Form H: Direct Examination Data Sheet - Page 1 of 10

DA/ILI		DA		ILI	
Route Number:	191-1	**N-Segment:**	191-2013	**ILI Log Distance:**	N/A
Examination Date:	4/30/2013	**IMA Number:**	N/A	**RMP-11 Ref. Section:**	N/A
Mile Point:	35.82			**Reference Girth Weld:**	N/A
Examination Performed By:	Denise Ebright	**Region Number:**	1	**Distance From Girth Weld:**	N/A
PG&E Project Manager:	Adam Abraham	**Subregion # (ICDA):**	N/A		
Approved By:	Brenda McKay	**Stationing:**	34+36		
Order Number:	41821294				

Excavation Priority:

☐ Immediate ■ Scheduled ☐ 1 Year ☐ Other
☐ Monitor ☐ Effectiveness ☐ ICDA

Excavation Reason

■ ECDA ☐ ILI ☐ Recoat
☐ ICDA ☐ Other

If practical, take P/S or CIS reads before excavation: No test point available.

Excavation Details: Centerline on GPS Coordinates (Based on GIS):

Northing: [redacted]
Easting:

Planned Inspection Length (Ft.): 12
Actual Inspection Length (Ft.): 12

Centerline on GPS Coordinates (Uncorrected Field Measurement):

Northing: [redacted]
Easting:

GPS File Name: PG&E L191-1C Sta 34+36 MP 35.82

Centerline on GPS Coordinates (Corrected Field Measurement):

Northing: [redacted]
Easting:

Nominal Wall Thickness: 0.375"
Nominal Pipe Diameter: 12"

1.0 Data Before Coating Removal

1.1 Native Soil Type: ■ Clay ☐ Rock ■ Sand ☐ Loam ☐ Wet ■ Other Gravel (hardpan) mix

1.1a Backfill Material Found ■ Sand ☐ Slurry ☐ Native

Depth of Cover (Ft.): 2'3"

Comments: Native soil is a gravel clay mixture with some rock.

1.2 Coating Type: ☐ HAA ☐ Somastic ■ Plastic Tape ■ Wax Tape ☐ FBE ☐ Powercrete
☐ Bare/None ☐ Paint ■ Other: Protal 7200 Comments: 0'0"-1'0"/11'0"-12'0" Plastic Tape, 1'0"-11'0" Protal 7200

Coating Thickness (Inches): 0.020 to 0.232 Number of Layers: 1

1.3 Holiday Testing Performed?: ■ Yes ☐ No Voltage Used: 3,500V / 2,500V Map Location of Holidays Below.

Device Used: ☐ Coil ■ Brush Comments: Brass Brush: 3,500V on plastic tape / 2,500V on Protal 7200

1.4 Pipe-to-Soil Potentials in Ditch (-mV): US: 556 DS: 552

Comments: Pipe-to-Soil potentials were taken with a CSE. Readings were reported to Bryon Winget via email on 5/2/2013.

1.5 Soil Resistivity in Ditch (Ω-cm):

Method: ☐ 4-Pin N/A due to surroundings. ■ Soil Box 10,000 x 2.2 x 1 = 22,000

1.6 Soil Sample Location: Comments: U/S edge, at 6:00.

1.7 Ground Water Present?: ☐ Yes ■ No Sample(s) Collected?: ☐ Yes ■ No Sample pH: N/A

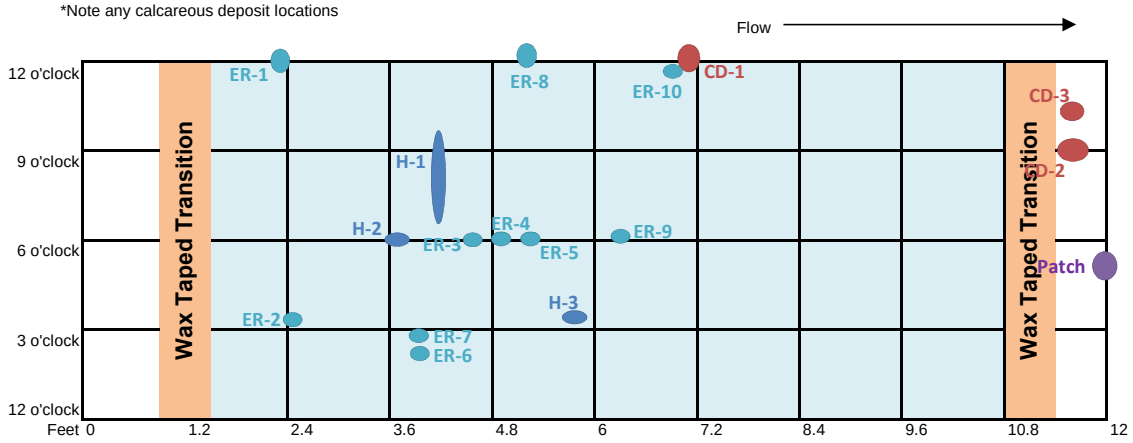
Comments: No ground water present.

1.8 Coating Condition: ☐ Good - Adhered to Pipe ■ Fair - Coating Partially Disbonded or Degraded
☐ Poor - Coating Significantly Disbonded or Missing

Comments: Ten existing repairs, 3 areas of coating disbondment (coating damage not through coating), 3 holidays and 1 patch found.
Plastic tape coating from 0'-1' / 11'-12' and Protal 7200 from 1'-11' from U/S edge, with Wax Taped transitions.

1.9 Map of Coating Degradation*: **Zero Reference Point:** U/S Edge of Inspection Area

*Note any calcareous deposit locations



DA/ILI		DA		ILI	
Route Number:	191-1	**N-Segment:**	191-2013	**ILI Log Distance:**	N/A
Examination Date:	4/30/2013	**IMA Number:**	N/A	**RMP-11 Ref. Section:**	N/A
Mile Point:	35.82			**Reference Girth Weld:**	N/A
Examination Performed By:	Denise Ebright	**Region Number:**	1	**Distance From Girth Weld:**	N/A
PG&E Project Manager:	Adam Abraham	**Subregion # (ICDA):**	N/A		
Approved By:	Brenda McKay	**Stationing:**	34+36		
Order Number:	41821294				

1.10 Photos Taken?*: ■ Yes ☐ No
*See Photo Log for additional information.

1.11 Coating Sample Taken?: ☐ Yes ■ No Location of Sample: N/A

1.12 Liquid Underneath Coating?: ☐ Yes ■ No If Yes, pH of Liquid: N/A

1.13 Corrosion Product Present?: ☐ Yes ■ No If Yes, Was Sample Taken?: ☐ Yes ☐ No
Comments: No corrosion product present.

