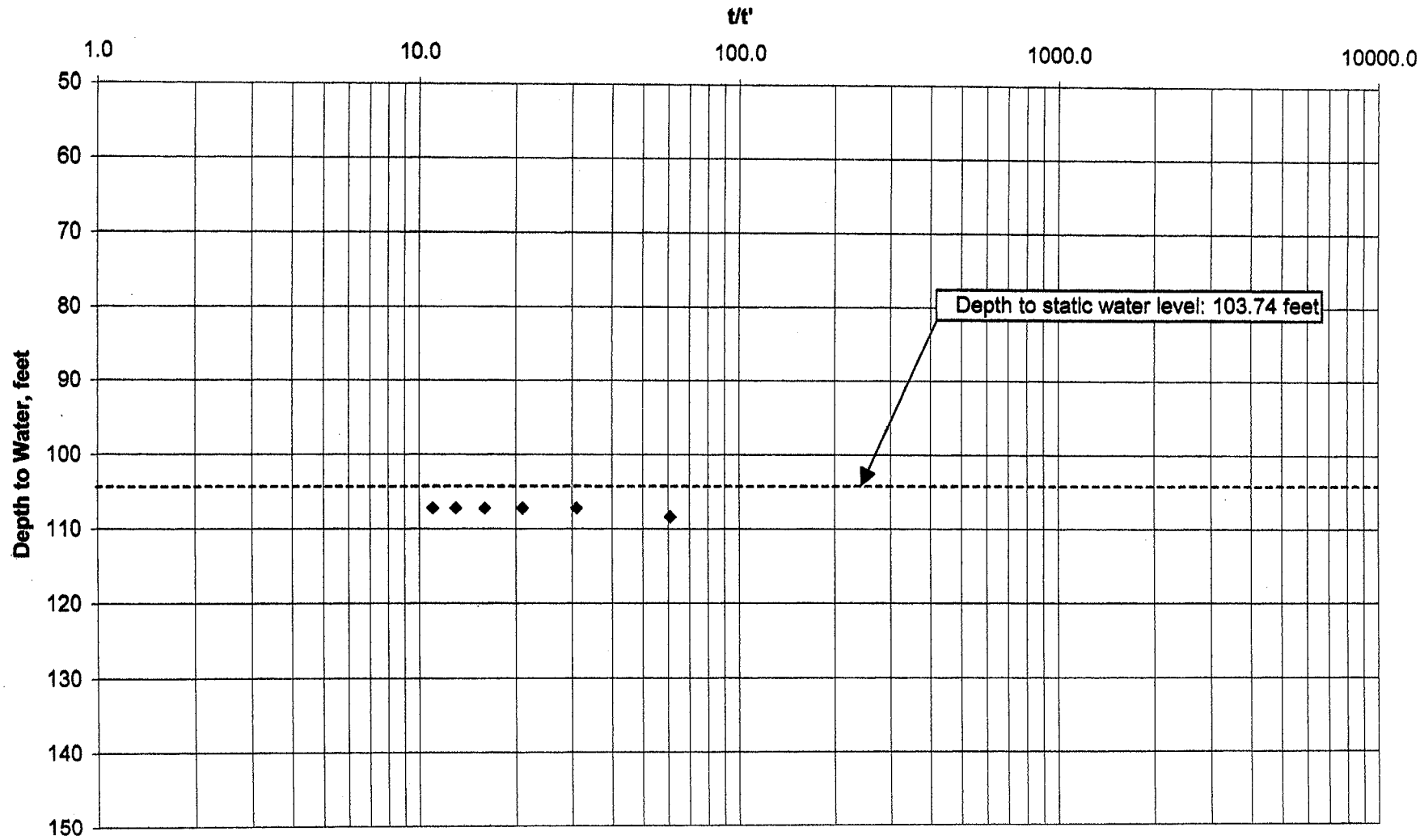
| Day | Time | Elapsed Time | Depth to Water | Drawdown | Pumping Rate | Observations |
|---|---|---|---|---|---|---|
| Mo./Day/Yr | hr:min | minutes | feet | feet | gallons per minute | |
| 11/9/1998 | 9:00 AM | 0 | 128.9 | 0.0 | 0 | Pumping Started-Static Water Level |
| | | 2 | 176.1 | 47.2 | 300 | |
| | | 4 | 174.8 | 45.9 | 300 | |
| | | 5 | 174.8 | 45.9 | 300 | |
| | | 10 | 174.6 | 45.7 | 300 | |
| | | 15 | 174.2 | 45.3 | 300 | |
| | | 20 | 174.3 | 45.4 | 300 | |
| | | 30 | 174.4 | 45.5 | 300 | |
| | | 45 | 174.4 | 45.5 | 300 | |
| | | 60 | 174.5 | 45.6 | 300 | |
| | | 90 | 174.5 | 45.6 | 300 | |
| | | 120 | 174.5 | 45.6 | 300 | |
| | | 180 | 174.6 | 45.7 | 300 | |
| | | 240 | 174.4 | 45.5 | 300 | |
| | | 300 | 174.1 | 45.2 | 300 | |
| | | 360 | 174.0 | 45.1 | 300 | |
| | | 420 | 174.1 | 45.2 | 300 | |
| | | 480 | 174.1 | 45.2 | 300 | |
| | | 540 | 172.8 | 43.9 | 300 | |
| | | 600 | 172.8 | 43.9 | 300 | |
| | | 660 | 172.8 | 43.9 | 300 | |
| | | 720 | 172.9 | 44.0 | 300 | |
| | | 780 | 172.9 | 44.0 | 300 | |
| | | 840 | 172.9 | 44.0 | 300 | |
| | 12:00 AM | 900 | 172.9 | 44.0 | 300 | |

| Recovery | t | s | t' | t/t' |
|---|---|---|---|---|
| 11/10/1998 | 905 | 130.0 | 5 | 181.0 |
| | 907 | 130.0 | 7 | 129.6 |
| | 910 | 129.9 | 10 | 91.0 |
| | 915 | 129.9 | 15 | 61.0 |
| | 920 | 129.9 | 20 | 46.0 |
| | 925 | 129.9 | 25 | 37.0 |
| | 930 | 129.9 | 30 | 31.0 |
| | 935 | 129.9 | 35 | 26.7 |
| | 940 | 129.9 | 40 | 23.5 |
| | 950 | 129.9 | 50 | 19.0 |
| | 960 | 129.9 | 60 | 16.0 |

**Pumping Test - F&T #2, Laetitia Winery, Arroyo Grande, California**
**December 10, 2003**
**Depth to Static Water Level: 103.74 feet** **Pumping Rate at End of Test: 340 gpm**



