

Potable Water Piping Layout

WATER HEATER CALCULATION

 $q = Q \times Cp \times \rho \times \Delta t \div \eta$ q =heater input (W)

Q = flow rate (mL/s)

Cp=specific heat of water = 4.1868 (kJ/(kg.K))

 ρ =density of water = 1 (kg/L)

 Δt =Temperature rise (K)

 η =heater efficiency (90% for electrical water heater)

 $q=(7.6 \text{ L/H} \times 1000 \div 3600) \times 4.1868 \times 1 \times (43-10) \div 0.9$ $\dot{q} = \dot{3}24.1 \ \dot{W}$

Hot Water Demand per Fixture (Industrial Plant)								
Fixture	Demand (L/H)	Quantity	Total Demand (L/H)					
Basin, privet lavatory	7.6	1	7.6					
Demand Factor Storage Factor	0. ₄	4	7.6					
	$V = 7.6 \times 0.4$	\times 1 = 3.4 Lit						

CAST IRON SURFACE (/----- PIPE SLEEVE OUTLET PIPE DRAIN FACILITES VALVE BOX SECTION VALVE BOX PLAN

ALL DIMENSIONS OF VALVE BOX ARE IN MILIMETER

DETAIL "A": VALVE BOX PLAN AND SECTION

AUTOMATIC ELECTRICAL WATER HEATER

EQUIPMENT NO.	QTY	INSTALLATION AREA	TYPE	NOMINAL STORAGE TANK CAPACITY (Liter)	STORAGE TANK MATERIAL CONSTRUCTION	ELECTRIC POWER SUPPLY V/PH/Hz	INCLUDING
1202-EWH-GCSWH-01	1	TOILET	WALL MOUNTED	10	GALVANIZED STEEL	230/1/50	STANDARD THERMOSTATS (A SAFETY CUT-OUT) PREVENTING THE ELECTRICALLY-LIVE PARTS TO BE IN CONTACT WITH WATER. AND EQUIPPED WITH DRAIN VALVE, TEMPERATURE GAGE AND ALL STANDARD ACCESSORIES

FLOOR PLAN

100	STORAGE
101	INSTRUMENT WORKSHOP
102	INSTRUMENT STORAGE
103	TOILET
104	ROOF
105	WALKWAY

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5	WAL	_KWAY						THIS A	AREA-		`	
							***	******	**.**	***.***	**.**	***.***
	DEC.2024	AFC	K.AHMADI	M.FAKHARIAN	S.FARAMARZPOUR	**.**	REV.	DESCRIPTION	BY	DATE	BY	DATE
	APR.2024	IFC	K.AHMADI	M.FAKHARIAN	S.FARAMARZPOUR	**.**	1615 4.	DESCRIPTION	CHE	CKED	REV.	APPR.

							***	******	**,**	***.***	**.**	***,****
D01	DEC.2024	AFC	K.AHMADI	M.FAKHARIAN	S.FARAMARZPOUR	**,**	REV.	DESCRIPTION	BY	DATE	BY	DATE
D00	APR.2024	IFC	K.AHMADI	M.FAKHARIAN	S.FARAMARZPOUR	**,**	REV.	DESCRIPTION	CHECKED		REV. APPR.	
REV.	DATE	P.O.I.S	PREP.	CHK.	APP.	AUT.	.د.	ملی مناطق نفت خیز جنوب میباث	متعلق به شرکت	ه و حق اقتباس	لليه نسخ اين نقش	اصل و ک
PROJECT	NAME:	BINAK OILFIELD GA		ENT/SURFAC		S		THE ORIGINAL AND THE COPYRIGH				
PROJECT	NO.:		9710	20			બો	346	N.I.S.O.C	./ FIELD	S	

EPD/EPC CONTRACTOR (GC): EPC CONTRACTOR:

