

REV.	DATE	DESCRIPTION	CHK'D	APP'D	CLIENT	ENGINEERING & PERMIT STAMPS	BY	DATE	DRAWN:	CHECKED:	DESIGN:	APPROVED:	CLIENT:	SCALE/PLOT SCALE	NTS	CADNAME:	74514-P&ID-00-02-SHEET 1	REV. 9A
9A	11.07.12	COMMITTED TO GALLON TITLEBLOCK					CA	11.07.12										
8	10.10.18	PHASE II EXPANSION GENERAL REVISIONS																
7	10.09.21	POST CONSTRUCTION																
6	10.09.03	GENERAL REVISIONS																
5	10.07.20	REVISED AS PER CLIENTS REMARKS																
4	10.07.01	ISSUED FOR CONSTRUCTION																
3	10.05.08	ISSUED FOR CLIENT REVIEW																
2		POST CONSTRUCTION REVISION																
1	08.10.18	DEFINITION ISSUED FOR INFORMATION ONLY																

1ST. LETTER	MEANING(S)	2ND. LETTER	MEANING(S)	3RD. LETTER	MEANING(S)
A	ANALYZE, ACTUATE	A	ALARM	A	ALARM
B	BURNER	B		B	
BD	BLOWDOWN	BD		BD	
C	COMBUSTIBLE, CONCENTRATION	C	CONTROL	C	CONTROLLER, CLOSED
D	DEW, MOISTURE	D	DETECT	D	DETECT, DEVICE
E	VOLTAGE, EMERGENCY	E		E	ELEMENT
F	FLOW	F	RATIO, FRACTIONAL	F	FORWARD
FF	FLAME FAILURE	FF		FF	
G	GAS	G		G	GLASS, GAUGE
H	HAND	H		H	HATCH, HIGH
I	ELECTRICAL CURRENT	I	INDICATOR, IGNITOR	I	INDICATOR, IGNITOR
J	POWER	J		J	
K	TIME, TIME SCHEDULE	K		K	CONTROL STATION
L	LEVEL	L		L	LOW
M	MOTOR	M	MOMENTARY	M	MANAGER(R)
N	USERS CHOICE	N	USERS CHOICE	N	USERS CHOICE
O	USERS CHOICE	O		O	
P	PRESSURE, VACUUM	P	POINT/TEST CONNECTION	P	
PD	PRESSURE DIFFERENTIAL	PD		PD	
PV	PRESSURE & VACUUM	PV		PV	
Q	QUANTITY	Q		Q	
R	RADIATION, RESTRICT	R	RECORD, REGULATE, RUN, RELIEF	R	RECORD, REVERSE, RUN
S	SPEED, FREQUENCY, SOLENOID, SURGE	S	SAFETY, SOON, STOP/START, SWITCH	S	SWITCH, SYSTEM, STATUS
SD	SHUTDOWN	SD	SHUTDOWN	SD	SHUTDOWN
T	TEMPERATURE, TIME	T		T	TRANSMITTER
TD	TEMPERATURE DIFFERENTIAL	TD		TD	
U	MULTIVARIABLE UNIT	U	MULTIFUNCTION	U	MULTIFUNCTION
V	VELOCITY, FORCE	V	VACUUM	V	VALVE, DAMPER, LOUVER
W	WEIGHT, FORCE	W		W	WELL
X	UNCLASSIFIED	X	UNCLASSIFIED	X	UNCLASSIFIED
Y	EVENT, STATE, PRESENCE	Y	CONVERT, COMPUTE, RELAY	Y	

NOTE: WHEN AN INSTRUMENT IS CLASSIFIED WITH ONLY TWO LETTERS, USE THE FIRST AND THIRD LETTER MEANINGS. WHEN AN INSTRUMENT IS CLASSIFIED WITH ONLY ONE LETTER, USE THE SECOND LETTER MEANINGS.

INSTRUMENT BALLOON LETTERING LEGEND

SYMBOL	DESCRIPTION
	MOTOR OPERATED ACTUATOR
	BALL VALVE (BA)
	GATE VALVE (GA)
	PLUG VALVE (PL)
	NEEDLE VALVE (NE)
	GLOBE VALVE (GL)
	CHECK VALVE (CH)
	BUTTERFLY VALVE (BU)
	SOCKET WELD VALVE
	SCREENED VALVE
	CONTROL VALVE WITH DIAPHRAGM ACTUATOR
	SPRING OPPOSED SINGLE ACTING PISTON ACTUATOR
	DOUBLE ACTING PISTON ACTUATOR
	PRESSURE REGULATOR
	MOTOR OPERATED ACTUATOR
	3-WAY VALVE
	3-WAY SOLENOID VALVE VENTING WITH POWER FAILURE
	ANGLE CHOCK
	IN-LINE CHOCK
	DIAPHRAGM
	IN-LINE STRAINER
	Y-STRAINER
	BASKET STRAINER
	PRESSURE SAFETY VALVE
	PRESSURE VACUUM RELIEF VALVE
	RUPTURE DISC (PRESSURE)
	RUPTURE DISC (VACUUM)
	FLOW NOZZLE
	ORIFICE PLATE
	PADDLE BLIND (CLOSED)
	PADDLE BLIND (OPEN)
	SPECTACLE BLIND, OPEN
	SPECTACLE BLIND, CLOSED
	CHANGE IN PIPE SIZE
	IN-LINE STRAINER
	GAUGE HATCH
	THIEF HATCH
	EMERGENCY HATCH
	INSULATION (H-HOT, C-COLD)
	INSULATION & ELECTRIC HEAT TRACE
	INSULATION & GLYCOL HEAT TRACE
	FLEXIBLE HOSE
	EXPANSION JOINT
	PROCESS PIPING
	PNEUMATIC SIGNAL
	CAPILLARY TUBING
	ELECTRICAL SIGNAL
	HYDRAULIC SIGNAL
	MECHANICAL LINK
	INTERNAL SYSTEM LINK (SOFTWARE OR DATA LINK)
	MODBUS LINK OR PROFIBUS
	STEAM TRAP
	INSTRUMENT OR DEVICE
	PLANT CONTROLLER (PLC, RTU, DCS)
	UNIT CONTROLLER (STANDALONE AT VENDOR PLC)
	FULL PORT
	FAIL OPEN
	FAIL CLOSED
	C.S.O.(C)
	E.S.D.
	NORMALLY CLOSED
	NORMALLY OPEN
	SPRING RETURN
	MECHANICAL LINK
	SPEC BREAK
	SUPPLIED BY OTHERS
	TIE IN LOCATIONS
	TIE IN NUMBER
	CORROSION FLOW ELEMENT
	MAGNETIC FLOW ELEMENT

SYMBOL LEGEND

SYMBOL	DESCRIPTION
	SONIC FLOW ELEMENT
	TURBINE FLOW ELEMENT
	POSITIVE DISPLACEMENT ELEMENT
	VORTEX ELEMENT
	WEDGE FLOW ELEMENT
	ORIFICE METER RUN
	ROTAMETER
	STRESS RELIEVE
	INSTRUMENT AIR (A) OR GAS (G) HOOK-UP
	TYPICAL AT LOCATIONS MARKED WITH:

LINE NUMBERING SYSTEM

LINE NUMBER	PIPE SYSTEM CODE	CLASS	LINE MATERIAL CODE	LINE MATERIAL
114	C	150	1500	1500
			900	900
			800	800
			300	300
			600	600
			900	900
			1500	1500
			2500	2500

TEMPERATURE INDEX	TEMPERATURE INDEX
V	BELOW -45°C
W	-45°C TO -29°C
X	-29°C TO 121°C
Y	121°C TO 200°C
Z	ABOVE 200°C

VALVE DESIGNATIONS	VALVE TYPE	VALVE SIZE
BA-114	BA-BALL	114
BS-114	BS-BASKET STRAINER	114
BU-114	BU-BUTTERFLY	114
CA-114	CA-GATE	114
CH-114	CH-CHECK	114
GL-114	GL-GLOBE	114
NE-114	NE-NEEDLE	114
PL-114	PL-PLUG	114
YS-114	YS-Y STRAINER	114
BA-114	BA-BALL	114
BS-114	BS-BASKET STRAINER	114
BU-114	BU-BUTTERFLY	114
CA-114	CA-GATE	114
CH-114	CH-CHECK	114
GL-114	GL-GLOBE	114
NE-114	NE-NEEDLE	114
PL-114	PL-PLUG	114
YS-114	YS-Y STRAINER	114

VALVE DESIGNATIONS	VALVE TYPE	VALVE SIZE
BA-114	BA-BALL	114
BS-114	BS-BASKET STRAINER	114
BU-114	BU-BUTTERFLY	114
CA-114	CA-GATE	114
CH-114	CH-CHECK	114
GL-114	GL-GLOBE	114
NE-114	NE-NEEDLE	114
PL-114	PL-PLUG	114
YS-114	YS-Y STRAINER	114

SYMBOL	DESCRIPTION
	SONIC FLOW ELEMENT
	TURBINE FLOW ELEMENT
	POSITIVE DISPLACEMENT ELEMENT
	VORTEX ELEMENT
	WEDGE FLOW ELEMENT
	ORIFICE METER RUN
	ROTAMETER
	STRESS RELIEVE
	INSTRUMENT AIR (A) OR GAS (G) HOOK-UP
	TYPICAL AT LOCATIONS MARKED WITH:

STAMPS

SYMBOL	DESCRIPTION
V	BELOW -45°C
W	-45°C TO -29°C
X	-29°C TO 121°C
Y	121°C TO 200°C
Z	ABOVE 200°C

GUIDEX
Guidex Exploration Ltd.

MILLENIA
ENGINEERING

KAKUT 14-12 GAS PLANT
LSD 14-12-75-3 W6M
SYMBOLS & LEGENDS
PIPING & INSTRUMENTATION DIAGRAM

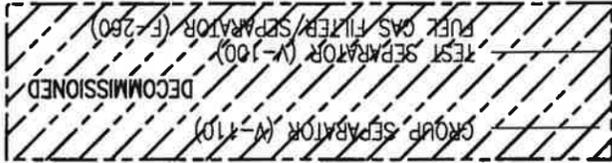
SCALE/PLOT SCALE
NTS
74514-P&ID-00-02-SHEET 1

REV. 9A

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F.G. SEPARATOR (V-153)
BUILDING HEATER (H-405)

SHEET 6 — PIGGING AREA

SHEET 7 — GROUP SEPARATOR (V-150)
BUILDING HEATER (H-407A/B)

SHEET 8 — FREE WATER KNOCK OUT (V-151)
SAMPLE BOX PUMP (P-552)
FLOOR DRAIN PUMP (P-553)

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FLARE HEADER
GAS TO PLANT COMPRESSION

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SHEET 11 — WATER STORAGE SKIM TANK (S-910)
WATER STORAGE TANK (S-920)

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OIL STORAGE TANK (T-820) EXISTING
920

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WATER CHARGE PUMP (P-520)
WATER INJECTION PUMP (P-530)
WATER FILTER (F-600)
WATER FILTER (F-610)

