

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

<u>DA/ILI</u>		<u>DA</u>		<u>ILI</u>	
Route Number: _____	N-Segment: _____	ILI Log Distance: _____	RMP-11 Ref. Section: Table 5.6.2		
Examination Date: 11/13/2011	IMA Number: _____	Reference Girth Weld: _____	Distance From Girth Weld: _____		
Mile Point: _____	Region Number: _____				
Examination Performed By: <u>[Signature]</u>	Subregion # (ICDA): _____				
PG&E Project Manager: _____	Stationing: _____				
Approved By: _____					
Order Number: _____					

<u>Excavation Priority:</u>			<u>Excavation Reason:</u>			
<input type="checkbox"/> Immediate	<input type="checkbox"/> Scheduled (For ILI -	<input type="checkbox"/> 1 Year	<input type="checkbox"/> Other	<input type="checkbox"/> ECDA	<input type="checkbox"/> ILI	<input type="checkbox"/> Recoat
<input type="checkbox"/> Monitor	<input type="checkbox"/> Effectiveness	<input type="checkbox"/> ICDA	<input type="checkbox"/> ICDA	<input checked="" type="checkbox"/> Other	<input type="checkbox"/> MAOP Validation	

If practical, take PIS or CIS reads before excavation: _____

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

Planned Inspection Length (Ft.): _____

Actual Inspection Length (Ft.): _____

Centerline on GPS Coordinates (Uncorrected Field Measurement): _____

GPS File Name: _____

Centerline on GPS Coordinates (Corrected Field Measurement): _____

Nominal Wall Thickness: _____

Nominal Pipe Diameter: _____

1.0 Data Before Coating Removal

1.1 Native Soil Type: Clay Rock Sand Loam Wet Other _____

1.1a Backfill Material Found Sand Slurry Native

Depth of Cover (Ft.): _____

Comments: _____

1.2 Coating Type: HAA Somatic Plastic Tape Wax Tape FBE Powercrete

Bare/None Paint Other: _____

Comments: Poor condition disbonded

Coating Thickness (Inches): 1/8" Number of Layers: 1

1.3 Holiday Testing Performed? Yes No Voltage Used: _____ Map Location of Holidays Below.

Device Used: Coil Wet Sponge Comments: _____

1.4 Pipe-to-Soil Potentials in Ditch (-mV): US: neg 1190 mv DS: neg 1190 mv

Comments: _____

1.5 Soil Resistivity in Ditch (Ω -cm):

Method: 4-Pin Soil Box 5300 ohms

1.6 Soil Sample Location: Comments: D/S end

1.7 Ground Water Present?: Yes No Sample(s) Collected?: Yes No Sample pH: _____

Comments: _____

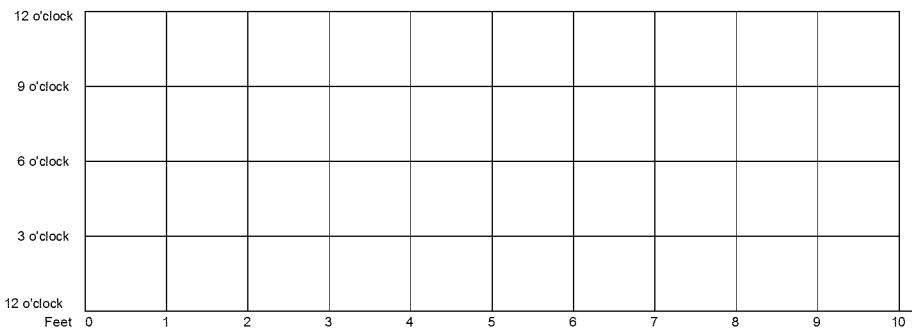
1.8 Coating Condition: Good - Adhered to Pipe Fair - Coating Partially Disbonded or Degraded

Poor - Coating Significantly Disbonded or Missing

Comments: Coating disbonded and falling off with soil removal 100% over exposed pipe.

