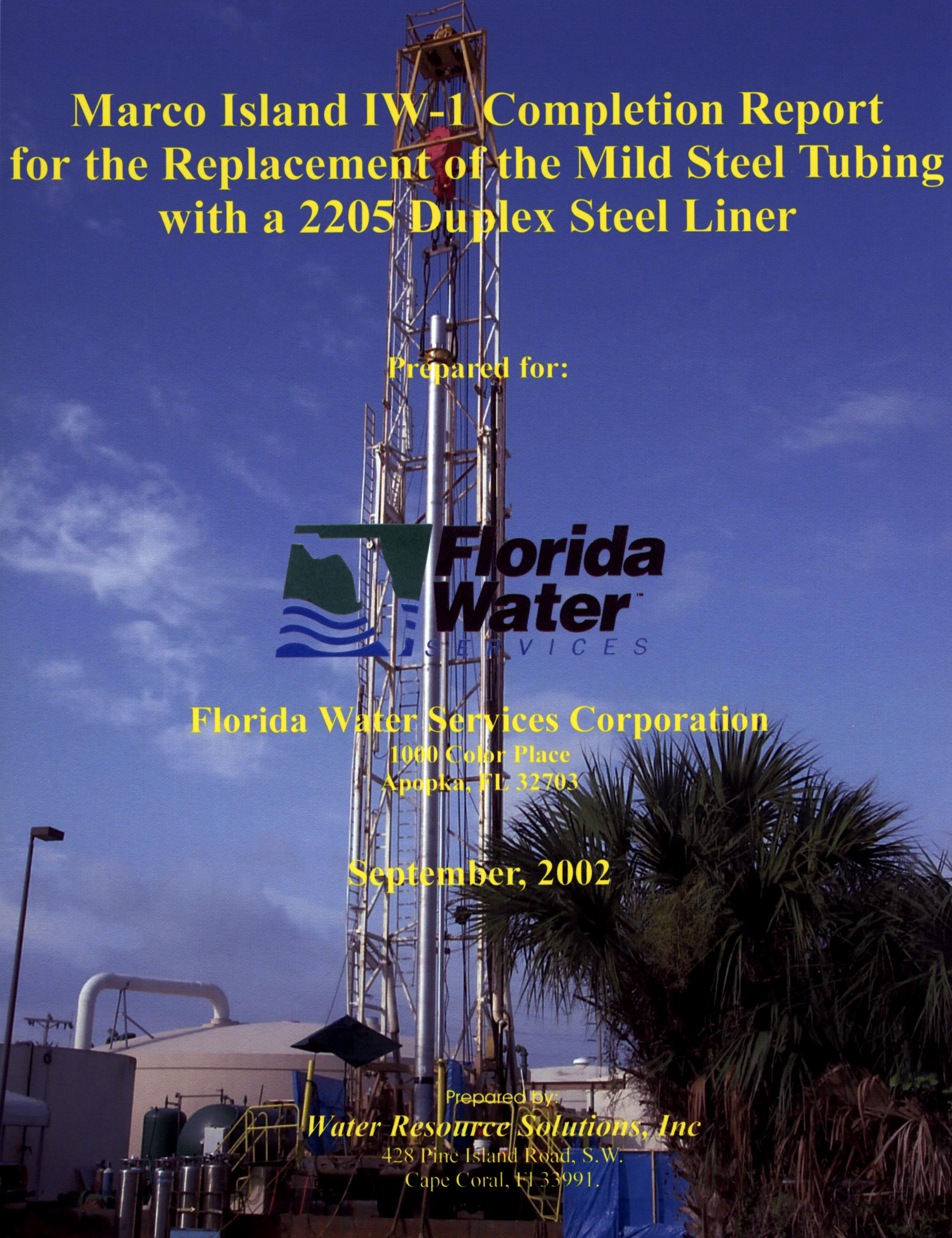

Marco Island IW-1 Completion Report for the Replacement of the Mild Steel Tubing with a 2205 Duplex Steel Liner

Prepared for:

Florida Water SERVICES

Florida Water Services Corporation
1000 Color Place
Apopka, FL 32703

September, 2002

Prepared by:

Water Resource Solutions, Inc

428 Pine Island Road, S.W.
Cape Coral, Fl 33991.

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FOR THE REPLACEMENT OF THE MILD STEEL TUBING
WITH A 2205 DUPLEX STEEL LINER

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1.0 INTRODUCTION

This Well Completion Report describes the work performed in replacing the 20-inch O.D. mild steel tubing in the Marco Island IW-1 injection well with a 16-inch O.D., 2205 duplex steel liner. The injection well is located at the Marco Island Water Reclamation Facility located on Marco Island, Florida (Figure 1.1). This workover, which was authorized in the recently issued Florida Department of Environmental Protection (FDEP) operating permit dated August 12, 2002, was required because the mild steel tubing had been compromised by corrosion.

In addition to the replacement of the tubing with the 2205 duplex steel liner, mechanical integrity testing was performed on this well after the liner installation. As discussed in the report, "Marco Island IW-1 2002 Mechanical Integrity Testing Results", the well was deemed to have mechanical integrity based on a one hour pressure test, a radioactive survey, a temperature survey, and a video survey of the well.

The weekly activity reports and the associated information provided weekly during this workover are provided in Appendix 1.1 to this submission.

2.0 TUBING REPLACEMENT PROGRAM

Tubing Removal

Preparation to remove the tubing began on Monday August 12, 2002 when the well flow was killed and the piping and monitoring lines to the wellhead were removed. The position of the packer in the hole was reaffirmed on August 13, 2002 using a casing collar locator and x, y caliper log (Appendix 2.1). The packer was located between a depth of 2562 to 2571 feet and the base of the casing was located at 2642 feet. On August 14, 2002, a casing cutter was run into the hole to a depth of 2550 feet. The casing was cut and heavy brine was added to both the annulus and the tubing to prevent the well from flowing.

On August 15, 2002, the removal of the 20-inch tubing was initiated. Tubing was removed using a crane with a load capacity of 360,000 lbs. Maximum string weight was reported to be approximately 230,000 lbs. This string weight indicates that over 40,000 lbs. of the tubing had been lost due to corrosion during the 10 years the tubing had existed in the well. Wall thickness measured at a few points along the tubing after the scale was removed suggested that, on average, approximately 50 percent of the 0.594-inch tubing wall thickness had been lost over the past 10 years. After the scale was removed, the remaining inner wall of the tubing appeared smooth. The protected outer wall of the tubing was found to be in good condition during the tubing removal. The last sections of tubing were removed from the well on August 16, 2002. The total length of tubing removed from the well was approximately 2549 feet.

Installation of 2205 Duplex Steel Liner

The installation of the 2205 duplex steel liner was initiated on August 17, 2002. Liner joints, approximately 30 feet in length, were welded into 60 feet sections. The approximate 60 feet sections were then moved to the floor of the drilling rig where they were welded to the liner already suspended in the hole. Gussets were welded to the side of the tubing to hold the liner in place while it hung in the hole. Centralizers were welded every 200 feet to keep the liner centered in the hole. Each welded connection was x–rayed and analyzed for defects according to API-1104 standard by Professional Service Industries, Inc. (PSI) welding inspectors. Table 2.1 provides the tally for the new liner placed in the hole. Table 2.2 summarizes the results of the x-ray analyses, while Table 2.3 provides a correlation between the x-ray number, the manufacturer's number for the joints being welded, and the relative position of the joints in the hole. Mill specs for the tubing are located in Appendix 2.2 and the x-ray inspection data are provided in Appendix 2.3.

The bottom of the 2205 liner, which consisted of 14-inch O.D. 2205 tubing, was constructed with a dual seal assembly (Figure 2.2). The upper seal assembly was designed to seal on the 20-inch tubing or, if necessary, the crossover between the old packer assembly and the 20-inch tubing. The lower seal assembly was designed to seal within the 17 12/32-inch bore in the old packer assembly. The upper and lower seal units, composed of rubber with 2205 steel support plates, were set 12 feet apart so that, during the initial attempt to seal the base of the tubing, both seals would be engaged.

Once the complete liner had been welded together, but prior to setting the seal assembly, a video camera was run into the hole to determine the relative location between the base of the new liner and the top of the cut-off 20-inch mild steel tubing left in the hole. This was done to determine the precise separation between the base of the 2205 duplex steel liner and the top of the 20 inch tubing so that the seal assembly could be set with the lower seal set approximately one foot into the packer bore. The distance between the top of the cut-off tubing and the crossover to the packer was previously determined using a caliper log.

After the separation distance was determined, the liner was lowered into position. Next, brine was pumped into the annulus. A slow loss in fluid level indicated a significant, but incomplete restriction to fluid movement had been established. This restriction was determined to be sufficient to proceed, and preparation for cementing operations was initiated. As indicated in the next section, the seal proved to be adequate, and no additional lowering of the liner was required to form a seal for the cement.

Cementing Operations

Cementing operations using Class B cement were initiated on August 26, 2002 when 12 sacks of cement containing 6% bentonite were placed in the annulus through a 1.5-inch I.D., hydril tubing string. After 12 hours a tag was attempted. No rise in cement level was noted. At that time another 12 sacks of Class B cement containing 6% bentonite were pumped. After 10 hours, the top of the second stage was tagged at a point 2.93 feet above the previous tag point. After this tag, three additional stages of cement were pumped using only neat cement. After the fourth stage, the top of cement was located at approximately 2334 feet. At this point, the neat cement column was now approximately 209 feet in height above the packer. The grout used above this point consisted of Class B cement containing 12% bentonite. Each stage was approximately 400 feet in height. Cementing operations continued every 12 hours until the cement column reached the surface.

Temperature logs were performed approximately 6 to 8 hours after each cementing stage. These logs, which are provided in Appendix 2.4, can be used to verify cement tops and stage heights. Once the annular cementing of the 2205 duplex steel liner was completed, the well was shut-in for two days to allow the cement to cool.

On September 3, 2002, the top of the 2205 duplex steel 16-inch liner was cut-off and a 20-inch, 2205 duplex steel flange was welded to the top of the 16-inch liner in preparation for a pressure test on the newly installed liner.

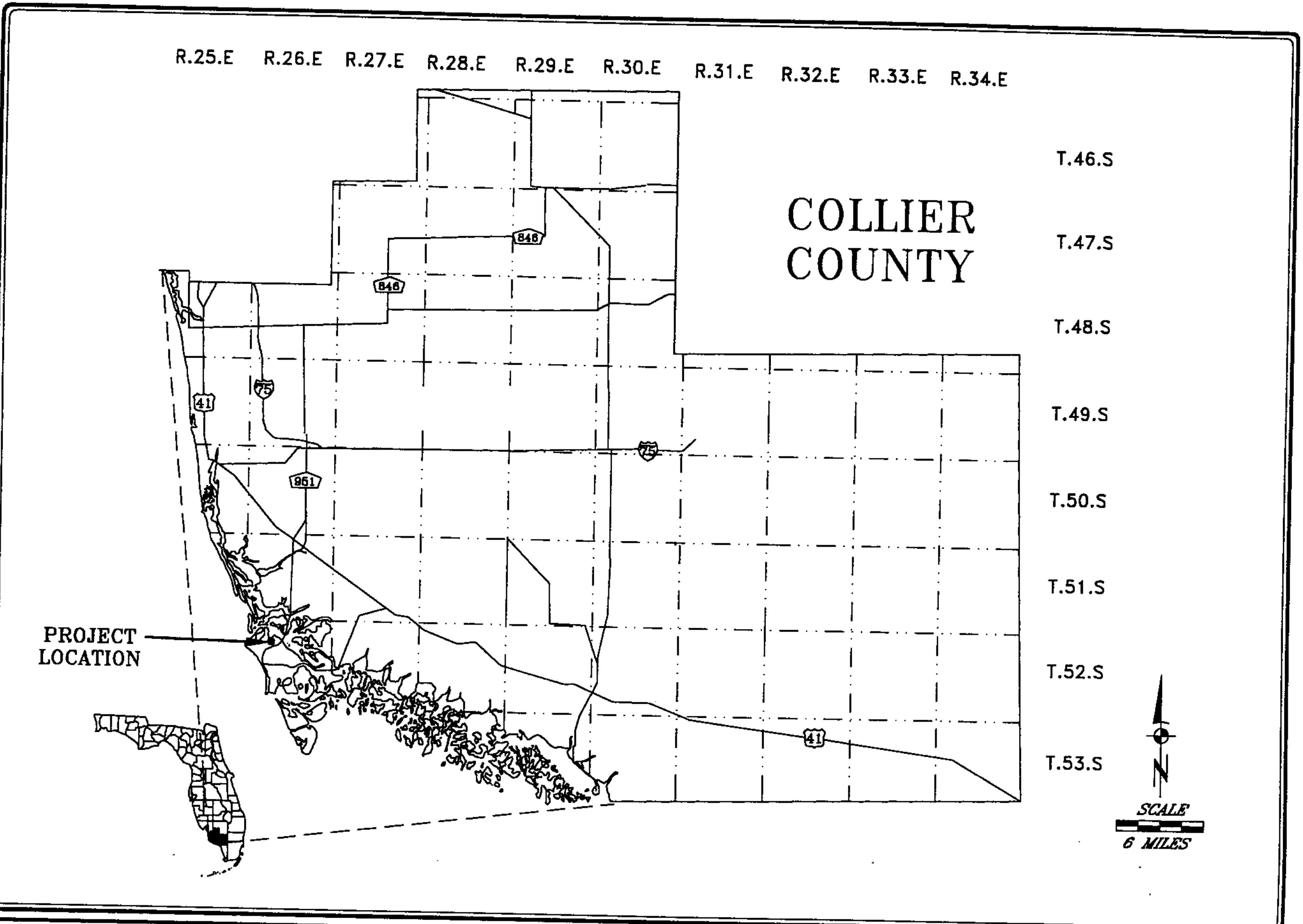
A cement bond log (Appendix 2.5) was run on September 5, 2002 to evaluate the placement of cement behind the liner. The cement bond log indicates the state of bonding between the liner and the cement. Based on good results from the cement bond log, the temperature logs, and volume of cement used, the 2205 liner is adequately grouted in place. Figure 2.3 provides a cross sectional view of Marco Island's IW-1 well as currently completed.

Mechanical Integrity Testing

The details of the mechanical integrity testing are provided in the separate report, "Marco Island IW-1 2002 Mechanical Integrity Testing Results." However, the results are briefly summarized here for completeness.

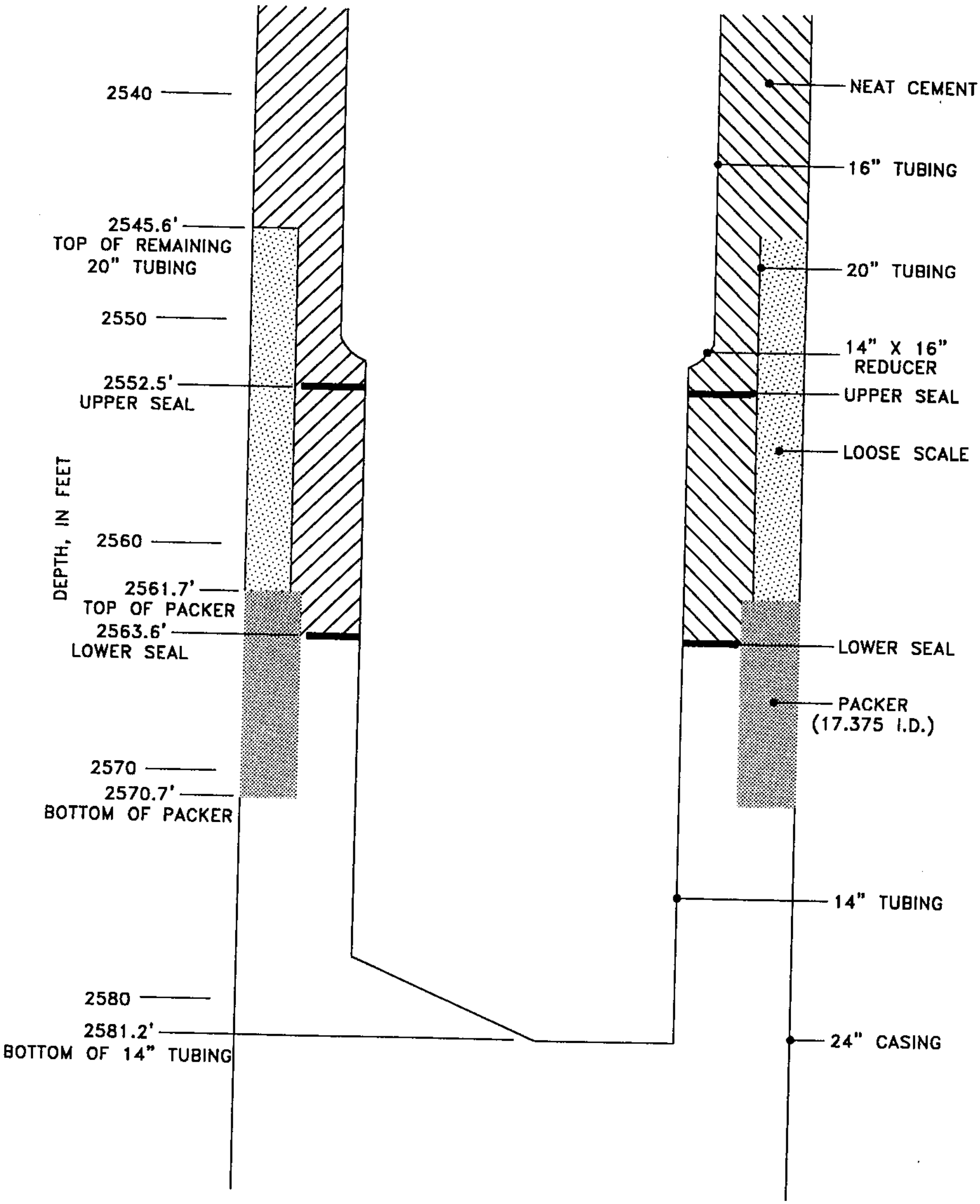
On September 4, 2002, an inflatable packer was run to a depth of 2528.25 feet which corresponds to setting the packer in the 16-inch liner immediately above the 14-inch section of the 2205 steel liner used to sting into the packer bore (Figure 2.2). A pressure test was performed at a test pressure of 160.7 psi on September 5, 2002. This test was witnessed by Mr. Richard Orth of the Florida Department of Environmental Protection. After the successful completion of the pressure test on the casing, the packer was removed and the original wellhead and assôciated piping and equipment were reconnected. The drilling rig was removed from the site.

On September 7, 2002 a radioactive tracer survey, a video survey, and a temperature survey were performed on the well. These logs, coupled with the results from the pressure test, demonstrated that the Marco Island IW-1 injection well has mechanical integrity.



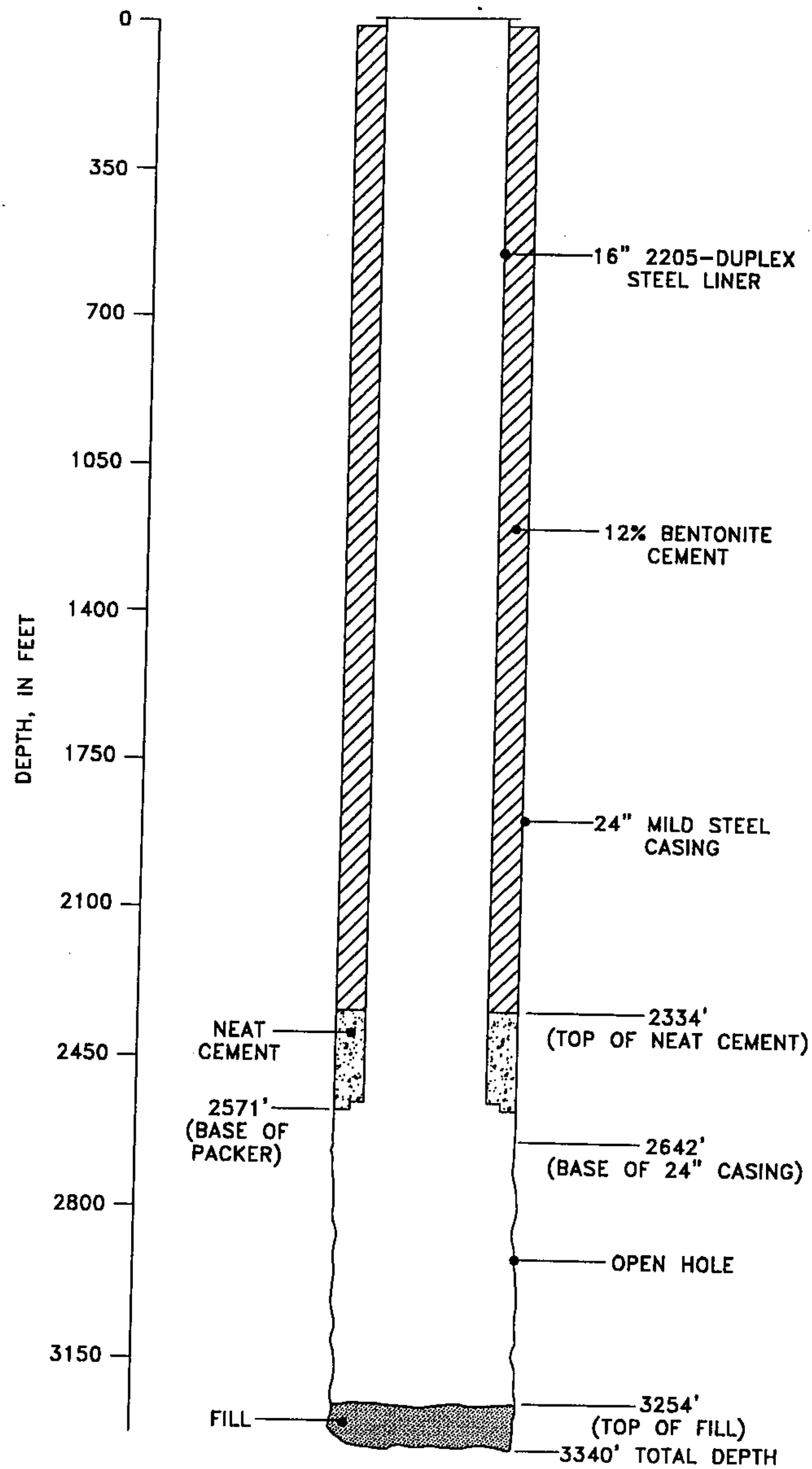
Water Resource Solutions	PROJECT NAME: MARCO ISLAND TUBING REPLACEMENT	DWG. NUMBER: A-COLLI-CO-2
	PROJECT NUMBER: 01-04317.HO	DATE: 9/19/02

FIGURE 1.1 MARCO ISLAND SITE LOCATION MAP.



Water Resource Solutions	PROJECT NAME: MARCO ISLAND IW-1	DWG. NUMBER: A-014317WX2-1
	PROJECT NUMBER: 01-04317.HO	DATE: 9/24/02

FIGURE 2.2 SCHEMATIC DETAIL OF TUBING SEAT.



Water Resource Solutions	PROJECT NAME: MARCO ISLAND IW-1	DWG. NUMBER: A-014317WX-1
	PROJECT NUMBER: 01-04317.HO	DATE: 9/24/02

FIGURE 2.3 CROSS SECTION OF MARCO IW-1 AFTER 2002 TUBING REPLACEMENT.

Table 2.1

MARCO ISLAND IW-1 TUBING REPLACEMENT

16-INCH LINER TALLY

Tubing Joint No.	Tubing Length (feet)	Total Length (feet)	Total Length to Top Seal (feet)	Total Length to Bottom Seal (feet)	Installation Date/Time
1[1]	60.91	60.91	31.26	43.31	8/19/02 11:36
2	59.91	120.82	91.17	103.22	8/19/02 17:28
3	59.30	180.12	150.47	162.52	8/19/02 23:25
4	59.89	240.01	210.36	222.41	8/20/02 2:46
5	59.53	299.54	269.89	281.94	8/20/02 6:50
6	56.95	356.49	326.84	338.89	8/20/02 9:54
7	57.75	414.24	384.59	396.64	8/20/02 13:53
8	55.22	469.46	439.81	451.86	8/20/02 16:39
9	59.80	529.26	499.61	511.66	8/20/02 23:40
10	59.63	588.89	559.24	571.29	8/21/02 2:33
11	58.68	647.57	617.92	629.97	8/21/02 5:49
12	57.38	704.95	675.30	687.35	8/21/02 10:01
13	59.44	764.39	734.74	746.79	8/21/02 12:54
14	55.52	819.91	790.26	802.31	8/21/02 14:55
15	59.32	879.23	849.58	861.63	8/21/02 18:55
16	56.41	935.64	905.99	918.04	8/21/02 21:57
17	59.40	995.04	965.39	977.44	8/22/02 5:50
18	59.33	1054.37	1024.72	1036.77	8/22/02 9:22
19	59.38	1113.75	1084.10	1096.15	8/22/02 12:09
20	59.39	1173.14	1143.49	1155.54	8/22/02 14:47
21	58.90	1232.04	1202.39	1214.44	8/22/02 17:04
22	58.65	1290.69	1261.04	1273.09	8/22/02 19:52
23	60.32	1351.01	1321.36	1333.41	8/22/02 22:30
24	60.30	1411.31	1381.66	1393.71	8/23/02 0:55
25	59.86	1471.17	1441.52	1453.57	8/23/02 9:29
26	58.51	1529.68	1500.03	1512.08	8/23/02 11:57
27	59.47	1589.15	1559.50	1571.55	8/23/02 14:35
28	52.26	1641.41	1611.76	1623.81	8/23/02 16:44
29	60.04	1701.45	1671.80	1683.85	8/23/02 18:59
30	59.02	1760.47	1730.82	1742.87	8/23/02 21:25
31	59.73	1820.20	1790.55	1802.60	8/23/02 23:41
32	59.79	1879.99	1850.34	1862.39	8/24/02 6:40
33	59.65	1939.64	1909.99	1922.04	8/24/02 9:41
34	59.62	1999.26	1969.61	1981.66	8/24/02 12:26
35	59.50	2058.76	2029.11	2041.16	8/24/02 15:54
36	59.57	2118.33	2088.68	2100.73	8/24/02 17:59

Table 2.1.
MARCO ISLAND IW-1 TUBING REPLACEMENT
16-INCH LINER TALLY

Tubing Joint No.	Tubing Length (feet)	Total Length (feet)	Total Length to Top Seal (feet)	Total Length to Bottom Seal (feet)	Installation Date/Time
37	60.11	2178.44	2148.79	2160.84	8/24/02 22:09
38	53.35	2231.79	2202.14	2214.19	8/25/02 3:05
39	59.45	2291.24	2261.59	2273.64	8/25/02 9:25
40	59.63	2350.87	2321.22	2333.27	8/25/02 11:39
41	59.09	2409.96	2380.31	2392.36	8/25/02 15:42
42	59.57	2469.53	2439.88	2451.93	8/25/02 18:30
43	59.50	2529.03	2499.38	2511.43	8/25/02 21:05
44	20.54	2549.57	2519.92	2531.97	8/25/02 23:05
45[2]	42.00	2591.57	2561.92	2573.97	8/26/02 10:15
Final Depths:		2581.17	2551.52	2563.57	

[1]Lower most section of tubing joint #1 has a diameter of 14-inches. Two seals are installed at 17.60 feet and 29.65 feet above the bottom of the 14-inch. The lower seal will seat inside the packer and the upper seal will seat inside the 20-inch tubing.

[2]Final tubing joint lowered 42 feet to seat seals inside the packer and 20-inch tubing.