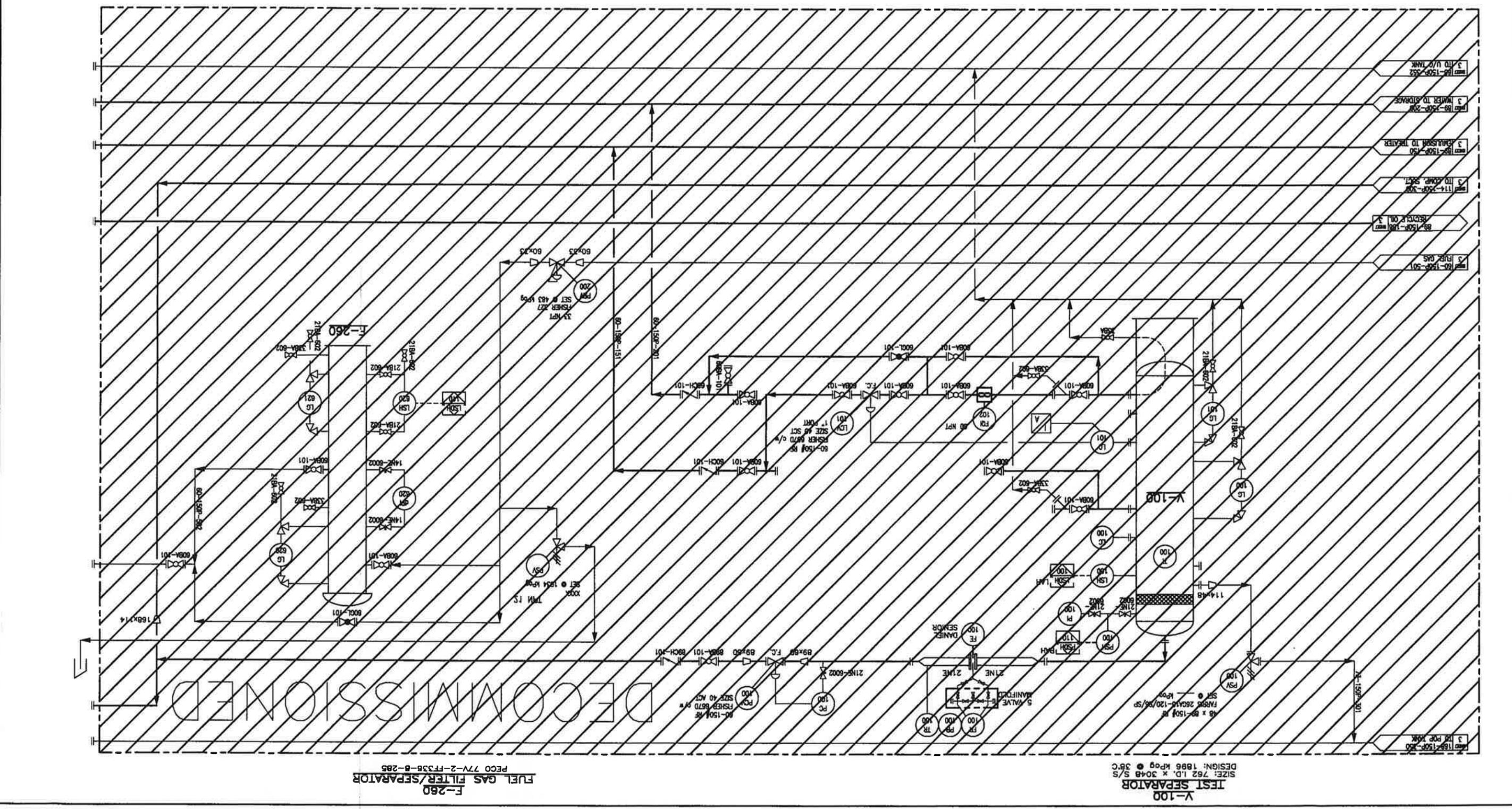
NOTES	REFERENCE DRAWINGS	REV.	DATE	BY	DESCRIPTION	CHK'D	APP'D	CLIENT	ENGINEERING & PERMIT STAMPS				
		BA	11.07.12	CA	COMMITTED TO GALLEON TIEBLOCK				DRAWN: CA 11.07.12	CHECKED:	DESIGN:	APPROVED:	CLIENT:
		9	10.10.18	CAF	PHASE II EXPANSION GENERAL REVISIONS								
		8	10.10.15	CAF	PHASE II EXPANSION								
		7	10.09.21	CA	POST CONSTRUCTION								
		6	10.09.03	CAF	GENERAL REVISIONS								
		5	10.07.20	CAF	REVISED AS PER CLIENTS REMARKS								
		4	10.07.01	CAF	ISSUED FOR CONSTRUCTION			PC					
		3	10.05.08	AS	ISSUED FOR CLIENT REVIEW								
		2		ASA	POST CONSTRUCTION REVISION								
		9B	11.08.22	FE	ISSUED FOR REVIEW (MRC JOB# 11844)								

SCALE/PLT SCALE	DRAWING NAME	DWTG NO. & SHEET NO.	CAPNAME:	MRC JOB No.:	DATE
NTS	74514-P&ID-00-02-SHEET 2	11844			
GUIDEX Guide Expansion Ltd.					
MILLENIA ENGINEERING					
KAKUT 14-12 GAS PLANT LSD 14-12-75-3 W6M PIPING & INSTRUMENTATION DIAGRAM					
REV.					
9B					

REV.	DATE	BY	DESCRIPTION	CHK'D	APP'D	CLIENT
98	11.08.18	FE	ISSUED FOR REVIEW (MRC JOB# 11844)			
2		ASA	POST CONSTRUCTION REVISION			
3	10.05.08	JE	ISSUED FOR CLIENT REVIEW			
4	10.07.01	CAF	ISSUED FOR CONSTRUCTION		PC	
5	10.07.20	CAF	REVISED AS PER CLIENTS REMARKS			
6	10.08.03	CAF	GENERAL REVISIONS			
7	10.08.21	CAF	POST CONSTRUCTION			
8	10.10.18	CAF	PHASE II EXPANSION			
9	10.10.18	CAF	PHASE II EXPANSION GENERAL REVISIONS			
9A	11.07.12	CA	CONVERTED TO GALLEON TRILBLOCK			

SCALE/PLOT SCALE	DRAWING NAME	74514-P&ID-00-02-SHEET 4
NTS	TEST SEPARATOR (V-100) & FUEL GAS FILTER/SEP. (F-260)	PIPING & INSTRUMENTATION DIAGRAM
	LSD 14-12-75-3 W6M	KAKUT 14-12 GAS PLANT
		ENGINEERING
		MILLENIA
		GUIDEX
		Guide Exploration Ltd.

DATE	BY	DRAWN:	CHECKED:	DESIGN:	APPROVED:	CLIENT:
11.07.12	CA					



F-260
FUEL GAS FILTER/SEPARATOR
PECO 77V-2-FT358-B-285

V-100
TEST SEPARATOR
DESIGN: 1886 Wpg © 38°C
SIZE: 762 I.D. x 3048 S/S

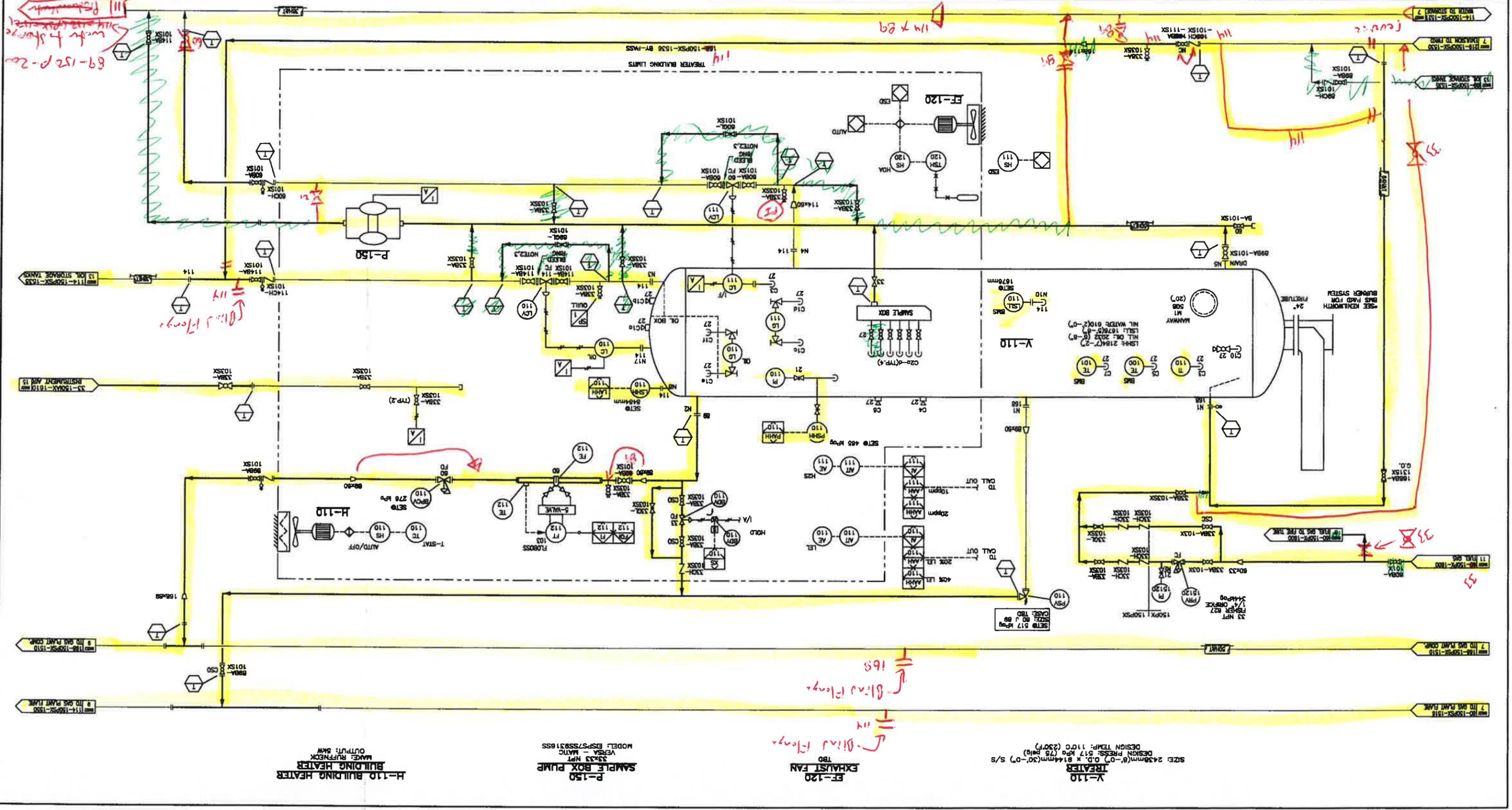
- 188-150P-250 3" POP MARK
- 25-150P-201
- 114-150P-302
- 88-150P-100 3" RECEIVER ON 3"
- 114-250P-302 3" TO COMP. SECT.
- 88-150P-150 3" EXPANSION TO HEATER
- 88-250P-200 3" WATER TO STORAGE
- 88-150P-252 3" TO U/O TANK

REV.	DATE	DESCRIPTION	BY	CHK'D	APP'D	CLIENT
10	12.06.28	ISSUED FOR CONSTRUCTION (ME JOB# 12535)	PM			
9F	12.06.28	ISSUED FOR ENGINEERING (ME JOB# 12535)	PM			
9C	12.06.08	ISSUED FOR REVIEW (ME JOB# 12535)	AM			
9B	11.06.18	ISSUED FOR REVIEW (MEC JOB# 12535)	FE			
9A	11.07.12	COMMENTED TO GALLOW TIEBLOCK	CA			
8	10.10.18	PHASE 2 EXPANSION GENERAL REVISIONS	CAF			
7	10.08.21	POST CONSTRUCTION	CAF			
6	10.06.03	GENERAL REVISIONS	CAF			
5	10.07.20	REVISED AS PER CLIENTS REMARKS	CAF			

SCALE/PLOT SCALE	DRAWING NAME	CADNAME:	DATE	SIGNATURE	PERMIT TO PRACTICE	PERMIT NUMBER: P 6109
NTS	74514-P&ID-00-02-SHEET 8	DRN-110-02-0801 L10				
		WRC JOB No.: 12535				
		CHECKED: CA	11.07.12			
		DESIGN: CA				
		APPROVED: CA				
		CLIENT: MILLENIA RESOURCE CONSULTING				

