

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
BENEFICIAL USE FIELD REPORT

RECEIVED
JUN 01 2015
Department of Water Resources
Eastern Region

A Beneficial Use Field Report is prepared by a water right examiner as the result of an examination to clearly confirm and establish the extent of the beneficial use of water established in connection with a permit during the development period authorized by the permit and any extensions of time previously approved.

A. GENERAL INFORMATIONPermit No. 22-13967

1. Owner Walters Ready Mix Inc Phone No. (208) 356-5491
Current address 342 W 4th N, Rexburg, ID 83440
2. Examiner's name Bryce A. Contor EXAM DATE 27 May, 2015
3. Accompanied by Stacey Walters & Nick Maupin Email _____
Address Same as above
Relationship to permit holder Employees Phone No. Same as above
4. Source Ground Water tributary to _____

B. OVERLAP REVIEW

1. Other water rights with the same place of use 22-7267
2. Other water rights with the same source and point of diversion 22-7267

C. DIVERSION AND DELIVERY SYSTEM

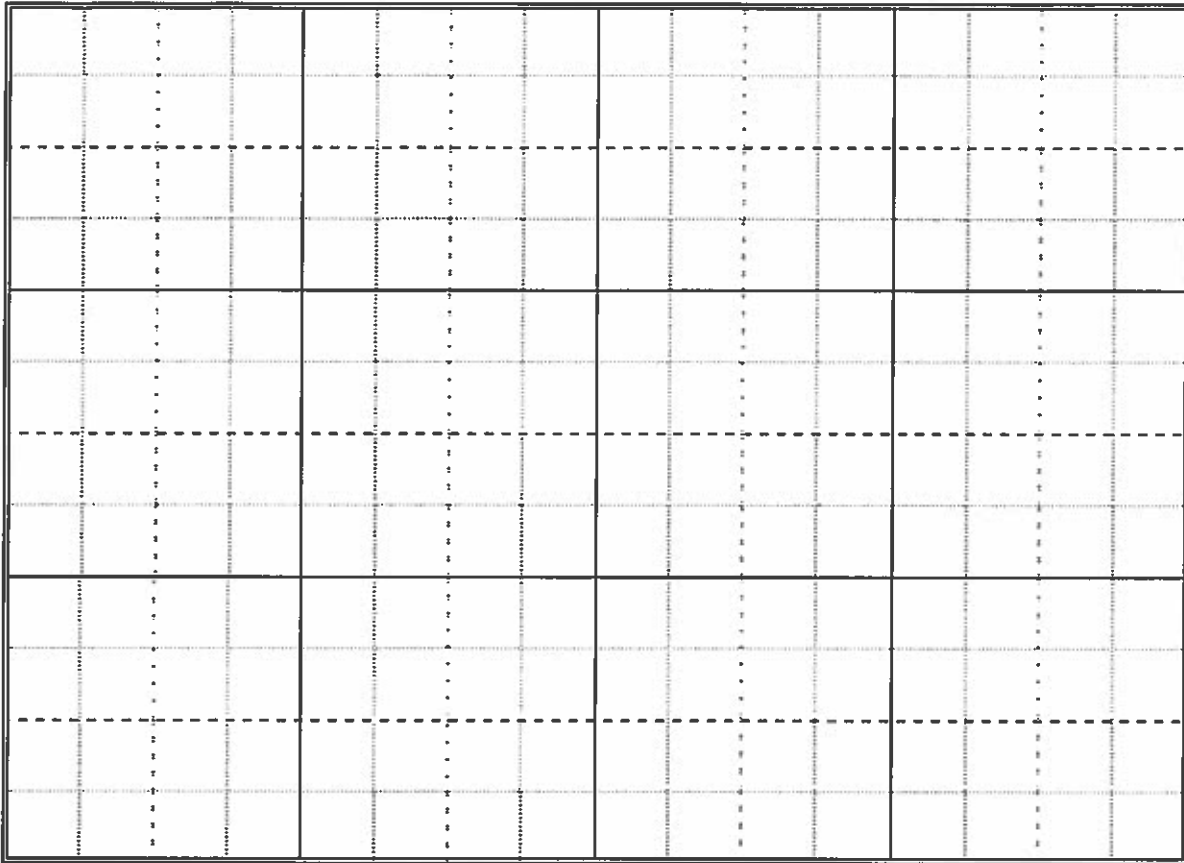
1. Point(s) of Diversion:

Ident. No.	Gov't Lot	¼	¼	¼	Sec	Twp	Rge	County	Method of Determination/Remarks
	2	SE	SW	NW	19	6N	40E	Madison	GPS/Aerial photo/site observation
									A single POD serves 22-7267 &
									22-13967

2. Place(s) of Use: Method of determination Aerial photo/site observation

Twp	Rge	Sec	NE				NW				SW				SE				Totals
			NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	
6N	40E	2							C										

3. **Delivery System Diagram:** Indicate all major components and distances between components. Indicate weir size/ditch size/pipe diameter (inside), as applicable. Use the space provided or ☒ see attached.



