

 NISOC	نگهداشت و افزایش تولید میدان نفتی بینک سطح الارض احداث ردیف تراکم گاز در ایستگاه جمع آوری بینک							 	
	DATA SHEETS FOR CORROSION COUPON/ PROBE								
شماره پیمان:	پروژه	بسته کاری	صادر کننده	تجهیزات	رشته	نوع مدرک	سریال	نسخه	شماره صفحه: 1 از 11
053 - 073 - 9184	BK	GCS	PEDCO	120	IN	DT	0014	D01	

طرح نگهداشت و افزایش تولید 27 مخزن

DATA SHEETS FOR CORROSION COUPON/ PROBE

نگهداشت و افزایش تولید میدان نفتی بینک

D01	NOV.2022	IFA	P.Hajisadeghi	M.Fakharian	M.Mehrshad	
D00	MAR.2022	IFC	P.Hajisadeghi	M.Fakharian	M.Mehrshad	
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Class: 2

CLIENT Doc. Number: F9Z-708935

status:

IDC: Inter-Discipline Check

IFC: Issued For Comment

IFA: Issued For Approval

AFD: Approved For Design

AFC: Approved For Construction

AFP: Approved For Purchase

AFQ: Approved For Quotation

IFI: Issued For Information

AB-R: As-Built for CLIENT Review

AB-A: As-Built -Approved



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نگهداشت و افزایش تولید میدان نفتی بینک
سطح الارض

احداث ردیف تراکم گاز در ایستگاه جمع آوری بینک



DATA SHEETS FOR CORROSION COUPON/ PROBE

شماره پیمان:	پروژه	بسته کاری	صادر کننده	تسهیلات	رشته	نوع مدرک	سریال	نسخه	شماره صفحه: 2 از 11
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REVISION RECORD SHEET

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2	X	X				66					
3	X	X				67					
4	X	X				68					
5	X	X				69					
6	X	X				70					
7	X	X				71					
8	X	X				72					
9		X				73					
10		X				74					
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نگهداشت و افزایش تولید میدان نفتی بینک
سطح الارض

احداث ردیف تراکم گاز در ایستگاه جمع آوری بینک



DATA SHEETS FOR CORROSION COUPON/ PROBE

شماره پیمان:

053 - 073 - 9184

پروژه

BK

بسته کاری

GCS

صادرکننده

PEDCO

تجهیزات

120

رشته

IN

نوع مدرک

DT

سریال

0014

نسخه

D01

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	DATA SHEETS FOR CORROSION COUPON/ PROBE								
	شماره پیمان:	پروژه	بسته کاری	صادرکننده	تجهیزات	رشته	نوع مدرک	سریال	نسخه
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REFERENCE DOCUMENTS :

Specification For Instrumentation	BK-GNRAL-PEDCO-000-IN-SP-0001
Process Basis Of Design	BK-GNRAL-PEDCO-000-PR-DB-0001
Piping Material Specification	BK-GCS-PEDCO-120-PI-SP-0001
Hazardous Area Classification Layout	BK-GCS-PEDCO-120-SA-PY-0002
Instrument & Control System Design Criteria	BK-GCS-PEDCO-120-IN-DC-0002
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Symbol & Legend For PFD and P&ID	BK-GCS-PEDCO-120-PR-PI-0001
P&ID - Gas Compression Inlet Gas Pipeline (Binak)	BK-GCS-PEDCO-120-PR-PI-0002
P&ID - Gas Compression Inlet Gas Pipeline (Golkhari)	BK-GCS-PEDCO-120-PR-PI-0003
P&ID - Slug Catcher System	BK-GCS-PEDCO-120-PR-PI-0004
P&ID - Gas Compression Inlet Knock Out Drum	BK-GCS-PEDCO-120-PR-PI-0005
P&ID - 1st Stage Gas Compression Suction Drums	BK-GCS-PEDCO-120-PR-PI-0006
P&ID - 1st Stage Gas Compression Compressors	BK-GCS-PEDCO-120-PR-PI-0007
P&ID - 1st Stage Gas Compression Air Coolers	BK-GCS-PEDCO-120-PR-PI-0008
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P&ID - 2nd Stage Gas Compression Compressors	BK-GCS-PEDCO-120-PR-PI-0010
P&ID - 2nd Stage Gas Compression Air Coolers	BK-GCS-PEDCO-120-PR-PI-0011
P&ID - 2nd Stage Gas Compression Discharge Drum	BK-GCS-PEDCO-120-PR-PI-0012
P&ID - Gas Compression Dehydration Package	BK-GCS-PEDCO-120-PR-PI-0013
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P&ID - Nitrogen Generation System	BK-GCS-PEDCO-120-PR-PI-0016
P&ID - Close Drain System	BK-GCS-PEDCO-120-PR-PI-0017
P&ID - Corrosion Inhibitor Package	BK-GCS-PEDCO-120-PR-PI-0018
P&ID - Methanol Injection Package	BK-GCS-PEDCO-120-PR-PI-0019
P&ID - LP Flare System	BK-GCS-PEDCO-120-PR-PI-0020
P&ID - Oily Water Sewer	BK-GCS-PEDCO-120-PR-PI-0021
P&ID - Fuel Gas System	BK-GCS-PEDCO-120-PR-PI-0022
P&ID - Diesel Oil System	BK-GCS-PEDCO-120-PR-PI-0023
P&ID - Potable Water System	BK-GCS-PEDCO-120-PR-PI-0024
P&ID - Glycol Sump Drum	BK-GCS-PEDCO-120-PR-PI-0025
P&ID - Fire Water Network	BK-GCS-PEDCO-120-SA-PI-0001
P&ID - Total Flooding System For Extension of Existing Elect. Building	BK-GCS-PEDCO-120-SA-PI-0002

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DATA SHEETS FOR CORROSION COUPON/ PROBE								
شماره پیمان: 053 - 073 - 9184	پروژه BK	بسته کاری GCS	صادر کننده PEDCO	تهیهات 120	رشته IN	نوع مدرک DT	سریال 0014	نسخه D01
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GENERAL NOTES:



