

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
BENEFICIAL USE FIELD REPORT

A. GENERAL INFORMATION

Permit No: 63-12510
Exam Date: 07/19/2019

1. Current Owner:
BRIDGET VANDERWOUDE 22448 MARKET RD PARMA ID 83660
GEORGE VANDERWOUDE 22448 MARKET RD PARMA ID 83660
2. Accompanied by: Bridget Vanderwoude
Phone No:
Address:
Relationship to permit Holder: Owner

3. SOURCE:
GROUND WATER

Method of Determination: Field Observations

B. OVERLAP REVIEW

1. Other water rights with the same place of use: YES Overlap

Water Right No.	Source	Purpose of Use	Basis
63-2322	Wilson/Elijah Sloughs	Irrigation	Decreed
63-2878	Wilson/Elijah Drains	Irrigation	Decreed
63-31039	Groundwater	Domestic	Decreed
63-31039	Groundwater	Stock Water	Decreed
63-32102	Groundwater	Stock Water	Decreed
63-32102	Groundwater	Commercial	Decreed
65-2433	Payette River	Irrigation	Decreed
65-2900	Tunnel No 2 Drain	Irrigation	Decreed

Comments:

Water Right 63-31039 received a partial decree from the Snake River Basin Adjudication (SRBA) on April 29, 2009. The claim referenced a 4 inch well as the Point of Diversion (POD) for the ground water supply within the Place of Use (POU). The uses cited for the POU include domestic and stock water for less than 370 dairy and dry cows. A priority date of June 1, 1950 was issued with a diversion rate of 0.24 cfs and a volume not to exceed 13,000 gal/day. This a direct overlapping water right that supplies a portion of the stock water use for this dairy.

Water Right 63-32102 was originally split from Water Right 63-32004 and received a partial decree from the SRBA on February 16, 2007 as a result of Transfer No. 71927. The split of Water Right 63-32004 created Water Rights 63-32101 and 63-32102. Water Right 63-32102 changed the POD, POU, Nature of Use, and Season of Use from the original Water Right 63-32004. As a result of the split and those changes, Water Right 63-32102 received a diversion rate of 0.05 cfs and a volume of 12.4 AF over the same POU as 63-12510 for Stock Water and Commercial purposes.

Water Rights 63-2322, 63-2878, 65-2433, and 65-2900 overlap the POU for Permit No. 63-12510 and are water rights limited to irrigation over this POU. All the Water Rights listed were decreed in the SRBA over the course of many years. Permit 63-12510 does not request irrigation as part of the application, so these Water Rights are not considered to be part of the license to be issued with Water Right 63-12510.

2. Other water rights with the same point-of-diversion: NO Overlap

Water Right No.	Source	Purpose of Use	Basis
63-31039	Groundwater	Domestic	Decreed
63-31039	Groundwater	Stock Water	Decreed
63-32102	Groundwater	Stock Water	Decreed
63-32102	Groundwater	Commercial	Decreed

Comments:

Water Right 63-31039 was claimed in the Snake River Basin (SRBA) Adjudication on April 29, 2009. The claim referenced a well as the Point of Diversion (POD) for the ground water supply within the Place of Use (POU). The uses cited for the POU include domestic and stock water uses and has a priority date of June 1, 1950. The POD for groundwater is stated as being a 4 inch casing in which the well depth is 150-200 ft in depth. This a direct overlapping water right that supplies a portion of the stock water use for this dairy.

A domestic well (Tag #D0009939) was constructed in August of 1999 for the purposes of Domestic Use. On September 5, 2005 Water Right Transfer 71927 authorized transferring a portion of Water Right 63-32004 to both POD: the 4 inch casing and the domestic well (Tag #D009939). The two POD over this POU suit the needs of the dairy operations and the domestic use at the time the exam occurred.