Table 2.2
MARCO ISLAND TUBING REPLACEMENT
X-RAY ANALYSES RESULTS

X-Ray Number	Date Shot	Double Joint No.	Approved
1	8/18/02	4	yes
2	8/18/02	3	yes
3	8/18/02	1	yes
4	8/18/02	2	yes
5	8/18/02	1	yes
6	8/18/02	5	yes
7	8/19/02	6	yes
8	8/19/02	7	yes
9	8/19/02	8	yes
10	8/19/02	1 to 2	yes
11	8/19/02	9	yes
12	8/19/02	2 to 3	yes
13	8/19/02	3 to 4	yes
14	8/20/02	4 to 5	yes
15	8/20/02	5 to 6	yes
16	8/20/02	11	yes
17	8/20/02	10	yes
18	8/20/02	6 to 7	yes
19	8/20/02	7 to 8	yes
20	8/20/02	13	yes
21	8/20/02	12	yes
22	8/20/02	8 to 9	yes
23	8/21/02	9 to 10	yes
24	8/21/02	10 to 11	yes
25	8/21/02	11 to 12	yes
26	8/21/02	14	yes
27	8/21/02	15	yes
28	8/21/02	12 to 13	yes
28	8/21/02	13 to 14	yes
30	8/21/02	16	yes
31	8/21/02	17	yes
32	8/21/02	14 to 15	yes
33	8/21/02	15 to 16	yes
34	8/22/02	16 to 17	yes
35	8/22/02	18	yes
36	8/22/02	19	yes
37	8/22/02	17 to 18	yes
38	8/22/02	20	yes
39	8/22/02	18 to 19	yes
40	8/22/02	21	yes
41	8/22/02	19 to 20	yes
42	8/22/02	23	yes

Table 2.2
MARCO ISLAND TUBING REPLACEMENT
X-RAY ANALYSES RESULTS

X-Ray Number	Date Shot	Double Joint No.	Approved
43	8/22/02	22	yes
44	8/22/02	20 to 21	yes
45	8/22/02	24	yes
46	8/22/02	21 to 22	yes
47	8/22/02	22 to 23	yes
48	8/22/02	23 to 24	yes
49	8/23/02	25	yes
50	8/23/02	26	yes
51	8/23/02	24 to 25	yes
52	8/23/02	25 to 26	yes
53	8/23/02	27	yes
54	8/23/02	28	yes
55	8/23/02	26 to 27	yes
56	8/23/02	30	yes
57	8/23/02	29	yes
58	8/23/02	27 to 28	yes
59	8/23/02	28 to 29	yes
60	8/23/02	32	yes
61	8/23/02	31	yes
62	8/23/02	29 to 30	yes
63	8/23/02	30 to 31	yes
64	8/24/02	31 to 32	yes
65	8/24/02	33	yes
66	8/24/02	32 to 33	yes
67	8/24/02	34	yes
68	8/24/02	33 to 34	yes
69	8/24/02	36	yes
70	8/24/02	35	yes
71	8/24/02	34 to 35	yes
72	8/24/02	35 to 36	yes
73	8/24/02	37	yes
74	8/24/02	38	yes
75	8/24/02	36 to 37	yes
76	8/25/02	37 to 38	yes
77	8/25/02	40	yes
78	8/25/02	39	yes
79	8/25/02	38 to 39	yes
80	8/25/02	39 to 40	yes
81	8/25/02	42	yes
82	8/25/02	41	yes
83	8/25/02	40 to 41	yes
84	8/25/02	43	yes

Table 2.2
MARCO ISLAND TUBING REPLACEMENT
X-RAY ANALYSES RESULTS

X-Ray Number	Date Shot	Double Joint No.	Approved
85	8/25/02	45	yes
86	8/25/02	41 to 42	yes
87	8/25/02	42 to 43	yes[1]
88	8/25/02	43 to 44	yes
89	8/25/02	44 to 45	yes
[1]Initial x-ray quality poor. Weld re x-ray inspected to verify acceptance.			

Table 2.3
MARCO ISLAND TUBING REPLACEMENT
X-RAY DATA, TUBING JOINT CORRELATION

X-Ray Number	Date Shot	Double Joint Number	Top Tubing (Factory Designation)		Bottom Tubing (Factory Designation)	
			Piece Number	Job Number	Piece Number	Job Number
1	8/18/02	4	1	5549	1	5547
2	8/18/02	3	25	5589	24	5589
3	8/18/02	1	2	5549	14 x 16 Reducer	
4	8/18/02	2	1	5541	1	5546
5	8/18/02	1	14 x 16 Reducer		1	5550
6	8/18/02	5	19	5625	3	5744
7	8/19/02	6	2	5626	7	5744
8	8/19/02	7	8	5744	10	5625
9	8/19/02	8	11	5744	9	5625
10	8/19/02	1 to 2	1	5546	2	5549
11	8/19/02	9	9	5744	1	5744
12	8/19/02	2 to 3	24	5589	1	5541
13	8/19/02	3 to 4	1	5547	25	5589
14	8/20/02	4 to 5	3	5744	1	5549
15	8/20/02	5 to 6	7	5744	19	5625
16	8/20/02	11	4	5744	5	5744
17	8/20/02	10	12	5744	2	5744
18	8/20/02	6 to 7	10	5625	2	5626
19	8/20/02	7 to 8	9	5625	8	5744
20	8/20/02	13	20	5625	16	5589
21	8/20/02	12	21	5625	6	5744
22	8/20/02	8 to 9	1	5744	11	5744
23	8/21/02	9 to 10	2	5744	9	5744
24	8/21/02	10 to 11	5	5744	12	5744
25	8/21/02	11 to 12	6	5744	4	5744
26	8/21/02	14	6	5625	22	5589

Table 2.3
MARCO ISLAND TUBING REPLACEMENT
X-RAY DATA, TUBING JOINT CORRELATION

X-Ray Number	Date Shot	Double Joint Number	Top Tubing (Factory Designation)		Bottom Tubing (Factory Designation)	
			Piece Number	Job Number	Piece Number	Job Number
27	8/21/02	15	21	5589	15	5625
28	8/21/02	12 to 13	16	5589	21	5625
28	8/21/02	13 to 14	22	5589	20	5625
30	8/21/02	16	8	5625	10	5744
31	8/21/02	17	13	5625	23	5625
32	8/21/02	14 to 15	15	5625	6	5625
33	8/21/02	15 to 16	10	5744	21	5589
34	8/22/02	16 to 17	23	5625	8	5625
35	8/22/02	18	1	5625	2	5625
36	8/22/02	19	3	5625	18	5625
37	8/22/02	17 to 18	2	5625	13	5625
38	8/22/02	20	1	5626	16	5625
39	8/22/02	18 to 19	18	5625	1	5625
40	8/22/02	21	17	5625	14	5625
41	8/22/02	19 to 20	16	5625	3	5625
42	8/22/02	23	2	5548	1	5544
43	8/22/02	22	2	5542	3	5543
44	8/22/02	20 to 21	14	5625	1	5626
45	8/22/02	24	1	5542	1	5545
46	8/22/02	21 to 22	3	5543	17	5625
47	8/22/02	22 to 23	1	5544	2	5542
48	8/22/02	23 to 24	1	5545	2	5548
49	8/23/02	25	12	5625	6	5543
50	8/23/02	26	1	5540	1	5539
51	8/23/02	24 to 25	6	5543	1	5542
52	8/23/02	25 to 26	1	5539	12	5625

Table 2.3
MARCO ISLAND TUBING REPLACEMENT
X-RAY DATA, TUBING JOINT CORRELATION

X-Ray Number	Date Shot	Double Joint Number	Top Tubing (Factory Designation)		Bottom Tubing (Factory Designation)	
			Piece Number	Job Number	Piece Number	Job Number
53	8/23/02	27	23	5589	22	5625
54	8/23/02	28	7	5625	5	5625
55	8/23/02	26 to 27	22	5625	1	5540
56	8/23/02	30	2	5545	3	5541
57	8/23/02	29	5	5543	2	5544
58	8/23/02	27 to 28	5	5625	23	5589
59	8/23/02	28 to 29	2	5544	7	5625
60	8/23/02	32	1	5543	4	5543
61	8/23/02	31	1	5589	3	5544
62	8/23/02	29 to 30	3	5541	5	5543
63	8/23/02	30 to 31	3	5544	2	5545
64	8/24/02	31 to 32	4	5543	1	5589
65	8/24/02	33	4	5590	17	5589
66	8/24/02	32 to 33	17	5589	1	5543
67	8/24/02	34	2	5543	20	5589
68	8/24/02	33 to 34	20	5589	4	5590
69	8/24/02	36	2	5589	2	5590
70	8/24/02	35	5	5590	8	5589
71	8/24/02	34 to 35	8	5589	2	5543
72	8/24/02	35 to 36	2	5590	5	5590
73	8/24/02	37	6	5589	7	5590
74	8/24/02	38	11	5625	1	5548
75	8/24/02	36 to 37	7	5590	2	5589
76	8/25/02	37 to 38	1	5548	6	5589
77	8/25/02	40	6	5590	19	5589
78	8/25/02	39	3	5589	10	5589

Table 2.3
MARCO ISLAND TUBING REPLACEMENT
X-RAY DATA, TUBING JOINT CORRELATION

X-Ray Number	Date Shot	Double Joint Number	Top Tubing (Factory Designation)		Bottom Tubing (Factory Designation)	
			Piece Number	Job Number	Piece Number	Job Number
79	8/25/02	38 to 39	10	5589	11	5625
80	8/25/02	39 to 40	19	5589	3	5589
81	8/25/02	42	1	5590	18	5589
82	8/25/02	41	7	5589	4	5589
83	8/25/02	40 to 41	4	5589	6	5590
84	8/25/02	43	11	5589	5	5589
85	8/25/02	45	14	5589	12	5589
86	8/25/02	41 to 42	18	5589	7	5589
87	8/25/02	42 to 43	5	5589	1	5590
88	8/25/02	43 to 44	4	5625	11	5589
89	8/25/02	44 to 45	12	5589	4	5625

APPENDIX 1.1

WEEKLY PROGRESS REPORTS

Water Resource Solutions

428 Pine Island Road SW • Cape Coral, Florida 33991 239 574-1919 Fax: 239 574-8106

August 16, 2002

Mr. Jack Myers, P.G.
Florida Department of Environmental Protection
Underground Injection Program
2295 Victoria Avenue, Suite 364
Ft. Myers, Florida 33901

Re: Florida Water Services
Marco Island Injection Well IW-1
Permit #: 143383-002-UO
Injection Tubing Replacement

Dear Mr. Myers:

Attached is the first progress report for the injection tubing replacement in Florida Water Services' Marco Island Injection well IW-1.

The drilling rig was mobilized to the site. The tubing was killed and the wellhead was removed. Following the removal of the wellhead, geophysical logging was performed to determine the location of the packer and the base of the casing. The packer was located between 2562 and 2571 feet bpl. The base of the casing was located at 2642 feet bpl.

A casing cutter was tripped into the hole to 2550 feet bpl. The 20-inch tubing was cut and the annulus was killed. Following the removal of the cutter, the tubing retrieval was begun.

The weekly activity report form and the contractor drilling/activity reports are attached for your review. If you have any questions, please call me at your earliest convenience.

Sincerely,

Mark S. Pearce

Mark S. Pearce, Ph.D.
Senior Scientist

c. Mr. Joe Haberfeld
Ms. Nancy Marsh
Mr. Steve Anderson
Mr. Ron Reese
Mr. Don Stearns

WATER RESOURCE SOLUTIONS, INC.

WEEKLY REPORT
TUBING REPLACEMENT
INJECTION WELL IW-1

Florida Water Services - Marco Island **Project No. 01-04317.HO**

FDEP Permit No. 143383-004-UO **Contractor: Diversified Drilling Corporation**

Prepared by: G. Susdorf/ T. Tubbert **Date: 8/15/02** **Week # 1**

Date	Description of Activities
Friday 8/9/02	Continue mobilization and rig setup.
Saturday 8/10/02	No site activity
Sunday 8/11/02	No site activity.
Monday 8/12/02	Injection to the well was shut in. The piping to the wellhead up to the 24-inch gate valve was removed.
Tuesday 8/13/02	Measured the water levels, purged, and collected samples from the four pad monitor wells. For the purpose of this project, the wells were designated as follows: The northeastern well is PMW-1, the northwestern well is PMW-2, the southwestern well is PMW-3, and the southeastern well is PMW-4. <u>PMW-1</u> Water Level: 3.82 ft. btoc Conductivity.: 535 µS Chloride: 50 mg/l <u>PMW-2</u> Water Level: 2.50 ft. btoc Conductivity.: 660 µS Chloride: 44 mg/l <u>PMW-3</u> Water Level: 2.24 ft. btoc Conductivity.: 526 µS Chloride: 36 mg/l <u>PMW-4</u> Water Level: 3.96 ft. btoc Conductivity.: 745 µS Chloride: 75 mg/l The tubing in the well was killed with 110 bbls of salt brine. The wellhead was removed and the rig was moved over the well. A casing

WATER RESOURCE SOLUTIONS, INC.

WEEKLY REPORT
TUBING REPLACEMENT
INJECTION WELL IW-1

Florida Water Services - Marco Island **Project No. 01-04317.HO**

FDEP Permit No. 143383-004-UO **Contractor: Diversified Drilling Corporation**

Prepared by: G. Susdorf/ T. Tubbert **Date: 8/15/02** **Week # 1**

Date	Description of Activities
Tuesday 8/13/02 (cont.)	collar locator log and a caliper log were run to determine the top and bottom of the packer as well as the base if the casing. Both logs showed that the top of the packer was at 2562 feet bpl, the bottom of the packer was at 2571 feet bpl, and the base of the casing was at 2642 feet bpl. The cutting tool was prepared to run into the 20-inch tubing. The drillers began running the cutting tool in the well on the drill string.
Wednesday 8/14/02	The drillers completed running in the cutting tool to 2550 feet bpl. The casing was cut and the cutter and drill string were tripped out of the hole. The drill string and the annulus were both killed with salt brine before tripping out of the well.
Thursday 8/15/02	The removal of the 20-inch tubing was begun. The tubing is being removed in ± 40 feet lengths. Approximately 830 feet of tubing was removed to-date.

Water Resource Solutions
428 Pine Island Road SW • Cape Coral, Florida 33991 239 574-1919 Fax: 239 574-8106

August 23, 2002

Mr. Jack Myers, P.G.
Florida Department of Environmental Protection
Underground Injection Program
2295 Victoria Avenue, Suite 364
Ft. Myers, Florida 33901

Re: Florida Water Services
Marco Island Injection Well IW-1
Permit #: 143383-002-UO
Injection Tubing Replacement

Dear Mr. Myers:

Attached is the second progress report for the injection tubing replacement in Florida Water Services' Marco Island Injection well IW-1.

The removal of the 20-inch tubing was completed. A caliper log was run to verify the top of the remaining 20-inch tubing above the packer. Installation of the 16-inch tubing was begun. Two individual sections of tubing are being welded on the site into double joints before being installed in the well. The welded connections on the 16-inch tubing are being x-ray inspected prior to the installation of the tubing.

The daily summaries listed on the weekly activity reports begin at 07:00 of the listed date and end at 07:00 the following morning.

The weekly activity report form, the tubing tally form, the x-ray summary form, and the contractor drilling/activity reports from this week and last week are attached for your review. If you have any questions, please call me at your earliest convenience.

Sincerely,

Mark S. Pearce

Mark S. Pearce, Ph.D.
Senior Scientist

c. Mr. Joe Haberfeld
Ms. Nancy Marsh
Mr. Steve Anderson
Mr. Ron Reese
Mr. Don Stearns

WATER RESOURCE SOLUTIONS, INC.

WEEKLY REPORT
TUBING REPLACEMENT
INJECTION WELL IW-1

Florida Water Services - Marco Island **Project No. 01-04317.HO**

FDEP Permit No. 143383-004-UO **Contractor: Diversified Drilling Corporation**

Prepared by: G. Susdorf **Date:** 8/23/02 **Week # 2**

Date	Description of Activities
Friday 8/16/02	The 20-inch tubing removal was completed. The tallied length of tubing removed was 2548.65 feet.
Saturday 8/17/02	A caliper log was run on the well to determine the depth of the top of the 20-inch tubing remaining above the packer. The log showed the top of the tubing was at 2548 feet bpl. The welders began welding single joints of the 16-inch tubing into doubles.
Sunday 8/18/02	Welding tubing continued. PSI arrived on site to begin the x-ray inspection of the welds.
Monday 8/19/02	PSI will utilize API-1104 as the acceptance standard for the welds x-ray inspected. Installation of the 16-inch tubing was begun. The first joint of tubing installed has a section of 14-inch tubing welded on the bottom with two seals placed around the pipe. The seals will seat inside the packer and the 20-inch tubing to isolate the annulus. Approximately 299 feet of tubing was installed in the well.
Tuesday 8/20/02	Installation of the 16-inch tubing continues. A total of 658 feet has been installed to-date.
Wednesday 8/21/02	Installation of the 16-inch tubing continues. A total of 995 feet has been installed to-date. Measured the water levels, purged, and collected samples from the four pad monitor wells. <u>PMW-1</u> Water Level: 3.77 ft. btoc Conductivity.: 1403 µS Chloride: 297 mg/l <u>PMW-2</u> Water Level: 1.24 ft. btoc Conductivity.: 772 µS Chloride: 70 mg/l

WATER RESOURCE SOLUTIONS, INC.

WEEKLY REPORT
TUBING REPLACEMENT
INJECTION WELL IW-1

Florida Water Services - Marco Island **Project No. 01-04317.HO**

FDEP Permit No. 143383-004-UO **Contractor: Diversified Drilling Corporation**

Prepared by: G. Susdorf **Date:** 8/23/02 **Week # 2**

Date	Description of Activities
Wednesday 8/21/02 (cont.)	PMW-3 Water Level: 2.19 ft. btoc Conductivity.: 762 μS Chloride: 86 mg/l PMW-4 Water Level: 3.72 ft. btoc Conductivity.: 806 μS Chloride: 99 mg/l
Thursday 8/22/02	Installation of the 16-inch tubing continues. A total of 1411 feet has been installed to-date.

WATER RESOURCE SOLUTIONS, INC.

TUBING TALLY
INJECTION WELL IW-1

Florida Water Services - Marco Island **Project No. 01-04317.HO**

FDEP Permit No. 143383-004-UO **Contractor: Diversified Drilling Corporation**

Tubing Size: **16-inch diameter[1]** **Casing Type:** **0.312-inch wall 2205 stainless steel**

Prepared by: **G.Susdorf**
Week #2

Tubing Joint No.	Tubing Length (feet)	Total Length (feet)	Total Length to Top Seal (feet)	Total Length to Bottom Seal (feet)	Installation Date/Time
1[1]	60.91	60.91	31.26	43.31	8/19/02 11:36
2	59.91	120.82	91.17	103.22	8/19/02 17:28
3	59.30	180.12	150.47	162.52	8/19/02 23:25
4	59.89	240.01	210.36	222.41	8/20/02 2:46
5	59.53	299.54	269.89	281.94	8/20/02 6:50
6	56.95	356.49	326.84	338.89	8/20/02 9:54
7	57.75	414.24	384.59	396.64	8/20/02 13:53
8	55.22	469.46	439.81	451.86	8/20/02 16:39
9	59.80	529.26	499.61	511.66	8/20/02 23:40
10	59.63	588.89	559.24	571.29	8/21/02 2:33
11	58.68	647.57	617.92	629.97	8/21/02 5:49
12	57.38	704.95	675.30	687.35	8/21/02 10:01
13	59.44	764.39	734.74	746.79	8/21/02 12:54
14	55.52	819.91	790.26	802.31	8/21/02 14:55
15	59.32	879.23	849.58	861.63	8/21/02 18:55
16	56.41	935.64	905.99	918.04	8/21/02 21:57
17	59.40	995.04	965.39	977.44	8/22/02 5:50
18	59.33	1054.37	1024.72	1036.77	8/22/02 9:22
19	59.38	1113.75	1084.10	1096.15	8/22/02 12:09
20	59.39	1173.14	1143.49	1155.54	8/22/02 14:47
21	58.90	1232.04	1202.39	1214.44	8/22/02 17:04
22	58.65	1290.69	1261.04	1273.09	8/22/02 19:52
23	60.32	1351.01	1321.36	1333.41	8/22/02 22:30
24	60.30	1411.31	1381.66	1393.71	8/23/02 0:55

WATER RESOURCE SOLUTIONS, INC.

TUBING TALLY
INJECTION WELL IW-1

Florida Water Services - Marco Island

Project No. 01-04317.HO

FDEP Permit No. 143383-004-UO

Contractor: Diversified Drilling Corporation

Tubing Size: 16-inch diameter[1] Casing Type: 0.312-inch wall 2205 stainless steel

Prepared by: G.Susdorf
Week #2

[1]Lower most section of tubing joint #1 has a diameter of 14-inches. Two seals are installed at 17.60 feet and 29.65 feet above the bottom the 14-inch. The lower seal will seat inside the packer and the upper seal will seat inside the 20-inch tubing.

WATER RESOURCE SOLUTIONS, INC.

WELD X-RAY SUMMARY
TUBING REPLACEMENT
INJECTION WELL IW-1

Florida Water Services - Marco Island **Project No. 01-04317.HO**

FDEP Permit No. 143383-004-UO **Contractor: Diversified Drilling Corporation**

Prepared by: G. Susdorf **Date: 8/23/02** **Week # 2**

X-Ray Number	Date Shot	Double Joint No.	Approved
1	8/18/02	4	yes
2	8/18/02	3	yes
3	8/18/02	1	yes
4	8/18/02	2	yes
5	8/18/02	1	yes
6	8/18/02	5	yes
7	8/19/02	6	yes
8	8/19/02	7	yes
9	8/19/02	8	yes
10	8/19/02	1 to 2	yes
11	8/19/02	9	yes
12	8/19/02	2 to 3	yes
13	8/19/02	3 to 4	yes
14	8/20/02	4 to 5	yes
15	8/20/02	5 to 6	yes
16	8/20/02	11	yes
17	8/20/02	10	yes
18	8/20/02	6 to 7	yes
19	8/20/02	7 to 8	yes
20	8/20/02	13	yes
21	8/20/02	12	yes
22	8/20/02	8 to 9	yes
23	8/21/02	9 to 10	yes
24	8/21/02	10 to 11	yes
25	8/21/02	11 to 12	yes
26	8/21/02	14	yes
27	8/21/02	15	yes
28	8/21/02	12 to 13	yes
28	8/21/02	13 to 14	yes
30	8/21/02	16	yes
31	8/21/02	17	yes
32	8/21/02	14 to 15	yes

WATER RESOURCE SOLUTIONS, INC.

WELD X-RAY SUMMARY
TUBING REPLACEMENT
INJECTION WELL IW-1

Florida Water Services - Marco Island **Project No. 01-04317.HO**

FDEP Permit No. 143383-004-UO **Contractor: Diversified Drilling Corporation**

Prepared by: G. Susdorf **Date:** 8/23/02 **Week # 2**

X-Ray Number	Date Shot	Double Joint No.	Approved
33	8/21/02	15 to 16	yes
34	8/22/02	16 to 17	yes
35	8/22/02	18	yes
36	8/22/02	19	yes
37	8/22/02	17 to 18	yes
38	8/22/02	20	yes
39	8/22/02	18 to 19	yes
40	8/22/02	21	yes
41	8/22/02	19 to 20	yes
42	8/22/02	23	yes
43	8/22/02	22	yes
44	8/22/02	20 to 21	yes
45	8/22/02	24	yes
46	8/22/02	21 to 22	yes
47	8/22/02	22 to 23	yes
48	8/22/02	23 to 24	yes

DIVERSIFIED DRILLING CORPORATION
DAILY DRILLING REPORT

DATE: 7-21-02
WELL NAME/DIA:

PROJECT: Marco Island
JOB NUMBER: 6031

WELL DEPTH – START OF SHIFT:
END OF SHIFT:

WATER LEVEL – START OF SHIFT:
END OF SHIFT:

FORMATION	FROM	TO
0600-1700 Water dn 81 Back side Inside pipe 91.90		
1700-1730 W.O.W		
1730-1800 Weld pipe dn TO 879.23		

ACCIDENT ON SITE? YES___ NO ✓
DESCRIBE:

WEATHER CONDITIONS:

DRILLING MUD
USED: WGT.: VISCOSITY:
SPECIAL CONDITIONS/COMMENTS:

DRILLER: Tony Rodriguez Jr.

OWNER/ENG REP:

HELPERS: Mario
Edwin

DIVERSIFIED DRILLING CORPORATION
DAILY DRILLING REPORT

DATE: 8-20-02
WELL NAME/DIA:

PROJECT: Marco Island
JOB NUMBER: 6031

WELL DEPTH – START OF SHIFT: ______
END OF SHIFT: ______

WATER LEVEL – START OF SHIFT: ______
END OF SHIFT: ______

FORMATION	FROM	TO
0600-1800 Run 16" csg dn TO 529.26		
Water dn TO 81'		

CCIDENT ON SITE? YES ____ NO ✓
ESCRIBE:

WEATHER CONDITIONS:

DRILLING MUD
USED: WGT.: VISCOSITY:

SPECIAL CONDITIONS/COMMENTS:

RILLER: Tony Rondash Jr

HELPERS: Marco
Edwin

WNER/ENG REP:

DIVERSIFIED DRILLING CORPORATION
DAILY DRILLING REPORT

DATE: 8-19-02	PROJECT: Marco Island
WELL NAME/DIA:	JOB NUMBER: 6031

WELL DEPTH – START OF SHIFT:______
END OF SHIFT:______

WATER LEVEL – START OF SHIFT:______
END OF SHIFT:______

FORMATION FROM TO

0700-1100 Hole welder water d.a. 70' mix & pump
2 bag salt 2865 dn.
1100-1800 Run Csg

ACCIDENT ON SITE? YES____ NO ✓
DESCRIBE:

WEATHER CONDITIONS:

DRILLING MUD
USED: WGT.: VISCOSITY:
SPECIAL CONDITIONS/COMMENTS:

DRILLER: Larry Randolph Jr.

HELPERS: Mario
Edwin

OWNER/ENG REP:

DIVERSIFIED DRILLING CORPORATION

DAILY DRILLING REPORT

DATE: 8-19-02
WELL NAME/DIA:

PROJECT: Marco Island
JOB NUMBER: 6031

WELL DEPTH – START OF SHIFT: ______
END OF SHIFT: ______

WATER LEVEL – START OF SHIFT: ______
END OF SHIFT: ______

FORMATION	FROM	TO
0700-1930 Water 70' dn Help welder & X Ray Crew Make Rig Floor Ready to Run Csg		

CCIDENT ON SITE? YES____ NO ✓
ESCRIBE:

WEATHER CONDITIONS:

DRILLING MUD
USED: WGT.: VISCOSITY:
SPECIAL CONDITIONS/COMMENTS:

RILLER: Larry Rardolph Jr.

WNER/ENG REP:

HELPERS: marco
Edwin

DIVERSIFIED DRILLING CORPORATION
DAILY DRILLING REPORT

DATE: 8-17-02	PROJECT: Marco Island
WELL NAME/DIA:	JOB NUMBER: 6031

WELL DEPTH – START OF SHIFT:______ END OF SHIFT:______

WATER LEVEL – START OF SHIFT:______ END OF SHIFT:______

FORMATION FROM TO

0600-0730 Water 70' dn Shut In well move Crane
0730-1100 Back Rig over Hole & R/U Same
1100-1200 R/U wall around Rig water 70'
1200-1330 R/U logger & Run Call. log
1330-1530 finish wall around Rig & Help welder
1530-1830 W.O.W
1830-1900 weld pipe Together Help welder

ACCIDENT ON SITE? YES____ NO ✓

DESCRIBE:

WEATHER CONDITIONS:

DRILLING MUD
USED: WGT.: VISCOSITY:

SPECIAL CONDITIONS/COMMENTS:

DRILLER: Larry Randolph Jr.

HELPERS: Marco, Edwin

OWNER/ENG REP:

DIVERSIFIED DRILLING CORPORATION

DAILY DRILLING REPORT

DATE: 8-15-02

WELL NAME/DIA:

PROJECT: Marco Island

JOB NUMBER: 6071

WELL DEPTH – START OF SHIFT: ______
END OF SHIFT: ______

WATER LEVEL – START OF SHIFT: ______
END OF SHIFT: ______

FORMATION	FROM	TO

0600-0800 L/d Derrick & move Rig f/ Hole
0800-1130 mil & pump Salt Remove Plang f/well
1130-1300 Remove bolt on Plang Set Crane up
1300-1700 pull 20" pipe p/u wt. 250K pull
124' OUT @ 1HR 20min Cut to Cut.
H2O Inside well 70' dn Back Side 128' dn

ACCIDENT ON SITE? YES____ NO ✓
DESCRIBE:

WEATHER CONDITIONS:

DRILLING MUD
USED: WGT.: VISCOSITY:
SPECIAL CONDITIONS/COMMENTS:

DRILLER: Tony Randolph Jr.

OWNER/ENG REP:

HELPERS: Marco
Edwin
Bill

DIVERSIFIED DRILLING CORPORATION

DAILY DRILLING REPORT

DATE: 8-10-02

WELL NAME/DIA:

PROJECT: Marco Island

JOB NUMBER: 6031

WELL DEPTH – START OF SHIFT:

END OF SHIFT:

WATER LEVEL – START OF SHIFT:

END OF SHIFT:

FORMATION	FROM	TO
0600-0900 P/U Drlg Pipe & Cutter Asmy.		
0900-1130 P/U Kelly put wall around Rig Unload CSg Pipe		
1130-1500 Cut 80' CSg		
1500-1630 W.O.W		
1630-1700 mix & pump salt dn Drlg pipe kill same		
1700-1800 mix & pump salt dn Back side kill same		

CCIDENT ON SITE? YES____ NO ✓

ESCRIBE:

WEATHER CONDITIONS:

DRILLING MUD

USED: WGT.: VISCOSITY:

SPECIAL CONDITIONS/COMMENTS:

RILLER: Tony Randolph Jr.

HELPERS: Marco
Edwin
Dill

WNER/ENG REP:

DIVERSIFIED DRILLING CORPORATION
DAILY DRILLING REPORT

DATE: 8-13-02
WELL NAME/DIA:

PROJECT: marco Island
JOB NUMBER: 6031

WELL DEPTH – START OF SHIFT: ______
END OF SHIFT: ______

WATER LEVEL – START OF SHIFT: ______
END OF SHIFT: ______

FORMATION	FROM	TO

0700-1030 R/u & mix Salt pill
1030-1100 pump 22 bbl. montion well dn TO ground level
1100-1230 mix & pump 22 bbl. pill 10 ppg put Crane Together Spot Rig well H2O dn TO 45'
1230-1300 montion well dn 49'
1300-1500 Remove valve f/ well Spot Rig over Hole
1500-1530 Raise Derrick
1530-1700 R/u & Run Coller location log
1700-1800 R/u & Run Calb log

ACCIDENT ON SITE? YES____ NO ✓
DESCRIBE: ______

WEATHER CONDITIONS:

DRILLING MUD
USED: WGT.: VISCOSITY:
SPECIAL CONDITIONS/COMMENTS:

DRILLER: Larry Randolph Jr.