REV.	DATE	DESCRIPTION
1	12.06.28	ISSUED FOR CONSTRUCTION (ME JOB# 12535)
2	12.06.28	ISSUED FOR ENGINEERING (ME JOB# 12535)
3	12.06.08	ISSUED FOR REVIEW (ME JOB# 12535)
4	11.06.18	ISSUED FOR REVIEW (MEC JOB# 12535)
5	11.07.12	COMMENTED TO GALLOW TIEBLOCK
6	10.10.18	PHASE 2 EXPANSION GENERAL REVISIONS
7	10.08.21	POST CONSTRUCTION
8	10.06.03	GENERAL REVISIONS
9	10.07.20	REVISED AS PER CLIENTS REMARKS

- NOTES
1. ORIGINAL PWK0 V-151 WAS REPLACED BY THIS UNIT
 2. REUSE LIQUID SWAMP VALVES
 3. ADD SS BLEED RING TO DRAIN COATED SPOOLS



H-110 BUILDING HEATER
 MAKE: RUFIBECK
 OUTPUT: 8MW

P-150 SAMPLE BOX PUMP
 VERSA - MATIC
 MODEL: DS-7/SS218SS

EF-120 EXHAUST FAN
 T80

V-110 TRAINER
 SIZE: 2438mm(φ) O.D. x 8144mm(20'-0") S/S
 DESIGN PRESS: 817 kPa (7.5 barg)
 DESIGN TEMP: 110°C (230°F)

FUTURE EQUIPMENT

REV.	DATE	BY	DESCRIPTION	CHK'D	APP'D	CLIENT	ENGINEERING & PERMIT STAMPS	DATE	BY	DRAWN:	CHECKED:	DESIGN:	APPROVED:	CLIENT:	MRC JOB No.:	CADNAME:	SCALE/PLOT SCALE	DRAWING NAME	74514-P&ID-00-02-SHEET 10	REV	9A	
1	08.10.18	ASA	DELETION ISSUED FOR INFORMATION ONLY												11844			NTS				
2		ASA	POST CONSTRUCTION REVISION																			
3	10.05.08	JP	ISSUED FOR CLIENT REVIEW																			
4	10.07.01	CAF	ISSUED FOR CONSTRUCTION			PC																
5	10.07.20	CAF	REVISED AS PER CLIENTS REMARKS																			
6	10.05.03	CAF	GENERAL REVISIONS																			
7	10.09.21	CAF	POST CONSTRUCTION																			
8	10.10.15	CAF	PHASE II EXPANSION																			
9	10.10.18	CAF	PHASE II EXPANSION GENERAL REVISIONS																			
9A	11.07.12	CA	CONVERTED TO GALLEON TITLEBLOCK																			

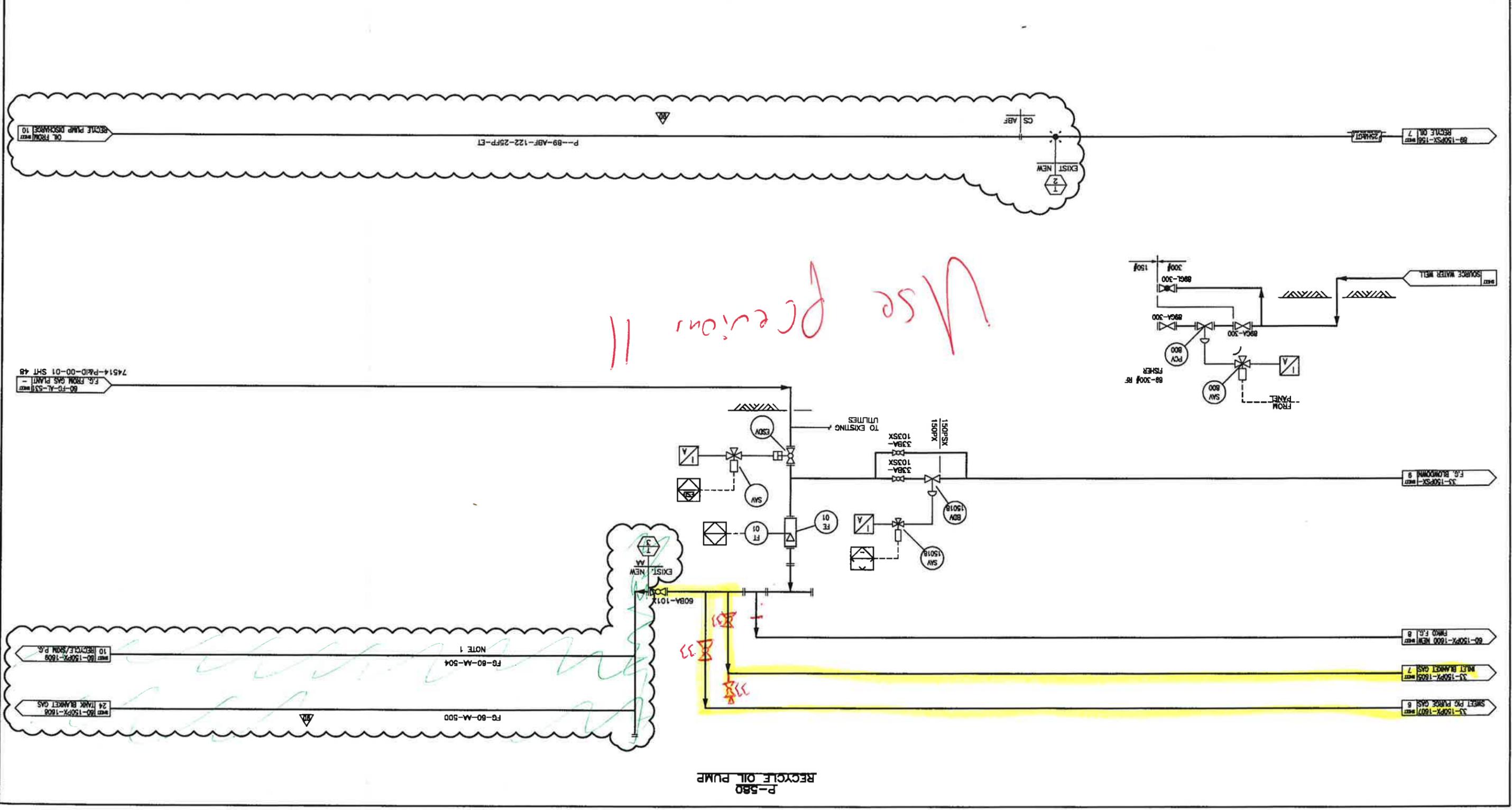


KAKUT 14-12 GAS PLANT
LSD 14-12-75-3 W6M
PIPING & INSTRUMENTATION DIAGRAM

1. F/G TO RECYCLE/SKIM BUILDING ON HOLD.

REV.	DATE	BY	DESCRIPTION	CHK'D	APP'D	CLIENT	ENGINEERING & PERMIT STAMPS	DATE	BY
BA	11.07.12	CA	COMVERTED TO GALLEON TIMELOCK					CA	11.07.12
9	10.10.18	CAF	PHASE II EXPANSION GENERAL REVISIONS						
8	10.10.15	CAF	PHASE II EXPANSION						
7	10.09.21	CAF	POST CONSTRUCTION						
6	10.06.03	CAF	GENERAL REVISIONS						
5	10.07.20	CAF	REVISED AS PER CLIENTS REMARKS						
4	10.07.01	CAF	ISSUED FOR CONSTRUCTION			PC			
90	11.10.12	RE	ISSUED FOR HAZOP						
9C	11.09.18	RE	RE-ISSUED FOR REVIEW						
9B	11.08.18	FE	ISSUED FOR REVIEW						

SCALE/PLOT SCALE	NTS
DRAWING NAME	74514-P&ID-00-02-SHEET 11
REV.	9D



Use Revision II

P-580 RECYCLE OIL PUMP

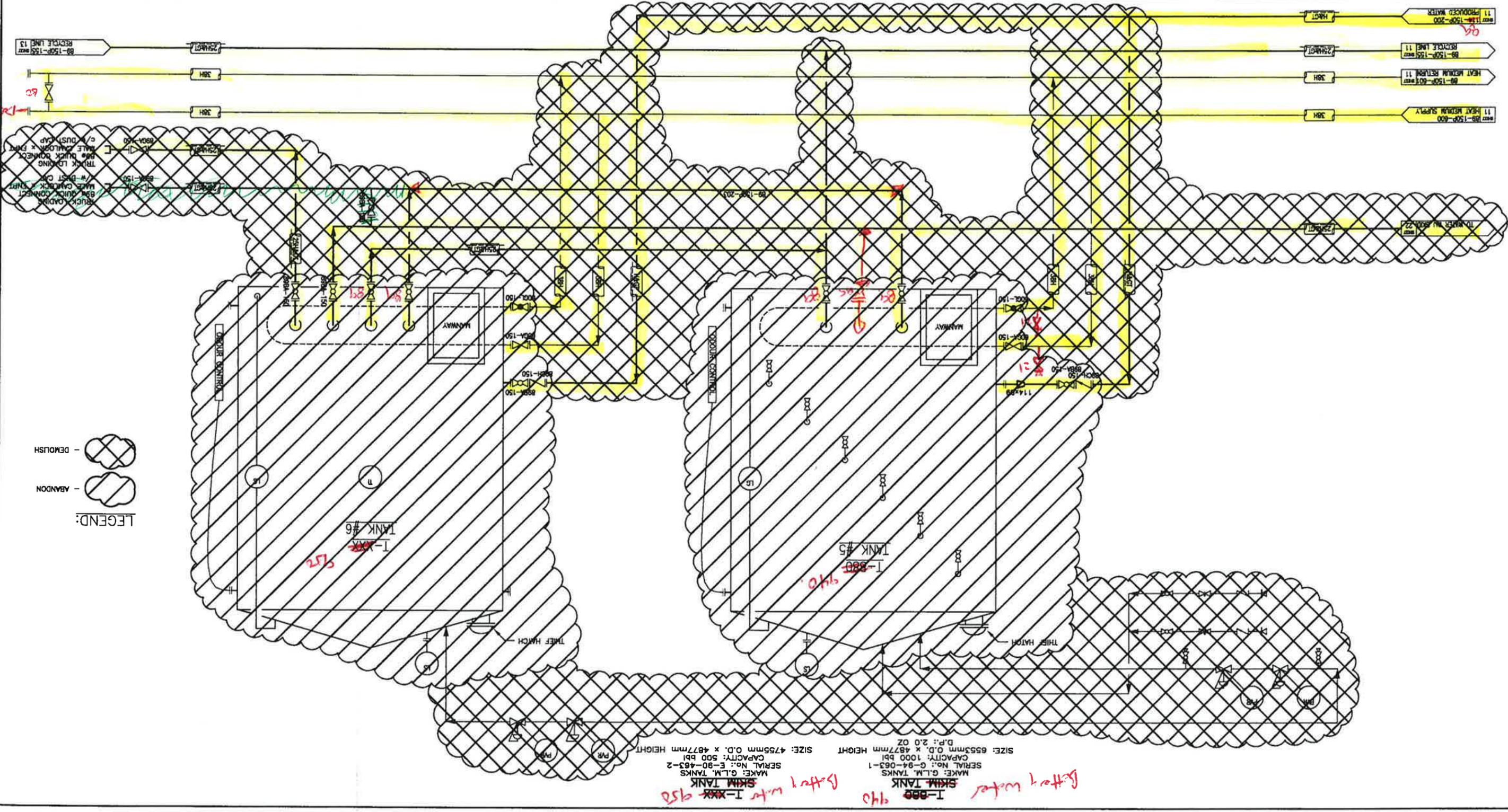
FG-80-AA-504	NOTE 1
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FG-80-AA-504	
FG-80-AA-500	

FG-80-AA-504	
FG-80-AA-500	

FG-80-AA-504	
FG-80-AA-500	

FG-80-AA-504	
FG-80-AA-500	

NOTES	REV.	DATE	BY	DESCRIPTION	CHK'D	APP'D	CLIENT	ENGINEERING & PERMIT STAMPS	DATE	BY	CHECKED:	DESIGN:	APPROVED:	CLIENT:	CADNAME:	SCALE/PLT SCALE	NTS	74514-P&ID-00-02-SHEET 12D	REV. 0
	0	11.08.18		ISSUED FOR DEMOLITION						CA	11.07.13								