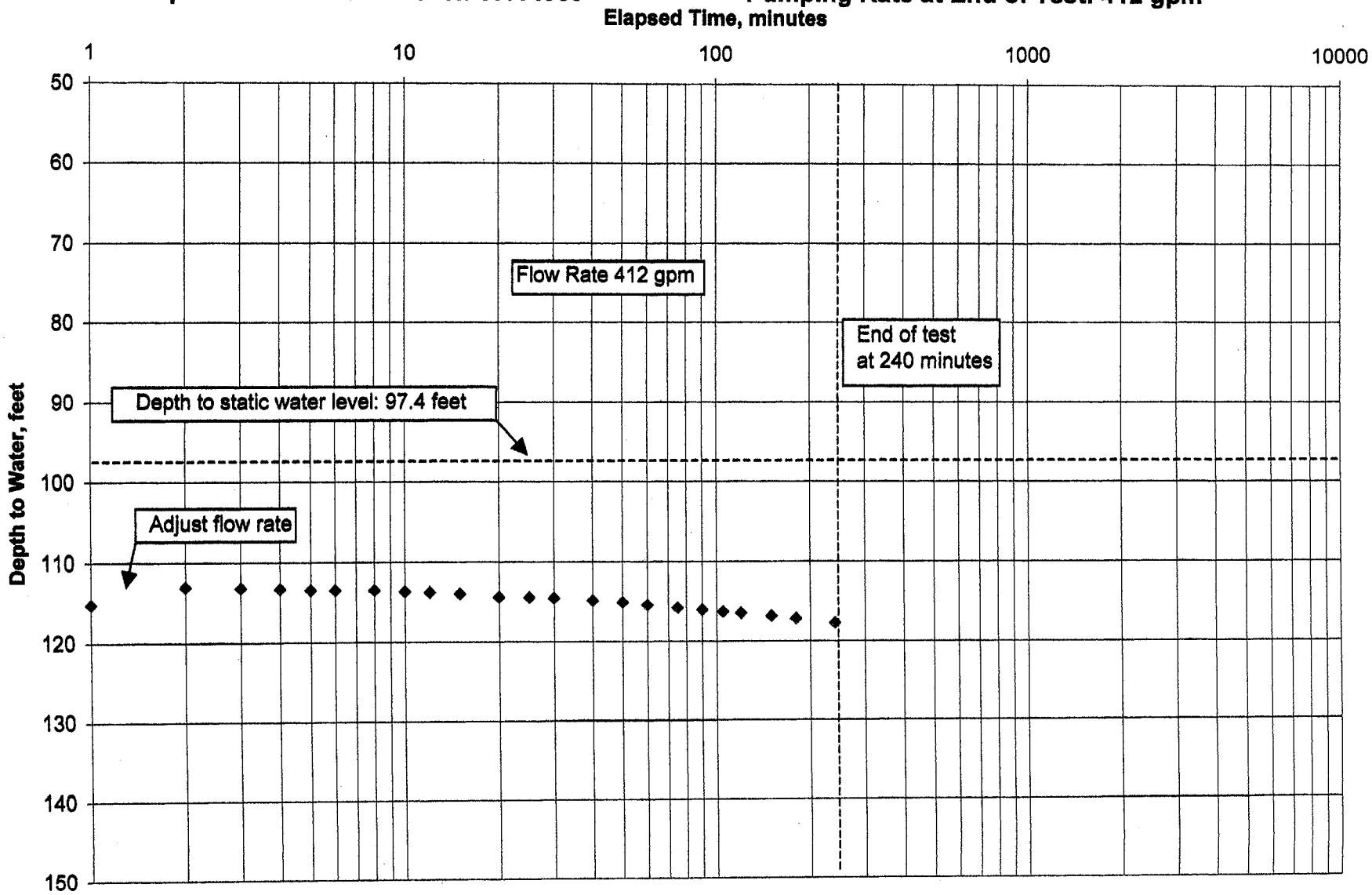
**Recovery Test - F&T #2 Laetitia Winery, Arroyo Grande, California**
**December 10, 2003**
**Depth to Static Water Level: 103.74 feet**