1.9 Map of Coating Degradation*: **Zero Reference Point: edge of exposed pipe.**

*Note any calcareous deposit locations



No Coating Degradation Found

Form H: Direct Examination Data Sheet - Page 2 of 10

<u>DA/ILI</u>	<u>DA</u>	<u>ILI</u>
Route Number: _____	N-Segment: _____	ILI Log Distance: _____
Examination Date: 11/13/2011	IMA Number: _____	RMP-11 Ref. Section: Table 5.6.2
Mile Point: _____	Region Number: _____	Reference Girth Weld: _____
Examination Performed By: <u>dj</u>	Subregion # (ICDA): _____	Distance From Girth Weld: _____
PG&E Project Manager: _____	Stationing: _____	
Approved By: _____		
Order Number: _____		

1.10 Photos Taken?: Yes No

*See Photo Log for additional information.

1.11 Coating Sample Taken?: Yes No

Location of Sample: D/S end

1.12 Liquid Underneath Coating?: Yes No

If Yes, pH of Liquid: _____

1.13 Corrosion Product Present?: Yes No

If Yes, Was Sample Taken?: Yes No

Comments: _____

1.14 Soil pH (Sb Electrode): Upstream: 6.5 Downstream: 6.5

2.0 Data After Coating Removal

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

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: _____
 Easting: _____
 Elevation: _____

LS Weld Clock Position: _____

2.4 Damage Found:

Corrosion Damage? Yes No Mechanical Damage? Yes No

Other Damage: _____

2.5 UT Wall Thickness Measurements: TDC: 0.149" 1 O'clock: 0.149" 2 O'clock: 0.149" 3 O'clock: 0.149"
 4 O'clock: 0.149" 5 O'clock: 0.149" 6 O'clock: 0.149" 7 O'clock: 0.149"
 8 O'clock: 0.149" 9 O'clock: 0.149" 10 O'clock: 0.149" 11 O'clock: 0.149"

2.5a Nominal Wall Thickness: 0.148"

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: Two linear indications were noted please see MT report for locations.

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.

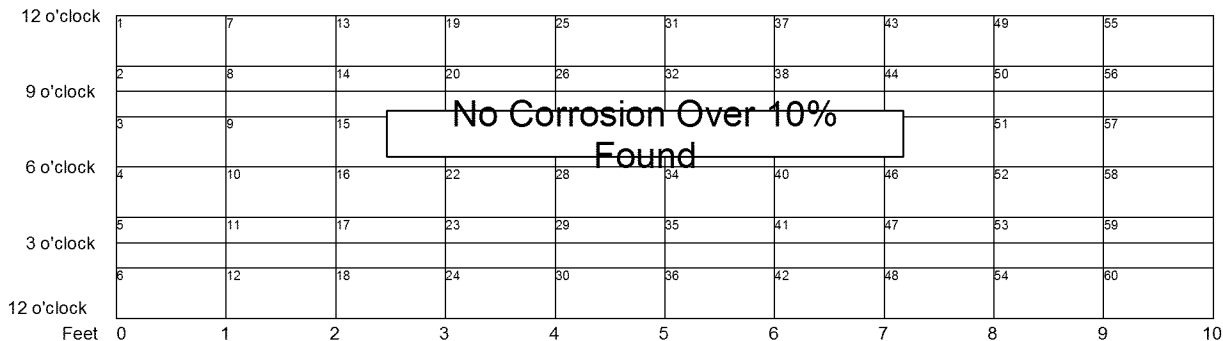
2.8 Overview Map of Corroded Area*:

*See Pit Depth Measurement Grid for additional Information

Zero Reference Point: edge of exposed pipe.

*Note any calcareous deposits.