AS SHOWN

PEDCO

BK-GCS-PEDCO-120-HV-PY-0017

BINAK OILFIELD DEVELOPMENT SURFACE FACILITIES

053-073-9184

GAS COMPRESSOR STATION DRAWING BY CHECKED BY PROJECT ENG. DATE

NOTES

1. ALL DIMENSIONS ARE IN MILLIMETER & ALL ELEVATIONS ARE IN METER UNLESS NOTED

2. ALL DIMENSIONS AND ELEVATIONS SHALL BE CHECKED BY THE CONTRACTOR PRIOR TO

3. THIS DWG. SHOULD BE WORKED TOGETHER WITH THE OTHER MECHANICAL, ARCHITECTURAL ELECTRICAL DWGS.

4. ALL HORIZONTAL DOMESTIC WATER PIPES IN THE BUILDING SHALL RUN ABOVE THE FALSE CEILING UNLESS

5. MATERIAL OF DOMESTIC COLD AND HOT WATER PIPES OUTSIDE BUILDING ARE GALVANIZED STEEL IN

6. DOMESTIC HOT WATER PIPING INSIDE THE BUILDING WILL BE COVERED WITH THERMAL INSULATION (WATER

7. DOMESTIC COLD WATER PIPING OUTSIDE THE BUILDING SHALL BE COVERED WITH ELASTOMERIC INSULATION

9. MATERIAL OF SANITARY SEWER, VENT PIPES AND FITTINGS SHALL BE PVC-U (BD-TYPE) IN ACCORDANCE

10.EXPOSED VENT PIPE AT ROOF LEVEL SHALL BE PROTECTED FROM SUNLIGHT BY PAINTING, COATING OR

13. MATERIAL OF HOT DIPPED GALVANIZED STEEL PIPE SHALL BE ACCORDING TO ASTM A53 GR B AND FITTINGS

15. THE WASTE FROM BUILDING TO WASTE WATER TREATMENT OR PITS IN PLANT SHALL DISCHARGE BY GRAVITY

LEGEND

VENT LINE

SEWAGE LINE

GLOBE VALVE

STRAINER (Y-TYPE)

BOTTOM OF PIPE

DIRECTION OF FLOW

DOMESTIC COLD WATER LINE

GATE VALVE (NORMAL OPEN)

GATE VALVE (NORMAL CLOSE)

CHECK VALVE (SWING TYPE)

DRG. No.

BK-GNRAL-PEDCO-000-HV-DC-0001

BK-GNRAL-PEDCO-000-HV-SP-0001

BK-GCS-PEDCO-120-AR-DW-0012

BK-GCS-PEDCO-120-PI-DW-0005

BK-GCS-PEDCO-120-CV-PY-0001

BK-PPL-PEDCO-120-PI-PY-0001

BK-GCS-PEDCO-120-CV-PY-0006

01 OF 02 D01

16.FINAL ROUTE FOR PLUMBING SHALL NOT BE OVER AND NEAR THE ELECTRICAL & CONTROL PANEL.

& ANY CONFLICT SHOULD CLARIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION.

ACCORDANCE WITH ASTM A53 AND FITTINGS ARE IN ACCORDANCE WITH ASME B16.12.

8. TOP OF THE SUPPORT STEEL STRUCTURE SHALL BE CONSIDERED AS B.O.P.

PIPE INSULATION) ACCORDING TO NIBR TOPIC 16.

SHALL BE ACCORDING TO ASTM A234 GR WPB.

B.O.P.

