



Wayne Cooper AG Services, LLC
(805) 466-6030
Pump Test Report

v.6.0 9/2014

Customer and Facility Data

Pump/Location:	JVEP #1/NONE	HP:	40	Utility:	PG&E
GPS Coord.:	Long -120.8392	Lat	35.81942	Pump Make:	Peerless
Motor Make:	U.S.	Type	Turbine	Meter Number:	1010044994
Customer Addr:	Joseph Vineyard Estates	Serial Number:	NONE	Voltage:	0
	76987 Nacimiento Lake Dr.	Amps:	0	Our Test #:	014-06158
	Bradley, CA 93426				
Contact:	Mike Clay				
Phone:	(805) 423-3357	Fax:		Cell:	

Test Results

Test Date: 8/27/2018

Tester: Cooper, Doherty

Run Number ('E' = used for cost anal): E-1

1. Pumping Water Level (ft):	58
2. Standing Water Level (ft):	14
3. Draw Down (ft):	44
4. Recovered Water Level (ft):	14
5. Discharge Pressure at Gauge (psi):	43
6. Total Lift (ft):	157
7. Flow Velocity (ft/sec):	1.5
8. Measured Flow Rate (gpm):	247
9. Customer Flow Rate (gpm):	293
10. Specific Capacity (gpm/ft draw):	5.6
11. Acre Feet per 24 Hr:	1.1
Million Gallons per 24 Hr:	0.356
12. Cubic Feet per Second (cfs):	0.6
13. Horsepower Input to Motor:	24
14. Percent of Rated Motor Load (%):	54
15. Kilowatt Input to Motor:	18
16. Kilowatt Hours per acre-foot:	391
17. Cost to Pump an acre-foot:	\$110.99
18. Energy Cost (\$/hour)	\$5.05
19. Base Cost per Kwh:	\$0.284
20. Nameplate rpm:	0
21. rpm at Gearhead:	0
22. Overall Pumping Efficiency (%):	41

If a Flow Velocity (line 7) is less than 1 ft/second, the accuracy of the test is suspect.

Note any major difference between the "Measured" flow rate and the "Customer's" (lines 8,9).

Remarks

All results are based on conditions during the time of the test. If these conditions vary from the normal operation of your pump, the results shown may not describe the pump's normal performance.

Overall efficiency of this plant is considered to be fair assuming this run represents plant's normal operating condition.

Test results may be impaired due to poor hydraulic test section.

Falling water may have affected the accuracy of our water level measurement.

Estimated savings of 50 kWh/AF and \$638.94 annual energy costs from a retrofit

Current OPE of 41% and estimated potential OPE of 62%



Wayne Cooper AG Services, LLC
(805) 466-6030
Pump Test Report

v.6.0 9/2014

Customer and Facility Data

Pump/Location:	JVEP #2/NONE	HP:	40	Utility:	PG&E
GPS Coord.:	Long -120.8415	Lat	35.81669	Pump Make:	Other
Motor Make:	Hitachi	Type	Submersible	Meter Number:	1010088909
Customer Addr:	Joseph Vineyard Estates	Serial Number:	NONE	Voltage:	0
	76987 Nacimiento Lake Dr.	Amps:	0	Our Test #:	014-06159
	Bradley, CA 93426				
Contact:	Mike Clay				
Phone:	(805) 423-3357	Fax:		Cell:	

