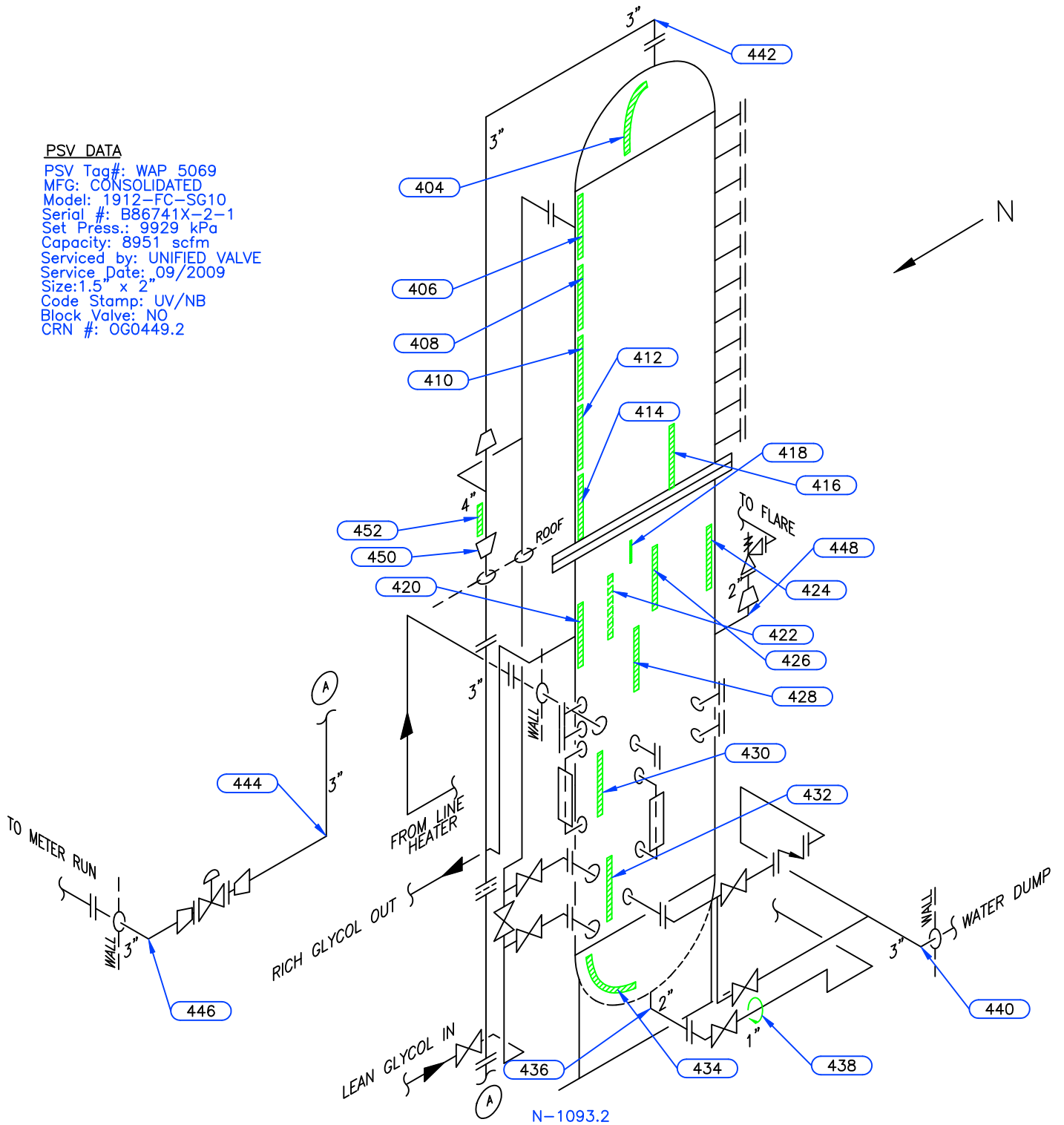


**PSV DATA**

PSV Tag#: WAP 5069  
 MFG: CONSOLIDATED  
 Model: 1912-FC-SG10  
 Serial #: B86741X-2-1  
 Set Press.: 9929 kPa  
 Capacity: 8951 scfm  
 Serviced by: UNIFIED VALVE  
 Service Date: 09/2009  
 Size: 1.5" x 2"  
 Code Stamp: UV/NB  
 Block Valve: NO  
 CRN #: OG0449.2