Scale: 1" = _____

- ☒ Copy of USGS Quadrangle attached showing location(s) of point(s) of diversion and place(s) of use (required)
☒ Aerial photo attached (required for irrigation of 10+ acres)
☒ Photo of diversion and system attached

4.

Well or Diversion Identification No.*	Motor Make	Hp	Motor Serial No.	Pump Make	Pump Serial No. or Discharge Size
W1	US	100	6347A-50-	National	2K6-0404
			W069W111	(tag identifies	(Pump tech tag)
			R149M	local supplier)	

*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
Collins	pitot tube	Collins	N/A	N/A	2" - 48"	N/A

2. Measurements: _____

4.15 cfs measured at full operating condition. See attached spreadsheet. Installed McCrometer meter indicated 14,200 gallons in 7:47.94 (7.799 minutes), 1821 gallons per minute or 4.06 cfs.

E. NARRATIVE/REMARKS/COMMENTS

Flow was measured with a Collins pitot-tube device, which is more robust to non-standard conditions and short upstream straight-pipe length than are other instruments.

A single point of diversion serves this water right and 22-7627. No other points of diversion are associated with either right.

Installed flowmeter calibration coefficient is $(4.15/4.06) = 1.02$. This is within +/- 10% accuracy requirement for installed flowmeters.

See attached photos of evaporation abatement hardware. In March 2015 a hand-held electronic anemometer was used to check wind reduction from abatement hardware on lower screener. Outside the screener, breeze was a mild 1.5 meters/second. Inside the screener there was not enough air movement to move the anemometer blades.

System capacity estimate from plumbing configuration, at 5 ft/s and 10 ft/s assumed velocities:

Fill line (item A in photo and sketch):	3" line, 0.25 to 0.50 cfs
Upper screener (item B)	3" line, 0.25 to 0.50 cfs
Lower screener (item C)	6" line, 1.0 to 2.0 cfs
3/4 screw (item D)	6" line, 1.0 to 2.0 cfs
2" wash hose	0.11 to 0.22 cfs
shop hose (garden hose size, assume 5 gpm)	0.01 cfs
Total	2.62 to 5.23 cfs

Has the permit holder met all conditions of permit approval, including any mitigation requirements and/or measuring device installation requirements? ☒ Yes ☐ No If no, what must be done to meet the permit requirements?

F. FLOW CALCULATIONS☒ Additional computation sheets attached

Measured Method:

Collins flow meter, 4.15 cfs

G. VOLUME CALCULATIONS

1. Volume Calculations for Irrigation:

 $V_{I.R.} = (\text{Acres Irrigated}) \times (\text{Irrigation Requirement}) =$ _____ $V_{D.R.} = [\text{Diversion Rate (cfs)}] \times (\text{Days in Irrigation Season}) \times 1.9835 =$ _____ $V = \text{Smaller of } V_{I.R.} \text{ and } V_{D.R.} =$ _____

2. Volume Calculations for Other Uses:

Summer time: 10 hrs/day x 6 days/week x 27 weeks = 1620 hours of operation

Winter time: 5 hrs/day x 2 days/week x 25 weeks = 250 hours of operation

Total: 1620 + 250 = 1870 hours operation

 $1870 \text{ hours} \times 60 \text{ min/hour} \times 60 \text{ seconds/min} \times 4.15 \text{ ft}^3/\text{second} \times 1 \text{ acre foot}/43560 \text{ ft}^3 = 641.4 \text{ acre feet}$ **H. RECOMMENDATIONS**

1. Recommended Amounts

Beneficial Use	Period of Use		Rate of Diversion	Annual Volume
	From	To	Q (cfs)	V (afa)
Commercial	1/1	12/31	4.15	641.4
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
Totals:			4.15	641.4

2. Recommended Amendments

☐ Change P.D. as reflected on page 1☐ Add P.D. as reflected on page 1☐ None☐ Change P.U. as reflected on page 1☐ Add P.U. as reflected on page 1☐ Other**I. AUTHENTICATION**