Flow



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

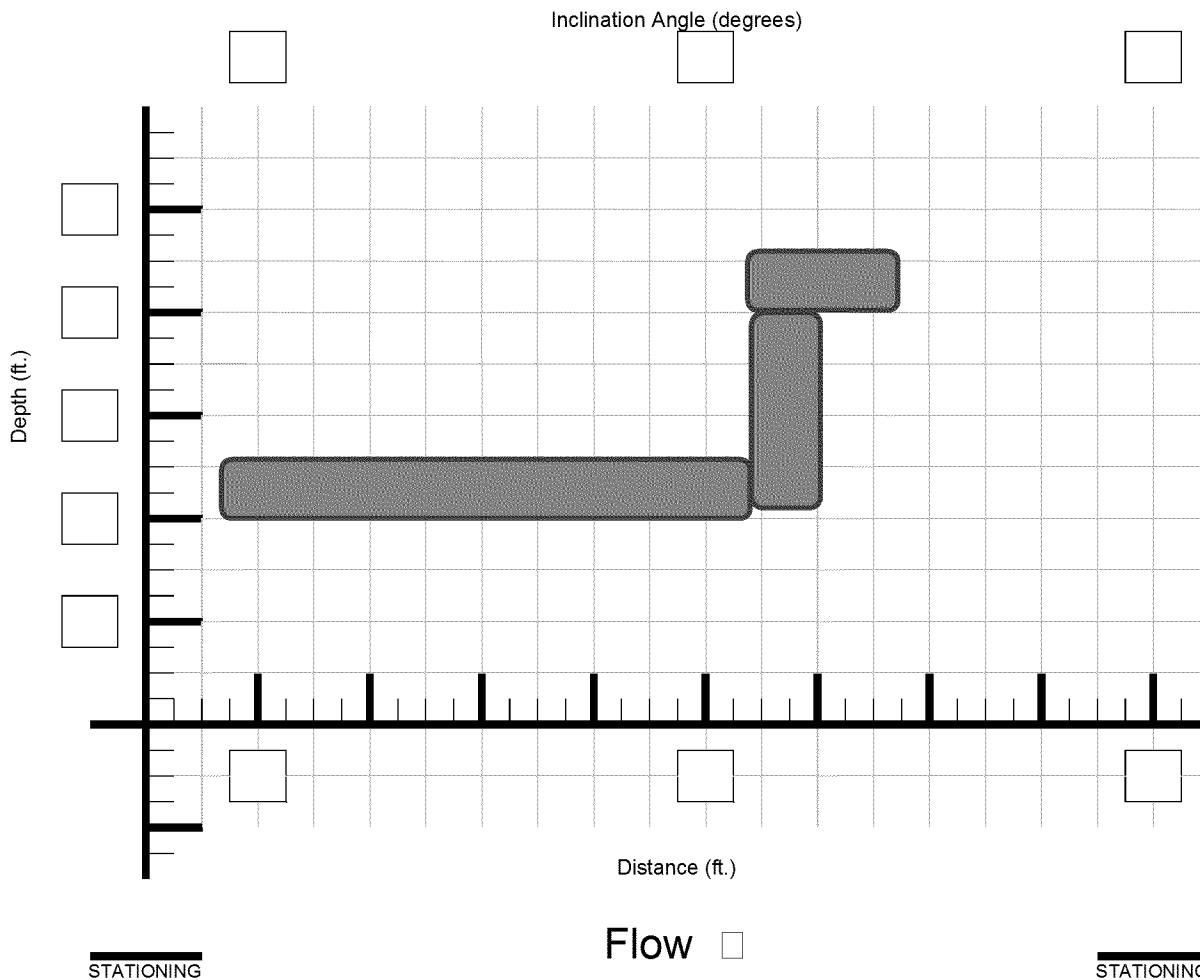
DA/ILI
 Route Number: _____
 Examination Date: 11/13/2011
 Mile Point: _____
 Examination Performed By: [Signature]
 PG&E Project Manager: _____
 Approved By: _____
 Order Number: _____

DA
 N-Segment: _____
 IMA Number: _____
 Region Number: _____
 Subregion # (ICDA): _____
 Stationing: _____

ILI
 ILI Log Distance: _____
 RMP-11 Ref. Section: Table 5.6.2
 Reference Girth Weld: _____
 Distance From Girth Weld: _____

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):

EXTERNAL PIT DEPTH MEASUREMENT GRID SHEETS

<p><u>DA/ILI</u> Route Number: _____ Examination Date: 11/13/2011 Mile Point: _____ Examination Performed By: <u>QJ</u> PG&E Project Manager: _____ Approved By: _____ Order Number: _____</p>	<p><u>DA</u> N-Segment: _____ IMA Number: _____ Region Number: _____ Subregion # (ICDA): _____ Stationing: _____</p>	<p><u>ILI</u> ILI Log Distance: _____ RMP-11 Ref. Section: Table 5.6.2 Reference Girth Weld: _____ Distance From Girth Weld: _____</p>
--	--	--

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

Anomaly #: _____ Grid #: _____

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	
A																							
B																							
C																							
D																							
E																							
F																							
G																							
H																							
I																							
J																							
K																							
L																							
M																							
N																							
O																							
P																							
Q																							
R																							
S																							
T																							
U																							
V																							
W																							
X																							

