

	ULTRASONIC INSPECTION REPORT	CA1101-UT1-338 Page 1 of 6
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Procedure: 4.2 Technique: Contact - Thickness Code/Standard: Client Requested Inspection Other: -	Rev: 3.0 IRISNDT #: LYN2100275 Location: Marsden Unit #1 Battery 1-30-44-26w3 Item Inspected: Treater UT survey locations as listed	Date: 2021-Apr-13 WO #: 60794526 PO #: 8401478506
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Material Type: Carbon Steel		Surface Condition: Painted		Heat Treatment: Not Applicable	
Equipment: USM / DMS GO+ S/N #: GOPLS16120074 Model: USM / DMS GO+ Asset #: 30174 Calibration Due Date: 2021-Jun-01					
Calibration Block: Step Wedge Asset #: 321360		Probe(s): S/N # Angle Frequency (MHz) Crystal Size	SCA1370		
Sweep range Cal: N/A Asset #: N/A			0		
Cable & Type: Coaxial / Lemo – Lemo (L-L) Length: 4'			7.5		
Scanning Surface: ☒ OD ☐ ID ☐ Other N/A			0.375		
Dis. AMPL. Calibration: N/A		Couplant: Echogel 20 Batch #: 18F149		Expiry Date: 2022-Apr-20	
Transfer Loss Calibration: ☐ Direct Comparison ☒ N/A ☐ Other N/A					TL: N/A db
Reference Flaw Size: N/A		Primary Reference Level: 100%		Reference Gain: 62 db	
☐ Lamination ☐ Shear Wave ☐ Volumetric ☒ Thickness				Scan Methods: ☒ Contact ☐ Other	
Surface Temp (°C): > 5°C / 41°F & < 60°C / 140°F Temp. Varies with cycling of flow through lines (ambient to 50deg.C)					

UT Thickness scans were carried out as requested in CML locations as listed for **Treater EQ#62065240 sn#88J57**
@ Marsden Unit#1 Battery 1-30-44-26w3 All locations numbered as per Husky provided drawings attached.

De-Sand Inlet Nozzles and associated piping			
See UT survey sketch page#1 of 2			
UT #	Description	MIN	NOMINAL
#1	3"xs Elbow	0.297"	0.300"
#2	3"xs Elbow	0.280"	0.300"
#3	3"x2"std. TEE	0.230"	0.216"
#4	2"sche.160 Nozzle	0.325"	0.344"
#5	3"x2"std. TEE	0.225"	0.216"
#6	2"sche.160 Nozzle	0.328"	0.344"
#7	3"x2"std. TEE	0.280"	0.216"
#8	2"sche.160 Nozzle	0.285"	0.344"
#9	3"x2"std. TEE	0.278"	0.216"
#10	2"sche.160 Nozzle	0.320"	0.344"

Inspection Limitations: Some areas of inlet nozzles covered in old baked on UT couplant from previous survey.(sono600) only areas dressed with emry able to be scanned.		
Unit#: 1093 Kilometers: _____ In: _____ Out: _____ Hrs: _____ In: _____ Out: _____ Hrs: _____ Personnel: Sheldon Trachuk Marshall Lundell	Consumables: ---MIN---	Interpretation by: Sheldon Trachuk (Print) (Sign) _____ SNT-TC-1A: 2 C.G.S.B.: 2 (Level) C.G.S.B. #: 11405 Client Representative: _____ (Print) I am in full agreement with report contents (Sign) _____

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De-Sand Inlet Nozzles and associated piping

See UT survey sketch page#1 of 2

UT #	Description	MIN	NOMINAL
#11	3"x2"xs TEE	0.392"	0.300"
#12	3"x2"std. TEE	0.280"	0.216"
#13	2"sch.160 Nozzle	0.257"	0.344"
See "For Firetube"			
#29	2"sch.160 Nozzle	0.335"	0.344"
#30	2"sch.160 Nozzle	0.320"	0.344"