Field Examiner's Signature

Dyke A. Contor

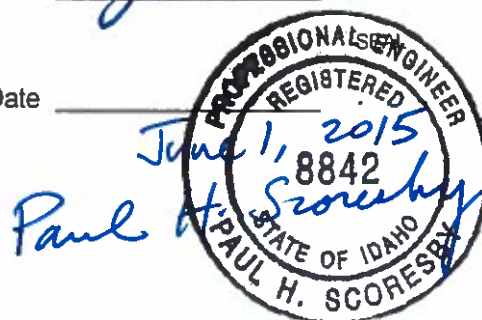
Date

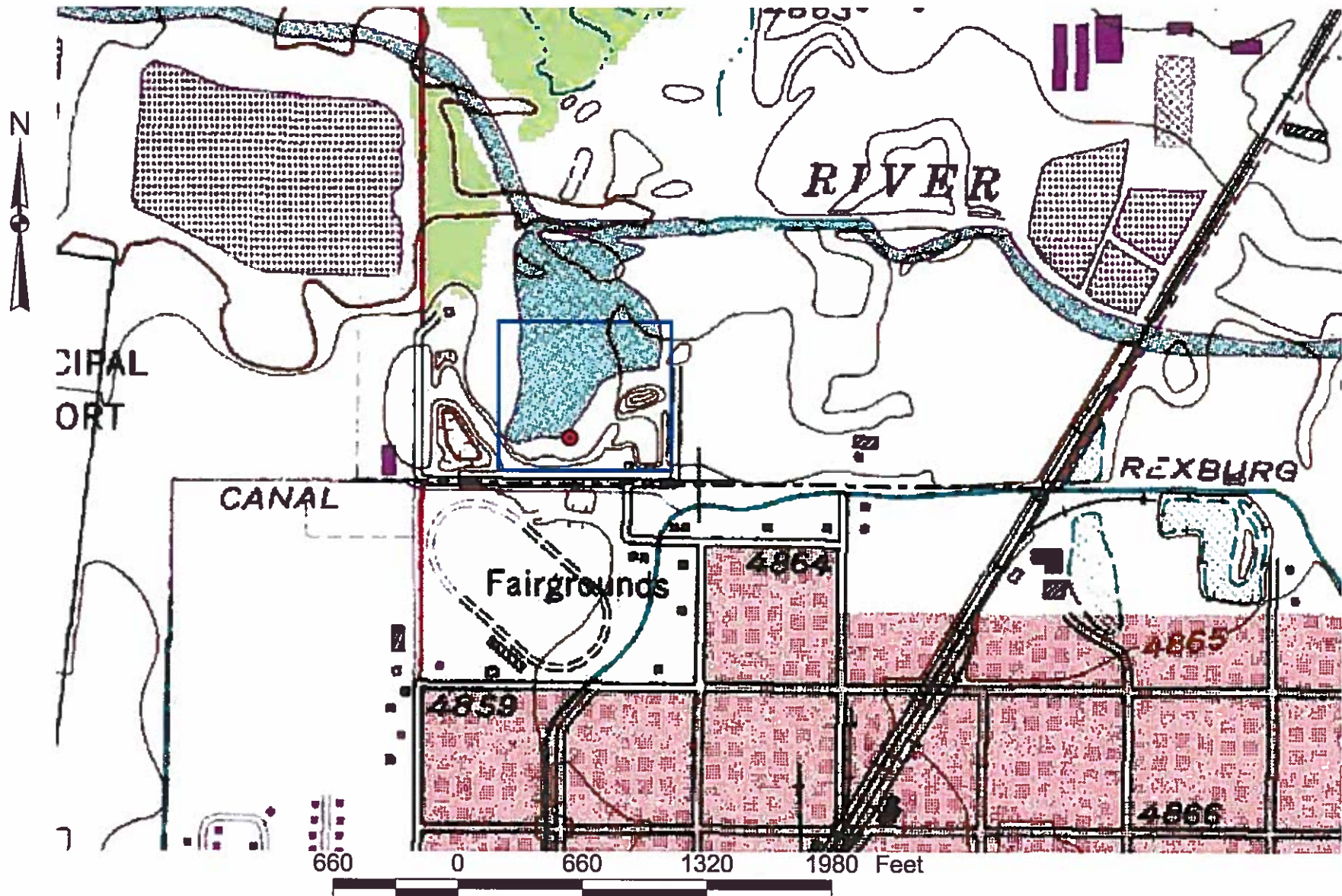
1 June 2015

Reviewer

[Signature]

