

APPENDIX F

APPENDIX F

RESULTS OF GYROSCOPIC SURVEYS IN INJECTION WELLS
1 AND 2



REPORT
of
SUB-SURFACE
DIRECTIONAL
SURVEY

ALSAY PIPPINS CORPORATION
COMPANY

HARPIS CORP. 1 W 1
WELL NAME

BREVARD COUNTY, FL
LOCATION

JOB NUMBER
250-0077

TYPE OF SURVEY
GYROSCOPIC SURVEY

DATE
2/5/86

SURVEY BY

BROCKHAVEN, MS

OFFICE



(601) 833-7831
P. O. Box 43/Brookhaven, MS 39601-0043

February 6, 1986

Alsay Pippins Corp.
P. O. BX 6650
Fort Worth, FL 33461

Atten: Jim Kern

Re: Harris Corp. 1 W 1
Brevard County, FL

Dear Sir:

Enclosed please find the original and four (4) copies of the Gyroscopic Survey report on the above mentioned well.

We wish to take this opportunity to thank you for calling us for our services and trust that we may continue to serve you in the future.

Sincerely,

EASTMAN WHIPSTOCK, INC.

Don A. Douglas

Don A. Douglas
District Surveyor

DAD:rr1

Enclosures

EASTMAN WHIPSTOCK, INC.

