



MIPS Analysis Report

Company:	East Cheyenne Gas Storage	Pipe Information						Date:	6/16/2016
Well:	Dorthy Strange #1 WP-D011	OD (in)	Wt (lb/ft)	Grade	ID (in)	Thk (in)	Drift (in)		
Field:	West Peetz	5.500	15.5#		4.950	0.275	4.825		
County:	Logan							Analyst	
State:	Colorado							Matt Gill	

Total Number of Joints:	7								
Total Grade A Joints:	0								
Total Grade B Joints:	4								
Total Grade C Joints:	2								
Total Grade F Joints:	1								
Total Joints Not Graded:	0								

Standard Pipe Grades

Grade A Joints 0% to 15% for 5.5" 15.5# Loss from Nominal ID

Grade B Joints 15.1% to 30% for 5.5" 15.5# Loss from Nominal ID

Grade C Joints 30.1% to 50% for 5.5" 15.5# Loss from Nominal ID

Grade F Joints above 50.1 % for 5.5" 15.5# Loss from Nominal ID

Comments

This Caliper log was run on 06/16/2016 for casing analysis. Out of 7 total joints there are 0 Grade A Joints, 4 Grade B Joints, 2 Grade C Joints, 1 Grade F Joints.

The minimum diameter of 4.69" and minimum radius of 4.57" is found at 2533'.

Heavy amount of build is detected between 2479' and 2549'. Screen Shots showing buildup are included in this report. The raw caliper data was normalized to nominal ID during MIPS processing. The Casing grade/loss/wear reports are based on 5.5" 15.5# nominal ID being 4.95" as a starting line for the percentage loss/wear analysis.

MIPS 3D View project is also included with this report.