HELPERS: marvio
Edwin
Bill

OWNER/ENG REP:

DIVERSIFIED DRILLING CORPORATION
DAILY DRILLING REPORT

ATE: 8-12-02
WELL NAME/DIA:

PROJECT: Malco Island
JOB NUMBER: 6031

WELL DEPTH — START OF SHIFT:______
END OF SHIFT:______

WATER LEVEL — START OF SHIFT:______
END OF SHIFT:______

FORMATION — FROM — TO

0700-1000 unload pipe @ marco Island 6031
1000-1900 put up wall around Rig Disasm Valve line on well

CCIDENT ON SITE? YES____ NO ✓
ESCRIBE:

WEATHER CONDITIONS:

DRILLING MUD
USED: WGT.: VISCOSITY:

SPECIAL CONDITIONS/COMMENTS:

RILLER: Jay Randolph Jr

HELPERS: marco
Edwin
Keith

WNER/ENG REP:

Water Resource Solutions

428 Pine Island Road SW • Cape Coral, Florida 33991 239 574-1919 Fax: 239 574-8106

August 30, 2002

Mr. Jack Myers, P.G.
Florida Department of Environmental Protection
Underground Injection Program
2295 Victoria Avenue, Suite 364
Ft. Myers, Florida 33901

Re: Florida Water Services
Marco Island Injection Well IW-1
Permit #: 143383-002-UO
Injection Tubing Replacement

Dear Mr. Myers:

Attached is the third progress report for the injection tubing replacement in Florida Water Services' Marco Island Injection well IW-1.

The installation of the 16-inch tubing was completed. A video log was run to verify the depths of the bottom of the replacement tubing, the top of the remaining 20-inch tubing, and the packer prior to the final installation.

Cementing of the annulus has begun. Seven stages of cement have been placed to-date.

The weekly activity report form, the tubing tally form, the x-ray summary form, the cementing tubing tally form, and the contractor drilling/activity reports are attached for your review. If you have any questions, please call me at your earliest convenience.

Sincerely,

Mark S. Pearce

Mark S. Pearce, Ph.D.
Senior Scientist

c. Mr. Joe Haberfeld
Ms. Nancy Marsh
Mr. Steve Anderson
Mr. Ron Reese
Mr. Don Stearns

WATER RESOURCE SOLUTIONS, INC.

WEEKLY REPORT
TUBING REPLACEMENT
INJECTION WELL IW-1

Florida Water Services - Marco Island **Project No. 01-04317.HO**

FDEP Permit No. 143383-004-UO **Contractor: Diversified Drilling Corporation**

Prepared by: G. Susdorf **Date: 8/30/02** **Week # 3**

Date	Description of Activities
Friday 8/23/02	Installation of the 16-inch tubing continues. A total of 1880 feet has been installed to-date.
Saturday 8/24/02	Installation of the 16-inch tubing continues. A total of 2232 feet has been installed to-date.
Sunday 8/25/02	Installation of the 16-inch tubing continues. A total of 2550 feet has been installed to-date. The base of the new injection tubing is just above the top of the 20-inch tubing.
Monday 8/26/02	A video survey was conducted at the base of the new injection tubing, into the top of the 20-inch tubing, and into the packer. The video was run to determine the depths and relative spacing of the new tubing, the 20-inch tubing, and the packer to be able to calculate the final setting depth. From the video it was determined to lower the string an additional 42 feet to properly seat the seals. The final setting depths are: the base of the tubing is at 2581.17 feet bpl, the lower seal inside the packer is at 2563.57 feet bpl, and the upper seal inside the 20-inch tubing is at 2552.52 feet bpl. After setting the 16-inch injection tubing, the cementing tubing was installed in the annulus. A tag was made at 2548.37 feet bpl. A small first stage of cement was placed as a seal. The stage consisted of 12 sacks of 6% gel cement.
Tuesday 8/27/02	A tag of the first stage was attempted. No fill was measured. A second stage of 12 sacks of 6% gel cement with an additional sealing agent added was pumped. Ten hours after pumping the second stage, a tag was made at 2545.44 feet bpl. The second stage fill is 2.93 feet.

WATER RESOURCE SOLUTIONS, INC.

WEEKLY REPORT
TUBING REPLACEMENT
INJECTION WELL IW-1

Florida Water Services - Marco Island **Project No. 01-04317.HO**

FDEP Permit No. 143383-004-UO **Contractor: Diversified Drilling Corporation**

Prepared by: G. Susdorf **Date:** 8/30/02 **Week # 3**

Date	Description of Activities
Tuesday 8/27/02 (cont.)	Following the tag of the second stage, a small third stage of cement was pumped. The third stage consisted of 25 sacks of neat portland cement grout.
Wednesday 8/28/02	The third stage of cement was tagged at 2527.57 feet bpl (18.87 feet of fill this stage). A fourth stage of neat cement was pumped. The fourth stage consisted of 238 sacks of neat portland cement grout. The cement weight ranged between 15.1 to 15.3 lbs./gal. Measured the water levels, purged, and collected samples from the four pad monitor wells. PMW-1 Water Level: 3.78 ft. btoc Conductivity.: * µS Chloride: 554 mg/l PMW-2 Water Level: 1.84 ft. btoc Conductivity.: * µS Chloride: 118 mg/l PMW-3 Water Level: 3.20 ft. btoc Conductivity.: * µS Chloride: 82 mg/l *Not recorded PMW-4 Water Level: 3.66 ft. btoc Conductivity.: * µS Chloride: 157 mg/l Twelve hours after the fourth stage was pumped, the top was tagged at 2334.37 feet bpl (193.20 feet of fill this stage). A temperature log was also conducted. The fifth stage of cement was pumped. The fifth stage consisted of 270 sacks of 12% gel portland cement grout. The cement weight ranged between 12.2 to 13.1 lbs./gal.

WATER RESOURCE SOLUTIONS, INC.

WEEKLY REPORT
TUBING REPLACEMENT
INJECTION WELL IW-1

Florida Water Services - Marco Island **Project No. 01-04317.HO**

FDEP Permit No. 143383-004-UO **Contractor: Diversified Drilling Corporation**

Prepared by: G. Susdorf **Date: 8/30/02** **Week # 3**

Date	Description of Activities
Thursday 8/29/02	Eight hours after the fifth stage of cement was pumped, a temperature log was conducted. The fifth stage was then tagged at 1939.67 feet bpl (394.70 feet of fill this stage). A sixth stage of 12% cement was pumped. The sixth stage consisted of 258 sacks of 12% gel portland cement grout. The cement weight ranged between 12.2 to 13.1 lbs./gal. Eight hours after the sixth stage of cement was pumped, a temperature log was conducted. The sixth stage was then tagged at 1513.27 feet bpl (426.40 feet of fill this stage). The seventh stage of cement was pumped. The seventh stage consisted of 270 sacks of 12% gel portland cement grout. The cement weight ranged between 12.6 to 13.3 lbs./gal.

WATER RESOURCE SOLUTIONS, INC.

TUBING TALLY
INJECTION WELL IW-1

Florida Water Services - Marco Island **Project No. 01-04317.HO**

FDEP Permit No. 143383-004-UO **Contractor: Diversified Drilling Corporation**

Tubing Size: 16-inch diameter[1] **Casing Type: 0.312-inch wall 2205 stainless steel**

Prepared by: G. Susdorf **Date: 8/30/02** **Week # 3**

Tubing Joint No.	Tubing Length (feet)	Total Length (feet)	Total Length to Top Seal (feet)	Total Length to Bottom Seal (feet)	Installation Date/Time
1[1]	60.91	60.91	31.26	43.31	8/19/02 11:36
2	59.91	120.82	91.17	103.22	8/19/02 17:28
3	59.30	180.12	150.47	162.52	8/19/02 23:25
4	59.89	240.01	210.36	222.41	8/20/02 2:46
5	59.53	299.54	269.89	281.94	8/20/02 6:50
6	56.95	356.49	326.84	338.89	8/20/02 9:54
7	57.75	414.24	384.59	396.64	8/20/02 13:53
8	55.22	469.46	439.81	451.86	8/20/02 16:39
9	59.80	529.26	499.61	511.66	8/20/02 23:40
10	59.63	588.89	559.24	571.29	8/21/02 2:33
11	58.68	647.57	617.92	629.97	8/21/02 5:49
12	57.38	704.95	675.30	687.35	8/21/02 10:01
13	59.44	764.39	734.74	746.79	8/21/02 12:54
14	55.52	819.91	790.26	802.31	8/21/02 14:55
15	59.32	879.23	849.58	861.63	8/21/02 18:55
16	56.41	935.64	905.99	918.04	8/21/02 21:57
17	59.40	995.04	965.39	977.44	8/22/02 5:50
18	59.33	1054.37	1024.72	1036.77	8/22/02 9:22
19	59.38	1113.75	1084.10	1096.15	8/22/02 12:09
20	59.39	1173.14	1143.49	1155.54	8/22/02 14:47
21	58.90	1232.04	1202.39	1214.44	8/22/02 17:04
22	58.65	1290.69	1261.04	1273.09	8/22/02 19:52
23	60.32	1351.01	1321.36	1333.41	8/22/02 22:30
24	60.30	1411.31	1381.66	1393.71	8/23/02 0:55
25	59.86	1471.17	1441.52	1453.57	8/23/02 9:29
26	58.51	1529.68	1500.03	1512.08	8/23/02 11:57

WATER RESOURCE SOLUTIONS, INC.

TUBING TALLY
INJECTION WELL IW-1

Florida Water Services - Marco Island **Project No. 01-04317.HO**

FDEP Permit No. 143383-004-UO **Contractor: Diversified Drilling Corporation**

Tubing Size: 16-inch diameter[1] **Casing Type: 0.312-inch wall 2205 stainless steel**

Prepared by: G. Susdorf **Date: 8/30/02** **Week # 3**

Tubing Joint No.	Tubing Length (feet)	Total Length (feet)	Total Length to Top Seal (feet)	Total Length to Bottom Seal (feet)	Installation Date/Time
27	59.47	1589.15	1559.50	1571.55	8/23/02 14:35
28	52.26	1641.41	1611.76	1623.81	8/23/02 16:44
29	60.04	1701.45	1671.80	1683.85	8/23/02 18:59
30	59.02	1760.47	1730.82	1742.87	8/23/02 21:25
31	59.73	1820.20	1790.55	1802.60	8/23/02 23:41
32	59.79	1879.99	1850.34	1862.39	8/24/02 6:40
33	59.65	1939.64	1909.99	1922.04	8/24/02 9:41
34	59.62	1999.26	1969.61	1981.66	8/24/02 12:26
35	59.50	2058.76	2029.11	2041.16	8/24/02 15:54
36	59.57	2118.33	2088.68	2100.73	8/24/02 17:59
37	60.11	2178.44	2148.79	2160.84	8/24/02 22:09
38	53.35	2231.79	2202.14	2214.19	8/25/02 3:05
39	59.45	2291.24	2261.59	2273.64	8/25/02 9:25
40	59.63	2350.87	2321.22	2333.27	8/25/02 11:39
41	59.09	2409.96	2380.31	2392.36	8/25/02 15:42
42	59.57	2469.53	2439.88	2451.93	8/25/02 18:30
43	59.50	2529.03	2499.38	2511.43	8/25/02 21:05
44	20.54	2549.57	2519.92	2531.97	8/25/02 23:05
45[2]	42.00	2591.57	2561.92	2573.97	8/26/02 10:15

[1]Lower most section of tubing joint #1 has a diameter of 14-inches. Two seals are installed at 17.60 feet and 29.65 feet above the bottom of the 14-inch. The lower seal will seat inside the packer and the upper seal will seat inside the 20-inch tubing.

[2]Final tubing joint lowered 42 feet to seat seals inside the packer and 20-inch tubing.

WATER RESOURCE SOLUTIONS, INC.

WELD X-RAY SUMMARY
TUBING REPLACEMENT
INJECTION WELL IW-1

Florida Water Services - Marco Island

Project No. 01-04317.HO

FDEP Permit No. 143383-004-UO

Contractor: Diversified Drilling Corporation

Prepared by: G. Susdorf

Date: 8/30/02

Week # 3

X-Ray Number	Date Shot	Double Joint No.	Approved
1	8/18/02	4	yes
2	8/18/02	3	yes
3	8/18/02	1	yes
4	8/18/02	2	yes
5	8/18/02	1	yes
6	8/18/02	5	yes
7	8/19/02	6	yes
8	8/19/02	7	yes
9	8/19/02	8	yes
10	8/19/02	1 to 2	yes
11	8/19/02	9	yes
12	8/19/02	2 to 3	yes
13	8/19/02	3 to 4	yes
14	8/20/02	4 to 5	yes
15	8/20/02	5 to 6	yes
16	8/20/02	11	yes
17	8/20/02	10	yes
18	8/20/02	6 to 7	yes
19	8/20/02	7 to 8	yes
20	8/20/02	13	yes
21	8/20/02	12	yes
22	8/20/02	8 to 9	yes
23	8/21/02	9 to 10	yes
24	8/21/02	10 to 11	yes
25	8/21/02	11 to 12	yes
26	8/21/02	14	yes
27	8/21/02	15	yes
28	8/21/02	12 to 13	yes
28	8/21/02	13 to 14	yes
30	8/21/02	16	yes
31	8/21/02	17	yes
32	8/21/02	14 to 15	yes

WATER RESOURCE SOLUTIONS, INC.

WELD X-RAY SUMMARY
TUBING REPLACEMENT
INJECTION WELL IW-1

Florida Water Services - Marco Island | **Project No. 01-04317.HO**

FDEP Permit No. 143383-004-UO | **Contractor: Diversified Drilling Corporation**

Prepared by: G. Susdorf | **Date:** 8/30/02 | **Week # 3**

X-Ray Number	Date Shot	Double Joint No.	Approved
33	8/21/02	15 to 16	yes
34	8/22/02	16 to 17	yes
35	8/22/02	18	yes
36	8/22/02	19	yes
37	8/22/02	17 to 18	yes
38	8/22/02	20	yes
39	8/22/02	18 to 19	yes
40	8/22/02	21	yes
41	8/22/02	19 to 20	yes
42	8/22/02	23	yes
43	8/22/02	22	yes
44	8/22/02	20 to 21	yes
45	8/22/02	24	yes
46	8/22/02	21 to 22	yes
47	8/22/02	22 to 23	yes
48	8/22/02	23 to 24	yes
49	8/23/02	25	yes
50	8/23/02	26	yes
51	8/23/02	24 to 25	yes
52	8/23/02	25 to 26	yes
53	8/23/02	27	yes
54	8/23/02	28	yes
55	8/23/02	26 to 27	yes
56	8/23/02	30	yes
57	8/23/02	29	yes
58	8/23/02	27 to 28	yes
59	8/23/02	28 to 29	yes
60	8/23/02	32	yes
61	8/23/02	31	yes
62	8/23/02	29 to 30	yes
63	8/23/02	30 to 31	yes
64	8/24/02	31 to 32	yes

WATER RESOURCE SOLUTIONS, INC.

WELD X-RAY SUMMARY
TUBING REPLACEMENT
INJECTION WELL IW-1

Florida Water Services - Marco Island **Project No. 01-04317.HO**

FDEP Permit No. 143383-004-UO **Contractor: Diversified Drilling Corporation**

Prepared by: G. Susdorf **Date:** 8/30/02 **Week # 3**

X-Ray Number	Date Shot	Double Joint No.	Approved
65	8/24/02	33	yes
66	8/24/02	32 to 33	yes
67	8/24/02	34	yes
68	8/24/02	33 to 34	yes
69	8/24/02	36	yes
70	8/24/02	35	yes
71	8/24/02	34 to 35	yes
72	8/24/02	35 to 36	yes
73	8/24/02	37	yes
74	8/24/02	38	yes
75	8/24/02	36 to 37	yes
76	8/25/02	37 to 38	yes
77	8/25/02	40	yes
78	8/25/02	39	yes
79	8/25/02	38 to 39	yes
80	8/25/02	39 to 40	yes
81	8/25/02	42	yes
82	8/25/02	41	yes
83	8/25/02	40 to 41	yes
84	8/25/02	43	yes
85	8/25/02	45	yes
86	8/25/02	41 to 42	yes
87	8/25/02	42 to 43	yes
88	8/25/02	43 to 44	yes[1]
89	8/25/02	44 to 45	yes

[1] Initial x-ray quality poor. Weld re x-ray inspected to verify acceptance.

WATER RESOURCE SOLUTIONS, INC.

CEMENTING TUBING TALLY
INJECTION WELL IW-1

Florida Water Services - Marco Island **Project No. 01-04317.HO**

FDEP Permit No. 143383-004-UO **Contractor: Diversified Drilling Corporation**

Tubing Size: 1.5-inch diameter

Prepared by: G. Susdorf **Date:** 8/30/02 **Week # 3**

Tubing Joint No.	Tubing Length (feet)	Cumulative Length (feet)
1	30.05	30.05
2	31.15	61.20
3	30.48	91.68
4	29.71	121.39
5	30.05	151.44
6	31.05	182.49
7	32.03	214.52
8	31.10	245.62
9	31.05	276.67
10	31.12	307.79
11	31.95	339.74
12	29.15	368.89
13	31.07	399.96
14	31.00	430.96
15	29.35	460.31
16	28.80	489.11
17	31.00	520.11
18	30.90	551.01
19	33.13	584.14
20	27.80	611.94
21	28.75	640.69
22	30.95	671.64
23	30.90	702.54
24	31.00	733.54
24	29.40	762.94
26	31.20	794.14
27	31.00	825.14
28	29.10	854.24

WATER RESOURCE SOLUTIONS, INC.

CEMENTING TUBING TALLY
INJECTION WELL IW-1

Florida Water Services - Marco Island **Project No. 01-04317.HO**

FDEP Permit No. 143383-004-UO **Contractor: Diversified Drilling Corporation**

Tubing Size: 1.5-inch diameter

Prepared by: G. Susdorf **Date:** 8/30/02 **Week # 3**

Tubing Joint No.	Tubing Length (feet)	Cumulative Length (feet)
29	31.05	885.29
30	31.00	916.29
31	29.20	945.49
32	32.90	978.39
33	30.90	1009.29
34	28.45	1037.74
35	31.00	1068.74
36	31.40	1100.14
37	30.95	1131.09
38	30.93	1162.02
39	31.00	1193.02
40	31.00	1224.02
41	31.00	1255.02
42	31.00	1286.02
43	30.95	1316.97
44	29.25	1346.22
45	30.95	1377.17
46	30.95	1408.12
47	27.77	1435.89
48	31.03	1466.92
49	30.80	1497.72
50	28.95	1526.67
51	29.25	1555.92
52	30.95	1586.87
53	31.00	1617.87
54	30.95	1648.82
55	29.45	1678.27
56	31.00	1709.27

WATER RESOURCE SOLUTIONS, INC.

CEMENTING TUBING TALLY
INJECTION WELL IW-1

Florida Water Services - Marco Island

Project No. 01-04317.HO

FDEP Permit No. 143383-004-UO

Contractor: Diversified Drilling Corporation

Tubing Size: 1.5-inch diameter

Prepared by: G. Susdorf

Date: 8/30/02

Week # 3

Tubing Joint No.	Tubing Length (feet)	Cumulative Length (feet)
57	29.35	1738.62
58	28.80	1767.42
59	30.95	1798.37
60	31.95	1830.32
61	29.70	1860.02
62	27.80	1887.82
63	30.90	1918.72
64	30.95	1949.67
65	29.25	1978.92
66	31.15	2010.07
67	29.40	2039.47
68	31.00	2070.47
69	30.95	2101.42
70	31.15	2132.57
71	27.80	2160.37
72	29.30	2189.67
73	27.35	2217.02
74	31.75	2248.77
75	29.25	2278.02
76	30.90	2308.92
77	30.95	2339.87
78	30.85	2370.72
79	29.30	2400.02
80	31.00	2431.02
81	31.00	2462.02
82	30.10	2492.12
83	30.95	2523.07
84	29.35	2552.42

WATER RESOURCE SOLUTIONS, INC.

CEMENTING TUBING TALLY
INJECTION WELL IW-1

Florida Water Services - Marco Island **Project No. 01-04317.HO**

FDEP Permit No. 143383-004-UO **Contractor: Diversified Drilling Corporation**

Tubing Size: 1.5-inch diameter

Prepared by: G. Susdorf **Date:** 8/30/02 **Week # 3**

Tubing Joint No.	Tubing Length (feet)	Cumulative Length (feet)
85	31.00	2583.42

DIVERSIFIED DRILLING CORPORATION

DAILY DRILLING REPORT

DATE: 8-22-02	PROJECT: Marco Island
WELL NAME/DIA:	JOB NUMBER: 6031

WELL DEPTH – START OF SHIFT:______ END OF SHIFT:______

WATER LEVEL – START OF SHIFT:______ END OF SHIFT:______

FORMATION	FROM	TO

0600-1900 Run 16" steel csg water 81 back side 94 inside pipe dn to 1232

ACCIDENT ON SITE? YES____ NO ✓

DESCRIBE:

WEATHER CONDITIONS:

DRILLING MUD

USED: WGT.: VISCOSITY:

SPECIAL CONDITIONS/COMMENTS:

DRILLER: Jerry Randolph for

OWNER/ENG REP:

HELPERS: Marco, Edwin

DIVERSIFIED DRILLING CORPORATION

DAILY DRILLING REPORT

DATE: 8-23-02	PROJECT: marco Island
WELL NAME/DIA:	JOB NUMBER: 6031

WELL DEPTH – START OF SHIFT:______ END OF SHIFT:______

WATER LEVEL – START OF SHIFT:______ END OF SHIFT:______

FORMATION	FROM	TO
above 180' water 81.50 out side 95 Inside Run		
16" Steel Csg		

ACCIDENT ON SITE? YES____ NO ✓

DESCRIBE:

WEATHER CONDITIONS:

DRILLING MUD

USED: WGT.: VISCOSITY:

SPECIAL CONDITIONS/COMMENTS:

DRILLER: Larry Randolph Jr.

OWNER/ENG REP:

HELPERS: Marvo Edwin

DIVERSIFIED DRILLING CORPORATION
DAILY DRILLING REPORT

DATE: 8-24-02	PROJECT: Marco Island
WELL NAME/DIA:	JOB NUMBER: 6031

WELL DEPTH – START OF SHIFT:______ END OF SHIFT:______

WATER LEVEL – START OF SHIFT:______ END OF SHIFT:______

FORMATION	FROM	TO
0600–1800 Water Back Side 83' Inside 85.40		
Run 16" Steel Csg TO 1838.64		

ACCIDENT ON SITE? YES____ NO ✓

DESCRIBE:

WEATHER CONDITIONS:

DRILLING MUD USED: WGT.: VISCOSITY:

SPECIAL CONDITIONS/COMMENTS:

DRILLER: Larry Cendaski Jr.

OWNER/ENG REP:

HELPERS: Marco, Edwin

DIVERSIFIED DRILLING CORPORATION
DAILY DRILLING REPORT

DATE: 7-25-02	PROJECT: Marco Island
WELL NAME/DIA:	JOB NUMBER: 6031

WELL DEPTH – START OF SHIFT:______
END OF SHIFT:______

WATER LEVEL – START OF SHIFT:______
END OF SHIFT:______

FORMATION	FROM	TO

0600-1800 water out side pipe 82.20 Inside 95.60
Run 16" steel csg dn. TO 2350.87

ACCIDENT ON SITE? YES____ NO ✓
DESCRIBE:

WEATHER CONDITIONS:

DRILLING MUD
USED: WGT.: VISCOSITY:
SPECIAL CONDITIONS/COMMENTS:

DRILLER: Tony Randolph Jr.

HELPERS: Marco
Edwin

OWNER/ENG REP:

DIVERSIFIED DRILLING CORPORATION

DAILY DRILLING REPORT

DATE: 8-26-02	PROJECT: Marco Island
WELL NAME/DIA:	JOB NUMBER: 6031

WELL DEPTH – START OF SHIFT:______ END OF SHIFT:______

WATER LEVEL – START OF SHIFT:______ END OF SHIFT:______

FORMATION	FROM	TO
0600-0800 Clean & monitor well		
0800-1000 R/u & Run video		
1000-1430 land 16" pipe / weld on lugs		
lower seal 2564.57		
upper seal 2552.52		
1430-1800 R/u & Run 1½ pipe tag @ 2548		

ACCIDENT ON SITE? YES____ NO ✓

DESCRIBE:

WEATHER CONDITIONS:

DRILLING MUD USED: WGT.: VISCOSITY:

SPECIAL CONDITIONS/COMMENTS:

DRILLER: Jerry Randolph Jr.

HELPERS: Mario, Edwin

OWNER/ENG REP:

DIVERSIFIED DRILLING CORPORATION
DAILY DRILLING REPORT

DATE: 8-27-02	PROJECT: Marco Island
WELL NAME/DIA:	JOB NUMBER: 6031

WELL DEPTH – START OF SHIFT:______ END OF SHIFT:______

WATER LEVEL – START OF SHIFT:______ END OF SHIFT:______

FORMATION	FROM	TO

0600-1000 TIH Tag @ 2545 Finding oats To pump dn. Hole

1000-1030 mix & pump 12 sks 6% H2O @ 571

1030-1800 W.O.C Clean Site

ACCIDENT ON SITE? YES____ NO ✓

DESCRIBE:

WEATHER CONDITIONS:

DRILLING MUD

USED: WGT.: VISCOSITY:

SPECIAL CONDITIONS/COMMENTS:

DRILLER: Larry Randolph Jr.

OWNER/ENG REP:

HELPERS: Mario Edwin

DIVERSIFIED DRILLING CORPORATION
DAILY DRILLING REPORT

DATE: 8-28-02	PROJECT: Marco Island
WELL NAME/DIA:	JOB NUMBER: 6031

WELL DEPTH – START OF SHIFT: ______
END OF SHIFT: ______

WATER LEVEL – START OF SHIFT: ______
END OF SHIFT: ______

FORMATION	FROM	TO
0600-0830 water @ 1320 TIH Tag @ 252757		
0830-0930 mix & Pump 238 sxs neat		
0930-1800 Clean Flange & location W.O.C		

ACCIDENT ON SITE? YES____ NO ✓
DESCRIBE: ______

WEATHER CONDITIONS:

DRILLING MUD
USED: WGT.: VISCOSITY:

SPECIAL CONDITIONS/COMMENTS:

DRILLER: Larry Randolph Jr.

OWNER/ENG REP:

HELPERS: Marco
Edwin

DIVERSIFIED DRILLING CORPORATION
DAILY DRILLING REPORT

DATE: 8-29-02	PROJECT: Marco Island
WELL NAME/DIA:	JOB NUMBER: 6031

WELL DEPTH – START OF SHIFT:______ END OF SHIFT:______

WATER LEVEL – START OF SHIFT:______ END OF SHIFT:______

FORMATION	FROM	TO

0600-0900 water @ 9.80 Service Rig Equip.
fill Cmt Tanks
0900-1030 R/U logger & Run Temp Log
1030-1130 W.O.C R/D Trailer House Run In
Tag @ 1939
1130-1330 R/U & Cmt w/ 250 sxs 12%
1330-1800 Stub Rig & Clean Cmt unit & location
water level 10' dn

ACCIDENT ON SITE? YES____ NO ✓
DESCRIBE:

WEATHER CONDITIONS:

DRILLING MUD
USED: WGT.: VISCOSITY:

SPECIAL CONDITIONS/COMMENTS:

DRILLER: Tony Kurbalek Jr.

OWNER/ENG REP:

HELPERS: Marco
Edwin

Water Resource Solutions
428 Pine Island Road SW • Cape Coral, Florida 33991 239 574-1919 Fax: 239 574-8106

September 6, 2002

Mr. Jack Myers, P.G.
Florida Department of Environmental Protection
Underground Injection Program
2295 Victoria Avenue, Suite 364
Ft. Myers, Florida 33901

Re: Florida Water Services
Marco Island Injection Well IW-1
Permit #: 143383-002-UO
Injection Tubing Replacement

Dear Mr. Myers:

Attached is the fourth progress report for the injection tubing replacement in Florida Water Services' Marco Island Injection well IW-1.

The cementing of the annulus was completed. Three stages were completed this week. In total, ten cement stages were placed to bring the annular cement to land surface.

An inflatable packer was placed in the tubing inside the lowermost 16-inch joint at a depth of 2528.84 feet bpl. A pressure test was conducted on the tubing at a pressure of 160.7 psi. The pressure fall off over one-hour was 3.7 psi for a 2.3% change.

The weekly activity report form, the tubing pressure test form, and the contractor drilling/activity reports are attached for your review. If you have any questions, please call me at your earliest convenience.

Sincerely,

Mark S. Pearce

Mark S. Pearce, Ph.D.
Senior Scientist

c. Mr. Joe Haberfeld
Ms. Nancy Marsh
Mr. Steve Anderson
Mr. Ron Reese
Mr. Don Stearns

WATER RESOURCE SOLUTIONS, INC.

