



# Red Flame NDT Services

## NON DESTRUCTIVE TESTING AND ENGINEERING SERVICES

Red Deer (403) 343-2012

Toll Free: 1-888-846-8827

Grande Prairie (780) 402-2545

Report Number: 21323-1

Report Printed On: 25-Jan-11

Client: \_\_\_\_\_

Client PO: -

Branch: \_\_\_\_\_

Client WO: -

Inspection Location: \_\_\_\_\_

Client REF: -

Inspection Date: Tuesday, January 25, 2011

Client Rep: Scott Shamber

### RF Test Equipment

Ultrasound: Make: GE

Model: USM GO

Serial #: 09100095

Calibration: 25-Nov-10

### RF Personnel

Technician: Tim Rosenkranz

CGSB CERT #: 10634 MT-2 PT-2 UT-2

SNT MT-2 PT-2 UT-2

Signature: 

Assistant: Jana Dicks

### Ultrasonic Examination

Material Type: Carbon Steel, Temperature: Ambient, Couplant: UT-XFE/Antifreeze, Surface Preparation: Painted  
Technique Used: 0 Degree Thickness Testing 'RDI Procedure (UT-1 Rev. 1.1)'

In Accordance With Code: ASME V Article 23 SE 797

Acceptance Criteria: Client Specification

### Ultrasonic Transducer(s)

Manufacturer	Serial#	Size	Angle	Type	Mode	Mhz	Ref DB	Scan DB	Range	Transfer
GE	01C2DB	.250"	0	Dual	Long.	5	38	+6	1/2" - 5"	

### Ultrasonic Calibration Block(s)

Type	Material	Thickness	Serial #	Reflector Type	Description
Step Block	Carbon Steel	.250 - 1"	05-5546	BWE	1" 4 Step

### Ultrasonic Test Results

Examination Conducted On: **Horizontal Vessel, A 139701**

Scope: Thickness Testing Of Horizontal Propane Bullet For Thickness As Requested.  
Pressure Rating Of Equipment Is Not Within The Scope Of This Examination.  
Client Is To Refer To Applicable ASME Code Or IRP For Guidelines On Pressure Rating Of Equipment  
Continuous Manual Contact Scanning Conducted.  
Maximum Speed Of Scanning: 3" per sec. Minimum Transducer Overlap: 50%.  
Paint Thickness (Approx. 0.005 -0.010) Is Included In Readings.  
Each Area Was Scanned To Determine The Low & Average Remaining Wall Thickness Values.

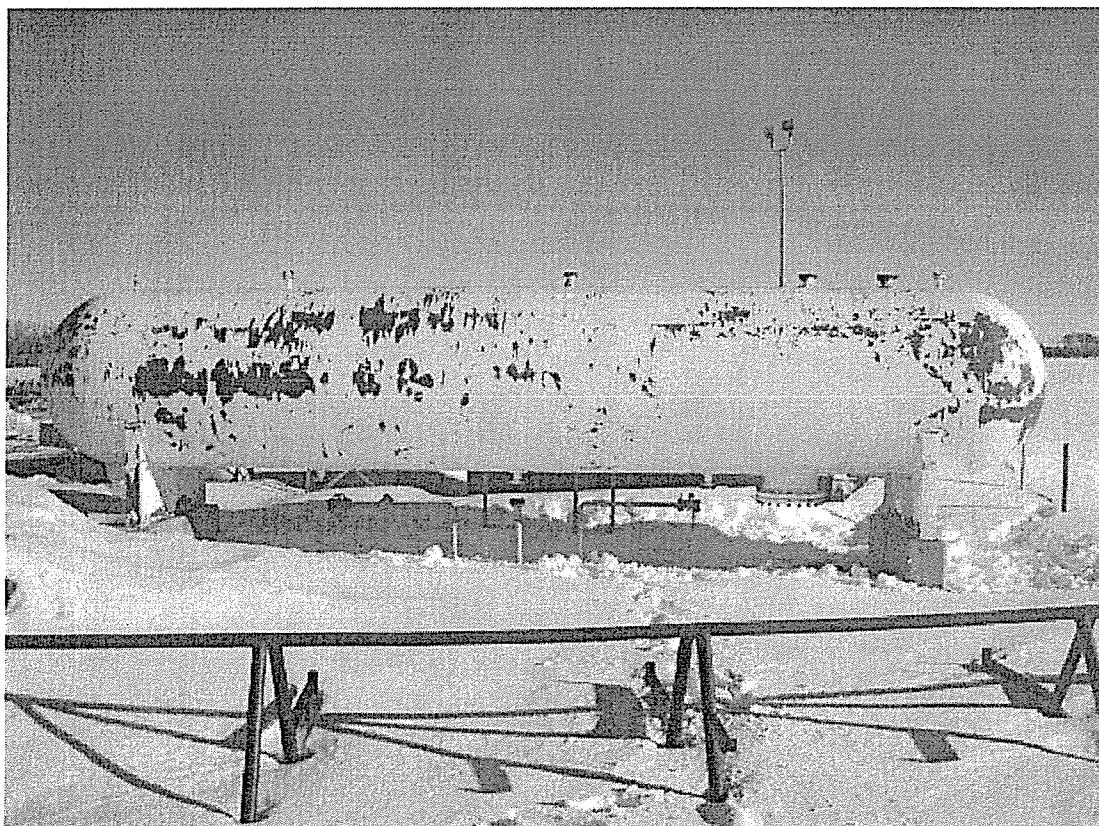
Nominal And Minimum Specification Are Assumed, Readings Below Minimum Are Flagged For Client Reference Only.  
Please Refer to Image(s): 1 - 2