1.14 Soil pH (Sb Electrode): Upstream: 5 Downstream: 5

2.0 Data After Coating Removal

2.1 Pipe Temperature (°F): 60.5 Measured Pipe Diameter (In.): 12.73

2.2 Weld Seam Type: ☐ DSAW ☐ SSAW ☐ ERW ■ SMLS
☐ Spiral ☐ Lap ☐ Flash ☐ AO Smith ☐ If can't determine, visually perform macroetch to locate & identify type (see Table 5.7.3, Element 2.2)

2.3 Girth Weld Coordinates:
Northing: N/A
Easting: N/A
Elevation: N/A
Weld Clock Position: N/A

2.4 Damage Found:
Corrosion Damage? ☐ Yes ■ No Mechanical Damage? ☐ Yes ■ No
Other Damage: One pipe anomaly found, after PG&E performed testing, unable to determine type of defect.

2.5 UT Wall Thickness Measurements:

TDC:	0.387"	1 O'clock:	0.379"	2 O'clock:	0.369"	3 O'clock:	0.364"
4 O'clock:	0.362"	5 O'clock:	0.372"	6 O'clock:	0.372"	7 O'clock:	0.389"
8 O'clock:	0.388"	9 O'clock:	0.390"	10 O'clock:	0.389"	11 O'clock:	0.387"

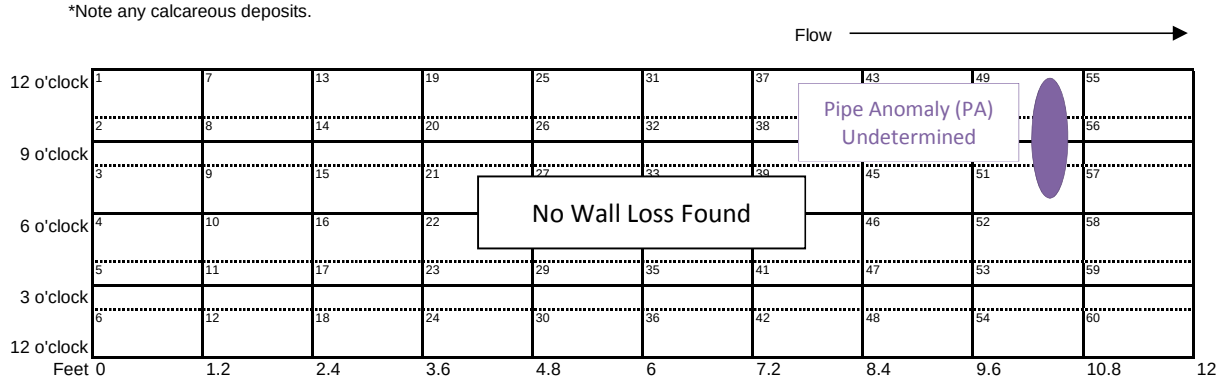
2.5a Nominal Wall Thickness: 0.375"

UT Wall Thickness Grid @ 6:00 is required. Be sure to attach grid to Form H electronically. See page 6 of 10.

2.6 Wet Fluorescent Mag. Part. Is Required. Comments: Magnetic Particle Exam performed by D. Ebright (Mears) on 5/2/2013.
Were there any linear indications? ☐ Yes ■ No If Yes, attach NDE report electronically as part of the Form H. Report to include black light and white light photos of indications.

2.7 Take Photos to Document Corrosion and Other Anomalies*
*See Photo Log for additional information.

2.8 Overview Map of Corroded Area*:
*See Pit Depth Measurement Grid for additional Information
*Note any calcareous deposits.
Zero Reference Point: U/S Edge of Inspection Area