- Licensed software for probes and training Courses for End User engineering department shall be considered by vendor.
- One set of retriever tool kit and service valve and also other part necessary for mounting of all corrosion coupon and probes shall be provided by vendor. This set of retriever and service valve is common to all CC/CP's fittings. Also any calibration set or special tools for test and installation shall be provided by vendor, as minimum on set portable corrosion meter for local monitoring of probes to be considered.
- Environmental Condition For Field Instrumentation of BINAK Complex Shall Be Considered As Per The Following:

Maximum ambient temperature: 50 (°C)
 Minimum ambient temperature: -5 (°C)
 Maximum steel surface exposed to sun: 85 (°C)
 Maximum summer dry bulb: - (°C)
 DB/RH for Summer HVAC Design: 41 °C / 61 %
 DB FOR Winter HVAC Design: 6 °C

Relative Humidity:

- Maximum Design relative humidity (%): 100
 - Minimum Design relative humidity (%): 0
- Training Courses for Installation, Calibration, ... of corrosion transmitters shall be considered by vendor.
 - Considering the fluid corrosibility, the Element material shall be in accordance with pipe material.
 - All recommendations of IPS-I-TP-802 and NACE RP0775 for corrosion monitoring devices and accessories installation shall be followed by vendor.
 - Service valve & retriever system to be have below specification:
 - Suitable connection for 2" Access fitting
 - Isolating Valve
 - Drain Plug
 - Pressure Gauge
 - Retriever/Service Valve Seal Kit
 - Retriever/Service valve Repair Kit
 - Diverter Hose Assembly, Retainer Clamp, Safety Hammer, Head Bar, Back Pressure Pump
 - To be suitable for 40 barg design pressure B38 (suitable for high pressure) and 85° C design temperature.
 - Mounting Position for Gas services should be at 12 O'clock Position for easy maintenance.
 - Wetted part material shall be according to NACE MR 01-175 where required as per piping material standard.
 - Regarding protection of pipeline transportation system, ISO 15589 standards to be followed.
 - Electrical Resistance (ER) or Linear Polarization Resistance (LPR) methods shall be used in corrosion probes. Ultrasonic Examination, Acoustic Emission and other methods may be used individually or in combination with other methods if the Vendor advises. No local electrical signal exists for these probes.
- One Portable Corrosion Transmitter (shall be provided by vendor (To measure the Resistance of the probe periodically). This transmitter is common to all CP's fittings. Also any calibration set or special tools for test and installation shall be provided by vendor, as minimum on set portable corrosion meter for local monitoring of probes to be considered.
- Tag plate as per Specification for Instrumentation, shall be stainless steel 304 SS (VTC). Following details shall be engraved on them:
 - Tag Number
 - Range Limit
 - Service
 - Manufacture Model

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	DATA SHEETS FOR CORROSION COUPON/ PROBE							
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GENERAL	1	TAG NO	CC-2101	CC-2102	CC-2111
	2	P&ID NO.	BK-GCS-PEDCO-120-PR-PI-0002-D04	BK-GCS-PEDCO-120-PR-PI-0003-D04	BK-GCS-PEDCO-120-PR-PI-0004 (1 of 2)