KAKUT 14-12 GAS PLANT
 LSD 14-12-75-3 W6M
 SKIM TANK (T-880)
 PIPING & INSTRUMENTATION DIAGRAM

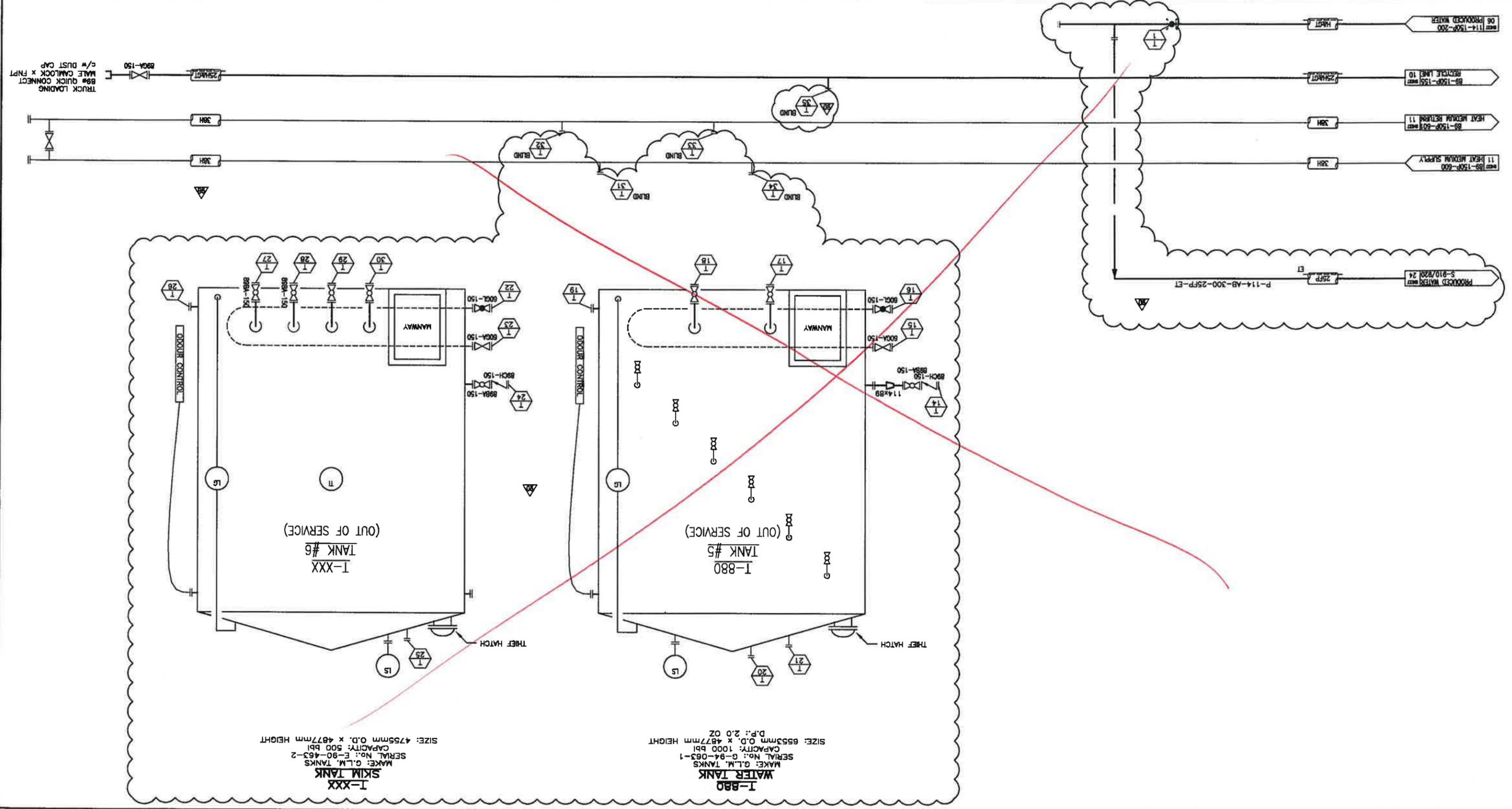
CADNAME: **MM-02-0887 BL**
 DATE: 11.07.13
 DRAWN: CA
 CHECKED: CA
 DESIGN: CA
 APPROVED: CA
 CLIENT: CA
 JOB NO: 11844

SKIM TANK I-880 940
 MAKE: G.L.M. TANKS
 SERIAL NO.: G-24-053-1
 CAPACITY: 1000 bbl
 SIZE: 6553mm O.D. x 4877mm HEIGHT
 D.P.: 2.0 OZ

SKIM TANK I-881 952
 MAKE: G.L.M. TANKS
 SERIAL NO.: E-80-483-2
 CAPACITY: 500 bbl
 SIZE: 4755mm O.D. x 4877mm HEIGHT

LEGEND:
 - ABANDON
 - DEMOLISH

REV.	DATE	BY	DESCRIPTION	CHK'D	APP'D	CLIENT	ENGINEERING & PERMIT STAMPS	DATE	BY	DESCRIPTION
98	11.08.18	FE	ISSUED FOR REVIEW (MRC JOB# 11844)							
9C	11.08.28	CA	RE-ISSUED FOR REVIEW							
9D	11.10.12	RE	ISSUED FOR HAZOP							
4	10.07.01	CAF	ISSUED FOR CONSTRUCTION			PC				
5	10.07.20	CAF	REVISED AS PER CLIENTS REMARKS							
6	10.08.03	CAF	GENERAL REVISIONS							
7	10.09.21	CAF	POST CONSTRUCTION							
8	10.10.19	CAF	PHASE 1 EXPANSION							
9	10.10.18	CAF	PHASE 1 EXPANSION GENERAL REVISIONS							
9A	11.07.12	CA	CONVERTED TO GALLEY TITRATOR							



NOTES: REFERENCE DRAWINGS: 98, 99, 9A, 9B, 9C, 9D, 9E, 9F, 9G, 9H, 9I, 9J, 9K, 9L, 9M, 9N, 9O, 9P, 9Q, 9R, 9S, 9T, 9U, 9V, 9W, 9X, 9Y, 9Z, 10A, 10B, 10C, 10D, 10E, 10F, 10G, 10H, 10I, 10J, 10K, 10L, 10M, 10N, 10O, 10P, 10Q, 10R, 10S, 10T, 10U, 10V, 10W, 10X, 10Y, 10Z, 11A, 11B, 11C, 11D, 11E, 11F, 11G, 11H, 11I, 11J, 11K, 11L, 11M, 11N, 11O, 11P, 11Q, 11R, 11S, 11T, 11U, 11V, 11W, 11X, 11Y, 11Z, 12A, 12B, 12C, 12D, 12E, 12F, 12G, 12H, 12I, 12J, 12K, 12L, 12M, 12N, 12O, 12P, 12Q, 12R, 12S, 12T, 12U, 12V, 12W, 12X, 12Y, 12Z.

GUIDEX
Guide Exploration Ltd.

MILLENIA
ENGINEERING

KAKUT 14-12 GAS PLANT
LSD 14-12-75-3 W6M
SLOP/RECYCLE TANK (S-930)
PIPING & INSTRUMENTATION DIAGRAM

CADNAME: 74514-P&ID-00-02-SHEET 12
SCALE/PLT SCALE: NTS
MRC JOB No.: 11844

DATE: 11.07.12
BY: CA
CHECKED:
DESIGN:
APPROVED:
CLIENT:

REV.	DATE	BY	DESCRIPTION	CHK'D	APP'D	CLIENT
98	11.08.18	FE	ISSUED FOR REVIEW (MRC JOB# 11844)			
9C	11.08.28	CA	RE-ISSUED FOR REVIEW			
9D	11.10.12	RE	ISSUED FOR HAZOP			
4	10.07.01	CAF	ISSUED FOR CONSTRUCTION			PC
5	10.07.20	CAF	REVISED AS PER CLIENTS REMARKS			
6	10.08.03	CAF	GENERAL REVISIONS			
7	10.09.21	CAF	POST CONSTRUCTION			
8	10.10.19	CAF	PHASE 1 EXPANSION			
9	10.10.18	CAF	PHASE 1 EXPANSION GENERAL REVISIONS			
9A	11.07.12	CA	CONVERTED TO GALLEY TITRATOR			

REV.	DESCRIPTION	CHK'D	APP'D	CLIENT	ENGINEERING & PERMIT STAMPS	DATE	BY
0	ISSUED FOR DEMOLITION					11.08.16	CA

SCALE/PLOT SCALE	DRAWING NAME	DRAWING NO.	DATE
NTS	74514-P&ID-00-02-SHEET 13D	11844	11.07.12

CLIENT	DESIGN	CHECKED	DRAWN
			CA

CONTRACT	PROJECT	JOB NO.
		11844

DATE	BY	DATE
11.07.12	CA	11.07.12

NOTES

REFERENCE DRAWINGS

DESCRIPTION

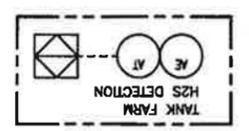
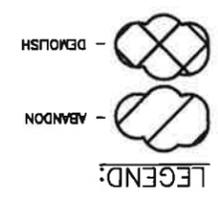
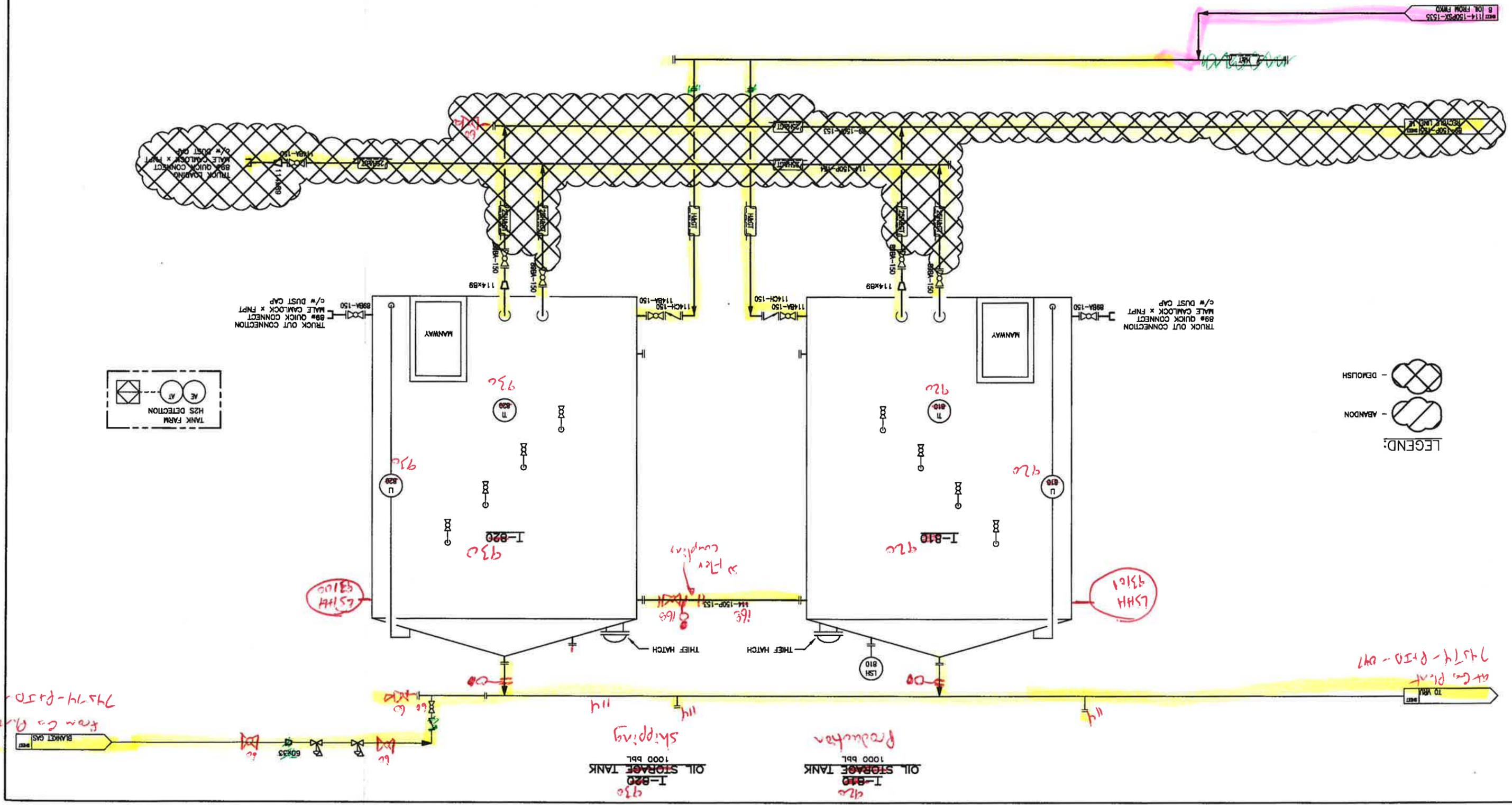
CHK'D