REFERENCE DRAWING

HVAC & PLUMBING DESIGN CRITERIA

SPECIFICATION FOR HVAC EQUIPMENT

SPECIFICATION FOR DUCT WORK & PIPE WORK

ARCHITECTURAL DETAIL DRAWING FOR GCS WAREHOUSE U/G PIPING PLAN

SITE SEWERAGE SYSTEM LAYOUT & DETAILS

UNIT PLOT PLAN DRAWING

PLANT UNDERGROUND COMPOSITE LAYOUT

KEY PLAN

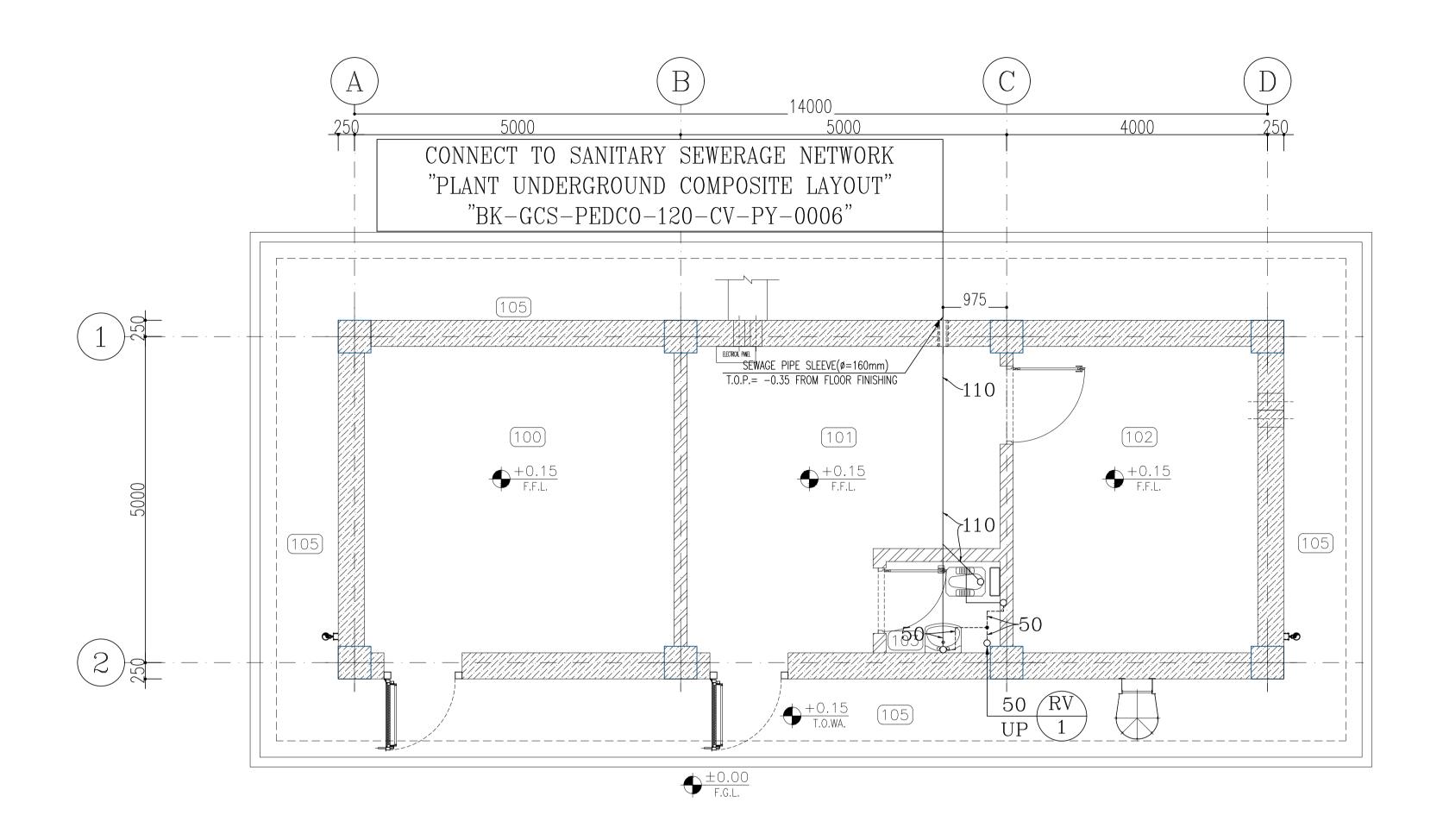
14. ALL VALVES ABOVE THE FALSE CEILING SHALL HAVE ACCESS DOOR.

GENERAL NOTES:

CONSTRUCTION.

DRAWING TITLE: NO CONSTRUCTION PERMITTED UNLESS DRAWING APPROVED PLUMBING & SEWAGE PIPING LAYOUT FOR GCS WAREHOUSE APPROVED FOR CONSTRUCTION SHEET NO. REV. BUDGET REF. LOCATION SIZE CLASS SERIAL NO. SHEET REVISION SCALE DRAWING NO.

PETROIRAN DEVELOPMENT COMPANY



FLOOR PLAN

Sewage Piping Layout



P.0.I.S

K.AHMADI M.FAKHARIAN S.FARAMARZPOUR **.**

K.AHMADI M.FAKHARIAN S.FARAMARZPOUR **.**

CHK. APP. AUT.

