STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
**BENEFICIAL USE FIELD REPORT**

## A. GENERAL INFORMATION

Permit No: 37-7460
Exam Date: 8/26/05
8/10/05

1. Current Owner: FRANK ASTORQUIA
1725 E 1800 S
GOODING ID 83330
(208)934-8178

And/Or

JOSEPHINE ASTORQUIA
1725 E 1800 S
GOODING ID 83330
(208)934-8178

2. Accompanied by: Judd Astorquia met with Corbin Knowles on 8/10/05 when well was measured. Discussed system description in phone conversation 10/17/05. Discussed IPCO measurement 11/18/05 of 1375 gpm.

Phone No: cell 539-5017

Address:

Relationship to Permit Holder: Son

3. **SOURCE** **TRIBUTARY**

GROUND WATER

## B. OVERLAP REVIEW

1. Other water rights with the same place of use: Shares in Big Wood Canal Company for portion of lands in PPU.
2. Other water rights with the same point of diversion: NONE

## C. DIVERSION AND DELIVERY SYSTEM

1. **LOCATION OF POINT(S) OF DIVERSION:**

GROUND WATER L3 NE1/4NE1/4NW1/4 Sec. 2, Twp 06S, Rge 14E, B.M.
GOODING County

Method of Determination: GPS with confirmation using quad and GIS.

2.

**PLACE OF USE:** IRRIGATION

| Twp | Rge | Sec | NE | | | | NW | | | | SW | | | | SE | | | | Totals |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | NE | NW | SW | SE | NE | NW | SW | SE | NE | NW | SW | SE | NE | NW | SW | SE | |
| 06S | 14E | 2 | 30.0 | 39.0 | 33.0 | 33.0 | 39.0 | 24.0 | 34.0 | 26.0 | | | | | | | | | 258.0 |
| | | | L1 | L2 | | | L3 | L4 | | | | | | | | | | | |

Total Acres: 258

Method of Determination: GPS and GIS.

3. __x___ Delivery System Diagram Attached (required). Indicate all major components and distances between components. Indicate weir size/pipe as applicable.

__x___ 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___ 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 |
|---|---|---|---|---|---|
| Well | US Electric Motor | 125 | | Wel Line Pump #45767 | 10" discharge pipe |
| Booster | US Electric Motor | 125 | | Layne Vertical Centrifugal Pump | |

*Code to correspond with No. on map and aerial photo

## D. FLOW MEASUREMENTS

1.

| Measurement Equipment | Type | Make | Model No. | Serial No. | Size | Calib. Date |
|---|---|---|---|---|---|---|
| TFP | | | | | | |

2. Measurements:

SEE Attached Measured 1297 average GPM over 10 minutes. ..... 2.89 cfs High reading was 1368 gpm during test.

Judd Astorquia recalls IPCO pump test in 1996 to be 1375 gpm or 3.06 cfs.

## E. FLOW CALCULATIONS

_____Additional Computation Sheets Attached

Measured Method:

## F. VOLUME CALCULATIONS

1. Volume Calculations for Irrigation:

$V_{I.R.}$ = (Acres Irrigated) x (Irrigation Requirement) = 200 X 4 = 800 afa

$V_{D.R.}$ = [Diversion Rate (cfs)] x (Days in Irrigation season) x 1.9835 = 3.06 x 1.9835 X 246 = 1493 afa

V = Smaller of $V_{I.R.}$ and $V_{D.R.}$ = 800 afa

2. Volume Calculations for Other Uses: NONE

## G. NARRATIVE/REMARKS/COMMENTS

This field exam was conducted to allow resolution of claim filed in the SRBA. Originally the well served 200 acres as documented in the papers filed to allow the permit to be reinstated. Currently the well is hooked into a common system which irrigates 258 acres. This system has evolved since proof has been submitted. Currently the well supplies water to two pivots and handlines. Currently the system is interconnected to a pump delivering Big Wood Canal Company shares. At the time Corbin Knowles measured the well Mr. Astorquia indicated that the pumping rate had dropped off over the last few years due to the drought and drop in water table. Corbin measured 1297 gpm or 2.89 cfs. Mr. Astorquia was given the opportunity to document historical pumping rate. He indicated that IPCO had conducted an energy audit in 1996. During that audit he recalled that the pumping rate was just shy of 1400 gpm (He thought the number was 1375 gpm). He was going to attempt to find those documents. I our conversation of 11/18/05 Judd indicated he has searched his records but cannot find the report. He indicated he would continue to look. Since 1375 gpm is very close to the high value (1368 gpm) measured during Corbin's measurement and within 6% of Corbin's averaged rate I am going to recommend licensing of 1375 gpm or 3.06 cfs. Review of the 1976 document from Layne Pump included in the file shows that originally the pump was designed to pump 4.0 cfs open discharge. It appears the booster was added to pressurize the system for sprinklers. The beneficial use statement was filed for 4.0 cfs.