When this permit was approved, it included a well on the south side of the road (Well ID 299256 in Section 17) as a backup well. This well was drilled and developed as an exempt use for the home on the south side of the road and was not originally connected to the dairy. A water right was not filed on the well on the south side of the road (Well ID 299256 in Section 17). Since water right 63-31039 is a domestic use that includes a dairy component, this exempt use cannot provide any additional water to the dairy under an exempt water right, since you cannot stack domestic uses on a dairy. All of the water for the dairy is covered by water rights 63-31039, 63-32102 and this permit 63-12510. Any water supplied by the backup well (Well ID 29956 in Section 17) to the dairy is authorized by this permit 63-12510.

C. DIVERSION AND DELIVERY SYSTEM**1. LOCATION OF POINT(S) OF DIVERSION:**

GROUND WATER NW¼ SE¼, Sec. 8, Twp 05N, Rge 04W, B.M. CANYON County
 GROUND WATER SW¼ SE¼, Sec. 8, Twp 05N, Rge 04W, B.M. CANYON County
 GROUND WATER NW¼ NE¼, Sec. 17, Twp 05N, Rge 04W, B.M. CANYON County

Method of Determination: GIS Verification

PLACE OF USE: STOCKWATER

Twp	Rng	Sec	NE				NW				SW				SE				Totals
			NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	
05N	04W	8														X	X		

PLACE OF USE: COMMERCIAL

Twp	Rng	Sec	NE				NW				SW				SE				Totals
			NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	
05N	04W	8														X	X		

Method of Determination:

3.

Delivery System Diagram Attached (required). Indicate all major components and distances between components.

 x Indicate weir size/pipe as applicable.

Map Attached Showing Location(s) of point(s) of diversion and place(s) of use (required). Scale must be 1:24,000 or greater.

 x

 x Aerial Photo Attached (required for irrigation of 10+ acres).

 x Photo of Diversion and System Attached

4.

Well or Diversion ID No.*	Motor Make	Hp	Motor Serial No.	Pump Make	Pump Serial No. or Discharge Size
A0020308	Franklin	2.0	2823018110	Franklin	2 inches
D0009939	Grundfos	1.5	98315254	Grundfos	1.5 inches

D. FLOW MEASUREMENTS

1. A flow measurement was not possible because of the small pipe diameters of the distribution system and the conditions for taking a reliable measurement did not exist at the well locations.
2. Measurements: Flows were calculated using the known well depths, pump types, and motor sizes supplying the distribution system.

E. FLOW CALCULATIONS

x Additional Computation Sheets Attached

Measured Method:

Based on the manufacturers curves associated with the new well, a diversion rate of 0.08 cfs is recommended for this water right. Refer to the pump curves attached with this report. When combined with Water Rights 63-31039 and 63-31202 the diversion rate shall not exceed 0.24 cfs as stated in Water Right 63-31039. This recommendation is made consistent with the IDWR. Water right condition X35 and will be needed to allow the full diversion rate for the commercial use when they are using the misters.

PLEASE NOTE: The backup well (Well ID 299256 in Section 17) is only used as a backup well and doesn't supply any additional water to the dairy unless one of the other wells breaks down. Therefore, the flow from this well cannot be included in the diversion rates calculated for this dairy use.

F. VOLUME CALCULATIONS

1. Volume Calculations for irrigation:

Based on the stock water and commercial requirements of the dairy in conjunction with the allowable volumes under Water Rights 63-31039 and 63-32102 a volume of 5.6 AF is recommended for Water Right 63-12510. Refer to the volume calculations attached with this report.

PLEASE NOTE: A portion of 63-31039 supplies a domestic home, so we must remove the domestic portion of this right to determine the amount of volume for dairy use. Administrative Processing Memorandum #22 states that a domestic use is generally licensed for 1.2 af for domestic use and a yard. Therefore, 1.2 af must be removed from the total possible volume of 63-31039 to ensure that there is adequate water for the dairy. Water right 63-31039 authorizes 13,000 gpd or 14.56 af ($[13,000 \text{ gpd} \times 365 \text{ days}] / 325850 = 14.56 \text{ af}$). Therefore we can only allow a total of 13.36 af from water right 63-31039 for the dairy use ($14.56 \text{ af} - 1.2 \text{ af} = 13.36 \text{ af}$ available for dairy use).