APP'D

CLIENT

ENGINEERING & PERMIT STAMPS

DATE



TRUCK OUT CONNECTION
89# QUICK CONNECT
MALE CAMLOCK x FNPT
c/w DUST CAP

TRUCK OUT CONNECTION
89# QUICK CONNECT
MALE CAMLOCK x FNPT
c/w DUST CAP

Blanket Gas
from Gas Plant
74514-010-047

OIL STORAGE TANK
I-820
1000 PBL
Shipping

OIL STORAGE TANK
I-810
1000 PBL
Production

TO WEL
at Gas Plant
74514-010-047

LSH 820
93100

LSH 810
93101

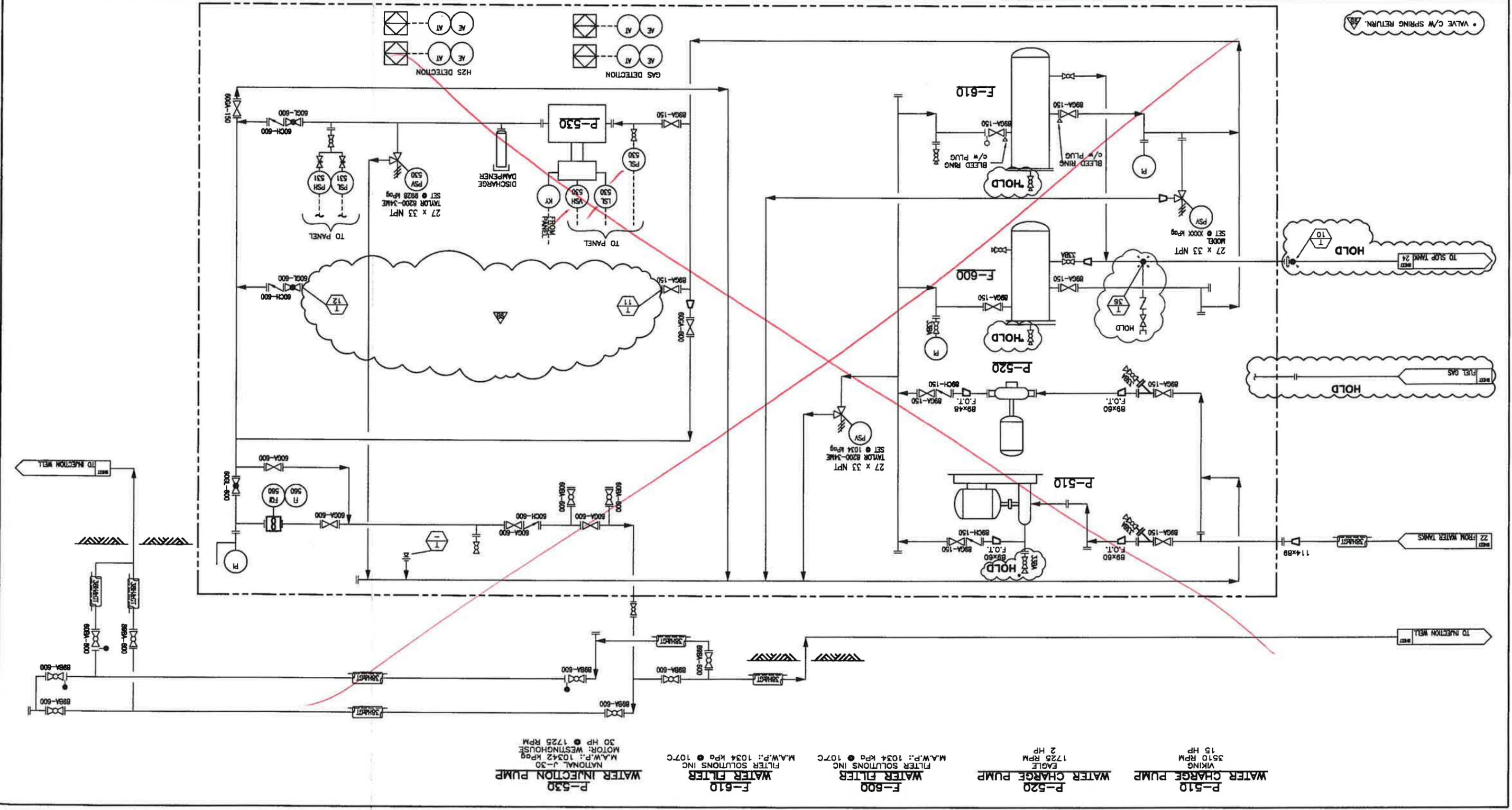
to Flow to 816

REV.	DATE	DESCRIPTION	CHK'D	APP'D	CLIENT
98	08.10.18	ISSUED FOR REVIEW (MNC JOB# 11844)			
9C	11.10.12	ISSUED FOR WZOP			
3	10.05.08	ISSUED FOR CLIENT REVIEW			
4	10.07.01	ISSUED FOR CONSTRUCTION		PC	
5	10.07.20	REVISED AS PER CLIENTS REMARKS			
6	10.08.03	GENERAL REVISIONS			
7	10.08.21	POST CONSTRUCTION			
8	10.10.18	PHASE II EXPANSION			
9	10.10.18	PHASE II EXPANSION GENERAL REVISIONS			
9A	11.07.12	CONNECTED TO GALLEON TITREBLOCK			

REV.	DATE	DESCRIPTION	CHK'D	APP'D	CLIENT
99	08.10.18	ISSUED FOR REVIEW (MNC JOB# 11844)			
9C	11.10.12	ISSUED FOR WZOP			
3	10.05.08	ISSUED FOR CLIENT REVIEW			
4	10.07.01	ISSUED FOR CONSTRUCTION		PC	
5	10.07.20	REVISED AS PER CLIENTS REMARKS			
6	10.08.03	GENERAL REVISIONS			
7	10.08.21	POST CONSTRUCTION			
8	10.10.18	PHASE II EXPANSION			
9	10.10.18	PHASE II EXPANSION GENERAL REVISIONS			
9A	11.07.12	CONNECTED TO GALLEON TITREBLOCK			

REV.	DATE	DESCRIPTION	CHK'D	APP'D	CLIENT
99	08.10.18	ISSUED FOR REVIEW (MNC JOB# 11844)			
9C	11.10.12	ISSUED FOR WZOP			
3	10.05.08	ISSUED FOR CLIENT REVIEW			
4	10.07.01	ISSUED FOR CONSTRUCTION		PC	
5	10.07.20	REVISED AS PER CLIENTS REMARKS			
6	10.08.03	GENERAL REVISIONS			
7	10.08.21	POST CONSTRUCTION			
8	10.10.18	PHASE II EXPANSION			
9	10.10.18	PHASE II EXPANSION GENERAL REVISIONS			
9A	11.07.12	CONNECTED TO GALLEON TITREBLOCK			

REV.	DATE	DESCRIPTION	CHK'D	APP'D	CLIENT
99	08.10.18	ISSUED FOR REVIEW (MNC JOB# 11844)			
9C	11.10.12	ISSUED FOR WZOP			
3	10.05.08	ISSUED FOR CLIENT REVIEW			
4	10.07.01	ISSUED FOR CONSTRUCTION		PC	
5	10.07.20	REVISED AS PER CLIENTS REMARKS			
6	10.08.03	GENERAL REVISIONS			
7	10.08.21	POST CONSTRUCTION			
8	10.10.18	PHASE II EXPANSION			
9	10.10.18	PHASE II EXPANSION GENERAL REVISIONS			
9A	11.07.12	CONNECTED TO GALLEON TITREBLOCK			



GUIDEX
 Guide Exploration Ltd.

MILLENIA
 ENGINEERING

KAKUT 14-12 GAS PLANT
 LSD 14-12-75-3 W6M
 WATER INJ. PUMPS (P-530/540) & CHARGE PUMPS
 PIPING & INSTRUMENTATION DIAGRAM

SCALE/PLOT SCALE: NTS
 DRAWING NAME: 74514-P&ID-00-02-SHEET 14
 REV: 9C

REV.	DATE	BY	DESCRIPTION	CHK'D	APP'D	CLIENT	ENGINEERING & PERMIT STAMPS	DATE	BY
BA	11.07.14	NK	COMMITTED TO GALLON TIEBACK					11.07.14	NK
9	10.10.18	CAF	PHASE II EXPANSION GENERAL REVISIONS						
8	10.10.18	CAF	PHASE II EXPANSION						
7	10.09.21	CA	POST CONSTRUCTION						
6	10.09.03	CAF	GENERAL REVISIONS						
5	10.07.20	CAF	REVISED AS PER CLIENTS REMARKS						
4	10.07.01	CAF	ISSUED FOR CONSTRUCTION						
3	10.05.08	JO	ISSUED FOR CLIENT REVIEW						
2		ASA	POST CONSTRUCTION REVISION						
1	08.10.18	ASA	DEFINITION, ISSUED FOR INFORMATION ONLY						