As explained by Judd Astorquia under the current system the NW, SW and SE corners of the west pivot are dry. Under the current system the NE, SE corners of the east pivot are irrigated from BWCC shares (Not the well) via the BWCC pump and the pasture area near the houses in the SW corner of the east pivot are irrigated from BWCC shares (Not the well) via gated pipe.

Have conditions of permit approval been met? _____Yes __x___No No measuring device is currently installed however should be waived since power records can be used.

## H. RECOMMENDATIONS

**1. Recommended Amounts**

| BENEFICIAL USE | PERIOD OF USE | DIVERSION RATE | ANNUAL VOLUME |
|---|---|---|---|
| IRRIGATION | 04/01 to 11/01 | 3.06 CFS | 800.00 AF |
| | Totals: | 3.06 CFS | 800.00 AF |

**2. Recommended Amendments**

_x__Change P.D. as reflected above ___Add P.D. as reflected above ___None

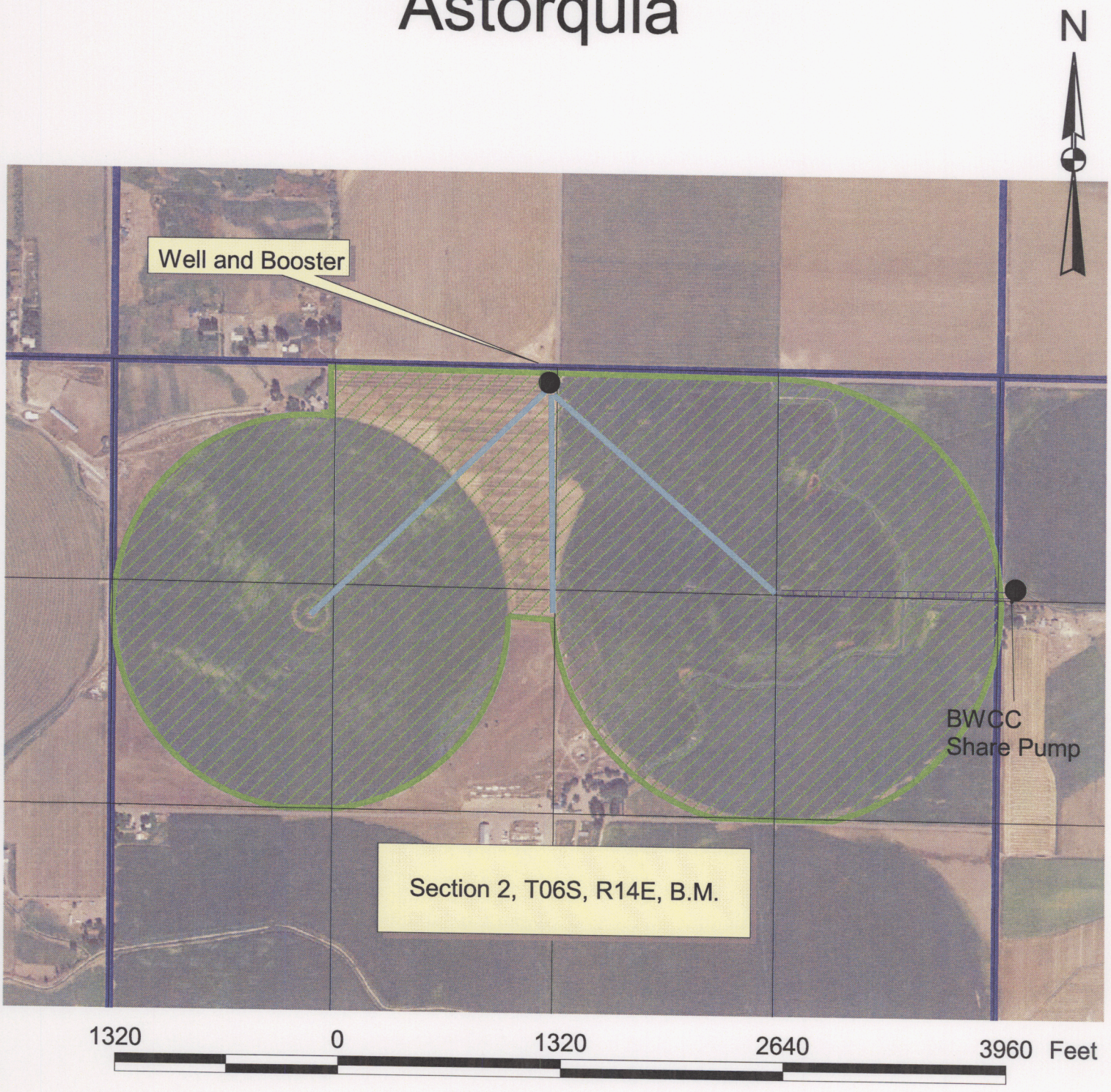
_x__Change P.U. as reflected above ___Add P.U. as reflected above ___Other