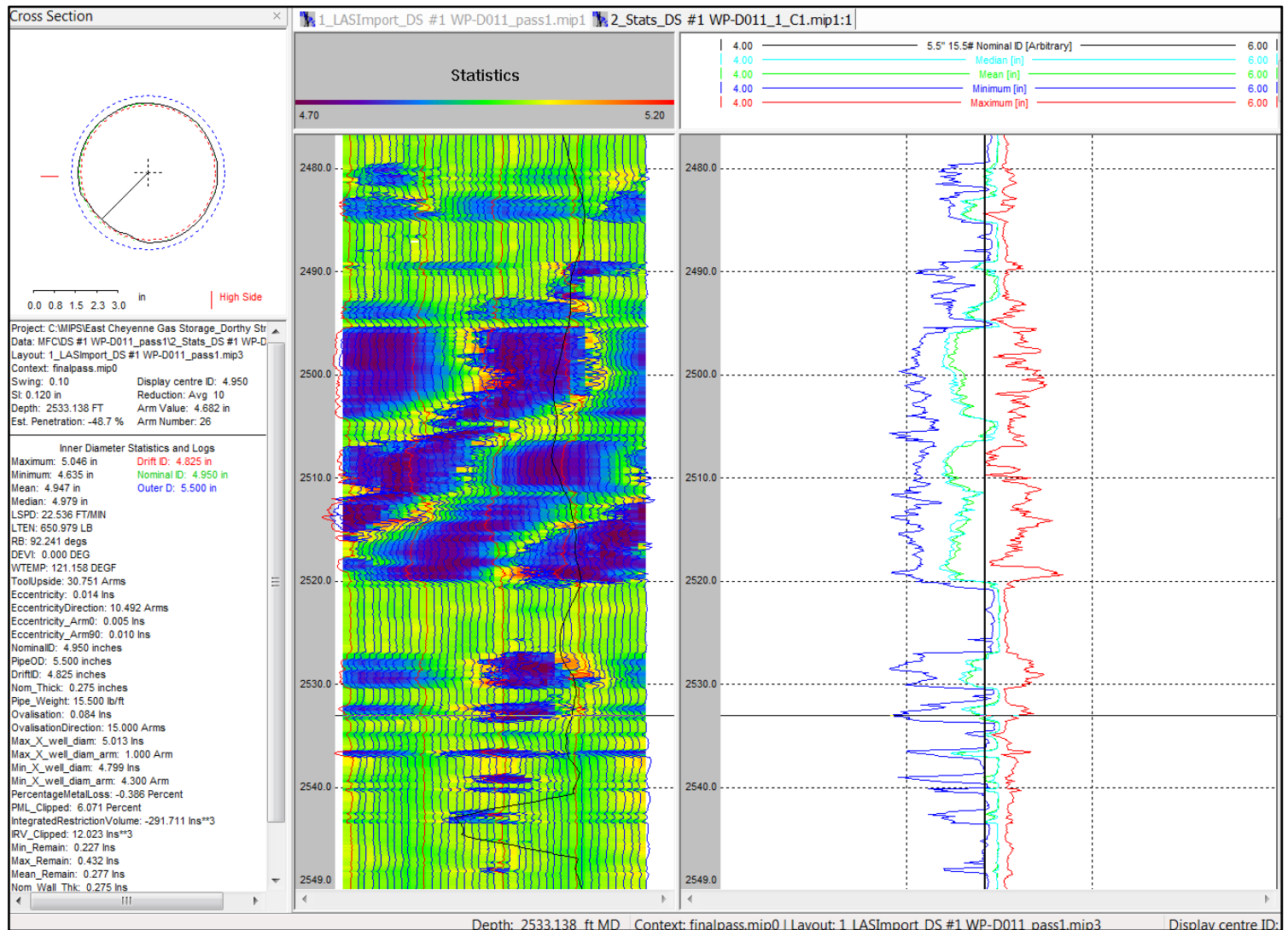
Disclaimer

All interpretations are opinions based on inferences from electrical or other measurements and we cannot and do not guarantee the accuracy or correctness of any interpretation, and we shall not, except in the case of gross or wilful negligence on our part, be liable or responsible for any loss, costs, damages or expenses incurred or sustained by anyone resulting from any interpretations made by any of our officers, agents or employees. These interpretations are also subject to our general terms and conditions.

MIPS Analysis Report

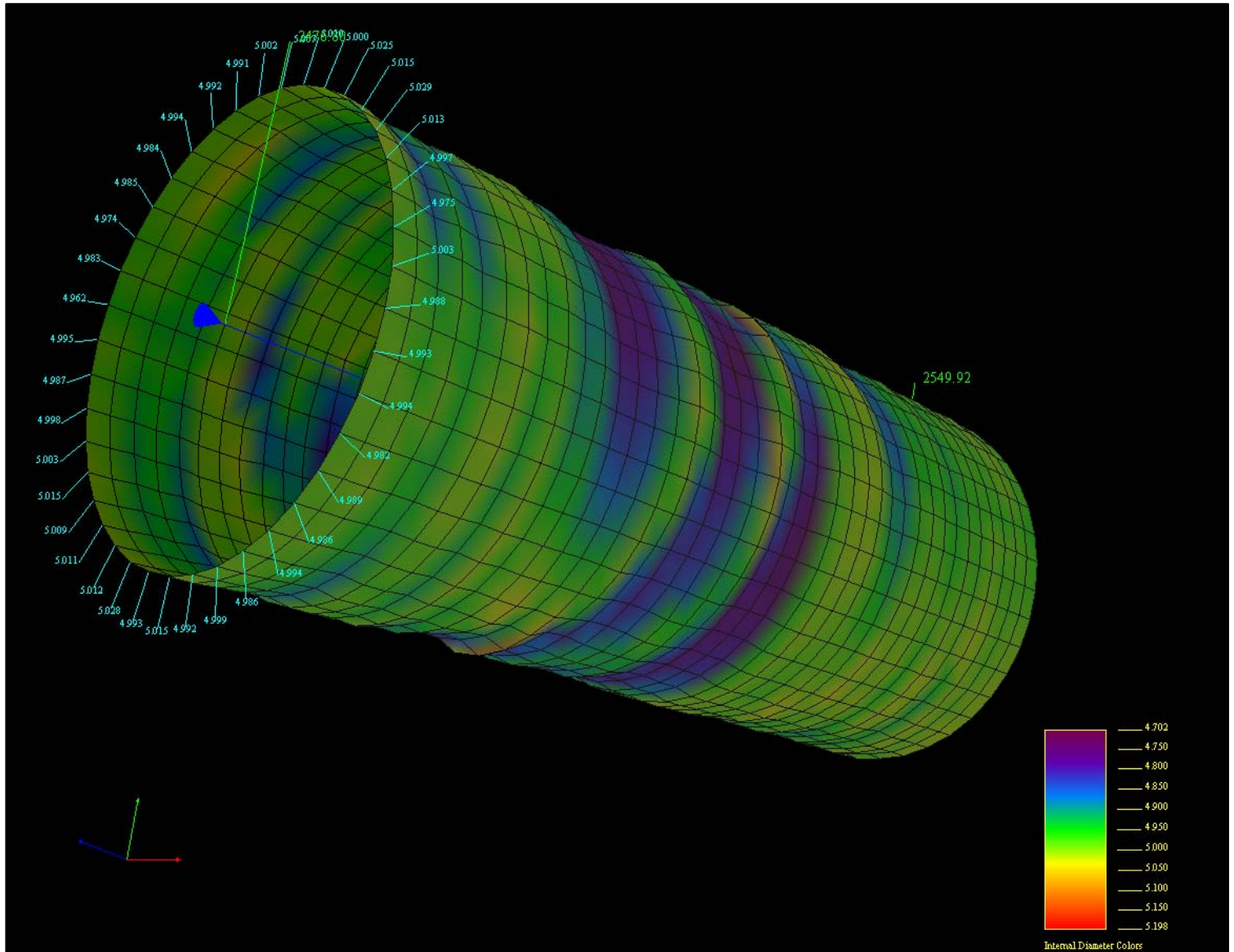
Company:	East Cheyenne Gas Storage	Pipe Information						Date:	6/16/2016
Well:	Dorothy Strange #1 WP-D011	OD (in)	Wt (lb/ft)	Grade	ID (in)	Thk (in)	Drift (in)		
Field:	West Peetz	5.500	15.5#		4.950	0.275	4.825		
County:	Logan							Analyst	
State:	Colorado							Matt Gill	