Test Results

Test Date: 8/27/2018

Tester: Cooper, Doherty

Run Number ('E' = used for cost anal): E-1

1. Pumping Water Level (ft):	50
2. Standing Water Level (ft):	22
3. Draw Down (ft):	28
4. Recovered Water Level (ft):	22
5. Discharge Pressure at Gauge (psi):	50
6. Total Lift (ft):	166
7. Flow Velocity (ft/sec):	4.3
8. Measured Flow Rate (gpm):	390
9. Customer Flow Rate (gpm):	400
10. Specific Capacity (gpm/ft draw):	13.9
11. Acre Feet per 24 Hr:	1.7
Million Gallons per 24 Hr:	0.562
12. Cubic Feet per Second (cfs):	0.9
13. Horsepower Input to Motor:	36
14. Percent of Rated Motor Load (%):	80
15. Kilowatt Input to Motor:	26
16. Kilowatt Hours per acre-foot:	369
17. Cost to Pump an acre-foot:	\$104.76
18. Energy Cost (\$/hour)	\$7.52
19. Base Cost per Kwh:	\$0.284
20. Nameplate rpm:	0
21. rpm at Gearhead:	0
22. Overall Pumping Efficiency (%):	46

If a Flow Velocity (line 7) is less than 1 ft/second, the accuracy of the test is suspect.

Note any major difference between the "Measured" flow rate and the "Customer's" (lines 8,9).

Remarks

All results are based on conditions during the time of the test. If these conditions vary from the normal operation of your pump, the results shown may not describe the pump's normal performance.

Overall efficiency of this plant is considered to be fair assuming this run represents plant's normal operating condition.

Test results may be impaired due to poor hydraulic test section.

Water levels determined using customers air line. Air line length is 50 feet.

Some surging detected

Current OPE of 46% and estimated potential OPE of 62%



Wayne Cooper AG Services, LLC
(805) 466-6030
Pump Test Report

v.6.0 9/2014

Customer and Facility Data

Pump/Location:	JVEP #3/NONE	HP:	30	Utility:	PG&E
GPS Coord.:	Long -120.8419	Lat	35.81546	Pump Make:	Other
Motor Make:	Hitachi	Type	Submersible	Meter Number:	1010093524
Customer Addr:	Joseph Vineyard Estates	Serial Number:	NONE	Voltage:	0
	76987 Nacimiento Lake Dr.	Amps:	0	Our Test #:	014-06160
	Bradley, CA 93426				
Contact:	Mike Clay				
Phone:	(805) 423-3357	Fax:		Cell:	

Test Results

Test Date: 8/27/2018

Tester: Cooper, Doherty

Run Number ('E' = used for cost anal): E-1

1. Pumping Water Level (ft):	29
2. Standing Water Level (ft):	0
3. Draw Down (ft):	29
4. Recovered Water Level (ft):	0
5. Discharge Pressure at Gauge (psi):	38
6. Total Lift (ft):	117
7. Flow Velocity (ft/sec):	1.8
8. Measured Flow Rate (gpm):	164
9. Customer Flow Rate (gpm):	181
10. Specific Capacity (gpm/ft draw):	5.7
11. Acre Feet per 24 Hr:	0.7
Million Gallons per 24 Hr:	0.236
12. Cubic Feet per Second (cfs):	0.4
13. Horsepower Input to Motor:	20
14. Percent of Rated Motor Load (%):	56
15. Kilowatt Input to Motor:	15
16. Kilowatt Hours per acre-foot:	500
17. Cost to Pump an acre-foot:	\$141.95
18. Energy Cost (\$/hour)	\$4.29
19. Base Cost per Kwh:	\$0.284
20. Nameplate rpm:	0
21. rpm at Gearhead:	0
22. Overall Pumping Efficiency (%):	24

If a Flow Velocity (line 7) is less than 1 ft/second, the accuracy of the test is suspect.

Note any major difference between the "Measured" flow rate and the "Customer's" (lines 8,9).

Remarks

All results are based on conditions during the time of the test. If these conditions vary from the normal operation of your pump, the results shown may not describe the pump's normal performance.

Overall efficiency of this plant is considered to be low assuming this run represents plant's normal operating condition.

Falling water may have affected the accuracy of our water level measurement.