## I. AUTHENTICATION

Field Examiner's Name_____ Date 11/21/05

Reviewer_____ Date_____

# FE 37-7460
# Astorquia




Bwcc share pipeline.shp
Well pipeline.shp
GCDB06S14E GCDB
37-7460.shp
PLSS Section LinesGcdb_sections.shp

ADM
10/17/2005

| Astorquin | 8-10-05 | C. Knowles |
|---|---|---|

Gps File A0013567 TAGged 8-10-05

- Pump Info -

Meas RATE 1297 - Owner feels draw down in well has equated to 10 PSI Loss at topg hole

Canal WATER Typically mixed @ booster

BOOSTER
125 Hp US Electric motor
1770 Rpm
Layne Vertical Centrifugal Pump

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Well
125 Hp US Electric motor
1770 RPM
SIMER well Line Pump
Pump # 45767
STAGE 12 TTC

WENT to Low Pressure System in mid 90's

IPCO Metering on New Hook ups

Approx 200 AC of 320 Developed on groundwater
120 AC Canal SHARES

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Booster must Run for well to be Running
Well ~~motor~~ Pump is designed for open discharge type - ~~measurements~~ measurement was done with Booster Running.

CAMPBELL 22-140 100 sheets

1001350?

F.E. 37-7460

OUTER DIAMETER
10.0299 IN

PIPE MATERIAL
? CS.SS

WALL THICKNESS
0.1150 IN

KIND OF FLUID
? WATER

SPACING
7.557 IN V

09:20+ 1.320E 3GPM 00R
+ 5.616E 0FPS 00R
+00000 *10 G 00R
-00000 *10 G 00R

09:21+ 1.266E 3GPM 00R
+ 5.387E 0FPS 00R
+00129 *10 G 00R
-00000 *10 G 00R

09:22+ 1.320E 3GPM 00R
+ 5.616E 0FPS 00R
+00259 *10 G 00R
-00000 *10 G 00R

09:23+ 1.295E 3GPM 00R
+ 5.511E 0FPS 00R
+00389 *10 G 00R
-00000 *10 G 00R

09:24+ 1.306E 3GPM 00R
+ 5.557E 0FPS 00R
+00519 *10 G 00R
-00000 *10 G 00R

09:25+ 1.242E 3GPM 00R
+ 5.285E 0FPS 00R
+00648 *10 G 00R
-00000 *10 G 00R

09:26+ 1.368E 3GPM 00R
+ 5.823E 0FPS 00R
+00777 *10 G 00R
-00000 *10 G 00R

09:27+ 1.346E 3GPM 00R
+ 5.728E 0FPS 00R
+00907 *10 G 00R
-00000 *10 G 00R

09:28+ 1.290E 3GPM 00R
+ 5.488E 0FPS 00R
+01037 *10 G 00R
-00000 *10 G 00R

09:29+ 1.328E 3GPM 00R
+ 5.652E 0FPS 00R
+01168 *10 G 00R
-00000 *10 G 00R

09:30+ 1.318E 3GPM 00R
+ 5.610E 0FPS 00R
+01297 *10 G 00R
-00000 *10 G 00R

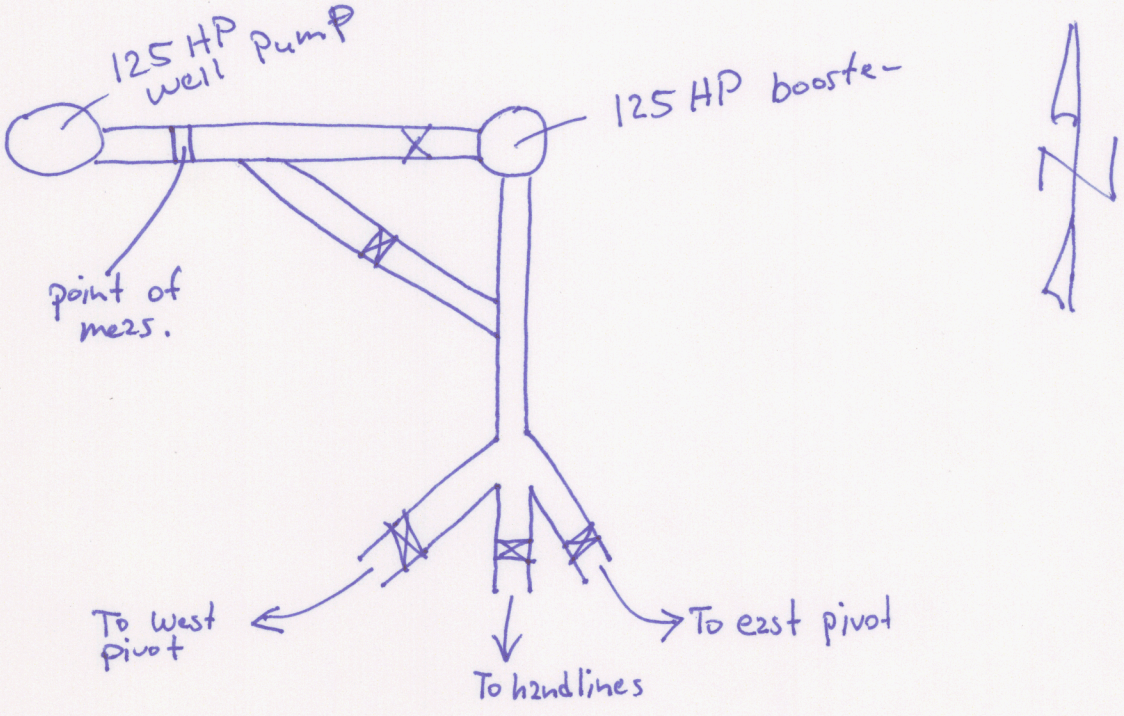
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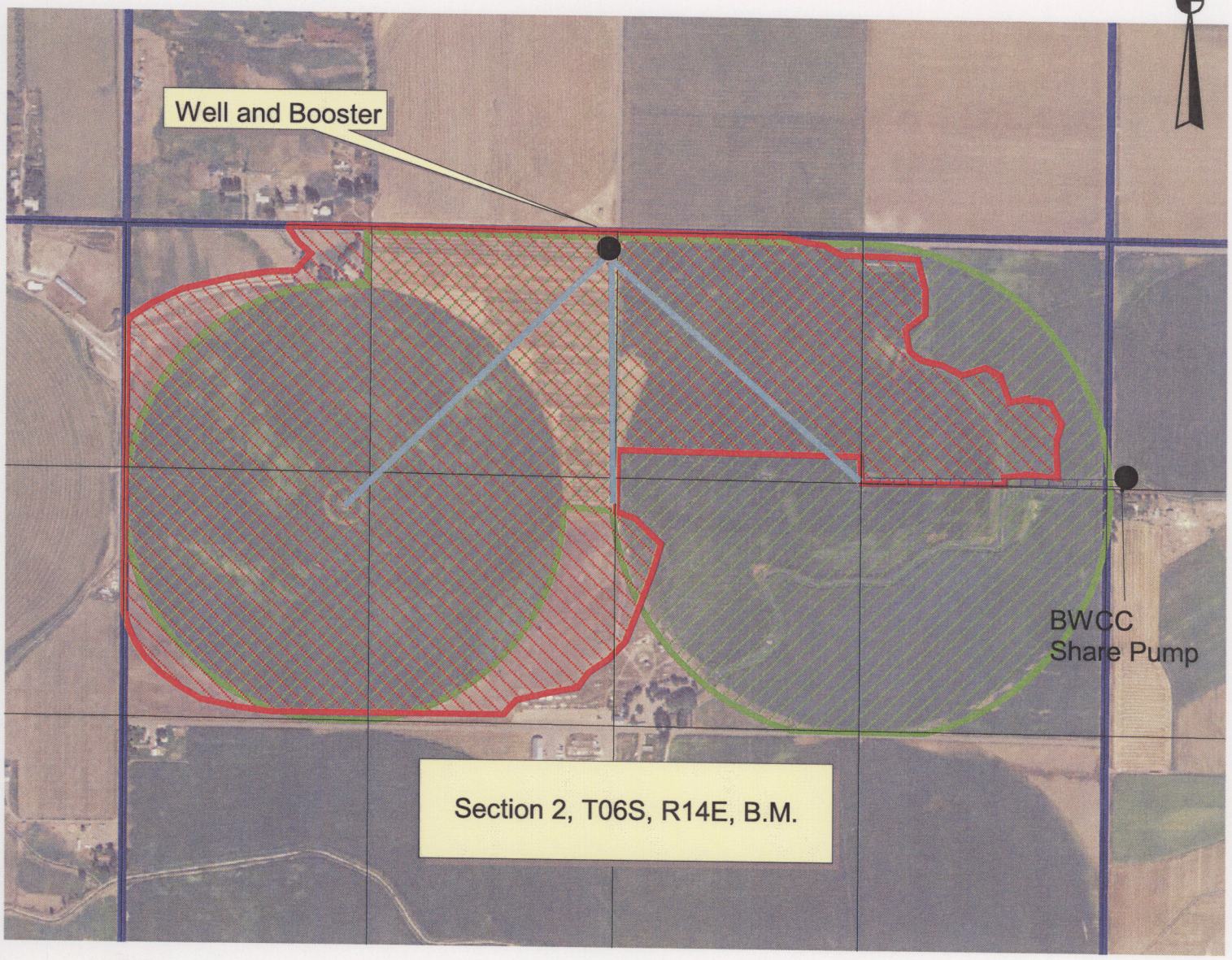