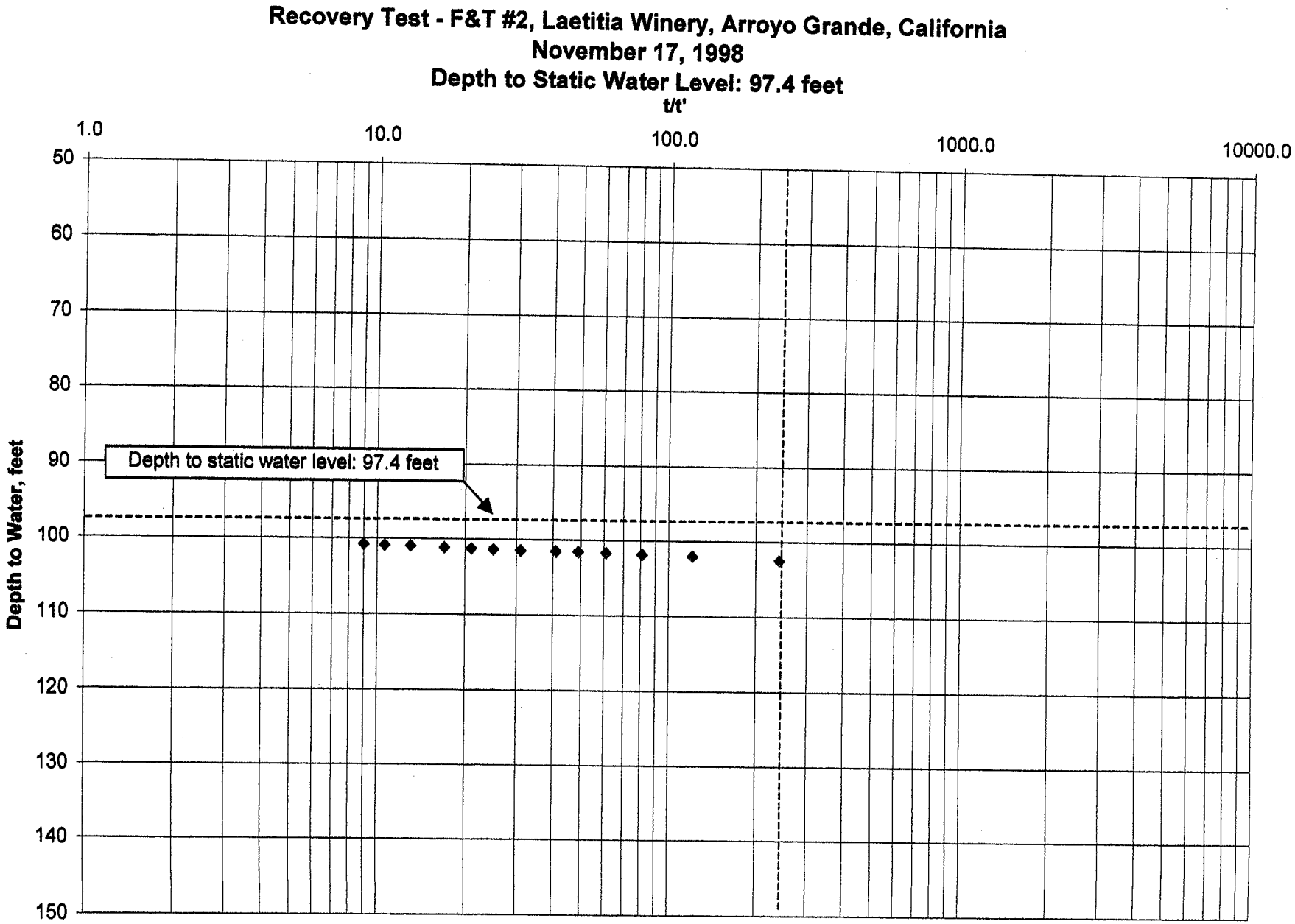


**Pumping Test, F&T #2, Laetitia Winery, Arroyo Grande, Califorina, December 10, 2003**

| Day | Time | Elapsed Time | Depth to Water | Drawdown | Pumping Rate | Observations |
|---|---|---|---|---|---|---|
| Mo./Day/Yr | hr:min | minutes | feet | feet | gallons per minute | |
| 12/10/2003 | 12:22 PM | 0 | 103.7 | 0.0 | 0 | Pumping Started-Static Water Level |
| | | 1 | 110.7 | 6.9 | 340 | |
| | | 2 | 111.3 | 7.6 | 340 | |
| | | 3 | 111.3 | 7.6 | 340 | |
| | | 4 | 111.3 | 7.6 | 340 | |
| | | 5 | 110.7 | 6.9 | 340 | |
| | | 6 | 110.7 | 6.9 | 340 | |
| | | 8 | 110.7 | 6.9 | 340 | |
| | | 10 | 110.7 | 6.9 | 340 | |
| | | 12 | 110.7 | 6.9 | 340 | |
| | | 15 | 110.7 | 6.9 | 340 | |
| | | 20 | 110.7 | 6.9 | 340 | |
| | | 25 | 110.7 | 6.9 | 340 | |
| | | 30 | 110.7 | 6.9 | 340 | |
| | | 40 | 110.7 | 6.9 | 340 | |
| | | 50 | 110.7 | 6.9 | 340 | |
| | 1:22 PM | 60 | 110.7 | 6.9 | 340 | |
| Recovery | | t | s | t' | t/t' | |
| 12/10/2003 | | 61 | 108.4 | 1 | 61.0 | |
| | | 62 | 107.2 | 2 | 31.0 | |
| | | 63 | 107.2 | 3 | 21.0 | |
| | | 64 | 107.2 | 4 | 16.0 | |
| | | 65 | 107.2 | 5 | 13.0 | |
| | | 66 | 107.2 | 6 | 11.0 | |

**Pumping Test - F&T #2, Laetitia Winery, Arroyo Grande, California**
**November 17, 1998**
**Depth to Static Water Level: 97.4 feet** **Pumping Rate at End of Test: 412 gpm**




Recovery Test - F&T #2, Laetitia Winery, Arroyo Grande, California
November 17, 1998
Depth to Static Water Level: 97.4 feet
t/t'
1.0
10.0
100.0
1000.0
10000.0
Depth to Water, feet
50
60
70
80
90
100
110
120
130
140
150
Depth to static water level: 97.4 feet

**Pumping Test, F&T #2, Laetitia Winery, Arroyo Grande, Califorina, November 17, 1998**

| Day | Time | Elapsed Time | Depth to Water | Drawdown | Pumping Rate | Observations |
|---|---|---|---|---|---|---|
| Mo./Day/Yr | hr:min | minutes | feet | feet | gallons per minute | |
| 11/17/1998 | 10:10 AM | 0 | 97.4 | 0.0 | 0 | Pumping Started-Static Water Level adjusted flow |
| | | 1 | 115.2 | 17.8 | | |
| | | 2 | 113.0 | 15.6 | | |
| | | 3 | 113.1 | 15.7 | | |
| | | 4 | 113.2 | 15.8 | | |
| | | 5 | 113.4 | 16.0 | 412 | |
| | | 6 | 113.4 | 16.0 | 412 | |
| | | 8 | 113.4 | 16.0 | 412 | |
| | | 10 | 113.6 | 16.2 | 412 | |
| | | 12 | 113.7 | 16.3 | 412 | |
| | | 15 | 113.9 | 16.5 | 412 | |
| | | 20 | 114.3 | 16.9 | 412 | |
| | | 25 | 114.4 | 17.0 | 412 | |
| | | 30 | 114.5 | 17.1 | 412 | |
| | | 40 | 114.8 | 17.4 | 412 | |
| | | 50 | 115.0 | 17.6 | 412 | |
| | 11:10 AM | 60 | 115.3 | 17.9 | 412 | |
| | | 75 | 115.7 | 18.3 | 412 | |
| | | 90 | 116.0 | 18.6 | 412 | |
| | | 105 | 116.2 | 18.8 | 412 | |
| | 12:10 PM | 120 | 116.4 | 19.0 | 412 | |
| | | 150 | 116.8 | 19.4 | 412 | |
| | | 180 | 117.1 | 19.7 | 412 | |
| | 2:10 PM | 240 | 117.7 | 20.3 | 412 | |
| Recovery | | t | s | t' | t/t' | |
| 11/17/1998 | | 241 | 102.4 | 1 | 241.0 | |
| | | 242 | 102.0 | 2 | 121.0 | |
| | | 243 | 101.8 | 3 | 81.0 | |
| | | 244 | 101.6 | 4 | 61.0 | |
| | | 245 | 101.6 | 5 | 49.0 | |
| | | 246 | 101.5 | 6 | 41.0 | |
| | | 248 | 101.44 | 8 | 31.0 | |
| | | 250 | 101.33 | 10 | 25.0 | |
| | | 252 | 101.21 | 12 | 21.0 | |
| | | 255 | 101.12 | 15 | 17.0 | |
| | | 260 | 100.94 | 20 | 13.0 | |
| | | 265 | 100.86 | 25 | 10.6 | |
| | 2:40 PM | 270 | 100.73 | 30 | 9.0 | |

# Appendix D

## Laboratory Analytical Reports

CREEK ENVIRONMENTAL LABORATORIES, INC.
141 SUBURBAN ROAD, SUITE C-5 · SAN LUIS OBISPO, CA 93401 · (805) 545-9838 · FAX (805) 545-0107



Dave Hickey
Laetitia Winery
453 Laetitia Vineyard Drive
Arroyo Grande, CA 93420

Log Number: 03-C13297
Order: K4981
Project: Laetitia Well Evaluation
Received: 12/09/03

## REPORT OF ANALYTICAL RESULTS

| SAMPLE DESCRIPTION | SAMPLED BY | SAMPLED DATE @ TIME | MATRIX |
|---|---|---|---|
| F.V. Wells #1 | David Williams | 12/09/03@ | Drinking Water |

| ANALYTE | RESULT | DLR | UNITS | METHOD | ANALYZED |
|---|---|---|---|---|---|
| Total Alkalinity as CaCO3 | 350 | 2 | mg/L | SM 2320B | 12/16/03 |
| Chloride | 160 | 10 | mg/L | EPA 300.0 | 12/10/03 |
| Electrical Conductance | 1,500 | 1 | umhos/cm | SM 2510 | 12/10/03 |
| Nitrate as N | Not Detected | 0.1 | mg/L | EPA 300.0 | 12/10/03 |
| Nitrate as NO3 | Not Detected | 0.4 | mg/L | EPA 300.0 | 12/10/03 |
| pH | 7.6 | 0.1 | units | EPA 150.1 | 12/10/03 |
| Sulfate | 300 | 5 | mg/L | EPA 300.0 | 12/10/03 |
| Sulfide, Total | 5.6 | 1 | mg/L | EPA 376.2 | 12/10/03 |
| Total Dissolved Solids | 1,100 | 10 | mg/L | EPA 160.1 | 12/13/03 |
| Boron | 0.19 | 0.05 | mg/L | EPA 200.7 | 12/16/03 |
| Calcium | 100 | 0.03 | mg/L | EPA 200.7 | 12/16/03 |
| Hardness | 570 | 1 | mg/L CaCO3 | EPA 200.7 | 12/16/03 |
| Sodium Adsorption Ratio | 2.5 | 0.1 | | EPA 200.7 | 12/17/03 |
| Copper | Not Detected | 0.05 | mg/L | EPA 200.7 | 12/16/03 |
| Iron | 0.5 | 0.1 | mg/L | EPA 200.7 | 12/16/03 |
| Potassium | 11 | 0.1 | mg/L | EPA 200.7 | 12/16/03 |
| Magnesium | 76 | 0.03 | mg/L | EPA 200.7 | 12/16/03 |
| Manganese | 0.05 | 0.03 | mg/L | EPA 200.7 | 12/16/03 |
| Sodium | 130 | 0.05 | mg/L | EPA 200.7 | 12/16/03 |
| Zinc | Not Detected | 0.05 | mg/L | EPA 200.7 | 12/16/03 |

DLR - Detection Limit for Reporting. Results of "Not Detected" are below DLR.

