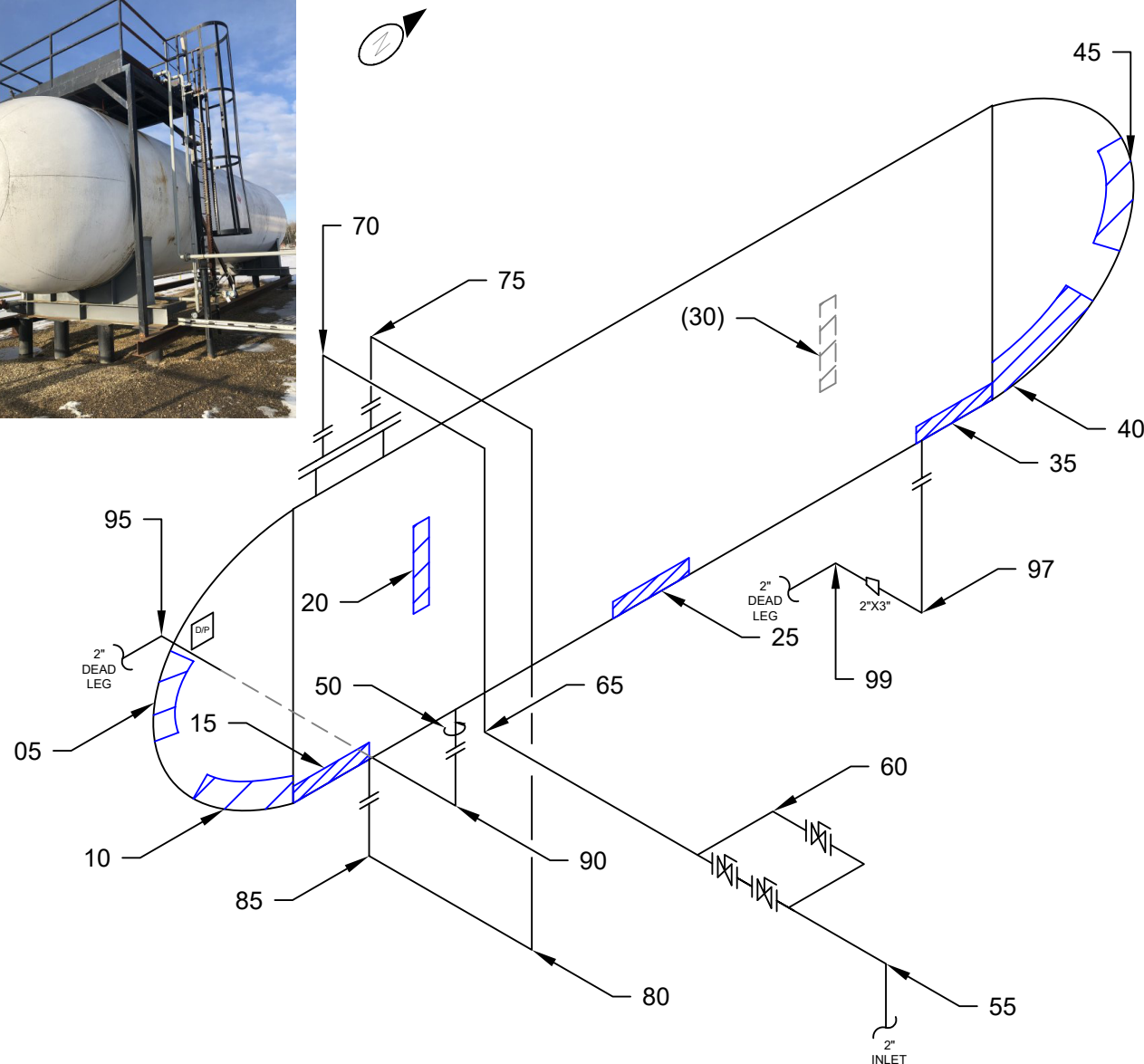


ITEM:

BULLET

568797



COMMENTS:

PROJECT:
C52617

MWS
MOUNTAIN WEST SERVICES
SYLVAN LAKE, AB (403) 887-3562
WHITECOURT, AB (780) 778-5584
GRANDE PRAIRIE, AB (780) 518-9757