View of well with 125 HP pump on left and 125 HP booster on right. View looking north.

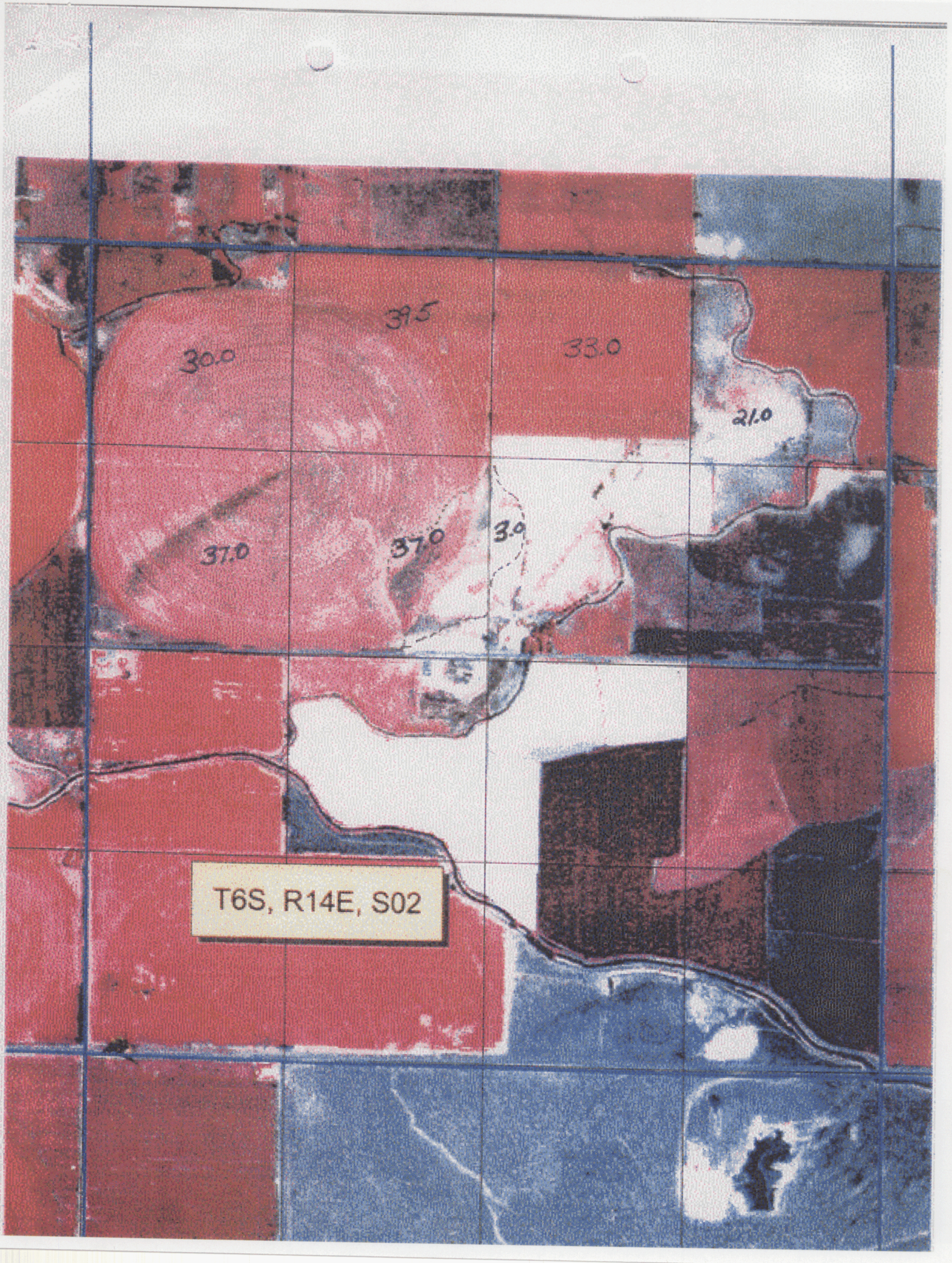
Photos by ADM. Taken in August of 2005.