TUBING PRESSURE TEST
TUBING REPLACEMENT
INJECTION WELL IW-1

Florida Water Services - Marco Island **Project No. 01-04317.HO**

FDEP Permit No. 143383-004-UO **Contractor: Diversified Drilling Corporation**

Prepared by: G. Susdorf **Date: 9/5/02**

Well No.: Injection Well IW-1

Starting Date/Time: 9/5/02 10:02 **Starting Pressure:** 160.7 **psi**

Tubing Diameter: 16-inches **Ending Pressure:** 157.0**psi**

Elapsed Time (minutes)	Pressure (psi)	Pressure Change (psi)	Percent Change
0	160.7	0	0
5	160.5	0.2	0.1
10	160.2	0.5	0.3
15	159.8	0.9	0.6
20	159.5	1.2	0.6
25	159.2	1.5	0.7
30	159.0	1.7	0.9
35	158.5	2.2	1.1
40	158.0	2.7	1.4
45	157.8	2.9	1.7
50	157.5	3.2	1.8
55	157.2	3.5	2.0
60	157.0	3.7	2.2
			2.3

Witnessed by:

Signature

Water Resource Solutions
Firm/Organization

Signature

F.D.E.P. South District
Firm/Organization

Signature

Diversified Drilling
Firm/Organization

DIVERSIFIED DRILLING CORPORATION
DAILY DRILLING REPORT

DATE: 8-31-02
WELL NAME/DIA:

PROJECT: Marco Island
JOB NUMBER: 6031

WELL DEPTH — START OF SHIFT: ______
END OF SHIFT: ______

WATER LEVEL — START OF SHIFT: ______
END OF SHIFT: ______

FORMATION	FROM	TO
0600-0730 Run Temp. log		
0730-0800 TIH w/ 1½" pipe Tag @ 253.42		
0800-0830 mix & pump 171 sx 12%		
0830-1230 level 16" Csg & Clean site		

ACCIDENT ON SITE? YES____ NO ✓
DESCRIBE:

WEATHER CONDITIONS:

DRILLING MUD
USED: WGT.: VISCOSITY:

SPECIAL CONDITIONS/COMMENTS:

DRILLER: Larry Randolph Jr.

OWNER/ENG REP:

HELPERS: marco
Edwin

DIVERSIFIED DRILLING CORPORATION
DAILY DRILLING REPORT

DATE: 9-3-02	PROJECT: Marco Island
WELL NAME/DIA:	JOB NUMBER: 6031

WELL DEPTH – START OF SHIFT: ______
END OF SHIFT: ______

WATER LEVEL – START OF SHIFT: ______
END OF SHIFT: ______

FORMATION FROM TO

0700-1200 Weld Reduction Flang together

1200-1900 Cut 16" CSG OFF & weld 20" Flang together

ACCIDENT ON SITE? YES ___ NO ✓
DESCRIBE:

WEATHER CONDITIONS:

DRILLING MUD
USED: WGT.: VISCOSITY:

SPECIAL CONDITIONS/COMMENTS:

DRILLER: Larry Rudolph Jr.

HELPERS: Marco
Edwin

OWNER/ENG REP:

DIVERSIFIED DRILLING CORPORATION
DAILY DRILLING REPORT

DATE: 9-4-02
WELL NAME/DIA:

PROJECT: marco Island
JOB NUMBER: 6031

WELL DEPTH – START OF SHIFT: ______
END OF SHIFT: ______

WATER LEVEL – START OF SHIFT: ______
END OF SHIFT: ______

FORMATION	FROM	TO

0700-1400 TIH w/ 9 5/8 packer Asmy.
1400-1530 press up on packer
1530-1600 fill 16" csg
1600-1730 Test csg @ 160 psi drop dn. TO
ok

ACCIDENT ON SITE? YES____ NO ✓
DESCRIBE:

WEATHER CONDITIONS:

DRILLING MUD
USED: WGT.: VISCOSITY:
SPECIAL CONDITIONS/COMMENTS:

DRILLER: Larry Randolph Mi

HELPERS: marco
Edwin

OWNER/ENG REP:

DIVERSIFIED DRILLING CORPORATION
DAILY DRILLING REPORT

DATE: 9-5-02
/ELL NAME/DIA:

PROJECT: Marco Island
JOB NUMBER: 6031

WELL DEPTH – START OF SHIFT: ______
END OF SHIFT: ______

WATER LEVEL – START OF SHIFT: ______
END OF SHIFT: ______

FORMATION	FROM	TO

0800-1000 press up 16" csg to 160 PSI ok
1000-1100 press 16" csg back up to 160.7 drop
dn. to 152.0 15 gal water back
1100-1230 deflate packer
1230-1630 POOH w/1½" pipe shut in well L/d swivel & Kel
1630-1830 Lay dn. Derrick move Rig off Hole
1830-1930 Install 20" valve on well shut in same

ACCIDENT ON SITE? YES____ NO ✓
DESCRIBE:

WEATHER CONDITIONS:

DRILLING MUD
USED: WGT.: VISCOSITY:
SPECIAL CONDITIONS/COMMENTS:

DRILLER: Larry Rudolph Jr.
OWNER/ENG REP:

HELPERS: Mauro
Edwin

DIVERSIFIED DRILLING CORPORATION
DAILY DRILLING REPORT

DATE: 8-21-02	PROJECT: Marco Island
WELL NAME/DIA:	JOB NUMBER: 6031

WELL DEPTH – START OF SHIFT: ______ END OF SHIFT: ______

WATER LEVEL – START OF SHIFT: ______ END OF SHIFT: ______

FORMATION	FROM	TO
0600-1700 Water dn 81 Back side Inside pipe 91.90		
1700-1730 W.O.W		
1730-1800 Weld pipe dn TO 879.23		

ACCIDENT ON SITE? YES____ NO ✓

DESCRIBE:

WEATHER CONDITIONS:

DRILLING MUD USED: WGT.: VISCOSITY:

SPECIAL CONDITIONS/COMMENTS:

DRILLER: Tony Lombardi Jr.

HELPERS: Mario, Edwin

OWNER/ENG REP:

DIVERSIFIED DRILLING CORPORATION
DAILY DRILLING REPORT

DATE: 8-20-02	PROJECT: Imaco J Sload
WELL NAME/DIA:	JOB NUMBER: 6031

WELL DEPTH – START OF SHIFT: ______ END OF SHIFT: ______

WATER LEVEL – START OF SHIFT: ______ END OF SHIFT: ______

FORMATION	FROM	TO
0600-1800 Run 16" csg dn TO 528.26		
Water dn TO 81'		

ACCIDENT ON SITE? YES____ NO ✓
DESCRIBE:

WEATHER CONDITIONS:

DRILLING MUD
USED: WGT.: VISCOSITY:

SPECIAL CONDITIONS/COMMENTS:

DRILLER: Jorge Randolph
OWNER/ENG REP:

HELPERS: Imaco
Edwin

DIVERSIFIED DRILLING CORPORATION
DAILY DRILLING REPORT

DATE: 8-19-02	PROJECT: Marco ISland
WELL NAME/DIA:	JOB NUMBER: 6031

WELL DEPTH – START OF SHIFT: ______
END OF SHIFT: ______

WATER LEVEL – START OF SHIFT: ______
END OF SHIFT: ______

FORMATION	FROM	TO

0700-1100 Help welder water dn. 70' mix & pump
2 bag salt 2865 dn.
1100-1800 Run Csg

ACCIDENT ON SITE? YES ____ NO ✓ DESCRIBE:	WEATHER CONDITIONS:
	DRILLING MUD USED: WGT.: VISCOSITY:
	SPECIAL CONDITIONS/COMMENTS:
DRILLER: Larry Randolph Jr.	HELPERS: marco Edwin
OWNER/ENG REP:	

DIVERSIFIED DRILLING CORPORATION
DAILY DRILLING REPORT

DATE: 8-18-02	PROJECT: Marco Island
WELL NAME/DIA:	JOB NUMBER: 6031

WELL DEPTH – START OF SHIFT:______ END OF SHIFT:______

WATER LEVEL – START OF SHIFT:______ END OF SHIFT:______

FORMATION	FROM	TO

0700-1930 Water 70' dn Help welder & X-Ray Crew
Make Rig Floor Ready to Run Csg

ACCIDENT ON SITE? YES____ NO ✓
DESCRIBE:

WEATHER CONDITIONS:

DRILLING MUD
USED: WGT.: VISCOSITY:
SPECIAL CONDITIONS/COMMENTS:

DRILLER: Jerry Randolph Jr.

OWNER/ENG REP:

HELPERS: Marco
Edwin

DIVERSIFIED DRILLING CORPORATION

DAILY DRILLING REPORT

DATE: 8-17-02	PROJECT: Marco Island
WELL NAME/DIA:	JOB NUMBER: 6031

WELL DEPTH – START OF SHIFT:______ END OF SHIFT:______

WATER LEVEL – START OF SHIFT:______ END OF SHIFT:______

FORMATION	FROM	TO
0600-0730 Water 70' dn Shut In well move Crane		
0730-1100 Back Rig over Hole & R/U Same		
1100-1200 R/U wall around Rig water 70'		
1200-1330 R/U logger & Run Call. log		
1330-1530 finish wall around Rig & Help welder		
1530-1830 W.O.W		
1830-1900 weld pipe Togather Help welder		

ACCIDENT ON SITE? YES____ NO __/__

DESCRIBE:

WEATHER CONDITIONS:

DRILLING MUD USED: WGT.: VISCOSITY:

SPECIAL CONDITIONS/COMMENTS:

DRILLER: Larry Randolph Jr.

OWNER/ENG REP:

HELPERS: Marcus
Edwin

DIVERSIFIED DRILLING CORPORATION
DAILY DRILLING REPORT

DATE: 8-15-02	PROJECT: marco Island
WELL NAME/DIA:	JOB NUMBER: 6031

WELL DEPTH – START OF SHIFT: ______
END OF SHIFT: ______

WATER LEVEL – START OF SHIFT: ______
END OF SHIFT: ______

FORMATION	FROM	TO

0600-0800 L/d Derrick & move Rig f/ Hole
0800-1130 mix & Pump Salt Remove Flang f/well
1130-1300 Remove Bolt on Flang Set Cran up
1300-1900 pull 30" pipe p/u wt. 350k pull
124' OUT @ 1HR 2min Cut to Cut
H2O Inside well 70' dn Back Side 128' dn

ACCIDENT ON SITE? YES____ NO ✓
DESCRIBE:

WEATHER CONDITIONS:

DRILLING MUD
USED: WGT.: VISCOSITY:

SPECIAL CONDITIONS/COMMENTS:

DRILLER: Jay Landolph Jr.

OWNER/ENG REP:

HELPERS: marco
Edwin
Bill

DIVERSIFIED DRILLING CORPORATION
DAILY DRILLING REPORT

ATE: 8-16-02	PROJECT: marco Island
WELL NAME/DIA:	JOB NUMBER: 6031

WELL DEPTH – START OF SHIFT:______
END OF SHIFT:______

WATER LEVEL – START OF SHIFT:______
END OF SHIFT:______

FORMATION	FROM	TO

0600-0900 P/u Drlg Pipe & Cutter Assmy.
0900-1130 P/u kelly put wall around Rig Unload Csg Pipe
1130-1500 Cut 80' csg
1500-1630 W.O.W
1630-1700 mix & Pump salt dn Drlg pipe kill Same
1700-1800 mix & pump salt dn Back Side kill Same

ACCIDENT ON SITE? YES____ NO ✓
DESCRIBE:

WEATHER CONDITIONS:

DRILLING MUD
USED: WGT.: VISCOSITY:
SPECIAL CONDITIONS/COMMENTS:

DRILLER: Tony Rudolph Jr.

WNER/ENG REP:

HELPERS: marco
Edwin
Bill

DIVERSIFIED DRILLING CORPORATION
DAILY DRILLING REPORT

DATE: 8-13-02
WELL NAME/DIA:

PROJECT: marco Island
JOB NUMBER: 6031

WELL DEPTH – START OF SHIFT:
END OF SHIFT:

WATER LEVEL – START OF SHIFT:
END OF SHIFT:

FORMATION	FROM	TO

0700-1030 R/u & mix Salt pill

1030-1100 pump 22 bbl. montion well dn TO ground level

1100-1230 mix & pump 22 bbl. pill 10 ppg put Crane Together Spot Rig well H2O dn TO 45'

1230-1300 montion well dn 49'

1300-1500 Remove valve fl well Spot Rig over Hole

1500-1530 Raise Derrick

1530-1700 R/u & Run Coller location log

1700-1800 R/u & Run Calb log

ACCIDENT ON SITE? YES ___ NO ✓
DESCRIBE:

WEATHER CONDITIONS:

DRILLING MUD
USED: WGT.: VISCOSITY:

SPECIAL CONDITIONS/COMMENTS:

DRILLER: Larry Randall Jr.

OWNER/ENG REP:

HELPERS: marco
Edwin
bill

DIVERSIFIED DRILLING CORPORATION
DAILY DRILLING REPORT

DATE: 8-12-02
WELL NAME/DIA:

PROJECT: Marco Island
JOB NUMBER: 6031

WELL DEPTH – START OF SHIFT:
END OF SHIFT:

WATER LEVEL – START OF SHIFT:
END OF SHIFT:

FORMATION	FROM	TO

0700-1000 unload pipe @ marco Island 6031
1000-1900 put up wall around Rig DiSAsm. Valve line on well

ACCIDENT ON SITE? YES ___ NO ✓
DESCRIBE:

WEATHER CONDITIONS:

DRILLING MUD
USED: WGT.: VISCOSITY:
SPECIAL CONDITIONS/COMMENTS:

DRILLER: Jay Radolph Jr.

OWNER/ENG REP:

HELPERS: Marco
Edwin
Keith

Water Resource Solutions
428 Pine Island Road SW • Cape Coral, Florida 33991 239 574-1919 Fax: 239 574-8106

September 13, 2002

Mr. Jack Myers, P.G.
Florida Department of Environmental Protection
Underground Injection Program
2295 Victoria Avenue, Suite 364
Ft. Myers, Florida 33901

Re: Florida Water Services
Marco Island Injection Well IW-1
Permit #: 143383-002-UO
Injection Tubing Replacement

Dear Mr. Myers:

Attached is the fifth progress report for the injection tubing replacement in Florida Water Services' Marco Island Injection well IW-1.

A bond log was conducted on the annular cement between the 16-inch tubing and the 24-inch casing. A background temperature log, a background gamma log, a radioactive tracer survey, and a final gamma log were conducted. No upward tracer movement was noted during the RTS. Following the RTS, a video survey of the well was completed.

This report is the final weekly construction report for this project. However, the chlorides are elevated in the pad monitor well PMW-1. This well will be purged to reduce the chloride concentration. The well will be purged daily and the water quality results will be reported weekly until the chloride concentrations fall below 250 mg/l.

The weekly activity report form and the contractor drilling/activity reports are attached for your review. If you have any questions, please call me at your earliest convenience.

Sincerely,

Mark S. Pearce

Mark S. Pearce, Ph.D.
Senior Scientist

c. Mr. Joe Haberfeld
Ms. Nancy Marsh
Mr. Steve Anderson
Mr. Ron Reese
Mr. Don Stearns

WATER RESOURCE SOLUTIONS, INC.

WEEKLY REPORT
TUBING REPLACEMENT
INJECTION WELL IW-1

Florida Water Services - Marco Island **Project No. 01-04317.HO**

FDEP Permit No. 143383-004-UO **Contractor: Diversified Drilling Corporation**

Prepared by: G. Susdorf **Date:** 9/13/02 **Week # 5**

Date	Description of Activities
Friday 9/6/02	The wellhead piping was reinstalled. A video survey of the well was attempted, but the water clarity was too poor to continue. A bond log of the cement between the tubing and casing also conducted. The bond log showed good cement throughout the entire annulus.
Saturday 9/7/02	The radioactive tracer survey was conducted on the well. The RTS included a background temperature and a background gamma log prior to initiating the tracer survey. Two low flow and one high rate tracer surveys were conducted. No upward movement of tracer was noted. Following the completion of the tracer ejections and logging, the well was flushed and an after test gamma log was run. A video log was conducted on the well after the RTS. The clarity of the water in the well was good throughout the tubing, casing, and upper portion of the open-hole. The clarity of the water was poor below 2735 feet bpl. The video survey was completed to 2765 feet bpl. After completing the logging, the stripper head was removed from the well and a blind flange was bolted to the top of the 6-inch valve on the top of the wellhead. The well, with the exception to the reattachment of the electrical connections to the surface facilities, was completed for returned to service.
Sunday 9/8/02	No site activity.
Monday 9/9/02	Diversified began demobilization and restoration of the site.

WATER RESOURCE SOLUTIONS, INC.

WEEKLY REPORT
TUBING REPLACEMENT
INJECTION WELL IW-1

Florida Water Services - Marco Island **Project No. 01-04317.HO**

FDEP Permit No. 143383-004-UO **Contractor: Diversified Drilling Corporation**

Prepared by: G. Susdorf **Date:** 9/13/02 **Week # 5**

Date	Description of Activities
Tuesday 9/10/02	Demobilization and site restoration continued.
Wednesday 9/11/02	Demobilization and site restoration continued. The monitoring of the pad monitor wells will be discontinued now that the tubing replacement is complete. However, the chloride concentrations in pad monitor well PMW-1 are above 250 mg/l. Therefore, Diversified will begin purging this well until the chloride levels fall below 250 mg/l. The pad monitor wells constructed during this phase of the project, those designated PMW-1 and PMW-2, will be completed in 12-inch manholes.
Thursday 9/12/02	Demobilization and site restoration continued. A sample was collected from the discharge of the water purged from the pad monitor well PMW-1. The conductivity was measured at 2680 µS and the chloride was measured at 680 mg/l.

APPENDIX 2.1

X-Y CALIPER, CASING COLLAR LOCATOR LOG

MV Geophysical

X-Y CALIPER CASING COLLAR LOCATOR LOG

Company	Diversified Drilling Corp.
Well	Injection Well
Field	Marco Island
County	Collier
State/Prv	Florida

Company	Diversified Drilling Corporation
Well	Injection Well
Field	Marco Island
County	Collier
State/Prv	Florida
Location	Marco Island Water Treat Plant Marco Island Utilities Water Resource Solutions
Other Services	XY
Permanent Datum	G.L.
Log Measured From	G.L.
Drilling Measured From	G.L.
Elevation	K.B. D.F. G.L.

Date	13-AUG-2002
Run Number	ONE
Depth Driller	3340'
Depth Logger	NA
Bottom Logged Interval	2684'
Top Log Interval	2490'
Open Hole Size	24"
Type Fluid	WATER
Density / Viscosity	NA/NA
Max. Recorded Temp.	na
Estimated Cement Top	NA
Time Well Ready	16:00 8/13/02
Time Logger on Bottom	16:00 8/13/02
Equipment Number	MVGS-1
Location	Ft. Myers
Recorded By	S.Miller
Witnessed By	G.Susdorf (WRS) B.Balmer (DDC)

Borehole Record / Tubing Record

Run Number	Bit	From	To	Size	Weight	From	To
ONE	24"	2640'	3340'				

Casing Record	Size	Wgt/Ft	Top	Bottom
Surface String	24"	0.375" WT	SURFACE	2640' 2642' logger
Prot. String				
Production String				
Liner				

Invoice No. 2002163 P.O. # 17531 Job No. 6031 * FINAL PRINT *

<<< Fold Here >>>

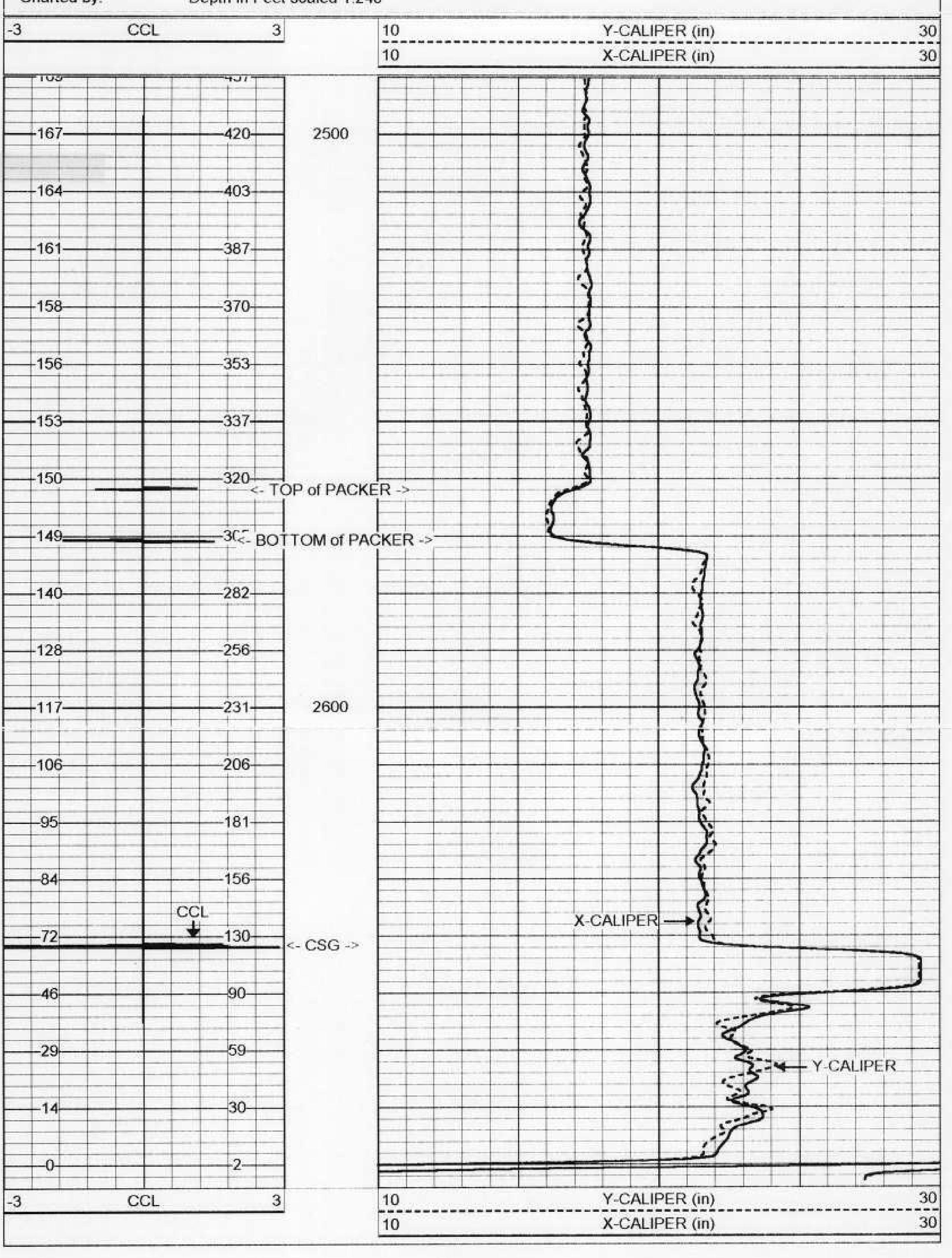
Comments

Base of 24": 2642'
Bottom of Packer: 2570.5'
Top of Packer: 2562'

FUTURE CASING SIZE: 16" OD

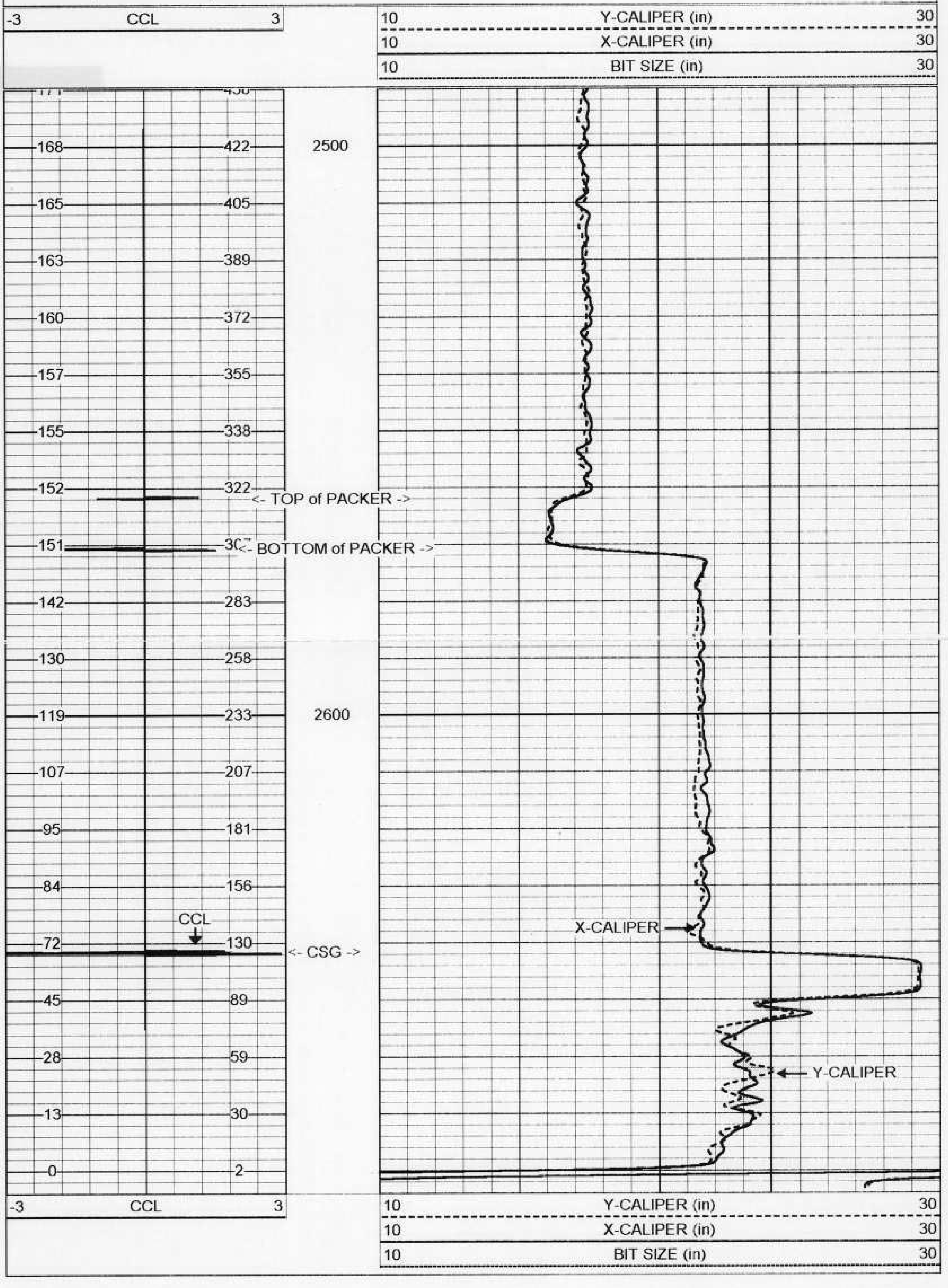
MV Geophysical — MAIN PASS

Database File: marcoiw1.db
Dataset Pathname: MAIN
Presentation Format: xycclmi5.prs
Dataset Creation: Tue Aug 13 18:08:17 2002
Charted by: Depth in Feet scaled 1:240