No Corrosion Over 20%
Found

EXTERNAL PIT DEPTH MEASUREMENT GRID SHEETS

<p><u>DA/ILI</u></p> <p>Route Number: _____</p> <p>Examination Date: 11/13/2011 _____</p> <p>Mile Point: _____</p> <p>Examination Performed By: <u>QJ</u> _____</p> <p>PG&E Project Manager: _____</p> <p>Approved By: _____</p> <p>Order Number: _____</p>	<p><u>DA</u></p> <p>N-Segment: _____</p> <p>IMA Number: _____</p> <p>Region Number: _____</p> <p>Subregion # (ICDA): _____</p> <p>Stationing: _____</p>	<p><u>ILI</u></p> <p>ILI Log Distance: _____</p> <p>RMP-11 Ref. Section: Table 5.6.2 _____</p> <p>Reference Girth Weld: _____</p> <p>Distance From Girth Weld: _____</p>
---	---	--

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

Anomaly #: _____ Grid #: _____

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
A																						
B																						
C																						
D																						
E																						
F																						
G																						
H																						
I																						
J																						
K																						
L																						
M																						
N																						
O																						
P																						
Q																						
R																						
S																						
T																						
U																						
V																						
W																						
X																						

No Corrosion Over 20%
Found

PIT DEPTH GRID 2 OF 2

INTERNAL CORROSION PIT DEPTH GRID

<u>DA/ILI</u>	<u>DA</u>	<u>ILI</u>
Route Number: _____	N-Segment: _____	ILI Log Distance: _____
Examination Date: 11/13/2011	IMA Number: _____	RMP-11 Ref. Section: Table 5.6.2
Mile Point: _____	Region Number: _____	Reference Girth Weld: _____
Examination Performed By: DJ	Subregion # (ICDA): _____	Distance From Girth Weld: _____
PG&E Project Manager: _____	Stationing: _____	
Approved By: _____		
Order Number: _____		

Grid Size = 6.0 Inch x 6.0 Inch
 Clock Position (specify below)

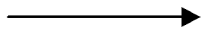
UT Data in Inches

___' from U/S Edge

UT Data in Mils

6:00

	1	2	3	4	5	6	7	8	9	10	11	12
A	0.149	0.149	0.149	0.150	0.150	0.149						
B	0.149	0.149	0.149	0.151	0.149	0.150						
C	0.149	0.150	0.149	0.151	0.150	0.150						
D	0.150	0.150	0.150	0.149	0.151	0.150						
E	0.149	0.149	0.149	0.150	0.150	0.149						
F	0.150	0.149	0.149	0.150	0.151	0.149						
G												
H												
I												
J												
K												
L												



INTERNAL CORROSION GRID
 1 of 1

CORROSION LOG

<p><u>DA/ILI</u></p> Route Number: _____ Examination Date: 11/13/2011 _____ Mile Point: _____ Examination Performed By: [DJ] _____ PG&E Project Manager: _____ Approved By: _____ Order Number: _____	<p><u>DA</u></p> N-Segment: _____ IMA Number: _____ Region Number: _____ Subregion # (ICDA): _____ Stationing: _____	<p><u>ILI</u></p> ILI Log Distance: _____ RMP-11 Ref. Section: Table 5.6.2 _____ Reference Girth Weld: _____ Distance From Girth Weld: _____
---	--	---

IC or EC	FEET FROM REFERENCE	O'CLOCK	MAX PIT DEPTH (MILS)	MAX LENGTH (IN.)	MAX CIRC EXTENT (IN.)
<div style="border: 1px solid black; padding: 5px; display: inline-block;"> No Corrosion Over 20% Found </div>					

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

<u>DA/ILI</u>		<u>DA</u>	<u>ILI</u>
Route Number: _____	N-Segment: _____	ILI Log Distance: _____	
Examination Date: 11/13/2011	IMA Number: _____	RMP-11 Ref. Section: Table 5.6.2	
Mile Point: _____	Region Number: _____	Reference Girth Weld: _____	
Examination Performed By: <input checked="" type="checkbox"/>	Subregion # (ICDA): _____	Distance From Girth Weld: _____	
PG&E Project Manager: _____	Stationing: _____		
Approved By: _____			
Order Number: _____			

3.0 Recoat Data

3.1 Sandblast Media: _____ Anchor Profile Measurement: _____

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: _____ Dew Point: _____
Pipe Temperature: _____ Relative Humidity: _____
Time of Day: _____

3.4 Repair Coating Hardness (If ARC Coating:) _____

3.5 Measured Coating Thickness: 3:00 - _____ 6:00 - _____ 9:00 - _____ 12:00 - _____

Holiday Tested?: Yes No

Device Used: Coil Wet Sponge Voltage Used: _____ Repair All Holidays.