	3	SERVICE	TO INLET K.O. DRUM (V-2105)	TO SLUG CATCHER (V-2104)	AFTER SLUG CATCHER DRUM (V-2104) TO INLET K.O. DRUM (V-2105)
	4	LINE NO.	GAS-111-0001-AN07-6"-PT	GAS-111-0001-FN05-8"-PT	GAS-111-0019-AN07-8"-PT
	5	LINE SIZE / SCHEDULE	6" , SCH.80 (Note 4)	8" , SCH.80 (Note 4)	8" , SCH.60 (Note 4)
	6	LINE/EQUIPMENT MATERIAL	ASTM A106 Gr.B (Note 4)	ASTM A106 Gr.B (Note 4)	ASTM A106 Gr.B (Note 4)
	7	PIPING CLASS	AN07 (Note 4)	FN05 (Note 4)	AN07 (Note 4)
	8	AREA CLASSIFICATION	N/A	N/A	N/A
	9	NACE COMPLIANCE (as per NACE MR0175/ISO 15156)	Required	Required	Required
PROCESS DATA (NOTE 1)	10	FLUID	GAS/Liquid	GAS/Liquid	GAS/Liquid
	11	PHASE	2 phase (Water/Vapour)	2 phase (Water/Vapour)	2 phase (Water/Vapour)
	12	DESIGN PRESSURE (barg)	9	9	F.V/9
	13	OPERATING. PRESSURE (barg)	7.5	7.5	5.3
	14	DESIGN TEMPERATURE (°C)	85	85	85
	15	MIN DESIGN METAL TEMPERATURE (°C)	5	5	5
	16	OPERATING TEMPERATURE (°C)	46.11/26.67	32/15.5	31.86/15.35
	17	MAX FLOW (Kg/hr)	7220.4	12395.9308	12395.9308
	18	NORMAL FLOW (Kg/hr)	6564	11269.028	11269.028
	19	MEAN VELOCITY (m/s)	14.68	9.9	15.79
	20	VISCOSITY (cP)	0.01	0.01	-
	21	DENSITY (kg/m3)	6.66	6.21	6.16
	22	PIPING CORROSION ALLOWANCE (mm)	6	6	6
	23	WATER CUT	-	-	-
PROBE & TRANSMITTER	24	RATE OF CO2 CONTENT (SUM/WIN)	0.0345/0.0167 mole fraction in gas phase	0.0301/0.0296 mole fraction in gas phase	0.0562/0.0296 mole fraction in gas phase
	25	RATE OF CHLORIDE CONTENT	-	-	-
	26	VELOCITY	16.15	16.15	17.17
	27	PROBE TYPE	N/A	N/A	N/A
	28	PROBE INSERTION LENGTH	N/A	N/A	N/A
	29	PROBE HOLDER	N/A	N/A	N/A
	30	MATERIAL	N/A	N/A	N/A
	31	MOUNTING POSITION	N/A	N/A	N/A
	32	ENCLOSURE MATERIAL	N/A	N/A	N/A
	33	MEASURING RANGE	N/A	N/A	N/A
	34	OUTPUT SIGNAL	N/A	N/A	N/A
	35	COMMUNICATION PROTOCOL	N/A	N/A	N/A
	36	POWER SUPPLY	N/A	N/A	N/A
	37	ACCURACY	N/A	N/A	N/A
	38	INTEGRAL INDICATOR	N/A	N/A	N/A
	39	Ex PROTECTION	N/A	N/A	N/A
	40	INGRESS PROTECTION	N/A	N/A	N/A
	41	CABLE ENTRY	N/A	N/A	N/A
	42	-			
COUPON	43	COUPON TYPE	Strip	Strip	Strip
	44	COUPON MATRIAL	ASTM A106 Gr.B (Note 4)	ASTM A106 Gr.B (Note 4)	ASTM A106 Gr.B (Note 4)
	45	COUPON HOLDER (Note 6)	Yes	Yes	Yes
	46	HOLDER MATERIAL	316 S.S as minimum	316 S.S as minimum	316 S.S as minimum
	47	HOLDER LENGTH	VTA	VTA	VTA
	48	COUPON INSERTION LENGTH	VTA	VTA	VTA
	49	WETTED PART MATERIAL	ASTM A106 Gr.B (Note 4)	ASTM A106 Gr.B (Note 4)	ASTM A106 Gr.B (Note 4)
	50	STYLE	Retrievable (VTC)	Retrievable (VTC)	Retrievable (VTC)
ACCESS FITTING (Note 5)	51	PROCESS CONNECTION	2", Flare Weld Type	2", Flare Weld Type	2", Flare Weld Type
	52	MOUNTING POSITION	at 12'O Clock (Note 8 in General Note)	at 12'O Clock (Note 8 in General Note)	at 12'O Clock (Note 8 in General Note)
	53	BRANCH STANDOUT LENGTH	(Note 2)	(Note 2)	(Note 2)
	54	FITTING PLUG	Solid Plug	Solid Plug	Solid Plug
	55	MATERIAL	ASTM A106 Gr.B (Note 4)	ASTM A106 Gr.B (Note 4)	ASTM A106 Gr.B (Note 4)
	56	PROTECTIVE COVER	Required	Required	Required
	57	RETRACTABLE TOOL	Required (Note 3)	Required (Note 3)	Required (Note 3)
	58	SERVICE VALVE	Required (Note 3)	Required (Note 3)	Required (Note 3)
OTHER	59	MANUFACTURE	will be finalized later	will be finalized later	will be finalized later
	60	MODEL NO.	will be finalized later	will be finalized later	will be finalized later
	61	TAG PLATE (General Note 12)	Required	Required	Required
	62	WAKE FREQUENCY STANDARD (NOTE 2)	Required as per ASME PTC	Required as per ASME PTC	Required as per ASME PTC