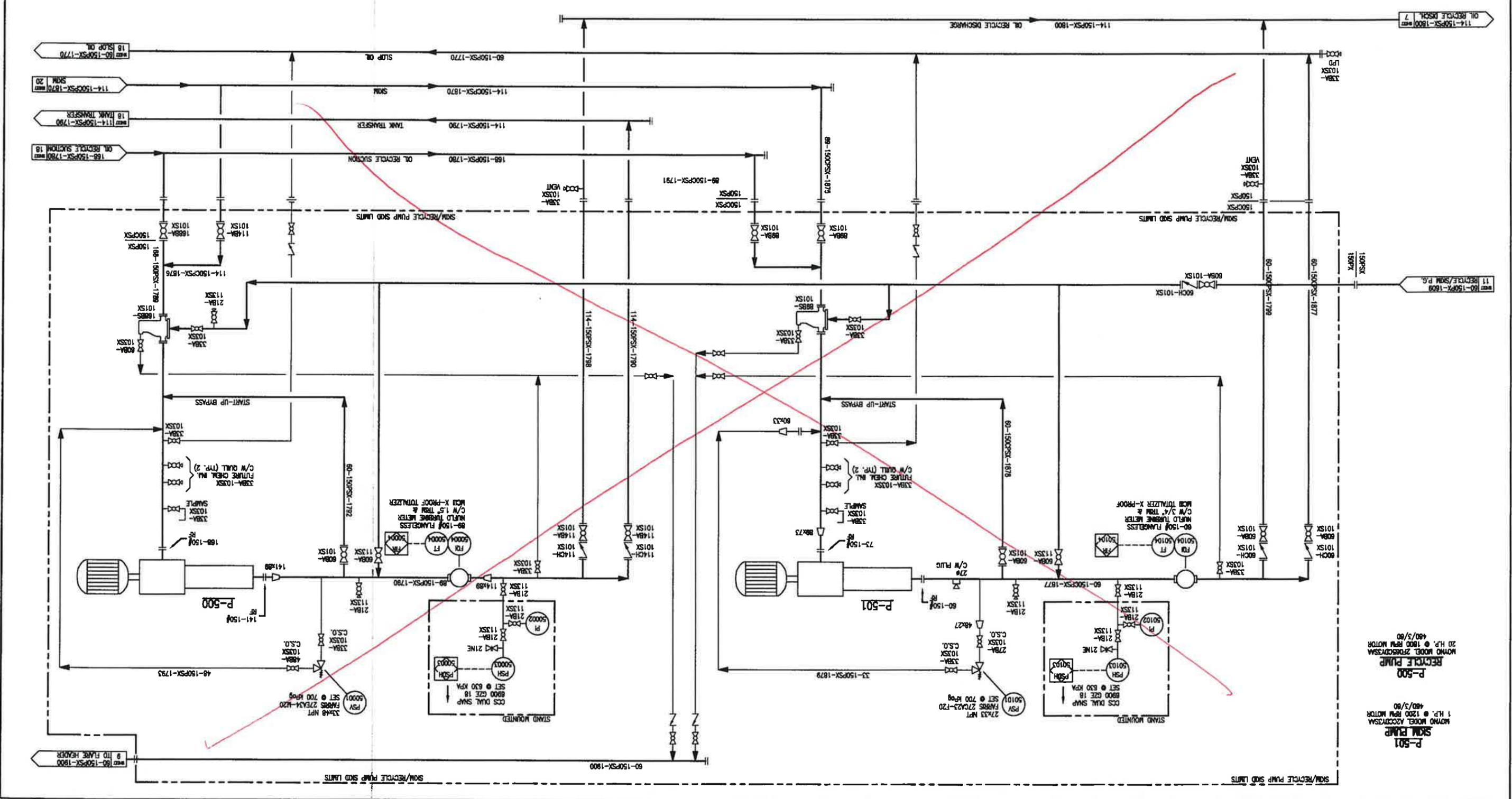
SCALE/PLOT SCALE	DRAWING NAME	74514-P&ID-00-02-SHEET 17
NTS	SKM / RECYCLE PUMP AREA PIPING & INSTRUMENTATION DIAGRAM	

CLIENT:	APPROVED:	DESIGN:	CHECKED:	DRAWN:	DATE
				NK	11.07.14

CADNAME:	WRC JOB NO.:
	11844

GUIDEX	ENGINEERING
Guide Exploration Ltd.	

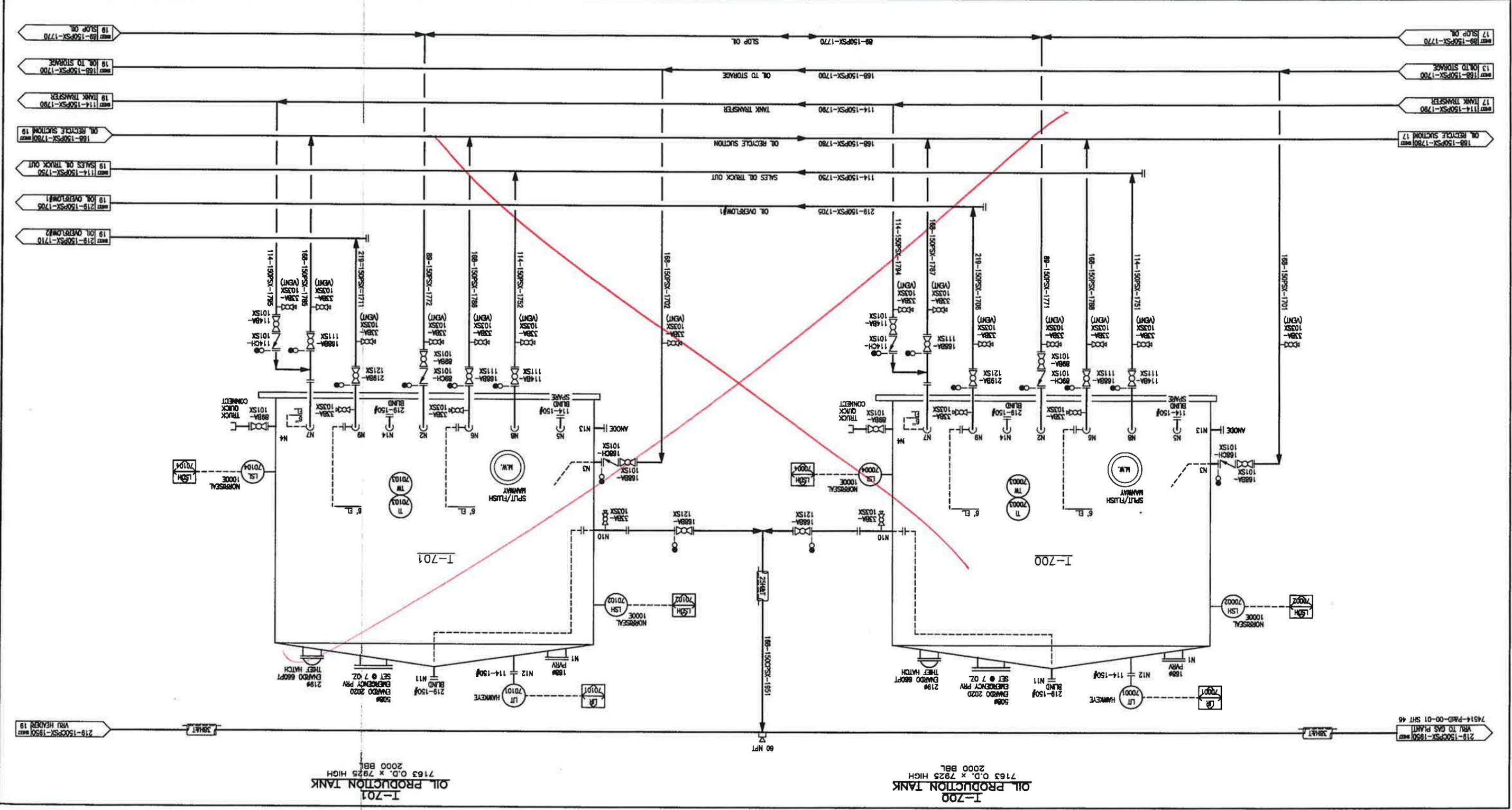
REV.	9A
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P-500
 RECYCLE PUMP
 MONO MODEL 2F0800V3SM
 20 HP, @ 1800 RPM MOTOR
 480 V/50

P-501
 SKM PUMP
 MONO MODEL AC200V3SM
 1 HP, @ 1200 RPM MOTOR
 480 V/50

REV.	DATE	DESCRIPTION	CHK'D	APP'D	CLIENT	ENGINEERING & PERMIT STAMPS	BY	DATE	DRAWN:	CHECKED:	DESIGN:	APPROVED:	CLIENT:	UFC JOB No.:	CADNAME:	SCALE/PLOT SCALE	DRAWING NAME	REV.
9A								11.07.12	CA					11844		NTS	74514-P&ID-00-02-SHEET 18	
GUIDEX <i>Guide Exploration Ltd.</i>																		
MILLENIA <i>ENGINEERING</i>																		
KAKUT 14-12 GAS PLANT LSD 14-12-75-3 W6M OIL PRODUCTION TANKS (T-700 & T-710) PIPING & INSTRUMENTATION DIAGRAM																		

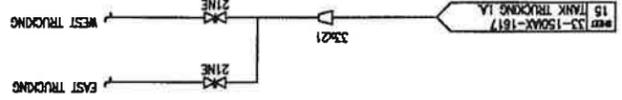
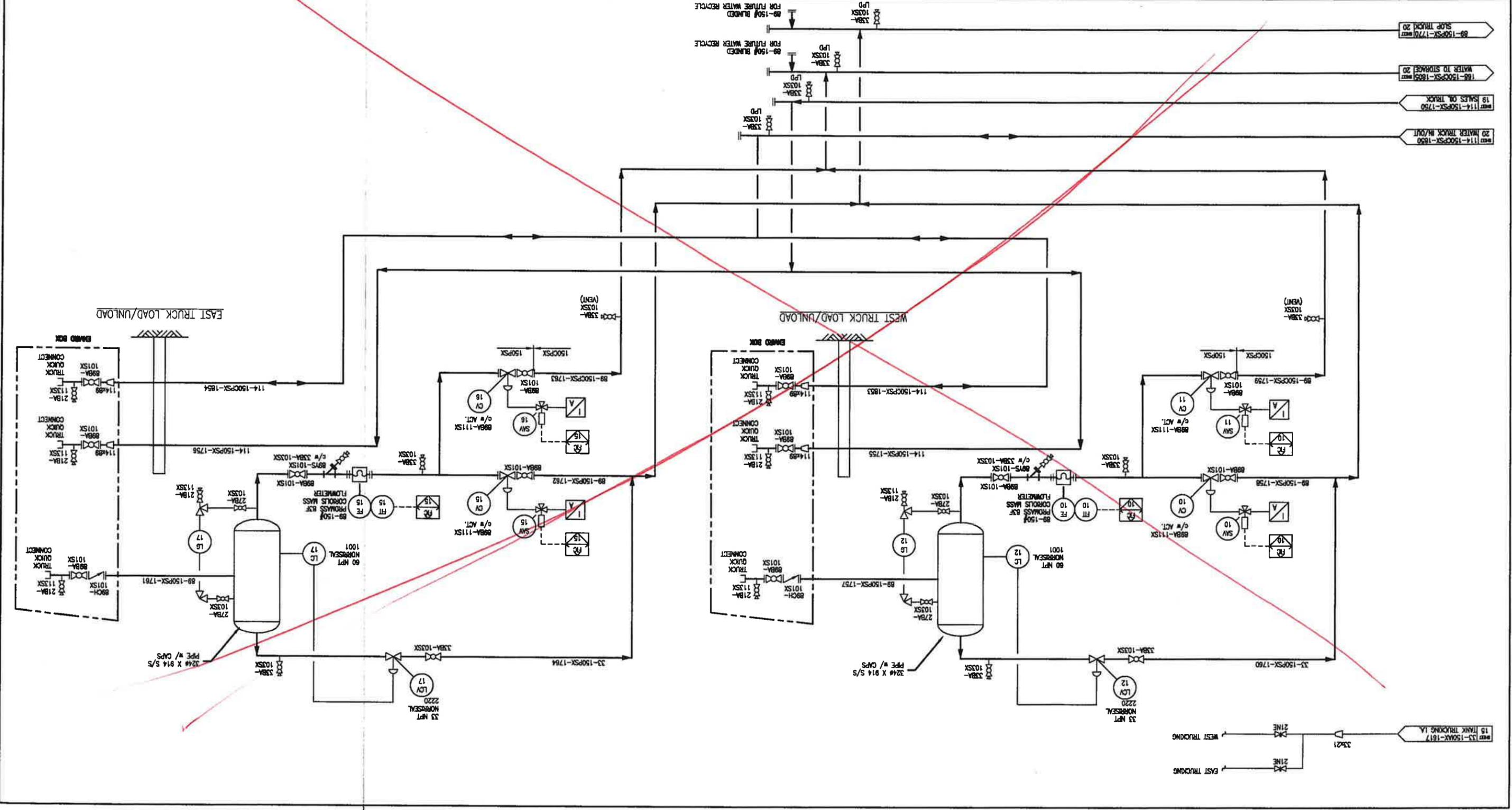


REV.	DATE	BY	DESCRIPTION	CHK'D	APP'D	CLIENT
9A	11.07.12	CA	CONVERTED TO GALLEON THERMLOCK			
	10.10.18	CAF	PHASE II EXPANSION GENERAL REVISIONS			
	10.10.18	CAF	PHASE II EXPANSION			
	10.09.21	CAF	POST CONSTRUCTION			
	10.08.03	CAF	GENERAL REVISIONS			
	10.07.20	CAF	REVISED AS PER CLIENTS REMARKS			
	10.07.01	CAF	ISSUED FOR CONSTRUCTION			
	10.06.08	JO	ISSUED FOR CLIENT REVIEW			
		ASA	POST CONSTRUCTION REVISION			
		ASA	DEMOLITION ISSUED FOR INFORMATION ONLY			