Screen shot showing build up from 2479' to 2549'.



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Well:	Dorthy Strange #1 WP-D011	OD (in)	Wt (lb/ft)	Grade	ID (in)	Thk (in)	Drift (in)		
Field:	West Peetz	5.500	15.5#		4.950	0.275	4.825		
County:	Logan							Analyst	
State:	Colorado							Matt Gill	





PIPE GRADE WITH BURST PRESSURE

Company: East Cheyenne Gas Storage

Well: Dorthy Strange #1 WP-D011

Field: West Peetz

County: Logan

State: Colorado

Date: 6/16/2016

5.5" 15.5#

0% to 15.0%

15.1% to 30.0%

30.1% to 50.0%

> 50.1%

Other WT

0% to 15%

15.1% to 30%

30.1% to 50%

> 50.1%

GRADE

A


B


C

F

Comment:

Joint No.	Depth Feet	Length Feet	Max Pen %	Max Pen Depth	Max ID Inches	Min Wall Inches	Nominal ID Inches	Weight lb/ft	Pipe Grade	Comment
1	2345.85	27.71	20.2%	2361.90	5.061	0.220	4.950	15.5#	B	
2	2374.56	39.06	20.0%	2406.69	5.060	0.220	4.950	15.5#	B	
3	2414.61	39.42	28.4%	2451.14	5.106	0.197	4.950	15.5#	B	
4	2455.04	39.86	28.5%	2493.80	5.107	0.197	4.950	15.5#	B	
5	2495.44	39.17	57.1%	2519.19	5.264	0.118	4.950	15.5#	F	
6	2535.31	39.45	31.8%	2536.54	5.125	0.188	4.950	15.5#	C	
7	2575.76	28.05	30.2%	2595.07	5.116	0.192	4.950	15.5#	C	

<div></div>				PIPE TALLY WITH PIPE GRADE									
				Company: East Cheyenne Gas Storage Well: Dorthy Strange #1 WP-D011 Field: West Peetz County: Logan State: Colorado Date: 6/16/2016			5.5" 15.5#					Other WT	GRADE
							0% to 15.0%					0% to 15%	A
							15.1% to 30.0%					15.1% to 30%	B
							30.1% to 50.0%					30.1% to 50%	C
							> 50.1%					> 50.1%	F
				Comment:									
Joint No.	Depth Feet	Length Feet	Max Pen %	Pipe Grade	Comments	Joint No.	Depth Feet	Length Feet	Max Pen %	Pipe Grade	Comments		
1	2345.85	27.71	20.2%	B									
2	2374.56	39.06	20.0%	B									
3	2414.61	39.42	28.4%	B									
4	2455.04	39.86	28.5%	B									
5	2495.44	39.17	57.1%	F									
6	2535.31	39.45	31.8%	C									
7	2575.76	28.05	30.2%	C									

<div></div>				PIPE JOINT TALLY											
				Company: East Cheyenne Gas Storage Well: Dorthy Strange #1 WP-D011 Field: West Peetz County: Logan State: Colorado Date: 6/16/2016						Pipe OD: 5.5" Weight: 15.5# Nom ID: 4.95" Nom Thk: 0.275" Pipe Grade:					
										Comment:					
Joint No.	Depth Feet	Length Feet	Max ID inches	Mean ID inches	Min ID inches	Nominal ID inches		Joint No.	Depth Feet	Length Feet	Max ID inches	Mean ID inches	Min ID inches	Nominal ID inches	
1	2345.85	27.71	5.061	5.000	4.966	4.950									
2	2374.56	39.06	5.060	4.994	4.963	4.950									
3	2414.61	39.42	5.106	4.999	4.940	4.950									
4	2455.04	39.86	5.107	4.983	4.826	4.950									
5	2495.44	39.17	5.264	4.905	4.689	4.950									
6	2535.31	39.45	5.125	4.993	4.741	4.950									
7	2575.76	28.05	5.116	4.996	4.935	4.950									