Current OPE of 24% and estimated potential OPE of 62%



Wayne Cooper AG Services, LLC
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Pump Test Report

v.6.0 9/2014

Customer and Facility Data

Pump/Location:	JVEP #4/NONE	HP:	30	Utility:	PG&E
GPS Coord.:	Long -120.8428	Lat 35.81507	Pump Make:	Other	
Motor Make:	Hitachi	Type	Submersible		
Customer Addr:	Joseph Vineyard Estates		Meter Number:	1009937826	
	76987 Nacimiento Lake Dr.		Serial Number:	NONE	
	Bradley, CA 93426		Voltage:	0	Amps: 0
Contact:	Mike Clay		Our Test #:	014-06161	
Phone:	(805) 423-3357	Fax:			
	Cell:				

Test Results

Test Date: 8/27/2018

Tester: Cooper, Doherty

Run Number ('E' = used for cost anal): E-1

1. Pumping Water Level (ft):	0
2. Standing Water Level (ft):	0
3. Draw Down (ft):	
4. Recovered Water Level (ft):	0
5. Discharge Pressure at Gauge (psi):	33
6. Total Lift (ft):	0
7. Flow Velocity (ft/sec):	1.8
8. Measured Flow Rate (gpm):	166
9. Customer Flow Rate (gpm):	0
10. Specific Capacity (gpm/ft draw):	
11. Acre Feet per 24 Hr:	0.7
Million Gallons per 24 Hr:	0.239
12. Cubic Feet per Second (cfs):	0.4
13. Horsepower Input to Motor:	28
14. Percent of Rated Motor Load (%):	76
15. Kilowatt Input to Motor:	21
16. Kilowatt Hours per acre-foot:	675
17. Cost to Pump an acre-foot:	\$191.56
18. Energy Cost (\$/hour)	\$5.85
19. Base Cost per Kwh:	\$0.284
20. Nameplate rpm:	0
21. rpm at Gearhead:	0
22. Overall Pumping Efficiency (%):	0

If a Flow Velocity (line 7) is less than 1 ft/second, the accuracy of the test is suspect.

Note any major difference between the "Measured" flow rate and the "Customer's" (lines 8,9).

Remarks

All results are based on conditions during the time of the test. If these conditions vary from the normal operation of your pump, the results shown may not describe the pump's normal performance.
Overall efficiency unknown due to inability to measure Pumping Water Level.

No entrance in well. Unable to measure water levels.

Test results may be impaired due to poor hydraulic test section.

Test results estimate: Pump possibly breaking suction.

OPE cannot be calculated, no estimate of potential savings from a retrofit available



Wayne Cooper AG Services, LLC
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Pump Test Report

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Customer and Facility Data

Pump/Location:	JVEP #5/NONE	HP:	30	Utility:	PG&E
GPS Coord.:	Long -120.8428	Lat	35.81442	Pump Make:	Grundfos
Motor Make:	Franklin	Type	Submersible	Meter Number:	1010043854
Customer Addr:	Joseph Vineyard Estates	Serial Number:	NONE	Voltage:	0
	76987 Nacimiento Lake Dr.	Amps:	0	Our Test #:	014-06162
	Bradley, CA 93426				
Contact:	Mike Clay				
Phone:	(805) 423-3357	Fax:		Cell:	

Test Results

Test Date: 8/27/2018

Tester: Cooper, Doherty

Run Number ('E' = used for cost anal): E-1

1. Pumping Water Level (ft):	0
2. Standing Water Level (ft):	0
3. Draw Down (ft):	
4. Recovered Water Level (ft):	0
5. Discharge Pressure at Gauge (psi):	22
6. Total Lift (ft):	0
7. Flow Velocity (ft/sec):	2.6
8. Measured Flow Rate (gpm):	421
9. Customer Flow Rate (gpm):	0
10. Specific Capacity (gpm/ft draw):	
11. Acre Feet per 24 Hr:	1.9
Million Gallons per 24 Hr:	0.606
12. Cubic Feet per Second (cfs):	0.9
13. Horsepower Input to Motor:	19
14. Percent of Rated Motor Load (%):	52
15. Kilowatt Input to Motor:	14
16. Kilowatt Hours per acre-foot:	181
17. Cost to Pump an acre-foot:	\$51.32
18. Energy Cost (\$/hour)	\$3.98
19. Base Cost per Kwh:	\$0.284
20. Nameplate rpm:	0
21. rpm at Gearhead:	0
22. Overall Pumping Efficiency (%):	0

If a Flow Velocity (line 7) is less than 1 ft/second, the accuracy of the test is suspect.