Date



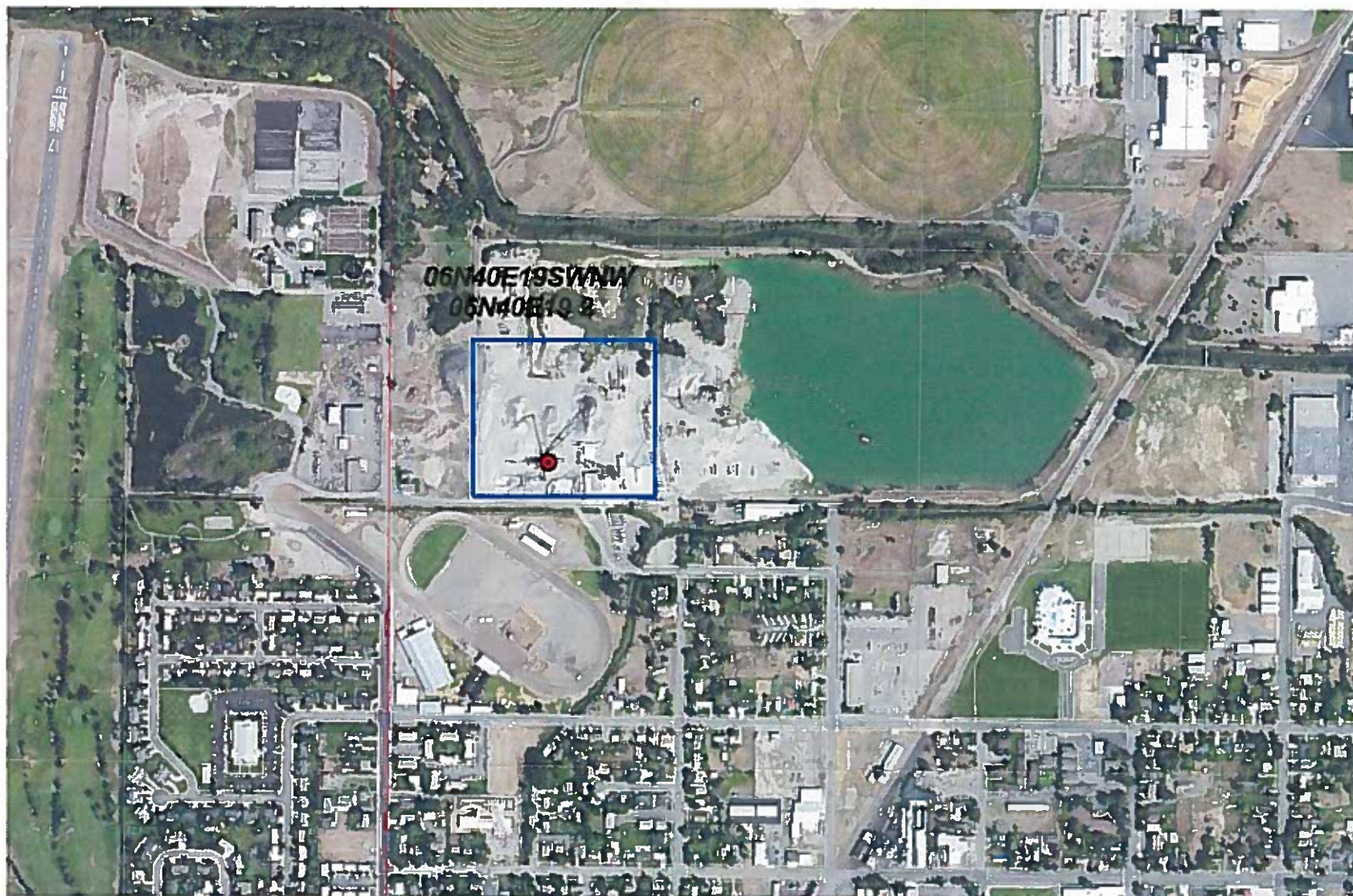


482 Constitution Way, Idaho Falls, ID 83402
208-524-2353

Attachment for Part C.3 (Topographic Map)
for Field Exam 22-13967

Project 09-0025





660 0 660 1320 1980 Feet



Rocky Mountain
ENVIRONMENTAL
ASSOCIATES, INC.