3.6 Coupon Test Station Installed?: Yes No ETS Installed?: Yes No

If Yes, Date Installed: _____

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: _____

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

Comments: _____

3.9 Attach site sketch of excavation site.

4.0 Repair Data

4.1 Repair Made: Yes No 4.1 Number of Repairs Made: _____

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

4.4 Damage Repaired: Corrosion Mechanical Other

Misc. Comments/Information: _____



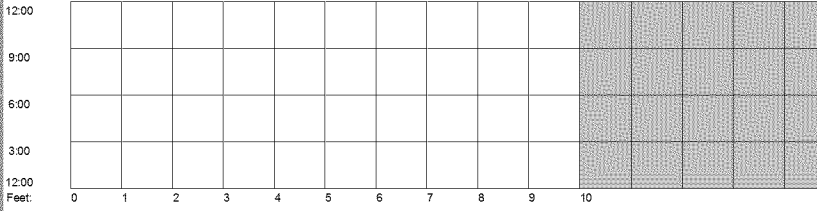
MAGNETIC PARTICLE EXAMINATION DATA SHEET

Route Number: _____ N-Segment: _____ ILLI Log Distance: _____
 Examination Date: 11/13/2011 IMA Number: _____ RMP-11 Ref. Section: Table 5.6.2
 Mile Point: _____ Reference Girth Weld: _____
 Examination Performed By: [Signature] Region Number: _____ Distance From Girth Weld: _____
 PG&E Project Manager: _____ Subregion # (ICDA): _____
 Approved By: _____ Stationing: _____
 Order Number: _____

Test Equipment	Serial No.	Technique	Test Medium	Quality Control	Surface Condition
Yoke <input checked="" type="checkbox"/>	15386/B300	Continuous <input checked="" type="checkbox"/>	Wet <input checked="" type="checkbox"/>	Batch # _____	<input checked="" type="checkbox"/> As Blasted NACE 2
Permanent Magnet <input type="checkbox"/>	_____	Residual <input type="checkbox"/>	Dry <input type="checkbox"/>	Batch # _____	<input type="checkbox"/> Bare Metal
Coil <input type="checkbox"/>	_____	AC <input type="checkbox"/>	Fluorescent <input checked="" type="checkbox"/>	Batch # 09/001	<input type="checkbox"/> As Ground
Other <input type="checkbox"/>	_____	DC <input type="checkbox"/>	Black on White <input type="checkbox"/>	Batch # _____	<input type="checkbox"/> Painted
					<input type="checkbox"/> Other (Walnut Blasted)

Reference GPS: _____ Acceptance Criteria: API 1160
 Northing: _____ Easting: _____
 Accepted? Yes No. See Table below.

Map of Magnetic Particle Indications: Zero Reference Point: edge of exposed pipe. Flow →



Ind No.	Axial Position	Circumferential Position	Indication Length	Wall Thickness before Softpad	Wall Thickness after Final Softpad	Indication Removed (Yes, No)
1	4'	6:00	.75"	in weld		
2	7	12:00	1"	in weld		

Notes: Linear indication 1 is located in the reinforcement weld at 6:00. Linear indication 2 is located in the 90 deg tangent weld at 12:00.