NOTES : VTA : VENDOR TO ADVISE VTC : VENDOR TO CONFIRM N/A : NOT APPLICABLE

- All process data will be finalized later
- Wake frequency analysis (stress calculation) according to ASME Power Test Code 19.3 shall be done & submitted by vendor.
- One set of retriever and service valve is common to all CC's fittings.
- Piping class, pipe schedule and materials related to Piping Material Specification, will be finalized after confirmation of this document.
- High pressure access fitting to be supplied by vendor.
- Length of stem holder for installation in 120° clock due to liquid service, to be the way that measure the corrosion at the bottom of line.

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GENERAL	1	TAG NO	CC-2112	CC-2141	CC-2271
	2	P&ID NO.	BK-GCS-PEDCO-120-PR-PI-0005-D04	BK-GCS-PEDCO-120-PR-PI-0012-D04	BK-GCS-PEDCO-120-PR-PI-0022-D04
	3	SERVICE	AFTER INLET KNOCK OUT DRUM (V-2105)	ABOVE THE GAS COMPRESSION DISCHARGE DRUM (V-2103)	ABOVE THE FUEL GAS K.O. DRUM (V-2205)
	4	LINE NO.	GAS-111-0025-AN07-10"-PT	GAS-111-0066-FN05-6"-PT	FLG-112-0110-AN07-2"-PT
	5	LINE SIZE / SCHEDULE	10" , SCH.40 (Note 4)	6" , SCH.80 (Note 4)	2" , SCH.160 (Note 4)
	6	LINE/EQUIPMENT MATERIAL	ASTM A106 Gr.B (Note 4)	ASTM A106 Gr.B (Note 4)	ASTM A106 Gr.B (Note 4)
	7	PIPING CLASS	AN07 (Note 4)	FN05 (Note 4)	AN07 (Note 4)
	8	AREA CLASSIFICATION	N/A	N/A	N/A
	9	NACE COMPLIANCE (as per NACE MR0175/ISO 15156)	Required	Required	Required
PROCESS DATA (NOTE 1)	10	FLUID	GAS	GAS	FUEL GAS
	11	PHASE	1 phase (Vapour)	1 phase (Vapour)	1 phase (Vapour)
	12	DESIGN PRESSURE (barg)	F.V/9	F.V/62	F.V/9
	13	OPERATING. PRESSURE (barg)	5.1	53.9	4.9
	14	DESIGN TEMPERATURE (°C)	85	85	85
	15	MIN DESIGN METAL TEMPERATURE (°C)	5	5	5
	16	OPERATING TEMPERATURE (°C)	36.92/19.02	59.89/59.90	36.7
	17	MAX FLOW (Kg/hr)	19616.421	18977.739	556.38
	18	NORMAL FLOW (Kg/hr)	17833.11	17252.49	505.8
	19	MEAN VELOCITY (m/s)	16.31	4.34	10.87
	20	VISCOSITY (cP)	0.011	0.01	0.01
	21	DENSITY (kg/m3)	5.96	59.17	5.96
	22	PIPING CORROSION ALLOWANCE (mm)	6	3	6
	23	WATER CUT	-	-	-
	24	RATE OF CO2 CONTENT (SUM/WIN)	0.0316/0.0252 mole fraction in gas phase	0.0318/0.0252 mole fraction in gas phase	0.0316/0.0252 mole fraction in gas phase
PROBE & TRANSMITTER	25	RATE OF CHLORIDE CONTENT	-	-	-
	26	VELOCITY	17.94	4.76	11.24
	27	PROBE TYPE	N/A	N/A	N/A
	28	PROBE INSERTION LENGTH	N/A	N/A	N/A
	29	PROBE HOLDER	N/A	N/A	N/A
	30	MATERIAL	N/A	N/A	N/A
	31	MOUNTING POSITION	N/A	N/A	N/A
	32	ENCLOSURE MATERIAL	N/A	N/A	N/A
	33	MEASURING RANGE	N/A	N/A	N/A
	34	OUTPUT SIGNAL	N/A	N/A	N/A
	35	COMMUNICATION PROTOCOL	N/A	N/A	N/A
	36	POWER SUPPLY	N/A	N/A	N/A
	37	ACCURACY	N/A	N/A	N/A
	38	INTEGRAL INDICATOR	N/A	N/A	N/A
COUPON	39	Ex PROTECTION	N/A	N/A	N/A
	40	INGRESS PROTECTION	N/A	N/A	N/A
	41	CABLE ENTRY	N/A	N/A	N/A
	42	-			
	43	COUPON TYPE	Strip	Strip	Strip
	44	COUPON MATERIAL	ASTM A106 Gr.B (Note 4)	ASTM A106 Gr.B (Note 4)	ASTM A106 Gr.B (Note 4)
	45	COUPON HOLDER (Note 6)	Yes	Yes	Yes
	46	HOLDER MATERIAL	316 S.S as minimum	316 S.S as minimum	316 S.S as minimum
ACCESS FITTING (Note 5)	47	HOLDER LENGTH	VTA	VTA	VTA
	48	COUPON INSERTION LENGTH	VTA	VTA	VTA
	49	WETTED PART MATERIAL	ASTM A106 Gr.B (Note 4)	ASTM A106 Gr.B (Note 4)	ASTM A106 Gr.B (Note 4)
	50	STYLE	Retrievable (VTC)	Retrievable (VTC)	Retrievable (VTC)
	51	PROCESS CONNECTION	2", Flare Weld Type at 12'O Clock (Note 8 in General Note)	2", Flare Weld Type at 12'O Clock (Note 8 in General Note)	2", Flare Weld Type at 12'O Clock (Note 8 in General Note)
	52	MOUNTING POSITION	(Note 2)	(Note 2)	(Note 2)
	53	BRANCH STANDOUT LENGTH	Solid Plug	Solid Plug	Solid Plug
	54	FITTING PLUG	ASTM A106 Gr.B (Note 4)	ASTM A106 Gr.B (Note 4)	ASTM A106 Gr.B (Note 4)
OTHER	55	MATERIAL	Required	Required	Required
	56	PROTECTIVE COVER	Required (Note 3)	Required (Note 3)	Required (Note 3)
	57	RETRACTABLE TOOL	Required (Note 3)	Required (Note 3)	Required (Note 3)
	58	SERVICE VALVE	will be finalized later	will be finalized later	will be finalized later
	59	MANUFACTURE	will be finalized later	will be finalized later	will be finalized later
	60	MODEL NO.	Required	Required	Required
	61	TAG PLATE (General Note 12)	Required as per ASME PTC	Required as per ASME PTC	Required as per ASME PTC
	62	WAKE FREQUENCY STANDARD (NOTE 2)			

NOTES : VTA : VENDOR TO ADVISE VTC : VENDOR TO CONFIRM N/A : NOT APPLICABLE

- All process data will be finalized later
- Wake frequency analysis (stress calculation) according to ASME Power Test Code 19.3 shall be done & submitted by vendor.
- One set of retriever and service valve is common to all CC's fittings.
- Piping class, pipe schedule and materials related to Piping Material Specification, will be finalized after confirmation of this document.
- High pressure access fitting to be supplied by vendor.
- Length of stem holder for installation in 12O'clock due to liquid service, to be the way that measure the corrosion at the bottom of line.

 NISOC	نگهداشت و افزایش تولید میدان نفتی بینک سطح الارض احداث ردیف تراکم گاز در ایستگاه جمع آوری بینک							 
	DATA SHEETS FOR CORROSION COUPON/ PROBE							
شماره پیمان:	پروژه	بسته کاری	صادر کننده	تهیه کننده	رشته	نوع مدرک	سریال	نسخه
053 - 073 - 9184	BK	GCS	PEDCO	120	IN	DT	0014	D01
								شماره صفحه: 8 از 11