RECORD OF SURVEY

FOR

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* * * * *  
* OPERATOR      : ALSAY, INC.  
* WELL NAME     : HARRIS CORPORATION I W 1  
* LOCATION      : BREVARD COUNTY, FL  
* JOB NUMBER    :  
* RIG           : ALSAY PIPPIN RIG  
* DECLINATION   :      2.00 W  
* * * * *
```

EW DISTRICT : BROOKHAVEN, MS



ALSAY, INC.
 HARRIS CORPORATION I W 1
 BREVARD COUNTY, FL

DATE PRINTED : 06-FEB-86
 OUR REF. NO. : S00339.7AZ
 DECLINATION : 2.00 JOB NUMBER :

PAGE NO.

MEASURED DEPTH	DRIFT ANGLE D M	DRIFT DIRECTION D M	COURSE LENGTH	TRUE VERTICAL DEPTH	RECTANGULAR COORDINATES	DOGLEG SEVERITY
0.00	0 0	N 0 0 E	0.00	0.00	0.00 N 0.00 E	0.00
60.00	0 15	S 29 0 W	60.00	60.00	0.11 S 0.06 W	0.42
120.00	0 0	N 0 0 E	60.00	120.00	0.23 S 0.13 W	0.42
180.00	0 15	S 55 0 W	60.00	180.00	0.30 S 0.23 W	0.42
240.00	0 15	S 25 0 W	60.00	240.00	0.50 S 0.40 W	0.22
300.00	0 15	S 33 0 E	60.00	300.00	0.75 S 0.38 W	0.40
360.00	0 15	S 82 0 E	60.00	360.00	0.89 S 0.17 W	0.35
420.00	0 15	S 77 0 W	60.00	420.00	1.07 S 0.16 W	0.82
480.00	0 15	S 52 0 W	60.00	480.00	1.18 S 0.39 W	0.18
540.00	0 15	S 32 0 W	60.00	540.00	1.38 S 0.57 W	0.14
600.00	0 15	S 28 0 E	60.00	600.00	1.63 S 0.58 W	0.42
660.00	0 0	N 0 0 E	60.00	660.00	1.74 S 0.52 W	0.42
720.00	0 15	S 38 0 W	60.00	720.00	1.85 S 0.60 W	0.42
780.00	0 15	S 7 0 W	60.00	779.99	2.08 S 0.70 W	0.22
840.00	0 15	S 33 0 E	60.00	839.99	2.33 S 0.64 W	0.29
900.00	0 15	S 2 0 E	60.00	899.99	2.58 S 0.56 W	0.22
960.00	0 15	S 9 0 W	60.00	959.99	2.84 S 0.58 W	0.08
1020.00	0 15	S 45 0 E	60.00	1019.99	3.08 S 0.50 W	0.38
1080.00	0 15	S 56 0 E	60.00	1079.99	3.25 S 0.30 W	0.08
1140.00	0 15	S 13 0 W	60.00	1139.99	3.48 S 0.21 W	0.47
1200.00	0 15	S 80 0 E	60.00	1199.99	3.67 S 0.08 W	0.60
1260.00	0 15	S 80 0 E	60.00	1259.99	3.72 S 0.18 E	0.00
1320.00	0 15	N 72 0 E	60.00	1319.99	3.70 S 0.44 E	0.20
1380.00	0 15	N 53 0 E	60.00	1379.99	3.58 S 0.67 E	0.14
1440.00	0 15	N 56 0 E	60.00	1439.99	3.43 S 0.88 E	0.02
1500.00	0 30	N 75 0 E	60.00	1499.99	3.27 S 1.24 E	0.46
1560.00	0 30	N 66 0 E	60.00	1559.98	3.09 S 1.73 E	0.13
1620.00	0 15	N 66 0 E	60.00	1619.98	2.93 S 2.09 E	0.42
1680.00	0 15	N 79 0 E	60.00	1679.98	2.85 S 2.34 E	0.09
1740.00	0 30	S 86 0 E	60.00	1739.98	2.83 S 2.73 E	0.44

CONTINUED ON NEXT PAGE ...



ALSAY, INC.
HARRIS CORPORATION I W 1
BREVARD COUNTY, FL

DATE PRINTED : 06-FEB-86
OUR REF. NO. : S00339.7AZ
JOB NUMBER :

PAGE NO.

DECLINATION :

2.00

MEASURED DEPTH	DRIFT ANGLE D M	DRIFT DIRECTION D M	COURSE LENGTH	TRUE VERTICAL DEPTH	RECTANGULAR COORDINATES	DOGLEG SEVERITY
1800.00	0 45	N 75 0 E	60.00	1799.98	2.77 S 3.38 E	0.54
1860.00	0 15	N 49 0 E	60.00	1859.98	2.52 S 3.84 E	0.89
1920.00	0 30	N 65 0 E	60.00	1919.97	2.31 S 4.17 E	0.45
1950.00	0 30	N 86 0 E	30.00	1949.97	2.24 S 4.42 E	0.61

CLOSURE - DISTANCE : 4.96
DIRECTION : S 63 6 E

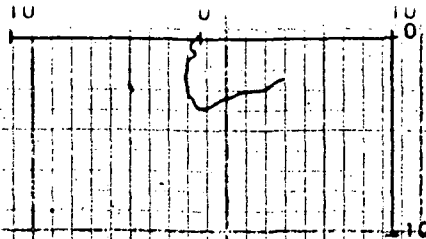
REPORT UNITS : Feet

SURVEY CALCULATION METHOD : Radius of curvature

SURVEY RUN INFORMATION

=====

GYROSCOPIC MULTIPLE SHOT SURVEY 0-1950 M.D.
W. REDD 2-5-86



0
200
400
600
800
TVD
1000
1200
1400
1600
1800
2000

SCALE 1" = 10 FT.
NOTE: COORDINATES RELATIVE TO SLOT

200 0 200
SECTION PLANE NO. 00° E

SURVEY: 500339.7AZ

ALSAY, INC.
HARRIS CORPORATION I W 1



REPORT
of
SUB-SURFACE
DIRECTIONAL
SURVEY

ALSAY PIPPINS CORPORATION
COMPANY

HARPISON CORPORATION INJECTION WELL #2
WELL NAME

BREVARD CO., FL
LOCATION

JOB NUMBER
B985-G-0468

TYPE OF SURVEY
GYROSCOPIC SURVEY

DATE
9/28/85

SURVEY BY

BROOKHAVEN, MS

OFFICE



(601) 833-7831
P. O. Box 43/Brookhaven, MS 39601-0043

October 2, 1985

Alsay Pippins Corp.
P. O. BX 6650
Lake Worth, FL 33461

Atten: Bob Newford

Re: Harrison Corp. Injection Well #2
Brevard County, FL

Dear Sir:

Enclosed please find the original and four (4) copies of the Gyroscopic Survey report on the above mentioned well.

We wish to take this opportunity to thank you for calling us for our services and trust that we may continue to serve you in the future.

Sincerely,

EASTMAN WHIPSTOCK, INC.

Don A. Douglas

Don A. Douglas
District Surveyor

(RL)

DAD:rr1

Enclosures

ALSAY PIPPIN
HARRISON CORPORATION INJECTION WELL #2
BREVARD COUNTY, FLA.
FILE #114
28-SEP-85
B985-G-0468
GYRO MULTIPLE SHOT SURVEY
WENDELL REDD
EASTMAN WHIPSTOCK, INC.

RECORD OF SURVEY

RADIUS OF CURVATURE METHOD

ELSAY PIPPIN
HARRISON CORPORATION INJECTION WELL #2
BREVARD COUNTY, FLA.

COMPUTATION PAGE NO.
TIME DATE
00:00:19 00--00

MEASURED DEPTH FEET	DRIFT ANGLE D M	DRIFT DIRECTION D	COURSE LENGTH FEET	TRUE VERTICAL DEPTH FEET	RECTANGULAR COORDINATES FEET	DOGLEG SEVERITY DG/100FT
0.	0 0	0	0.	0.00	0.00	0.00
20.	0 7	N 31 E	20.	20.00	0.02 N 0.01 E	0.52
80.	0 8	N 58 W	60.	80.00	0.14 N 0.02 W	0.29
140.	0 3	N 21 W	60.	140.00	0.21 N 0.08 W	0.16
200.	0 4	S 72 W	60.	200.00	0.24 N 0.13 W	0.14
260.	0 3	N 8 W	60.	260.00	0.26 N 0.17 W	0.15