CREEK ENVIRONMENTAL LABORATORIES

Lab Director, Orval Osborne

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CREEK ENVIRONMENTAL LABORATORIES, INC.
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Dave Hickey
Laetitia Winery
453 Laetitia Vineyard Drive
Arroyo Grande, CA 93420

Log Number: 03-C13363
Order: K5010
Received: 12/11/03

## REPORT OF ANALYTICAL RESULTS

| SAMPLE DESCRIPTION | SAMPLED BY | SAMPLED DATE @ TIME | MATRIX |
|---|---|---|---|
| F.V. Wells #2 | David Williams | 12/10/03@13:45 | Drinking Water |

| ANALYTE | RESULT | DLR | UNITS | METHOD | ANALYZED |
|---|---|---|---|---|---|
| Total Alkalinity as CaCO3 | 320 | 2 | mg/L | SM 2320B | 12/22/03 |
| Chloride | 260 | 20 | mg/L | EPA 300.0 | 12/12/03 |
| Electrical Conductance | 2,000 | 1 | umhos/cm | SM 2510 | 12/11/03 |
| Nitrate as N | Not Detected | 0.1 | mg/L | EPA 300.0 | 12/11/03 |
| Nitrate as NO3 | Not Detected | 0.4 | mg/L | EPA 300.0 | 12/11/03 |
| pH | 7.3 | 0.1 | units | EPA 150.1 | 12/11/03 |
| Sulfate | 380 | 10 | mg/L | EPA 300.0 | 12/12/03 |
| Total Dissolved Solids | 1,500 | 10 | mg/L | EPA 160.1 | 12/13/03 |
| Boron | 0.11 | 0.05 | mg/L | EPA 200.7 | 12/16/03 |
| Calcium | 130 | 0.03 | mg/L | EPA 200.7 | 12/16/03 |
| Hardness | 700 | 1 | mg/L CaCO3 | EPA 200.7 | 12/16/03 |
| Sodium Adsorption Ratio | 2.4 | 0.1 | | EPA 200.7 | 12/23/03 |
| Copper | Not Detected | 0.05 | mg/L | EPA 200.7 | 12/16/03 |
| Iron | 0.2 | 0.1 | mg/L | EPA 200.7 | 12/16/03 |
| Potassium | 16 | 0.1 | mg/L | EPA 200.7 | 12/16/03 |
| Magnesium | 92 | 0.03 | mg/L | EPA 200.7 | 12/16/03 |
| Manganese | 0.15 | 0.03 | mg/L | EPA 200.7 | 12/16/03 |
| Sodium | 140 | 0.05 | mg/L | EPA 200.7 | 12/16/03 |
| Zinc | 0.08 | 0.05 | mg/L | EPA 200.7 | 12/16/03 |

DLR = Detection Limit for Reporting. Results of "Not Detected" are below DLR.

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Lab Director, Orval Osborne

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Dave Hickey
Laetitia Winery
453 Laetitia Vineyard Drive
Arroyo Grande, CA 93420

Log Number: 03-C13298
Order: K4981
Project: Laetitia Well Evaluation
Received: 12/09/03

## REPORT OF ANALYTICAL RESULTS

| SAMPLE DESCRIPTION | SAMPLED BY | SAMPLED DATE @ TIME | MATRIX |
|---|---|---|---|
| F.V. Wells #3 | David Williams | 12/09/03@ | Drinking Water |

| ANALYTE | RESULT | DLR | UNITS | METHOD | ANALYZED |
|---|---|---|---|---|---|
| Total Alkalinity as CaCO3 | 330 | 2 | mg/L | SM 2320B | 12/16/03 |
| Chloride | 260 | 10 | mg/L | EPA 300.0 | 12/10/03 |
| Electrical Conductance | 1,800 | 1 | umhos/cm | SM 2510 | 12/10/03 |
| Nitrate as N | Not Detected | 0.1 | mg/L | EPA 300.0 | 12/10/03 |
| Nitrate as NO3 | Not Detected | 0.4 | mg/L | EPA 300.0 | 12/10/03 |
| pH | 7.2 | 0.1 | units | EPA 150.1 | 12/10/03 |
| Sulfate | 490 | 5 | mg/L | EPA 300.0 | 12/10/03 |
| Total Dissolved Solids | 1,600 | 10 | mg/L | EPA 160.1 | 12/13/03 |
| Boron | 0.14 | 0.05 | mg/L | EPA 200.7 | 12/10/03 |
| Calcium | 140 | 0.03 | mg/L | EPA 200.7 | 12/10/03 |
| Hardness | 740 | 1 | mg/L CaCO3 | EPA 200.7 | 12/10/03 |
| Sodium Adsorption Ratio | 2.5 | 0.1 | | EPA 200.7 | 12/17/03 |
| Copper | Not Detected | 0.05 | mg/L | EPA 200.7 | 12/10/03 |
| Iron | 0.2 | 0.1 | mg/L | EPA 200.7 | 12/10/03 |
| Potassium | 11 | 0.1 | mg/L | EPA 200.7 | 12/10/03 |
| Magnesium | 93 | 0.03 | mg/L | EPA 200.7 | 12/10/03 |
| Manganese | Not Detected | 0.03 | mg/L | EPA 200.7 | 12/10/03 |
| Sodium | 150 | 0.05 | mg/L | EPA 200.7 | 12/10/03 |
| Zinc | Not Detected | 0.05 | mg/L | EPA 200.7 | 12/10/03 |

DLR = Detection Limit for Reporting. Results of "Not Detected" are below DLR.

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Lab Director, Orval Osborne

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Dave Hickey
Laetitia Winery
453 Laetitia Vineyard Drive
Arroyo Grande, CA 93420

Log Number: 03-C13364
Order: K5010
Received: 12/11/03

## REPORT OF ANALYTICAL RESULTS

| SAMPLE DESCRIPTION | SAMPLED BY | SAMPLED DATE @ TIME | MATRIX |
|---|---|---|---|
| F.V. Wells #4 | David Williams | 12/10/03@13:35 | Drinking Water |

| ANALYTE | RESULT | DLR | UNITS | METHOD | ANALYZED |
|---|---|---|---|---|---|
| Total Alkalinity as CaCO3 | 310 | 2 | mg/L | SM 2320B | 12/22/03 |
| Chloride | 280 | 20 | mg/L | EPA 300.0 | 12/12/03 |
| Electrical Conductance | 2,000 | 1 | umhos/cm | SM 2510 | 12/11/03 |
| Nitrate as N | 0.2 | 0.1 | mg/L | EPA 300.0 | 12/11/03 |
| Nitrate as NO3 | 0.7 | 0.4 | mg/L | EPA 300.0 | 12/11/03 |
| pH | 7.1 | 0.1 | units | EPA 150.1 | 12/11/03 |
| Sulfate | 400 | 10 | mg/L | EPA 300.0 | 12/12/03 |
| Total Dissolved Solids | 1,500 | 10 | mg/L | EPA 160.1 | 12/13/03 |
| Boron | 0.11 | 0.05 | mg/L | EPA 200.7 | 12/16/03 |
| Calcium | 130 | 0.03 | mg/L | EPA 200.7 | 12/16/03 |
| Hardness | 710 | 1 | mg/L CaCO3 | EPA 200.7 | 12/16/03 |
| Sodium Adsorption Ratio | 2.3 | 0.1 | | EPA 200.7 | 12/23/03 |
| Copper | Not Detected | 0.05 | mg/L | EPA 200.7 | 12/16/03 |
| Iron | 3.4 | 0.1 | mg/L | EPA 200.7 | 12/16/03 |
| Potassium | 17 | 0.1 | mg/L | EPA 200.7 | 12/16/03 |
| Magnesium | 92 | 0.03 | mg/L | EPA 200.7 | 12/16/03 |
| Manganese | 0.21 | 0.03 | mg/L | EPA 200.7 | 12/16/03 |
| Sodium | 140 | 0.05 | mg/L | EPA 200.7 | 12/16/03 |
| Zinc | Not Detected | 0.05 | mg/L | EPA 200.7 | 12/16/03 |

DLR = Detection Limit for Reporting. Results of "Not Detected" are below DLR.