GENERAL	1	TAG NO	CC-2151	CC-2162	
	2	P&ID NO.	BK-GCS-PEDCO-120-PR-PI-0013-D04	BK-GCS-PEDCO-120-PR-PI-0014-D04	
	3	SERVICE	AFTER DEHYDRATION PACKAGE (PK-2101)	LEAN GLYCOL STORAGE TANK (TK-2102)	
	4	LINE NO.	GAS-111-0179-FN05-6"-PT	-	
	5	LINE SIZE / SCHEDULE	6" , SCH.80 (Note 4)	-	
	6	LINE/EQUIPMENT MATERIAL	ASTM A106 Gr.B (Note 4)	A-283 GR.C	
	7	PIPING CLASS	FN05 (Note 4)	AN04 (Note 4)	
	8	AREA CLASSIFICATION	N/A	N/A	
	9	NACE COMPLIANCE (as per NACE MR0175/ISO 15156)	Required	-	
PROCESS DATA (NOTE 1)	10	FLUID	GAS	LIQUID	
	11	PHASE	1 phase (Vapour)	1 phase (Liquid)	
	12	DESIGN PRESSURE (barg)	F.V/62	full of liquid +160 mbarg/-7 mbarg	
	13	OPERATING. PRESSURE (barg)	52.9	0.1	
	14	DESIGN TEMPERATURE (°C)	130	85	
	15	MIN DESIGN METAL TEMPERATURE (°C)	5	5	
	16	OPERATING TEMPERATURE (°C)	59.40/59.36	AMB	
	17	MAX FLOW (Kg/hr)	18887.88603	5500	
	18	NORMAL FLOW (Kg/hr)	17170.80548	5000	
	19	MEAN VELOCITY (m/s)	4.408	0.65	
	20	VISCOSITY (cP)	0.011	0.54	
	21	DENSITY (kg/m3)	58.06	988.2	
	22	PIPING CORROSION ALLOWANCE (mm)	3	3	
	23	WATER CUT	-	-	
	24	RATE OF CO2 CONTENT (SUM/WIN)	0.0319/0.0253 mole fraction in gas phase	0.0319/0.0253 mole fraction in gas phase	
PROBE & TRANSMITTER	25	RATE OF CHLORIDE CONTENT	-	-	
	26	VELOCITY	4.85	0.56	
	27	PROBE TYPE	N/A	N/A	
	28	PROBE INSERTION LENGTH	N/A	N/A	
	29	PROBE HOLDER	N/A	N/A	
	30	MATERIAL	N/A	N/A	
	31	MOUNTING POSITION	N/A	N/A	
	32	ENCLOSURE MATERIAL	N/A	N/A	
	33	MEASURING RANGE	N/A	N/A	
	34	OUTPUT SIGNAL	N/A	N/A	
	35	COMMUNICATION PROTOCOL	N/A	N/A	
	36	POWER SUPPLY	N/A	N/A	
	37	ACCURACY	N/A	N/A	
	38	INTEGRAL INDICATOR	N/A	N/A	
	39	Ex PROTECTION	N/A	N/A	
COUPON	40	INGRESS PROTECTION	N/A	N/A	
	41	CABLE ENTRY	N/A	N/A	
	42	-			
	43	COUPON TYPE	Strip	Strip	
	44	COUPON MATERIAL	ASTM A106 Gr.B (Note 4)	A-283 GR.C	
	45	COUPON HOLDER (Note 6)	Yes	Yes	
ACCESS FITTING (Note 5)	46	HOLDER MATERIAL	316 S.S as minimum	316 S.S as minimum	
	47	HOLDER LENGTH	VTA	VTA	
	48	COUPON INSERTION LENGTH	VTA	VTA	
	49	WETTED PART MATERIAL	ASTM A106 Gr.B (Note 4)	A-283 GR.C	
	50	STYLE	Retrievable (VTC)	Retrievable (VTC)	
	51	PROCESS CONNECTION	2", Flare Weld Type	2", Flange 300RF	
OTHER	52	MOUNTING POSITION	at 12'O Clock (Note 8 in General Note)	Vessel Side Mounted	
	53	BRANCH STANDOUT LENGTH	(Note 2)	(Note 2)	
	54	FITTING PLUG	Solid Plug	Solid Plug	
	55	MATERIAL	ASTM A106 Gr.B (Note 4)	A-283 GR.C	
	56	PROTECTIVE COVER	Required	Required	
	57	RETRACTABLE TOOL	Required (Note 3)	Required (Note 3)	
	58	SERVICE VALVE	Required (Note 3)	Required (Note 3)	
	59	MANUFACTURE	will be finalized later	will be finalized later	
	60	MODEL NO.	will be finalized later	will be finalized later	
	61	TAG PLATE (General Note 12)	Required	Required	
	62	WAKE FREQUENCY STANDARD (NOTE 2)	Required as per ASME PTC	Required as per ASME PTC 19.3	

NOTES : VTA : VENDOR TO ADVISE VTC : VENDOR TO CONFIRM N/A : NOT APPLICABLE

- All process data will be finalized later
- Wake frequency analysis (stress calculation) according to ASME Power Test Code 19.3 shall be done & submitted by vendor.
- One set of retriever and service valve is common to all CC's fittings.
- Piping class, pipe schedule and materials related to Piping Material Specification, will be finalized after confirmation of this document.
- High pressure access fitting to be supplied by vendor.
- Length of stem holder for installation in 120° clock due to liquid service, to be the way that measure the corrosion at the bottom of line.

 NISOC		تکه‌داشت و افزایش تولید میدان نفتی بینک سطح الارض احداث ردیف تراکم گاز در ایستگاه جمع آوری بینک						 	
		DATA SHEETS FOR CORROSION COUPON/ PROBE						شماره صفحه: 9 از 11 D01	
شماره پیمان:		پروژه	بسته کاری	صادر کننده	تهیه‌ات	رشته	نوع مدرک		
053 - 073 - 9184		BK	GCS	PEDCO	120	IN	DT	0014	D01