TECHNICIAN:

JORDAN BRENTON
SNT LEVEL II
CGSB 48.9712
LEVEL II # 18069

DATE: 11/19/19

CAD UPDATED BY : SG

CLIENT: LONG RUN EXPLORATION

LSD: 07-04-071-18-W5M

INSPECTOR : DUANE PAETKAU

LOCATION : SNIPE LAKE

DISTRICT UNIT : NORTHERN - AB

BLDG/SKID/LIC : N/A

PROCESS : SWEET

CODE : ASME SEC VIII DIV 1

SPECIFICATION : AS PER ASME SE 797

TECHNIQUE : UTT-01 REV. #01

METHOD : UT CONTINUOUS / A SCAN

SURFACE COND : PAINTED

SURFACE TEMP : AMBIENT

VESSEL INFORMATION

VESSEL # : 568797

CRN # : A223.4.5.3.2.8.0

SERIAL # : 5656

MANUFACTURER : TORONTO IRON WORKS

DATE BUILT : 1968

CLIENT ID / TAG : -

M.A.W.P. : 250 PSI

M.A.W.T. : 128° F

JOINT EFFICIENCY/RT : NO

STRESS RELIEVED : NO

INSULATED : NO

MANWAY : YES

VESSEL SPECIFICATIONS

	OD	NOMINAL	MATERIAL	CA
VESSEL HEAD	130"	.5625"	SA-516-70	.063"
VESSEL SHELL	130"	.9375"	SA-516-70	.063"
BOOT HEAD	-	-	-	-
BOOT SHELL	-	-	-	-

PIPING INFORMATION

PIPING ID	SIZE	SCH	NOM	M.A.W.P. (VESSEL)	M.A.W.T. (VESSEL)	FLANGE RATING
55-95	2.375"	XS	.218"	250 PSI	128°F	-
97	3.500"	XS	.300"	"	"	"
99	2.375"	XS	.218"	"	"	"



ULTRASONIC CORROSION SURVEY: LONG RUN EXPLORATION

LSD:	07-04-071-18W5	Vessel Number:	568797	Manufacturer:	TORONTO IRON WORKS	Survey Date:	11/19/19
District Unit:	NORTHERN - AB	Vessel Name:	BULLET	Serial Number:	5656	Inspector:	DUANE PAETKAU
Location:	SNIFE LAKE	Year Built:	1968	Shell MAWP PSI:	250	MAWT F:	128
PKG/Skid:	N/A	Tag Number:	-	Tube MAWP PSI:		MAWT F:	
Pipeline:	12345-678	CRN:	A223.4.5.3.2.8.0	Vessel CA:	0.0630	Project #:	C52617
						Report Number:	59347

Band	Description			Year	Avg Inches	Min Inches	Scanning surface operational status during UT survey	Nominal	CA	Pressure TMIN	Recommended Retirement Date	Piping Structural TMin
05	Head	Baseline	08/20/14	0.634	0.628			0.5625	0.0630	0.4609	2039	
Shape	Hemispherical	shell Side	Previous	08/20/14	0.634	0.628		Comments-->		OK		
OD	130	Current	11/19/19	0.635	0.626	External (Online)						
Spec.	VIII Div 1	ST Loss MPY			0							
Material	SA 515 - 70	LT Loss MPY			0							
10	Head	Baseline	08/20/14	0.615	0.601			0.5625	0.0630	0.4609	2039	
Shape	Hemispherical	shell Side	Previous	08/20/14	0.615	0.601		Comments-->		OK		
OD	130	Current	11/19/19	0.605	0.600	External (Online)						
Spec.	VIII Div 1	ST Loss MPY			0							
Material	SA 515 - 70	LT Loss MPY			0							
15	Shell	Baseline	08/20/14	0.970	0.966			0.9375	0.0630	0.9231	2039	
Shape	Cylindrical	shell Side	Previous	08/20/14	0.970	0.966		Comments-->		OK		
OD	130	Current	11/19/19	0.966	0.959	External (Online)						
Spec.	VIII Div 1	ST Loss MPY			1							
Material	SA 515 - 70	LT Loss MPY			1							
20	Shell	Baseline	08/20/14	0.980	0.978			0.9375	0.0630	0.9231	2039	
Shape	Cylindrical	shell Side	Previous	08/20/14	0.980	0.978		Comments-->		OK		
OD	130	Current	11/19/19	0.979	0.976	External (Online)						
Spec.	VIII Div 1	ST Loss MPY			0							
Material	SA 515 - 70	LT Loss MPY			0							