De-Sand Outlet Nozzles, Drain Nozzles, and Associated Piping

See UT survey sketch page#2 of 2

UT location#	Description	MIN	NOMINAL
14	3"std. Elbow	0.214"	0.216"
15	3"std. Elbow	0.220"	0.216"
16	3"std. Elbow	0.220"	0.216"
17	3"x2"std. TEE	0.305"	0.216"
18	3"x2"std. TEE	0.315"	0.216"
19	3"x2"std. TEE	0.302"	0.216"
20	3"x2"std. TEE	0.304"	0.216"
21	3"x2"std. TEE	0.312"	0.216"
22	3"std. Elbow	0.298"	0.216"
23	3"xs TEE	0.435"	0.300"
24	2"sch.160 Nozzle	0.310"	0.344"
25	2"sch.160 Nozzle	0.325"	0.344"
26	2"sch.160 Nozzle Corrosion evident at bottom of nozzle adjacent to vessel side weld	0.175"	0.344"
27	2"sch.160 Nozzle	0.325"	0.344"
28	2"sch.160 Nozzle	0.328"	0.344"

IRISNDT #: LYN2100275

Date: 2021-Apr-13

Client: HUSKY OIL OPERATIONS LIMITED

Sheldon Trachuk

(Print)

(Sign)

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De-Sand Drain Piping

UT location#	Description	MIN	NOMINAL
31	3"sch.xxs Drain Nozzle	0.572"	0.600"
32	2"std. Elbow	0.154"	0.154"
33	3"sch.xxs Drain Nozzle	0.580"	0.600"
34	2"std. Elbow	0.153"	0.154"
35	3"xs Nozzle	0.290"	0.300"
36	3"xs Nozzle	0.296"	0.300"
37	3"xs Nozzle	0.270"	0.300"
38	3"xs Elbow	0.290"	0.300"

IRISNDT #: LYN2100275**Date:** 2021-Apr-13

Sheldon Trachuk

(Print)

Client: HUSKY OIL OPERATIONS LIMITED

(Sign)

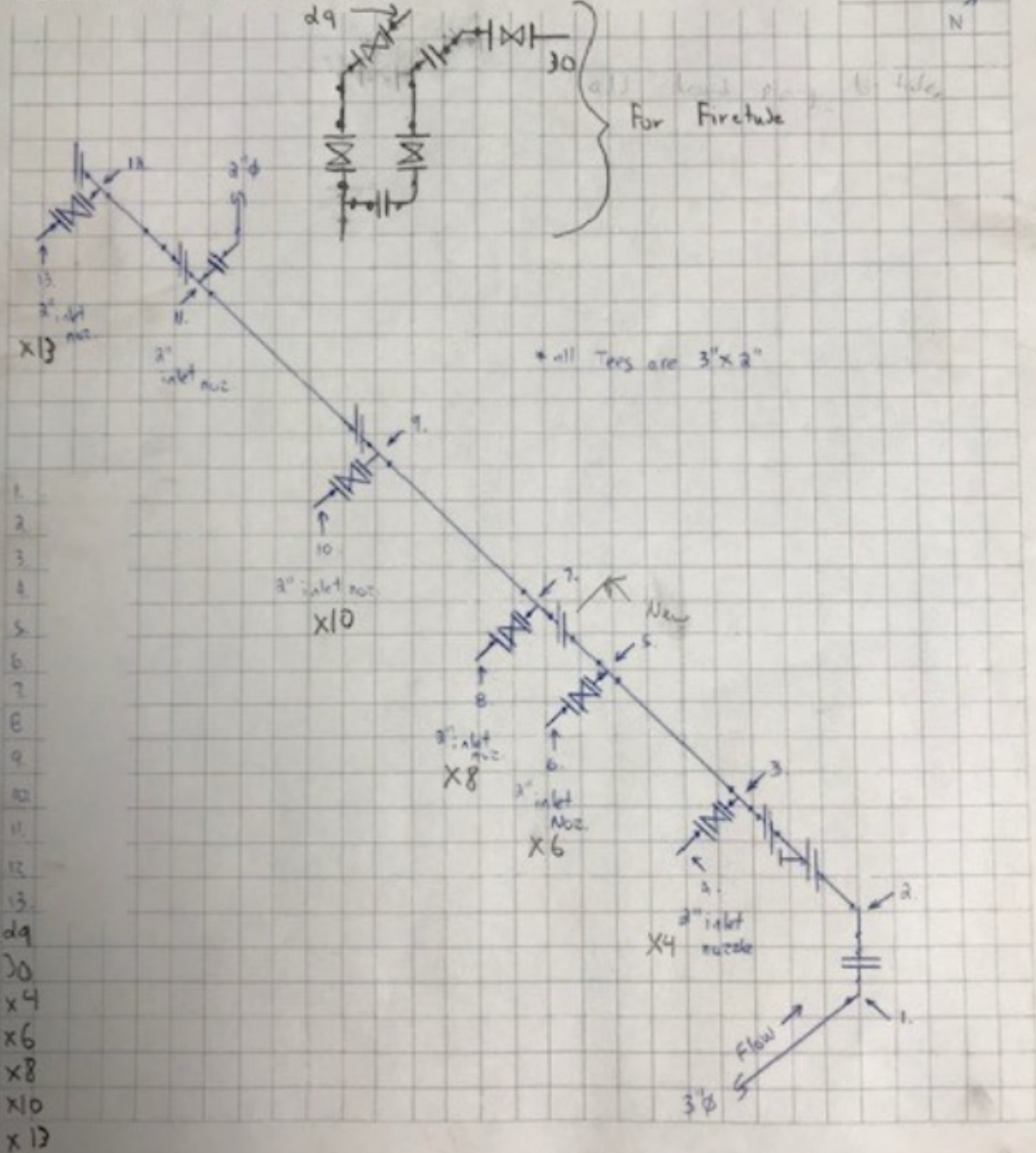
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Marsden Unit 1 Battery - 01-30-044-26W3
Equipment #62065240, Treater, Serial #88157
UT Survey Sketch - Page 1 of 2