# FE 37-7460
# Astorquia




ADM
10/17/2005


39.5
30.0
33.0
21.0
37.0
37.0
3.0
T6S, R14E, S02

JUN-25-82 08:39A

LAYNE PUMPS

Box 640, Twin Falls, Idaho 83301
Phone No. 733-3284

ORDER NO _____

DATE 5-17 1976

DEALER

PUMP ESTIMATE AND ORDER

CUSTOMER

Frank Battaglini

S/N 45767

Route _____ Date Desired _____

PUMPING CONDITIONS

| | | |
|---|---|---|
| Inside Dia. of Well 20" | Lift in Well _____ | Capacity 1800 GP |
| Depth of Well 310 | Lift Above _____ Lbs. _____ | Speed of Pump _____ RP |
| Static Water Level 225 | Column Friction _____ | HP Required _____ |
| Drawdown _____ | Total Dynm. Head 248 | Allowable Shaft HP _____ |

| Number | DESCRIPTION | LIST PRICE | NET PRICE |
|---|---|---|---|
| 1 | 125 HP MOTOR Phase _____ Volt 4.5 Make _____ RPM | | |
| | { With / Without } Ratchet _____ | | |
| | _____ HP STARTER { Across Line / Auto Start } _____ Volt _____ Make | | |
| | _____ AMP SAFETY SWITCH _____ Volt _____ Phase _____ Make | | |
| | _____ GEAR DRIVE _____ Ratio { With / Without } Ratchet _____ Make | | |
| | WL _____ SPICER SHAFT _____" Long _____ | | |
| | W _____ DRIVE FLANGE _____ Bore _____ Key _____ | | |
| | W _____ ENGINE FLANGE _____ Bore _____ Key _____ | | |
| 1 | 10WL HEAD _____" Outlet _____ { Water Lub / Oil Lub } _____ | | |
| 1 | 16 GAL OILER _____ Volt Solenoid _____ | | |
| | _____"X _____" DISCHARGE NIPPLE { TOE / TBE } _____ | | |
| 1 | 250' SETTING OF 10"X 2½"X 1½" In _____ Length | | |
| 1 | 12 "BOWLS NK11 Type S Stage { Open / Close } Ports { Bronze / Cast Iron } Wear Rings | | |
| | { Bronze / Cast Iron } Impellers { Oversize / Standard } Shaft Fitted X 2-3 H.P. X _____ X _____ | | |
| | _____"X _____' SUCTION { TOE / TBE } _____ Couplings | | |
| | _____" STRAINER { Bronze / Galvanized } { Screwed / Welded } { Basket / Cone } | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | TOTAL | | |

TF-127

Quoted By _____