CREEK ENVIRONMENTAL LABORATORIES

Lab Director, Orval Osborne

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Dave Hickey
Laetitia Winery
453 Laetitia Vineyard Drive
Arroyo Grande, CA 93420

Log Number: [illegible]
Order: K5010
Received: 12/11/03

## REPORT OF ANALYTICAL RESULTS

| SAMPLE DESCRIPTION | SAMPLED BY | SAMPLED DATE @ TIME | MATRIX |
|---|---|---|---|
| F & T #1 | David Williams | 12/10/03@16:15 | Drinking Water |

| ANALYTE | RESULT | DLR | UNITS | METHOD | ANALYZED |
|---|---|---|---|---|---|
| Total Alkalinity as CaCO3 | 320 | 2 | mg/L | SM 2320B | 12/22/03 |
| Chloride | 71 | 1 | mg/L | EPA 300.0 | 12/11/03 |
| Electrical Conductance | 1,100 | 1 | umhos/cm | SM 2510 | 12/11/03 |
| Nitrate as N | Not Detected | 0.1 | mg/L | EPA 300.0 | 12/11/03 |
| Nitrate as NO3 | Not Detected | 0.4 | mg/L | EPA 300.0 | 12/11/03 |
| pH | 7.3 | 0.1 | units | EPA 150.1 | 12/11/03 |
| Sulfate | 220 | 0.5 | mg/L | EPA 300.0 | 12/11/03 |
| Sulfide, Total | 14 | 0.8 | mg/L | EPA 376.2 | 12/18/03 |
| Total Dissolved Solids | 810 | 10 | mg/L | EPA 160.1 | 12/13/03 |
| Boron | 0.16 | 0.05 | mg/L | EPA 200.7 | 12/16/03 |
| Calcium | 78 | 0.03 | mg/L | EPA 200.7 | 12/16/03 |
| Hardness | 420 | 1 | mg/L CaCO3 | EPA 200.7 | 12/16/03 |
| Sodium Adsorption Ratio | 2.0 | 0.1 | | EPA 200.7 | 12/23/03 |
| Copper | Not Detected | 0.05 | mg/L | EPA 200.7 | 12/16/03 |
| Iron | 0.5 | 0.1 | mg/L | EPA 200.7 | 12/16/03 |
| Potassium | 7.7 | 0.1 | mg/L | EPA 200.7 | 12/16/03 |
| Magnesium | 55 | 0.03 | mg/L | EPA 200.7 | 12/16/03 |
| Manganese | 0.04 | 0.03 | mg/L | EPA 200.7 | 12/16/03 |
| Sodium | 92 | 0.05 | mg/L | EPA 200.7 | 12/16/03 |
| Zinc | 0.13 | 0.05 | mg/L | EPA 200.7 | 12/16/03 |

DLR = Detection Limit for Reporting. Results of "Not Detected" are below DLR.

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Lab Director, Orval Osborne

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Dave Hickey
Laetitia Winery
453 Laetitia Vineyard Drive
Arroyo Grande, CA 93420

Log Number: 03-C13366
Order: K5010
Received: 12/11/03

REPORT OF ANALYTICAL RESULTS

| SAMPLE DESCRIPTION | SAMPLED BY | SAMPLED DATE @ TIME | MATRIX |
|---|---|---|---|
| F & T #2 | David Williams | 12/10/03@12:20 | Drinking Water |

| ANALYTE | RESULT | DLR | UNITS | METHOD | ANALYZED |
|---|---|---|---|---|---|
| Total Alkalinity as CaCO3 | 330 | 2 | mg/L | SM 2320B | 12/22/03 |
| Chloride | 240 | 20 | mg/L | EPA 300.0 | 12/12/03 |
| Electrical Conductance | 2,100 | 1 | umhos/cm | SM 2510 | 12/11/03 |
| Nitrate as N | Not Detected | 0.1 | mg/L | EPA 300.0 | 12/11/03 |
| Nitrate as NO3 | Not Detected | 0.4 | mg/L | EPA 300.0 | 12/11/03 |
| pH | 7.3 | 0.1 | units | EPA 150.1 | 12/11/03 |
| Sulfate | 620 | 10 | mg/L | EPA 300.0 | 12/12/03 |
| Total Dissolved Solids | 1,800 | 10 | mg/L | EPA 160.1 | 12/13/03 |
| Boron | 0.11 | 0.05 | mg/L | EPA 200.7 | 12/16/03 |
| Calcium | 170 | 0.03 | mg/L | EPA 200.7 | 12/16/03 |
| Hardness | 930 | 1 | mg/L CaCO3 | EPA 200.7 | 12/16/03 |
| Sodium Adsorption Ratio | 1.7 | 0.1 | | EPA 200.7 | 12/23/03 |
| Copper | Not Detected | 0.05 | mg/L | EPA 200.7 | 12/16/03 |
| Iron | 2.5 | 0.1 | mg/L | EPA 200.7 | 12/16/03 |
| Potassium | 8.3 | 0.1 | mg/L | EPA 200.7 | 12/16/03 |
| Magnesium | 120 | 0.03 | mg/L | EPA 200.7 | 12/16/03 |
| Manganese | 0.08 | 0.03 | mg/L | EPA 200.7 | 12/16/03 |
| Sodium | 120 | 0.05 | mg/L | EPA 200.7 | 12/16/03 |
| Zinc | Not Detected | 0.05 | mg/L | EPA 200.7 | 12/16/03 |

DLR = Detection Limit for Reporting. Results of "Not Detected" are below DLR.

CREEK ENVIRONMENTAL LABORATORIES

Lab Director, Orval Osborne

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# WATER TE ING AND CONSULTING LA RATORY

3825 SANTA CLAUS LANE • CARPINTERIA, CA 93013 • (805, 684-3301

CALIFORNIA STATE HEALTH APPROVED LABORATORY

## ANALYSIS

F.V. wells # 2

EPORT TO: FLOYD WELLS INC.
P.O. BOX 1007
SANTA MARIA, CA. 93456

TTENTION: MR. CHUCK WELLS

OURCE: PICHO /MAISON DEUTZ, SANTA MARIA, CA.

MPLE DESCRIPTION: RAW WATER

TE COLLECTED: JULY 14, 1988

MPLE COLLECTOR: CHUCK WELLS

MPLE BOTTLE USED: WTCL: 1-L Gubitainer; lan split as eceived, 1/4 liter + 0.3 ml $HNO_3$(for Metals); 1/4 liter 0.3 ml $H_2SO_4$(for Nitrate).

LAB NO. 88525

DATE JULY 27, 1988

PAGE 1 OF 1

TESTS REQUESTED: GENERAL MINERAL, GENERAL PHYSICAL AND INORGANIC CHEMICAL ANALYSES PLUS BORON.