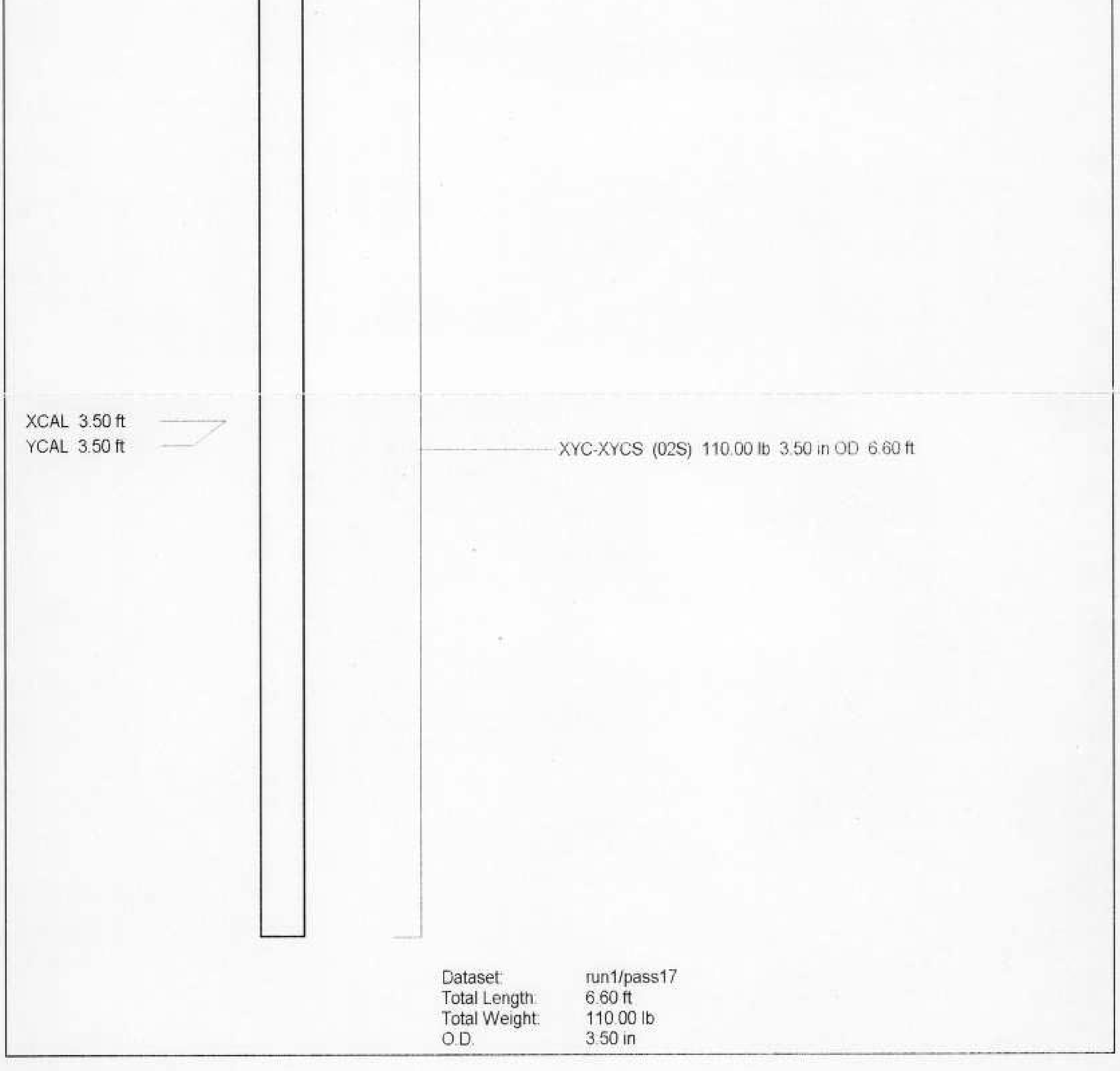
MV Geophysical — REPEAT SECTION

Database File: marcoiw1.db
Dataset Pathname: REPEAT
Presentation Format: xycclmi5.prs
Dataset Creation: Tue Aug 13 17:46:18 2002
Charted by: Depth in Feet scaled 1:240



XY Caliper Calibration Report

Serial Number:	02S		
Tool Model:	XYCS		
Performed:	Tue Aug 13 13:49:35 2002		
Small Ring:	15.25	in	
Large Ring:	29.25	in	
	X Caliper	Y Caliper	
Reading with Small Ring:	741.667	726.19	cps
Reading with Large Ring:	1110.02	1095.04	cps
Gain:	0.038007	0.0379559	
Offset:	-12.9385	-12.3132	



Dataset: run1/pass17
Total Length: 6.60 ft
Total Weight: 110.00 lb
O.D. 3.50 in

APPENDIX 2.2

2205 DUPLEX STEEL MILL SPECIFICATIONS

6/25/02

FLORIDA WATER SERVICES
PO BOX 609520
ORLANDO FL 32660-9520
ATTN: JAY BARY

FLORIDA WATER SERVICES
MARCO ISLAND WTP
100 WINWARD DRIVE
MARCO ISLAND, FL 33937
MARCO ISLAND, FL 33937

[illegible] 4/[illegible] [illegible] 20 22 TRUCK COLLECT
46214 Prepaid

[illegible]700.000 1966.000 16000W0312001 FT 20-Loc

734.000 16" SCH20 (.312"W) 2 ( )
ASTM A928

Job#	Serl	Heat#	Pieces	Feet		LB
5539	22033705	818792		29.810		
			1	29.810	WT:	1609.74
5540	22033796	818794		28.690		
			1	28.690	WT:	1549.26
5541	22033508	818796		29.960		
5541	22033729	818796		30.040		
5541	22033839	818796		30.140		
			3	90.140	WT:	48[illegible].56
5542	22033623	818798		30.140		
5542	22033641	818798		29.500		
5542	22033640	818798		29.540		
			3	89.180	WT:	47[illegible]1.72
5543	22033501	818801		29.560		
5543	22033512	818801		29.920		
5543	22033726	818801		29.830		
5543	22033794	818801		27.930		
5543	22033795	818801		29.960		
5543	[illegible]	8188[illegible]		[illegible]		
			6	178.780	WT:	9[illegible]
5544	22033612	818803		30.100		
5544	22033628	818803		30.140		
5544	22033728	818803		30.140		
			3	90.400	WT:	4881.60
5545	22033622	818805		30.130		

*** Continued On The Next Page ***

6/25/02

FLORIDA WATER SERVICES
PO BOX 609520
ORLANDO FL 32660-9520
ATTN: [illegible]

FLORIDA WATER SERVICES
MARCO ISLAND WTP
100 WINDWARD DRIVE
MARCO ISLAND, FL 33937
MARCO ISLAND, FL 33937

[illegible] 9/02/02 [illegible] 20 22 TRUCK COLLECT
46214 Prepaid

5545	22033774 918805		28,980		
		2	54,100	WT:	2921.40
5546	22033502 918907		29,940		
5546	22033797 918807		29,940		
		2	58,980	WT:	3164.92
5547	22033503 918809		29,940		
		1	29,940	WT:	1616.76
548	22033631 918811		30,140		
		1	30,140	WT:	1627.56
5549	22033499 918815		29,720		
5549	22033500 918813		29,940		
		2	[illegible]	WT:	3232.44
		[illegible]	[illegible]	WT:	[illegible]

[illegible] ***
[illegible] SUPPLY [illegible] PIPE MANUFACTURED IN
IN ACCORDANCE WITH ASTM A928 CLASS 2 [illegible]
WELDED WITH THE ADDITION OF FILLER METAL
[illegible] PCS 30' R/L = 2700 FT
BOTH ENDS BEVELED PER ANSI B16.25, FIG 2a.
NO OTHER TESTS, SPECS OR REQUIREMENTS REQUESTED OR QUOTED
****
PROGRESS PAYMENT SCHEDULE AS FOLLOWS
[illegible] OF ORDER VALUE AT TIME OF ORDER PLACEMENT
30% OF ORDER VALUE AFTER RECEIPT OF RAW MATERIAL
40% UPON DELIVERY
****
WEIGHT PER PIECE = 1,614 LBS
TOTAL WEIGHT FOR 90 PCS = 145,260 LBS

*** Continued On The Next Page ***

036520 3

5/25/02

FLORIDA WATER SERVICES
PO BOX 609520
ORLANDO FL 32660-9520
ATTN: JAY SPRY

FLORIDA WATER SERVICES
MARCO ISLAND WTP
100 WINDWARD DRIVE
MARCO ISLAND, FL 33937
MARCO ISLAND, FL 33937

612 4/02/02 51215 20 22 TRUCK COLLECT
46214 Prepaid

hipment Summary: 1 Cartons 0 Pallets 39,666.00 Weight

TEST REPORT

SWEPCO TUBE LLC

ONE CLIFTON BOULEVARD . CLIFTON, NEW JERSEY 07015

DATE: June 25, 2002
SOLD TO: 61215
FLORIDA WATER SERVICES, P.O. BOX 609520, ORLANDO, FL 32660-9520

SWEPCO SHOP ORDER NUMBER **5539**	SWEPCO SALES ORDER **014612**	DISTRIBUTOR P.O. NUMBER **46214**

PRODUCT DESCRIPTION
SIZE : **16" SCH 20 (.312"W)**
SWEPCO WELDED DUPLEX 2205 (UNS S32205), MFD. PER ASTM A928-00-HT-O, CLASS 2
WELDED WITH THE ADDITION OF FILLER METAL. BOTH ENDS BEVELED PER ANSI B16.25, FIG. 2a.
NO OTHER SPECS., TESTS OR REQUIREMENTS REQUESTED OR SUPPLIED.

CHEMICAL ANALYSIS

A240-01 2205

UNS S31803	C Max	Mn Max	P Max	S Max	Si Max	Ni	Cr	Mo	Co	Cu	N
Chemical Requirements - Plate	0.030	2.00	0.030	0.020	1.00	4.5-6.5	21.0-23.0	2.5-3.5	-----	-----	0.08-0.20
Heat Analysis - HT 818792	.020	1.45	.023	.001	.38	5.60	22.56	3.18	-----	-----	.19

al Requirements - R2209 UNS S39209 eld Wire - Spec ASME SFA 5.9	C Max 0.03	Mn 0.5 - 2.0	P Max 0.03	S Max 0.03	Si Max 0.90	Ni 7.5 - 9.5	Cr 21.5 - 23.5	Mo 2.5 - 3.5	Cu Max 0.75	N 0.08 - 0.20	Ti -----	V -----	Co -----
45" Heat 08049 Weld Wire	0.011	1.65	0.015	0.001	0.50	8.70	22.69	3.10	0.15	0.16	----	----	-----
62" Heat 966074 Weld Wire	0.011	1.62	0.018	0.001	0.50	8.64	22.98	3.09	0.11	0.161	----	----	-----
62" Heat 966075 Weld Wire	0.011	1.62	0.018	0.001	0.50	8.64	22.98	3.09	0.11	0.161	----	----	-----

MECHANICAL TESTS

	Hardness Maximum	Yield P.S.I.	Tensile P.S.I.	% Elong in 2"	Red of Area	Side Bend	Root Bend	Reverse Bend	Flattening
Specification	BHN 290	Minimum	Minimum	Minimum					
Mechanical Test Requirements	HRC 28	65 000	90 000	25%					
Base Metal – 818792	18	85608	117614	35.4					
Transverse Tensile Test	HRB 95	N/A	118 470	N/A		OK	OK		
Transverse Tensile Test	HRB 96	N/A	114 298	N/A		OK	OK		

EXAMINATIONS

Supplementary Testing	Radiographic Test	Ultrasonic Test	Dye Penetrant Test	Impact Test	Corrosion Test	Hydrostatic Test	Pressure P.S.I.
Specification						2 minute	1300
Results						Hold Time	Satisfactory

REMARKS
No weld repairs have been performed on base metal.
Mill certs to DIN 50049 3.1.B, EN10204 3.1.B & ISO10474 3.1.B
No materials or processes using elemental mercury or its compounds have been used in the processing of items supplied on this order.
All product manufactured in U.S.A. We certify that the above material is in full compliance to the above listed specifications

SWEPCO TUBE LLC

....
Raymond V. Dulay Q.C. Coordinator

TEST REPORT
SWEPCO TUBE LLC

ONE CLIFTON BOULEVARD . CLIFTON, NEW JERSEY 07015

DATE: June25, 2002
SOLD TO: 61215
FLORIDA WATER SERVICES, P.O. BOX 609520, ORLANDO, FL 32660-9520

SWEPCO SHOP ORDER NUMBER 5540	SWEPCO SALES ORDER 014612	DISTRIBUTOR P.O. NUMBER 46214

PRODUCT DESCRIPTION
SIZE : **16" SCH 20 (.312"W)**
SWEPCO WELDED DUPLEX 2205 (UNS S32205), MFD. PER ASTM A928-00-HT-O, CLASS 2
WELDED WITH THE ADDITION OF FILLER METAL. BOTH ENDS BEVELED PER ANSI B16.25, FIG. 2a.
NO OTHER SPECS., TESTS OR REQUIREMENTS REQUESTED OR SUPPLIED.

CHEMICAL ANALYSIS

A240-01 2205

	C Max	Mn Max	P Max	S Max	Si Max	Ni	Cr	Mo	Co	Cu	N
UNS S31803 Chemical Requirements - Plate	0.030	2.00	0.030	0.020	1.00	4.5-6.5	21.0-23.0	2.5-3.5	-----	-----	0.08-0.20
Heat Analysis - HT 818794	.020	1.45	.023	.001	.38	5.60	22.56	3.18	-----	-----	.19

Chemical Requirements - ER2209 UNS S39209 Weld Wire - Spec ASME SFA 5.9	C Max	Mn	P Max	S Max	Si Max	Ni	Cr	Mo	Cu Max	N	Ti	V	Co
	0.03	0.5 - 2.0	0.03	0.03	0.90	7.5 - 9.5	21.5 - 23.5	2.5 - 3.5	0.75	0.08 - 0.20	----	----	----
.045" Heat 08049 Weld Wire	0.011	1.65	0.015	0.001	0.50	8.70	22.69	3.10	0.15	0.16	----	----	-----
.062" Heat 966074 Weld Wire	0.011	1.62	0.018	0.001	0.50	8.64	22.98	3.09	0.11	0.161	----	----	-----
.062" Heat 966075 Weld Wire	0.011	1.62	0.018	0.001	0.50	8.64	22.98	3.09	0.11	0.161	----	----	-----

MECHANICAL TESTS

	Hardness Maximum	Yield P.S.I.	Tensile P.S.I.	% Elong in 2"	Red of Area	Side Bend	Root Bend	Reverse Bend	Flattening
Specification	BHN 290	Minimum	Minimum	Minimum					
Mechanical Test Requirements	HRC 28	65 000	90 000	25%					
Base Metal – 818792	18	85608	117614	35.4					
Transverse Tensile Test	HRB 95	N/A	118 470	N/A		OK	OK		
Transverse Tensile Test	HRB 96	N/A	114 298	N/A		OK	OK		

EXAMINATIONS

Supplementary Testing	Radiographic Test	Ultrasonic Test	Dye Penetrant Test	Impact Test	Corrosion Test	Hydrostatic Test	Pressure P.S.I.
Specification Results						2 minute Hold Time	1300 Satisfactory

REMARKS
No weld repairs have been performed on base metal.
Mill certs to DIN 50049 3.1.B, EN10204 3.1.B & ISO10474 3.1.B
No materials or processes using elemental mercury or its compounds have been used in the processing of items supplied on this order.
product manufactured in U.S.A. We certify that the above material is in full compliance to the above listed specifications

SWEPCO TUBE LLC

....
Raymond V. Dulay Q.C. Coordinator

TEST REPORT
SWEPCO TUBE LLC

ONE CLIFTON BOULEVARD . CLIFTON, NEW JERSEY 07015

DATE: June 25, 2002
SOLD TO: 61215
FLORIDA WATER SERVICES, P.O. BOX 609520, ORLANDO, FL 32660-9520

SWEPCO SHOP ORDER NUMBER	SWEPCO SALES ORDER	DISTRIBUTOR P.O. NUMBER
5541	014612	46214

PRODUCT DESCRIPTION
SIZE : 16" SCH 20 (.312"W)
SWEPCO WELDED DUPLEX 2205 (UNS S32205), MFD. PER ASTM A928-00-HT-O, CLASS 2
WELDED WITH THE ADDITION OF FILLER METAL. BOTH ENDS BEVELED PER ANSI B16.25, FIG. 2a.
NO OTHER SPECS., TESTS OR REQUIREMENTS REQUESTED OR SUPPLIED.

CHEMICAL ANALYSIS

A240-01 2205

UNS S31803	C Max	Mn Max	P Max	S Max	Si Max	Ni	Cr	Mo	Co	Cu	N
Chemical Requirements - Plate	0.030	2.00	0.030	0.020	1.00	4.5-6.5	21.0-23.0	2.5-3.5	-----	-----	0.08-0.20
Heat Analysis - HT 818796	.020	1.45	.023	.001	.38	5.60	22.56	3.18	-----	-----	.19

	C	Mn	P	S	Si	Ni	Cr	Mo	Cu	N	Ti	V	Co
.al Requirements - R2209 UNS S39209 Weld Wire - Spec ASME SFA 5.9	Max 0.03	0.5 - 2.0	Max 0.03	Max 0.03	Max 0.90	7.5 - 9.5	21.5 - 23.5	2.5 - 3.5	Max 0.75	0.08 - 0.20	-----	-----	-----
045" Heat 08049 Weld Wire	0.011	1.65	0.015	0.001	0.50	8.70	22.69	3.10	0.15	0.16	----	----	-----
62" Heat 966074 Weld Wire	0.011	1.62	0.018	0.001	0.50	8.64	22.98	3.09	0.11	0.161	----	----	-----
62" Heat 966075 Weld Wire	0.011	1.62	0.018	0.001	0.50	8.64	22.98	3.09	0.11	0.161	----	----	-----

MECHANICAL TESTS

	Hardness Maximum	Yield P.S.I.	Tensile P.S.I.	% Elong in 2"	Red of Area	Side Bend	Root Bend	Reverse Bend	Flattening
Specification	BHN 290	Minimum	Minimum	Minimum					
Mechanical Test Requirements	HRC 28	65 000	90 000	25%					
Base Metal – 818792	18	85608	117614	35.4					
Transverse Tensile Test	HRB 95	N/A	118 470	N/A		OK	OK		
Transverse Tensile Test	HRB 96	N/A	114 298	N/A		OK	OK		

EXAMINATIONS

Supplementary Testing	Radiographic Test	Ultrasonic Test	Dye Penetrant Test	Impact Test	Corrosion Test	Hydrostatic Test	Pressure P.S.I.
Specification Results						2 minute Hold Time	1300 Satisfactory

REMARKS
No weld repairs have been performed on base metal.
Mill certs to DIN 50049 3.1.B, EN10204 3.1.B & ISO10474 3.1.B
No materials or processes using elemental mercury or its compounds have been used in the processing of items supplied on this order.
All product manufactured in U.S.A. We certify that the above material is in full compliance to the above listed specifications

SWEPCO TUBE LLC

....
Raymond V. Dulay Q.C. Coordinator

TEST REPORT
SWEPCO TUBE LLC

ONE CLIFTON BOULEVARD . CLIFTON, NEW JERSEY 07015

DATE: June 25, 2002
SOLD TO: 61215
FLORIDA WATER SERVICES, P.O. BOX 609520, ORLANDO, FL 32660-9520

SWEPCO SHOP ORDER NUMBER	SWEPCO SALES ORDER	DISTRIBUTOR P.O. NUMBER
5542	014612	46214

PRODUCT DESCRIPTION
SIZE : **16" SCH 20 (.312"W)**
SWEPCO WELDED DUPLEX 2205 (UNS S32205), MFD. PER ASTM A928-00-HT-O, CLASS 2
WELDED WITH THE ADDITION OF FILLER METAL. BOTH ENDS BEVELED PER ANSI B16.25, FIG. 2a.
NO OTHER SPECS., TESTS OR REQUIREMENTS REQUESTED OR SUPPLIED.

CHEMICAL ANALYSIS

A240-01 2205

UNS S31803	C Max	Mn Max	P Max	S Max	Si Max	Ni	Cr	Mo	Co	Cu	N
Chemical Requirements - Plate	0.030	2.00	0.030	0.020	1.00	4.5-6.5	21.0-23.0	2.5-3.5	-----	-----	0.08-0.20
Heat Analysis - HT 818798	.020	1.45	.023	.001	.38	5.60	22.56	3.18	-----	-----	.19

C al Requirements - ER2209 UNS S39209 Weld Wire - Spec ASME SFA 5.9	C Max	Mn	P Max	S Max	Si Max	Ni	Cr	Mo	Cu Max	N	Ti	V	Co
	0.03	0.5 - 2.0	0.03	0.03	0.90	7.5 - 9.5	21.5 - 23.5	2.5 - 3.5	0.75	0.08 - 0.20	-----	-----	-----
045" Heat 08049 Weld Wire	0.011	1.65	0.015	0.001	0.50	8.70	22.69	3.10	0.15	0.16	----	----	-----
62" Heat 966074 Weld Wire	0.011	1.62	0.018	0.001	0.50	8.64	22.98	3.09	0.11	0.161	----	----	-----
62" Heat 966075 Weld Wire	0.011	1.62	0.018	0.001	0.50	8.64	22.98	3.09	0.11	0.161	----	----	-----

	Hardness Maximum BHN 290	Yield P.S.I. Minimum	Tensile P.S.I. Minimum	% Elong in 2" Minimum	Red of Area	Side Bend	Root Bend	Reverse Bend	Flattening
Mechanical Test Requirements	HRC 28	65 000	90 000	25%					
Base Metal – 818798	18	85608	117614	35.4					
Transverse Tensile Test	HRB 99	N/A	115848	N/A		OK	OK		

EXAMINATIONS

Supplementary Testing	Radiographic Test	Ultrasonic Test	Dye Penetrant Test	Impact Test	Corrosion Test	Hydrostatic Test	Pressure P.S.I.
Specification						2 minute Hold Time	1300
Results							Satisfactory

REMARKS
No weld repairs have been performed on base metal.
Mill certs to DIN 50049 3.1.B, EN10204 3.1.B & ISO10474 3.1.B
No materials or processes using elemental mercury or its compounds have been used in the processing of items supplied on this order.
All product manufactured in U.S.A. We certify that the above material is in full compliance to the above listed specifications

SWEPCO TUBE LLC

....
Raymond V. Dulay Q.C. Coordinator

TEST REPORT
SWEPCO TUBE LLC

ONE CLIFTON BOULEVARD . CLIFTON, NEW JERSEY 07015

DATE: June 25, 2002
SOLD TO: 61215
FLORIDA WATER SERVICES, P.O. BOX 609520, ORLANDO, FL 32660-9520

SWEPCO SHOP ORDER NUMBER 5543	SWEPCO SALES ORDER 014612	DISTRIBUTOR P.O. NUMBER 46214

PRODUCT DESCRIPTION
SIZE : 16" SCH 20 (.312"W)
SWEPCO WELDED DUPLEX 2205 (UNS S32205), MFD. PER ASTM A928-00-HT-O, CLASS 2
WELDED WITH THE ADDITION OF FILLER METAL. BOTH ENDS BEVELED PER ANSI B16.25, FIG. 2a.
NO OTHER SPECS., TESTS OR REQUIREMENTS REQUESTED OR SUPPLIED.

CHEMICAL ANALYSIS

A240-01 2205

UNS S31803	C Max	Mn Max	P Max	S Max	Si Max	Ni	Cr	Mo	Co	Cu	N
Chemical Requirements - Plate	0.030	2.00	0.030	0.020	1.00	4.5-6.5	21.0-23.0	2.5-3.5	-----	-----	0.08-0.20
Heat Analysis - HT 818801	.020	1.45	.023	.001	.38	5.60	22.56	3.18	-----	-----	.19

al Requirements - R2209 UNS S39209 /eld Wire - Spec ASME SFA 5.9	C Max	Mn	P Max	S Max	Si Max	Ni	Cr	Mo	Cu Max	N	Ti	V	Co
	0.03	0.5 - 2.0	0.03	0.03	0.90	7.5 - 9.5	21.5 - 23.5	2.5 - 3.5	0.75	0.08 - 0.20	----	----	----
45" Heat 08049 Weld Wire	0.011	1.65	0.015	0.001	0.50	8.70	22.69	3.10	0.15	0.16	----	----	-----
62" Heat 966074 Weld Wire	0.011	1.62	0.018	0.001	0.50	8.64	22.98	3.09	0.11	0.161	----	----	-----
62" Heat 966075 Weld Wire	0.011	1.62	0.018	0.001	0.50	8.64	22.98	3.09	0.11	0.161	----	----	-----

MECHANICAL TESTS

	Hardness Maximum BHN 290	Yield P.S.I. Minimum	Tensile P.S.I. Minimum	% Elong in 2" Minimum	Red of Area	Side Bend	Root Bend	Reverse Bend	Flattening
Mechanical Test Requirements	HRC 28	65 000	90 000	25%					
Base Metal – 818801	18	85608	117614	35.4					
Transverse Tensile Test	HRB 97	N/A	110 858	N/A		OK	OK		

EXAMINATIONS

Supplementary Testing	Radiographic Test	Ultrasonic Test	Dye Penetrant Test	Impact Test	Corrosion Test	Hydrostatic Test	Pressure P.S.I.
Specification Results						2 minute Hold Time	1300 Satisfactory

REMARKS
No weld repairs have been performed on base metal.
Mill certs to DIN 50049 3.1.B, EN10204 3.1.B & ISO10474 3.1.B
No materials or processes using elemental mercury or its compounds have been used in the processing of items supplied on this order.
product manufactured in U.S.A. We certify that the above material is in full compliance to the above listed specifications

SWEPCO TUBE LLC

....
Raymond V. Dulay Q.C. Coordinator

TEST REPORT

SWEPCO TUBE LLC

ONE CLIFTON BOULEVARD . CLIFTON, NEW JERSEY 07015

DATE: June 25, 2002
SOLD TO: 61215
FLORIDA WATER SERVICES, P.O. BOX 609520, ORLANDO, FL 32660-9520

SWEPCO SHOP ORDER NUMBER	SWEPCO SALES ORDER	DISTRIBUTOR P.O. NUMBER
5544	014612	46214

PRODUCT DESCRIPTION
SIZE : **16" SCH 20 (.312"W)**
SWEPCO WELDED DUPLEX 2205 (UNS S32205), MFD. PER ASTM A928-00-HT-O, CLASS 2
WELDED WITH THE ADDITION OF FILLER METAL. BOTH ENDS BEVELED PER ANSI B16.25, FIG. 2a.
NO OTHER SPECS., TESTS OR REQUIREMENTS REQUESTED OR SUPPLIED.

CHEMICAL ANALYSIS

A240-01 2205

UNS S31803	C Max	Mn Max	P Max	S Max	Si Max	Ni	Cr	Mo	Co	Cu	N
Chemical Requirements - Plate	0.030	2.00	0.030	0.020	1.00	4.5-6.5	21.0-23.0	2.5-3.5	-----	-----	0.08-0.20
Heat Analysis - HT 818803	.020	1.45	.023	.001	.38	5.60	22.56	3.18	-----	-----	.19

[illegible]cal Requirements - ER2209 UNS S39209 Weld Wire - Spec ASME SFA 5.9	C Max 0.03	Mn 0.5 - 2.0	P Max 0.03	S Max 0.03	Si Max 0.90	Ni 7.5 - 9.5	Cr 21.5 - 23.5	Mo 2.5 - 3.5	Cu Max 0.75	N 0.08 - 0.20	Ti -----	V -----	Co -----
045" Heat 08049 Weld Wire	0.011	1.65	0.015	0.001	0.50	8.70	22.69	3.10	0.15	0.16	----	----	-----
062" Heat 966074 Weld Wire	0.011	1.62	0.018	0.001	0.50	8.64	22.98	3.09	0.11	0.161	----	----	-----
062" Heat 966075 Weld Wire	0.011	1.62	0.018	0.001	0.50	8.64	22.98	3.09	0.11	0.161	----	----	-----

MECHANICAL TESTS

	Hardness Maximum BHN 290	Yield P.S.I. Minimum	Tensile P.S.I. Minimum	% Elong in 2" Minimum	Red of Area	Side Bend	Root Bend	Reverse Bend	Flattening
Mechanical Test Requirements	HRC 28	65 000	90 000	25%					
Base Metal – 818803	18	85608	117614	35.4					
Transverse Tensile Test	HRB 99	N/A	17 222	N/A		OK	OK		

EXAMINATIONS

Supplementary Testing	Radiographic Test	Ultrasonic Test	Dye Penetrant Test	Impact Test	Corrosion Test	Hydrostatic Test	Pressure P.S.I.
Specification Results						2 minute Hold Time	1300 Satisfactory

REMARKS
No weld repairs have been performed on base metal.
Mill certs to DIN 50049 3.1.B, EN10204 3.1.B & ISO10474 3.1.B
No materials or processes using elemental mercury or its compounds have been used in the processing of items supplied on this order.
' product manufactured in U.S.A. We certify that the above material is in full compliance to the above listed specifications
SWEPCO TUBE LLC

....
Raymond V. Dulay Q.C. Coordinator

TEST REPORT
SWEPCO TUBE LLC

ONE CLIFTON BOULEVARD . CLIFTON, NEW JERSEY 07015

DATE: June 25 2002
SOLD TO: 61215
FLORIDA WATER SERVICES, P.O. BOX 609520, ORLANDO, FL 32660-9520

SWEPCO SHOP ORDER NUMBER 5545	SWEPCO SALES ORDER 014612	DISTRIBUTOR P.O. NUMBER 46214

PRODUCT DESCRIPTION
SIZE : **16" SCH 20 (.312"W)**
SWEPCO WELDED DUPLEX 2205 (UNS S32205), MFD. PER ASTM A928-00-HT-O, CLASS 2
WELDED WITH THE ADDITION OF FILLER METAL. BOTH ENDS BEVELED PER ANSI B16.25, FIG. 2a.
NO OTHER SPECS., TESTS OR REQUIREMENTS REQUESTED OR SUPPLIED.