ULTRASONIC CORROSION SURVEY: LONG RUN EXPLORATION

LSD:	07-04-071-18W5	Vessel Number:	568797	Manufacturer:	TORONTO IRON WORKS	Survey Date:	11/19/19
District Unit:	NORTHERN - AB	Vessel Name:	BULLET	Serial Number:	5656	Inspector:	DUANE PAETKAU
Location:	SNIFE LAKE	Year Built:	1968	Shell MAWP PSI:	250	MAWT F:	128
PKG/Skid:	N/A	Tag Number:	-	Tube MAWP PSI:		MAWT F:	
Pipeline:	12345-678	CRN:	A223.4.5.3.2.8.0	Vessel CA:	0.0630	Project #:	C52617
						Report Number:	59347

Band	Description	Year	Avg Inches	Min Inches	Scanning surface operational status during UT survey	Nominal	CA	Pressure TMIN	Recommended Retirement Date	Piping Structural TMin
25	Shell	Baseline	08/20/14	0.981	0.978	0.9375	0.0630	0.9231	2039	
Shape	Cylindrical	shell Side	Previous	08/20/14	0.981	0.978	Comments-->	OK		
OD	130	Current	11/19/19	0.980	0.975	External (Online)				
Spec.	VIII Div 1	ST Loss MPY		1						
Material	SA 515 - 70	LT Loss MPY		1						
30	Shell	Baseline	08/20/14	0.955	0.950	0.9375	0.0630	0.9231	2022	
Shape	Cylindrical	shell Side	Previous	08/20/14	0.955	0.950	Comments-->	OK		
OD	130	Current	11/19/19	0.946	0.934	External (Online)				
Spec.	VIII Div 1	ST Loss MPY		3						
Material	SA 515 - 70	LT Loss MPY		3						
35	Shell	Baseline	08/20/14	0.949	0.944	0.9375	0.0630	0.9231	2019	
Shape	Cylindrical	shell Side	Previous	08/20/14	0.949	0.944	Comments-->	OK		
OD	130	Current	11/19/19	0.944	0.926	External (Online)				
Spec.	VIII Div 1	ST Loss MPY		3						
Material	SA 515 - 70	LT Loss MPY		3						
40	Head	Baseline	08/20/14	0.612	0.607	0.5625	0.0630	0.4609	2039	
Shape	Hemispherical	shell Side	Previous	08/20/14	0.612	0.607	Comments-->	OK		
OD	130	Current	11/19/19	0.620	0.605	External (Online)				
Spec.	VIII Div 1	ST Loss MPY		0						
Material	SA 515 - 70	LT Loss MPY		0						



ULTRASONIC CORROSION SURVEY: LONG RUN EXPLORATION

LSD:	07-04-071-18W5	Vessel Number:	568797	Manufacturer:	TORONTO IRON WORKS	Survey Date:	11/19/19
District Unit:	NORTHERN - AB	Vessel Name:	BULLET	Serial Number:	5656	Inspector:	DUANE PAETKAU
Location:	SNIFE LAKE	Year Built:	1968	Shell MAWP PSI:	250	MAWT F:	128
PKG/Skid:	N/A	Tag Number:	-	Tube MAWP PSI:		MAWT F:	
Pipeline:	12345-678	CRN:	A223.4.5.3.2.8.0	Vessel CA:	0.0630	Project #:	C52617
						Report Number:	59347