N-1093.2

Equip. No. \_\_\_\_\_ Prov. Reg. No. **A** C 56370 \_\_\_\_\_ C.R.N. H-8383.1 \_\_\_\_\_ Serial No. 5826-20 \_\_\_\_\_ Yr. Inst. \_\_\_\_\_  
 Code/Div. ASME VIII, Div 1 Size: 24in x 34ft \_\_\_\_\_ Manufacturer: PRESSON MFG \_\_\_\_\_ Yr. Blt. 1996 \_\_\_\_\_  
 C. Stamp: U \_\_\_\_\_ Service: SOUR \_\_\_\_\_ PWHT: HT \_\_\_\_\_ Radiography: RT-1 \_\_\_\_\_ Insulated: NO \_\_\_\_\_

**Design & Materials Data**

**HEAD:**  
 Top Mat'l. SA 516 70 \_\_\_\_\_ Top Nom. 28.6mm \_\_\_\_\_ Top C.A. 3.2mm \_\_\_\_\_  
 Btm. Mat'l. \_\_\_\_\_ Btm. Nom. \_\_\_\_\_ Btm. C.A. \_\_\_\_\_  
**CHANNEL:**  
 Material: \_\_\_\_\_ Nominal: \_\_\_\_\_ C.A. \_\_\_\_\_  
**BOOT**  
 Head Mat'l. \_\_\_\_\_ Head Nom. \_\_\_\_\_ Head C.A. \_\_\_\_\_  
 Shell Mat'l. \_\_\_\_\_ Shell Nom. \_\_\_\_\_ Shell C.A. \_\_\_\_\_  
**SHELL**  
 Material: SA 516 70 \_\_\_\_\_ Nominal: 27.0mm \_\_\_\_\_ C.A. 3.2mm \_\_\_\_\_  
 MAWP Shell Side: 9929 kPa \_\_\_\_\_ @ Temp. 54°C \_\_\_\_\_  
 MAWP Tube Side: \_\_\_\_\_ @ Temp. \_\_\_\_\_

CLIENT	CANADIAN NATURAL RESOURCES LTD		
FACILITY	WOLVERINE		
	LSD d-66-D/93-P-02		
ITEM	GLYCOL CONTRACTOR		
BY: CW	DATE: 05/2014	DWG.# 4	

# UTS DATA

**CLIENT:** CANADIAN NATURAL RESOURCES  
**EQUIPMENT:** GLYCOL CONTRACTOR  
**CRN#:** H-8383.1  
**PROV REG:** C 56370  
**TESTED ON STREAM**

**FACILITY:** WOLVERINE d-66-D  
**SERVICE:**  
**LOCATION:** d-66-D/93-P-02  
**RTD JOB #:** 10.114525  
**REFER TO DRAWING:** 4

Test Point	THICKNESS DATA				Flag	T-Min	C.A.	Nom.	Short Term	Long Term	Ave. mm/py	Retirement Date
404												
Description: TOP HEAD												
	2009	9	2014	4								
Min. Thick.	27.8		27.8		23.80		3.2	27.00	0	0		
Average:	28		28						0	0		
Analysis:												
406												
Description: UPPER SHELL												
	2009	9	2014	4								
Min. Thick.	28.7		28.6		25.40	24.3	3.2	28.60	.02	.02		
Average:	28.9		28.8						.02	.02		2229
Analysis:												
408												
Description: UPPER SHELL												
	2009	9	2014	4								
Min. Thick.	28.9		28.8		25.40		3.2	28.60	.02	.02		
Average:	29		28.9						.02	.02		
Analysis:												
410												
Description: UPPER SHELL												
	2009	9	2014	4								
Min. Thick.	28.9		28.9		25.40		3.2	28.60	0	0		
Average:	29		29						0	0		
Analysis:												
412												
Description: UPPER SHELL												
	2009	9	2011	10	2014	4						
Min. Thick.	29		29		28.8			28.60	.08	.04		
Average:	29.1		29.1		28.9				.08	.04		
Analysis:												
414												
Description: UPPER SHELL												
	2009	9	2011	10	2014	4						
Min. Thick.	27.6		27.6		27.6			28.60	0	0		
Average:	28.7		28.7		28				.28	.15		
Analysis:												