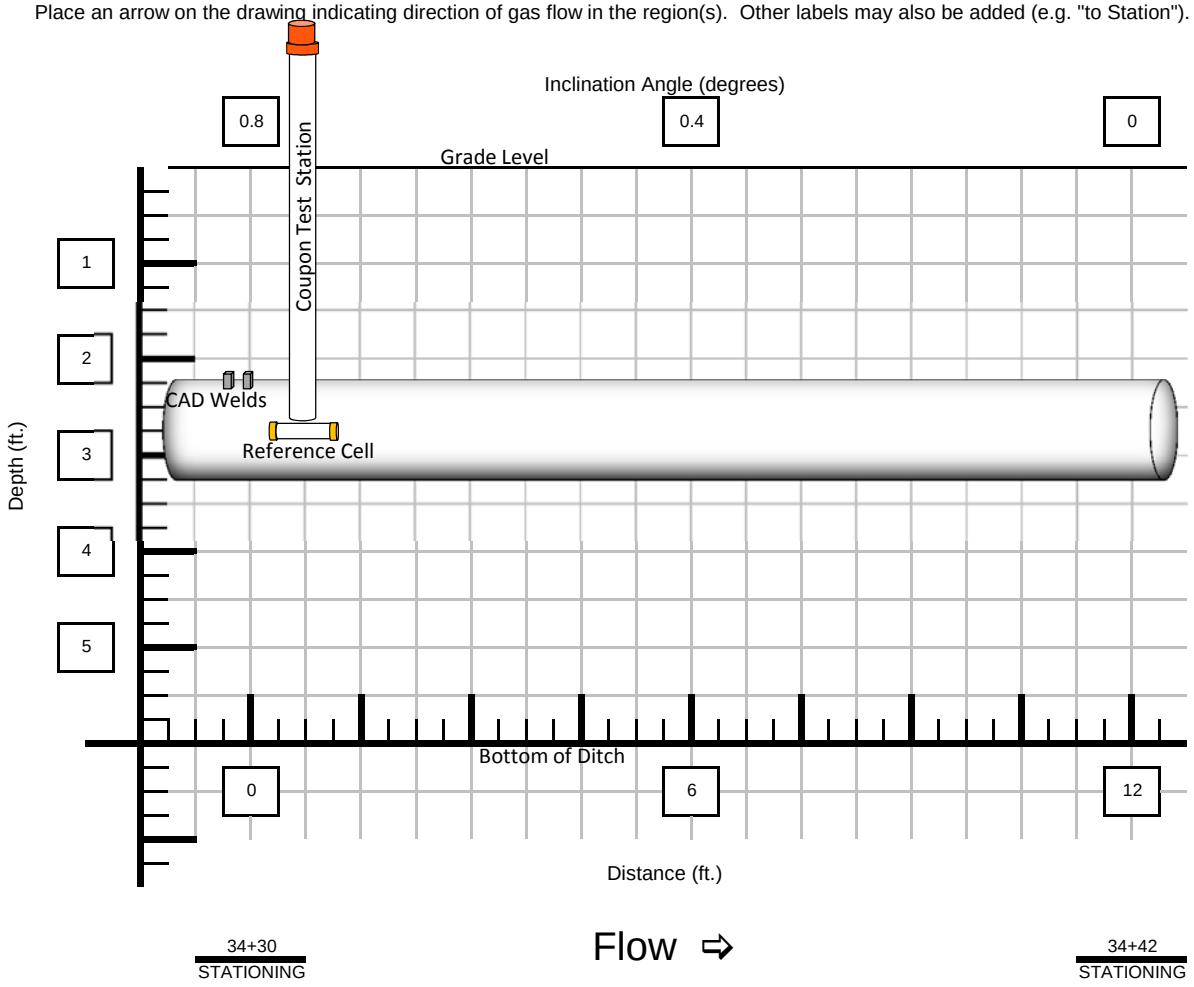


Form H: Direct Examination Data Sheet - Page 3a of 10

DA/ILI		DA		ILI	
Route Number:	191-1	**N-Segment:**	191-2013	**ILI Log Distance:**	N/A
Examination Date:	4/30/2013	**IMA Number:**	N/A	**RMP-11 Ref. Section:**	N/A
Mile Point:	35.82			**Reference Girth Weld:**	N/A
Examination Performed By:	Denise Ebright	**Region Number:**	1	**Distance From Girth Weld:**	N/A
PG&E Project Manager:	Adam Abraham	**Subregion # (ICDA):**	N/A		
Approved By:	Brenda McKay	**Stationing:**	34+36		
Order Number:	41821294				

Excavation Drawing:

At minimum draw pipe elevation profile and indicate stationing of 1) low point and 2) critical inclination angle.
Place an arrow on the drawing indicating direction of gas flow in the region(s). Other labels may also be added (e.g. "to Station").



NOTES: (Record stationing and names of nearby landmarks such as creeks and roads. Provide any additional information that may help in spatially positioning pipe):

Site is located [redacted]

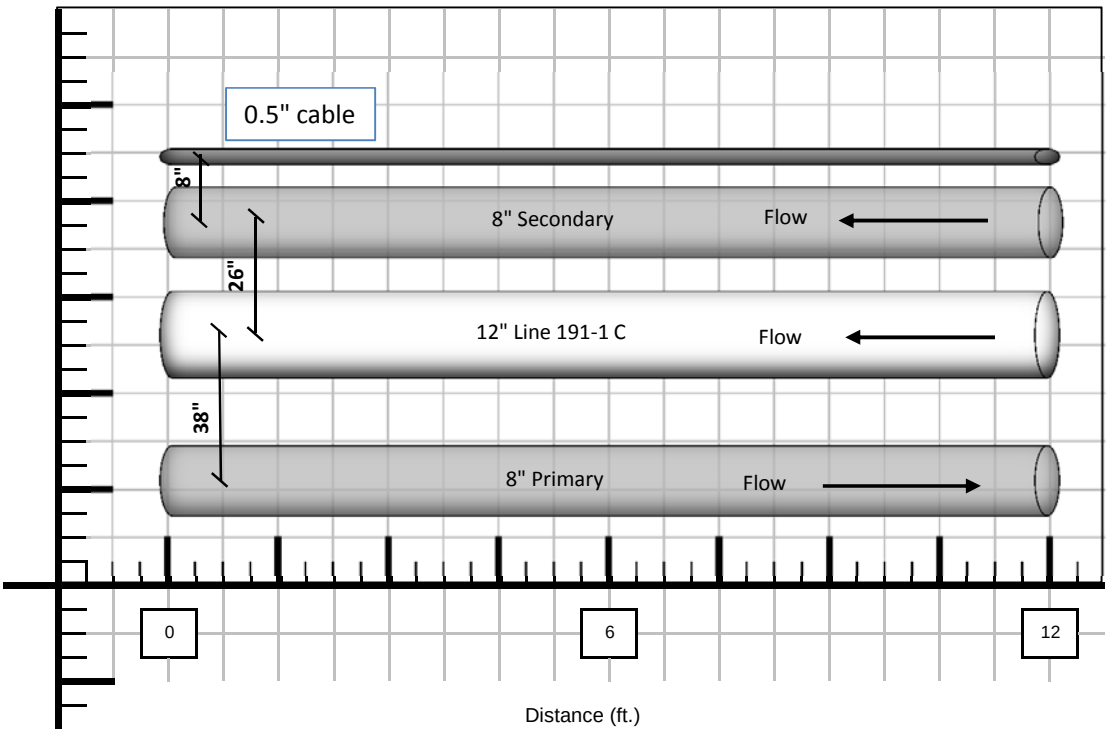
Form H: Direct Examination Data Sheet - Page 3b of 10

DA/ILI		DA		ILI	
Route Number:	191-1	**N-Segment:**	191-2013	**ILI Log Distance:**	N/A
Examination Date:	4/30/2013	**IMA Number:**	N/A	**RMP-11 Ref. Section:**	N/A
Mile Point:	35.82			**Reference Girth Weld:**	N/A
Examination Performed By:	Denise Ebright	**Region Number:**	1	**Distance From Girth Weld:**	N/A
PG&E Project Manager:	Adam Abraham	**Subregion # (ICDA):**	N/A		
Approved By:	Brenda McKay	**Stationing:**	34+36		
Order Number:	41821294				

Excavation Drawing:

At minimum draw pipe elevation profile and indicate stationing of 1) low point and 2) critical inclination angle.
Place an arrow on the drawing indicating direction of gas flow in the region(s). Other labels may also be added (e.g. "to Station").