G. NARRATIVE/REMARKS/COMMENTS

The dairy began back in 1976 but records indicate farming activities under the domestic water right definition date clear back to 1950. A single 4" diameter well (aka Original 4" Well) was identified as the POD for the groundwater supply to be used for both domestic purposes and the allowable livestock purposes. In time the dairy grew in size, and the Vanderwoude's claimed their uses for the domestic and livestock purposes in the Snake River Basin Adjudication (SRBA).

The Vanderwoude's issued a "Notice of Claim to a Water Right" on March 12, 1999 for Water Right 63-31039 for domestic and stock water purposes for the dairy. On February 18, 2009 a partial claim was issued by the SRBA. The partial claim allowed for both domestic and stock water uses for a combined rate of diversion of 0.24 cfs (0.04 cfs and 0.20 cfs for domestic and stock water purposes, respectively) while the volume for the water right was 13,000 gal/day (14.6 Ac-ft Annually).

On August 31st, 2004 the Vanderwoude's filed an "Application for Transfer of Water Right" and received approval of Transfer No. 71927 which brought an additional diversion rate of 0.05 cfs and 12.4 ac-ft to the two POD (1. The original 4 inch well, and 2. Well Tag D0009939) associated with the POU for the dairy operation at that time.

Water Right 63-12510 includes an additional POD across the street from the dairy which is described as a domestic well according to the well drillers report (Well ID 299256; No metal tag in Section 17). During the beneficial use exam, the well was noted as being used for domestic purposes. Visual observations supported the claim for domestic use of the well. The well is connected into the dairy operations across the street via a 2 inch pipeline. The domestic use for this residence and dairy operations on the other side of the street are isolated via a valve located near the domestic well. This well is used for back-up or emergency purposes at the dairy. It should be noted that the domestic well was constructed in 1995 and has a

typical domestic exemption associated with its use. This Water Right 63-12510 is not afforded the typical exemptions for domestic and stock water diversions and volumes from this domestic well. Instead the POD serves as an additional water supply, so the dairy can have a back-up POD if one of the two primary POD fail. The domestic volume and diversion rate should remain with the home where the well is located. Since water right 63-31039 is a domestic use that includes a dairy component, this exempt use cannot provide any additional water to the dairy under an exempt water right, since you cannot stack domestic uses on a dairy. All of the water for the dairy is covered by water rights 63-31039, 63-32102 and this permit 63-12510. Any water supplied by the backup well (Well ID 29956 in Section 17) to the dairy is authorized by this permit 63-12510.

In total Water Right 63-12510 has 1. a domestic use authorized by water right 63-31039 associated with the dairy that began back in 1950 that was associated with the original residence within the POU, 2. the increased volumes and diversion rates from Transfer No. 71927(Water Right 63-32102), and 3. the increased volumes from this Water Right Permit 63-12510. It should be noted that water right 63-31039 allows 13,000 gpd or 14.56 af for a home and the dairy. As stated above, 1.2 af of water from this right needs to be allocated to the home, so only 13.36 af can be applied to the dairy use.

The dairy operations are consistent with typical dairies using dry chemical washing techniques to eliminate the need to wash the cows before milking.

The permit holder applied for a water permit for the beneficial uses of commercial and stock water for an additional 1,200 cows in the dairy operation (600 milking and 600 dry). In the "Statement of Completion for Submitting Proof of Beneficial Use", the permit holder stated there were 1,200 cattle associated with water right 63-12510. When in the field with the owner, the counts were confirmed to be 453 dairy cows, 413 heifers, and 292 dry cows. Based on the information from the owner and visual observations made on site, these numbers were reasonable and are recommended to be incorporated into the final water right.

The commercial use of water in the dairy operations were addressed in the field with the owner. The commercial uses in the dairy operation include the washing of the milking parlor/bulk tanks, flushing the lines after milking, and parlor/holding pen clean up. Other uses also include towel washing, feed mixing, washing trucks, and washing heifer hutches. The estimated volumes were provided by the permit holder and a walk through of the facility confirmed the volumes and frequency of use for the water uses listed previously. Seasonally, the operations of the dairy will use misters to cool the dairy cows in the heat of summer. During the tour of the facility, the misters were in operation and the owner described the misting duration and frequency. The duration and frequency were reasonable and are recommended for incorporation into this water right. The daily requirement for misting is stated in the calculations of the dairy shown below.