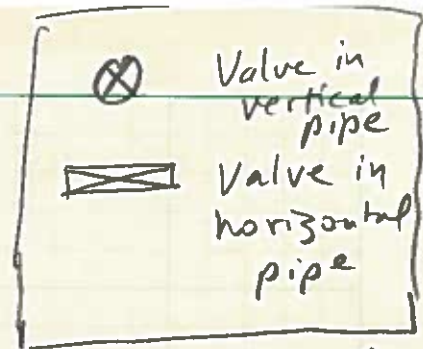
482 Constitution Way, Idaho Falls, ID 83402
208-524-2353

Attachment for Part C.3 (Aerial Photo)
for Field Exam 22-13967

Project 09-0025

-  PLS Sections
-  QQ
-  POU
-  POD

Item C3: Delivery System Diagram



↑
N

A = vertical 3" PVC to fill line

B = horizontal 3" galv. steel to upper screener

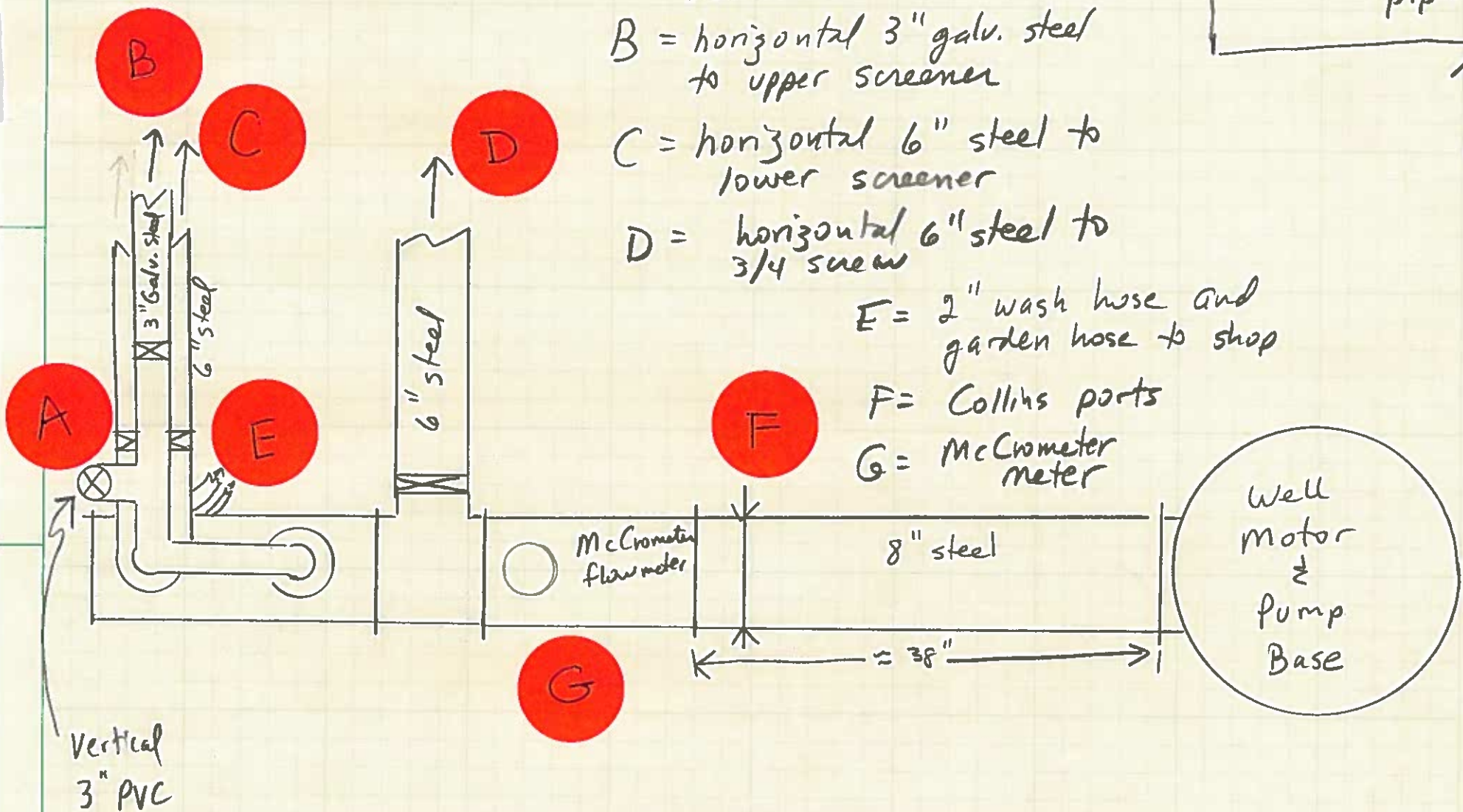
C = horizontal 6" steel to lower screener

D = horizontal 6" steel to 3/4 sneeu

E = 2" wash hose and garden hose to shop

F = Collins parts

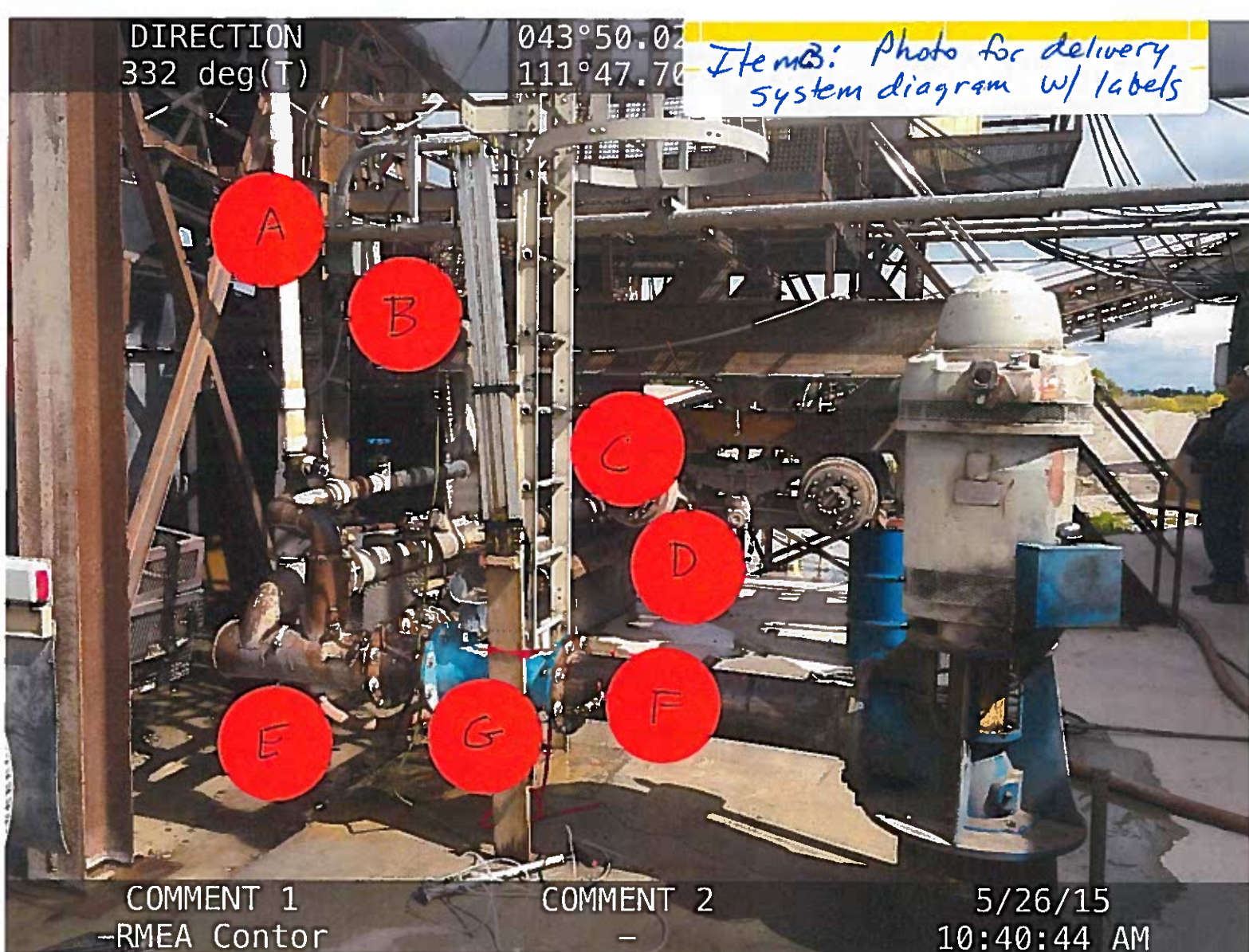
G = McCrometer meter



DIRECTION
332 deg(T)

043°50.02
111°47.70

Items: Photo for delivery
system diagram w/ labels



COMMENT 1
-RMEA Contor

COMMENT 2
-

5/26/15
10:40:44 AM

A = Vertical 3" PVC to fill line

B = Horizontal 3" galvanized steel to upper screener

C = Horizontal 6" steel to lower screener

D = Horizontal 6" steel to 3/4 screw

E = Two hoses attach out of view:

- 2" hose to wash

- garden hose to shop

F = Collins parts

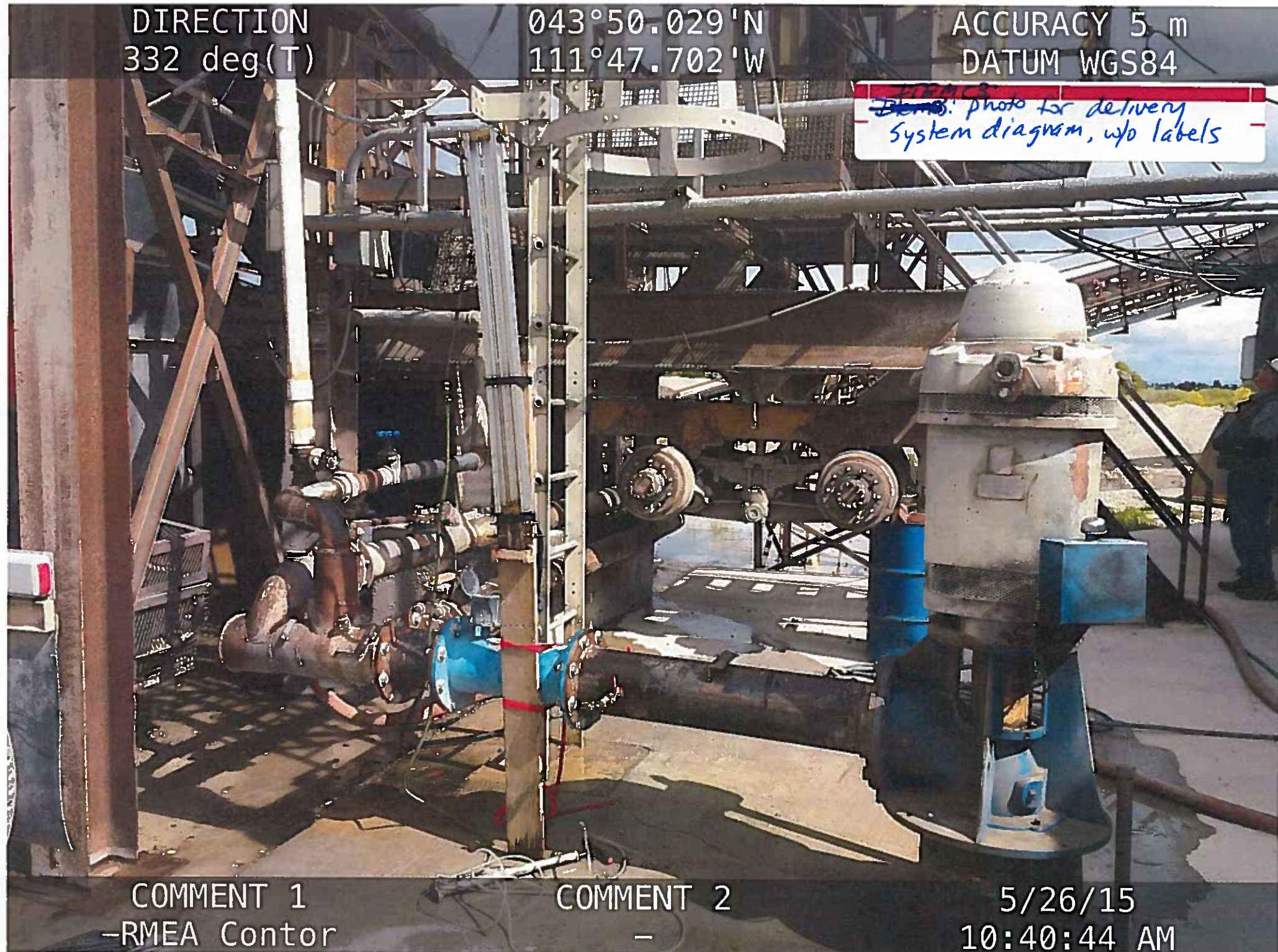
G = Installed McCrometer flowmeter

DIRECTION
332 deg(T)

043°50.029'N
111°47.702'W

ACCURACY 5 m
DATUM WGS84

~~Items:~~ photo for delivery
System diagram, w/o labels



COMMENT 1
-RMEA Contor

COMMENT 2
-

5/26/15
10:40:44 AM

Attachment for Item D 2: Flow Measurement									
Site Name	Walters Ready Mix Rexburg production well								
Date	27 May, 2015								
Time	Starting 9:00 AM approximately.								
	Inches	1/16	Decimal Inches						
OD	8	10	8.65405		Circumference 2' 3 3/16"				
Wall Thickness	0	4	0.25						
ID	8	2	8.15405		(= OD minus 2x Wall Thickness)				
Inside Radius	4	1	4.077025		(ID/2)				
Area (ft^2)			0.362639		(pi x (radius in feet)^2)				

COLLINS

ARTHUR L. COLLINS FLOW GAGE
Corrected G. P. M.