Band	Description	Year	Avg Inches	Min Inches	Scanning surface operational status during UT survey	Nominal	CA	Pressure TMIN	Recommended Retirement Date	Piping Structural TMin
45	Head	Baseline	08/20/14	0.640	0.633	0.5625	0.0630	0.4609	2039	
Shape	Hemispherical	shell Side	Previous	08/20/14	0.640	0.633	Comments-->	OK		
OD	130	Current	11/19/19	0.641	0.631	External (Online)				
Spec.	VIII Div 1	ST Loss MPY		0						
Material	SA 515 - 70	LT Loss MPY		0						
50	Nozzle	Baseline	08/20/14	0.219	0.217	0.2180	0.0630	0.0164	2039	
Shape	Cylindrical	shell Side	Previous	08/20/14	0.219	0.217	Comments-->	OK		
OD	2.375	Current	11/19/19	0.218	0.207	External (Online)				
Spec.	VIII Div 1	ST Loss MPY		2						
Material	SA 106 - B	LT Loss MPY		2						
55	Piping	Baseline	08/20/14	0.199	0.198	0.2180	0.0272	0.0148	2039	0.07
Shape	90° Elbow	shell Side	Previous	08/20/14	0.199	0.198	Comments-->	OK		
OD	2.375	Current	11/19/19	0.210	0.203	External (Online)				
Spec.	B31.3	ST Loss MPY		0						
Material	A 234 - WPB	LT Loss MPY		0						
60	Piping	Baseline	08/20/14	0.215	0.213	0.2180	0.0272	0.0148	2039	0.07
Shape	90° Elbow	shell Side	Previous	08/20/14	0.215	0.213	Comments-->	OK		
OD	2.375	Current	11/19/19	0.225	0.218	External (Online)				
Spec.	B31.3	ST Loss MPY		0						
Material	A 234 - WPB	LT Loss MPY		0						



ULTRASONIC CORROSION SURVEY: LONG RUN EXPLORATION

LSD:	07-04-071-18W5	Vessel Number:	568797	Manufacturer:	TORONTO IRON WORKS	Survey Date:	11/19/19
District Unit:	NORTHERN - AB	Vessel Name:	BULLET	Serial Number:	5656	Inspector:	DUANE PAETKAU
Location:	SNIFE LAKE	Year Built:	1968	Shell MAWP PSI:	250	MAWT F:	128
PKG/Skid:	N/A	Tag Number:	-	Tube MAWP PSI:		MAWT F:	
Pipeline:	12345-678	CRN:	A223.4.5.3.2.8.0	Vessel CA:	0.0630	Project #:	C52617
						Report Number:	59347

Band	Description			Year	Avg Inches	Min Inches	Scanning surface operational status during UT survey	Nominal	CA	Pressure TMIN	Recommended Retirement Date	Piping Structural TMin
65		Piping	Baseline	08/20/14	0.203	0.198		0.2180	0.0272	0.0148	2039	0.07
Shape	90° Elbow	shell Side	Previous	08/20/14	0.203	0.198		Comments-->		OK		
OD	2.375		Current	11/19/19	0.217	0.206	External (Online)					
Spec.	B31.3		ST Loss MPY			0						
Material	A 234 - WPB		LT Loss MPY			0						
70		Piping	Baseline	08/20/14	0.213	0.206		0.2180	0.0272	0.0148	2039	0.07
Shape	90° Elbow	shell Side	Previous	08/20/14	0.213	0.206		Comments-->		OK		
OD	2.375		Current	11/19/19	0.218	0.211	External (Online)					
Spec.	B31.3		ST Loss MPY			0						
Material	A 234 - WPB		LT Loss MPY			0						
75		Piping	Baseline	08/20/14	0.231	0.229		0.2180	0.0272	0.0148	2039	0.07
Shape	90° Elbow	shell Side	Previous	08/20/14	0.231	0.229		Comments-->		OK		
OD	2.375		Current	11/19/19	0.239	0.234	External (Online)					
Spec.	B31.3		ST Loss MPY			0						
Material	A 234 - WPB		LT Loss MPY			0						
80		Piping	Baseline	11/19/2019	0.363	0.229	External (Online)	0.2180	0.0272	0.0148	2039	0.07
Shape	90° Elbow	Shell Side	Previous					Comments-->		OK		
OD	2.375		Current	11/19/2019	0.363	0.229	External (Online)					
Spec.	B31.3		ST Loss MPY									
Material	A 234 - WPB		LT Loss MPY			0						