UT Images & Drawings

1.



2.



# Red Flame NDT

## Vertical Vessel Drawing Worksheet

Client: ASPIRE

Today's Date: JAN. 25/11

RF Report# 21323-1

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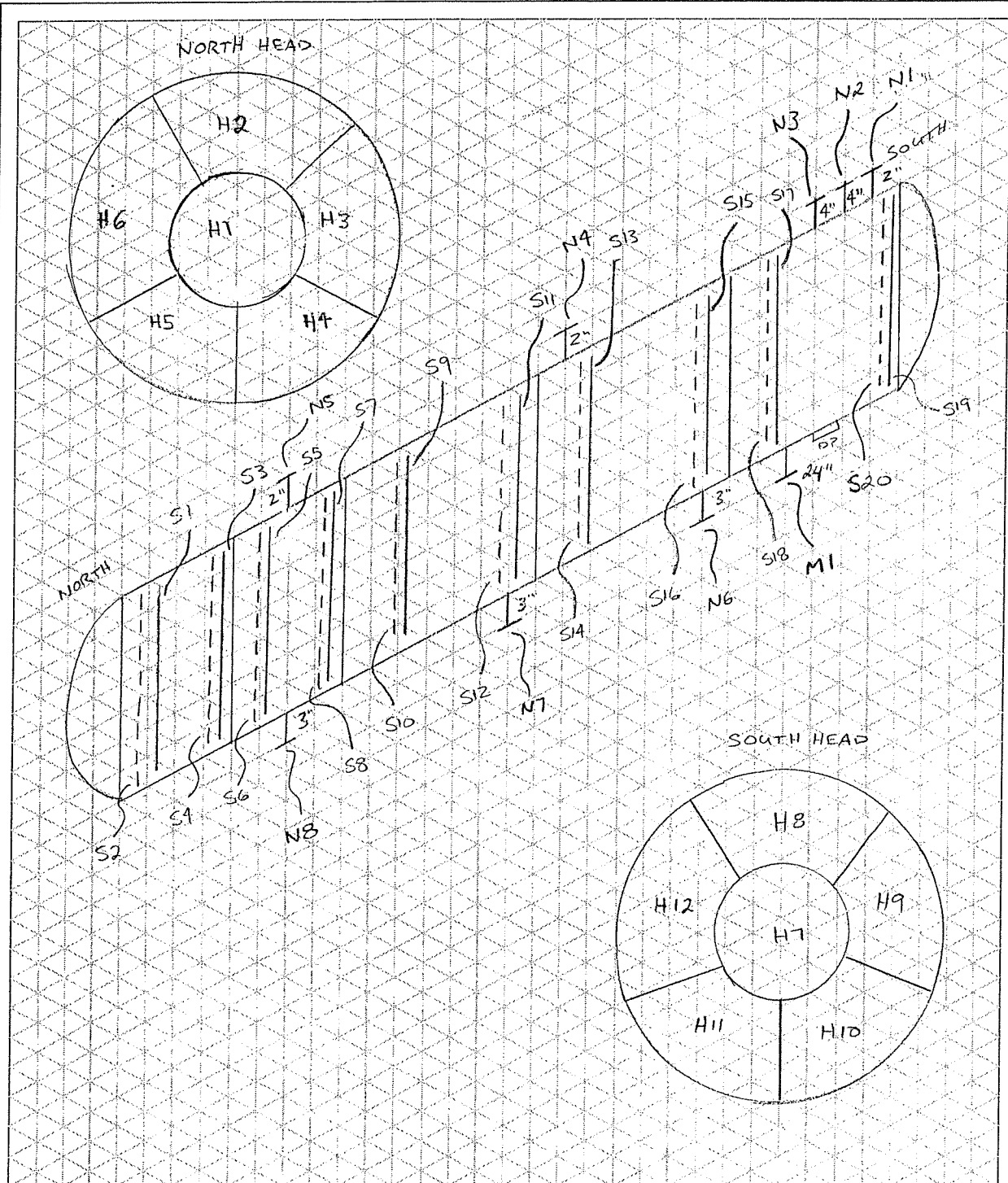
Client Unit # —

A # 139701

Surface Prep: PAINTED

Surface Temp: AMBIENT

Drawing Name: PROPANE BULLET



Drawing Completed By:

Comments:

## Red Flame NDT Vessel, Nozzle &amp; Piping Scan Work Sheet

Today's Date: Jan. 25/11

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Surface Prep: Painted

Mat'l Temp: Ambient

RF Report #: 21323-1

Drawing #: Repair Bulletin

Client: Aspire

Client Unit # 1

A # 139701

## Scan Location Information

## Ultrasonic Scan Results

Scan #	Description	Size	Ø ID	Nom.	Min.	Min.	Avg.	Comments
H1	NORTH HEAD	7'	84"		.438"	.488"	.505"	
H2						.486"	.495"	
H3						.477"	.485"	
H4						.481"	.500"	
H5						.483"	.500"	
H6						.482"	.500"	
H7	SOUTH					.470"	.495"	
H8						.482"	.495"	
H9						.479"	.500"	
H10						.476"	.485"	
H11						.471"	.490"	
H12						.476"	.500"	
S1	SHELL			.750"	.740"	.761"	.770"	
S2						.753"	.765"	
S3						.763"	.770"	
S4						.757"	.770"	
S5						.758"	.765"	
S6						.757"	.765"	

Header Section: All fields must be filled in. Drawing number is the number and sequence of drawings on this job. (First Drawing is #1 ect....)

Surface Prep: The actual surface prep of the Vessel / Piping - Mat'l Temp: The actual temperature of the Vessel / Piping

Scan Location Information: Scan # Enter corresponding number from drawing. Description: Enter the component type (Shell, Head, Tee, Elbow Reducer)

Size: Nominal Pipe Size or vessel OD - OD: The actual OD of the component from the description field (this is critical required information for T-Min calculations)

Nom. &amp; Min. Taken from pipe chart for pipe and shells made form pipe. Taken from Name Plate On vessels.

UT Min. is lowest remaining wall detected during scanning. Inclusions are not recorded unless complete loss of back wall occurs.

UT Avg. is the general thickness during the majority of the scan this number will give an indication of how low the min. wall is

Comments Required if loss of back wall, pitting or readings below Specified Min. is encountered. Record size, depth, and frequency.

# Red Flame NDT Vessel, Nozzle & Piping Scan Work Sheet

Surface Prep: PAINTED

Mat'l Temp: AMBIENT

Client: ASPIRE

Today's Date: JAN. 25/11

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RF Report #: 21323-1

Drawing #: PROPANE BULLET

Client Unit #

A # 139701

## Scan Location Information

## Ultrasonic Scan Results

Scan #	Description	Size	Depth	Nom.	Min.	Min.	Avg.	Comments
S7	SHELL	7"	84"	.750"	.740"	.759"	.770"	
S8						.756"	.765"	
S9						.762"	.770"	
S10						.754"	.765"	
S11						.757"	.765"	
S12						.749"	.760"	
S13						.756"	.765"	
S14						.747"	.760"	
S15						.757"	.765"	
S16						.755"	.766"	
S17						.756"	.770"	
S18						.754"	.765"	
S19						.760"	.770"	
S20						.756"	.765"	
N1	PIPE (NOZZLE)	2"	.375"	.154"	.135"	.147"	.160"	
N2		4"	4.5"	.237"	.208"	.217"	.225"	
N3						.231"	.245"	
N4		2"	.2375"	.154"	.135"	.139"	.155"	

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Drawing #: PROPANE

[illegible]

**Header Section:** All fields must be filled in. Drawing number is the number and sequence of drawings on this job. (First Drawing is #1 ect....)