Note any major difference between the "Measured" flow rate and the "Customer's" (lines 8,9).

Remarks

All results are based on conditions during the time of the test. If these conditions vary from the normal operation of your pump, the results shown may not describe the pump's normal performance.
Overall efficiency unknown due to inability to measure Pumping Water Level.

No entrance in well. Unable to measure water levels.

OPE cannot be calculated, no estimate of potential savings from a retrofit available



Wayne Cooper AG Services, LLC
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Pump Test Report

v.6.0 9/2014

Customer and Facility Data

Pump/Location:	JVEP #6/NONE	HP:	15	Utility:	PG&E
GPS Coord.:	Long -120.8425	Lat	35.81317	Pump Make:	Other
Motor Make:	Franklin	Type	Submersible	Meter Number:	1009994752
Customer Addr:	Joseph Vineyard Estates	Serial Number:	NONE	Voltage:	0
	76987 Nacimiento Lake Dr.	Amps:	0	Our Test #:	014-06163
	Bradley, CA 93426				
Contact:	Mike Clay				
Phone:	(805) 423-3357	Fax:		Cell:	

Test Results

Test Date: 8/27/2018

Tester: Cooper, Doherty

Run Number ('E' = used for cost anal): E-1

1. Pumping Water Level (ft):	26
2. Standing Water Level (ft):	8.25
3. Draw Down (ft):	18
4. Recovered Water Level (ft):	8.25
5. Discharge Pressure at Gauge (psi):	32
6. Total Lift (ft):	100
7. Flow Velocity (ft/sec):	1.4
8. Measured Flow Rate (gpm):	125
9. Customer Flow Rate (gpm):	0
10. Specific Capacity (gpm/ft draw):	7.0
11. Acre Feet per 24 Hr:	0.6
Million Gallons per 24 Hr:	0.180
12. Cubic Feet per Second (cfs):	0.3
13. Horsepower Input to Motor:	12
14. Percent of Rated Motor Load (%):	66
15. Kilowatt Input to Motor:	9
16. Kilowatt Hours per acre-foot:	392
17. Cost to Pump an acre-foot:	\$111.20
18. Energy Cost (\$/hour)	\$2.56
19. Base Cost per Kwh:	\$0.284
20. Nameplate rpm:	0
21. rpm at Gearhead:	0
22. Overall Pumping Efficiency (%):	26

If a Flow Velocity (line 7) is less than 1 ft/second, the accuracy of the test is suspect.

Note any major difference between the "Measured" flow rate and the "Customer's" (lines 8,9).

Remarks

All results are based on conditions during the time of the test. If these conditions vary from the normal operation of your pump, the results shown may not describe the pump's normal performance.

Overall efficiency of this plant is considered to be low assuming this run represents plant's normal operating condition.

Test results may be impaired due to poor hydraulic test section.

Falling water may have affected the accuracy of our water level measurement.

Valve closed 1/4 to stabilize system

Test results estimate: Pump possibly breaking suction.

Current OPE of 26% and estimated potential OPE of 57%



Wayne Cooper AG Services, LLC
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Pump Test Report

v.6.0 9/2014

Customer and Facility Data

Pump/Location:	JVEP #7/NONE	HP:	15	Utility:	PG&E
GPS Coord.:	Long -120.8468	Lat	35.80923	Pump Make:	Other
Motor Make:	Franklin	Type	Submersible	Meter Number:	1009937849
Customer Addr:	Joseph Vineyard Estates	Serial Number:	NONE	Voltage:	0
	76987 Nacimiento Lake Dr.	Amps:	0	Our Test #:	014-06164
	Bradley, CA 93426				
Contact:	Mike Clay				
Phone:	(805) 423-3357	Fax:		Cell:	

Test Results

Test Date: 8/27/2018

Tester: Cooper, Doherty

Run Number ('E' = used for cost anal): E-1

1. Pumping Water Level (ft):	50
2. Standing Water Level (ft):	14
3. Draw Down (ft):	36
4. Recovered Water Level (ft):	14
5. Discharge Pressure at Gauge (psi):	80
6. Total Lift (ft):	235
7. Flow Velocity (ft/sec):	1.8
8. Measured Flow Rate (gpm):	161
9. Customer Flow Rate (gpm):	0
10. Specific Capacity (gpm/ft draw):	4.5
11. Acre Feet per 24 Hr:	0.7
Million Gallons per 24 Hr:	0.232
12. Cubic Feet per Second (cfs):	0.4
13. Horsepower Input to Motor:	18
14. Percent of Rated Motor Load (%):	97
15. Kilowatt Input to Motor:	13
16. Kilowatt Hours per acre-foot:	449
17. Cost to Pump an acre-foot:	\$127.64
18. Energy Cost (\$/hour)	\$3.78
19. Base Cost per Kwh:	\$0.284
20. Nameplate rpm:	0
21. rpm at Gearhead:	0
22. Overall Pumping Efficiency (%):	53

If a Flow Velocity (line 7) is less than 1 ft/second, the accuracy of the test is suspect.

Note any major difference between the "Measured" flow rate and the "Customer's" (lines 8,9).

Remarks

All results are based on conditions during the time of the test. If these conditions vary from the normal operation of your pump, the results shown may not describe the pump's normal performance.

Overall efficiency of this plant is considered to be good assuming this run represents plant's normal operating condition.

Test results may be impaired due to poor hydraulic test section.

Valve closed 3/4 to stabilize system.

Falling water may have affected the accuracy of our water level measurement.

Current OPE is close to optimum - no savings estimated for a retrofit



Wayne Cooper AG Services, LLC
(805) 466-6030
Pump Test Report

v.6.0 9/2014

Customer and Facility Data

Pump/Location:	JVEP #8/NONE	HP:	200	Utility:	Other
GPS Coord.:	Long -120.8364	Lat 35.81381	Pump Make:	National	
Motor Make:	Cummings	Type	Turbine		
Customer Addr:	Joseph Vineyard Estates 76987 Nacimiento Lake Dr. Bradley, CA 93426		Meter Number:		
			Serial Number:	NONE	
			Voltage: 0	Amps: 0	
Contact:	Mike Clay		Our Test #:	014-061645	
Phone: (805) 423-3357	Fax:	Cell:			

Test Results

Test Date: 8/27/2018

Tester: Cooper, Doherty

Run Number ('E' = used for cost anal): E-1

1. Pumping Water Level (ft):	154
2. Standing Water Level (ft):	115
3. Draw Down (ft):	39
4. Recovered Water Level (ft):	115
5. Discharge Pressure at Gauge (psi):	20
6. Total Lift (ft):	200
7. Flow Velocity (ft/sec):	2.6
8. Measured Flow Rate (gpm):	632
9. Customer Flow Rate (gpm):	679
10. Specific Capacity (gpm/ft draw):	16.2
11. Acre Feet per 24 Hr:	2.8
Million Gallons per 24 Hr:	0.910
12. Cubic Feet per Second (cfs):	1.4
13. Horsepower Input to Motor:	0
14. Percent of Rated Motor Load (%):	0
15. Kilowatt Input to Motor:	0
16. Kilowatt Hours per acre-foot:	0
17. Cost to Pump an acre-foot:	\$0.00
18. Energy Cost (\$/hour)	\$0.00
19. Base Cost per Kwh:	\$0.000
20. Nameplate rpm:	0
21. rpm at Gearhead:	0
22. Overall Pumping Efficiency (%):	0

If a Flow Velocity (line 7) is less than 1 ft/second, the accuracy of the test is suspect.

Note any major difference between the "Measured" flow rate and the "Customer's" (lines 8,9).

Remarks

All results are based on conditions during the time of the test. If these conditions vary from the normal operation of your pump, the results shown may not describe the pump's normal performance.

Unable to calculate OPE due to inability to measure fuel consumption

OPE cannot be calculated, no estimate of potential savings from a retrofit available



Wayne Cooper AG Services, LLC
(805) 466-6030
Pump Test Report

v.6.0 9/2014

Customer and Facility Data

Pump/Location:	JVEP #9/NONE	HP:	200	Utility:	Other
GPS Coord.:	Long -120.8412	Lat	35.81498	Pump Make:	Floway
Motor Make:	Cummings	Type	Turbine	Meter Number:	
Customer Addr:	Joseph Vineyard Estates	Serial Number:	NONE	Voltage:	0
	76987 Nacimiento Lake Dr.	Amps:	0	Our Test #:	014-06166
	Bradley, CA 93426				
Contact:	Mike Clay				
Phone:	(805) 423-3357	Fax:		Cell:	

Test Results

Test Date: 8/27/2018

Tester: Cooper, Doherty

Run Number ('E' = used for cost anal): E-1

1. Pumping Water Level (ft):	248
2. Standing Water Level (ft):	121
3. Draw Down (ft):	127
4. Recovered Water Level (ft):	121
5. Discharge Pressure at Gauge (psi):	21
6. Total Lift (ft):	297
7. Flow Velocity (ft/sec):	4.2
8. Measured Flow Rate (gpm):	1,021
9. Customer Flow Rate (gpm):	1,212
10. Specific Capacity (gpm/ft draw):	8.0
11. Acre Feet per 24 Hr:	4.5
Million Gallons per 24 Hr:	1.470
12. Cubic Feet per Second (cfs):	2.3
13. Horsepower Input to Motor:	0
14. Percent of Rated Motor Load (%):	0
15. Kilowatt Input to Motor:	0
16. Kilowatt Hours per acre-foot:	0
17. Cost to Pump an acre-foot:	\$0.00
18. Energy Cost (\$/hour)	\$0.00
19. Base Cost per Kwh:	\$0.000
20. Nameplate rpm:	0
21. rpm at Gearhead:	0
22. Overall Pumping Efficiency (%):	0

If a Flow Velocity (line 7) is less than 1 ft/second, the accuracy of the test is suspect.

Note any major difference between the "Measured" flow rate and the "Customer's" (lines 8,9).

Remarks

All results are based on conditions during the time of the test. If these conditions vary from the normal operation of your pump, the results shown may not describe the pump's normal performance.
Overall efficiency unknown due to inability to measure Pumping Water Level.

Unable to calculate OPE due to inability to measure fuel consumption.

No entrance in well. Unable to measure water levels.

Water levels determined using customers air line. Air line length is 260 feet.

OPE cannot be calculated, no estimate of potential savings from a retrofit available



Wayne Cooper Ag Services, LLC

7340 Atascadero Ave
Atascadero, Ca 93422
805-466-6030
wcoop01@yahoo.com
Tax ID 45-4424280

Invoice

Number	1592
Date	8/30/2018

Bill To

Lupe Ruesga
4-Star Fruit
2800 Road 136
Delano, CA, 93215

PO Number

Terms

Date	Description	Quantity	Rate	Amount
08/27/2018	Electric Pump test	7	\$200.00	\$1,400.00
08/27/2018	Diesel Pump test	2	\$200.00	\$400.00

Amount Due \$1,800.00

Sub Total \$1,800.00

Pump Tests performed on well pumps at Joseph Vineyard Estates;
76987 Nacimiento Lake Dr. Bradley, CA per Mike Clay.

Total \$1,800.00