11:40 AM

**DATE RECEIVED: JULY 18, 1988

Date Completed: 7/26/88

| ENERAL MINERAL ANALYSES | | |
|---|---|---|
| icarbonate Alkalinity, mg/1 $CaCO_3$ | $HCO_3$ | 360 |
| arbonate Alkalinity, mg/1 $CaCO_3$ | $CO_3$ | <1 |
| ydroxide Alkalinity, mg/1 $CaCO_3$ | OH | <1 |
| alcium, mg/1 Ca | | 104 |
| hloride, mg/1 C1 (500) | | 340 |
| opper, mg/1 Cu (1.0) | | <0.02 |
| urfactant, mg/1 MBAS (0.5) | | <0.02 |
| n, mg/1 Fe (0.3) | | 0.08 |
| agnesium, mg/1 Mg | | 102 |
| anganese, mg/1 (0.05) | | 0.11 |
| factor, unit | | 7.1 |
| dium, mg/1 Na | | 304 |
| fate, mg/1 $SO_4$ (500) | | 243 |
| nductance, electrical, 25° C (1600)MMH/CM | | 1750 |
| tal Dissolved Solids, mg/1 TDS(at 180° C)(1000) | | 1292 |
| al Hardness, mg/1 $CaCO_3$ | | 680 |
| alcium Hardness, mg/1 $CaCO_3$ | | 260 |
| agnesium Hardness, mg/1 $CaCO_3$ | | 420 |
| , mg/1 Zn (5) | | 0.02 |
| ERAL PHYSICAL ANALYSES | | |
| or, Unit (15) | | 10 |
| idity, NTU (5) | | 1.5 |
| eshold Odor Number at 60 C (3) | | 1.4 |
| ERS: Theoritical TDS(Summation of Solids) | | 1465 |
| al Anions, Milligram Equivalent/liter | | 20.4 |
| tal Cations, Milligram Equivalent/liter | | 20.4 |
| ndard Deviation, Anion-Cation Balance | | ± 0 |

| INORGANIC CHEMICAL ANALYSES | |
|---|---|
| Arsenic, mg/1 As (0.05) | <0.005 |
| Barium, mg/1 Ba (1.0) | 0.088 |
| Cadmium, mg/1 (0.01) | <0.002 |
| Chromium, mg/1 Cr (0.05) | <0.005 |
| Lead, mg/1 Pb (0.05) | <0.010 |
| Mercury, mg/1 Hg (0.002) | <0.0003 |
| Nitrate as Nitrogen, mg/1 $NO_3N$ (10) | 0.4 |
| Nitrate as $NO_3$, mg/1 $NO_3$ (45.0) | 1.8 |
| Fluoride, mg/1 F (2.0) | 0.68 |
| Selenium, mg/1 Se (0.01) | <0.005 |
| Silver, mg/1 Ag (0.05) | <0.002 |
| **ORGANIC CHEMICAL ANALYSES** | |
| **Chlorinated Hydrocarbons:** | |
| Endrin mg/1 (0.0002) | |
| Lindane, mg/1 (0.004) | |
| Methoxychlor, mg/1 (0.1) | |
| Toxaphene, mg/1 (0.005) | |
| **Chlorophenols:** | |
| 2,4-D, mg/1 (0.1) | |
| 2,4,5-TP Silvex, mg/1 (0.01) | |
| **MISCELLANEOUS** | |
| Boron, mg/1 B | 0.40 |
| Potassium, mg/1 K | 12.0 |
| Sodium Adsorption Ratio (SAR) | 7.0 |
| Per Cent Sodium | 64.7 |
| | |
| | |

EGEND: Mg/ℓ means milligrams per liter and is also equivalent to parts per million (ppm). "Less than" (<) means less than the detectable limits by the instruments or methods used in testing. Numbers in parenthesis are the Maximum Contaminant Levels (MCL) established by the State of California Department Health Services in drinking waters. ** OUT OF 48-HOUR HOLDING TIME.

ll data presented here were obtained by following the EPA or State of California standard laboratory procedures. The liability of this laboratory shall not exceed the mount paid for in this report.

ARKS: This well water failed to meet the standard for general mineral analysis due to high ncentrations of manganese, electrical conductance and total dissolved solids exceeding the imum Contaminant Levels(MCL) established by the State Health in drinking waters. Its general ysical and inorganic chemical analysis passed the MCL

# FRUIT GROWERS LABORATORY, INC.

ANALYTICAL CHEMISTS

November 18, 1998

LAB No: SP 809309-1 Page 1

**Filipponi & Thompson Drilling**
3250 El Camino Real Bld #D
P.O. Box 845
Atascadero, CA 93422
Sample Site: Bilo Zariff
Description: At Well Head

F&T #1

Date Sampled : November 10, 1998
Date Received : November 11, 1998
Date Completed November 13, 1998

Sample type: Ground Water

## General Irrigation Suitability Analysis

| Test Description | Result mg/L | Result % | Result Lbs/AF | Graphical Results Presentation: Good | Possible Problem | Moderate Problem | Increasing Problem | Severe Problem |
|---|---|---|---|---|---|---|---|---|
| **Cations** | | | | | | | | |
| Calcium | 81 | 30 | 220 | ** | | | | |
| Magnesium | 57 | 34 | 160 | ** | | | | |
| Potassium | 8 | 2 | 22 | ** | | | | |
| Sodium | 110 | 35 | 300 | | | | | |
| **Anions** | | | | | | | | |
| Carbonate | < 10 | 0 | 0 | | | | | |
| Bicarbonate | 390 | 51 | 1100 | ** | | | | |
| Sulfate | 190 | 32 | 520 | ** | | | | |
| Chloride | 74 | 17 | 200 | | | | | |
| Nitrate | < 0.4 | 0 | 0.0 | | | | | |
| Fluoride | 0.4 | 0 | 1.1 | | | | | |
| **Minor Elements** | | | | | | | | |
| Boron | 0.2 | | 0.5 | | | | | |
| Copper | < 0.05 | | 0.00 | | | | | |
| Iron | < 0.05 | | 0.00 | | | | | |
| Manganese | 0.04 | | 0.11 | | | | | |
| Zinc | < 0.05 | | 0.00 | | | | | |
| **Other** | | | | | | | | |
| pH | 7.6 | units | | | | | | |
| E. C. | 1200 | umhos/cm | | | | | | |
| SAR | 2.3 | mg/L | | | | | | |
| **Crop Suitability** | | | | | | | | |
| No Amendments | Good | | | | | | | |
| With Amendments | Good | | | | | | | |
| **Amendments** | | | | 0 | 1 (10) | 2 (20) | 3 (30) | 4 (40) / 5 (50) / 6 (60) |
| Gypsum Requirement | 0.3(0.0) | Tons/AF | | | | | | |
| Urea Sulfuric Acid | 54 | oz/1000Gal | | | | | | |
| Leaching Requirement | 9 | % | | | | | | |

Good: :Problem :Amendments

Note: Color coded bar graphs have been used to provide you with 'AT-A-GLANCE' interpretations.
** Used in various calculations. mg/L = Milligrams Per Liter (ppm) Lbs/AF = Pounds Per Acre Foot

Interpretations and amendment application notes are presented on the last page. The above interpretation is based upon the tolerance of salt sensitive plants.


**Corporate Offices & Laboratory**
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2500 Stagecoach Road
Stockton, CA 95215
TEL: 209/942-0181
FAX: 209/942-0423

**Field Office**
Visalia, CA
TEL: 209/734-9473
FAX: 209/734-8435

F&T #1

November 18, 1998

LAB No: SP 809309-1 Page 2

**Filipponi & Thompson Drilling**

Date Sampled : November 10, 1998

Sample Site: Bilo Zariff
Description: At Well Head

Sample type: Ground Water

## Micro Irrigation System Plugging Hazard

| Test Description | Result | | Graphical Results Presentation (Slight / Moderate / Severe) |
|---|---|---|---|
| **Chemical** | | | |
| Manganese | 0.04 | mg/L | |
| Iron | < 0.05 | mg/L | |
| TDS by Summation | 910 | mg/L | |
| **No Amendments** | | | |
| pH | 7.6 | units | |
| Alkalinity | 320 | mg/L | |
| Langlier Index | 0.5 | — | |
| Total Hardness | 440 | mg/L | |
| **With Amendments** | | | |
| Alkalinity | 60 | | |
| Langlier Index | -0.4 | — | |
| Total Hardness | 440 | mg/L | |

Good: :Problem

Note: Color coded bar graphs have been used to provide you with 'AT-A-GLANCE' interpretations.