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

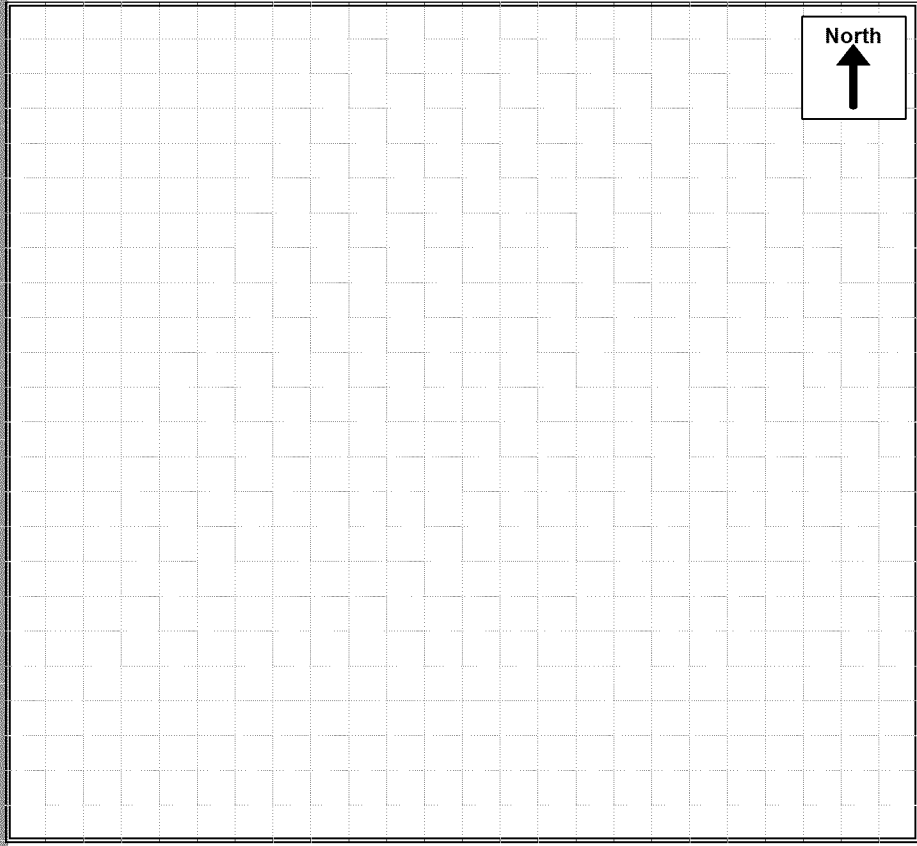
Technician's Signature: _____ Mears Level: _____ Date: _____
 Assistant: _____ Mears Level: _____ Date: _____



Form H: Site Map

<u>DA/ILI</u>	<u>DA</u>	<u>ILI</u>
Route Number: _____	N-Segment: _____	ILI Log Distance: _____
Examination Date: 11/13/2011	IMA Number: _____	RMP-11 Ref. Section: Table 5.6.2
Mile Point: _____	Region Number: _____	Reference Girth Weld: _____
Examination Performed By: [Signature]	Subregion # (ICDA): _____	Distance From Girth Weld: _____
PG&E Project Manager: _____	Stationing: _____	
Approved By: _____		
Order Number: _____		

*Sketch Not Drawn to Scale



Misc. Comments/Information About Area Surrounding Ditch: _____

<p><u>DA/ILI</u></p> <p>Route Number: _____</p> <p>Examination Date: 11/13/2011</p> <p>Mile Point: _____</p> <p>Examination Performed By: [Signature]</p> <p>PG&E Project Manager: _____</p> <p>Approved By: _____</p> <p>Order Number: _____</p>	<p><u>DA</u></p> <p>N-Segment: _____</p> <p>IMA Number: _____</p> <p>Region Number: _____</p> <p>Subregion # (ICDA): _____</p> <p>Stationing: _____</p>	<p><u>ILI</u></p> <p>ILI Log Distance: _____</p> <p>RMP-11 Ref. Section: Table 5.6.2</p> <p>Reference Girth Weld: _____</p> <p>Distance From Girth Weld: _____</p>
---	---	--

Clock position UT Data near welds



UT Data in Inches

	1	2	3	4	5	6	7	8	9	10	11	12
1:00	0.149	0.149	0.149	0.151	0.152							
2:00	0.149	0.151	0.151	0.151	0.151							
3:00	0.149	0.151	0.150	0.149	0.152							
4:00	0.150	0.150	0.150	0.152	0.153							
5:00	0.149	0.151	0.151	0.153	0.152							
6:00	0.149	0.149	0.149	0.152	0.150							
7:00	0.149	0.151	0.149	0.152	0.152							
8:00	0.150	0.150	0.150	0.152	0.153							
9:00	0.150	0.149	0.149	0.152	0.152							
10:00	0.149	0.149	0.149	0.153	0.152							
11:00	0.149	0.151	0.150	0.151	0.152							
12:00	0.149	0.151	0.150	0.151	0.153							