GENERAL	1	TAG NO	CP-2101	CP-2102	CP-2111
	2	P&ID NO.	BK-GCS-PEDCO-120-PR-PI-0002-D04	BK-GCS-PEDCO-120-PR-PI-0003-D04	BK-GCS-PEDCO-120-PR-PI-0004-D04(1 of 2)
	3	SERVICE	TO INLET K.O. DRUM (V-2105)	TO SLUG CATCHER (V-2104)	AFTER SLUG CATCHER DRUM (V-2104) TO INLET K.O. DRUM (V-2105)
	4	LINE NO.	GAS-111-0001-AN07-6"-PT	GAS-111-0001-FN05-8"-PT	GAS-111-0019-AN07-8"-PT
	5	LINE SIZE / SCHEDULE	6" , SCH.80 (Note 4)	8" , SCH.80 (Note 4)	8" , SCH.60 (Note 4)
	6	LINE/EQUIPMENT MATERIAL	ASTM A106 Gr.B (Note 4)	ASTM A106 Gr.B (Note 4)	ASTM A106 Gr.B (Note 4)
	7	PIPING CLASS	AN07 (Note 4)	FN05 (Note 4)	AN07 (Note 4)
	8	AREA CLASSIFICATION	Zone 2, IIB T4	Zone 2, IIB T4	Zone 2, IIB T4
	9	NACE COMPLIANCE (as per NACE MR0175/ISO 15156)	Required	Required	Required
PROCESS DATA (NOTE 1)	10	FLUID	GAS/Liquid	GAS/Liquid	GAS/Liquid
	11	PHASE	2 phase (Water/Vapour)	2 phase (Water/Vapour)	2 phase (Water/Vapour)
	12	DESIGN PRESSURE (barg)	9	9	F.V/9
	13	OPERATING. PRESSURE (barg)	7.5	7.5	5.3
	14	DESIGN TEMPERATURE (°C)	85	85	85
	15	MIN DESIGN METAL TEMPERATURE (°C)	5	5	5
	16	OPERATING TEMPERATURE (°C)	46.11/26.67	32/15.5	31.86/15.35
	17	MAX FLOW (Kg/hr)	7220.4	12395.9308	12395.9308
	18	NORMAL FLOW (Kg/hr)	6564	11269.028	11269.028
	19	MEAN VELOCITY (m/s)	14.68	9.9	15.79
	20	VISCOSITY (cP)	0.01	0.01	-
	21	DENSITY (kg/m3)	6.66	6.21	6.16
	22	PIPING CORROSION ALLOWANCE (mm)	6	6	6
	23	WATER CUT	-	-	-
	24	RATE OF CO2 CONTENT (SUM/WIN)	0.0345/0.0167 mole fraction in gas phase	0.0301/0.0296 mole fraction in gas phase	0.0562/0.0296 mole fraction in gas phase
	25	RATE OF CHLORIDE CONTENT	-	-	-
26	VELOCITY	16.15	16.15	17.17	
PROBE & TRANSMITTER	27	PROBE TYPE	VTA	VTA	VTA
	28	PROBE INSERTION LENGTH	VTA	VTA	VTA
	29	PROBE HOLDER	Yes	Yes	Yes
	30	MATERIAL	ASTM A106 Gr.B (Note 4)	ASTM A106 Gr.B (Note 4)	ASTM A106 Gr.B (Note 4)
	31	MOUNTING POSITION	Top of line	Top of line	Top of line
	32	ENCLOSURE MATERIAL	VTA	VTA	VTA
	33	MEASURING RANGE	VTA	VTA	VTA
	34	OUTPUT SIGNAL	(Note 11 in General Note)	(Note 11 in General Note)	(Note 11 in General Note)
	35	COMMUNICATION PROTOCOL	(Note 11 in General Note)	(Note 11 in General Note)	(Note 11 in General Note)
	36	POWER SUPPLY	(Note 11 in General Note)	(Note 11 in General Note)	(Note 11 in General Note)
	37	ACCURACY	(Note 11 in General Note)	(Note 11 in General Note)	(Note 11 in General Note)
	38	INTEGRAL INDICATOR	No	No	No
	39	Ex PROTECTION	Eex "ia"	Eex "ia"	Eex "ia"
	40	INGRESS PROTECTION	IP 65	IP 65	IP 65
41	CABLE ENTRY	ISO M20 x 1.5	ISO M20 x 1.5	ISO M20 x 1.5	
COUPON	42	STYLE	Retrievable Type (VTC)	Retrievable Type (VTC)	Retrievable Type (VTC)
	43	COUPON TYPE	N/A	N/A	N/A
	44	COUPON MATERIAL	N/A	N/A	N/A
	45	COUPON HOLDER (Note 6)	N/A	N/A	N/A
	46	HOLDER MATERIAL	N/A	N/A	N/A
	47	HOLDER LENGTH	N/A	N/A	N/A
ACCESS FITTING (Note 5)	48	COUPON INSERTION LENGTH	N/A	N/A	N/A
	49	-	N/A	N/A	N/A
	50	STYLE	N/A	N/A	N/A
	51	PROCESS CONNECTION	2", Flare Weld Type	2", Flare Weld Type	2", Flare Weld Type
	52	MOUNTING POSITION	at 12'O Clock (Note 8 in General Note)	at 12'O Clock (Note 8 in General Note)	at 12'O Clock (Note 8 in General Note)
	53	BRANCH STANDOUT LENGTH	(Note 2)	(Note 2)	(Note 2)
	54	FITTING PLUG	Hollow Plug	Hollow Plug	Hollow Plug
	55	MATERIAL	ASTM A106 Gr.B (Note 4)	ASTM A106 Gr.B (Note 4)	ASTM A106 Gr.B (Note 4)
OTHER	56	PROTECTIVE COVER	Required	Required	Required
	57	RETRACTABLE TOOL	Required (Note 3)	Required (Note 3)	Required (Note 3)
	58	SERVICE VALVE	Required (Note 3)	Required (Note 3)	Required (Note 3)
	59	MANUFACTURE	will be finalized later	will be finalized later	will be finalized later
	60	MODEL NO.	will be finalized later	will be finalized later	will be finalized later
	61	TAG PLATE (General Note 12)	Required	Required	Required
	62	WAKE FREQUENCY STANDARD (NOTE 2)	Required as per ASME PTC	Required as per ASME PTC	Required as per ASME PTC

NOTES :	VTA : VENDOR TO ADVISE	VTC : VENDOR TO CONFIRM	N/A : NOT APPLICABLE
(1) All process data will be finalized later (2) Wake frequency analysis (stress calculation) according to ASME Power Test Code 19.3 shall be done & submitted by vendor. (3) One set of retriever and service valve is common to all CC's fittings. (4) Piping class, pipe schedule and materials related to Piping Material Specification, will be finalized after confirmation of this document. (5) High pressure access fitting to be supplied by vendor. (6) Length of stem holder for installation in 12O'clock due to liquid service, to be the way that measure the corrosion at the bottom of line.			