ULTRASONIC CORROSION SURVEY: LONG RUN EXPLORATION

LSD:	07-04-071-18W5	Vessel Number:	568797	Manufacturer:	TORONTO IRON WORKS	Survey Date:	11/19/19
District Unit:	NORTHERN - AB	Vessel Name:	BULLET	Serial Number:	5656	Inspector:	DUANE PAETKAU
Location:	SNIFE LAKE	Year Built:	1968	Shell MAWP PSI:	250	MAWT F:	128
PKG/Skid:	N/A	Tag Number:	-	Tube MAWP PSI:		MAWT F:	
Pipeline:	12345-678	CRN:	A223.4.5.3.2.8.0	Vessel CA:	0.0630	Project #:	C52617
						Report Number:	59347

Band	Description			Year	Avg Inches	Min Inches	Scanning surface operational status during UT survey	Nominal	CA	Pressure TMIN	Recommended Retirement Date	Piping Structural TMin
85		Piping	Baseline	08/20/14	0.215	0.211		0.2180	0.0272	0.0148	2039	0.07
Shape	90° Elbow	shell Side	Previous	08/20/14	0.215	0.211		Comments-->		OK		
OD	2.375		Current	11/19/19	0.227	0.223	External (Online)					
Spec.	B31.3		ST Loss MPY			0						
Material	A 234 - WPB		LT Loss MPY			0						
90		Piping	Baseline	08/20/14	0.195	0.191		0.2180	0.0272	0.0148	2039	0.07
Shape	90° Elbow	shell Side	Previous	08/20/14	0.195	0.191		Comments-->		OK		
OD	2.375		Current	11/19/19	0.210	0.203	External (Online)					
Spec.	B31.3		ST Loss MPY			0						
Material	A 234 - WPB		LT Loss MPY			0						
95		Piping	Baseline	08/20/14	0.213	0.198		0.2180	0.0272	0.0148	2039	0.07
Shape	90° Elbow	shell Side	Previous	08/20/14	0.213	0.198		Comments-->		OK		
OD	2.375		Current	11/19/19	0.219	0.213	External (Online)					
Spec.	B31.3		ST Loss MPY			0						
Material	A 234 - WPB		LT Loss MPY			0						
97		Piping	Baseline	08/20/14	0.256	0.253		0.3000	0.0375	0.0217	2039	0.08
Shape	90° Elbow	shell Side	Previous	08/20/14	0.256	0.253		Comments-->		OK		
OD	3.5		Current	11/19/19	0.282	0.268	External (Online)					
Spec.	B31.3		ST Loss MPY			0						
Material	A 234 - WPB		LT Loss MPY			0						



ULTRASONIC CORROSION SURVEY: LONG RUN EXPLORATION

LSD:	07-04-071-18W5	Vessel Number:	568797	Manufacturer:	TORONTO IRON WORKS	Survey Date:	11/19/19
District Unit:	NORTHERN - AB	Vessel Name:	BULLET	Serial Number:	5656	Inspector:	DUANE PAETKAU
Location:	SNIPE LAKE	Year Built:	1968	Shell MAWP PSI:	250	MAWT F:	128
PKG/Skid:	N/A	Tag Number:	-	Tube MAWP PSI:		MAWT F:	
Pipeline:	12345-678	CRN:	A223.4.5.3.2.8.0	Vessel CA:	0.0630	Project #:	C52617
						Report Number:	59347

Band	Description	Year	Avg Inches	Min Inches	Scanning surface operational status during UT survey	Nominal	CA	Pressure TMIN	Recommended Retirement Date	Piping Structural TMin
99	Piping	Baseline	08/20/14	0.234	0.232					
Shape	90° Elbow	shell Side	Previous	08/20/14	0.234	0.232				
OD	2.375	Current	11/19/19	0.228	0.218	External (Online)				
Spec.	B31.3	ST Loss MPY			3					
Material	A 234 - WPB	LT Loss MPY			3					