PETROIRAN

COMPANY

DEVELOPMENT

SHEET NO. REV.

02 **OF 02 D01**

PREP.

PLUMBING & SEWAGE PIPING LAYOUN FOR GCS WAREHOUSE

DRAWING NO.

BK-GCS-PEDCO-120-HV-PY-0017

BINAK OILFIELD DEVELOPMENT/SURFACE FACILITIES
GAS COMPRESSOR STATION

971020

EPD/EPC CONTRACTOR (GC):

D01 DEC.2024

D00 APR.2024

REV. DATE

PROJECT NAME:

PROJECT NO.:

EPC CONTRACTOR:

DRAWING TITLE:

SCALE

AS SHOWN

HIRGAN ENERGY - DESIGN & INSPECTION COMPANIES

		B.O.P.			BOTTO	OM OF	PIPE				
	R	EFERENCE		DRG	. No.						
HVAC & PLUMBING DESIGN CRITERIA							RAL-PEDCO	-000-1	HV-DC-0001		
	SPECIFI	CATION FOR H	IVAC EQ	UIPMENT		BK-GNI	RAL-PEDCO	-000 -1	HV-SP-0001		
SPE	CIFICATION	ON FOR DUCT	WORK 8	& PIPE WO	ORK	BK-GNF	RAL-PEDCO	-000-1	HV-SP-0002		
STANDARD DRAWING FOR HVAC & PLUMBING						BK-GNF	RAL-PEDCO	-000-1	HV-DW-0001		
SYMBOL & LEGEND FOR HVAC & PLUMBING							BK-GNRAL-PEDCO-000-HV-DW-0002				
ARCHITECTURAL DETAIL DRAWING FOR GCS WAREHOUSE							BK-GCS-PEDCO-120-AR-DW-0012				
U/G PIPING PLAN							BK-GCS-PEDCO-120-PI-DW-0005				
SI	ITE SEWE	RAGE SYSTEM	LAYOUT	Г & DETAI	LS	BK-G0	BK-GCS-PEDCO-120-CV-PY-0001				
	U	NIT PLOT PLA	N DRAW	ING		BK-PI	PL-PEDCO-	-120-P	I-PY-0001		
I	PLANT UI	NDERGROUND	COMPOSI	ITE LAYOU	T	BK-GC	S-PEDCO-	120-C	V-PY-0006		
				KEY	PLAN						
THIS AREA											
			HIS A	REA							
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	D			**:** BY		DATE	ВҮ		DATE		
REV.		********** ESCRIPTION	N -	** ** BY	CHECKE	DATE D	BY RI	EV. A	DATE APPR.		
REV.	 وب میباش ▲	********** ESCRIPTIO! لق نفت خيز جن THE ORIGINA	N ملی مناط L AND	**.** BY (به شرکت ALL COP HT THERI	CHECKE باس متعلق PIES OF EIN ARE	DATE D D په و حق اقت	BY RI سخ این نقش WING TO E PROPE	EV. A کلیه ن	DATE APPR. اصل و		
REV.	وب میباث	********** ESCRIPTIO1 لق نفت خيز جن 'HE ORIGINA' THE CO	ملی مناط L AND PYRIGH	**.** BY ر به شرکت ALL COP HT THERI N.I.S.(CHECKE باس متعلق PIES OF EIN ARE O.C./	DATE D A THIS DRA THE SOL FIELD	BY RI سخ این نقش WING TOO E PROPE S	EV. A کلیه ن	DATE APPR. اصل و		
REV.	وب میباث	********* ESCRIPTION لق نفت خيز جن THE ORIGINAL THE CO	ملی مناط L AND PYRIGH LK OIL	**.** BY په شرکت ALL COP HT THERI N.I.S.(LFIELD FACE	CHECKE باس متعلق PIES OF EIN ARE O.C./	DATE D A THIS DRA THE SOL FIELD	BY RI سخ این نقث WING TOO E PROPE S	EV. A کلیه ن	DATE APPR. اصل و		
REV.	وب میباث	********* ESCRIPTION لق نفت خيز جن THE ORIGINAL THE CO	ملی مناط L AND PYRIGH AK OI SUR S CO	**.** BY به شرکت ALL COP HT THERI N.I.S. LFIELD FACE	CHECKE باس متعلق PIES OF EIN ARE O.C./ DEVI FACILI	DATE D THIS DRA THE SOL FIELD ELOPME TIES STATIO	BY RI WING TOO E PROPE S	EV. A کلیه ن GETHE	DATE APPR. اصل و		
REV.	وب میباث آ آ	####### ESCRIPTIO! لق نفت خيز جن THE ORIGINA! THE CO	ملی مناط L AND PYRIGH AK OI SUR S CO	**.** BY به شرکت ALL COP HT THERI N.I.S. LFIELD FACE	CHECKE باس متعلق PIES OF EIN ARE O.C./ DEVI FACILI	DATE D THIS DRA THE SOL FIELD ELOPME TIES STATIO	BY RI WING TOO E PROPE S	EV. A کلیه ن GETHE	DATE APPR. اصل و ER WITH OF		
REV.	وب ميبائه آ	####### ESCRIPTIO! لق نفت خيز جن THE ORIGINA! THE CO	ملی مناط L AND DPYRIGH SUR S CO E	**.** BY په شرکت ALL COP HT THERI N.I.S.(LFIELD FACE	CHECKE باس متعلق PIES OF EIN ARE O.C./ DEVI FACILI SSOR	DATE D THIS DRA THE SOL FIELD ELOPME TIES STATION CHECK	BY RI RI WING TOO E PROPE S CNT	EV. A کلیه ن GETHI RTY (DATE APPR. اصل و ER WITH OF		
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DA APPR	TE NO CO ROVED	#******** ESCRIPTION لق نفت خيز جن THE ORIGINAL THE CO BINA GA SCAL NSTRUCTIO FOR CONS	ملی مناط L AND PYRIGH SUR S CO E	**.** BY ALL COP HT THERI N.I.S. LFIELD FACE MPRES DRAWI RMITTEL TION	CHECKE LIES OF EIN ARE O.C./ DEVIFACILI FACILI SSOR UNLE BY:	DATE D THIS DRA THE SOL FIELD ELOPME TIES STATIOI CHECK SS DRAW	BY RI RI WING TOO E PROPE S CNT N ED BY VING AP DAT	EV. A کلیه ن GETHE PRTY (DATE APPR. اصل و ER WITH OF JECT ENG.		
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10.EXPOSED VENT PIPE AT ROOF LEVEL SHALL BE PROTECTED FROM SUNLIGHT BY PAINTING, COATING OR