**Surface Prep:** The actual surface prep of the Vessel / Piping

**Mat'l Temp:** The actual temperature of the Vessel / Piping

Size	Nominal Pipe Size	Weight	Material	Temperature	Pressure	Notes
1/2"	1/2"	1.10	Carbon Steel	350°F	150 PSI	
3/4"	3/4"	1.67	Carbon Steel	350°F	150 PSI	
1"	1"	2.57	Carbon Steel	350°F	150 PSI	
1 1/2"	1 1/2"	5.04	Carbon Steel	350°F	150 PSI	
2"	2"	7.68	Carbon Steel	350°F	150 PSI	
2 1/2"	2 1/2"	11.96	Carbon Steel	350°F	150 PSI	
3"	3"	15.70	Carbon Steel	350°F	150 PSI	
3 1/2"	3 1/2"	21.24	Carbon Steel	350°F	150 PSI	
4"	4"	26.69	Carbon Steel	350°F	150 PSI	
4 1/2"	4 1/2"	33.94	Carbon Steel	350°F	150 PSI	
5"	5"	40.23	Carbon Steel	350°F	150 PSI	
5 1/2"	5 1/2"	48.03	Carbon Steel	350°F	150 PSI	
6"	6"	55.64	Carbon Steel	350°F	150 PSI	
6 1/2"	6 1/2"	64.16	Carbon Steel	350°F	150 PSI	
7"	7"	72.69	Carbon Steel	350°F	150 PSI	
7 1/2"	7 1/2"	82.23	Carbon Steel	350°F	150 PSI	
8"	8"	91.77	Carbon Steel	350°F	150 PSI	
8 1/2"	8 1/2"	103.31	Carbon Steel	350°F	150 PSI	
9"	9"	114.85	Carbon Steel	350°F	150 PSI	
9 1/2"	9 1/2"	128.39	Carbon Steel	350°F	150 PSI	
10"	10"	141.93	Carbon Steel	350°F	150 PSI	
10 1/2"	10 1/2"	157.47	Carbon Steel	350°F	150 PSI	
11"	11"	173.01	Carbon Steel	350°F	150 PSI	
11 1/2"	11 1/2"	189.55	Carbon Steel	350°F	150 PSI	
12"	12"	206.09	Carbon Steel	350°F	150 PSI	
12 1/2"	12 1/2"	223.63	Carbon Steel	350°F	150 PSI	
13"	13"	241.17	Carbon Steel	350°F	150 PSI	
13 1/2"	13 1/2"	259.71	Carbon Steel	350°F	150 PSI	
14"	14"	278.25	Carbon Steel	350°F	150 PSI	
14 1/2"	14 1/2"	296.79	Carbon Steel	350°F	150 PSI	
15"	15"	315.33	Carbon Steel	350°F	150 PSI	
15 1/2"	15 1/2"	333.87	Carbon Steel	350°F	150 PSI	
16"	16"	352.41	Carbon Steel	350°F	150 PSI	
16 1/2"	16 1/2"	370.95	Carbon Steel	350°F	150 PSI	
17"	17"	389.49	Carbon Steel	350°F	150 PSI	
17 1/2"	17 1/2"	408.03	Carbon Steel	350°F	150 PSI	
18"	18"	426.57	Carbon Steel	350°F	150 PSI	
18 1/2"	18 1/2"	445.11	Carbon Steel	350°F	150 PSI	
19"	19"	463.65	Carbon Steel	350°F	150 PSI	
19 1/2"	19 1/2"	482.19	Carbon Steel	350°F	150 PSI	
20"	20"	500.73	Carbon Steel	350°F	150 PSI	
20 1/2"	20 1/2"	519.27	Carbon Steel	350°F	150 PSI	
21"	21"	537.81	Carbon Steel	350°F	150 PSI	
21 1/2"	21 1/2"	556.35	Carbon Steel	350°F	150 PSI	
22"	22"	574.89	Carbon Steel	350°F	150 PSI	
22 1/2"	22 1/2"	593.43	Carbon Steel	350°F	150 PSI	
23"	23"	611.97	Carbon Steel	350°F	150 PSI	
23 1/2"	23 1/2"	630.51	Carbon Steel	350°F	150 PSI	
24"	24"	649.05	Carbon Steel	350°F	150 PSI	
24 1/2"	24 1/2"	667.59	Carbon Steel	350°F	150 PSI	
25"	25"	686.13	Carbon Steel	350°F	150 PSI	
25 1/2"	25 1/2"	704.67	Carbon Steel	350°F	150 PSI	
26"	26"	723.21	Carbon Steel	350°F	150 PSI	
26 1/2"	26 1/2"	741.75	Carbon Steel	350°F	150 PSI	
27"	27"	760.29	Carbon Steel	350°F	150 PSI	
27 1/2"	27 1/2"	778.83	Carbon Steel	350°F	150 PSI	
28"	28"	797.37	Carbon Steel	350°F		

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