Based on the observations made in the field and the information provided by the owner, the volume of water associated with stock water and the dairy's commercial use as stated below are recommended for this license.

Check past aerial imagery for irrigation to verify domestic irrigation

Have conditions of permit approval been met? X Yes No

H. RECOMMENDATIONS

1. Recommended Amounts

Beneficial Use	Period of Use	Rate of Diversion	Annual Volume
STOCKWATER	01/01 to 12/31	0.08 CFS	5.6 AF
COMMERCIAL	01/01 to 12/31	0.08 CFS	5.6 AF

Totals: 0.24 CFS 5.6 AF

2. Recommended Amendments

Change P.D. as reflected above Add P.D. as reflected above x None

Change P.U. as reflected above Add P.U. as reflected above x None

I. AUTHENTICATION

Randy Broesch - Engineer Tech 1

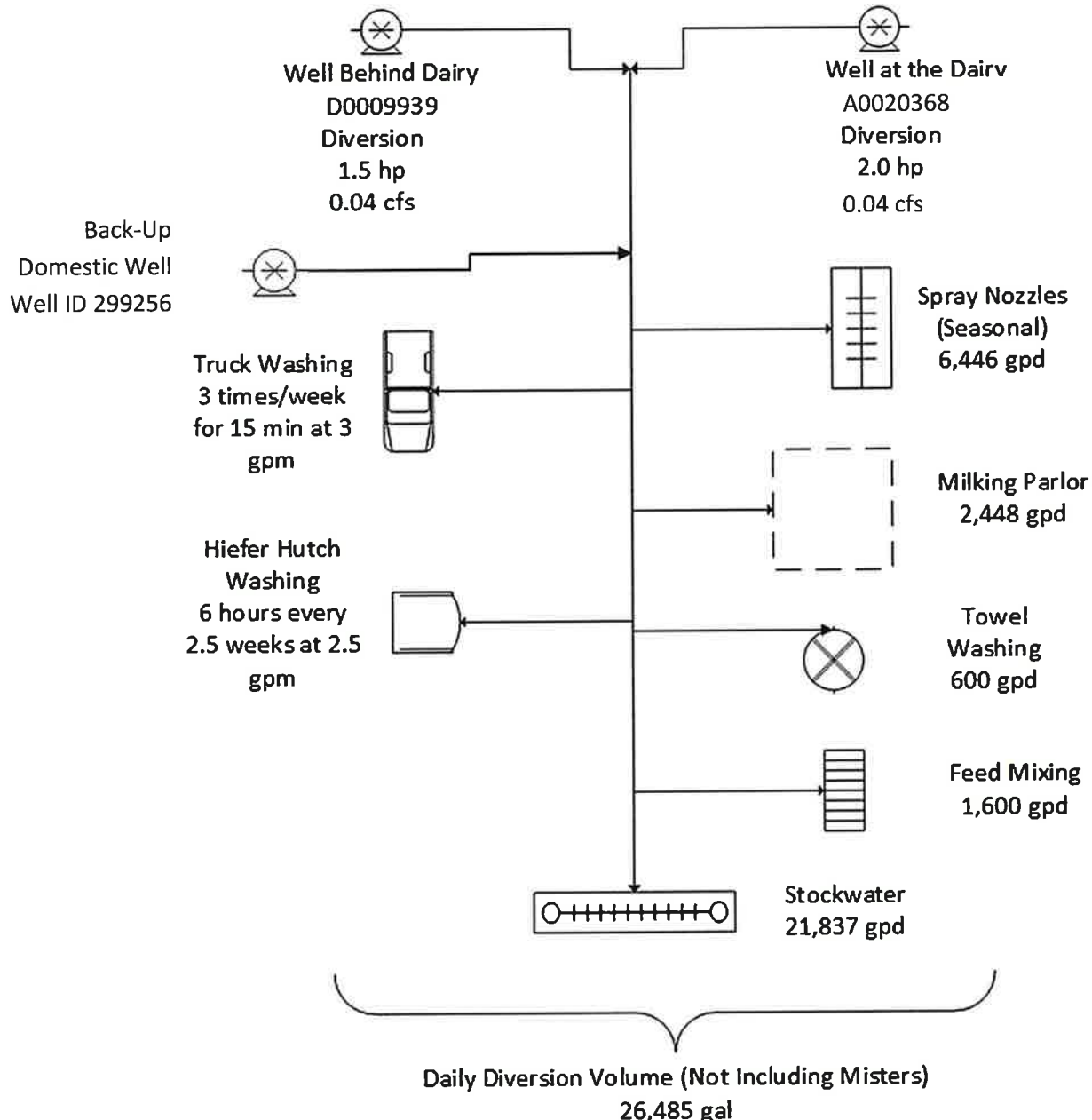
Field Examiner's Name Randall A. Bunch P.E. Date 3-SEPT-2021