## Water Amendments Application Notes:

The amendments recommended on the previous pages include,

**Gypsum:** This should be applied at least once a year to the irrigated soil surface area. Gypsum can also be applied in smaller quantities in the irrigation water. Apply the smaller (bracketed) amount of gypsum when also applying the recommended amount of Urea Sulfuric Acid and the larger amount when applying only Gypsum.

**Urea Sulfuric Acid:** This product should be applied periodically as needed to prevent emitter plugging in the irrigation system. Please exercise caution when using this material as excesses may be harmful to the system and/or the plants being irrigated. Urea Sulfuric Acid requirement of 54 oz/1000 gallons of water is intended to remove approximately 80 % of the alkalinity. The final pH should range from 5.4 to 6.7. We recommend a field pH determination to confirm that the pH you designate is being achieved. This application of Urea Sulfuric Acid is based upon the use of a product that contains 15% Urea (1.89 lbs Nitrogen), 49% Sulfuric Acid and has a specific gravity of 1.52 at 68°F.

Guidelines for the above interpretations are sourced from USDA & U.C. Cooperative Extension Service publications. Please contact us if you have any questions.

FRUIT GROWERS LAB, INC.

Darrell H. Nelson, B.S.
Laboratory Director

DHN:kdm

# FRUIT GROWERS LABORATORY, INC.

## ANALYTICAL CHEMISTS

F&T #1

November 18, 1998

LAB No: SP 809309-1

Filipponi & Thompson Drilling
3250 El Camino Real Bld #D
P.O. Box 845
Atascadero, CA 93422

RE: Inorganic Analysis

Sample Site: Bilo Zariff
Description: At Well Head
Sampled by : Mike O'Donnell
Type of Sample: Ground Water

Sampled : November 10, 1998
Received : November 11, 1998
Completed : November 17, 1998
QA/QC ID# : 80930901-

**Analytical Results**

| CONSTITUENT | METHOD | UNITS | DLR | RESULTS |
|---|---|---|---|---|
| Sulfide, Total | 4500-S D | mg/L | 0.1 | 0.5 |

DLR = Detection Limit for Reporting Purposes. ND = Not Detected at or above the DLR.
ug/L = Micrograms Per Liter (ppb) mg/L = Milligrams Per Liter (ppm) mg/kg = Milligrams Per Kilogram
♦ = DLR adjusted because of dilutions, concentrations, or limited sample.
Preservatives: (1) NaOH + Zinc Acetate Containers: (a) Plastic

If you have any questions, please call.

FGL ENVIRONMENTAL

Kurt Wilkinson, B.S.
QA Director

KW:kdm


**Corporate Offices & Laboratory**
PO Box 272 / 853 Corporation Street
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CREEK ENVIRONMENTAL LABORATORIES, INC.
141 SUBURBAN ROAD, SUITE C-5 • SAN LUIS OBISPO, CA 93401 • (805) 545-9838 • FAX (805) 545-0107



Ned Thompson
Filipponi & Thompson Drilling
P.O. Box 845
Atascadero, CA 93422

Lab Number: F2552-1

PROJECT: Bilo Zariff/Tim Cleath

F&T #2

REPORT OF ANALYTICAL RESULTS

| SAMPLE DESCRIPTION | MATRIX | SAMPLED BY | SAMPLED DATE/TIME | RECEIVED |
|---|---|---|---|---|
| Well #2 | Aqueous | M.A.O'Donnell | 17 NOV 98/14:00 | 17 NOV 98 |

| ANALYTE | RESULT | *D.L. | UNITS | METHOD | ANALYZED | BY | NOTES |
|---|---|---|---|---|---|---|---|
| Hardness | 910. | 1. | mg/L CaCO3 | SM 2340 B | 11-18-98 | MEL | |
| Sodium Absorption Ratio | 1.8 | 0.1 | | EPA 200.7 | 11-20-98 | ORO | |
| ICP Metals for Irrigation | | | | | | | |
| Calcium | 170. | 0.03 | mg/L | EPA 200.7 | 11-18-98 | MEL | |
| Magnesium | 120. | 0.03 | mg/L | EPA 200.7 | 11-18-98 | MEL | |
| Sodium | 120. | 0.05 | mg/L | EPA 200.7 | 11-18-98 | MEL | |
| Potassium | 8.4 | 0.1 | mg/L | EPA 200.7 | 11-18-98 | MEL | |
| Boron | 0.15 | 0.05 | mg/L | EPA 200.7 | 11-18-98 | MEL | |
| Copper, Total | ND | 0.005 | mg/L | EPA 200.7 | 11-18-98 | MEL | |
| Iron, Total | 2.3 | 0.02 | mg/L | EPA 200.7 | 11-18-98 | MEL | |
| Manganese, Total | 0.075 | 0.002 | mg/L | EPA 200.7 | 11-18-98 | MEL | |
| Zinc, Total | ND | 0.02 | mg/L | EPA 200.7 | 11-18-98 | MEL | |
| Electrical Conductance | 1880. | 1. | umhos/cm | EPA 120.1 | 11-17-98 | ALF | |
| Total Alkalinity, as CaCO3 | 330. | 1. | mg/L | EPA 310.1 | 11-18-98 | ALF | |
| Total Dissolved Solids | 1,500. | 10. | mg/L | EPA 160.1 | 11-18-98 | ALF | |
| pH | 7.2 | 0.1 | Units | EPA 150.1 | 11-17-98 | ALF | |
| Anions by Ion Chromatography | | | | | | | |
| Chloride | 230. | 1. | mg/L | EPA 300.0 | 11-18-98 | KHF | |
| Nitrate as N | ND | 0.1 | mg/L | EPA 300.0 | 11-18-98 | KHF | |
| Sulfate | 660. | 1. | mg/L | EPA 300.0 | 11-18-98 | KHF | |

'METHODS' are EPA SW-846 or 600/4 or as 'SM' indicating Standard Methods; 18th Ed. Lab Certification: ELAP#1958
*D.L. - Reported Detection Limit. 'RESULTS' reported as 'ND' means not detected above D.L.

CREEK ENVIRONMENTAL LABORATORY

Orval Osborne
Laboratory Director

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# DRINKING WATER EVALUATION

"MCL" is Maximum Contaminant Level, the highest acceptable concentration of analyte. Compare these MCL's to your results. **Acceptable RESULTS are less than the MCL's for each analyte.** The MCL's are determined by California Department of Health Services. They are listed in the Code of Regulations, Title 22, Sections 64435 & 64473. "ANALYTE" is the chemical constituent being measured.
"UNITS" are in mg/L (ppm). mg/L = milligrams per liter. ppm = parts-per-million.
To convert mg/L to ug/L (ppb): 1 mg/L = 1,000 ug/L. 1 ug/L = 0.001 mg/L.