Overhead View



34+30
STATIONING

34+42
STATIONING

NOTES: (Record stationing and names of nearby landmarks such as creeks and roads. Provide any additional information that may help in spatially positioning pipe):

Site is located [redacted]

Form H: Direct Examination Data Sheet - Page 4 of 10

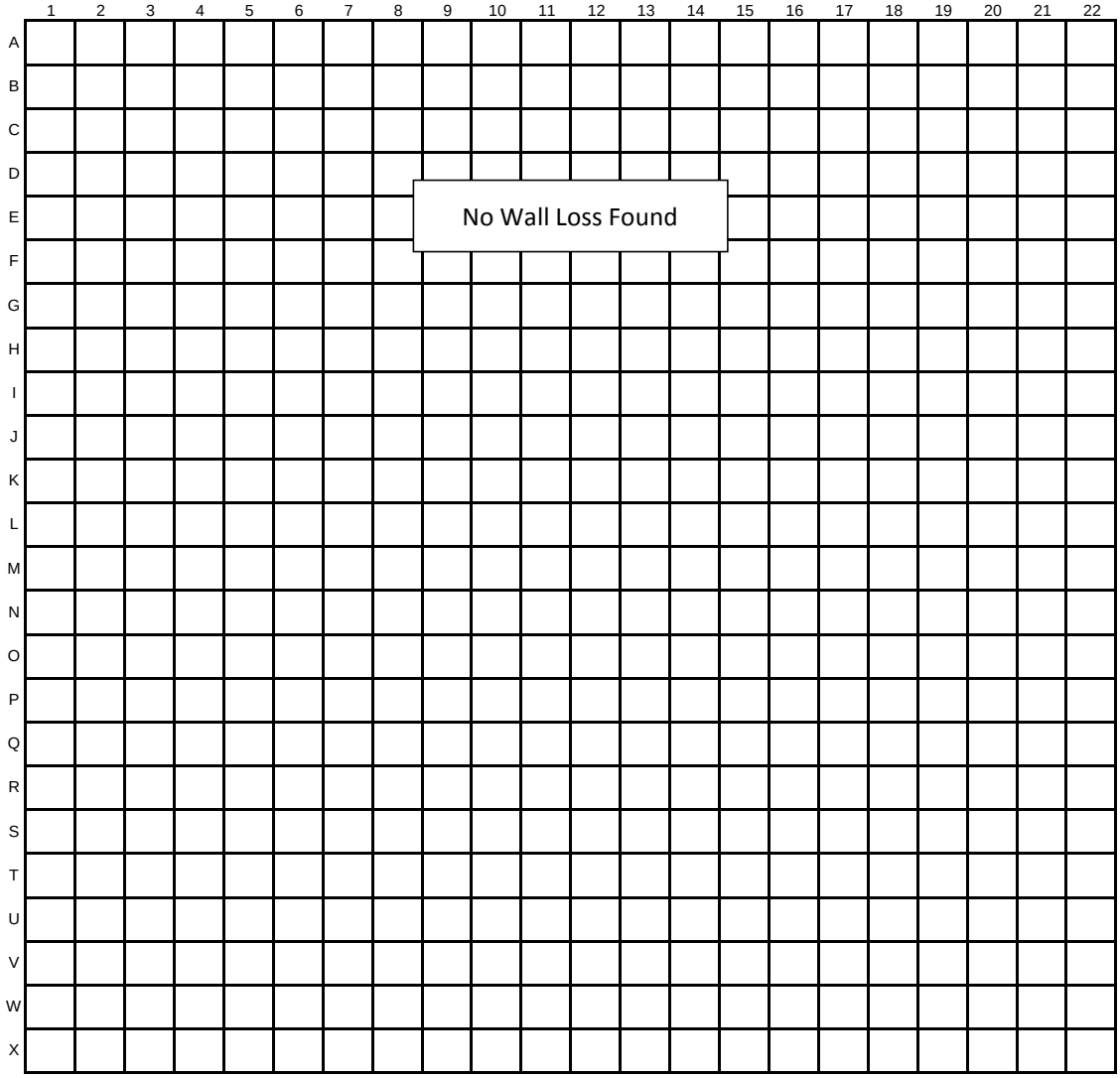
EXTERNAL PIT DEPTH MEASUREMENT GRID SHEETS

DA/ILI		DA		ILI	
Route Number:	191-1	**N-Segment:**	191-2013	**ILI Log Distance:**	N/A
Examination Date:	4/30/2013	**IMA Number:**	N/A	**RMP-11 Ref. Section:**	N/A
Mile Point:	35.82			**Reference Girth Weld:**	N/A
Examination Performed By:	Denise Ebright	**Region Number:**	1	**Distance From Girth Weld:**	N/A
PG&E Project Manager:	Adam Abraham	**Subregion # (ICDA):**	N/A		
Approved By:	Brenda McKay	**Stationing:**	34+36		
Order Number:	41821294				

Grid Size = _____ Inch x _____ Inch (specify grid size)

Clock Position (specify below)

Anomaly #: N/A Grid #: N/A



PIT DEPTH GRID 1 OF 2

EXTERNAL PIT DEPTH MEASUREMENT GRID SHEETS

DA/ILI

Route Number:	191-1
Examination Date:	4/30/2013
Mile Point:	35.82
Examination Performed By:	Denise Ebright
PG&E Project Manager:	Adam Abraham
Approved By:	Brenda McKay
Order Number:	41821294