320.	0 8	N 44 W	60.	320.00	0.34 N 0.21 W	0.16
380.	0 6	N 78 W	60.	380.00	0.40 N 0.31 W	0.13
440.	0 8	N 39 W	60.	440.00	0.45 N 0.40 W	0.14
500.	0 11	S 59 W	60.	500.00	0.48 N 0.55 W	0.35
560.	0 9	N 34 W	60.	560.00	0.52 N 0.71 W	0.38
620.	0 10	S 80 W	60.	620.00	0.58 N 0.86 W	0.29
680.	0 7	S 80 W	60.	680.00	0.55 N 1.02 W	0.08
740.	0 8	N 50 W	60.	740.00	0.59 N 1.15 W	0.18
800.	0 11	S 46 W	60.	800.00	0.58 N 1.30 W	0.36
860.	0 7	N 69 W	60.	860.00	0.55 N 1.45 W	0.28
920.	0 7	S 46 W	60.	920.00	0.53 N 1.56 W	0.21
980.	0 6	S 88 W	60.	980.00	0.49 N 1.66 W	0.13
1040.	0 14	S 31 W	60.	1040.00	0.41 N 1.80 W	0.33
1100.	0 12	S 46 W	60.	1100.00	0.23 N 1.94 W	0.11
1160.	0 4	S 46 W	60.	1160.00	0.14 N 2.04 W	0.22
1220.	0 17	N 57 W	60.	1220.00	0.12 N 2.21 W	0.46
1280.	0 2	N 7 W	60.	1280.00	0.25 N 2.29 W	0.44
1340.	0 15	N 20 E	60.	1340.00	0.40 N 2.27 W	0.37
1400.	0 9	N 33 E	60.	1400.00	0.59 N 2.13 W	0.18
1460.	0 13	S 40 W	60.	1460.00	0.66 N 2.28 W	0.61
1520.	0 17	N 13 W	60.	1519.99	0.71 N 2.49 W	0.75
1580.	0 16	N 4 W	60.	1579.99	0.99 N 2.53 W	0.08
1640.	0 19	N 2 E	60.	1639.99	1.29 N 2.53 W	0.10
1700.	0 10	S 86 E	60.	1699.99	1.45 N 2.37 W	0.60

ALSAY PIPPIN
 HARRISON CORPORATION INJECTION WELL #2
 BREVARD COUNTY, FLA.

COMPUTATION PAGE NO.
 TIME DATE
 00:00:19 00--00

MEASURED DEPTH FEET	DRIFT ANGLE D M	DRIFT DIRECTION D	COURSE LENGTH FEET	TRUE VERTICAL DEPTH FEET	RECTANGULAR COORDINATES FEET		DOGLEG SEVERITY DG/100FT
1760.	0 16	N 8 E	60.	1759.99	1.57 N	2.21 W	0.51
1820.	0 23	N 12 W	60.	1819.99	1.91 N	2.22 W	0.27
1880.	0 27	N 64 W	60.	1879.99	2.24 N	2.48 W	0.62
1940.	0 21	N 81 W	60.	1939.99	2.37 N	2.67 W	0.26
2000.	0 35	N 48 W	60.	1999.99	2.58 N	3.31 W	0.58
2030.	0 33	N 72 W	30.	2029.98	2.72 N	3.56 W	0.79

FINAL CLOSURE - DIRECTION: N 52 DEGS 37 MINS 0 SECS W
 DISTANCE: 4.48 FEET

00:01:29 00--00

ALSAY PIPPIN
HARRISON CORPORATION INJECTION WELL #2
BREVARD COUNTY, FLA.
FILE #114
28-SEP-85
B985-G-0468
GYRO MULTIPLE SHOT SURVEY
WENDELL REDD
EASTMAN WHIPSTOCK, INC.

PROBABILITY CALCULATIONS

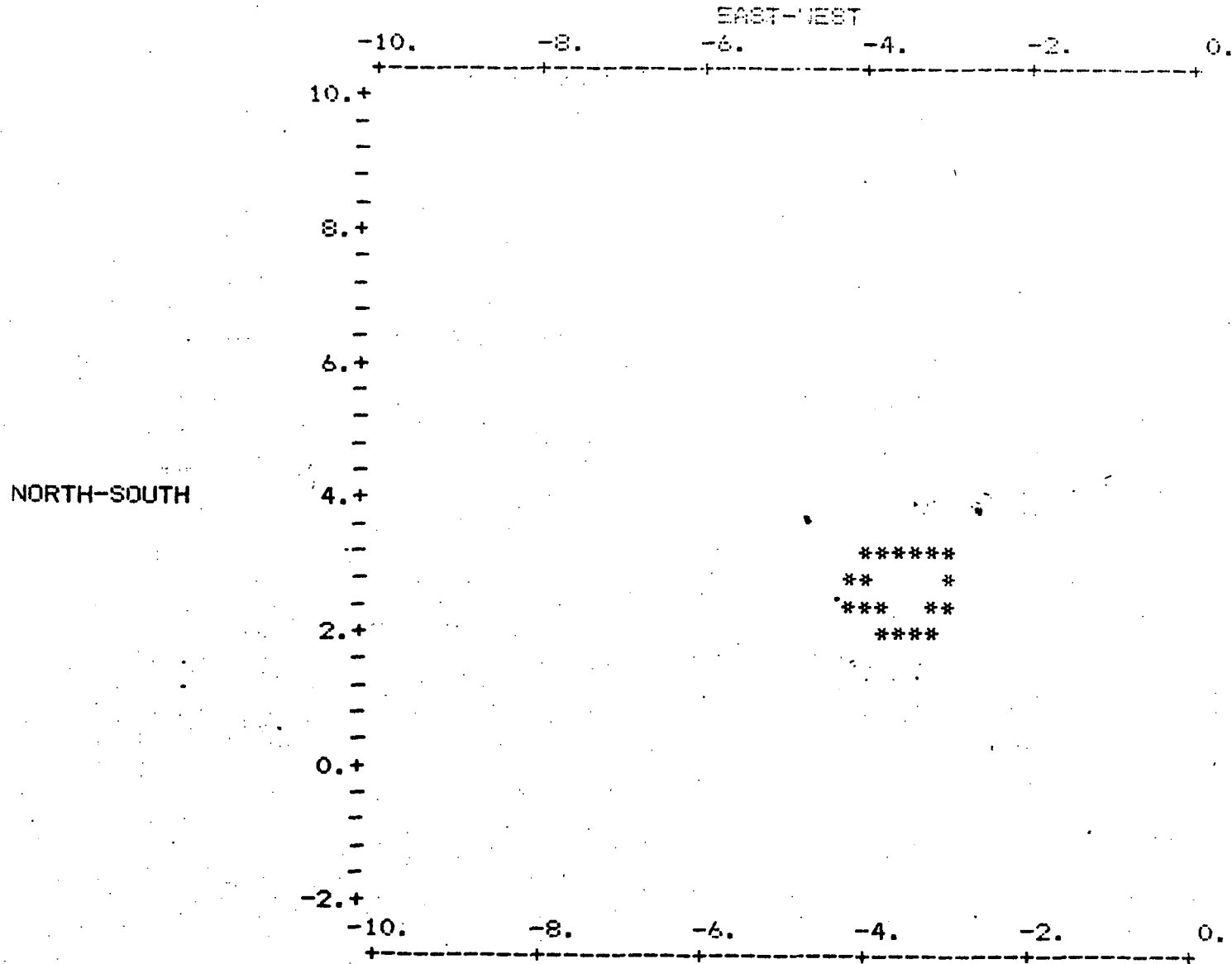
EXPECTED VALUE :		VARIANCE :		COVARIANCE :	
EAST-WEST COORDINATE :	-3.5 FT.	EAST-WEST :	0.0	EW-NS :	-0.0
NORTH-SOUTH COORDINATE:	2.7 FT.	NORTH-SOUTH :	0.0	EW-V :	0.0
VERTICAL COORDINATE :	2030.0 FT.	VERTICAL :	0.0	NS-V :	-0.0

RESULTS ARE BASED ON THE FOLLOWING TOOLS:

0.0 TO 2030.0 TOOL NUMBER 3 = 5 DEGREE UNIT GYRO WITH TAC



ELLIPSE OF UNCERTAINTY V2.10
 FOR FILE 0



PROBABILITY IS 0.99 THAT BOTTOM-HOLE COORDINATES ARE WITHIN THIS ELLIPSE AND
 THAT TRUE VERTICAL DEPTH IS BETWEEN 2030.0 FT. AND 2030.0 FT.
 CENTER OF ELLIPSE IS 2.7 FT. NORTH AND 3.5 FT. WEST AT A DEPTH OF 2030.0 FT.
 MAJOR AXIS IS 1.2 FT. AND IS ROTATED 44. DEG CLOCKWISE FROM NORTH
 MINOR AXIS IS 1.1 FT. VERTICAL THICKNESS IS 0.0 FT.



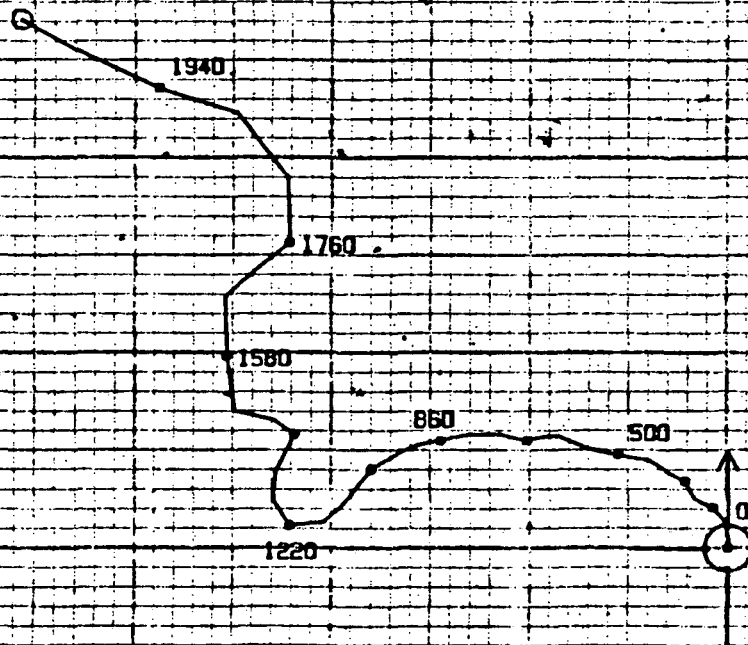
ALSAY PIPPIN
HARRISON CORPORATION INJECTION WELL 2
BREVARD COUNTY, FLA.

HORIZONTAL PROJECTION

SCALE 1 IN. = 1 FEET
DEPTH INDICATOR: MD

EASTMAN WHIPSTOCK, INC.

FINAL STATION:
DEPTH 2030 MD. 2029.98 TVD
NORTH 2.72 WEST 3.56
CLOSURE 4.48 N 52.37 0 W



APPENDIX G

APPENDIX G

RESULTS OF THE 8 5/8-INCH DIAMETER
INJECTION CASING PRESSURE TESTS
IN INJECTION WELLS
1 AND 2

APPENDIX G

HARRIS CORPORATION
APRIL 2, 1986
BY JOHN LOCKWOOD
P0769ML2

SINGLE PACKER PRESSURE TEST ON 8-5/8" DIAMETER INJECTION CASING IW-1

TIME	PSI	TIME	PSI
0927	89	0958	89
0928	89	0959	89
0929	89	1000	89
0930	89	1001	89
0931	89	1002	89
0932	89	1003	89
0933	89	1004	89
0934	89	1005	89
0935	89	1006	89
0936	89	1007	89
0937	89	1008	89
0938	89	1009	89
0939	89	1010	89
0940	89	1012	89
0941	89	1013	89
0942	89	1014	89
0943	89	1015	89
0944	89	1016	89
0945	89	1017	89
0946	89	1018	89
0947	89	1019	89
0948	89	1020	89
0949	89	1021	89
0950	89	1022	89
0951	89	1023	89
0952	89	1024	89
0953	89	1025	89
0954	89	1026	89
0955	89	1027	89
0956	89	1028	89
0957	89		

HARRIS CORPORATION
MARCH 26, 1986
BY HELEN MAKEKSHO
P0769ML

SINGLE PACKER PRESSURE TEST ON 8-5/8" DIAMETER INJECTION CASING IW-2

TIME	PSI	TIME	PSI
0130	90	0201	90
0131	90	0202	90
0132	90	0203	90
0133	90	0204	90
0134	90	0205	90
0135	90	0206	90
0136	90	0207	90
0137	90	0208	90
0138	90	0209	90
0139	90	0210	90
0140	90	0211	90
0141	90	0212	90
0142	90	0213	90
0143	90	0214	90
0144	90	0215	90
0145	90	0216	90
0146	90	0217	90
0147	90	0218	90
0148	90	0219	90
0149	90	0220	90
0150	90	0221	90
0151	90	0222	90
0152	90	0223	90
0153	90	0224	90
0154	90	0225	90
0155	90	0226	90
0156	90	0227	90
0157	90	0228	90
0158	90	0229	90
0159	90	0230	90
0200	90		

APPENDIX H

APPENDIX H

RESULTS OF WATER QUALITY ANALYSIS
FROM MONITOR WELL ZONES



September 24, 1986
P0769ML3

Mr. John Armstrong
Florida Department of Environmental Regulation
3319 Maguire Boulevard, Suite 232
Orlando, Florida 32803

Dear John,