## PRIMARY DRINKING WATER STANDARDS

Primary standards analytes have potential toxic effects when above the MCL.

| ANALYTE | MCL | UNITS | ANALYTE | MCL | UNITS |
|---|---|---|---|---|---|
| Aluminum | 1 | mg/L | Nickel | 0.1 | mg/L |
| Antimony | 0.006 | mg/L | Selenium | 0.05 | mg/L |
| Arsenic | 0.05 | mg/L | Silver | 0.05 | mg/L |
| Barium | 1 | mg/L | Thallium | 0.002 | mg/L |
| Beryllium | 0.004 | mg/L | Zinc | 5 | mg/L |
| Cadmium | 0.005 | mg/L | Cyanide | 0.2 | mg/L |
| Chromium | 0.05 | mg/L | Fluoride | 2 | mg/L |
| Lead | 0.05 | mg/L | Nitrate as NO3 | 45 | mg/L |
| Mercury | 0.002 | mg/L | Nitrite | 1 | mg/L |

## SECONDARY DRINKING WATER STANDARDS

These aesthetic standards analytes may contribute to undesirable characteristics when over MCL's, but are not threats to human health.

| ANALYTE | MCL | UNITS | ANALYTE | MCL | UNITS |
|---|---|---|---|---|---|
| Copper | 1 | mg/L | Color | 15 | Units |
| Iron | 0.3 | mg/L | Odor | 3 | Units |
| Manganese | 0.05 | mg/L | Turbidity | 5 | Units |
| MBAS | 0.5 | mg/L | | | |

| MCL: | RECOMMENDED | UPPER | SHORT TERM | UNITS |
|---|---|---|---|---|
| Chloride | 250 | 500 | 600 | mg/L |
| Sulfate | 250 | 500 | 600 | mg/L |
| Electrical Conductance | 900 | 1600 | 2200 | umhos/cm |
| Total Dissolved Solids | 500 | 1000 | 1500 | mg/L |

Analytes not listed above have no MCL established, so any level is acceptable.
NOTE: Organic chemicals, solvents, pesticides, herbicides, radioactivity, asbestos or bacteria are not included in above tests.

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# IRRIGATION WATER ANALYSIS EVALUATION

| ANALYTE (units) | PROBLEM GUIDELINES NONE | INCREASING | SEVERE |
|---|---|---|---|

note 1: "<" means less than; ">" means greater than.
note 2: "mg/l" means milligrams per liter. mg/l = ppm (parts per million).

**Boron (mg/L)** <0.5 0.5 - 2.0 >2

Boron may present a problem in root absorption. Grapes and avocados are most sensitive.

**SAR** <3 3 - 9 >9

SAR = Sodium Absorption Ratio. SAR is a ratio of Sodium to Calcium and Magnesium. Gypsum may lower a high SAR. Sodium may present a problem in root and foliar absorption. Most tree crops and woody ornamentals are sensitive to Sodium and Chloride, whereas most annual crops are not. Leaf burn due to Sodium or Chloride occurs under low-humidity and high evaporations.

**Alkalinity (mg/L)** <100 100 - 500 >500

Alkalinity is bicarbonate and carbonate. It can be a problem in sprinkler irrigation from white deposit which can form on fruit.

**Chloride (mg/L)** <120 120 - 350 >350

Chloride may present a problem in root and foliar absorption. Most tree crops and woody ornamentals are sensitive to Sodium and Chloride, whereas most annual crops are not. Leaf burn occurs under low-humidity and high evaporations.

**Electrical Conductance (EC) (umhos/cm = micro-mhos/cm)**

<750 750 - 3000 >3000

(To express in milli-mhos/cm (mmhos/cm), divide by 1000.) EC is also known as Salinity. EC is a measure of total soluble salts. Crops vary in tolerance to salinity. Also, crop tolerance depends on SAR.

**pH** normal range: 6.0 to 8.5

**Nitrate as N (mg/L)** <5 5 - 30 >30

Some crops, such as grapes, are sensitive to high levels of Nitrate.

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Order # [illegible]

- Please Print in Pen

| Client Name | Contact | Phone | Due Date: |
|---|---|---|---|
| LAETITIA VINEYARD | DAVE HICKEY | 805-474-7643 | 24Hr 48Hr Other Normal TAT |
| **Address** 453 LAETITIA VINEYARD **City** ARROYO GRANDE **State** CA **Zip** 9420 | | Fax 805-473-7214 | Cell / Beeper |
| Project Name/Number | | PO# | Copies To: C. WATTS & ASSOCIATES |
| Bill to: (if different from above) | Address | City | State Zip |
| **Sampler Name (Print)** DAVID WILLIAMS | Comments: | | **Matrix Key:** DW = Drinking Water, AQ = Aqueous, SL = Soil/Solid |

| Sample Description | Date/Time Sampled | Analysis | Matrix | # of Bottles | Preservative / Type Bottles | Creek Lab Sample # |
|---|---|---|---|---|---|---|
| F.V. WELLS #2 | 12/10/03 [illegible] | IRRIGATION SUITE | DW | 2 | | 13363 |
| F.V. WELLS #4 | 12/10/03 [illegible] | IRRIGATION SUITE | DW | 2 | | 13364 |
| F&T #1 | 12/10/03 [illegible] | IRRIGATION SUITE + SULFIDE | DW | 3 | | 13365 |
| F&T #2 | 12/10/03 [illegible] | IRRIGATION SUITE | DW | 2 | | 13366 |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |

| RELINQUISHED BY (Sign) | (Print) | (Organization) | DATE/TIME | RECEIVED BY (Sign) | (Print) | (Organization) |
|---|---|---|---|---|---|---|
| [signature] | DAVID WILLIAMS | WATTS & ASSOC. | 12/11/03 0825 | [signature] | [illegible] | |
| | | | | | | Creek Environmental Laboratories, Inc. |

FOR LAB USE ONLY: Shipping Method: Client/ Lab/ Courier: Sample Conditions: Intact: Y/ N Temp: 10.5 Custody Sealed: Y/ N

REMARKS

# Creek Environmental Laboratories, Inc. Chain-of-Custody

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Order # K 11921

- Please Print in Pen

| Client Name | Contact | Phone | Due Date: |
|---|---|---|---|
| LAETITIA WINERY | DAVE HICKEY | 805-474-7643 | 24Hr 48Hr Other Normal TAT |
| **Address** 453 LAETITIA VINEYARD DR. **City** HUASNA GRANDE **State** CA **Zip** 93420 | | Fax 805-473-7214 | Cell / Beeper |
| Project Name/Number: LAETITIA WELL EVALUATION | | PO# | Copies To: CLEATH & ASSOCIATES |
| Bill to: (If different from above) | Address | City | State Zip |

| Sampler Name (Print) | Comments: | Matrix Key: DW = Drinking Water, AQ = Aqueous, SL = Soil/Solid |
|---|---|---|
| DAVID WILLIAMS | | |

| Sample Description | Date/Time Sampled | Analysis | Matrix | # of Bottles | Preservative / Type Bottles | Creek Lab Sample # |
|---|---|---|---|---|---|---|
| F.V. WELLS #1 | 12/9/03 | IRRIGATION SUITE + SULFIDE | DW | 3 | 1QP UNP, 8OZ P HNO3, 8OZ P ZnAc | 13297 |
| F.V. WELLS #3 | 12/9/03 | IRRIGATION SUITE | DW | 2 | 1QP UNP-A, 8OZ P HNO3-B | 13298 |
| | | | | | | |
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| RELINQUISHED BY (Sign) | (Print) | (Organization) | DATE/TIME | RECEIVED BY (Sign) | (Print) | (Organization) |
|---|---|---|---|---|---|---|
| [signature] | DAVID WILLIAMS | CLEATH & ASSOC. | 12/9/03 16:30 | | | |
| | | | | [signature] | [signature] | Creek Environmental Laboratories, Inc. |

FOR LAB USE ONLY: Shipping Method: Client/ Lab/ Courier: Sample Conditions: Intact: Y/N Temp: 17° Custody Sealed: Y/N

REMARKS