# UTS DATA

**CLIENT:** CANADIAN NATURAL RESOURCES  
**EQUIPMENT:** GLYCOL CONTRACTOR  
**CRN#:** H-8383.1  
**PROV REG:** C 56370  
**TESTED ON STREAM**

**FACILITY:** WOLVERINE d-66-D  
**SERVICE:**  
**LOCATION:** d-66-D/93-P-02  
**RTD JOB #:** 10.114525  
**REFER TO DRAWING:** 4

Test Point	THICKNESS DATA				Flag	T-Min	C.A.	Nom.	Short Term	Long Term	Ave. mm/py	Retirement Date
<b>416</b>												
Description: UPPER SHELL												
	2009	9	2011	10	2014	4						
Min. Thick.	29		29		28.8		25.40	3.2	28.60	.08	.04	
Average:	29.2		29.2		28.9					.12	.07	
Analysis:												
<b>418</b>												
Description: MID SHELL												
	2009	9	2011	10	2014	4						
Min. Thick.	29		29		28.8		25.40	3.2	28.60	.08	.04	
Average:	29.2		29.2		28.9					.12	.07	
Analysis:												
<b>420</b>												
Description: MID SHELL												
	2009	9	2011	10	2014	4						
Min. Thick.	29.2		29.2		29		25.40	3.2	28.60	.08	.04	
Average:	29.3		29.3		29.2					.04	.02	
Analysis:												
<b>422</b>												
Description: MID SHELL												
	2009	9	2011	10	2014	4						
Min. Thick.	29.1		29.1		29		25.40	3.2	28.60	.04	.02	
Average:	29.4		29.4		29.2					.08	.04	
Analysis:												
<b>424</b>												
Description: MID SHELL												
	2009	9	2011	10	2014	4						
Min. Thick.	29.1		29.1		29		25.40	3.2	28.60	.04	.02	
Average:	29.3		29.3		29.2					.04	.02	
Analysis:												
<b>426</b>												
Description: MID SHELL												
	2009	9	2011	10	2014	4						
Min. Thick.	29		29		29		25.40	3.2	28.60	0	0	
Average:	29.2		29.2		29.2					0	0	
Analysis:												

# UTS DATA

**CLIENT:** CANADIAN NATURAL RESOURCES  
**EQUIPMENT:** GLYCOL CONTRACTOR  
**CRN#:** H-8383.1  
**PROV REG:** C 56370  
**TESTED ON STREAM**

**FACILITY:** WOLVERINE d-66-D  
**SERVICE:**  
**LOCATION:** d-66-D/93-P-02  
**RTD JOB #:** 10.114525  
**REFER TO DRAWING:** 4