Reviewer PK Date 9/8/21



The Vanderwoude Dairy exists over two quarter-quarters (the SWSE and NWSE) of Section 8 in T.05N R.04W. Stock and commercial water uses reside over the entire POU. The entire POU is supplied by water from the two wells (the Well at the dairy and the Well behind the dairy) while a third domestic well across the street in the NWNE of Section 17 in T.05N, R.04W supplies the dairy when needed as a backup.

Vanderwoude Dairy Water Use Schematic



Annual Diversion for Stockwater and Commercial Uses

5.65 Ac-ft

Overlapping Water Right 63-31039 13.36 Ac-ft

Overlapping Water Right 63-32102 12.40 Ac-ft

Diversion Rate

0.08 cfs

Figure 1 Schematic of Vanderwoude Dairy Operations

SUBMERSIBLE PUMPS

4400 SERIES

MENU

FPS

4-INCH HIGH CAPACITY

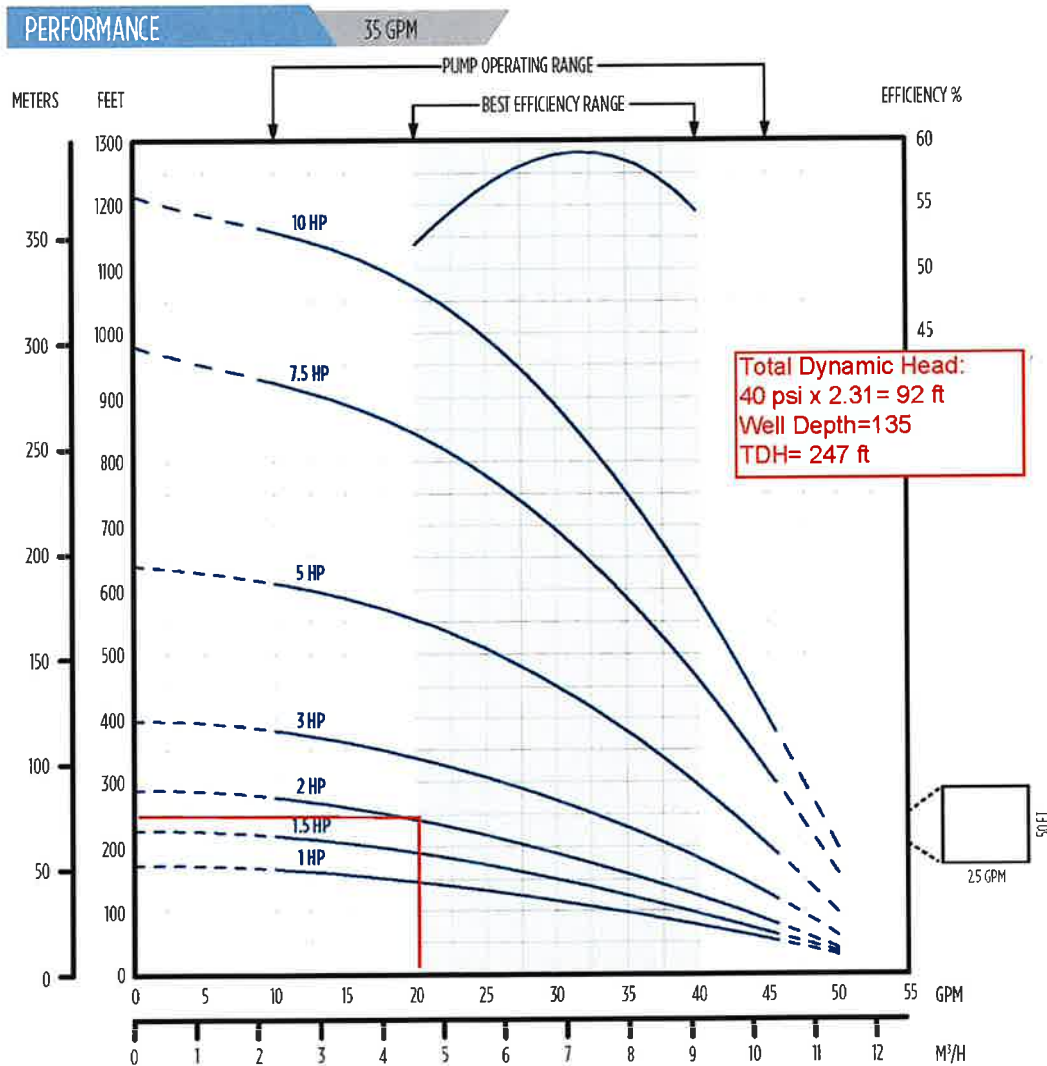
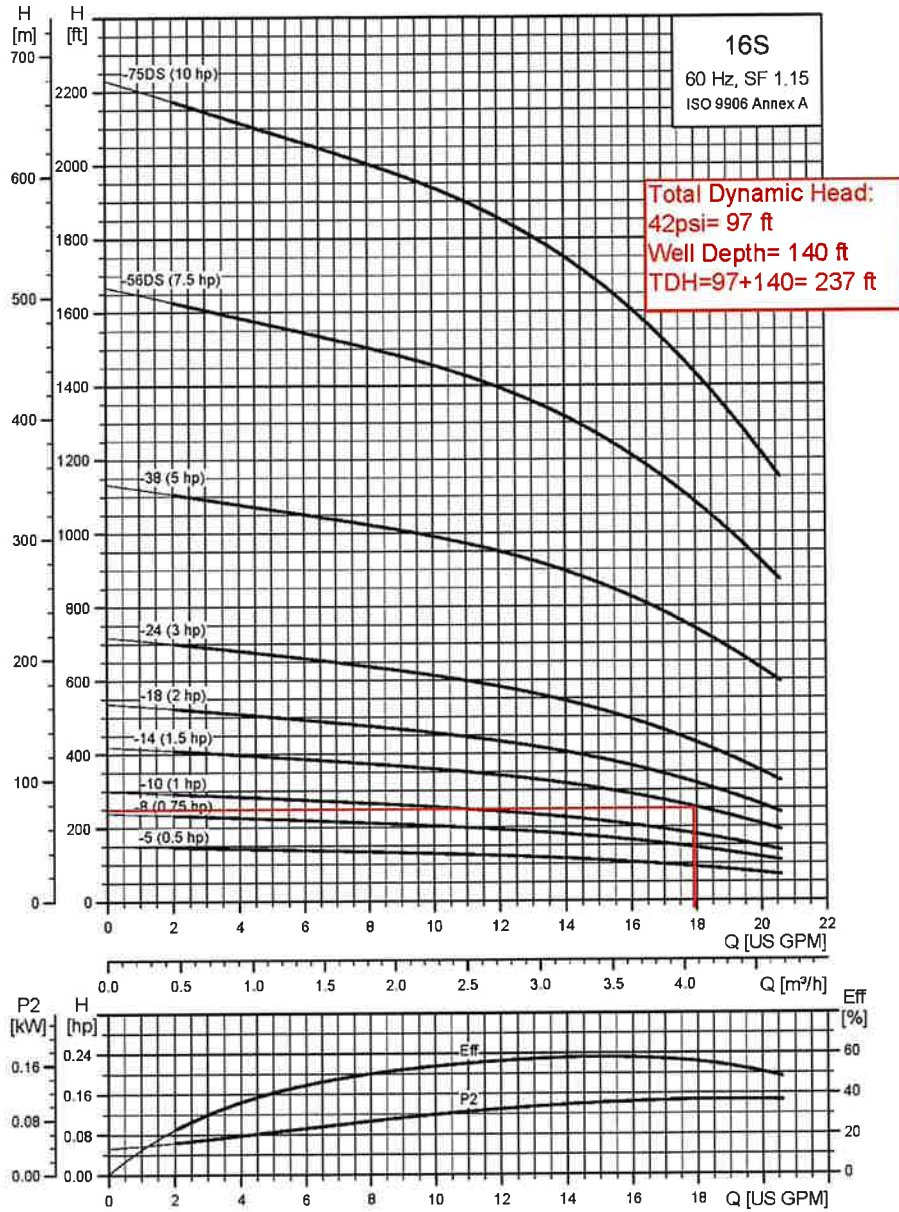