 NISOC	تکه‌داشت و افزایش تولید میدان نفتی بینک سطح الارض احداث ردیف تراکم گاز در ایستگاه جمع آوری بینک							 	
	DATA SHEETS FOR CORROSION COUPON/ PROBE								
	شماره پیمان:	پروژه	بسته کاری	صادر کننده	تهیه‌ات	رشته	نوع مدرک	سریال	نسخه
053 - 073 - 9184	BK	GCS	PEDCO	120	IN	DT	0014	D01	شماره صفحه: 10 از 11

GENERAL	1	TAG NO	CP-2112	CP-2141	CP-2271
	2	P&ID NO.	BK-GCS-PEDCO-120-PR-PI-0005-D04	BK-GCS-PEDCO-120-PR-PI-0012-D04	BK-GCS-PEDCO-120-PR-PI-0022-D04
	3	SERVICE	AFTER INLET KNOCK OUT DRUM (V-2105)	ABOVE THE GAS COMPRESSION DISCHARGE DRUM (V-2103)	ABOVE THE FUEL GAS K.O. DRUM (V-2205)
	4	LINE NO.	GAS-111-0025-AN07-10"-PT	GAS-111-0066-FN05-6"-PT	FLG-112-0110-AN07-2"-PT
	5	LINE SIZE / SCHEDULE	10" , SCH.40 (Note 4)	6" , SCH.80 (Note 4)	2" , SCH.160 (Note 4)
	6	LINE/EQUIPMENT MATERIAL	ASTM A106 Gr.B (Note 4)	ASTM A106 Gr.B (Note 4)	ASTM A106 Gr.B (Note 4)
	7	PIPING CLASS	AN07 (Note 4)	FN05 (Note 4)	AN07 (Note 4)
	8	AREA CLASSIFICATION	Zone 2,IIB T4	Zone 2,IIB T4	N/A
	9	NACE COMPLIANCE (as per NACE MR0175/ISO 15156)	Required	Required	Required
PROCESS DATA (NOTE 1)	10	FLUID	GAS	GAS	FUEL GAS
	11	PHASE	1 phase (Vapour)	1 phase (Vapour)	1 phase (Vapour)
	12	DESIGN PRESSURE (barg)	F.V/9	F.V/62	F.V/9
	13	OPERATING. PRESSURE (barg)	5.1	53.9	4.9
	14	DESIGN TEMPERATURE (°C)	85	85	85
	15	MIN DESIGN METAL TEMPERATURE (°C)	5	5	5
	16	OPERATING TEMPERATURE (°C)	36.92/19.02	59.89/59.90	36.7
	17	MAX FLOW (Kg/hr)	19616.421	18977.739	556.38
	18	NORMAL FLOW (Kg/hr)	17833.11	17252.49	505.8
	19	MEAN VELOCITY (m/s)	16.31	4.34	10.87
	20	VISCOSITY (cP)	0.011	0.01	0.01
	21	DENSITY (kg/m3)	5.96	59.17	5.96
	22	PIPING CORROSION ALLOWANCE (mm)	6	3	6
	23	WATER CUT	-	-	-
	24	RATE OF CO2 CONTENT (SUM/WIN)	0.0316/0.0252 mole fraction in gas phase	0.0318/0.0252 mole fraction in gas phase	0.0316/0.0252 mole fraction in gas phase
PROBE & TRANSMITTER	25	RATE OF CHLORIDE CONTENT	-	-	-
	26	VELOCITY	17.94	4.76	11.24
	27	PROBE TYPE	VTA	VTA	VTA
	28	PROBE INSERTION LENGTH	VTA	VTA	VTA
	29	PROBE HOLDER	Yes	Yes	Yes
	30	MATERIAL	ASTM A106 Gr.B (Note 4)	ASTM A106 Gr.B (Note 4)	ASTM A106 Gr.B (Note 4)
	31	MOUNTING POSITION	Top of line	Top of line	Top of line
	32	ENCLOSURE MATERIAL	VTA	VTA	VTA
	33	MEASURING RANGE	VTA	VTA	VTA
	34	OUTPUT SIGNAL	(Note 11 in General Note)	(Note 11 in General Note)	(Note 11 in General Note)
	35	COMMUNICATION PROTOCOL	(Note 11 in General Note)	(Note 11 in General Note)	(Note 11 in General Note)
	36	POWER SUPPLY	(Note 11 in General Note)	(Note 11 in General Note)	(Note 11 in General Note)
	37	ACCURACY	(Note 11 in General Note)	(Note 11 in General Note)	(Note 11 in General Note)
	38	INTEGRAL INDICATOR	No	No	No
COUPON	39	Ex PROTECTION	Eex "ia"	Eex "ia"	Eex "ia"
	40	INGRESS PROTECTION	IP 65	IP 65	IP 65
	41	CABLE ENTRY	ISO M20 x 1.5	ISO M20 x 1.5	ISO M20 x 1.5
	42	STYLE	Retrievable Type (VTC)	Retrievable Type (VTC)	Retrievable Type (VTC)
	43	COUPON TYPE	N/A	N/A	N/A
	44	COUPON MATERIAL	N/A	N/A	N/A
	45	COUPON HOLDER (Note 6)	N/A	N/A	N/A
	46	HOLDER MATERIAL	N/A	N/A	N/A
ACCESS FITTING (Note 5)	47	HOLDER LENGTH	N/A	N/A	N/A
	48	COUPON INSERTION LENGTH	N/A	N/A	N/A
	49	-	N/A	N/A	N/A
	50	STYLE	N/A	N/A	N/A
	51	PROCESS CONNECTION	2", Flare Weld Type	2", Flare Weld Type	2", Flare Weld Type
	52	MOUNTING POSITION	at 12'O Clock (Note 8 in General Note)	at 12'O Clock (Note 8 in General Note)	at 12'O Clock (Note 8 in General Note)
	53	BRANCH STANDOUT LENGTH	(Note 2)	(Note 2)	(Note 2)
	54	FITTING PLUG	Hollow Plug	Hollow Plug	Hollow Plug
OTHER	55	MATERIAL	ASTM A106 Gr.B (Note 4)	ASTM A106 Gr.B (Note 4)	ASTM A106 Gr.B (Note 4)
	56	PROTECTIVE COVER	Required	Required	Required
	57	RETRACTABLE TOOL	Required (Note 3)	Required (Note 3)	Required (Note 3)
	58	SERVICE VALVE	Required (Note 3)	Required (Note 3)	Required (Note 3)
	59	MANUFACTURE	will be finalized later	will be finalized later	will be finalized later
	60	MODEL NO.	will be finalized later	will be finalized later	will be finalized later
	61	TAG PLATE (General Note 12)	Required	Required	Required
	62	WAKE FREQUENCY STANDARD (NOTE 2)	Required as per ASME PTC	Required as per ASME PTC	Required as per ASME PTC