SCALE/PLOT SCALE	DRAWING NAME	WRC JOB No.	CADNAME:
NTS	74514P&ID-00-02-SHEET 21	11844	

DATE	BY	CHECKED:	DESIGN:	APPROVED:	CLIENT:
11.07.12	CA				

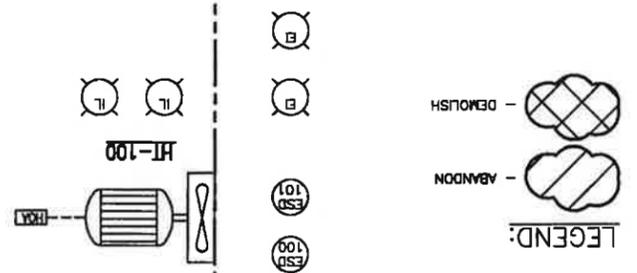
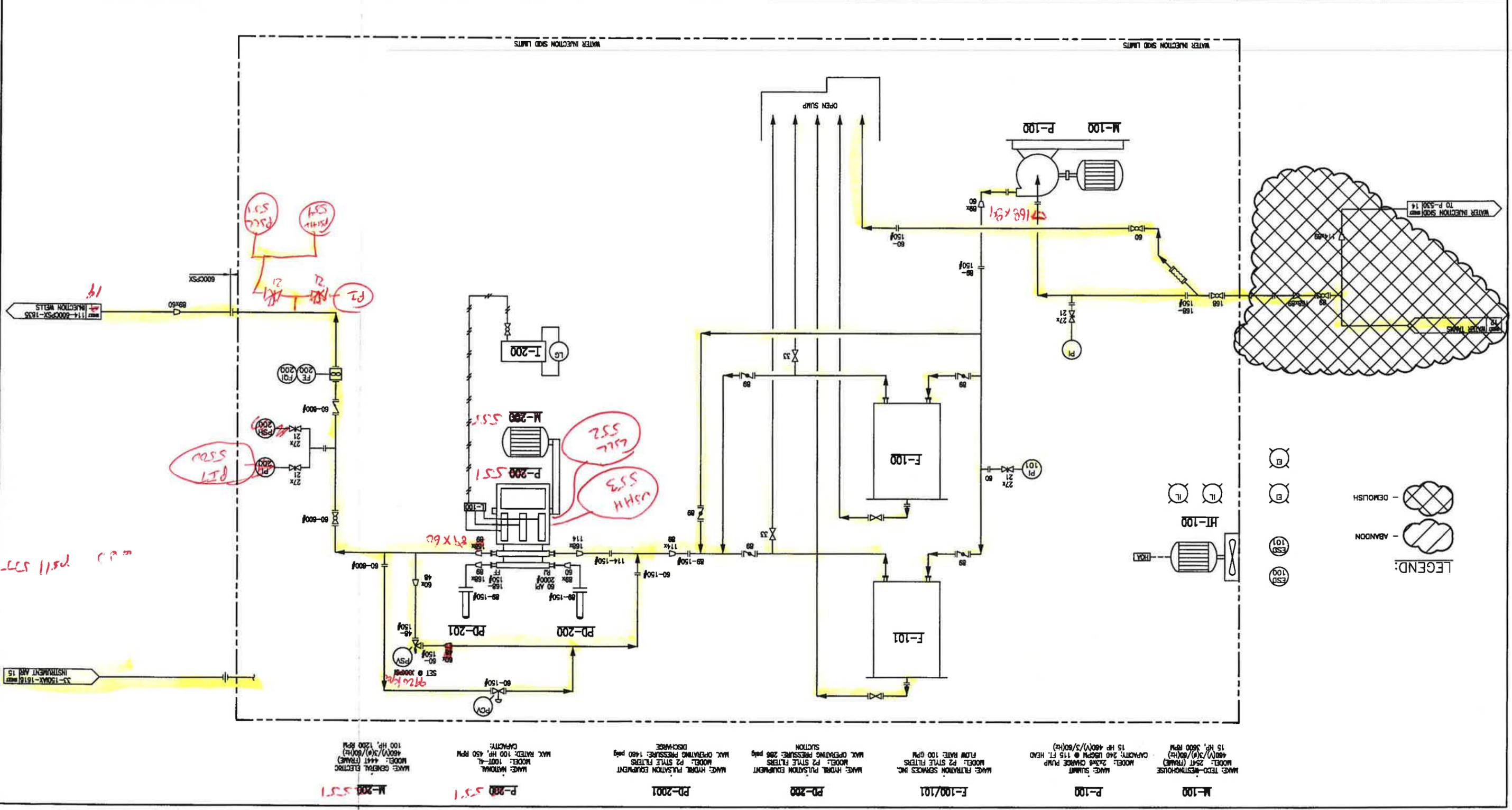
ENGINEERING & PERMIT STAMPS



- 114-150F-SX-1850 WATER TRUCK IN/OUT
- 114-150F-SX-1750 WATER TO STORAGE 20
- 150F-SX-1770 SLOP TRUCK 20

NOTES

NOTES	REFERENCE DRAWINGS	REV.	DATE	BY	DESCRIPTION	CHK'D	APP'D	CLIENT	ENGINEERING & PERMIT STAMPS	DATE	BY	DRAWN	CHECKED	DESIGN	APPROVED	CUSTOMER	MRC JOB No.	CADNAME	SCALE/PLT SCALE	NTS	DRAWING NAME	74514-P&ID-00-02-SHEET 22D	REV.	0
	ISSUED FOR DEMOLITION	0	11.10.12								11.07.14	NK						11844				KAKUT 14-12 GAS PLANT LSD 14-12-7-5-3 W6M WATER INJECTION PUMP SKID PIPING & INSTRUMENTATION DIAGRAM		



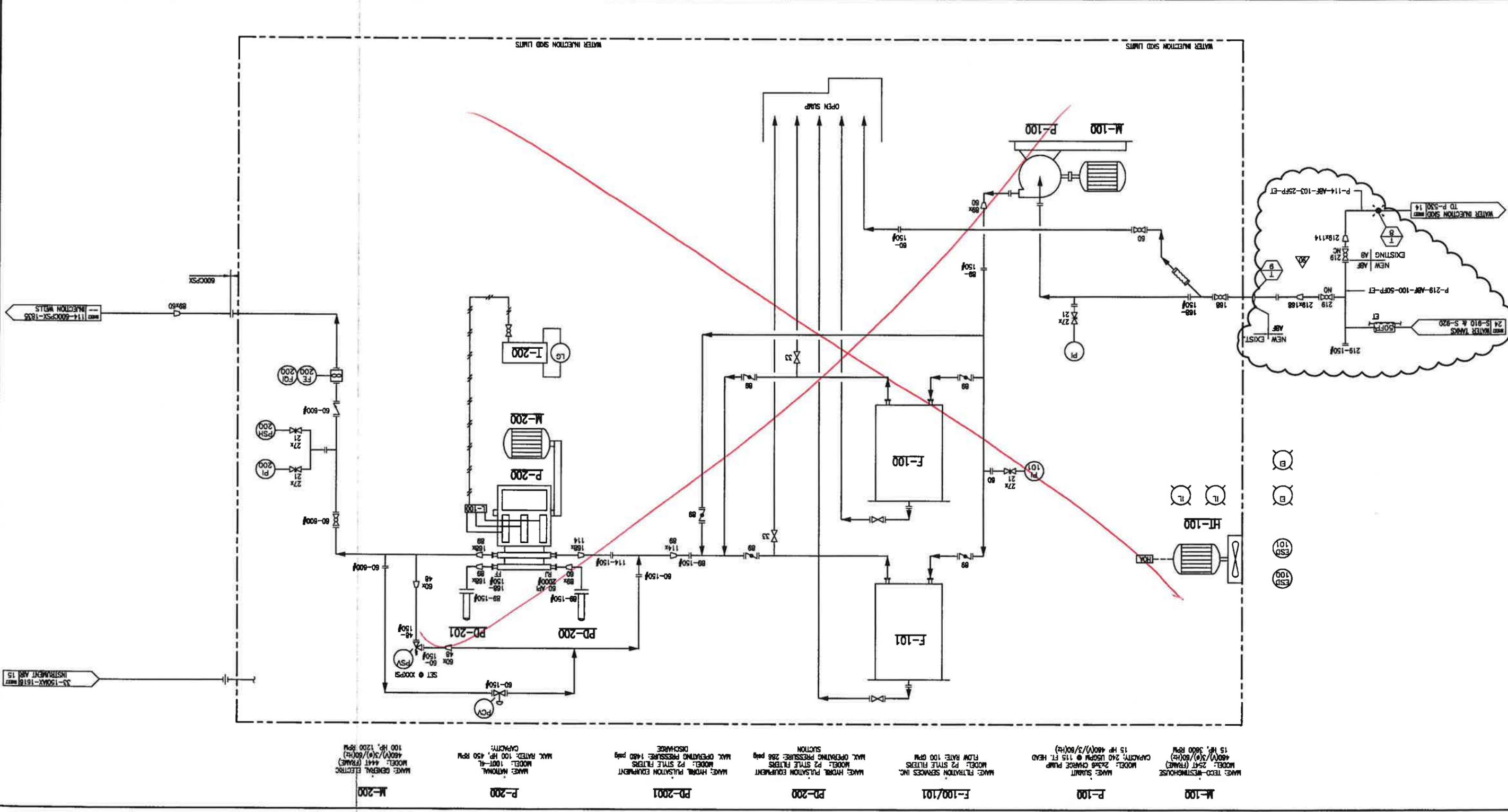
M-100 MAKE: TEXO-TESTINGHOUSE MODEL: 25RT (FRAME) CAPACITY: 25 RT (FRAMES) 15 HP 3600 RPM
P-100 MAKE: SUAMT MODEL: 2546 CHANGE PUMP CAPACITY: 240 USGPM @ 115 FT. HEAD 15 HP 480(V)/3/60(Hz)
F-100/101 MAKE: FILTRATION SERVICES INC. MODEL: P2 STYLE FILTERS MAX. FLOW RATE: 100 GPM
PD-200 MAKE: HYDRAL PULSATION EQUIPMENT MODEL: P2 STYLE FILTERS MAX. OPERATING PRESSURE: 286 psig SUCTION
PD-2001 MAKE: HYDRAL PULSATION EQUIPMENT MODEL: P2 STYLE FILTERS MAX. OPERATING PRESSURE: 1480 psig DISCHARGE
P-200 MAKE: NATIONAL MODEL: 100T-4L CAPACITY: 100 HP 450 RPM
M-200 MAKE: GENERAL ELECTRIC MODEL: 444T (FRAME) 480(V)/3/60(Hz) 100 HP 1200 RPM

REV.	DATE	DESCRIPTION	CHK'D	APP'D	CLIENT	ENGINEERING & PERMIT STAMPS	BY	DATE
9A	11.07.14	CONVERTED TO GALLEON TITREBLOCK					NK	11.07.14
8	10.10.18	PHASE II EXPANSION GENERAL REVISIONS						
7	10.09.21	POST CONSTRUCTION						
6	10.09.03	GENERAL REVISIONS						
5	10.07.20	REVISED AS PER CLIENTS REMARKS						
4	10.07.01	ISSUED FOR CONSTRUCTION			PC			
3	11.10.12	ISSUED FOR HAZOP						
2	11.08.15	ISSUED FOR REVIEW						
1	11.08.21	ISSUED FOR REVIEW						