Figure 2 Pump Curve for Original 4 inch Well

4" and larger wells - continued
SP 16S (16 gpm)



TM05 0231 0112

Figure 3 Pump Curve for Well Behind Barn

DAILY FRESH WATER REQUIREMENT FOR DAIRY FACILITY

FOR: Vanderwoude Dairy 63-12510
 BY: DANIEL A NELSON/Randall A. Broesch P.E.
 DATE: 11/20/2019

Stockwater Requirements

Animal Type	Number	Use/day	Total GPD	Total GPY
MILKING COWS	453.00	35.00	15,855.00	5,787,075.00
DRY COWS	292.00	12.00	3,504.00	1,278,960.00
HEIFERS	413.00	6.00	2,478.00	904,470.00
TOTAL GALLONS			21,837.00	7,970,505.00

Stockwater Annual Volume Needed in AF =	24.5 AF
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COMMERCIAL VOLUME REQUIREMENT

Milking Parlor Requirements

Item	Gals/Operation	Times/Day	Total GPD	Total GPY
BULK TANK #1	250.00	0.57	142.50	52,012.50
BULK TANK #2	150.00	0.57	85.50	31,207.50
PIPELINES	50.00	3.00	150.00	54,750.00
PARLOR CLEANUP	690.00	3.00	2,070.00	755,550.00
WASHPEN CLEANUP	0.00	0.00	0.00	0.00
Total Milking Parlor Use			2,448.00	893,520.00

MISCELLANEOUS USES

Item	Gal/Operation	Times/Day	Total GPD	GALS/YEAR
TOWEL WASHING	50.00	12.00	600.00	219,000.00
FEED MIXING	1,600.00	1.00	1,600.00	584,000.00
MISTERS OUTSIDE	3,046.00	0.23	701.00	255,864.00
MISTERS NEAR BARN	3,046.00	0.23	701.00	255,864.00
MISTERS UNDER ROOF OF BARN	84.60	0.23	19.47	7,106.40
BROADCAST DEFLECTOR SPRAY IN C	270.00	0.23	62.14	22,680.00
HIEFER HUTCH WASHING	900.00	0.06	51.29	18,720.00
TRUCK WASHING	19.29	1.00	19.29	7,039.29
			0.00	0.00
TOTAL MISCELLANEOUS USES			3,754.17	1,370,273.69

Commercial Annual Volume Required in AF =

6.9

Stockwater Volume Requirement in AF =	24.46
Overlapping Stockwater Right 63-31039=	-13.36
Overlapping Stockwater Right 63-32102=	-7.40
Total Stockwater Volume for 63-12510	3.70
Commercial Annual Volume Requirement in AF =	6.95
Overlapping Commerical Right 63-32102=	-5.00
Volume Recommended for 63-12510=	1.95
Total Volume Required for Water Right 63-12510=	5.65

Figure 4 Volume Calculations for the Vanderwoude Dairy



Figure 5 Original 4 Inch Barn Well



Figure 6 Pressure Reading for 4 Inch Barn Well

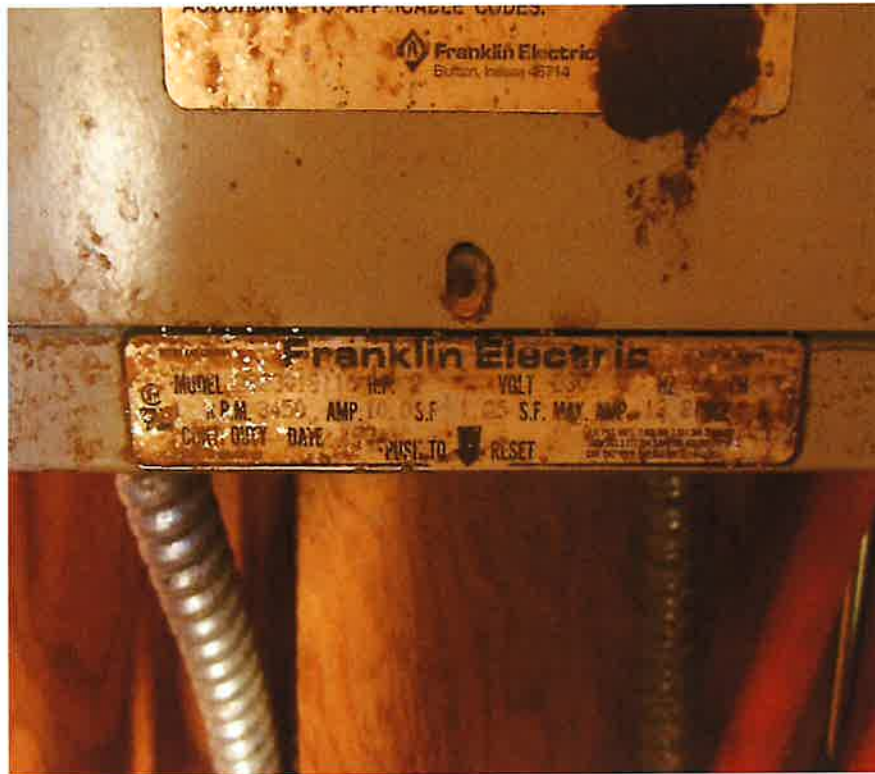


Figure 7 Pump and Motor Controller for 4 inch Barn Well



Figure 8 Well Behind Farm (also stock pen area)



Figure 9 Well Tag for Well Behind Barn



Figure 10 Pressure Tanks for Well Behind Barn



Figure 11 Pump & Motor Controller for Well Behind Barn

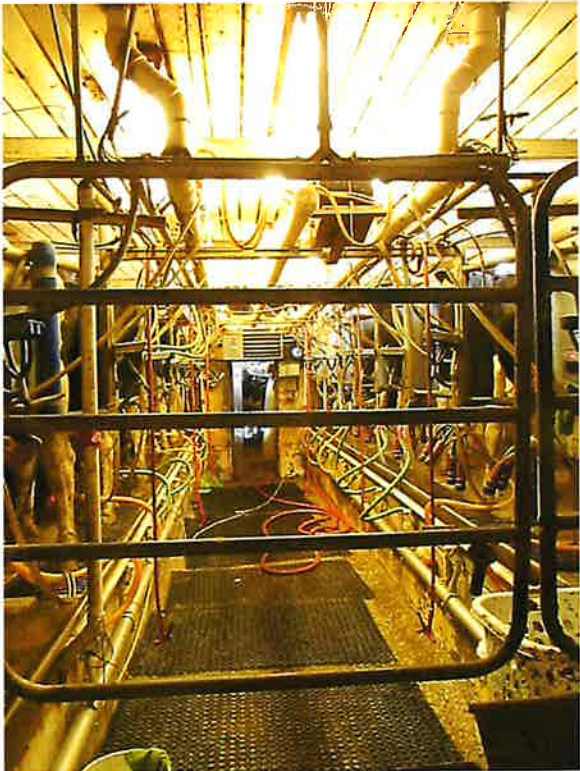


Figure 12 Milking Parlor Area