12. MATERIAL OF DOMESTIC COLD AND HOT WATER PIPES INSIDE BUILDING SHALL BE FIVE LAYERED

POLYETHYLENE PEX -AL- PEX ACCORDING TO ASTM F1281/1282 AND FITTINGS SHALL BE ACCORDING TO

13.MATERIAL OF HOT DIPPED GALVANIZED STEEL PIPE SHALL BE ACCORDING TO ASTM A53 GR B AND FITTINGS

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LEGEND

VENT LINE

SEWAGE LINE

GLOBE VALVE

STRAINER (Y-TYPE)

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DOMESTIC COLD WATER LINE

GATE VALVE (NORMAL OPEN)

GATE VALVE (NORMAL CLOSE)

CHECK VALVE (SWING TYPE)

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ACCORDANCE WITH ASTM A53 AND FITTINGS ARE IN ACCORDANCE WITH ASME B16.12.

8. TOP OF THE SUPPORT STEEL STRUCTURE SHALL BE CONSIDERED AS B.O.P.

GENERAL NOTES:

CONSTRUCTION.

OTHERWISE SPECIFIED.

PIPE INSULATION) ACCORDING TO NIBR TOPIC 16.

11. SLOPE OF SEWAGE PIPES ARE 1.5% ~ 2% TO DRAIN.

SHALL BE ACCORDING TO ASTM A234 GR WPB.

14.ALL VALVES ABOVE THE FALSE CEILING SHALL HAVE ACCESS DOOR.