



Hole to Home

WELL PERFORMANCE TEST REPORT

JAK Drilling & Pump (JAK) was retained by Mr. Justin Hammer (client) to determine the production capabilities of three groundwater wells (Well #1 through Well #3) located at 25252 Jerusalem Grade Road and one groundwater well (Well #4) located at 25372 Jerusalem Grade Road, Lower Lake, CA (see Figure 1 attached).

Well No. 1

Location Description: 38.7236361, -122.5552889

Total Depth: -feet below ground surface (bgs)

Depth to Static Water Level:

Diameter of well: 5 inches

Casing type: PVC

Pumping Rate: 5-gallons per minute

Pumping Duration: 2-hours

Test Type: Airlifting

Observations: On February 6, 2020, JAK arrived onsite to investigate the condition of the well and to conduct a well performance test should the well be accessible. It was observed that at some point the well had been vandalized causing the existing well pump, motor, wire, and pipe to become stuck and non-operable. JAK was able to dislodge much of the debris from the well including rocks, hardened cement, and metal fencing material. While the existing well pump and motor remain locked in the well, JAK was able to clear additional material from the well eventually allowing the movement of groundwater via airlifting. JAK continued to airlift the well at a constant pressure for approximately 2-hours. The well continued to produce water at an estimated rate of approximately 5-gallons per minute for the duration of the test which was concluded after 2-hours due to loss of daylight. Due to the debris in the well and the disturbance caused by dislodging material from the well over the course of several hours, JAK was unable to measure the static depth-to-water and pumping level in the well.

Well No. 2

Location Description: 38.82139444, -122.4525000

Total Depth: Unknown

Depth to Static Water Level: Not Applicable

Diameter of well: 4 inches

Casing type: PVC

Pumping Rate: Not Applicable

Pumping Duration: Not Applicable

Test Type: Not Applicable

Observations: On January 27, 2020, JAK observed that this well had been filled in with dirt and gravel and cannot be tested at this time.



Well No. 3

Location Description: 38.82139167, -122.4525000
Total Depth: 115-feet below the top of casing
Depth to Static Water Level: 29.25-feet below the top of casing
Diameter of well: 5-inches
Casing type: PVC
Pumping Rate: 11-gallons per minute
Pumping Duration: 4-hours
Test Type: Pumping

Observations: The existing well pump is operational and wired for power when using a generator. There is no pressure tank present and the existing control box for the well pump indicates that it is a $\frac{3}{4}$ -horsepower 10-gallon per minute pumping system. Per the property owner, it has been more than 30-days since the well was last used.

Well Performance Pump Test: On January 27, 2020 the four-hour pump test was conducted using the existing 10-GPM well pump and in accordance with industry standards. The well pump system remained inactive for at least 24-hours prior to the measurement of the static water level within the well. Once the performance test began, the depth-to-water was measured in the well every five minutes during the first half hour of the test and then every 10-minutes for the next hour of the test. The measurement interval was then increased to every 30-minutes for the remainder of the four-hour test. The pumping rate was measured by timing the flow through the mechanical totalizing flow meter temporarily installed on the effluent side of the pumping system. The pumping rate was measured at the same intervals as the depth-to-water. Both the depth-to-water and pumping rate measurements are summarized in Table 1 (attached).

Initially the well pump produced upwards of 16.5-gallons per minute for the first 15-minutes until the pumping level stabilized at 111-feet below the top of casing. At a 111-feet below the top of casing the pumping rate decreased to 11.25-gallons per minute. The pumping rate continued to fluctuate between 11.0 and 11.5-gallons per minute for about an hour before stabilizing at 11.0-gallons per minute at a stable pumping level of 111-feet below the top of casing for the duration of the test.

After four hours the well pump was shut off and the well was then allowed to rest and recharge while system connections were restored. After a 10-minute rest period, the depth-to-water measured in the well decreased from a depth of 111-feet to 28.75-feet below the top of casing, a recharge rate of more than 100%.



Well No. 4

Location Description: 38.82131667, -122.4575000
Total Depth: 300-feet below the top of casing
Depth to Static Water Level: 22.0-feet below the top of casing
Diameter of well: 4 ½ -inches
Casing type: PVC
Pumping Rate: 5-gallons per minute
Pumping Duration: 4-hours
Test Type: Pumping

Observations: Per the property owner, this is a new well that has not been previously used. JAK conducted the well performance test using a ¾ -horse 10-gallon per minute test pump temporarily installed on poly pipe. The well pump was sized according to the depth of the well and typical installations found in the immediate area.

Well Performance Pump Test: On January 6, 2020, JAK installed the temporary well pump and the four-hour well performance test was conducted in accordance with industry standards. Once the performance test began, the depth-to-water was measured in the well every five minutes during the first half hour of the test and then every 10-minutes for the next hour of the test. The measurement interval was then increased to every 30-minutes for the remainder of the four-hour test. The pumping rate was measured by timing the flow through the mechanical totalizing flow meter temporarily installed on the effluent side of the pumping system. The pumping rate was measured at the same intervals as the depth-to-water. Both the depth-to-water and pumping rate measurements are summarized in Table 1 (attached).

Initially the well pump produced upwards of 7-gallons per minute and slowly decreased in volume over the first hour until the pumping rate settled at 5-gallons per minute at 163.5-feet below the top of casing. The pumping rate remained a constant 5-gallons per minute at 163.5-feet below the top of casing for the duration of the test. After four hours the well pump was shut off and the well was then allowed to rest and recharge. After a 30-minute rest period, the depth-to-water measured in the well decreased from a depth of 163.5-feet to 28.50-feet below the top of casing, a recharge rate of 95%.

Disclaimer:

Observations made of the well(s) are strictly limited to the date and time that the test(s) was conducted and are in no way a guarantee of future conditions, including but not limited to the quantity and/or quality of the water produced by this well.

Please feel free to contact our office if there are any questions regarding the well test and/or well test report.