Desand Inlet Nozzles and Associated Piping



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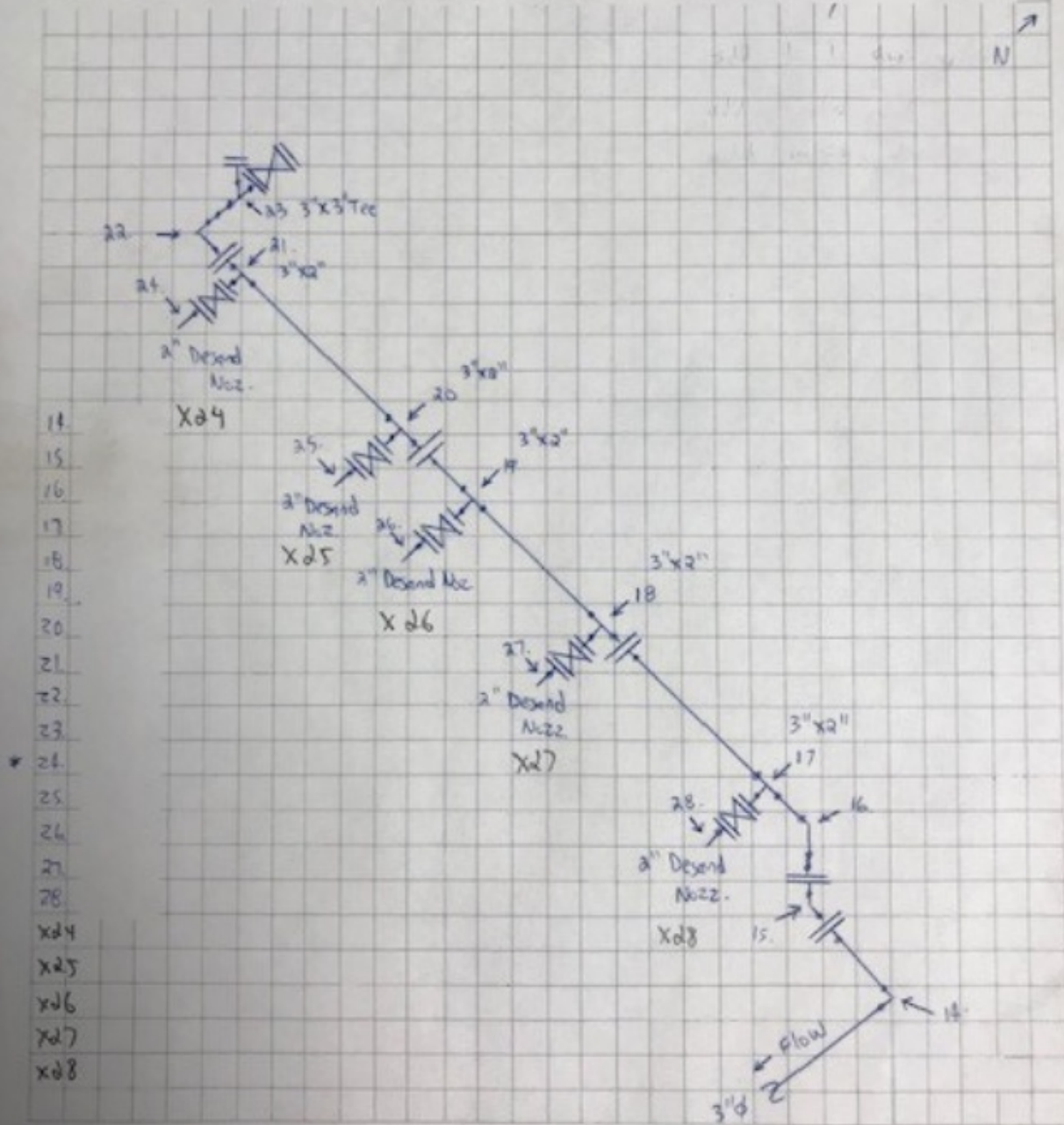
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Marsden Unit 1 Battery - 01-30-044-26W3
Equipment #62065240, Treater, Serial #88J57
UT Survey Sketch - Page 2 of 2