CHEMICAL ANALYSIS

A240-01 2205

	C	Mn	P	S	Si	Ni	Cr	Mo	Co	Cu	N
UNS S31803	Max	Max	Max	Max	Max						
Chemical Requirements - Plate	0.030	2.00	0.030	0.020	1.00	4.5-6.5	21.0-23.0	2.5-3.5	-----	-----	0.08-0.20
Heat Analysis - HT 818805	.020	1.45	.023	.001	.38	5.60	22.56	3.18	-----	-----	.19

(cal Requirements - ER2209 UNS S39209 Weld Wire - Spec ASME SFA 5.9	C	Mn	P	S	Si	Ni	Cr	Mo	Cu	N	Ti	V	Co
	Max		Max	Max	Max				Max				
	0.03	0.5 - 2.0	0.03	0.03	0.90	7.5 - 9.5	21.5 - 23.5	2.5 - 3.5	0.75	0.08 - 0.20	-----	-----	-----
045" Heat 08049 Weld Wire	0.011	1.65	0.015	0.001	0.50	8.70	22.69	3.10	0.15	0.16	----	----	-----
062" Heat 966074 Weld Wire	0.011	1.62	0.018	0.001	0.50	8.64	22.98	3.09	0.11	0.161	----	----	-----
062" Heat 966075 Weld Wire	0.011	1.62	0.018	0.001	0.50	8.64	22.98	3.09	0.11	0.161	----	----	-----

MECHANICAL TESTS

	Hardness Maximum	Yield P.S.I. Minimum	Tensile P.S.I. Minimum	% Elong in 2" Minimum	Red of Area	Side Bend	Root Bend	Reverse Bend	Flattening
	BHN 290								
Mechanical Test Requirements	HRC 28	65 000	90 000	25%					
Base Metal – 818805	18	85608	117614	35.4					
Transverse Tensile Test	HRB 97	N/A	115 948	N/A		OK	OK		

EXAMINATIONS

Supplementary Testing	Radiographic Test	Ultrasonic Test	Dye Penetrant Test	Impact Test	Corrosion Test	Hydrostatic Test	Pressure P.S.I.
Specification Results						2 minute Hold Time	1300 Satisfactory

REMARKS
No weld repairs have been performed on base metal.
Mill certs to DIN 50049 3.1.B, EN10204 3.1.B & ISO10474 3.1.B
No materials or processes using elemental mercury or its compounds have been used in the processing of items supplied on this order.
'I product manufactured in U.S.A. We certify that the above material is in full compliance to the above listed specifications

SWEPCO TUBE LLC

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Raymond V. Dulay Q.C. Coordinator

TEST REPORT

SWEPCO TUBE LLC

ONE CLIFTON BOULEVARD . CLIFTON, NEW JERSEY 07015

DATE: June 25, 2002
SOLD TO: 61215
FLORIDA WATER SERVICES, P.O. BOX 609520, ORLANDO, FL 32660-9520

SWEPCO SHOP ORDER NUMBER	SWEPCO SALES ORDER	DISTRIBUTOR P.O. NUMBER
5546	**014612**	**46214**

PRODUCT DESCRIPTION
SIZE : 16" SCH 20 (.312"W)
SWEPCO WELDED DUPLEX 2205 (UNS S32205), MFD. PER ASTM A928-00-HT-O, CLASS 2
WELDED WITH THE ADDITION OF FILLER METAL. BOTH ENDS BEVELED PER ANSI B16.25, FIG. 2a.
NO OTHER SPECS., TESTS OR REQUIREMENTS REQUESTED OR SUPPLIED.

CHEMICAL ANALYSIS

A240-01 2205

	C Max	Mn Max	P Max	S Max	Si Max	Ni	Cr	Mo	Co	Cu	N
UNS S31803 Chemical Requirements - Plate	0.030	2.00	0.030	0.020	1.00	4.5-6.5	21.0-23.0	2.5-3.5	-----	-----	0.08-0.20
Heat Analysis - HT 818807	.020	1.45	.023	.001	.38	5.60	22.56	3.18	-----	-----	.19

..al Requirements - ..R2209 UNS S39209 ..eld Wire - Spec ASME SFA 5.9	C Max	Mn	P Max	S Max	Si Max	Ni	Cr	Mo	Cu Max	N	Ti	V	Co
	0.03	0.5 - 2.0	0.03	0.03	0.90	7.5 - 9.5	21.5 - 23.5	2.5 - 3.5	0.75	0.08 - 0.20	----	----	----
..045" Heat 08049 Weld Wire	0.011	1.65	0.015	0.001	0.50	8.70	22.69	3.10	0.15	0.16	----	----	-----
..62" Heat 966074 Weld Wire	0.011	1.62	0.018	0.001	0.50	8.64	22.98	3.09	0.11	0.161	----	----	-----
..62" Heat 966075 Weld Wire	0.011	1.62	0.018	0.001	0.50	8.64	22.98	3.09	0.11	0.161	----	----	-----

MECHANICAL TESTS

	Hardness Maximum BHN 290	Yield P.S.I. Minimum	Tensile P.S.I. Minimum	% Elong in 2" Minimum	Red of Area	Side Bend	Root Bend	Reverse Bend	Flattening
Mechanical Test Requirements	HRC 28	65 000	90 000	25%					
Base Metal – 818807	18	85608	117614	35.4					
Transverse Tensile Test	HRB 98	N/A	113 434	N/A		OK	OK		

EXAMINATIONS

Supplementary Testing	Radiographic Test	Ultrasonic Test	Dye Penetrant Test	Impact Test	Corrosion Test	Hydrostatic Test	Pressure P.S.I.
Specification Results						2 minute Hold Time	1300 Satisfactory

REMARKS
No weld repairs have been performed on base metal.
Mill certs to DIN 50049 3.1.B, EN10204 3.1.B & ISO10474 3.1.B
No materials or processes using elemental mercury or its compounds have been used in the processing of items supplied on this order.
product manufactured in U.S.A. We certify that the above material is in full compliance to the above listed specifications
SWEPCO TUBE LLC

....
Raymond V. Dulay Q.C. Coordinator

TEST REPORT
SWEPCO TUBE LLC

ONE CLIFTON BOULEVARD . CLIFTON, NEW JERSEY 07015

DATE: June 25, 2002
SOLD TO: 61215
FLORIDA WATER SERVICES, P.O. BOX 609520, ORLANDO, FL 32660-9520

SWEPCO SHOP ORDER NUMBER	SWEPCO SALES ORDER	DISTRIBUTOR P.O. NUMBER
5547	014612	46214

PRODUCT DESCRIPTION
SIZE : **16" SCH 20 (.312"W)**
SWEPCO WELDED DUPLEX 2205 (UNS S32205), MFD. PER ASTM A928-00-HT-O, CLASS 2
WELDED WITH THE ADDITION OF FILLER METAL. BOTH ENDS BEVELED PER ANSI B16.25, FIG. 2a.
NO OTHER SPECS., TESTS OR REQUIREMENTS REQUESTED OR SUPPLIED.

CHEMICAL ANALYSIS

A240-01 2205

	C Max	Mn Max	P Max	S Max	Si Max	Ni	Cr	Mo	Co	Cu	N
UNS S31803 Chemical Requirements - Plate	0.030	2.00	0.030	0.020	1.00	4.5-6.5	21.0-23.0	2.5-3.5	-----	-----	0.08-0.20
Heat Analysis - HT 818807	.020	1.45	.023	.001	.38	5.60	22.56	3.18	-----	-----	.19

cal Requirements - ER2209 UNS S39209 Weld Wire - Spec ASME SFA 5.9	C Max	Mn	P Max	S Max	Si Max	Ni	Cr	Mo	Cu Max	N	Ti	V	Co
	0.03	0.5 - 2.0	0.03	0.03	0.90	7.5 - 9.5	21.5 - 23.5	2.5 - 3.5	0.75	0.08 - 0.20	-----	-----	-----
045" Heat 08049 Weld Wire	0.011	1.65	0.015	0.001	0.50	8.70	22.69	3.10	0.15	0.16	----	----	-----
062" Heat 966074 Weld Wire	0.011	1.62	0.018	0.001	0.50	8.64	22.98	3.09	0.11	0.161	----	----	-----
062" Heat 966075 Weld Wire	0.011	1.62	0.018	0.001	0.50	8.64	22.98	3.09	0.11	0.161	----	----	-----

MECHANICAL TESTS

	Hardness Maximum BHN 290	Yield P.S.I. Minimum	Tensile P.S.I. Minimum	% Elong in 2" Minimum	Red of Area	Side Bend	Root Bend	Reverse Bend	Flattening
Mechanical Test Requirements	HRC 28	65 000	90 000	25%					
Base Metal – 818807	18	85608	117614	35.4					
Transverse Tensile Test	HRB 100	N/A	121 274	N/A		OK	OK		

EXAMINATIONS

Supplementary Testing	Radiographic Test	Ultrasonic Test	Dye Penetrant Test	Impact Test	Corrosion Test	Hydrostatic Test	Pressure P.S.I.
Specification Results						2 minute Hold Time	1300 Satisfactory

REMARKS
No weld repairs have been performed on base metal.
Mill certs to DIN 50049 3.1.B, EN10204 3.1.B & ISO10474 3.1.B
No materials or processes using elemental mercury or its compounds have been used in the processing of items supplied on this order.
'I product manufactured in U.S.A. We certify that the above material is in full compliance to the above listed specifications

SWEPCO TUBE LLC

....
Raymond V. Dulay Q.C. Coordinator

TEST REPORT
SWEPCO TUBE LLC

ONE CLIFTON BOULEVARD . CLIFTON, NEW JERSEY 07015

DATE: June 25, 2002
SOLD TO: 61215
FLORIDA WATER SERVICES, P.O. BOX 609520, ORLANDO, FL 32660-9520

SWEPCO SHOP ORDER NUMBER **5548**	SWEPCO SALES ORDER **014612**	DISTRIBUTOR P.O. NUMBER **46214**

PRODUCT DESCRIPTION
SIZE : **16" SCH 20 (.312"W)**
SWEPCO WELDED DUPLEX 2205 (UNS S32205), MFD. PER ASTM A928-00-HT-O, CLASS 2
WELDED WITH THE ADDITION OF FILLER METAL. BOTH ENDS BEVELED PER ANSI B16.25, FIG. 2a.
NO OTHER SPECS., TESTS OR REQUIREMENTS REQUESTED OR SUPPLIED.

CHEMICAL ANALYSIS

A240-01 2205

UNS S31803	C	Mn	P	S	Si	Ni	Cr	Mo	Co	Cu	N
	Max	Max	Max	Max	Max						
Chemical Requirements - Plate	0.030	2.00	0.030	0.020	1.00	4.5-6.5	21.0-23.0	2.5-3.5	-----	-----	0.08-0.20
Heat Analysis - HT 818811	.020	1.45	.023	.001	.38	5.60	22.56	3.18	-----	-----	.19

C al Requirements - ER2209 UNS S39209 Weld Wire - Spec ASME SFA 5.9	C Max 0.03	Mn 0.5 - 2.0	P Max 0.03	S Max 0.03	Si Max 0.90	Ni 7.5 - 9.5	Cr 21.5 - 23.5	Mo 2.5 - 3.5	Cu Max 0.75	N 0.08 - 0.20	Ti ----	V ----	Co ----
045" Heat 08049 Weld Wire	0.011	1.65	0.015	0.001	0.50	8.70	22.69	3.10	0.15	0.16	----	----	-----
062" Heat 966074 Weld Wire	0.011	1.62	0.018	0.001	0.50	8.64	22.98	3.09	0.11	0.161	----	----	-----
062" Heat 966075 Weld Wire	0.011	1.62	0.018	0.001	0.50	8.64	22.98	3.09	0.11	0.161	----	----	-----

MECHANICAL TESTS

	Hardness Maximum	Yield P.S.I.	Tensile P.S.I.	% Elong in 2"	Red of Area	Side Bend	Root Bend	Reverse Bend	Flattening
	BHN 290	Minimum	Minimum	Minimum					
Mechanical Test Requirements	HRC 28	65 000	90 000	25%					
Base Metal – 818811	18	85608	117614	35.4					
Transverse Tensile Test	HRB 100	N/A	116 111	N/A		OK	OK		

EXAMINATIONS

Supplementary Testing	Radiographic Test	Ultrasonic Test	Dye Penetrant Test	Impact Test	Corrosion Test	Hydrostatic Test	Pressure P.S.I.
Specification Results						2 minute Hold Time	1300 Satisfactory

REMARKS
No weld repairs have been performed on base metal.
Mill certs to DIN 50049 3.1.B, EN10204 3.1.B & ISO10474 3.1.B
No materials or processes using elemental mercury or its compounds have been used in the processing of items supplied on this order.
product manufactured in U.S.A. We certify that the above material is in full compliance to the above listed specifications

SWEPCO TUBE LLC

....
Raymond V. Dulay Q.C. Coordinator

TEST REPORT
SWEPCO TUBE LLC

ONE CLIFTON BOULEVARD . CLIFTON, NEW JERSEY 07015

DATE: June 25, 2002
SOLD TO: 61215
FLORIDA WATER SERVICES, P.O. BOX 609520, ORLANDO, FL 32660-9520

SWEPCO SHOP ORDER NUMBER	SWEPCO SALES ORDER	DISTRIBUTOR P.O. NUMBER
5549	014612	46214

PRODUCT DESCRIPTION
SIZE : 16" SCH 20 (.312"W)
SWEPCO WELDED DUPLEX 2205 (UNS S32205), MFD. PER ASTM A928-00-HT-O, CLASS 2
WELDED WITH THE ADDITION OF FILLER METAL. BOTH ENDS BEVELED PER ANSI B16.25, FIG. 2a.
NO OTHER SPECS., TESTS OR REQUIREMENTS REQUESTED OR SUPPLIED.

CHEMICAL ANALYSIS

A240-01 2205

	C	Mn	P	S	Si	Ni	Cr	Mo	Co	Cu	N
UNS S31803	Max	Max	Max	Max	Max						
Chemical Requirements - Plate	0.030	2.00	0.030	0.020	1.00	4.5-6.5	21.0-23.0	2.5-3.5	-----	-----	0.08-0.20
Heat Analysis - HT 818815	.020	1.45	.023	.001	.38	5.60	22.56	3.18	-----	-----	.19

	C	Mn	P	S	Si	Ni	Cr	Mo	Cu	N	Ti	V	Co
C al Requirements - ER2209 UNS S39209	Max		Max	Max	Max				Max				
Veld Wire - Spec ASME SFA 5.9	0.03	0.5 - 2.0	0.03	0.03	0.90	7.5 - 9.5	21.5 - 23.5	2.5 - 3.5	0.75	0.08 - 0.20	-----	-----	-----
045" Heat 08049 Weld Wire	0.011	1.65	0.015	0.001	0.50	8.70	22.69	3.10	0.15	0.16	----	----	-----
062" Heat 966074 Weld Wire	0.011	1.62	0.018	0.001	0.50	8.64	22.98	3.09	0.11	0.161	----	----	-----
062" Heat 966075 Weld Wire	0.011	1.62	0.018	0.001	0.50	8.64	22.98	3.09	0.11	0.161	----	----	-----

MECHANICAL TESTS

	Hardness Maximum	Yield P.S.I.	Tensile P.S.I.	% Elong in 2"	Red of Area	Side Bend	Root Bend	Reverse Bend	Flattening
	BHN 290	Minimum	Minimum	Minimum					
Mechanical Test Requirements	HRC 28	65 000	90 000	25%					
Base Metal – 818815	18	85608	117614	35.4					
Transverse Tensile Test	HRB 98	N/A	114 855	N/A		OK	OK		

EXAMINATIONS

Supplementary Testing	Radiographic Test	Ultrasonic Test	Dye Penetrant Test	Impact Test	Corrosion Test	Hydrostatic Test	Pressure P.S.I.
Specification Results						2 minute Hold Time	1300 Satisfactory

REMARKS
No weld repairs have been performed on base metal.
Mill certs to DIN 50049 3.1.B, EN10204 3.1.B & ISO10474 3.1.B
materials or processes using elemental mercury or its compounds have been used in the processing of items supplied on this order.
product manufactured in U.S.A. We certify that the above material is in full compliance to the above listed specifications

SWEPCO TUBE LLC

....
Raymond V. Dulay Q.C. Coordinator

TEST REPORT

SWEPCO TUBE LLC

ONE CLIFTON BOULEVARD . CLIFTON, NEW JERSEY 07015

DATE: June 25, 2002
SOLD TO: 61215
FLORIDA WATER SERVICES, P.O. BOX 609520, ORLANDO, FL 32660-9520

SWEPCO SHOP ORDER NUMBER	SWEPCO SALES ORDER	DISTRIBUTOR P.O. NUMBER
5550	**014613**	**46214**

PRODUCT DESCRIPTION
SIZE : **14" SCH 20 (.312"W)**
SWEPCO WELDED DUPLEX 2205 (UNS S32205), MFD. PER ASTM A928-00-HT-O, CLASS 2
WELDED WITH THE ADDITION OF FILLER METAL. BOTH ENDS BEVELED PER ANSI B16.25, FIG. 2a.
NO OTHER SPECS., TESTS OR REQUIREMENTS REQUESTED OR SUPPLIED.

CHEMICAL ANALYSIS

A240-01 2205

	C Max	Mn Max	P Max	S Max	Si Max	Ni	Cr	Mo	Co	Cu	N
UNS S31803 Chemical Requirements - Plate	0.030	2.00	0.030	0.020	1.00	4.5-6.5	21.0-23.0	2.5-3.5	-----	-----	0.08-0.20
Heat Analysis - HT 818794	.020	1.45	.023	.001	.38	5.60	22.56	3.18	-----	-----	.19

	C Max	Mn	P Max	S Max	Si Max	Ni	Cr	Mo	Cu Max	N	Ti	V	Co
al Requirements - R2209 UNS S39209 Veld Wire - Spec ASME SFA 5.9	0.03	0.5 - 2.0	0.03	0.03	0.90	7.5 - 9.5	21.5 - 23.5	2.5 - 3.5	0.75	0.08 - 0.20	----	----	----
045" Heat 08049 Weld Wire	0.011	1.65	0.015	0.001	0.50	8.70	22.69	3.10	0.15	0.16	----	----	-----
62" Heat 966074 Weld Wire	0.011	1.62	0.018	0.001	0.50	8.64	22.98	3.09	0.11	0.161	----	----	-----
62" Heat 966075 Weld Wire	0.011	1.62	0.018	0.001	0.50	8.64	22.98	3.09	0.11	0.161	----	----	-----

MECHANICAL TESTS

	Hardness Maximum BHN 290	Yield P.S.I. Minimum	Tensile P.S.I. Minimum	% Elong in 2" Minimum	Red of Area	Side Bend	Root Bend	Reverse Bend	Flattening
Mechanical Test Requirements	HRC 28	65 000	90 000	25%					
Base Metal – 818794	18	85608	117614	35.4					
Transverse Tensile Test	HRC 20	89 928	125 449	N/A		OK	OK		

EXAMINATIONS

Supplementary Testing	Radiographic Test	Ultrasonic Test	Dye Penetrant Test	Impact Test	Corrosion Test	Hydrostatic Test	Pressure P.S.I.
Specification Results						2 minute Hold Time	1500 Satisfactory

REMARKS
No weld repairs have been performed on base metal.
Mill certs to DIN 50049 3.1.B, EN10204 3.1.B & ISO10474 3.1.B
No materials or processes using elemental mercury or its compounds have been used in the processing of items supplied on this order.
product manufactured in U.S.A. We certify that the above material is in full compliance to the above listed specifications
SWEPCO TUBE LLC

....
Raymond V. Dulay Q.C. Coordinator

APPENDIX 2.3

X-RAY ANALYSES DATA FROM PSI

Information To Build On
Engineering • Consulting • Testing

Mark Pearce
Water Resource Solutions
428 Pine Island Road S.W.
Cape Coral
Florida 33991

Subject : Report of Radiographic Weld Inspection

Dear Sir,

Please find enclosed radiographic inspection reports for the Marco Island I W -1 Injection well Project.

I hope you were satisfied with our service and look forward to working with you in the future.

Sincerely,

Terry Griffin
Metals Department Manager

REPORT OF WELD RADIOGRAPHIC INSPECTION

TESTED FOR: DDC

PROJECT: Marco Island, FL

DATE: 8-18-02

OUR REPORT NO.: 761-NEW

WELD INTERPRETATION

Test Method Standard	PSI QC RT 3
Accepted Standard	API 1104
Drawing No.	
Lab No.	761
Client Order No.	
Type of Material	S/S
Source or KV	IR 192
Fitting	J-Groove
Reducer	
Valve	
Date Radiographed	8-18-02
File No.	

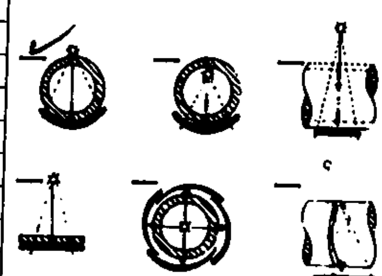
Viewing - Check One: ✓ 1 Wall ___ 2 Wall

Technique - Check One: ___ 1 Wall ✓ 2 Wall

Film View		Meets Code	Fails Code	Incomplete Fusion	Incomplete Penetration	Root Concavity	Root Convexity	Root Shrinkage	Crack	Slag Inclusion	Tungsten Inclusion	Porosity	Undercut	Surface Condition	Film Artifact	Remarks
W1	1-2	✓														
	2-3	✓														
	3-4	✓														
	4-1	✓														
W2	1-2	✓														
	2-3	✓														
	3-4	✓														
	4-1	✓														
W3	1-2	✓														
	2-3	✓														
	3-4	✓														
	4-1	✓														
W4	1-2	✓														
	2-3	✓														
	3-4	✓														
	4-1	✓														
W5	1-2	✓														
Reducer	2-3	✓														
	3-4	✓														
	4-1	✓														

Pipe Size	16"
Nominal Wall	3/8"
Reinforcement	1/8"
Backing Ring	NA
Total Thickness	1/2"
Curries or MA	53
Maximum Effective Focal Spot Size	.174
S-O Distance	16"
Unsharpness	.007"
Penetrameter	1 B
Shim Thickness	N/A
Sensitivity	GOOD .013"
Exposure Time	1100
Lead Backup	N/A
Screens	.01 x .01
Film Size	4½ x 17
Film Type	AGFA D7
Number Films	20

RADIOGRAPHY SET-UP USED: Source ✡ Film ▬



___ Others (Sketch)

Radiographer: Derrick Morcante Level II

Radiographer: Rex Wright Level II

Interpreter: [signature] Level II

REMARKS:

Respectfully submitted,
PSI

[signature]

REPORT OF WELD RADIOGRAPHIC INSPECTION

TESTED FOR: DDC

PROJECT: Marco Island, FL

DATE: 8-18-02

OUR REPORT NO.: 761 - NEW

WELD INTERPRETATION

Test Method Standard	PSI QC RT-3
Accepted Standard	API 1104
Drawing No.	
Lab No.	761
Client Order No.	
Type of Material	S/S
Source or KV	IR 192
Fitting	Groove
Reducer	
Valve	
Date Radiographed	8-18-02
File No.	

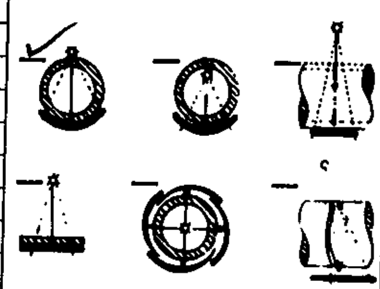
Viewing - Check One: ✓ 1 Wall ___ 2 Wall

Technique - Check One: ___ 1 Wall ✓ 2 Wall

Film View	Meets Code	Fails Code	Incomplete Fusion	Incomplete Penetration	Root Concavity	Root Convexity	Root Shrinkage	Crack	Slag Inclusion	Tungsten Inclusion	Porosity	Undercut	Surface Condition	Film Artifact	Remarks
W6 1-2	✓														
2-3	✓														
3-4	✓														
4-1	✓														
W7 1-2	✓														
2-3	✓														
3-4	✓														
4-1	✓														

Pipe Size	16"
Nominal Wall	3/8"
Reinforcement	1/8"
Backing Ring	N/A
Total Thickness	1/2"
Curries or MA	53
Maximum Effective Focal Spot Size	.134
S-O Distance	16"
Unsharpness	.0037"
Penetrameter	1B
Shim Thickness	N/A
Sensitivity	.013"
Exposure Time	1100
Lead Backup	N/A
Screens	.01 x .01
Film Size	4½ x 17
Film Type	AGFA D7
Number Films	8

RADIOGRAPHY SET-UP USED: Source ✡ Film ▬



___ Others (Sketch)

Radiographer: Derick Marcantel Level II Interpreter: Level II

Radiographer: Rex Wright Level II

REMARKS:

Respectfully submitted,
PSI

REPORT OF WELD RADIOGRAPHIC INSPECTION

TESTED FOR: DDC

PROJECT: Marco Island, FL

DATE: 8-19-02

OUR REPORT NO.: 761-NEW

WELD INTERPRETATION

Test Method Standard	PSI RT DC 3		Drawing No.		Lab No. 761
Accepted Standard	API 1104				
Client Order No.	Type of Material S/S	Source or KV IR 192	Fitting Groove	Reducer	Valve

Date Radiographed: 8-19-02

File No.

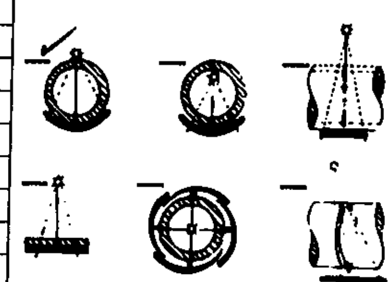
Viewing - Check One: ✓ 1 Wall ___ 2 Wall

Technique - Check One: ✓ 1 Wall ___ 2 Wall

Film View		Meets Code	Fails Code	Incomplete Fusion	Incomplete Penetration	Root Concavity	Root Convexity	Root Shrinkage	Crack	Slag Inclusion	Tungsten Inclusion	Porosity	Undercut	Surface Condition	Film Artifact	Remarks
W8	1-2	✓														
	2-3	✓														
	3-4	✓														
	4-1	✓														
W9	1-2	✓														
	2-3	✓														
	3-4	✓														
	4-1	✓														
W10	1-2	✓														
	2-3	✓														
	3-4	✓														
	4-1	✓														
W11	1-2	✓														
	2-3	✓														
	3-4	✓														
	4-1	✓														

Pipe Size	16"
Nominal Wall	3/8"
Reinforcement	1/8"
Backing Ring	N/A
Total Thickness	1/2"
Curries or MA	53
Maximum Effective Focal Spot Size	.174
S-O Distance	16"
Unsharpness	.0037"
Penetrameter	1B
Shim Thickness	N/A
Sensitivity	.013"
Exposure Time	1:10
Lead Backup	N/A
Screens	.01 x .01
Film Size	4½ x 17
Film Type	D7 AGFA
Number Films	16

RADIOGRAPHY SET-UP USED: Source ✡ Film ▬



___ Others (Sketch)

Radiographer: Derrick Marcenyl Level II Interpreter: [signature] Level II

Radiographer: Carey Fields Level I

REMARKS:

Respectfully submitted,
PSI

[signature]

REPORT OF WELD RADIOGRAPHIC INSPECTION

TESTED FOR: DDG

PROJECT: MARCO. IS.

DATE: 8-20-02

OUR REPORT NO.: 761 - NEW

WELD INTERPRETATION

Test Method Standard	PSI QC RT 3
Accepted Standard	API 1104
Drawing No.	
Lab No.	761
Client Order No.	
Type of Material	S/S
Source or KV	IR 192
Fitting	PIPE GROOVE
Reducer	/
Valve	/
Date Radiographed	8-20
File No.	

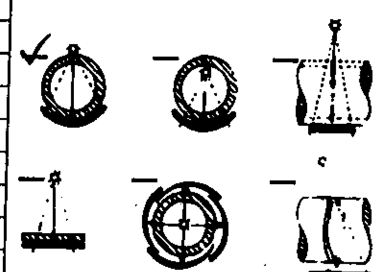
Viewing - Check One: ✓ 1 Wall ___ 2 Wall

Technique - Check One: ___ 1 Wall ✓ 2 Wall

Film View		Meets Code	Fails Code	Incomplete Fusion	Incomplete Penetration	Root Concavity	Root Convexity	Root Shrinkage	Crack	Slag Inclusion	Tungsten Inclusion	Porosity	Undercut	Surface Condition	Film Artifact	Remarks
W-12	1-2	✓														
	2-3	✓														
	3-4	✓														
	4-1	✓														
W-13	1-2	✓														
	2-3	✓														
	3-4	✓														
	4-1	✓														
W-14	1-2	✓														
	2-3	✓														
	3-4	✓														
	4-1	✓														

Pipe Size	16"
Nominal Wall	3/8"
Reinforcement	1/8"
Backing Ring	N/A
Total Thickness	1/2"
Curies or MA	53 Ci.
Maximum Effective Focal Spot Size	.1x.1 .174
S-O Distance	16"
Unsharpness	.007"
Penetrameter	1-B
Shim Thickness	N/A
Sensitivity	.013"
Exposure Time	1:00
Lead Backup	N/A
Screens	.010x.010"
Film Size	4½x17"
Film Type	AGFA D-7
Number Films	12

RADIOGRAPHY SET-UP USED: Source ☼ Film ▬



___ Others (Sketch)

Radiographer: REX WRIGHT Level II Interpreter: [signature] Level II

Radiographer: Level

REMARKS:

Respectfully submitted,
PSI

[signature]

PSI A-500-13 (2)

REPORT OF WELD RADIOGRAPHIC INSPECTION

TESTED FOR: DDC

PROJECT: Marco Island, FL

DATE: 8-20-02

OUR REPORT NO.: 761

Day Shift

WELD INTERPRETATION

Test Method Standard	PSI QC RT 3
Accepted Standard	API 1104
Drawing No.	
Lab No.	761
Client Order No.	
Type of Material	S/S
Source or KV	IR-192
Fitting	V-Groove
Reducer	
Valve	
Date Radiographed	8-20-02
File No.	

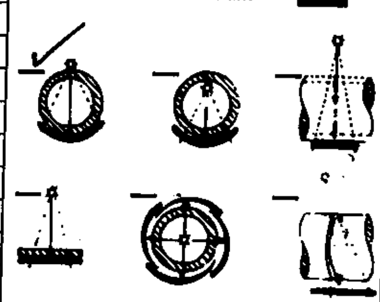
Viewing - Check One: ✓ 1 Wall ___ 2 Wall

Technique - Check One: ___ 1 Wall ✓ 2 Wall

Film View		Meets Code	Fails Code	Incomplete Fusion	Incomplete Penetration	Root Concavity	Root Convexity	Root Shrinkage	Crack	Slag Inclusion	Tungsten Inclusion	Porosity	Undercut	Surface Condition	Film Artifact	Remarks
W15	1-2	✓														
	2-3	✓														
	3-4	✓														
	4-1	✓														
W16	1-2	✓														
	2-3	✓														
	3-4	✓														
	4-1	✓														
W17	1-2	✓														
	2-3	✓														
	3-4	✓														
	4-1	✓														
W18	1-2	✓														
	2-3	✓														
	3-4	✓														
	4-1	✓														
W19	1-2	✓														
	2-3	✓														
	3-4	✓		X												
	4-1	✓														

Pipe Size	16
Nominal Wall	3/8"
Reinforcement	1/8"
Backing Ring	—
Total Thickness	.500
Curries or MA	53
Maximum Effective Focal Spot Size	.174
S-O Distance	contact 16"
Unsharpness	– .007"
Penetrameter	ASTM 1B
Shim Thickness	– .013"
Sensitivity	GOOD
Exposure Time	1 min
Lead Backup	–
Screens	.01 x .01
Film Size	4½ x 17
Film Type	AGFA D7
Number Films	20

RADIOGRAPHY SET-UP USED: Source ✡ Film ▬



___ Others (Sketch)

Radiographer: Derrick Mercante / Level II Interpreter: [signature] Level II

Radiographer: Casey Fields Level I

REMARKS:

Respectfully submitted,
PSI

[signature]

REPORT OF WELD RADIOGRAPHIC INSPECTION

TESTED FOR: DDC

PROJECT: MARCO ISLAND, FL

DATE: 8-20-02

OUR REPORT NO.: 761

Day Shift

WELD INTERPRETATION

Test Method Standard	PSI QC RT 3
Accepted Standard	API 1104
Drawing No.	
Lab No.	761
Client Order No.	
Type of Material	S/S
Source or KV	IR-192
Fitting	V-GROOVE
Reducer	
Valve	
Date Radiographed	8-20-02
File No.	

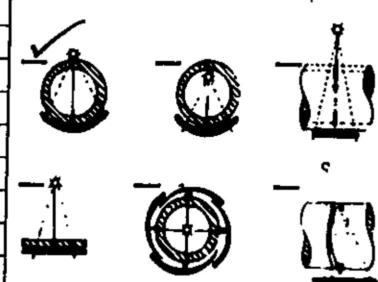
Viewing - Check One: ✓ 1 Wall ___ 2 Wall

Technique - Check One: ___ 1 Wall ✓ 2 Wall

Film View		Meets Code	Fails Code	Incomplete Fusion	Incomplete Penetration	Root Concavity	Root Convexity	Root Shrinkage	Crack	Slag Inclusion	Tungsten Inclusion	Porosity	Undercut	Surface Condition	Film Artifact	Remarks
W20	1-2	✓														
	2-3	✓														
	3-4	✓														
	4-1	✓														
W21	1-2	✓														
	2-3	✓														
	3-4	✓														
	4-1	✓														

Pipe Size	16
Nominal Wall	3/8"
Reinforcement	1/8"
Backing Ring	\
Total Thickness	.500
Curries or MA	53
Maximum Effective Focal Spot Size	.174
S-O Distance	Contact 16"
Unsharpness	— .017"
Penetrameter	ASTM 1B
Shim Thickness	— .013"
Sensitivity	Good
Exposure Time	1 min
Lead Backup	—
Screens	.01 x .01
Film Size	4½x17
Film Type	AFGA D7
Number Films	8

RADIOGRAPHY SET-UP USED: Source ☼ Film ▬



___ Others (Sketch)

Radiographer: Derrick Marcantel Level II Interpreter: [signature] Level II

Radiographer: Casey Fields Level I

REMARKS:

Respectfully submitted,
PSI

[signature]

REPORT OF WELD RADIOGRAPHIC INSPECTION

TESTED FOR: D.D.C. PROJECT: MARCO IS.

DATE: 8-21-02 OUR REPORT NO.:

WELD INTERPRETATION

Test Method Standard	PSI QC RT3
Accepted Standard	API 1104
Drawing No.	
Lab No.	7601
Client Order No.	
Type of Material	S/S
Source or KV	IR 192
Fitting	PIPE GROOVE
Reducer	/
Valve	/
Date Radiographed	8-20/8-21
File No.	

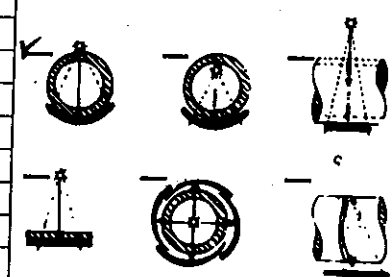
Viewing - Check One: ✓ 1 Wall ___ 2 Wall

Technique - Check One: ___ 1 Wall ✓ 2 Wall

Film View		Meets Code	Fails Code	Incomplete Fusion	Incomplete Penetration	Root Concavity	Root Convexity	Root Shrinkage	Crack	Slag Inclusion	Tungsten Inclusion	Porosity	Undercut	Surface Condition	Film Artifact	Remarks
W-22	1-2	✓														
	2-3	✓														
	3-4	✓														
	4-1	✓														
W-23	1-2	✓														
	2-3	✓														
	3-4	✓														
	4-1	✓														
W-24	1-2	✓														
	2-3	✓														
	3-4	✓														
	4-1	✓														

Pipe Size	16"
Nominal Wall	3/8"
Reinforcement	1/8"
Backing Ring	N/A
Total Thickness	1/2"
Curries or MA	53C'
Maximum Effective Focal Spot Size	.1x.1
S-O Distance	16"
Unsharpness	.007"
Penetrameter	1-B
Shim Thickness	N/A
Sensitivity	.013"
Exposure Time	1:00
Lead Backup	N/A
Screens	.010x.010"
Film Size	4 1/2x 17"
Film Type	AGFA-D-7
Number Films	12

RADIOGRAPHY SET-UP USED: Source ☼ Film ▬



___ Others (Sketch)

Radiographer: REX WRIGHT Level II Interpreter: [signature] Level II

Radiographer: Level

REMARKS:

Respectfully submitted,
PSI

[signature]

REPORT OF WELD RADIOGRAPHIC INSPECTION

TESTED FOR: DDC

PROJECT: Marco Island, FL

Day Shift

DATE: 8-21-02

OUR REPORT NO.: 761- NEW

WELD INTERPRETATION

Test Method Standard	PSI QC RT3
Accepted Standard	API 1104
Drawing No.	
Lab No.	761
Client Order No.	
Type of Material	S/S
Source or KV	IR-192
Fitting	V-Groove
Reducer	
Valve	
Date Radiographed	8-21-02
File No.	

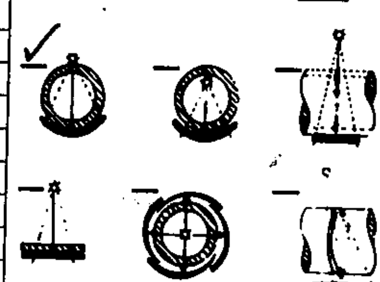
Viewing - Check One: ✓ 1 Wall ___ 2 Wall

Technique - Check One: ___ 1 Wall ✓ 2 Wall

Film View		Meets Code	Fails Code	Incomplete Fusion	Incomplete Penetration	Root Concavity	Root Convexity	Root Shrinkage	Crack	Slag Inclusion	Tungsten Inclusion	Porosity	Undercut	Surface Condition	Film Artifact	Remarks
W25	1-2	✓														
	2-3	✓														
	3-4	✓														
	4-1	✓														
W26	1-2	✓														
	2-3	✓														
	3-4	✓														
	4-1	✓														
W27	1-2	✓														
	2-3	✓														
	3-4	✓														
	4-1	✓														
W28	1-2	✓														
	2-3	✓														
	3-4	✓														
	4-1	✓														
W29	1-2	✓														
	2-3	✓														
	3-4	✓														
	4-1	✓														

Pipe Size	16"
Nominal Wall	3/8"
Reinforcement	1/8"
Backing Ring	—
Total Thickness	.500
Curries or MA	53
Maximum Effective Focal Spot Size	.174
S-O Distance	contact 16"
Unsharpness	— .007"
Penetrameter	ASTM 18
Shim Thickness	— .013"
Sensitivity	Good
Exposure Time	1 min
Lead Backup	—
Screens	.01/x.01
Film Size	4½ x 17
Film Type	AGFA D7
Number Films	20

RADIOGRAPHY SET-UP USED: Source ✱ Film ▬



___ Others (Sketch)

Radiographer: Derrick Marcantel Level II Interpreter: [signature] Level II

Radiographer: Casey Fields Level I

ARKS:

Respectfully submitted,
PSI

[signature]

REPORT OF WELD RADIOGRAPHIC INSPECTION

TESTED FOR: DDC

PROJECT: Marco Island, FL

DATE: 8-21-02 Day Shift OUR REPORT NO.: 761-NEW

WELD INTERPRETATION

Test Method Standard	PSI QC RT 3
Accepted Standard	API 1104
Drawing No.	
Lab No.	761
Client Order No.	
Type of Material	S/S
Source or KV	IR-192
Fitting	V-Groove
Reducer	
Valve	
Date Radiographed	8-21-02
File No.	

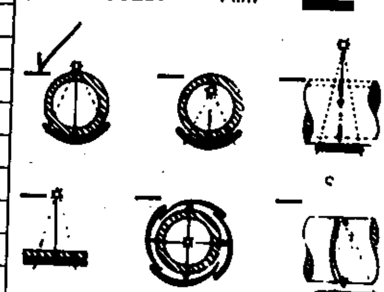
Viewing - Check One: ✓ 1 Wall __ 2 Wall

Technique - Check One: __ 1 Wall ✓ 2 Wall

Film View		Meets Code	Fails Code	Incomplete Fusion	Incomplete Penetration	Root Concavity	Root Convexity	Root Shrinkage	Crack	Slag Inclusion	Tungsten Inclusion	Porosity	Undercut	Surface Condition	Film Artifact	Remarks
W30	1-2	✓														
	2-3	✓														
	3-4	✓														
	4-1	✓														
W31	1-2	✓														
	2-3	✓														
	3-4	✓														
	4-1	✓														
W32	1-2	✓														
	2-3	✓														
	3-4	✓														
	4-1	✓														

Pipe Size	16"
Nominal Wall	5/8"
Reinforcement	1/8"
Backing Ring	N/A
Total Thickness	.500
Curries or MA	53
Maximum Effective Focal Spot Size	.174
S-O Distance	contact 16"
Unsharpness	— .007"
Penetrameter	ASTM 1B
Shim Thickness	—
Sensitivity	Good .013"
Exposure Time	1 min
Lead Backup	—
Screens	.01 x .01
Film Size	4½ x 17
Film Type	AGFA D7
Number Films	12

RADIOGRAPHY SET-UP USED: Source ☼ Film ▬



__ Others (Sketch)

Radiographer: Derrick Mascotel Level II Interpreter: [signature] Level II

Radiographer: Casey Fields Level I

REMARKS:

Respectfully submitted,
PSI

[signature]

REPORT OF WELD RADIOGRAPHIC INSPECTION

TESTED FOR: DDC

PROJECT: MARKO JS.

DATE: 8-22-02

OUR REPORT NO.:

WELD INTERPRETATION

Test Method Standard	PSI QC RT 3
Accepted Standard	API 1104
Drawing No.	
Lab No.	761
Client Order No.	
Type of Material	IR 192
Source or KV	5/6
Fitting	PIPE GRADE
Reducer	
Valve	
Date Radiographed	8-22
File No.	

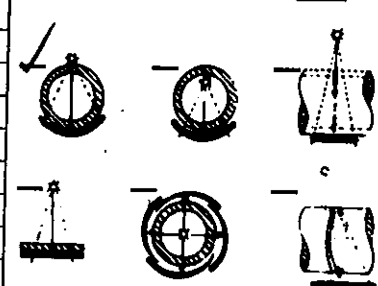
Viewing - Check One: ✓ 1 Wall ___ 2 Wall

Technique - Check One: ___ 1 Wall ✓ 2 Wall

Film View		Meets Code	Fails Code	Incomplete Fusion	Incomplete Penetration	Root Concavity	Root Convexity	Root Shrinkage	Crack	Slag Inclusion	Tungsten Inclusion	Porosity	Undercut	Surface Condition	Film Artifact	Remarks
W-33	1-2	✓														
	2-3	✓														
	3-4	✓														
	4-1	✓														
W-34	1-2	✓														
	2-3	✓														
	3-4	✓														
	4-1	✓														
W-35	1-2	✓														
	2-3	✓														
	3-4	✓														
	4-1	✓														
W-36	1-2	✓														
	2-3	✓														
	3-4	✓														
	4-1	✓														

Pipe Size	16"
Nominal Wall	3/8"
Reinforcement	1/8"
Backing Ring	N/A
Total Thickness	1/2"
Curries or MA	51 ci.
Maximum Effective Focal Spot Size	.1
S-O Distance	16"
Unsharpness	.007"
Penetrameter	1-B
Shim Thickness	N/A
Sensitivity	.013"
Exposure Time	1100
Lead Backup	N/A
Screens	.010x.010"
Film Size	4½x17"
Film Type	AGFA-D-7
Number Films	16

RADIOGRAPHY SET-UP USED: Source Film



___ Others (Sketch)

Radiographer: REX WRIGHT Level II Interpreter: [signature] Level II

Radiographer: Level

REMARKS:

Respectfully submitted,
PSI

[signature]

REPORT OF WELD RADIOGRAPHIC INSPECTION

TESTED FOR: DDC

PROJECT: Marco Island, FL

DATE: 8-22-02 Day Shift

OUR REPORT NO.: 761 NEW

WELD INTERPRETATION

Test Method Standard	PSI QC RT 3	Drawing No.	Lab No. 761
Accepted Standard	API 1104		
Client Order No.	Type of Material: S/S	Source or KV: IR-192	Fitting: V-Groove
Reducer	Valve		

Date Radiographed: 8-22-02

File No.

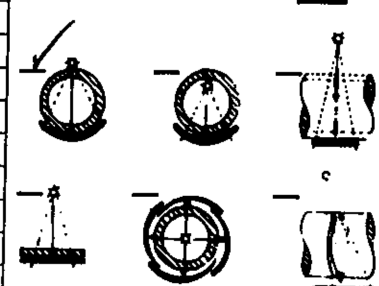
Viewing - Check One: ✓ 1 Wall ___ 2 Wall

Technique - Check One: ___ 1 Wall ✓ 2 Wall

Film View		Meets Code	Fails Code	Incomplete Fusion	Incomplete Penetration	Root Concavity	Root Convexity	Root Shrinkage	Crack	Slag Inclusion	Tungsten Inclusion	Porosity	Undercut	Surface Condition	Film Artifact	Remarks
W37	1-2	✓														
	2-3	✓														
	3-4	✓														
	4-1	✓														
W38	1-2	✓														
	2-3	✓														
	3-4	✓														
	4-1	✓														
W39	1-2	✓														
	2-3	✓														
	3-4	✓														
	4-1	✓														
W40	1-2	✓														
	2-3	✓														
	3-4	✓														
	4-1	✓														
W41	1-2	✓														
	2-3	✓														
	3-4	✓														
	4-1	✓														

Pipe Size	16"
Nominal Wall	3/8"
Reinforcement	1/8"
Backing Ring	/
Total Thickness	.500
Curies or MA	51
Maximum Effective Focal Spot Size	.174
S-O Distance	contact 16"
Unsharpness	- .007"
Penetrameter	ASTM 1B
Shim Thickness	-
Sensitivity	Good .013"
Exposure Time	1 min
Lead Backup	-
Screens	.01 x .01
Film Size	4½ x 17
Film Type	AGFA D7
Number Films	20

RADIOGRAPHY SET-UP USED: Source ☼ Film ▬



___ Others (Sketch)

Radiographer: Derrick Mascentel Level III Interpreter: [signature] Level II

Radiographer: Casey Fields Level I

REMARKS:

Respectfully submitted,
PSI

[signature]

REPORT OF WELD RADIOGRAPHIC INSPECTION

TESTED FOR: DDC

PROJECT: Marco Island, FL

DATE: 8-22-02 DAY SHIFT **OUR REPORT NO.:** 761-NEW

WELD INTERPRETATION

Test Method Standard	PSI QC RT 3
Accepted Standard	API 1104
Drawing No.	
Lab No.	761
Client Order No.	
Type of Material	S/S
Source or KV	IR-192
Fitting	V-Groove
Reducer	
Valve	
Date Radiographed	8-22-02
File No.	

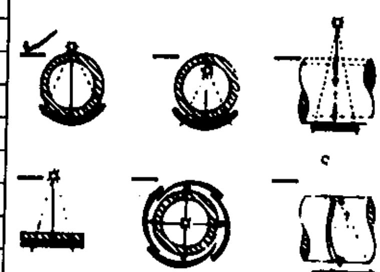
Viewing - Check One: ✓ 1 Wall ___ 2 Wall

Technique - Check One: ___ 1 Wall ✓ 2 Wall

Film View		Meets Code	Fails Code	Incomplete Fusion	Incomplete Penetration	Root Concavity	Root Convexity	Root Shrinkage	Crack	Slag Inclusion	Tungsten Inclusion	Porosity	Undercut	Surface Condition	Film Artifact	Remarks
W42	1-2	✓														
	2-3	✓														
	3-4	✓														
	4-1	✓														
W43	1-2	✓														
	2-3	✓														
	3-4	✓														
	4-1	✓														
W44	1-2	✓														
	2-3	✓														
	3-4	✓														
	4-1	✓														
W45	1-2	✓														
	2-3	✓														
	3-4	✓														
	4-1	✓														
W46	1-2	✓														
	2-3	✓														
	3-4	✓														
	4-1	✓														

Pipe Size	16"
Nominal Wall	5/8"
Reinforcement	1/8"
Backing Ring	–
Total Thickness	1/2"
Curries or MA	51
Maximum Effective Focal Spot Size	.174
S-O Distance	16"
Unsharpness	– .007"
Penetrameter	ASTM 18
Shim Thickness	–
Sensitivity	Good .013"
Exposure Time	1 min
Lead Backup	–
Screens	.01 x .01
Film Size	4½ x 17
Film Type	AGFA D7
Number Films	20

RADIOGRAPHY SET-UP USED: Source ☼ Film ▬



___ Others (Sketch)

Radiographer: Derrick Mercantel Level II Interpreter: [signature] Level II

Radiographer: Casey Fields Level I

REMARKS:

Respectfully submitted,
PSI

[signature]

REPORT OF WELD RADIOGRAPHIC INSPECTION

TESTED FOR: DDC

PROJECT: MARKO JS

DATE: 8-23-02

OUR REPORT NO.:

WELD INTERPRETATION

Test Method Standard	PSI QC RT 1	Drawing No.		Lab No.	761
Accepted Standard	API 1104				
Client Order No.	Type of Material: S/S	Source or KV: IR 192	Fitting: PIPE GROOVE	Reducer	Valve
Date Radiographed: 8-23-02					
File No.					

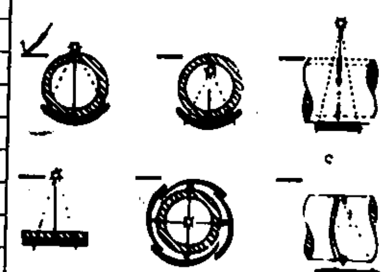
Viewing - Check One: ✓ 1 Wall ___ 2 Wall

Technique - Check One: ___ 1 Wall ✓ 2 Wall

Film View		Meets Code	Fails Code	Incomplete Fusion	Incomplete Penetration	Root Concavity	Root Convexity	Root Shrinkage	Crack	Slag Inclusion	Tungsten Inclusion	Porosity	Undercut	Surface Condition	Film Artifact	Remarks
W-47	1-2	✓														
	2-3	✓														
	3-4	✓														
	4-1	✓														
W-48	1-2	✓														
	2-3	✓														
	3-4	✓														
	4-1	✓														
W-49	1-2	✓														
	2-3	✓														
	3-4	✓														
	4-1	✓														
W-50	1-2	✓														
	2-3	✓														
	3-4	✓														
	4-1	✓														

Pipe Size	16"
Nominal Wall	3/8"
Reinforcement	1/8"
Backing Ring	N/A
Total Thickness	1/2"
Curries or MA	51 ci.
Maximum Effective Focal Spot Size	.1x.1
S-O Distance	16"
Unsharpness	.002"
Penetrameter	1-B
Shim Thickness	N/A
Sensitivity	.013"
Exposure Time	1:00
Lead Backup	N/A
Screens	.010x.010"
Film Size	4½x17"
Film Type	AGFA D7
Number Films	12

RADIOGRAPHY SET-UP USED: Source ✡ Film ▬



___ Others (Sketch)

Radiographer: REX WRIGHT Level II Interpreter: [signature] Level II

Radiographer: Level

REMARKS:

Respectfully submitted,
PSI

[signature]

REPORT OF WELD RADIOGRAPHIC INSPECTION

TESTED FOR: DDC

PROJECT: Marco Island, FL

DATE: 8-23-02 Day Shift

OUR REPORT NO.: 761- NEW

WELD INTERPRETATION

Test Method Standard: PSI QC RT 3		Drawing No.	Lab No. 761
Accepted Standard: API 1104			
Client Order No.	Type of Material: S/S	Source or KV: IR-192	Fitting: V-Groove
Reducer	Valve		
Date Radiographed: 8-23-02			
File No.			

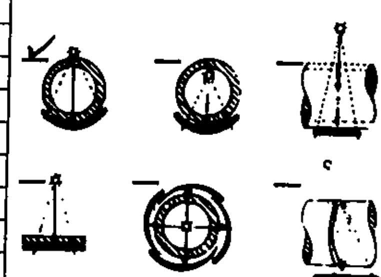
Viewing - Check One: ✓ 1 Wall ___ 2 Wall

Technique - Check One: ___ 1 Wall ✓ 2 Wall

Film View		Meets Code	Fails Code	Incomplete Fusion	Incomplete Penetration	Root Concavity	Root Convexity	Root Shrinkage	Crack	Slag Inclusion	Tungsten Inclusion	Porosity	Undercut	Surface Condition	Film Artifact	Remarks
WS1	1-2	✓														
	2-3	✓														
	3-4	✓														
	4-1	✓														
WS2	1-2	✓														
	2-3	✓														
	3-4	✓														
	4-1	✓														
WS3	1-2	✓														
	2-3	✓														
	3-4	✓														
	4-1	✓														
WS4	1-2	✓														
	2-3	✓														
	3-4	✓														
	4-1	✓														
WS5	1-2	✓														
	2-3	✓														
	3-4	✓														
	4-1	✓														

Pipe Size	16"
Nominal Wall	3/8"
Reinforcement	1/8"
Backing Ring	-
Total Thickness	1/2"
Curries or MA	51
Maximum Effective Focal Spot Size	.174
S-O Distance	16"
Unsharpness	.007"
Penetrameter	ASTM 1B
Shim Thickness	-
Sensitivity	.013"
Exposure Time	1:30 min
Lead Backup	-
Screens	.01 x .01
Film Size	4½ x 17
Film Type	AGFA D7
Number Films	20

RADIOGRAPHY SET-UP USED: Source ☼ Film ▬



___ Others (Sketch)

Radiographer: Derrick Maccarter Level II Interpreter: [signature] Level II

Radiographer: Casey Fields Level I

ARKS:

Respectfully submitted,
PSI

[signature]

REPORT OF WELD RADIOGRAPHIC INSPECTION

TESTED FOR: DDC

PROJECT: Marco Island, FL

DATE: 8-23-02 Day Shift OUR REPORT NO.: 761-NEW

WELD INTERPRETATION

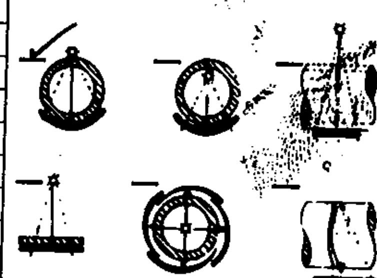
Test Method Standard: PSI QC RT3
Accepted Standard: API 1104
Drawing No.:
Lab No.: 761
Client Order No.:
Type of Material: S/S
Source or KV: IR 192
Fitting: V-Groove
Reducer:
Valve:
Date Radiographed: 8-23-02
File No.:

Viewing - Check One: ✓ 1 Wall ___ 2 Wall
Technique - Check One: ___ 1 Wall ✓ 2 Wall

Film View		Meets Code	Fails Code	Incomplete Fusion	Incomplete Penetration	Root Concavity	Root Convexity	Root Shrinkage	Crack	Slag Inclusion	Tungsten Inclusion	Porosity	Undercut	Surface Condition	Film Artifact	Remarks
WS6	1-2	✓														
	2-3	✓														
	3-4	✓														
	4-1	✓														
WS7	1-2	✓														
	2-3	✓														
	3-4	✓														
	4-1	✓														
WS8	1-2	✓														
	2-3	✓														
	3-4	✓														
	4-1	✓														
WS9	1-2	✓														
	2-3	✓														
	3-4	✓														
	4-1	✓														

- Pipe Size: 16"
- Nominal Wall: 3/8"
- Reinforcement: 1/8"
- Backing Ring: N/A
- Total Thickness: 1/2"
- Curries or MA: 51
- Maximum Effective Focal Spot Size: .174
- S-O Distance: 16"
- Unsharpness: .007"
- Penetrameter: ASTM 1B
- Shim Thickness: N/A
- Sensitivity: .013"
- Exposure Time: 1:30 min
- Lead Backup: N/A
- Screens: .01 x .01
- Film Size: 4½ x 17
- Film Type: AGFA D7
- Number Films: 16

RADIOGRAPHY SET-UP USED: Source ✡ Film ▬



___ Others (Sketch)

Radiographer: DERRICK MARCANTEL Level II Interpreter: [signature] Level II

Radiographer: CASEY FIELDS Level I

ARKS:

Respectfully submitted,
PSI

[signature]

REPORT OF WELD RADIOGRAPHIC INSPECTION

TESTED FOR: DDC.

PROJECT: MARCO ISLAND

DATE: 8-24-02

Night Shift

OUR REPORT NO.: 761 NEW

WELD INTERPRETATION

Test Method Standard: PSI QC RT 3

Accepted Standard: API 1104

Drawing No.:

Lab No.: 761

Client Order No.:

Type of Material: S/S

Source or KV: IR 192

Fitting: PIPE GROOVE

Reducer: /

Valve: /

Date Radiographed: 8-24

File No.:

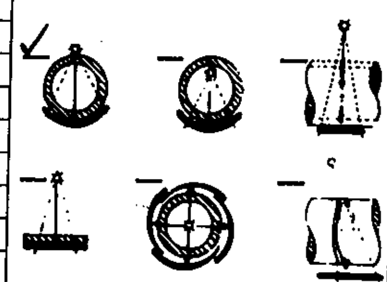
Viewing - Check One: ✓ 1 Wall ___ 2 Wall

Technique - Check One: ___ 1 Wall ✓ 2 Wall

Film View		Meets Code	Fails Code	Incomplete Fusion	Incomplete Penetration	Root Concavity	Root Convexity	Root Shrinkage	Crack	Slag Inclusion	Tungsten Inclusion	Porosity	Undercut	Surface Condition	Film Artifact	Remarks
W-60	1-2	✓														
	2-3	✓														
	3-4	✓														
	4-1	✓														
W-61	1-2	✓														
	2-3	✓														
	3-4	✓														
	4-1	✓														
W-62	1-2	✓														
	2-3	✓														
	3-4	✓														
	4-1	✓														
W-63	1-2	✓														
	2-3	✓														
	3-4	✓														
	4-1	✓														
W-64	1-2	✓														
	2-3	✓														
	3-4	✓														
	4-1	✓														

Pipe Size	16"
Nominal Wall	3/8"
Reinforcement	1/8"
Backing Ring	N/A
Total Thickness	1/2"
Curries or MA	51 C.
Maximum Effective Focal Spot Size	.1 x .1
S-O Distance	16"
Unsharpness	.007"
Penetrameter	1-B
Shim Thickness	N/A
Sensitivity	.013"
Exposure Time	1:00
Lead Backup	N/A
Screens	.010 x 010"
Film Size	4 1/2 x 17"
Film Type	AGFA-D-7
Number Films	20

RADIOGRAPHY SET-UP USED: Source ☆ Film ▬



___ Others (Sketch)

Radiographer: REX WRIGHT Level II Interpreter: [signature] Level II

Radiographer: Level

REMARKS:

Respectfully submitted,
PSI

[signature]

REPORT OF WELD RADIOGRAPHIC INSPECTION

TESTED FOR: DDC

PROJECT: Masco Islands FL

DATE: 8-24-02 Night shift OUR REPORT NO.: 761-NEW

WELD INTERPRETATION

Test Method Standard	PSI QC RT 3
Accepted Standard	API 1104
Drawing No.	
Lab No.	761
Client Order No.	
Type of Material	S/S
Source or KV	IR-192
Fitting	V-Groove
Reducer	
Valve	
Date Radiographed	8-24-02
File No.	

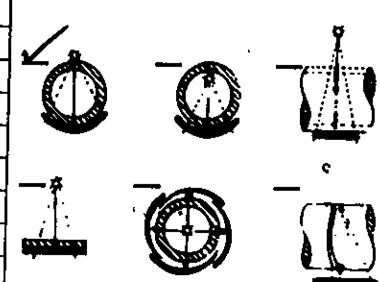
Viewing - Check One: ✓ 1 Wall ___ 2 Wall

Technique - Check One: ___ 1 Wall ✓ 2 Wall

Film View	Meets Code	Fails Code	Incomplete Fusion	Incomplete Penetration	Root Concavity	Root Convexity	Root Shrinkage	Crack	Slag Inclusion	Tungsten Inclusion	Porosity	Undercut	Surface Condition	Film Artifact	Remarks
W65 1-2	✓														
2-3	✓														
3-4	✓														
4-1	✓														

Pipe Size	16"
Nominal Wall	3/8"
Reinforcement	1/8"
Backing Ring	—
Total Thickness	1/2"
Curries or MA	51
Maximum Effective Focal Spot Size	.174"
S-O Distance	16"
Unsharpness	.007"
Penetrameter	ASTM B
Shim Thickness	N/A
Sensitivity	.013"
Exposure Time	1:00
Lead Backup	—
Screens	.01 x .01
Film Size	4½ x 17
Film Type	AGFA D7
Number Films	4

RADIOGRAPHY SET-UP USED: Source Film



___ Others (Sketch)

Radiographer: Rex Wright Level II Interpreter: [signature] Level II

Radiographer: Level

REMARKS:

Respectfully submitted,
PSI

[signature]

REPORT OF WELD RADIOGRAPHIC INSPECTION

TESTED FOR: DDC

PROJECT: Marco Island, FL

DATE: 8-24-02 Day Shift

OUR REPORT NO.: 761- NEW

WELD INTERPRETATION

Test Method Standard	PSI QC RT 3	Drawing No.	Lab No. 761
Accepted Standard	API 1104		
Client Order No.	Type of Material: S/S	Source or KV: IR 192	Fitting: V-Groove / Reducer / Valve
Date Radiographed: 8-24			
File No.			

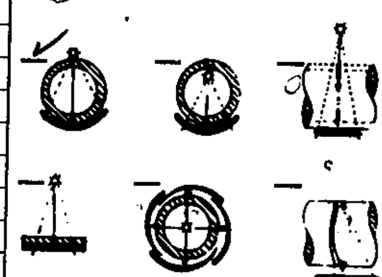
Viewing - Check One: ✓ 1 Wall ___ 2 Wall

Technique - Check One: ___ 1 Wall ✓ 2 Wall

Film View		Meets Code	Fails Code	Incomplete Fusion	Incomplete Penetration	Root Concavity	Root Convexity	Root Shrinkage	Crack	Slag Inclusion	Tungsten Inclusion	Porosity	Undercut	Surface Condition	Film Artifact	Remarks
W66	1-2	✓														
	2-3	✓														
	3-4	✓														
	4-1	✓														
W67	1-2	✓														
	2-3	✓														
	3-4	✓														
	4-1	✓														
W68	1-2	✓														
	2-3	✓														
	3-4	✓														
	4-1	✓														
W69	1-2	✓														
	2-3	✓														
	3-4	✓														
	4-1	✓														
W70	1-2	✓														
	2-3	✓														
	3-4	✓														
	4-1	✓														

Pipe Size	16"
Nominal Wall	3/8"
Reinforcement	1/8"
Backing Ring	N/A
Total Thickness	1/2"
Curries or MA	51
Maximum Effective Focal Spot Size	.174"
S-O Distance	16"
Unsharpness	.007"
Penetrameter	ASTM 1B
Shim Thickness	N/A
Sensitivity	.013"
Exposure Time	1:30
Lead Backup	N/A
Screens	.01 X .01
Film Size	4½x17
Film Type	AGFA D7
Number Films	20

RADIOGRAPHY SET-UP USED: Source ✡ Film ▬



___ Others (Sketch)

Radiographer: DERRICK MARCANTEL Level II Interpreter: [signature] Level II

Radiographer: CASEY FIELDS Level I

REMARKS:

Respectfully submitted,
PSI

[signature]

REPORT OF WELD RADIOGRAPHIC INSPECTION

TESTED FOR: DDC

PROJECT: Marco Island, FL

DATE: 8-24-02 Day OUR REPORT NO.: 761- NEW

WELD INTERPRETATION

Test Method Standard	PSI QC RT 3
Accepted Standard	API 1104
Drawing No.	
Lab No.	761
Client Order No.	
Type of Material	S/S
Source or KV	IR 192
Fitting	V-Groove
Reducer	
Valve	
Date Radiographed	8-24
File No.	

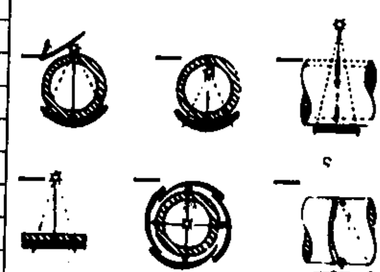
Viewing - Check One: ✓ 1 Wall ___ 2 Wall

Technique - Check One: ___ 1 Wall ✓ 2 Wall

Film View		Meets Code	Fails Code	Incomplete Fusion	Incomplete Penetration	Root Concavity	Root Convexity	Root Shrinkage	Crack	Slag Inclusion	Tungsten Inclusion	Porosity	Undercut	Surface Condition	Film Artifact	Remarks
W71	1-2	✓														
	2-3	✓														
	3-4	✓														
	4-1	✓														
W72	1-2	✓														
	2-3	✓														
	3-4	✓														
	4-1	✓														
W73	1-2	✓														
	2-3	✓														
	3-4	✓														
	4-1	✓														
W74	1-2	✓														
	2-3	✓														
	3-4	✓														
	4-1	✓														

Pipe Size	16"
Nominal Wall	3/8"
Reinforcement	1/8"
Backing Ring	N/A
Total Thickness	1/2"
Curies or MA	51
Maximum Effective Focal Spot Size	.174
S-O Distance	16"
Unsharpness	.007"
Penetrameter	ASTM 1B
Shim Thickness	N/A
Sensitivity	.013"
Exposure Time	1:30
Lead Backup	NA
Screens	.01 x .01
Film Size	4½ x 17
Film Type	AGFA D7
Number Films	16

RADIOGRAPHY SET-UP USED: Source ✡ Film ▬



___ Others (Sketch)

Radiographer: DERRICK MARLANTEL Level II Interpreter: [signature] Level II

Radiographer: CASEY FIELDS Level I

REMARKS:

Respectfully submitted,
PSI

[signature]

REPORT OF WELD RADIOGRAPHIC INSPECTION

TESTED FOR: DDC

PROJECT: MARCO JS.

DATE: 8-25-02

OUR REPORT NO.:

WELD INTERPRETATION

Test Method Standard	PSI QC RT 3
Accepted Standard	API 1104
Drawing No.	
Lab No.	761
Client Order No.	
Type of Material	S/S
Source or KV	IR 192
Fitting	PIPE GROOVE
Reducer	/
Valve	
Date Radiographed	8-25
File No.	

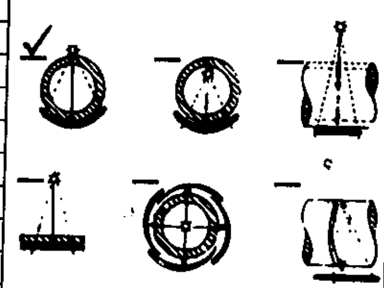
Viewing - Check One: ✓ 1 Wall ___ 2 Wall

Technique - Check One: ___ 1 Wall ✓ 2 Wall

Film View		Meets Code	Fails Code	Incomplete Fusion	Incomplete Penetration	Root Concavity	Root Convexity	Root Shrinkage	Crack	Slag Inclusion	Tungsten Inclusion	Porosity	Undercut	Surface Condition	Film Artifact	Remarks
W-75	1-2	✓														
	2-3	✓														
	3-4	✓														
	4-1	✓														
W-76	1-2	✓														
	2-3	✓														
	3-4	✓														
	4-1	✓														
W-77	1-2	✓														
	2-3	✓														
	3-4	✓														
	4-1	✓														
W-78	1-2	✓														
	2-3	✓														
	3-4	✓														
	4-1	✓														

Pipe Size	16"
Nominal Wall	3/8"
Reinforcement	1/8"
Backing Ring	N/A
Total Thickness	1/2"
Curries or MA	50 Ci.
Maximum Effective Focal Spot Size	.1x.1
S-O Distance	16"
Unsharpness	.007"
Penetrameter	ASTM 1-8
Shim Thickness	N/A
Sensitivity	.013"
Exposure Time	1:00
Lead Backup	N/A
Screens	.010X.010"
Film Size	4 1/2x17"
Film Type	AGFA-D-7
Number Films	32

RADIOGRAPHY SET-UP USED: Source ☆ Film ▬



___ Others (Sketch)

Radiographer: Rex Wright Level II Interpreter: [signature] Level II

Radiographer: Level

REMARKS:

Respectfully submitted,
PSI

[signature]

REPORT OF WELD RADIOGRAPHIC INSPECTION

TESTED FOR: DDC

PROJECT: Marco Island, FL

DATE: 8-25-02

OUR REPORT NO.: 761-NEW

WELD INTERPRETATION

Test Method Standard	PSI QC RT-3
Accepted Standard	API 1104
Drawing No.	
Lab No.	761
Client Order No.	
Type of Material	S/S
Source or KV	IR 192
Fitting	Groove
Reducer	
Valve	
Date Radiographed	8-25
File No.	

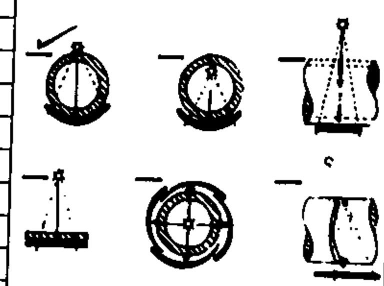
Viewing - Check One: ✓ 1 Wall ___ 2 Wall

Technique - Check One: ___ 1 Wall ✓ 2 Wall

Film View		Meets Code	Fails Code	Incomplete Fusion	Incomplete Penetration	Root Concavity	Root Convexity	Root Shrinkage	Crack	Slag Inclusion	Tungsten Inclusion	Porosity	Undercut	Surface Condition	Film Artifact	Remarks
W 79	1-2	✓														
	2-3	✓														
	3-4	✓														
	4-1	✓														
W 80	1-2	✓														
	2-3	✓														
	3-4	✓														
	4-1	✓														
W 81	1-2	✓														
	2-3	✓														
	3-4	✓														
	4-1	✓														
W 82	1-2	✓														
	2-3	✓														
	3-4	✓														
	4-1	✓														

Pipe Size	16"
Nominal Wall	3/8"
Reinforcement	1/8"
Backing Ring	N/A
Total Thickness	1/2"
Curies or MA	50 ci
Maximum Effective Focal Spot Size	.174
S-O Distance	16"
Unsharpness	.007"
Penetrameter	1B
Shim Thickness	N/A
Sensitivity	.013"
Exposure Time	1:30
Lead Backup	N/A
Screens	.01 x .01
Film Size	4½ x 17
Film Type	D7 AGFA
Number Films	16

RADIOGRAPHY SET-UP USED: Source / Film



___ Others (Sketch)

Radiographer: Derrick Marcantel Level II Interpreter: [signature] Level II

Radiographer: Casey Fields Level I

REMARKS:

Respectfully submitted,
PSI

[signature]

REPORT OF WELD RADIOGRAPHIC INSPECTION

TESTED FOR: DDC

PROJECT: Marco Island, FL

DATE: 8-25-02

OUR REPORT NO.: 761 - NEW

WELD INTERPRETATION

Test Method Standard	PSI QC RT 3
Accepted Standard	API 1104
Drawing No.	
Lab No.	761
Client Order No.	
Type of Material	S/S
Source or KV	IR-192
Fitting	V-Groove
Reducer	
Valve	
Date Radiographed	8-25
File No.	

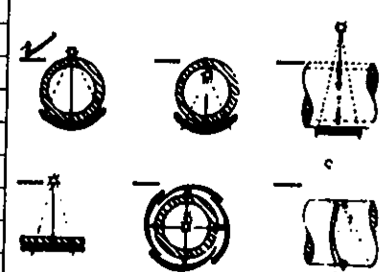
Viewing - Check One: ✓ 1 Wall ___ 2 Wall

Technique - Check One: ___ 1 Wall ✓ 2 Wall

Film View		Meets Code	Fails Code	Incomplete Fusion	Incomplete Penetration	Root Concavity	Root Convexity	Root Shrinkage	Crack	Slag Inclusion	Tungsten Inclusion	Porosity	Undercut	Surface Condition	Film Artifact	Remarks
W 83	1-2	✓														
	2-3	✓														
	3-4	✓														
	4-1	✓														
W 84	1-2	✓														
	2-3	✓														
	3-4	✓														
	4-1	✓														
W 85	1-2	✓														
	2-3	✓														
	3-4	✓														
	4-1	✓														
W 86	1-2	✓														
	2-3	✓														
	3-4	✓														
	4-1	✓														
W 87	1-2	✓														
	2-3	✓														
	3-4	✓														
	4-1	✓														

Pipe Size	16"
Nominal Wall	3/8"
Reinforcement	1/8"
Backing Ring	N/A
Total Thickness	1/2"
Curies or MA	50
Maximum Effective Focal Spot Size	.174
S-O Distance	16"
Unsharpness	.007"
Penetrameter	ASTM 1B
Shim Thickness	N/A
Sensitivity	.013"
Exposure Time	1:30
Lead Backup	N/A
Screens	.01 x .01
Film Size	4½ x 17
Film Type	AGFA D7
Number Films	20

RADIOGRAPHY SET-UP USED: Source ☼ Film ▬



___ Others (Sketch)

Radiographer: Derrick Marcantel Level II

Radiographer: Casey Fields Level I

Interpreter: [signature] Level III

REMARKS:

Respectfully submitted,
PSI

[signature]

REPORT OF WELD RADIOGRAPHIC INSPECTION

TESTED FOR: DDC

PROJECT: Marco Island, FL

DATE: 8-25-02

OUR REPORT NO.: 761-NEXW

WELD INTERPRETATION

Test Method Standard: PSI QC RT 3

Accepted Standard: API 1104

Drawing No.:

Lab No.: 761

Client Order No.:

Type of Material: S/S

Source or KV: IR 192

Fitting: V-Groove

Reducer:

Valve:

Date Radiographed: 8-25

File No.:

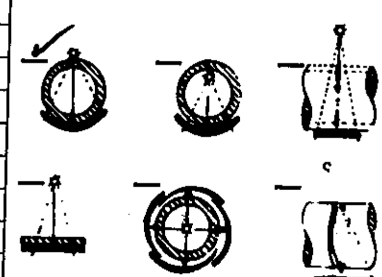
Viewing - Check One: ✓ 1 Wall ___ 2 Wall

Technique - Check One: ___ 1 Wall ✓ 2 Wall

Film View	Meets Code	Fails Code	Incomplete Fusion	Incomplete Penetration	Root Concavity	Root Convexity	Root Shrinkage	Crack	Slag Inclusion	Tungsten Inclusion	Porosity	Undercut	Surface Condition	Film Artifact	Remarks
W88 1-2	✓														
2-3	✓														
3-4	✓														
4-1	✓														
W89 1-2	✓														
2-3	✓														
3-4	✓														
4-1	✓														

Pipe Size	16"
Nominal Wall	3/8"
Reinforcement	1/8"
Backing Ring	N/A
Total Thickness	1/2"
Curries or MA	50
Maximum Effective Focal Spot Size	.174
S-O Distance	16"
Unsharpness	.007"
Penetrameter	ASTM 1B
Shim Thickness	N/A
Sensitivity	.013"
Exposure Time	1:30
Lead Backup	N/A
Screens	.01 x .01
Film Size	4½ x 17
Film Type	AGFA D7
Number Films	8

RADIOGRAPHY SET-UP USED: Source ✓ Film



___ Others (Sketch)

Radiographer: DERRICK MARCANTEL Level II

Interpreter: [signature] Level II

Radiographer: CAREY FIELDS Level I

REMARKS:

Total Film for Job = 356

Respectfully submitted,
PSI

[signature]

APPENDIX 2.4

CEMENTING STAGE TEMPERATURE LOGS

Southern Resource Exploration Inc.
P.O. Box 14311
Gainesville, Florida 32604
Phone 352-372-5950

TEMPERATURE LOG

COMPANY : DIVERSIFIED DRILLING
WELL : IW-1
LOCATION/FIELD : MARCO ISLAND
COUNTY : COLLIER
STATE : FL
SECTION : .
TOWNSHIP : .
RANGE : ..

OTHER SERVICES:

DATE : 08/28/02
DEPTH DRILLER : 2570'
LOG BOTTOM : 2576.00
LOG TOP : 1509.60

PERMANENT DATUM : -
ELEV. PERM. DATUM: .
LOG MEASURED FROM: PAD
DRL MEASURED FROM: PAD

ELEVATIONS
KB : 8.5
DF : 8.5
GL :

CASING DRILLER : -
CASING TYPE : STEEL
CASING THICKNESS: .375

LOGGING UNIT : BWT
FIELD OFFICE : GVL
RECORDED BY : MAF

BIT SIZE : -
MAGNETIC DECL. :
MATRIX DENSITY :
FLUID DENSITY :
NEUTRON MATRIX :
REMARKS :

BOREHOLE FLUID : WATER
RM :
RM TEMPERATURE :
MATRIX DELTA T :
FLUID DELTA T : 189

FILE : ORIGINAL
TYPE : ANIMT
LOG : 0
PLOT : TEMP 3
THRESH: 5000

Southern Resource Exploration

P.O. Box 14311
Gainesville, Florida 32604
Phone 352-372-5950

TEMPERATURE

COMPANY	: DIVERSIFIED DRILLING			OTHER SERVICES:	
WELL	: IW-1				
LOCATION/FIELD	: MARCO ISLAND				
COUNTY	: COLLIER				
STATE	: FL				
SECTION	: .	TOWNSHIP	: .	RANGE	: ..
DATE	: 08/29/02	PERMANENT DATUM	: -		
DEPTH DRILLER	: 2570'			KB	: 8.5
LOG BOTTOM	: 2576.20	LOG MEASURED FROM	: PAD	DF	: 8.5
LOG TOP	: 1502.60	DRL MEASURED FROM	: PAD	GL	:
CASING DIAMETER	: 16	LOGGING UNIT	: BWT		
CASING TYPE	: STEEL	FIELD OFFICE	: GVL		
CASING THICKNESS	: .375	RECORDED BY	: MAF		
BIT SIZE	: -	BOREHOLE FLUID	: WATER	FILE	: ORIGINAL
MAGNETIC DECL.	:	RM	:	TYPE	: ANIMT
MATRIX DENSITY	:	RM TEMPERATURE	:		
NEUTRON MATRIX	:	MATRIX DELTA T	:	THRESH:	5000

Southern Resource Exploration Inc.

P.O. Box 14311
Gainesville, Florida 32604
Phone 352-372-5950

TEMPERATURE LOG

COMPANY	: DIVERSIFIED DRILLING	OTHER SERVICES:			
WELL	: IW-1				
LOCATION/FIELD	: MARCO ISLAND				
COUNTY	: COLLIER				
STATE	: FL				
SECTION	: .	TOWNSHIP	: .	RANGE	: ..
DATE	: 08/29/02	PERMANENT DATUM	: -	ELEVATIONS	
DEPTH DRILLER	: 2570'	ELEV. PERM. DATUM	: .	KB	: 8.5
LOG BOTTOM	: 2571.60	LOG MEASURED FROM	: PAD	DF	: 8.5
LOG TOP	: 997.40	DRL MEASURED FROM	: PAD	GL	:
CASING DRILLER	: -	LOGGING UNIT	: BWT		
CASING TYPE	: STEEL	FIELD OFFICE	: GVL		
CASING THICKNESS	: .375	RECORDED BY	: MAF		
BIT SIZE	: -	BOREHOLE FLUID	: WATER	FILE	: ORIGINAL
MAGNETIC DECL.	:	RM	:	TYPE	: ANIMT
MATRIX DENSITY	:	RM TEMPERATURE	:	LOG	: 3
FLUID DENSITY	:	MATRIX DELTA T	:	PLOT	: TEMP 3
NEUTRON MATRIX	:	FLUID DELTA T	: 189	THRESH	: 5000
REMARKS	:				

Southern Resource Exploration Inc.

P.O. Box 14311
Gainesville, Florida 32604
Phone 352-372-5950

TEMPERATURE LOG

COMPANY	: DIVERSIFIED DRILLING			OTHER SERVICES:	
WELL	: IW-1				
LOCATION/FIELD	: MARCO ISLAND				
COUNTY	: COLLIER				
STATE	: FL				
SECTION	: .	TOWNSHIP	: .	RANGE	: ..
DATE	: 08/30/02	PERMANENT DATUM	: -	ELEVATIONS	
DEPTH DRILLER	: 2570'	ELEV. PERM. DATUM	: .	KB	: 8.5
LOG BOTTOM	: 2005.00	LOG MEASURED FROM	: PAD	DF	: 8.5
LOG TOP	: 504.20	DRL MEASURED FROM	: PAD	GL	:
CASING DRILLER	: -	LOGGING UNIT	: BWT		
CASING TYPE	: STEEL	FIELD OFFICE	: GVL		
CASING THICKNESS	: .375	RECORDED BY	: MAF		
BIT SIZE	: -	BOREHOLE FLUID	: WATER	FILE	: ORIGINAL
MAGNETIC DECL.	:	RM	:	TYPE	: ANIMT
MATRIX DENSITY	:	RM TEMPERATURE	:	LOG	: 4
FLUID DENSITY	:	MATRIX DELTA T	:	PLOT	: TEMP 3
NEUTRON MATRIX	:	FLUID DELTA T	: 189	THRESH	: 5000
REMARKS	:				

CEMENT STAGE #7

Southern Resource Exploration Inc.

P.O. Box 14311
Gainesville, Florida 32604
Phone 352-372-5950

TEMPERATURE LOG

COMPANY : DIVERSIFIED DRILLING
WELL : IW-1
LOCATION/FIELD : MARCO ISLAND
COUNTY : COLLIER
STATE : FL
SECTION : .   TOWNSHIP : .   RANGE : ..

OTHER SERVICES:

DATE	: 08/30/02	PERMANENT DATUM	: -	ELEVATIONS	
DEPTH DRILLER	: 2570'	ELEV. PERM. DATUM	: .	KB	: 8.5
LOG BOTTOM	: 1568.40	LOG MEASURED FROM	: PAD	DF	: 8.5
LOG TOP	: 110.40	DRL MEASURED FROM	: PAD	GL	:
CASING DRILLER	: -	LOGGING UNIT	: BWT		
CASING TYPE	: STEEL	FIELD OFFICE	: GVL		
CASING THICKNESS	: .375	RECORDED BY	: MAF		
BIT SIZE	: -	BOREHOLE FLUID	: WATER	FILE	: ORIGINAL
MAGNETIC DECL.	:	RM	:	TYPE	: ANIMT
MATRIX DENSITY	:	RM TEMPERATURE	:	LOG	: 5
FLUID DENSITY	:	MATRIX DELTA T	:	PLOT	: TEMP 3
NEUTRON MATRIX	:	FLUID DELTA T	: 189	THRESH	: 5000

REMARKS :
CEMENT STAGE #8

Southern Resource Exploration Inc.

P.O. Box 14311
Gainesville, Florida 32604
Phone 352-372-5950

TEMPERATURE LOG

COMPANY	: DIVERSIFIED DRILLING			OTHER SERVICES:	
WELL	: IW-1				
LOCATION/FIELD	: MARCO ISLAND				
COUNTY	: COLLIER				
STATE	: FL				
SECTION	: .	TOWNSHIP	: .	RANGE	: ..
DATE	: 08/31/02	PERMANENT DATUM	: -	ELEVATIONS	
DEPTH DRILLER	: 2570'	ELEV. PERM. DATUM	: .	KB	: 8.5
LOG BOTTOM	: 1133.60	LOG MEASURED FROM	: PAD	DF	: 8.5
LOG TOP	: 12.20	DRL MEASURED FROM	: PAD	GL	:
CASING DRILLER	: -	LOGGING UNIT	: BWT		
CASING TYPE	: STEEL	FIELD OFFICE	: GVL		
CASING THICKNESS	: .375	RECORDED BY	: MAF		
BIT SIZE	: -	BOREHOLE FLUID	: WATER	FILE	: ORIGINAL
MAGNETIC DECL.	:	RM	:	TYPE	: ANIMT
MATRIX DENSITY	:	RM TEMPERATURE	:	LOG	: 6
FLUID DENSITY	:	MATRIX DELTA T	:	PLOT	: TEMP 3
NEUTRON MATRIX	:	FLUID DELTA T	: 189	THRESH	: 5000
REMARKS	:				

CEMENT STAGE #9

ALL SERVICES PROVIDED SUBJECT TO STANDARD TERMS AND CONDITIONS

APPENDIX 2.5

CEMENT BOND LOG

MV Geophysical

CEMENT BOND VARIABLE DENSITY LOG

Company	Diversified Drilling Corporation
Well	Injection Well
Field	Marco Island
County	Collier
State/Prv	Florida
Location	Marco Island Water Treatment Plant Marco Island Utilities Water Resource Solutions
Other Services	HPT RTS VIDEO

Permanent Datum	G.L.	Elevation	K.B.
Log Measured From	G.L.		D.F.
Drilling Measured From	G.L.		G.L.

Company Diversified Drilling Corp.
Well Injection Well
Field Marco Island
County Collier
State/Prv Florida

Date	6-SEPT-2002
Run Number	TWO
Depth Driller	3340'
Depth Logger	NA
Bottom Logged interval	2675'
Top Log interval	50'
Open Hole Size	24"
Type Fluid	WATER
Density / Viscosity	NA/NA
Max. Recorded Temp.	na
Estimated Cement Top	SURFACE
Time Well Ready	ROA 9/6/02
Time Logger on Bottom	19:30 9/6/02
Equipment Number	MVGS-1
Location	Ft. Myers
Recorded By	S.Miller
Witnessed By	G.Susdorf (WRS) / B.Balmer (DDC)

Borehole Record				Tubing Record			
Run Number	Bit	From	To	Size	Weight	From	To
ONE	24"	2640'	3340'				

Casing Record	Size	Wgt/Ft	Top	Bottom
Surface String	24"	0.375" WT	SURFACE	2640'
Prot. String				2642' logger
Production String				
Liner				

Invoice No. 2002191 P.O.# 17536 Job No.: 6031 *FINAL PRINT*

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Comments

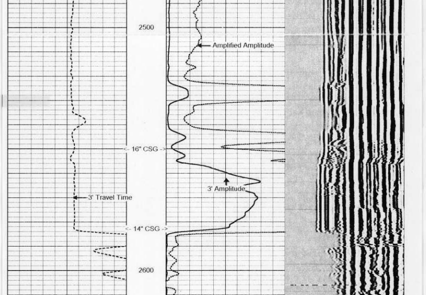
Cement Bond tool was run centralized.

MV Geophysical — MAIN PASS

Database File: marcoiw1.db
Dataset Pathname: run3/pass2
Presentation Format: cbl18.prs
Dataset Creation: Fri Sep 06 19:38:37 2002 by Log VER_5.3
Charted by: Depth in Feet scaled 1:240

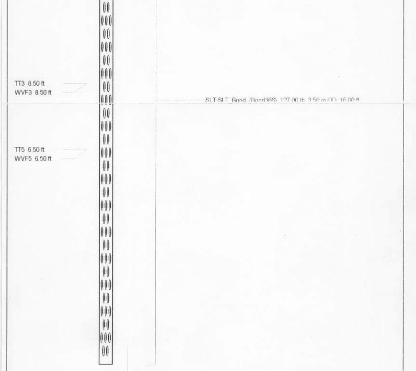
MV Geophysical — REPEAT SECTION

Database File: marcoiw1.db
Dataset Pathname: run3/pass1.1
Presentation Format: cbl18.prs
Dataset Creation: Fri Sep 06 19:37:19 2002 by Calc VER_5.3
Charted by: Depth in Feet scaled 1:240



Cement Bond Log Calibration Report

Serial Number:	Bond366		
Tool Model:	SLT_Bond		
Performed:	Fri Sep 06 19:36:05 2002		
Depth:	2505.38	ft	
Casing Diameter:	16	in	
	3' Spacing	5' Spacing	
Signal Zero:	1	1	mV
Calibrated Amplitude:	37.7164	37.7164	mV
Reading at Signal Zero:	0.0804688	0.0146973	V
Reading in Free Pipe:	4.0187	0.0174805	V
Gain:	9.32307	13192.1	
Offset:	0.249785	-192.888	



Dataset run3/pass2
Total Length 16.00 ft
Total Weight 127.00 lb