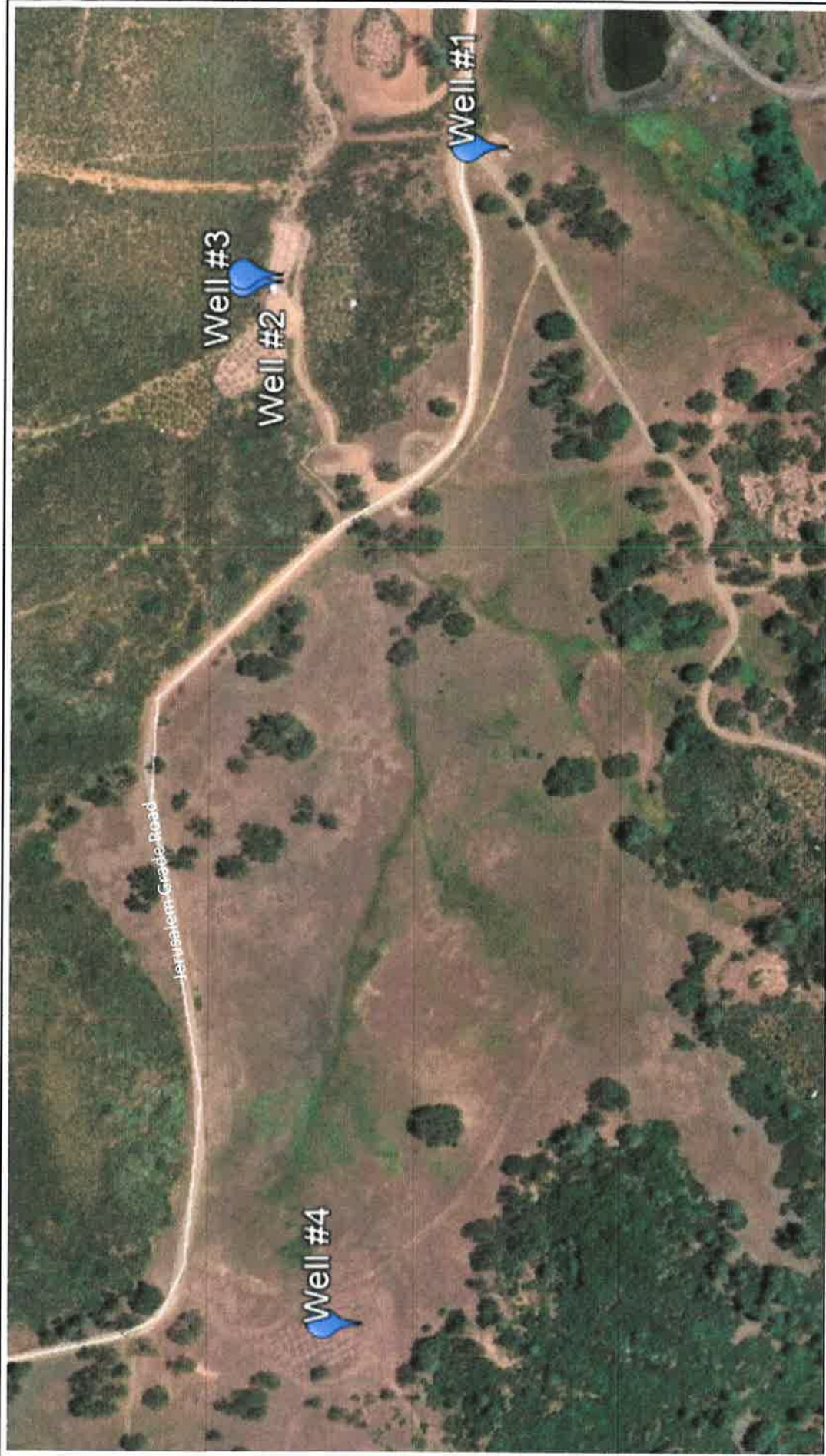
Sincerely,

A handwritten signature in blue ink, appearing to read 'Jessica Moreno'.

Jessica Moreno
Water T1/D2 Operator (#43482/52260)
JAK Drilling & Pump

Attachments:

Well Location Map
Table 1: Well Performance Data – Well #3
Table 2: Well Performance Data – Well #4



WELL LOCATION MAP
25372 & 25252 JERUSALEM GRADE ROAD
LOWER LAKE, CA

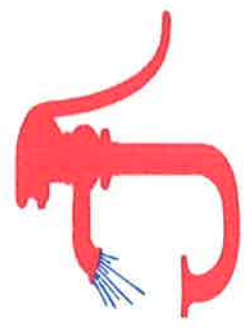




TABLE 1
WELL #3 - PERFORMANCE TEST DATA
25252 JERUSALEM GRADE ROAD, LOWER LAKE, CA
January 27, 2020

Time	Gallons Per Minute	Depth to Water In Feet Below Ground Surface
11:15	Static	29.25
11:20	16.50	30.50
11:25	16.50	52.25
11:30	16.00	96.00
11:35	11.25	111.00
11:40	11.25	112.25
11:45	11.25	111.00
11:55	11.50	111.00
12:05	11.50	111.00
12:15	11.50	111.00
12:25	11.25	111.00
12:35	11.25	111.00
12:45	11.25	111.00
13:15	11.50	111.00
13:45	11.00	111.00
14:15	11.00	111.00
14:45	11.00	111.00
15:15	11.00	111.00
15:45	11.00	111.00
15:55	RECHARGE	28.75



TABLE 2
WELL #4 - PERFORMANCE TEST DATA
25372 JERUSALEM GRADE ROAD, LOWER LAKE, CA
January 24, 2020

Time	Gallons Per Minute	Depth to Water In Feet Below Ground Surface
13:45	Static	22.00
13:50	6.40	47.00
13:55	7.14	76.00
14:00	7.14	98.50
14:05	7.14	111.50
14:10	7.14	116.00
14:15	7.14	124.25
14:20	6.98	134.50
14:30	5.77	142.25
14:40	5.56	146.25
14:50	5.00	148.00
15:00	5.00	151.00
15:10	5.00	153.50
15:20	5.00	159.25
15:50	5.00	162.25
16:20	5.00	163.50
16:50	5.00	163.50
17:20	5.00	163.50
17:50	5.00	163.50
18:20	RECHARGE	28.50