Enclosed is the background water-quality data from the Harris monitor well. This data should be incorporated into the Harris Injection Well report as Appendix H.

If you have any questions, please give me a call.

Sincerely,
GERAGHTY & MILLER, INC.

James A. Wheatley
Senior Scientist

JAW/k

cc: R. Sands, Harris Corp. (3)
A. Bradner, USGS-Orlando
R. Duerling, DER-Tallahassee
R. Levin, SJRWMD

RECEIVED

SEP 01 1986

GROUNDWATER
PROTECTION



Orlando Laboratories, Inc.

P. O. Box 19127 • Orlando, Florida 32814 • 305/896-6645

REPORT OF ANALYSIS

Geraghty & Miller, Inc.
Attn: James A. Wheatley
2700 PGA Blvd., Suite 104
Palm Beach Gardens, Florida 33410

Report #: 47159 (9674)
Sampled by: Client(H.V.Madelcsho)
Date sampled: 07-17-86
Date received: 07-21-86
Date reported: 08-25-86

Page 1 of 4

IDENTIFICATION: #1. Deep Monitor Zone
#2. Shallow Monitor Zone.

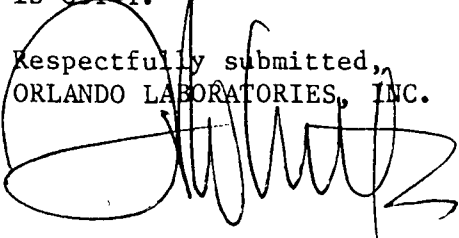
RESULTS OF ANALYSIS


<u>DETERMINATION</u>	#1	#2
Carbonates, CO ₃	0	0
Bicarbonates, HCO ₃	166	151
Total Suspended Solids, TSS	134	14.0
Total Dissolved Solids, TDS	31000	1700
Chemical Oxygen Demand, COD	1000	10.0
Total Phosphorus, T-PO ₄ -P	0.06	<0.03
Sodium, Na	6040	282
Sulfate, SO ₄	43.0	37.4
Potassium, K	360	9.0
Cyanide, CN	<0.005	<0.005
pH, units	7.3	7.7
Chloride, Cl	17000	625
BOD ₅ -day	<1.0	<1.0
Total Kjeldahl Nitrogen, TKN	<0.04	0.66
Dissolved Oxygen, DO	0.925	0.25
Specific Gravity	1.012	1.000
Total Organic Carbon, TOC	11.6	12.1
Fluoride, F	0.580	0.625

BOD started 07-21-86 @ 1540 hrs., finished 07-26-86 @ 1715 hrs.

Results expressed in mg/l unless otherwise designated. < = Less Than.
Our Florida/Department of Health & Rehabilitative Service Identification Number is 83141.

Respectfully submitted,
ORLANDO LABORATORIES, INC.


Laboratory Manager


Quality Control

REPORT OF ANALYSIS

Geraghty & Miller, Inc.
Attn: James A. Wheatley
2700 PGA Blvd., Suite 104
Palm Beach Gardens, Florida 33410

Report #: 47159 (9674)
Sampled by: Client(H.V.Madelcsho)
Date sampled: 07-17-86
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Page 2 of 4

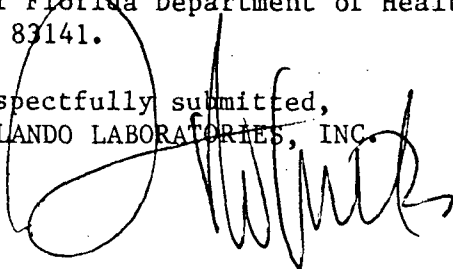
IDENTIFICATION: #1. Deep Monitor Zone
#2. Shallow Monitor Zone.

RESULTS OF ANALYSIS

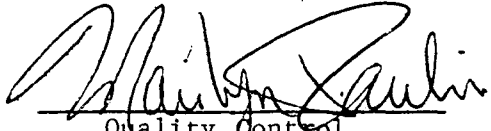
<u>DETERMINATION</u>	#1	#2
Calcium, Ca	104	95.9
Magnesium, Mg	127	70.0
Cadmium, Cd	<0.005	<0.005
Copper, Cu	0.08	<0.01
Mercury, Hg	<0.0005	<0.0005
Selenium, Se	<0.005	<0.005
Zinc, Zn	0.30	<0.05
Arsenic, As	0.056	<0.010
Chromium, Cr	<0.01	<0.01
Lead, Pb	<0.01	<0.01
Nickel, Ni	0.16	<0.01
Silver, Ag	<0.01	<0.01
<u>MISCELLANEOUS</u>		
Trichloroethylene	<0.001	<0.001
Methylene Chloride	<0.001	<0.001
O-Dichlorobenzene	<0.001	<0.001
1,1,1,-Trichloroethane	<0.001	<0.001
Tetrachloroethylene	<0.001	<0.001

Results expressed in mg/l unless otherwise designated. < = Less Than.
Our Florida Department of Health & Rehabilitative Service Identification Number is 83141.

Respectfully submitted,
ORLANDO LABORATORIES, INC.



Laboratory Manager



Quality Control

Geraghty & Miller, Inc.
Attn: James A. Wheatley

08-25-86

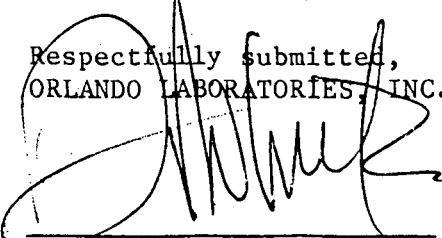
Report #: 47159 (9674)
Page 3 of 4

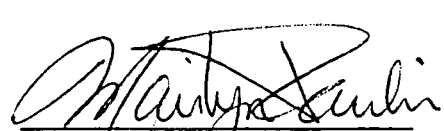
QUALITY CONTROL DATA SHEET

DUPLICATES:

<u>PARAMETER</u>	<u>% DIFFERENCE</u>	<u>DATE</u>	<u>ANALYST</u>
Calcium	<1.0	08-22-86	L.B.
Magnesium	1.4	08-22-86	L.B.
Cadmium	2.1	08-19-86	L.B.
Copper	<1.0	08-18-86	R.E.
Mercury	<1.0	07-31-86	R.E.
Selenium	2.0	08-14-86	L.B.
Zinc	2.0	08-18-86	R.E.
Arsenic	3.1	08-15-86	L.B.
Chromium	7.1	08-13-86	R.E.
Lead	1.7	08-15-86	L.B.
Nickel	10.0	08-19-86	L.B.
Silver	3.2	08-19-86	L.B.
Specific Gravity	0	07-23-86	R.B.
Cyanide	0	07-24-86	B.C.
Total Organic Carbon	3.3	07-25-86	B.C.
Total Alkalinity	0	07-30-86	C.L.
pH	0	07-30-86	B.C.
Fluoride	6	07-31-86	R.B.
Total Kjeldahl Nitrogen	4.0	07-31-86	B.C.
Sodium	0	08-01-86	C.L.
Chloride	0	08-01-86	C.L.
Total Dissolved Solids	0	08-05-86	C.L.
BOD	0	07-26-86	C.L.
Potassium	4	08-05-86	R.B.
Sulfate	1.7	08-05-86	B.C.
Chemical Oxygen Demand	4.0	08-06-86	R.B.
Total Suspended Solids	2.5	08-06-86	C.L.
COD (High)	5	08-07-86	R.B.
TDS (Gravimetric)	0.1	08-08-86	C.L.
Total Phosphorus	0	08-07-86	B.C.
Vinyl Chloride	2.3	08-09-86	E.P.
Trichloroethane	3.9	08-09-86	E.P.
Tetrachloroethane	1.7	08-09-86	E.P.

Respectfully submitted,
ORLANDO LABORATORIES, INC.


Laboratory Manager


Quality Control

Geraghty & Miller, Inc.
Attn: James A. Wheatley

08-25-86

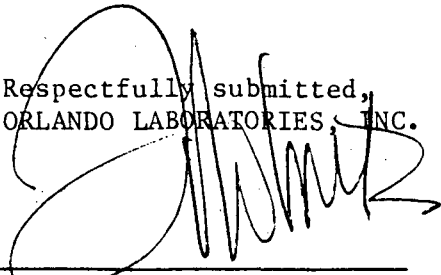
Report #: 47159 (9674)
Page 4 of 4

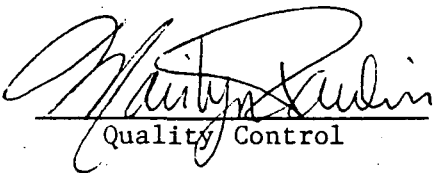
QUALITY CONTROL DATA SHEET

SPIKES:

<u>PARAMETER</u>	<u>% RECOVERY</u>	<u>DATE</u>	<u>ANALYST</u>
Calcium	95	08-22-86	L.B.
Magnesium	95	08-22-86	L.B.
Cadmium	104	08-18-86	L.B.
Copper	103	08-18-86	R.E.
Mercury	103	07-31-86	R.E.
Selenium	99	08-14-86	L.B.
Zinc	102	08-18-86	R.E.
Arsenic	97	08-15-86	L.B.
Chromium	100	08-13-86	R.E.