NOTES : VTA : VENDOR TO ADVISE VTC : VENDOR TO CONFIRM N/A : NOT APPLICABLE

- (1) All process data will be finalized later
 (2) Wake frequency analysis (stress calculation) according to ASME Power Test Code 19.3 shall be done & submitted by vendor.
 (3) One set of retriever and service valve is common to all CC's fittings.
 (4) Piping class, pipe schedule and materials related to Piping Material Specification, will be finalized after confirmation of this document.
 (5) High pressure access fitting to be supplied by vendor.
 (6) Length of stem holder for installation in 12O'clock due to liquid service, to be the way that measure the corrosion at the bottom of line.

 NISOC		تکده‌اشت و افزایش تولید میدان نفتی بینک سطح الارض احداث ردیف تراکم گاز در ایستگاه جمع آوری بینک						 	
		DATA SHEETS FOR CORROSION COUPON/ PROBE							
شماره پیمان:		پروژه	بسته کاری	صادر کننده	تجهیزات	رشته	نوع مدرک	سریال	نسخه
053 - 073 - 9184		BK	GCS	PEDCO	120	IN	DT	0014	D01
									شماره صفحه: 11 از 11
									D01

GENERAL	1	TAG NO	CP-2151	
	2	P&ID NO.	BK-GCS-PEDCO-120-PR-PI-0013-D04	
	3	SERVICE	AFTER DEHYDRATION PACKAGE (PK-2101)	
	4	LINE NO.	GAS-111-0179-FN05-6"-PT	
	5	LINE SIZE / SCHEDULE	6" , SCH.80 (Note 4)	
	6	LINE/EQUIPMENT MATERIAL	ASTM A106 Gr.B (Note 4)	
	7	PIPING CLASS	FN05 (Note 4)	
	8	AREA CLASSIFICATION	Zone 2,IIB T4	
	9	NACE COMPLIANCE (as per NACE MR0175/ISO 15156)	Required	
PROCESS DATA (NOTE 1)	10	FLUID	GAS	
	11	PHASE	1 phase (Vapour)	
	12	DESIGN PRESSURE (barg)	F.V/62	
	13	OPERATING. PRESSURE (barg)	52.9	
	14	DESIGN TEMPERATURE (°C)	130	
	15	MIN DESIGN METAL TEMPERATURE (°C)	5	
	16	OPERATING TEMPERATURE (°C)	59.40/59.36	
	17	MAX FLOW (Kg/hr)	18887.88603	
	18	NORMAL FLOW (Kg/hr)	17170.80548	
	19	MEAN VELOCITY (m/s)	4.408	
	20	VISCOSITY (cP)	0.011	
	21	DENSITY (kg/m3)	58.06	
	22	PIPING CORROSION ALLOWANCE (mm)	6	
	23	WATER CUT	-	
PROBE & TRANSMITTER	24	RATE OF CO2 CONTENT (SUM/WIN)	0.0319/0.0253 mole fraction in gas phase	
	25	RATE OF CHLORIDE CONTENT	-	
	26	VELOCITY	4.85	
	27	PROBE TYPE	VTA	
	28	PROBE INSERTION LENGTH	VTA	
	29	PROBE HOLDER	Yes	
	30	MATERIAL	ASTM A106 Gr.B (Note 4)	
	31	MOUNTING POSITION	Top of line	
	32	ENCLOSURE MATERIAL	VTA	
	33	MEASURING RANGE	VTA	
	34	OUTPUT SIGNAL	(Note 11 in General Note)	
	35	COMMUNICATION PROTOCOL	(Note 11 in General Note)	
	36	POWER SUPPLY	(Note 11 in General Note)	
	37	ACCURACY	(Note 11 in General Note)	
COUPON	38	INTEGRAL INDICATOR	No	
	39	Ex PROTECTION	Eex "ia"	
	40	INGRESS PROTECTION	IP 65	
	41	CABLE ENTRY	ISO M20 x 1.5	
	42	STYLE	Retrievable Type (VTC)	
	43	COUPON TYPE	N/A	
	44	COUPON MATERIAL	N/A	
	45	COUPON HOLDER (Note 6)	N/A	
	46	HOLDER MATERIAL	N/A	
	47	HOLDER LENGTH	N/A	
	48	COUPON INSERTION LENGTH	N/A	
	49	-	N/A	
	50	STYLE	N/A	
	ACCESS FITTING (Note 5)	51	PROCESS CONNECTION	2", Flare Weld Type
52		MOUNTING POSITION	at 12'O Clock (Note 8 in General Note)	
53		BRANCH STANDOUT LENGTH	(Note 2)	
54		FITTING PLUG	Hollow Plug	
55		MATERIAL	ASTM A106 Gr.B (Note 4)	
56		PROTECTIVE COVER	Required	
57		RETRACTABLE TOOL	Required (Note 3)	
58		SERVICE VALVE	Required (Note 3)	
OTHER	59	MANUFACTURE	will be finalized later	
	60	MODEL NO.	will be finalized later	
	61	TAG PLATE (General Note 12)	Required	
	62	WAKE FREQUENCY STANDARD (NOTE 2)	Required as per ASME PTC 19.3	

NOTES :
VTA : VENDOR TO ADVISE
VTC : VENDOR TO CONFIRM
N/A : NOT APPLICABLE

(1) All process data will be finalized later
(2) Wake frequency analysis (stress calculation) according to ASME Power Test Code 19.3 shall be done & submitted by vendor.
(3) One set of retriever and service valve is common to all CC's fittings.
(4) Piping class, pipe schedule and materials related to Piping Material Specification, will be finalized after confirmation of this document.
(5) High pressure access fitting to be supplied by vendor.
(6) Length of stem holder for installation in 12O'clock due to liquid service, to be the way that measure the corrosion at the bottom of line.