DA

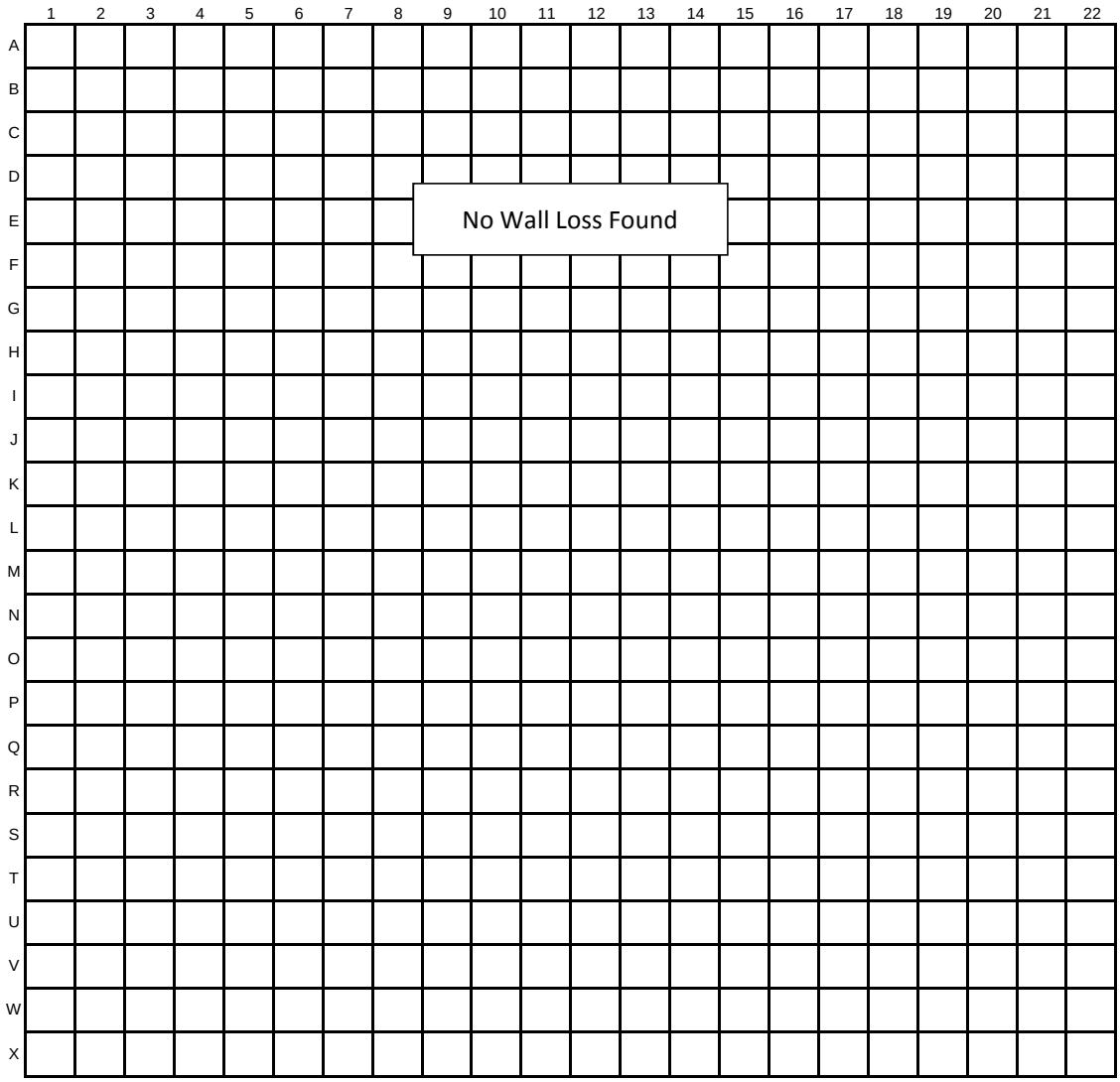
N-Segment:	191-2013
IMA Number:	N/A
Region Number:	1
Subregion # (ICDA):	N/A
Stationing:	34+36

ILI

ILI Log Distance:	N/A
RMP-11 Ref. Section:	N/A
Reference Girth Weld:	N/A
Distance From Girth Weld:	N/A

Grid Size = _____ Inch x _____ Inch (specify grid size)
Clock Position (specify below)

Anomaly #: N/A Grid #: N/A



PIT DEPTH GRID 2 OF 2

INTERNAL CORROSION PIT DEPTH GRID

DA/ILI

Route Number:	191-1
Examination Date:	4/30/2013
Mile Point:	35.82
Examination Performed By:	Denise Ebright
PG&E Project Manager:	Adam Abraham
Approved By:	Brenda McKay
Order Number:	41821294

DA

N-Segment:	191-2013
IMA Number:	N/A
Region Number:	1
Subregion # (ICDA):	N/A
Stationing:	34+36

ILI

ILI Log Distance:	N/A
RMP-11 Ref. Section:	N/A
Reference Girth Weld:	N/A
Distance From Girth Weld:	N/A

Grid Size = 1 Inch x 1 Inch

Clock Position (specify below)

UT Data in Inches

10'0" from U/S Edge

6:00

	1	2	3	4	5	6	7	8	9	10	11	12
A	0.384	0.375	0.376	0.379	0.380	0.376	0.376	0.380	0.378	0.369	0.373	0.377
B	0.386	0.377	0.379	0.379	0.380	0.377	0.378	0.384	0.380	0.374	0.375	0.381
C	0.387	0.382	0.378	0.384	0.381	0.379	0.383	0.385	0.382	0.374	0.378	0.384
D	0.385	0.374	0.379	0.383	0.383	0.378	0.381	0.385	0.381	0.375	0.380	0.381
E	0.382	0.376	0.376	0.380	0.376	0.371	0.374	0.379	0.381	0.372	0.377	0.384
F	0.374	0.349	0.360	0.381	0.377	0.372	0.374	0.382	0.378	0.376	0.379	0.381
G	0.382	0.375	0.376	0.379	0.375	0.372	0.376	0.381	0.377	0.376	0.378	0.374
H	0.378	0.374	0.375	0.375	0.370	0.369	0.373	0.382	0.378	0.381	0.381	0.377
I	0.379	0.374	0.381	0.380	0.379	0.375	0.378	0.385	0.384	0.384	0.387	0.385
J	0.379	0.381	0.381	0.384	0.379	0.377	0.380	0.385	0.385	0.387	0.391	0.390
K	0.380	0.380	0.382	0.387	0.385	0.380	0.382	0.387	0.388	0.389	0.395	0.392
L	0.377	0.378	0.381	0.383	0.381	0.379	0.380	0.384	0.388	0.390	0.391	0.389

INTERNAL CORROSION GRID

1 of 1

COATING DAMAGE

DA/ILI		DA		ILI	
Route Number:	191-1	N-Segment:	191-2013	ILI Log Distance:	N/A
Examination Date:	4/30/2013	IMA Number:	N/A	RMP-11 Ref. Section:	N/A
Mile Point:	35.82			Reference Girth Weld:	N/A
Examination Performed By:	Denise Ebright	Region Number:	1	Distance From Girth Weld:	N/A
PG&E Project Manager:	Adam Abraham	Subregion # (ICDA):	N/A		
Approved By:	Brenda McKay	Stationing:	34+36		
Order Number:	41821294				

NO.	FEET FROM REFERENCE	O'CLOCK	MAX LENGTH (IN.)	MAX CIRC EXTENT (IN.)
H-1	3'2"	8:00	0.75	11
H-2	3'2"	5:00	0.75	0.75
H-3	5'6"	3:30	0.5	0.5
CD-1	7'0"	12:00	0.75	0.75
CD-2	11'6"	9:00	2	2
CD-3	11'7"	10:30	0.5	0.5
ER-1	2'0"	12:00	1.5	1.5
ER-2	2'1"	3:30	1.5	1.5
ER-3	4'4"	6:00	3.5	2
ER-4	4'8"	6:00	1.5	1
ER-5	5'0"	6:00	1	1
ER-6	4'0"	2:00	1	1
ER-7	4'0"	2:30	0.5	0.5
ER-8	5'1"	12:00	1	1
ER-9	6'4"	6:15	1	1
ER-10	6'8"	11:30	1.5	1.5
Patch	11'10"	12:00	4	6