STANDARD PIPE.

8-18-64.

For Pipes 13" to 16" diam. add 1.2% for tube area correction.

Nominal Diameter Inches	Inside Diameter Inches	Thick-ness Inches	.707 times Radius	G. P. M. at 1 ft. per Sec.	Correction in Percent	G. P. M. Corrected
1	1.05	.133	.37	2.45		
1-1/4	1.38	.140	.49	3.89		
1-1/2	1.61	.145	.57	5.51		
2	2.07	.154	.73	9.79		
2-1/2	2.47	.203	.87	15.30	Deduct % " 12.1	13.45
3	3.07	.216	1.08	22.04	" 8.9	20.07
3-1/2	3.55	.226	1.25	29.99	" 7.1	27.87
4	4.03	.237	1.42	39.17	" 5.7	36.85
5	5.05	.258	1.78	61.20	" 3.6	59.00
6	6.07	.280	2.14	90.04	" 2.2	88.05
8	7.98	.322	2.82	156.66	" 0.5	155.81
10	10.02	.365	3.54	244.86	Add % " 0.5	246.10
12	12.00	.375	4.24	352.20	" 1.2	356.36
CASING						
2-3/4	2.77	.116	1.08	18.75	Deduct % " 10.5	16.83
3-1/4	3.25	.125	1.15	25.86	" 8.1	23.75
3-3/4	3.73	.134	1.32	34.09	" 6.5	31.87
4-1/4	4.22	.142	1.49	43.50	" 5.2	41.24
4-3/4	4.70	.152	1.66	53.98	" 4.2	51.70
5-5/8	5.67	.164	2.00	78.77	" 2.6	76.72
6-5/8	6.65	.174	2.35	107.71	" 1.5	106.10
7-5/8	7.63	.186	2.70	142.40	" 0.8	141.20
8-5/8	8.61	.196	3.04	181.07	Add % " 0.2	181.43
9-5/8	9.58	.209	3.39	224.73	" 0.3	225.40
10-5/8	10.55	.224	3.73	272.70	" 0.7	274.64
11-5/8	11.51	.243	4.07	324.40	" 1.0	327.81

REPRODUCED FROM THE COLLINS FLOW GAGE

Attachment for Part E (NARRATIVE REMARKS/COMMENTS)

Evaporation Abatement:

There are two locations where spray would be subject to wind and direct sunlight if not protected by abatement measures; the "Upper Screener" and the "Lower Screener."

Photo IMG-0628.JPG is taken looking down on top of the upper screener during operation. Belting material shields the spray from both wind and sun, with the metal sides of the screener providing additional wind shielding. Photo IMG_0630.JPG shows the spray jets in operation beneath the belting material. Photo IMG_0631.JPG shows the brushes installed to prevent lateral intrusion of wind into the direct spray area.



Photo IMG_0628.JPG. Looking down on belting shielding the spray on the upper screener. Spray was operational when photo was taken.



Photo IMG_0630.JPG. Spray jets below belting on upper screener.



Photo IMG_0631.JPG. Brushes used to prevent lateral entry of wind into spray area of upper screener. Spray was operational when photo was taken.

The lower screener is on the north side of the upper screener, shaded at times and in the lee of the prevailing wind. Photo IMG_0624.JPG shows how belting material and brushes are used to protect the sprays on the lower screener. Photo IMG_0625.JPG shows the spray operating inside the belting/brush assembly.



Photo IMG_0624.JPG. Belting and brushes used to shield sprays on lower screener.
Photo taken with sprays operational.



Photo IMG_0625.jpg. Spray operating on lower screener.

22-13967: well log

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES

WELL DRILLER'S REPORT

State law requires that this report be filed with the Director, Department of
within 30 days after the completion or abandonment of the w

Location Corrected by IDWR To:

T06N R40E Sec. 19 NWNWSE

By: mciscell 2012-10-19

[illegible]

USE ADDITIONAL SHEETS IF NECESSARY - FORWARD THE WHITE COPY TO THE DEPARTMENT