Lead	99	08-15-86	L.B.
Nickel	99	08-19-86	L.B.
Silver	101	08-19-86	L.B.
Cyanide	99.5	07-24-86	B.C.
Total Organic Carbon	116	07-25-86	B.C.
Total Alkalinity	100	07-30-86	C.L.
Fluoride	102	07-31-86	R.B.
Total Kjeldahl Nitrogen	89.4	07-31-86	B.C.
Sodium	96.7	08-01-86	C.L.
Chloride	100	08-01-86	C.L.
BOD	102	07-26-86	C.L.
Potassium	100	08-05-86	R.B.
Sulfate	101	08-05-86	B.C.
Chemical Oxygen Demand	102	08-06-86	R.B.
COD (High)	102	08-06-86	R.B.
Total Phosphorus	97.4	08-07-86	B.C.
Vinyl Chloride	96.7	08-09-86	E.P.
Trichloroethane	94.9	08-09-86	E.P.
Tetrachloroethane	92.9	08-09-86	E.P.

Respectfully submitted,
ORLANDO LABORATORIES, INC.


Laboratory Manager


Quality Control

APPENDIX I

APPENDIX I

RESULTS OF WATER QUALITY ANALYSIS
FROM INJECTION ZONE

MFORMA

ANALYSIS REPORT

ALSAY INCORPORATED

CLIENT NAME AND ADDRESS

P.O. BOX 6650

LAKEWORTH, FLORIDA 33460

1B222

SAMPLE NUMBER

10-14 1200 CL 10-14-85 1530

DATE TIME COLLECTED BY; RECEIVED

HARRIS SITE

LOCATION

INJECTION ZONE

PURPOSE

PARAMETER	STORET #	DATE	BY	NBR	RESULTS, mg/L
BOD (5)	00310	10-16	CM	56-211	3
CHLORIDE	00940	10-30	CB	35-473	17966
COD	00340	11-06	MD	57-252	802
CYANIDE	00720	11-06	BM	50-420	0.011
DO	00299	MUST BE DONE IN FIELD			
FLOURIDE	00951	10-22	MD	57-246	0.53
SILVER	01077	11-14	MD	57-256	0.008
ARSENIC	01002	12-23	MD	57-281	0.135
BARIUM	01007	11-06	MD	57-252	0.508
CALCIUM	00916	11-06	MD	57-253	640.5
CADMIUM	01027	10-15	MD	57-240	0.099
CHROMIUM	01034	10-24	MD	57-247	<0.005
COPPER	01042	10-28	MD	57-249	0.067
MERCURY	71900	10-21	MD	57-245	<0.0002
MAGNESIUM	00927	11-06	MD	57-253	1147
SODIUM	00929	11-12	MD	57-255	33568
NICKEL	01067	11-14	MD	57-256	0.016
LEAD	01051	12-26	MD	57-282	0.386
DATE 01-15-86	BY <i>fast</i>				LAB ID 86122

MFORMA

ANALYSIS REPORT

ALSAY INCORPORATED

CLIENT NAME AND ADDRESS

P.O. BOX 6650

LAKE WORTH FLORIDA 33460

1B222

SAMPLE NUMBER

10-14 1200 CL 10-14 1530

DATE TIME COLLECTED BY; RECEIVED

HARRIS SITE

LOCATION

INJECTION ZONE

PARAMETER	STORET #	DATE	BY	NBR	RESULTS, mg/L
SELENIUM	01147	11-15	MD	57-257	0.005
ZINC	01092	10-21	MD	57-244	<0.1
CARBONATE ALKALINITY		10-15	MD	57-250	131.2
BICARBONATE ALKALINITY		10-15	MD	57-250	131.2
TKN	00625	11-11	LG	62-81	0.255
t-PHOSPHORUS	00665	10-29	CB	35-472	0.3
pH	00400				7.4
NONFILTERABLE RES	00530	10-28	CM	43-163	91
SULFATE	00945	10-23	MD	57-245	2251
TDS	70304	10-28	CM	43-161	39672

DATE 01-15-86

BY *[Signature]*

LAB ID 86122

M601
METHOD 601

PURGEABLE HALOCARBONS

ALSAY INCORPORATED

CLIENT NAME AND ADDRESS

P.O. BOX 6650

LAKE WORTH FLORIDA 33460

18222

SAMPLE NUMBER

10-14 1200 CL 10-14 1530

DATE/TIME COLLECTED BY RECD

HARRIS SITE

LOCATION

INJECTION ZONE

PARAMETER	STORET NO.	MCL ug/L	RESULT ug/L
METHYLENE CHLORIDE	34423		<5
1,2-DICHLOROETHANE	34531		<0.3
TETRACHLOROETHENE	34475		<0.3
1,4-DICHLOROBENZENE	34571		<2

MCL FOR SUM OF STARRED COMPOUNDS IS 100 ug/L
OTHER MCL'S ARE LISTED IN CHAPTER 17-22.104 FAC

DATE 01-15-86 BY

LAB ID 86109

APPENDIX J

APPENDIX J

RESULTS OF WATER QUALITY ANALYSIS
FROM STRADDLE PACKER TESTS

MFORMA

ANALYSIS REPORT

ALSAY INCORPORATED

CLIENT NAME AND ADDRESS

P O BOX 6650

LAKE WORTH, FLORIDA 33460

18206

SAMPLE NUMBER

10-14-85 CLIENT 10-14-85 0900 DATE TIME COLLECTED BY; RECEIVED

HARRIS SITE

SITE LOCATION

TEST #4 1160' - 1300'

IW2

SAMPLE LOCATION

PARAMETER	STORET #	DATE	BY	NBR	RESULTS, mg/L
TDS	70304	10-18	CM	43-156	9,194
CHLORIDE	00940	10-30	CB	35-473	3,970
SPECIFIC CONDUCT	00095	10-15	MD	57-246	8,900
BARIUM	01007	11-06	MD	57-252	0.142
SULFATE	00945	10-23	MD	57-245	411

DATE 11-11-85

BY

C. Powell

LAB ID 86122

MFORMA

ANALYSIS REPORT

ALSAY INCORPORATED

CLIENT NAME AND ADDRESS

P O BOX 6650

LAKE WORTH, FLORIDA 33460

18220

SAMPLE NUMBER

10-14-85 CLIENT 10-14-85 0900 DATE TIME COLLECTED BY; RECEIVED

HARRIS SITE

SITE LOCATION

TEST #2 1500'-1700' IW2

SAMPLE LOCATION

PARAMETER	STORET #	DATE	BY	NBR	RESULTS, mg/L
TDS	70304	10-18	CM	43-156	26,324
CHLORIDE	00940	10-30	CB	35-473	11,630
SPECIFIC CONDUCT	00095	10-15	MD	57-246	25,000
BARIUM	01007	11-06	MD	57-252	0.142
SULFATE	00945	10-23	MD	57-245	1,325

DATE 11-11-85 BY *C. Brandel* LAB ID 86122

MFORMA

ANALYSIS REPORT

ALSAY INCORPORATED

CLIENT NAME AND ADDRESS

P O BOX 6650

LAKE WORTH, FLORIDA 33460

18205

SAMPLE NUMBER

10-14-85 CLIENT 10-14-85 0900 DATE TIME COLLECTED BY; RECEIVED

HARRIS SITE

SITE LOCATION

TEST #3 1320' - 1460' IW2

SAMPLE LOCATION

PARAMETER	STORET #	DATE	BY	NBR	RESULTS, mg/L
TDS	70304	10-18	CM	43-156	18,732
CHLORIDE	00940	10-30	CB	35-473	8,215
SPECIFIC CONDUCT	00095	10-15	MD	57-246	15,500
BARIUM	01007	11-06	MD	57-252	0.142
SULFATE	00945	10-23	MD	57-245	960

DATE 11-11-85 BY *C. Bravelok* LAB ID 86122

MFORMA

ANALYSIS REPORT

ALSAY INCORPORATED

CLIENT NAME AND ADDRESS

P O BOX 6650

LAKE WORTH, FLORIDA 33460

18219

SAMPLE NUMBER

10-14-85 CLIENT 10-14-85 0900 DATE TIME COLLECTED BY; RECEIVED

HARRIS SITE

SITE LOCATION

TEST #1 1740'-1940' IW2

SAMPLE LOCATION

PARAMETER	STORET #	DATE	BY	NBR	RESULTS, mg/L
TDS	70304	10-18	CM	43-156	40,174
CHLORIDE	00940	10-30	CB	35-473	17,572
SPECIFIC CONDUCT	00095	10-15	MD	57-246	32,000
BARIUM	01007	11-06	MD	57-252	0.174
SULFATE	00945	10-23	MD	57-245	1,668

DATE 11-11-85

BY

C. Brachok

LAB ID 86122

MFORMA

ANALYSIS REPORT

ALSAY INCORPORATED

CLIENT NAME AND ADDRESS

P O BOX 6650

LAKE WORTH, FLORIDA 33460

18207

SAMPLE NUMBER

10-14-85 CLIENT 10-14-85 0900 DATE TIME COLLECTED BY; RECEIVED

HARRIS SITE

SITE LOCATION

TEST #5 1010'-1150' IW2

SAMPLE LOCATION

PARAMETER	STORET #	DATE	BY	NBR	RESULTS, mg/L
TDS	70304	10-18	CM	43-156	15,834
CHLORIDE	00940	10-30	CB	35-473	7,164
SPECIFIC CONDUCT	00095	10-15	MD	57-246	13,200
BARIUM	01007	11-06	MD	57-252	0.142
SULFATE	00945	10-23	MD	57-245	824

DATE 11-11-85

BY

C. Bravich

LAB ID 86122

MFORMA

ANALYSIS REPORT

ALSAY INCORPORATED

CLIENT NAME AND ADDRESS

P O BOX 6650

LAKE WORTH, FLORIDA 33460

18221

SAMPLE NUMBER

10-14-85 CLIENT 10-14-85 0900 DATE TIME COLLECTED BY; RECEIVED

HARRIS SITE

SITE LOCATION

TEST #6 1210'-1280' IW2

SAMPLE LOCATION

PARAMETER	STORET #	DATE	BY	NBR	RESULTS, mg/L
TDS	70304	10-18	CM	43-156	11,796
CHLORIDE	00940	10-30	CB	35-473	4,348
SPECIFIC CONDUCT	00095	10-15	MD	57-246	12,000
BARIUM	01007	11-06	MD	57-252	0.206
SULFATE	00945	10-23	MD	57-245	503

DATE 11-11-85

BY

C. Swartz

LAB ID 86122

APPENDIX K

APPENDIX K

MILL CERTIFICATES FOR THE
8-5/8, 18 AND 24-INCH DIAMETER
CASINGS IN INJECTION WELLS 1 AND 2



**MANNESMANN
RÖHRENWERKE**

INSPECTION CERTIFICATE ACC. TO DIN 50049-3.1B 37902

15/0065/41 84.11.

MANNESMANN HANDEL AG
EXPORT DIVISION
POSTFACH 5502
4000 DUESSELDORF 1

815/7643 2
172 45019461 754 773 72
84.10.17
USA HOUSTON/TEXAS 77056 /USA 1990 POST OAK BOULEVARD

Lieferwerk
Lieferanten
Usine fournisseur

RATH

LINE PIPES * SEAMLESS *
TECHNICAL TERMS OF DELIVERY API SPEC. 5 L * ASTM A 53 *
GRADE B * ENDS BEVELED, ANGLE 30 DEGREES
(TOLERANCE +5/-0 DEGREES), ROOT FACE 1,6 +/- 0,8 MM * INSIDE
WITHOUT RUST-PREVENTIVE AGENTS * OUTSIDE
WITH TEMPORARY PROTECTION AGAINST CORROSION GROUP K *
IN RANDOM MILL LENGTH 36 - 42 FT
MATERIAL COVERED BY THIS CERTIFICATE IS MANUFACTURED OF
NON-ALLOY STEEL IN ACCORDANCE WITH US-CUSTOMS REGULATION

Item	TRM	Dimension / Item text	Quantity	kg/lbs	Total length m						
11		OUT. DIAM. W. THICKN. 8,5 x 8 x 0,500 IN	267	199.522 / 439.871	23.101,3 / 10.175,1						
Results of tests analysis (SI)											
HEAT NO. STEELMAK. PROCESS C SI MN P S											
MAXIMUM											
396142	S	Y	0,27	0,21	1,15	0,040	0,050				
396143	S	Y	0,13	0,22	0,90	0,011	0,002				
396144	S	Y	0,15	0,21	0,93	0,011	0,002				
Tensile test results											
Sample no	Heat no	Test piece dimension mm	Test piece type	Test piece direction	Test piece loc.	Test piece orient.	Test temperature Grad C	Yield/proof stress Rp0,5T0T PSI	Tensile strength Rm PSI	Elongation (Z) AL 2" %	Rp/Rm %
MINIMUM								35000	60000	29,5	
4918	396142	38,10 11,80	01	longit			RT	4100	70000	40,2	
4919	396142	38,20 13,60	01	longit			RT	420	70000	39,8	
4915	396143	38,20 12,30	01	longit			RT	4000	71000	41,2	



MANNESMANN RÖHRENWERKE

Mannesmann Röhren-Werke AG Postfach 1104 4000 Düsseldorf 1

MANNESMANN PIPE & STEEL CORP.
POST OAK CENTRAL BLDG.
18TH FLOOR
1990 POST OAK BOULEVARD

USA HOUSTON/TEXAS 77056 /USA

Lieferwerk
supply-plant
Usine expéditrice

RATH

STEEL TUBES * SEAMLESS *
TECHNICAL TERMS OF DELIVERY SA 106 ASME BOILER AND PRESSURE
VESSEL CODE, SECTION II * ASTM A 106 * GRADE B *
ENDS BEVELED, ANGLE 30 DEGREES
(TOLERANCE +5/-0 DEGREES), ROOT FACE 1,6 +/- 0,8 MM *
OUTSIDE WITH TEMPORARY PROTECTION AGAINST CORROSION GROUP K
* WALL THICKNESS TOLERANCE AS PER ASME SA 530 *
OUTSIDE DIAMETER TOLERANCE + 1,000/- 1,000 X *
IN RANDOM HILL LENGTH 36 - 42 FT
MATERIAL COVERED BY THIS CERTIFICATE IS MANUFACTURED OF
NON-ALLOY STEEL IN ACCORDANCE WITH US-CUSTOMS REGULATION

000/00000000/00/04/03/1

VEREIDELT: 0 A BESTELLEN

INSPECTION CERTIFICATE ACC. TO DIN 50049-3.1B

No./No
47628

Zur Lieferanzogen-Nr.
To delivery note no
A l'usage d'expédition

29/0005/41

Lieferdatum
Delivery date
Date d'expédition

85.05.1

MW-Auftrags-Nr.
MW-order no
No de commande MW

829/3904 0

Bestimmungsland
Destination
Pays de destination

USA

Kunden-Bestell-Nr.
Purchaser-order no
No de commande client

723 433 21

Bestell-Datum
Date of order
Date de commande

84.12.20

Verwender-Bestell-Nr.
User-order no
No de commande utilisateur

GRANT SUPPLY

Verwender
User
Utilisateur

USA HOUSTON / TEXAS / USA

*Carbon
Steel lined*

Item	TREN	Dimension / Item text	Quantity	kg/lbs	Total length m/l
10	4	OUT.DIAM. W.THICKN. 8 5/8 X 0,500 IN	3	2.335 5.148	36,5: 119,71
MPS-ORDER-NO.: QR- 315073 "DIE-STAMPED BY THE PRODUCER ACC. TRADE ACT 207"					

Results of ledle analysis (3) X

HEAT NO	STEELMAK.PROCESS	C	SI	MN	P	S
MINIMUM			0,10	0,29		
MAXIMUM			0,30	1,06	0,048	0,058
314037	S	Y	0,15	0,22	0,94	0,010
375121	S	Y	0,13	0,20	0,99	0,017

*P.423
DIN scale*



**MANNESMANN
RÖHRENWERKE**

INSPECTION CERTIFICATE ACC. TO DIN 50049-3.18

37902

For Lieferantengem.-
No. of manufacturer
A. 500 0000000000

15/0065/41

Interd.-
Date of order
Date of inspection

84.11.2

MH EXPORT DIV/D

MRW-Auftrags-Nr.
MRW order no.
No. de commande MRA

815/7643 2

Bestimmungsort
Destination
Pays de destination

USA

Kunden-Bestell-Nr.
Purchaser order no.
No. de commande client

Bestell-Datum
Date of order
Date de commande

Versender
User
Utilisateur

Lieferwerk
Supplier
Usine productrice

Sample no.	Heat no.	Test piece dimension	Test piece type	Test piece direction	Test piece loc.	Test piece orient.	Test temperature	Yield/proof stress	Tensile strength	Elongation (Z)	Rp	Rm
		mm					Grad C	Rp0.2TOT	PSI	Rm	PSI	AL %
4916	396144	38,30 12,30	01	longit			RT	42000		69000		41,6
4917	396144	38,10 12,90	01	longit			RT	43000		71000		42,0

Code references to the tensile test

TYPE OF TEST PIECE : 01 FLAT TEST SPECIMEN

Other test results

- HYDROSTATIC TEST, 2430 PSI, WITHOUT OBJECTION
- FLATTENING TEST SATISFACTORY
- VISUAL AND DIMENSIONAL INSPECTION SATISFACTORY

Marking of the products

MANUFACTURER'S BRAND: MW 41
INSPECTOR'S STAMP: HA
GRADE B
MARKING ACC. TO API SPEC. 5 L/ ASTM A 53
HEAT NO.

THE PRODUCTS HAVE BEEN TESTED IN ACCORDANCE WITH THE PURCHASE SPECIFICATION AND ARE FOUND TO BE SATISFACTORY.

MANNESMANNRÖHREN- WERKE AG, WERK RATH, ABNAHME
SIGNED STROINSKI, THE INSPECTOR
DÜSSELDORF, THE 84.11.30, TELEPHONE: (0211)616-949

This testimonial and certification respectively is recorded by computer system and is valid without signature. Alteration or use for other products are regarded as falsification of documents and will be subject to criminal jurisdiction.

L. B. FOSTER COMPANY
P. O. BOX 7796
GARDEN CITY, GA 31418-7796

STANDARD CERTIFIED TEST REPORT
TUBULAR PRODUCTS

Date OCTOBER 22, 1985

C
U
S
T
O
M
E
R

Name
ALSAY INCORPORATED

Address
P O BOX 6650

City & State
LAKE WORTH, FL 33461

LETTER OF INTENT

Customer's Order No.
23H030-049771

LBF Invoice No.
TWO INJECTION WELLS &
MONITOR WELLS
MELBOURNE, BREVARD COUNTY, FL

Material FOSTERWELD SPIRAL STEEL PIPE Grade ASTM A-139 GR C CHEMICALS

Heat No.	Size O.D.	Welded Wall Thick.	Min. Hydro. Test Pres. P.S.I.	MECHANICAL PROPERTIES			CHEMICAL ANALYSIS (%)				
				Yield Strength P.S.I. Point	Tensile Strength P.S.I.	Elong. In $\frac{2}{16}$ %	C	Mn	P	S	SI
7005	18"	.375	WAIVE	39,150	66,500	50	.23	1.07	.015	.011	
17059				42,480	72,250	43	.24	1.09	.013	.026	
21329				40,090	70,480	50	.23	1.07	.006	.020	
513172				49,059	69,678	31	.19	.51	.030	.016	
522889				53,325	73,944	31	.17	.54	.022	.011	
533239				49,770	68,967	30	.20	.55	.022	.020	

The undersigned, in behalf of The L. B. Foster Company, hereby certifies that the above materials have been inspected and tested in accordance with the methods prescribed in the applicable specifications and the results of such inspection and tests shown above. In determining properties or characteristics for which no methods of inspecting or testing are prescribed by sold specifications, the standard mill inspection and testing practices of The L. B. Foster Company have been applied. Unless it appears otherwise in the results of such inspection and tests shown above, the undersigned agent of The L. B. Foster Company believes that said materials conform to said specifications.

Subscribed and sworn to before me this 22nd day of OCT 1985

M. Harold Robinson
Notary Public
M. HAROLD ROBINSON
Notary Public, Chatham County, Ga.
My Commission Expires Sept 15, 1986

Otis R. Kessler
OTIS R. KESSLER PLANT MANAGER

Agents' Name & Title
L. B. FOSTER
COMPANY

L. B. FOSTER COMPANY
P. O. BOX 7796
GARDEN CITY, GA 31418-7796

STANDARD CERTIFIED TEST REPORT
TUBULAR PRODUCTS

C
U
S
T
O
M
E
R

Name
ALSAY INCORPORATED

Address
P O BOX 6650

City & State
LAKE WORTH, FL 33461

Date **AUGUST 12, 1985**

LETTER OF INTENT

Customer's Order No.
23H030-049771

LBF Invoice No.
**GERAGHTY & MILLER, INC
2700 PGA BLVD, SUITE 104
PALM BEACH GARDENS, FL 33410
ATTN: JIM WHEATLEY**

Material **FOSTERWELD SPIRAL STEEL PIPE** Grade **ASTM A-139 GR C**

Heat No.	Size O.D.	Wall Thick.	Min. Hydro. Test Pres. P.S.I.	MECHANICAL PROPERTIES			CHEMICAL ANALYSIS (%)				
				Yield Strength P.S.I. Point	Tensile Strength P.S.I.	Elong. In.-%	C	Mn	P	S	SI
16237	24"	.375	WAIVE	48,510	73,350	44	.23	1.14	.013	.018	

The undersigned, in behalf of The L. B. Foster Company, hereby certifies that the above materials have been inspected and tested in accordance with the methods prescribed in the applicable specifications and the results of such inspection and tests shown above. In determining properties or characteristics for which no methods of inspecting or testing are prescribed by sold specifications, the standard mill inspection and testing practices of The L. B. Foster Company have been applied. Unless it appears otherwise in the results of such inspection and tests shown above, the undersigned agent of The L. B. Foster Company believes that said materials conform to said specifications.

Subscribed and sworn to before me this 12th day of Aug 1985

M. Harold Robinson
Notary Public

M. HAROLD ROBINSON
Notary Public, Chatham County, Ga.
My Commission Expires Sept. 15, 1986

Marvin M. Hendrix

MARVIN M. HENDRIX GENERAL FOREMAN

Agents' Name & Title

L. B. FOSTER
COMPANY



MANNESMANN RÖHRENWERKE

Mannesmann-Röhren-Werke AG Postfach 1104 4000 Düsseldorf 1

INSPECTION CERTIFICATE ACC. TO DIN 50049-3.1B		Nr./No	Blatt/Pag
		47628	
Zur Lieferungsgehe-Nr. To delivery note no A l'end d'expédition	29/0005/41	Lieferdatum Delivery date Date d'expédition	85.05.13

MPS/HOUSTON

MRW-Auftrags-Nr.
MRW-order no
No. de commande MRW

829/3904 0

Bestimmungsort
Destination
Pays de destination

USA

Kunden-Bestell-Nr.
Purchaser-order no
No. de commande client

723 433 21

Bestell-Datum
Date of order
Date de commande

04.12.20

Verwender-Bestell-Nr.
User-order no
No. de commande utilisateur

GRANT SUPPLY
USA HOUSTON / TEXAS / USA

Lieferwerk
Supply-plant
Usine expéditrice

Tensile test results

Sample no	Heat no	Test piece dimension		Test piece type	Test piece direction	Test piece loc.	Test piece orient.	Test temperature Grad C	Yield/proof stress		Tensile strength		Elongation (Z) AL 2"	Rp/Rm	Z
		Inch							Rp0.2/ST02	PSI	Rm	PSI			
MINIMUM															
340	314037	1,50	0,53	01	longit			RT	35000		60000		30,0		
1	375121	1,50	0,49	01	longit			RT	47000		72000		41,2		
									37000		67000		39,8		

Code references to the tensile test

TYPE OF TEST PIECE : 01 FLAT TEST SPECIMEN

Other test results

- HEAT TREATMENT: HOT ROLLED
- INSIDE HYDROSTATIC TEST WITH WATER: 2440 PSI, WITHOUT OBJECTION
- FLATTENING TEST SATISFACTORY
- VISUAL AND DIMENSIONAL INSPECTION SATISFACTORY

Marking of the products

MANUFACTURER'S BRAND: MN 41
INSPECTOR'S STAMP: WA
GRADE B
ASTM A/ASME SA 106
HEAT NO.
GRANT SUPPLY/1712-85-0D
HOUSTON/315073
MADE IN WEST GERMANY

THE PRODUCTS HAVE BEEN TESTED IN ACCORDANCE WITH THE PURCHASE SPECIFICATION AND ARE FOUND TO BE SATISFACTORY.

MANNESMANNRÖHREN - WERKE AG, WERK RATH, ABNAHME
SIGNED STROINSKI, THE INSPECTOR
DÜSSELDORF, THE 85.05.13, TELEPHONE: (0211)616-949

This testimonial and certification respectively is recorded by computer-system and is valid without signature. Alteration or use for other products are regarded as falsification of documents and will be subject to criminal jurisdiction.

L. B. FOSTER COMPANY
P. O. BOX 7796
GARDEN CITY, GA 31418-7796

STANDARD CERTIFIED TEST REPORT
TUBULAR PRODUCTS

C U S T O M E R	Make	ALSA Y INCORPORATED
	Address	P. O. BOX 6650
	City & State	LAKE WORTH, FL 33461

Date NOVEMBER 12, 1985
LETTER OF INTENT
Customer's Order No. 23H030-049771
LBF Invoice No. TWO INJECTION WELLS & MONITOR WELLS MELBOURNE, BREVARD COUNTY,

Material FOSTERWELD SPIRAL STEEL PIPE Grade MEET OR EXCEEDS A139 GRADE B

Heat No.	Size O.D.	Wall Thick.	Min. Hydro. Test Pres. P.S.I.	MECHANICAL PROPERTIES			CHEMICAL ANALYSIS (%)				
				Yield Strength P.S.I. Point	Tensile Strength P.S.I.	Elong. In. 2' %	C	Mn	P	S	Si
17005	18"	.375	WAIVE	39,150	66,500	50	.23	1.07	.015	.011	
17059				42,480	72,250	43	.24	1.09	.013	.026	
21329				40,090	70,480	50	.23	1.07	.006	.020	
513172				49,059	69,678	31	.19	.51	.030	.016	
522889				53,325	73,944	31	.17	.54	.022	.011	
533239				49,770	68,967	30	.20	.55	.022	.020	

The undersigned, in behalf of The L. B. Foster Company, hereby certifies that the above materials have been inspected and tested in accordance with the methods prescribed in the applicable specifications and the results of such inspection and tests shown above. In determining properties or characteristics for which no methods of inspecting or testing are prescribed by said specifications, the standard mill inspection and testing practices of The L. B. Foster Company have been applied. Unless it appears otherwise in the results of such inspection and tests shown above, the undersigned agent of The L. B. Foster Company believes that said materials conform to said specifications.

Subscribed and sworn to before me this 12th day of Nov 1985

M. Harold Robison
Notary Public

M. HAROLD ROBINSON
Notary Public, Chatham County, Ga.
My Commission Expires Sept. 15, 1986

Otis R. Kessler
OTIS R. KESSLER PLANT MANAGER

Agents' Name & Title
L.B. FOSTER COMPANY