CORROSION LOG

DA/ILI

Route Number: 191-1
Examination Date: 4/30/2013
Mile Point: 35.82
Examination Performed By: Denise Ebright
PG&E Project Manager: Adam Abraham
Approved By: Brenda McKay
Order Number: 41821294

DA

N-Segment: 191-2013
IMA Number: N/A
Region Number: 1
Subregion # (ICDA): N/A
Stationing: 34+36

ILI

ILI Log Distance: N/A
RMP-11 Ref. Section: N/A
Reference Girth Weld: N/A
Distance From Girth Weld: N/A

IC or EC	FEET FROM REFERENCE	O'CLOCK	MAX PIT DEPTH (MILS)	MAX LENGTH (IN.)	MAX CIRC EXTENT (IN.)
PA-1	9'10"	9:30	N/A	5	19

No Wall Loss Found

PHOTO LOG

DA/ILI

Route Number: 191-1
Examination Date: 4/30/2013
Mile Point: 35.82
Examination Performed By: Denise Ebright
PG&E Project Manager: Adam Abraham
Approved By: Brenda McKay
Order Number: 41821294

DA

N-Segment: 191-2013
IMA Number: N/A
Region Number: 1
Subregion # (ICDA): N/A
Stationing: 34+36

ILI

ILI Log Distance: N/A
RMP-11 Ref. Section: N/A
Reference Girth Weld: N/A
Distance From Girth Weld: N/A

PHOTO NO.	LOCATION	DESCRIPTION	COMMENTS
1	Facing North	Site Prior to Excavation	
2	Facing East	Site Prior to Excavation	
3	Facing South	Site Prior to Excavation	
4	Facing West	Site Prior to Excavation	
5	Overview	Excavation in Progress	
6	Facing North	Excavation in Progress	
7	Facing North	Excavation in Progress	
8	Facing South	Excavation in Progress	
9	12:00, Facing D/S	Existing Coating	
10	3:00, Facing D/S	Existing Coating	
11	6:00, Facing D/S	Existing Coating	
12	9:00, Facing D/S	Existing Coating	
13	12:00, Facing U/S	Existing Coating	
14	3:00, Facing U/S	Existing Coating	
15	6:00, Facing U/S	Existing Coating	
16	9:00, Facing U/S	Existing Coating	
17	12:00, 2'0" from U/S Edge	ER-1	Existing Repair
18	12:00, 2'0" from U/S Edge	ER-1	Existing Repair
19	3:30, 2'1" from U/S Edge	ER-2	Existing Repair
20	3:30, 2'1" from U/S Edge	ER-2	Existing Repair
21	6:00, 4'4" to 5'0" from U/S Edge	ER-3, ER-4 and ER-5	Existing Repair
22	6:00, 4'8" from U/S Edge	ER-4	Existing Repair
23	6:00, 5'0" from U/S Edge	ER-5	Existing Repair
24	6:00, 4'4" from U/S Edge	ER-3	Existing Repair
25	2:00 - 2:30, 4'0" from U/S Edge	ER-6, and ER-7	Existing Repair
26	2:00, 4'0" from U/S Edge	ER-6	Existing Repair
27	2:30, 4'0" from U/S Edge	ER-7	Existing Repair
28	12:00, 5'1" from U/S Edge	ER-8	Existing Repair
29	12:00, 5'1" from U/S Edge	ER-8	Existing Repair
30	6:15, 6'4" from U/S Edge	ER-9	Existing Repair
31	6:15, 6'4" from U/S Edge	ER-9	Existing Repair
32	11:30, 6'8" from U/s Edge	ER-10	Existing Repair
33	11:30, 6'8" from U/s Edge	ER-10	Existing Repair
34	12:00, 7'0" from U/S Edge	CD-1	
35	12:00, 7'0" from U/S Edge	CD-1	
36	Full Circumference, 1'0" from U/S Edge	Existing Wax Taped Transition	Facing 12:00
37	Full Circumference, 11'0" from U/S Edge	Existing Wax Taped Transition	Facing 12:00
38	12:00, 11'10 from U/S Edge	Patch	
39	12:00, 11'10 from U/S Edge	Patch	
40	8:00, 3'2" from U/S Edge	H-1	

PHOTO LOG

DA/ILI

Route Number: 191-1
Examination Date: 4/30/2013
Mile Point: 35.82
Examination Performed By: Denise Ebright
PG&E Project Manager: Adam Abraham
Approved By: Brenda McKay
Order Number: 41821294

DA

N-Segment: 191-2013
IMA Number: N/A
Region Number: 1
Subregion # (ICDA): N/A
Stationing: 34+36

ILI

ILI Log Distance: N/A
RMP-11 Ref. Section: N/A
Reference Girth Weld: N/A
Distance From Girth Weld: N/A

PHOTO NO.	LOCATION	DESCRIPTION	COMMENTS
41	8:00, 3'2" from U/S Edge	H-1	
42	5:00, 3'2" from U/S Edge	H-2	
43	5:00, 3'2" from U/S Edge	H-2	
44	3:30, 5'6" from U/S Edge	H-3	
45	3:30, 5'6" from U/S Edge	H-3	
46	10:30, 11'7" from U/S Edge	CD-3	
47	10:30, 11'7" from U/S Edge	CD-3	
48	9:00, 11'6" from U/S Edge	CD-2	
49	9:00, 11'6" from U/S Edge	CD-2	
50	12:00, Facing D/S	Coating Removed	
51	3:00, Facing D/S	Coating Removed	
52	6:00, Facing D/S	Coating Removed	
53	9:00, Facing D/S	Coating Removed	
54	12:00, Facing U/S	Coating Removed	
55	3:00, Facing U/S	Coating Removed	
56	6:00, Facing U/S	Coating Removed	
57	9:00, Facing U/S	Coating Removed	
58	12:00, Facing D/S	Coating Removed	
59	3:00, Facing D/S	Coating Removed	
60	6:00, Facing D/S	Coating Removed	
61	9:00, Facing D/S	Coating Removed	
62	12:00, Facing U/S	Coating Removed	
63	3:00, Facing U/S	Coating Removed	
64	6:00, Facing U/S	Coating Removed	
65	9:00, Facing U/S	Coating Removed	
66	12:00, Facing D/S	Media Blasted Pipe	
67	3:00, Facing D/S	Media Blasted Pipe	
68	6:00, Facing D/S	Media Blasted Pipe	
69	9:00, Facing D/S	Media Blasted Pipe	
70	12:00, Facing U/S	Media Blasted Pipe	
71	3:00, Facing U/S	Media Blasted Pipe	
72	6:00, Facing U/S	Media Blasted Pipe	
73	9:00, Facing U/S	Media Blasted Pipe	
74	9:30, 9'10" from U/S Edge	PA-1	Undetermined type defect
75	9:30, 9'10" from U/S Edge	PA-1	Undetermined type defect
76	9:30, 9'10" from U/S Edge	PA-1	Undetermined type defect
77	9:30, 9'10" from U/S Edge	PA-1	Undetermined type defect
78	9:30, 9'10" from U/S Edge	PA-1	Undetermined type defect
79	9:30, 9'10" from U/S Edge	PA-1	Undetermined type defect
80	12:00, at D/S Edge	Test Wires Installed with CAD Welds	

