



# Diversified Technology Services

2045 Preisker Lane Suite A – Santa Maria, California 93454 – 805-928-6392

## VISUAL INSPECTION REPORT (API-570 – Process Piping)

	<b>Client:</b> <u>  DTS Client  </u> <b>Location:</b> <u>  Somewhere USA  </u>
	<b>Circuit Number:</b> <u>  GL-P-03-03  </u> <b>Date Built:</b> <u>  1981  </u>
	<b>Circuit/Process Name:</b> <u>  Gas Gathering sub-header &amp; header at well room #3.  </u>
	<b>P&amp;ID No.:</b> <u>  558-F-101  </u> <b>Service:</b> <u>  Gas Gathering  </u>
	<b>Inspector Name:</b> <u>  API Visual Insp.  </u> <b>API 570 #</b> <u>  18  </u> <b>Date:</b> <u>  11/25/03  </u>

* Inspection Interval Statistics *	
<b>Date of last Inspection:</b> <u>  Unknown  </u>	<b>Date of Next Inspection:</b> <u>  11/25/08  </u>

* Piping Statistics *						
<input checked="" type="checkbox"/> Carbon Steel		<input type="checkbox"/> Stainless Steel		<input type="checkbox"/> Other		
<input type="checkbox"/> Insulated		<input checked="" type="checkbox"/> Non-Insulated		<input type="checkbox"/> Partial Insulated		
Item	Area of Interest	Condition				Comments
		Good	Fair	Poor	N/A	
1	Insulation				X	
2	Insulation Jacketing				X	
3	Coating System			X		See narrative.
4	Supports			X		See narrative.
5	Spring Can Supports				X	
6	Orifice Nipples				X	
7	Vibration	X				
8	Alignment	X				
9	Dummy Legs				X	
10	Deck Penetrations		X			
11	Flanges		X			See narrative.
12	Flange Bolts		X			See narrative.
13	Welds and Seams	X				
14	Pipe Surface		X			See narrative.
15	Valve Packing	X				
16	Steam Tracing				X	
17	Expansion Joints				X	



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Item	Area of Interest	Condition				Comments
		Good	Fair	Poor	N/A	
18	Other				X	
19	Other				X	

Item	Area of Interest	Condition			Comments
		Yes	No	N/A	
20	Safety Valve			X	
21	Clamps		X		
22	Mixed Metals		X		
23	Screwed Fittings		X		
24	Distortion (sagging)		X		
25	Leaks		X		
26	C.U.L.			X	
27	Bulges		X		
28	Corrosion	X			See narrative.
29	Other			X	



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### \* Narrative description of findings \*

**Date:** 11/25/03

**Circuit No.:** GL-P-03-03

An On-Stream inspection was performed in accordance with the guidelines of API-570. Due to the amount, severity and location of the coating failure and associated external corrosion, complete removal of degraded coating or corrosion and scale during inspection was not possible at this time. Random areas were selected for inspection in an attempt to reflect the overall condition of this piping circuit.

#### **Coating:**

Throughout this circuit the coating on the header is mostly intact with few small corrosion blisters throughout and significant corrosion at the point of contact with the supports. Most of the coating on the sub-headers has failed and there is heavy corrosion and scale throughout the sub-headers. The damaged coating is not affecting the operational conditions of the piping at this time. All areas of blistered or damaged coating, rust and scale should be thoroughly cleaned to an industry standard acceptable to engineering and new coating applied to arrest the present corrosion and prevent further corrosion.

#### **Deck Penetrations:**

There is heavy corrosion and scale on the piping through the deck penetrations.

#### **Piping Surface:**

At the areas of coating failure there is general wall loss due to corrosion of approximately 0.010" to 0.020" throughout.

#### **Valves:**

The valves appear to be in fair condition.

#### **Supports:**

The piping does not have single points of contact between the piping and the support beams. Single points of contact help prevent moisture from sitting against the piping surface and promoting corrosion. At this time moderate to heavy corrosion and scale was noted at the contact points between the piping and supports.

#### **U-Bolts:**

Throughout the circuit, the U-bolts were found to be near failure due to corrosion.

#### **Flanges and Bolts:**

There is heavy corrosion and scale throughout this circuit.

#### **Ultrasonic Thickness Evaluation:**

Ultrasonic Thickness (UT) measurements were taken on this circuit. The results of this survey indicate that all areas of U.T. evaluations were above the required thickness minimums for piping specification class 'B' (Refer to ultrasonic inspection data report for results of survey).

Consideration should be given to scheduling the removal of any existing external corrosion for the purpose of measurements, evaluation and / or repairs at such a time that any through-wall corrosion would not result in a disruption of platform operations.



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<i>*Recommended Items for Repair*</i>	
Item	Recommendations
1	Consideration should be given to removing corrosion from supports and installing single points of contact to eliminate the possibility of future corrosion between the piping and supports.
2	Replace corroded, broken or missing U-bolts.
3	Consideration should be given to scheduling the removal of any existing external corrosion for the purpose of measurements and / or repairs at such a time that any through-wall corrosion would not result in a disruption of platform operations.
4	The damaged coating should be thoroughly cleaned to an industry standard acceptable to engineering and new coating applied to arrest the present corrosion and prevent further corrosion.

<i>*Completed Repairs*</i>	
Item	Description of Repairs Completed






Report Sign-Off	
	11-25-2003
Api Visual Inspector	Date



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## VISUAL INSPECTION REPORT (API-570 – Process Piping)

* Narrative Photo Attachment Page *			
Circuit No. GL-P-03-03		Date: 11/25/03	
Heavy corrosion on U-Bolts and supports		Complete coating failure and heavy corrosion on sub-headers	
Heavy corrosion and scale along bottom of headers		Coating failure with heavy corrosion and scale on header to 6" valves on south wall	
Complete coating failure on sub-header		Heavy corrosion on sub-headers above decking to valves	