Test Point	THICKNESS DATA				Flag	T-Min	C.A.	Nom.	Short Term	Long Term	Ave. mm/py	Retirement Date
428	Description: LOWER SHELL											
	2009	9	2011	10	2014	4						
Min. Thick.	29		29		29		25.40	3.2	28.60	0	0	
Average:	29.2		29.2		29.2					0	0	
Analysis:												
430	Description: LOWER SHELL											
	2009	9	2011	10	2014	4						
Min. Thick.	29		29		29		25.40	3.2	28.60	0	0	
Average:	29.2		29.2		29.2					0	0	
Analysis:												
432	Description: LOWER SHELL											
	2009	9	2011	10	2014	4						
Min. Thick.	28.6		28.6		28.6		25.40	3.2	28.60	0	0	
Average:	29		29		29					0	0	
Analysis:												
434	Description: BOTTOM HEAD											
	2009	9	2011	10	2014	4						
Min. Thick.	28		27.7		27.7		23.80	23.2	3.2	27.00	0	.07
Average:	29.9		29.7		29.6					.04	.07	2089
Analysis:												
436	Description: 2" 90° NOZZLE											
	2009	9	2011	10	2014	4						
Min. Thick.	10		10		10		7.90	2.1	3.2	11.10	0	0
Average:	10.4		10.4		10.4					0	0	2143
Analysis:												
448	Description: 2" 90° NOZZLE											
	2009	9	2011	10	2014	4						
Min. Thick.	11.5		11.5		11.3		7.90	2.1	3.2	11.10	.08	.04
Average:	11.9		11.9		11.6					.12	.07	2244
Analysis:												

# UTS DATA

**CLIENT:** CANADIAN NATURAL RESOURCES  
**EQUIPMENT:** GLYCOL CONTRACTOR PIPING  
**CRN#:**  
**PROV REG:**  
**TESTED ON STREAM**

**FACILITY:** WOLVERINE d-66-D  
**SERVICE:**  
**LOCATION:** d-66-D/93-P-02  
**RTD JOB #:** 10.114525  
**REFER TO DRAWING:** 4

Test Point	THICKNESS DATA				Flag	T-Min	C.A.	Nom.	Short Term	Long Term	Ave. mm/py	Retirement Date
<b>438</b>												
Description: 1" CIRC BAND												
	2009	9	2011	10	2014	4						
Min. Thick.	4.8		4.7		4.6		4.03	.6	4.60	.04	.04	
Average:	5.3		5.3		5.2					.04	.02	
Analysis:												
<b>440</b>												
Description: 2" 90° ELBOW												
	2009	9	2011	10	2014	4						
Min. Thick.	8		8		8		7.61	1.1	8.70	0	0	
Average:	8.3		8.3		8.2					.04	.02	
Analysis:												
<b>442</b>												
Description: 3" 90° ELBOW												
	2009	9	2014	4								
Min. Thick.	7.1		7.1				6.65	1	7.60	0	0	
Average:	7.4		7.4							0	0	
Analysis:												
<b>444</b>												
Description: 3" 90° ELBOW												
	2009	9	2011	10	2014	4						
Min. Thick.	7.7		7.7		7.6		6.65	1	7.60	.04	.02	
Average:	8.1		8.1		8					.04	.02	
Analysis:												
<b>446</b>												
Description: 3" 90° ELBOW												
	2009	9	2011	10	2014	4						
Min. Thick.	8		8		7.9		6.65	1	7.60	.04	.02	
Average:	8.3		8.3		8.2					.04	.02	
Analysis:												
<b>450</b>												
Description: 4" x 3" REDUCER												
	2011	10	2014	4								
Min. Thick.	10.1		10				9.71	1.4	11.10	.04	.04	
Average:	10.8		10.6							.08	.08	
Analysis:												

# UTS DATA

**CLIENT:** CANADIAN NATURAL RESOURCES  
**EQUIPMENT:** GLYCOL CONTRACTOR PIPING  
**CRN#:**  
**PROV REG:**  
**TESTED ON STREAM**

**FACILITY:** WOLVERINE d-66-D  
**SERVICE:**  
**LOCATION:** d-66-D/93-P-02  
**RTD JOB #:** 10.114525  
**REFER TO DRAWING:** 4

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Test Point	<b>THICKNESS DATA</b>				Flag	T-Min	C.A.	Nom.	Short Term	Long Term	Ave. mm/py	Retirement Date
<b>452</b>												
Description:	<b>4" VERTICAL BAND</b>											
	2011	10	2014	4								
Min. Thick.	10	9.9										
Average:	10.3	10.2										
Analysis:												

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