PHOTO LOG

DA/ILI

Route Number: 191-1
Examination Date: 4/30/2013
Mile Point: 35.82
Examination Performed By: Denise Ebright
PG&E Project Manager: Adam Abraham
Approved By: Brenda McKay
Order Number: 41821294

DA

N-Segment: 191-2013
IMA Number: N/A
Region Number: 1
Subregion # (ICDA): N/A
Stationing: 34+36

ILI

ILI Log Distance: N/A
RMP-11 Ref. Section: N/A
Reference Girth Weld: N/A
Distance From Girth Weld: N/A

PHOTO NO.	LOCATION	DESCRIPTION	COMMENTS
81	12:00, 2'0" from U/S Edge	LSW Analysis	
82	12:00, Facing D/S	Pipe Recoat in Progress	Primer
83	12:00, Facing D/S	Pipe Recoat in Progress	Primer
84	Facing South	Pipe Recoated	Wax Tape
85	9:00, Facing D/S	Pipe Recoated	Wax Tape
86	3:00, Facing D/S	Pipe Recoated	Wax Tape
87	9:00, Facing U/S	Pipe Recoated	Wax Tape
88	3:00, Facing U/S	Pipe Recoated	Wax Tape
89	Overview	Future Repair Area Marked	Tape over coating in area to be cut out
90	Facing North	Site As Left	5/16/2013
91	Facing South	Site As Left	5/16/2013
92	Facing North	Site As Left	5/16/2013
93	Facing South	Site As Left	5/16/2013
94	Overview	Reference Cell and Coupon Test Station	
95	Facing West	Coupon Test Stations Installed	Test Stations installed for each pipe in ditch
96	Facing East	Future Repair Area Staked	
97	Facing West	Future Repair Area Staked	
98	Facing North	Site As Left	5/18/2013
99	Facing East	Site As Left	5/18/2013
100	Facing South	Site As Left	5/18/2013
101	Facing West	Site As Left	5/18/2013

DA/ILI		DA		ILI	
Route Number:	191-1	**N-Segment:**	191-2013	**ILI Log Distance:**	N/A
Examination Date:	4/30/2013	**IMA Number:**	N/A	**RMP-11 Ref. Section:**	N/A
Mile Point:	35.82			**Reference Girth Weld:**	N/A
Examination Performed By:	Denise Ebright	**Region Number:**	1	**Distance From Girth Weld:**	N/A
PG&E Project Manager:	Adam Abraham	**Subregion # (ICDA):**	N/A		
Approved By:	Brenda McKay	**Stationing:**	34+36		
Order Number:	41821294				

3.0 Recoat Data

3.1 Sandblast Media: Kleen Blast 30/60 **Anchor Profile Measurement:** N/A

3.2 Pipe Recoated With:

☐ Powercrete J ■ Wax Tape ☐ Bar-Rust 235 ☐ Dev Grip 238 ☐ Dev Tar 247 ☐ Protal 7200 ☐ PE Tape

3.3 For Epoxy Coating Systems, Record Environmental Condition:

Air Temperature: N/A Dew Point: N/A

Pipe Temperature: N/A Relative Humidity: N/A

Time of Day: N/A

3.4 Repair Coating Hardness (If ARC Coating:) N/A

3.5 Measured Coating Thickness: 3:00 - N/A 6:00 - N/A 9:00 - N/A 12:00 - N/A

Holiday Tested?: ☐ Yes ■ No

Device Used: ☐ Coil ☐ Wet Sponge Voltage Used: N/A Repair All Holidays.

3.6 Coupon Test Station Installed?: ■ Yes ☐ No **ETS Installed?:** ☐ Yes ■ No

If Yes, Date Installed: 5/18/2013

Surface Configuration:: ■ Fink ☐ G-5 Box ☐ Carsonite ☐ Other:

3.7 Backfill Material: ■ Native ☐ Imported Sand ☐ Other:

Coating Protections?: ■ Yes ☐ No

If Yes, Check One: ☐ Rockguard ■ Tuff-N-Nuff ☐ PipeSaver ☐ Other:

3.8 Pipe-to-Soil Readings Over Bell Hole After Backfill: -793mV

*If specified, a CIS should be done for approximately 100' on either side of the bell hole. Attach data.

Comments: Pipe-to-Soil potential was taken with a CSE.

