



ULTRASONIC INSPECTION REPORT

CA1213-UT1-298

Page 1 of 7

Procedure: 4.2	Rev: 4.0	Client: HUSKY OIL OPERATIONS LIMITED	Date: 2020-Jul-02
Technique: 0 Deg. Contact		IRISNDT #: LYN2000616	WO #: 60718370
Code/Standard: Customer Information		Location: 14-18-050-06W4 Vermilion Battery	PO #: 8401456515
Other:		Item Inspected: Treater 66160155	APPR# 2Z-10001573

Material Type: Carbon Steel	Surface Condition: Other	Heat Treatment: Not Applicable
------------------------------------	---------------------------------	---------------------------------------

Equipment: DMSGO+	S/N #: GOPLS18080030	Model: DMSGO+	Asset #: 30199	Calibration Due Date: 2020-Nov-11
--------------------------	-----------------------------	----------------------	-----------------------	--

Calibration Block: Step & L block	Asset #: 33723	Probe(s): S/N	SCA1696			
Sweep range Cal: N/a	Asset #:	Angle	0			
Cable & Type: Coaxial / Lemo - Microdot (L-MD) Length: 4'		Frequency (MHz)	7.5			
Scanning Surface: ☒ OD ☐ ID ☐ Other		Crystal Size	0.375			

Dis. AMPL. Calibration: Not Applicable	Couplant: Sono 600	Batch #:
---	---------------------------	-----------------

Transfer Loss Calibration: ☐ Direct Comparison ☐ N/A ☐ Other	TL: db
--	---------------

Reference Flaw Size: Backwall	Primary Reference Level: 100%	Reference Gain: 60 db
--------------------------------------	--------------------------------------	------------------------------

☐ Lamination ☐ Shear Wave ☐ Volumetric ☒ Thickness	Scan Methods: ☒ Contact ☐ Other
---	---

Surface Temp (C°): > 5°C / 41°F & < 60°C / 140°F

A UT survey was carried out as requested on Treater#3 EQ# 62042846 as per the ITP.

The CML's followed the provided CML drawing locations

Each Shell & Head CML was 3"X 12", all nozzles had a full circ 2" wide band scanned (providing access), and the extrados on the 90's, all areas were scanned with minimum value recorded. UT ports were installed for access to the shell & Heads

See following pages for Drawing, pictures, & Data.