REV.	DATE	DESCRIPTION
9D	7/5/14	74514-P&ID-00-02-SHEET 22

GUIDEX <i>Guidex Exploration Ltd.</i> ENGINEERING	KAKUT 14-12 GAS PLANT LSD 14-12-75-3 W6M WATER INJECTION PUMP SKID PIPING & INSTRUMENTATION DIAGRAM	SCALE/PLOT SCALE NTS DRAWING NAME 74514-P&ID-00-02-SHEET 22
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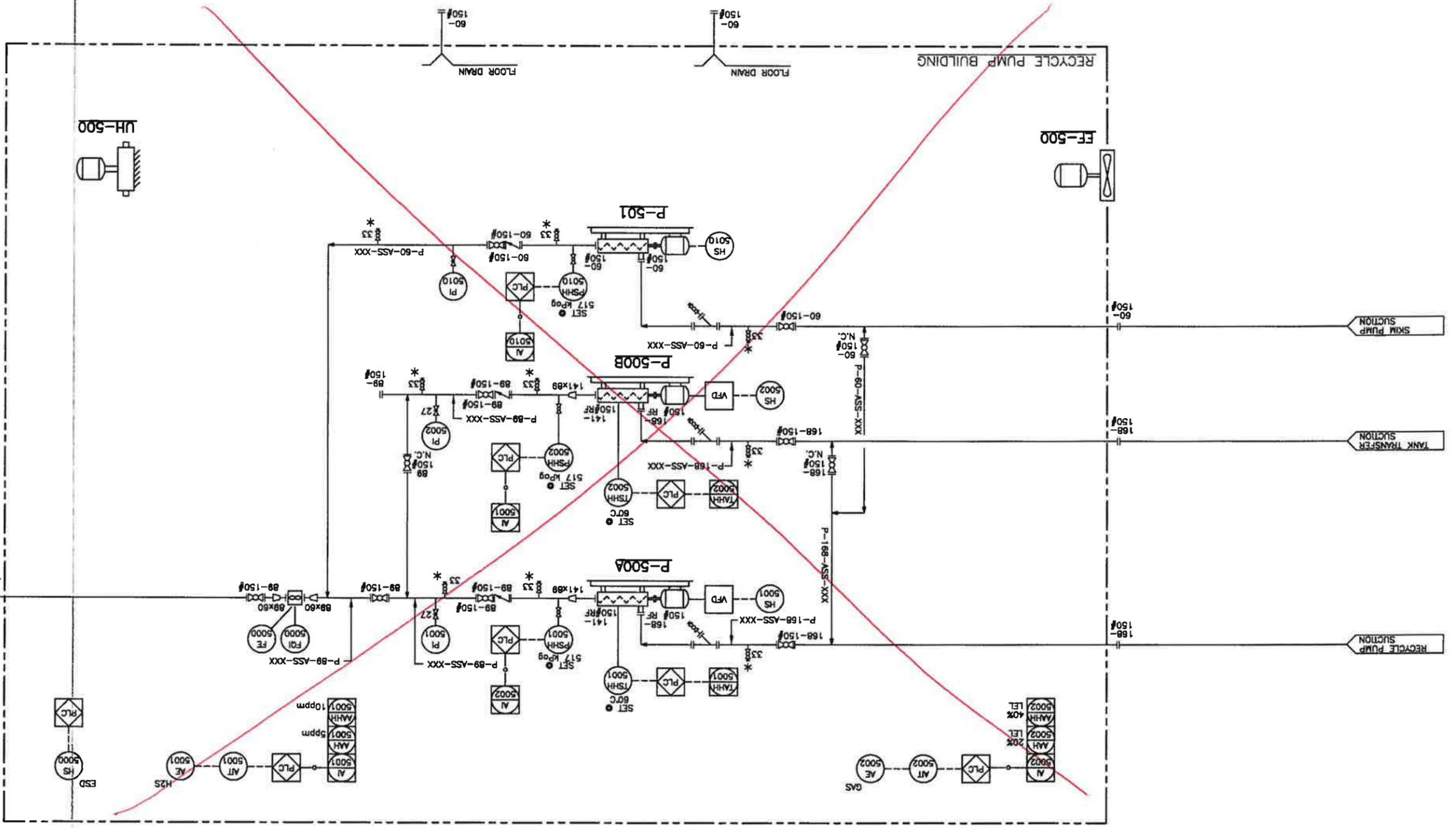
CADNAME:	WMC JOB No.:	CLIENT:
11844		
DESIGN:	CHECKED:	APPROVED:
DATE:	BY:	
11.07.14	NK	



REV.	DESCRIPTION	DATE	BY	DATE	DESCRIPTION	CHK'D	APP'D	CLIENT	ENGINEERING & PERMIT STAMPS	DATE	BY	DATE
A	ISSUED FOR APPROVAL	11.07.07	ME	11.07.07								

NOTES	1. SET POINT TO BE ADJUSTED ACCORDING TO OIL DENSITY.
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GUIDEX Guide Exploration Ltd.	MILLENIA ENGINEERING	KAKUT 14-12 FACILITY LSD KAKUT 14-12-75-3 W6M RECYCLE PUMP BUILDING PIPING & INSTRUMENTATION DIAGRAM	SCALE/PLOT SCALE NTS	DRAWING NAME 74514-PID-00-02-SHT 23
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LEGEND:
* - VALVE C/W SPRING RETURN

UJH-500 BUILDING HEATER
 MODEL: HP-5-20
 RUFUMBECK GLYCOL HEATER

P-500A/B RECYCLE PUMPS
 SEFPEK MODEL: BN-35-12
 SIZE: 1.5HP, 1800RPM, 480V/3PH/60HZ
 CAPACITY: 480m³/D (301888L/D) @ 200ppm

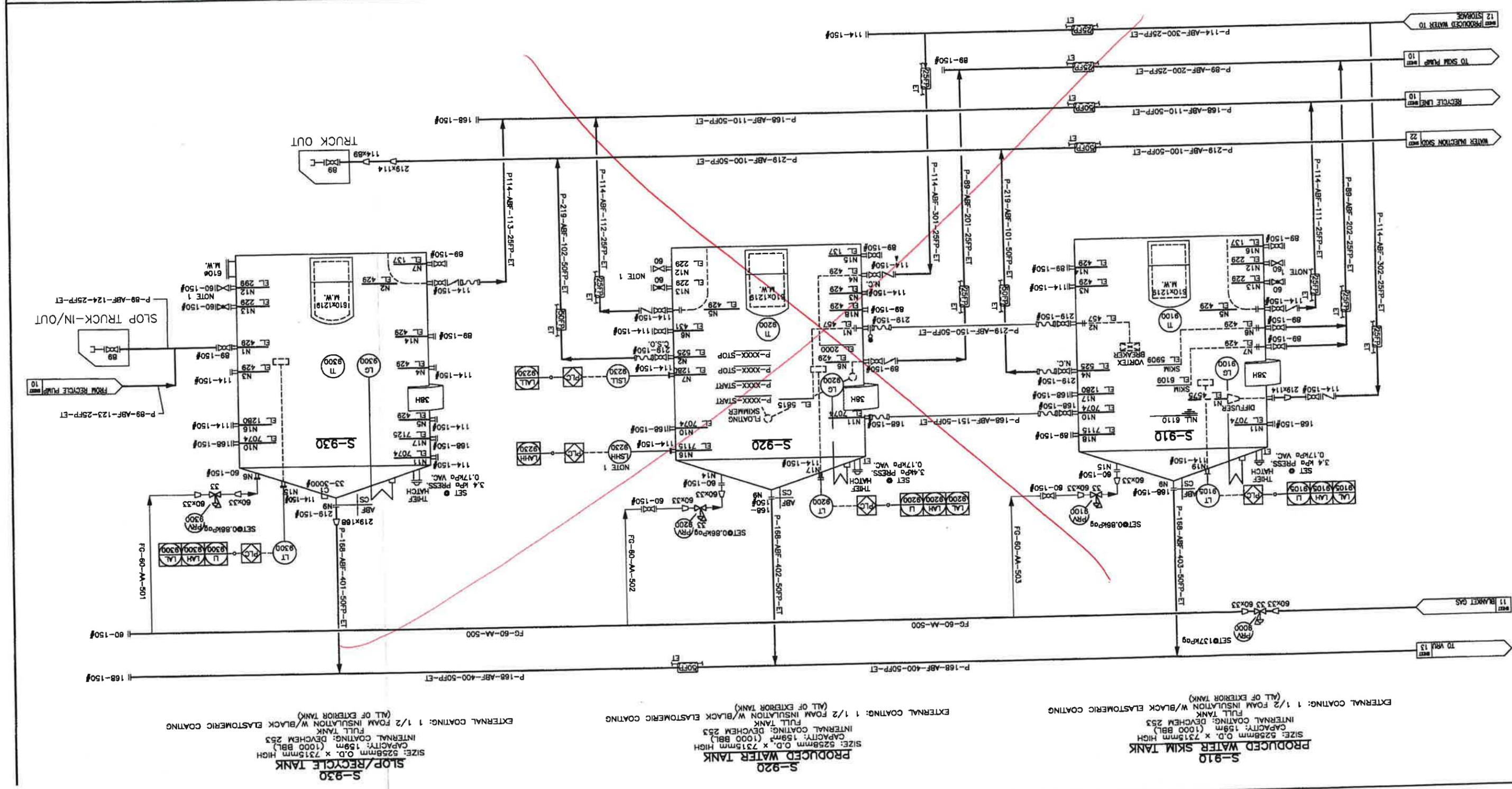
P-501 SKIM PUMP
 MOYNO MODEL: AZC CD9 3APA
 SIZE: 1HP, 1800RPM, 480V/3PH/60HZ
 CAPACITY: 80m³/D (37788L/D) @ 800ppm

EF-500 EXHAUST FAN
 1/4HP 12AC/HR

REV.	DATE	BY	CHK'D	APP'D	CLIENT	DESCRIPTION	REFERENCE DRAWINGS	NOTES
B	11.10.12	CA				ISSUED FOR REVIEW		1. FUTURE HEAT MEDIUM LINE TIE-INS.
CA	11.08.18	CA				ISSUED FOR REVIEW		

SCALE/PLOT SCALE	DRAWING NAME	74514+PID-00-02-SHEET 24
NTS	PROJECT NO.	11844
ADVANCE	CLIENT	
	DESIGN	
	CHECKED	
	APPROVED	
	DATE	11.08.18

ENGINEERING & PERMIT STAMPS	CLIENT	APP'D	CHK'D
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S-910
 PRODUCED WATER SKIM TANK
 SIZE: 5258mm O.D. x 7315mm HIGH
 CAPACITY: 159m³ (1000 BBL)
 INTERNAL COATING: DEVICHEM 253
 FULL TANK INSULATION W/BLACK ELASTOMERIC COATING
 EXTERNAL COATING: 1 1/2 FOAM INSULATION W/BLACK ELASTOMERIC COATING
 (ALL OF EXTERIOR TANK)

S-920
 PRODUCED WATER TANK
 SIZE: 5258mm O.D. x 7315mm HIGH
 CAPACITY: 159m³ (1000 BBL)
 INTERNAL COATING: DEVICHEM 253
 FULL TANK INSULATION W/BLACK ELASTOMERIC COATING
 EXTERNAL COATING: 1 1/2 FOAM INSULATION W/BLACK ELASTOMERIC COATING
 (ALL OF EXTERIOR TANK)

S-930
 SLOP/RECYCLE TANK
 SIZE: 5258mm O.D. x 7315mm HIGH
 CAPACITY: 159m³ (1000 BBL)
 INTERNAL COATING: DEVICHEM 253
 FULL TANK INSULATION W/BLACK ELASTOMERIC COATING
 EXTERNAL COATING: 1 1/2 FOAM INSULATION W/BLACK ELASTOMERIC COATING
 (ALL OF EXTERIOR TANK)



GUIDEX
 Guide Exploration Ltd.

KAKUT 14-12 GAS PLANT
 LSD 14-12-75-3 W6M
 SLOP/RECYCLE, PRODUCED WATER/SKIM TANK
 PIPING & INSTRUMENTATION DIAGRAM

74514+PID-00-02-SHEET 24
 NTS
 SCALE/PLOT SCALE
 ADVANCE