3.9 Attach site sketch of excavation site.

4.0 Repair Data

4.1 Repair Made: ☐ Yes ■ No **4.1 Number of Repairs Made:** N/A

4.3 Repair Type: ☐ Metallic Sleeve ☐ Non Metallic Sleeve ☐ Replace ☐ Can ☐ Filler Metal ☐ Other

4.4 Damage Repaired: ☐ Corrosion ☐ Mechanical ☐ Other

Misc. Comments/Information: Excavation began on 4/26/13 and was completed on 4/30/13. The entire excavation was hand dug, there are 3 lines running through the excavation; a 12" line and two 8" lines. After meeting with David He (PG&E) it was determined that all 3 lines should be inspected. A 1/2" ground cable was also found in the site. Once the pipe was exposed, a coating inspection was performed, existing plastic tape and Protal 7200 coating was found to be in fair condition with 1 patch, 10 existing repairs in Protal, 3 areas of coating damage, and 3 holidays were found. On 5/1/13, David He requested Pipe-to-Soil reads on the U/S and D/S edges and at centerline. Using the existing test leads attached to the pipe, reads were taken (D/S -556mV, U/S -552mV), sent to David He and Bryon Winget. Marcus Livermore (Mears) confirmed a survey was being performed on this line and rectifiers were off. Approval was given to continue with inspection. The coating was removed and the pipe was inspected to ensure safe media blast. The pipe was sandblasted with Kleen Blast 30/60 media. On 5/2/13, a pipe inspection was performed finding no evidence of wall loss due to external corrosion or mechanical damage. A Magnetic Particle Exam was performed finding no linear indications. On 5/3/13, Fred Necochea (ATS) performed acid etch, pipe was determined to be seamless. On 5/9/13, approval was given to recoat. Upon media blast to prepare for recoat, an unknown anomaly (PA) appeared. The anomaly was raised off surface of pipe and did not respond to blasting nor was a profile created. On 5/10/13, David Aguiar analyzed the anomaly and requested additional testing including chemical analysis, RT, Metallurgical replication and micro hardness testing. Paul Tibbals and Forrest Reasonere (PG&E) performed testing. Test results were inconclusive, more testing was performed including UT Angle Beam and UT Straight Beam, found no sub surface indications and no laminations. Andrew Carr and Forrest Reasonere returned to perform a second replication. On 5/14/13, determination was received from David Aguiar, that with extensive metallurgical, chemical, MT RT, UT, and replication being negative. There is no evidence of cracking or other injurious features and believes the anomaly does not pose a threat to integrity of the pipe. Nonetheless, David recommended cut out and replace of the section of pipe containing the anomaly for further investigation. While awaiting repair, the pipe was recoated with Wax Tape coating. Pink tape was wrapped around pipe at the location of the anomaly. Tuff-N-Nuff was applied to the pipe. A reference cell and coupon test station were installed. The site was backfilled with native soil. Stakes were placed above ground at the repair area. Site was restored on 05/18/2013.

Mears Job Number: 9101323013

Form H: Site Map

DA/ILI		DA		ILI	
Route Number:	191-1	**N-Segment:**	191-2013	**ILI Log Distance:**	N/A
Examination Date:	4/30/2013	**IMA Number:**	N/A	**RMP-11 Ref. Section:**	N/A
Mile Point:	35.82			**Reference Girth Weld:**	N/A
Examination Performed By:	Denise Ebright	**Region Number:**	1	**Distance From Girth Weld:**	N/A
PG&E Project Manager:	Adam Abraham	**Subregion # (ICDA):**	N/A		
Approved By:	Brenda McKay	**Stationing:**	34+36		
Order Number:	41821294				

[redacted]

Misc. Comments/Information About Area Surrounding Ditch: Site is located inside the [redacted]

Form H: Direct Examination Data Sheet

MAGNETIC PARTICLE EXAMINATION DATA SHEET

DA/ILI		DA		ILI	
Route Number:	191-1	**N-Segment:**	191-2013	**ILI Log Distance:**	N/A
Examination Date:	4/30/2013	**IMA Number:**	N/A	**RMP-11 Ref. Section:**	N/A
Mile Point:	35.82			**Reference Girth Weld:**	N/A
Examination Performed By:	Denise Ebright	**Region Number:**	1	**Distance From Girth Weld:**	N/A
PG&E Project Manager:	Adam Abraham	**Subregion # (ICDA):**	N/A		
Approved By:	Brenda McKay	**Stationing:**	34+36		
Order Number:	41821294				

Test Equipment	Serial No.	Technique	Test Medium	Quality Control	Surface Condition
■ Yoke	13171	■ Continuous	■ Wet	Batch # 10M068	■ As Blasted NACE 2
☐ Permanent Magnet		☐ Residual	☐ Dry	Batch #	☐ Bare Metal
☐ Coil		■ AC	■ Fluorescent	Batch # 10M068	☐ As Ground
☐ Other		☐ DC	☐ Black on White	Batch #	☐ Painted
					☐ Other (Walnut Blasted)

Reference GPS: *U/S Edge*

Northing [redacted]

Easting

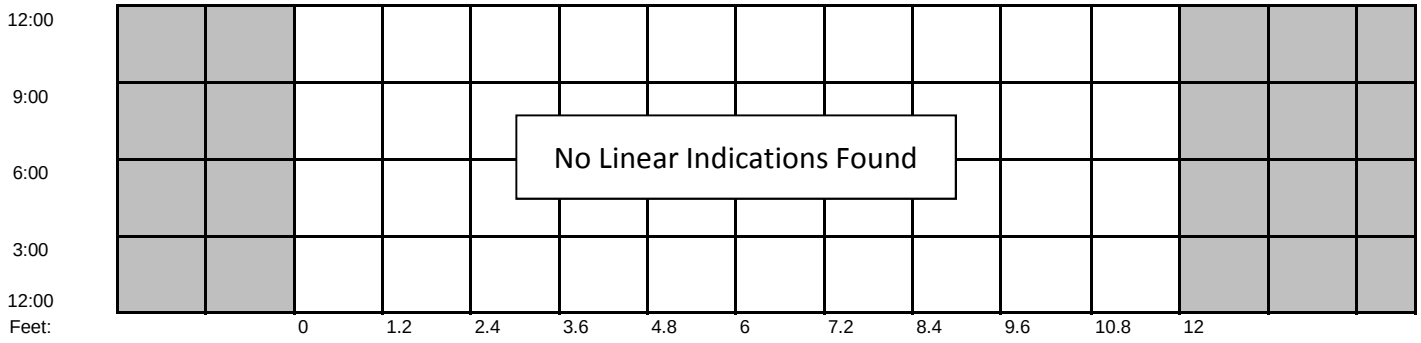
Acceptance Criteria: No indications allowed.

Accepted? ■ Yes ☐ No, See Table below.

Map of Magnetic Particle Indications:

Zero Reference Point: U/S Edge of Inspection Area

Flow →



Table

Ind No.	Axial Position	Circumferential Position	Indication Length	Wall Thickness before Softpad	Wall Thickness after Final Softpad	Indication Removed (Yes, No)
N/A	N/A	N/A	N/A	N/A	N/A	N/A

Notes: A wet fluorescent Magnetic Particle Exam was performed, no indications were found.

The examination above was performed to the best of my professional ability in accordance with Mears MPE-01.

Technician's Signature: Denise Ebright Mears Level: Level II - Limited Date: 05/02/13

Assistant: Zach Pochop Mears Level: Level II - Limited Date: 05/02/13