Desand Outlet Nozzles, Drain Nozzles, and Associated Piping



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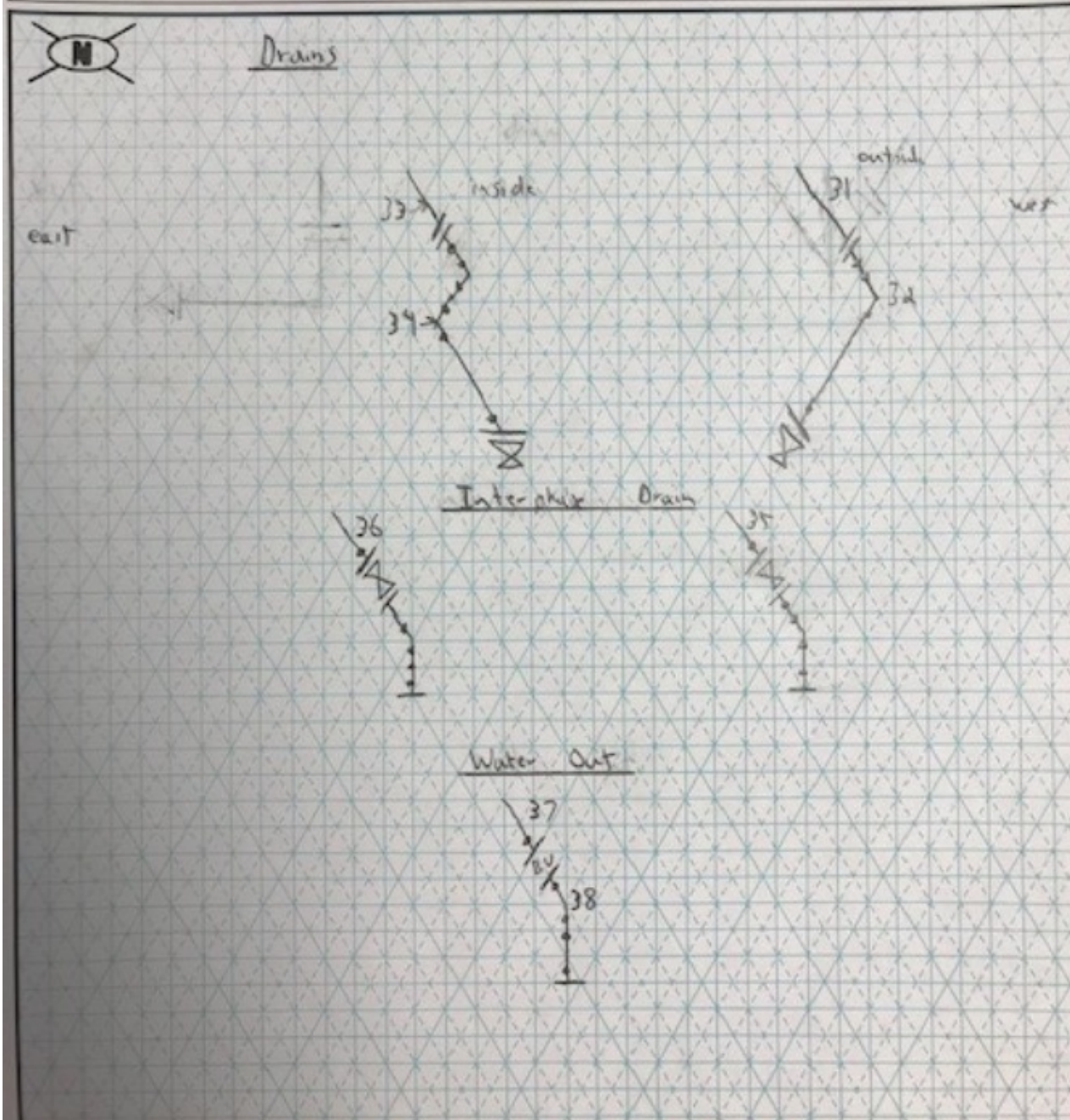
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Husky Oil