Serial # / CRN: L-1087/p-541.2

Requested By: Winson Avara Terry Neufeld

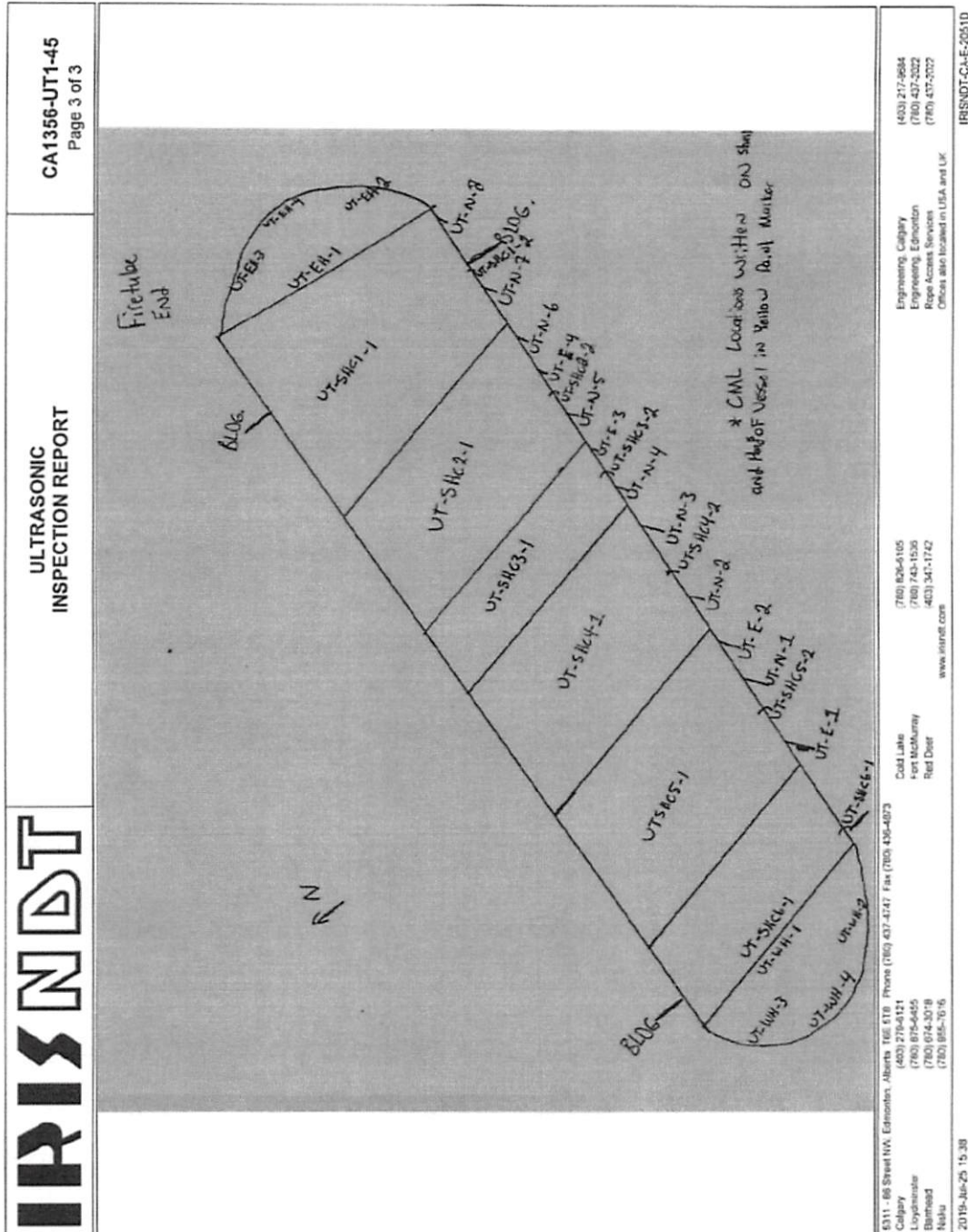
Approver: Scott Leonard

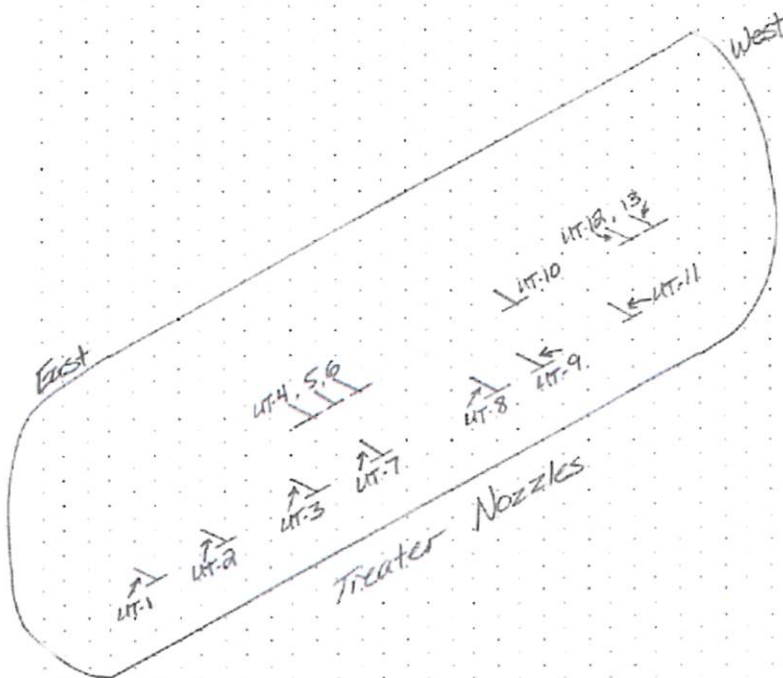
Inspection Limitation(s): N/A

Unit#: 1194	Kilometers:	Consumables:	Interpretation by:
In:	Out:	Min	Logan Skinner
In:	Out:		(Print)
In:	Out:		(Sign)
Personnel:			Client Representative:
Logan Skinner			(Print)
Brayden McGinnis			I am in full agreement with report contents
			(Sign)

5311 - 86 Street NW, Edmonton, Alberta T6E 5T8 Phone (780) 437-4747 Fax (780) 436-4873
Calgary (403) 279-6121 Cold Lake (780) 826-6105
Lloydminster (780) 875-6455 Fort McMurray (780) 743-1536
Barrhead (780) 674-3018 Red Deer (403) 347-1742
Nisku (780) 955-7616
www.irisndt.com

Engineering, Calgary (403) 217-9684
Engineering, Edmonton (780) 437-2022
Rope Access Services (780) 437-2022
Offices also located in USA and UK





Treater Nozzles UT locations

IRISNDT #: LYN1801126

Date: 26-Jul-18

Sheldon Trachuk

Client: HUSKY OIL OPERATIONS LIMITED

(Print)

(Sign)

5311 - 86 Street NW, Edmonton, Alberta T6E 5T8 Phone (780) 437-4747 Fax (780) 436-4873
 Calgary (403) 279-6121 Cold Lake (780) 826-6105
 Lloydminster (780) 875-6455 Fort McMurray (780) 743-1536
 Barrhead (780) 674-3018 Red Deer (403) 347-1742
 Nisku (780) 955-7616 www.irisndt.com

Engineering, Calgary (403) 217-9684
 Engineering, Edmonton (780) 437-2022
 Rope Access Services (780) 437-2022
 Offices also located in USA and UK

IRISNDT-CA-E-2051C

Results:

CML	Item	Min Reading mm	Nominal	Comments
UT-EH-1	East Head	15.79	12.7 mm	
UT-EH-2	East Head	17.01	12.7 mm	
UT-EH-3	East Head	18.3	12.7 mm	
UT-EH-4	East Head	15.21	12.7 mm	
UT-WH-1	West Head	14.27	11.11 mm	
UT-WH-2	West Head	14.51	11.11 mm	
UT-WH-3	West Head	14.44	11.11 mm	
UT-WH-4	West Head	14.44	11.11 mm	
UT-SHC1-1	Shell Course 1	13.64	12.7 mm	
UT-SHC1-2	Shell Course 1	13.37	12.7 mm	
UT-SHC2-1	Shell Course 2	13.57	12.7 mm	
UT-SHC2-2	Shell Course 2	13.57	12.7 mm	
UT-SHC3-1	Shell Course 3	13.4	12.7 mm	
UT-SHC3-2	Shell Course 3	13.44	12.7 mm	
UT-SHC4-1	Shell Course 4	13.48	12.7 mm	
UT-SHC4-2	Shell Course 4	13.6	12.7 mm	
UT-SHC5-1	Shell Course 5	13.4	12.7 mm	
UT-SHC5-2	Shell Course 5	13.22	12.7 mm	
UT-SHC6-1	Shell Course 6	12.84	12.7 mm	
UT-SHC6-2	Shell Course 6	13.09	12.7 mm	
UT#1	4" std. Treater nozzle	7.50	6.02 mm	
UT#2	4" std. Treater nozzle	6.80	6.02 mm	
UT#3	4" std. Treater nozzle	7.60	6.02 mm	
UT#4	2" Treater nozzle	6.13	5.715 mm	
UT#5	2" Treater nozzle	6.27	5.715 mm	
UT#6	2" Treater nozzle	6.28	5.715 mm	
UT#7	2" Treater nozzle	6.21	5.715 mm	
UT#8	4" std. Treater nozzle	7.40	6.02 mm	
UT#9	4" std. Treater nozzle	7.41	6.02 mm	
UT#10	2" Treater nozzle	5.78	5.715 mm	
UT#11	4" std. Treater nozzle	7.38	6.02 mm	
UT#12	2" Treater nozzle	5.98	5.715 mm	
UT#13	2" Treater nozzle	5.96	5.715 mm	
UT-N-1	3" Nozzle	7.71	8.5598 mm	
UT-N-2	3" Nozzle	7.61	8.5598 mm	
UT-N-3	3" Nozzle	7.74	8.5598 mm	
UT-N-4	3" Nozzle	7.69	8.5598 mm	
UT-N-5	3" Nozzle	7.68	8.5598 mm	
UT-N-6	3" Nozzle	7.74	8.5598 mm	

IRISNDT #: LYN2000616

Date: 2020-Jul-02

Logan Skinner

(Print)



Client: HUSKY OIL OPERATIONS LIMITED

(Sign)

5311 - 86 Street NW, Edmonton, Alberta T6E 5T8 Phone (780) 437-4747 Fax (780) 436-4873
 Calgary (403) 279-6121 Cold Lake (780) 826-6105
 Lloydminster (780) 875-6455 Fort McMurray (780) 743-1536
 Barrhead (780) 674-3018 Red Deer (403) 347-1742
 Nisku (780) 955-7616 www.irisndt.com

Engineering, Calgary (403) 217-9684
 Engineering, Edmonton (780) 437-2022
 Rope Access Services (780) 437-2022
 Offices also located in USA and UK

UT-N-7	3" Nozzle	7.48	8.5598 mm	
UT-N-8	3" Nozzle	7.76	8.5598 mm	
UT-M-1	16" Manway		15.87 mm	Not marked on drawings
UT-M-2	24" Manway		25.4 mm	Not marked on drawings
UT-M-3	16" Manway		15.87 mm	Not marked on drawings
UT-M-4	16" Manway		15.87 mm	Not marked on drawings
UT-M-5	16" Manway		15.87 mm	Not marked on drawings
UT-FT-1	North Firetube Throat	19.49		
UT-FT-2	South Firetube Throat	19.31		

IRISNDT #: LYN2000616

Date: 2020-Jul-02

Client: HUSKY OIL OPERATIONS LIMITED

Logan Skinner

(Print)

(Sign)

5311 - 86 Street NW, Edmonton, Alberta T6E 5T8 Phone (780) 437-4747 Fax (780) 436-4873
 Calgary (403) 279-6121 Cold Lake (780) 826-6105
 Lloydminster (780) 875-6455 Fort McMurray (780) 743-1536
 Barrhead (780) 674-3018 Red Deer (403) 347-1742
 Nisku (780) 955-7616 www.irisndt.com

Engineering, Calgary (403) 217-9684
 Engineering, Edmonton (780) 437-2022
 Rope Access Services (780) 437-2022
 Offices also located in USA and UK



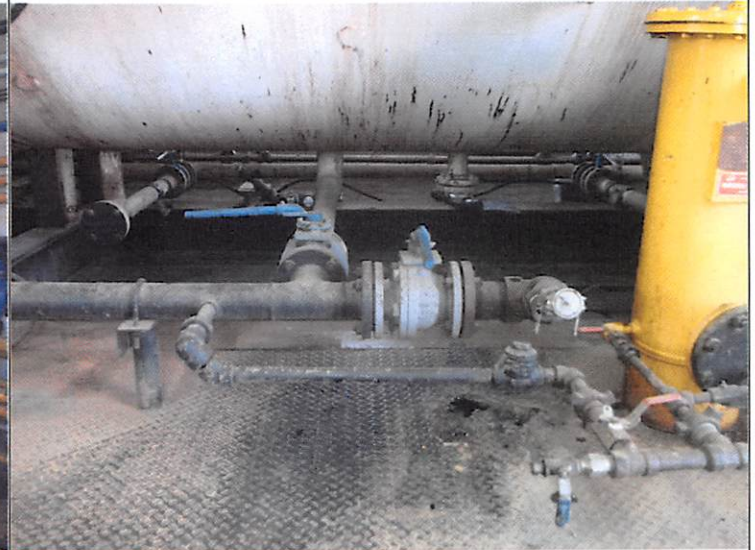
Name plates



East Head



South side of Treater



South side of Treater

IRISNDT #: LYN2000616

Date: 2020-Jul-02

Logan Skinner

Client: HUSKY OIL OPERATIONS LIMITED

(Print)

(Sign)

5311 - 86 Street NW, Edmonton, Alberta T6E 5T8 Phone (780) 437-4747 Fax (780) 436-4873
 Calgary (403) 279-6121 Cold Lake (780) 826-6105
 Lloydminster (780) 875-6455 Fort McMurray (780) 743-1536
 Barrhead (780) 674-3018 Red Deer (403) 347-1742
 Nisku (780) 955-7616 www.irisndt.com

Engineering, Calgary (403) 217-9684
 Engineering, Edmonton (780) 437-2022
 Rope Access Services (780) 437-2022
 Offices also located in USA and UK



West Head



North side of Treater



North side of Treater



North side of Treater

IRISNDT #: LYN2000616

Date: 2020-Jul-02

Client: HUSKY OIL OPERATIONS LIMITED

Logan Skinner

(Print)

(Sign)

5311 - 86 Street NW, Edmonton, Alberta T6E 5T8 Phone (780) 437-4747 Fax (780) 436-4873
 Calgary (403) 279-6121 Cold Lake (780) 826-6105
 Lloydminster (780) 875-6455 Fort McMurray (780) 743-1536
 Barrhead (780) 674-3018 Red Deer (403) 347-1742
 Nisku (780) 955-7616 www.irisndt.com

Engineering, Calgary (403) 217-9684
 Engineering, Edmonton (780) 437-2022
 Rope Access Services (780) 437-2022
 Offices also located in USA and UK