FIELD SHEET

PROJECT NO./WORK ORDER NO. 1-30 tracer	DATE (Y-M-D)	PAGE	OF
QC NO.	FIELD SKETCH ☐		
LINE NO./EQUIPMENT NO. 60065240	WELD MAP ☐		
PREPARED BY	AS BUILT ☐		
	REFERENCE		



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	DAILY LEM TIME-TICKET	IRISNDT DAILY TICKET# CA1101-DT-1197 Page 1 of 1
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Customer: HUSKY OIL OPERATIONS LIMITED	IRISNDT DISPATCH #: LYN2100275	Location: Marsden as listed	Date: 2021-Apr-13
Technician 1: Sheldon Trachuk	Position: Senior Tech	Technician 2: Marshall Lundell	Position: Assistant
Primary Activity: UT - Thickness		Report Prefix: CA1101-	
Technician 3:	Position:	Technician 4:	Position:

Time Start	Time Finish	Activity	Report #s	LOC	Total Hours	Total KMs	Description	PO/Cost Code/AFE		Job #/Work Order #/Other	
							Marsden Unit#1 1-30-44-26w3 Treater				
07:30	11:30	UT - Thickness	CA1101-UT1-338	4	4	50	UT Desand inlet & Outlet piping survey	P.O.#:	8401478506	W.O.#:	60794526
							Marsden Unit#2 13-16-44-26w3 V-101				
11:30	15:30	UT - Thickness	CA1101-UT1-339	4	4		UT Desand inlet & Outlet piping survey	P.O.#:	8401478506	W.O.#:	60796547
							Marsden Unit#2 13-16-44-26w3 V-102				
15:30	19:30	UT - Thickness	CA1101-UT1-340	4	4	50	UT Desand inlet & Outlet piping survey	P.O.#:	8401478506	W.O.#:	60796365

(Totals for this page only)	Totals:	12	100	Unit: 1093
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Work Location (LOC) Legend: 1) Inside Fab. Shop 2) Yard/Lay-down Area 3) Piping/Modular Fab. Area 4) Other
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J.H.A. Carried Out & Documented: ☒ Yes ☐ No	Safety Concerns: ☐ Yes ☒ No	Safety Meeting: ☒ Yes ☐ No	Living Out Allowance: ☒ N/A ☐ Full ☐ Bkfst ☐ Lunch ☐ Supper ☐ OT Meal ☐ Hotel
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Equipment, Supplies, Consumables, and Other Costs
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---MIN---

Additional Site, Daily, and other relevant job notes

REQ: Kyle Forbes / Luke Newport APP: Robin Hein ZZ-10009299

TECHNICIAN NAME: <u>Sheldon Trachuk</u> (Print) TECHNICIAN SIGNATURE: (Sign)	CLIENT NAME: <u>Samantha Voros</u> (Print) CLIENT SIGNATURE: (Sign)
Tech Date: 2021-Apr-13	Client Date: