

	نگهداشت و افزایش تولید میدان نفتی بینک سطح الارض احداث خطوط انتقال گاز/مایعات گازی از ایستگاه تقویت فشار گاز بینک تا ایستگاه تزریق گاز سیاهمکان/واحد بهره برداری بینک																									
شماره پیمان: 053 - 073 - 9184	<table><tr><th colspan="8">PROCESS DESCRIPTION</th></tr><tr><th>نسخه</th><th>سریال</th><th>نوع مدرک</th><th>رشته</th><th>تسهیلات</th><th>صادرکننده</th><th>بسته کاری</th><th>پروژه</th></tr><tr><td>D03</td><td>0001</td><td>DP</td><td>PR</td><td>320</td><td>PEDCO</td><td>PPL</td><td>BK</td></tr></table>	PROCESS DESCRIPTION								نسخه	سریال	نوع مدرک	رشته	تسهیلات	صادرکننده	بسته کاری	پروژه	D03	0001	DP	PR	320	PEDCO	PPL	BK	شماره صفحه: 2 از 7
PROCESS DESCRIPTION																										
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REVISION RECORD SHEET

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PROCESS DESCRIPTION																										
نسخه	سریال	نوع مدرک	رشته	تسهیلات	صادرکننده	بسته کاری	پروژه																			
D03	0001	DP	PR	320	PEDCO	PPL	BK																			

CONTENTS

1.0	INTRODUCTION	4
2.0	SCOPE	5
3.0	NORMATIVE REFERENCES.....	5
3.1	THE PROJECT DOCUMENTS.....	5
3.2	ENVIRONMENTAL DATA	5
3.3	ORDER OF PRECEDENCE.....	5
4.0	PROCESS DESCRIPTION.....	6
4.1	PROCESS SUMMARY	6

 NISOC	نگهداشت و افزایش تولید میدان نفتی بینک سطح الارض احداث خطوط انتقال گاز/مایعات گازی از ایستگاه تقویت فشار گاز بینک تا ایستگاه تزریق گاز سیاهمکان/واحد بهره برداری بینک							
شماره پیمان: 053 – 073 – 9184	PROCESS DESCRIPTION							شماره صفحه : 4 از 7
	نسخه	سریال	نوع مدرک	رشته	تسهیلات	صادرکننده	بسته کاری	
	D03	0001	DP	PR	320	PEDCO	PPL	
	BK							

1.0 INTRODUCTION

Binak oilfield in Bushehr province is a part of the southern oilfields of Iran, is located 20 km northwest of Genaveh city.

With the aim of increasing production of oil from Binak oilfield, an EPC/EPD Project has been defined by NIOC/NISOC and awarded to Petro Iran Development Company (PEDCO). Also PEDCO (as General Contractor) has assigned the EPC-packages of the Project to "Hirgan Energy - Design and Inspection" JV.

As a part of the Project, New Gas/Condensate Pipelines (from Binak New GCS to Siahmakan GIS/Binak PU) shall be constructed.

GENERAL DEFINITION

The following terms shall be used in this document.

CLIENT:	National Iranian South Oilfields Company (NISOC)
PROJECT:	Binak Oilfield Development – Surface Facilities; Gas & Gas-Condensate Pipelines
EPD/EPC CONTRACTOR (GC):	Petro Iran Development Company (PEDCO)
EPC CONTRACTOR:	Joint Venture of : Hirgan Energy – Design & Inspection(D&I) Companies
VENDOR:	The firm or person who will fabricate the equipment or material.
EXECUTOR:	Executor is the party which carries out all or part of construction and/or commissioning for the project.
THIRD PARTY INSPECTOR (TPI):	The firm appointed by EPD/EPC CONTRACTOR (GC) and approved by CLIENT (in writing) for the inspection of goods.
SHALL:	Is used where a provision is mandatory.
SHOULD:	Is used where a provision is advisory only.
WILL:	Is normally used in connection with the action by CLIENT rather than by an EPC/EPD CONTRACTOR, supplier or VENDOR.
MAY:	Is used where a provision is completely discretionary.

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شماره پیمان: 053 – 073 – 9184	PROCESS DESCRIPTION							شماره صفحه : 5 از 7
	نسخه	سریال	نوع مدرک	رشته	تسهیلات	صادرکننده	بسته کاری	
	D03	0001	DP	PR	320	PEDCO	PPL	BK

2.0 SCOPE

This document describes the process and utility facilities and outlines the methodology adopted in the design for safe operation of the facilities for "Construction of transmission pipelines from BINAK Compressor Station in BINAK Oil Field" Project.

3.0 NORMATIVE REFERENCES

3.1 THE PROJECT DOCUMENTS

- BK-GNRAL-PEDCO-000-PR-DB-0001 Process Basis of Design
- BK-GNRAL-PEDCO-000-PR-DC-0001 Process Design Criteria
- BK-PPL-PEDCO-320-PR-PI-0001 P&ID-Gas Pipeline(to Siahmakan G.I.Station)
- BK-PPL-PEDCO-320-PR-PI-0002 P&ID-Condensate Pipeline(to Binak PU)

3.2 ENVIRONMENTAL DATA

Refer to "Process Basis of Design; Doc. No. BK-GNRAL-PEDCO-000-PR-DB-0001".

3.3 ORDER OF PRECEDENCE

In case of any conflict between the contents of this document or any discrepancy between this document and other project documents or reference standards, this issue must be reported to the CLIENT. The final decision in this situation will be made by CLIENT.

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	D03	0001	DP	PR	320	PEDCO	PPL	BK

4.0 PROCESS DESCRIPTION

4.1 PROCESS SUMMARY



4.1.1 Gas transmission pipeline from BINAK new GCS to SIAHMAKAN G.I Station

With the aim of increasing the oil production rate from BINAK field, the construction of 8 inch gas transmission pipeline from new BINAK Compressor Station to SIAHMAKAN Gas Injection Station and 4 inch gas condensate transmission pipeline from new BINAK Compressor Station to BINAK Cluster, has been on the agenda. The flow rate, pressure and temperature of inlet gas to pipeline are 15 MMSCFD respectively.

Generally in order to cleaning and testing transferring pipeline, pig launching and receiving facilities are considered. Pig will launch from pig launcher located at BINAK new GCS (PL-3201) and will received in pig receiver located at SIAHMAKAN G.I (PR-3201).

(PL-3201) and (PR-3201) are provided with relief valves (PSV-3201) on (PL-3201) and (PSV-3202) on (PR-3201) in order to protect them at over pressure condition. For supervision, sufficient pressure instrument is considered. After launching or receiving the pig, the remained liquid in the equipment will be discharge to close drain system.

(ZS-3201) and (ZI-3202 & ZI-3203) are considered to confirm that the pig has been passing through the pipe at the beginning of the launch.

LBV-3201/ LBV-3202 shall be installed at distance 28.4 km and 28.6 km respectively because of river crossing. In order to isolating pipeline form BINAK new GCS and SIAHMAKAN G.I, ESDV-3201 and ESDV-3202 will be considered at the beginning and end of the pipeline. Corrosion inhibitor and methanol will be injected at the beginning of the pipeline in BINAK new GCS.

According to the P&ID-0001(BK-PPL-PEDCO-320-PR-PI-0001), there are three PT-3201A, B, C (VOTING 2003) on the GAS-111-0072-FN05-6"-PT line to close ESDV-3201 during pipeline low, low pressure.

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D03	0001	DP	PR	320	PEDCO	PPL	BK																			



Table 1-Inlet SIAHMAKAN Gas Injection Station Characteristics

SPECIFICATION	SIAHMAKAN Gas Injection Station (SUMMER/WINTER)
STDANDARD VOLUMETRIC FLOW (MMSCFD)	14.03/14.07
MASS FLOW (kg/hr)	17170.8/15105.2
PRESSURE (Barg)	40
TEMPERATURE (°C)	15.0/31.3
Molecular Weight	21.56/24.58
Viscosity (Cp)	0.01
Density (kg/m ³)	44.39/49.09

4.1.2 Oil condensate transmission pipeline from BINAK

Condensate from BINAK, which is slug pumps outlet, with flow rate 10 m³/hr (1426.6 st bbl/day @Std Cond) and discharg pressure 19.5 barg, will be transferred to BINAK Cluster via 4 inch pipeline with length 1.44 km. it should be noted that the 4" condensate line is existe and has been extended from existing BINAK GCS to destination of clauster.

According to the P&ID-0004(BK-GCS-PEDCO-120-PI-PR-PI-0004), for the oil line (CDH-112-0015-CN07-4"-PT), there is also a PT-2115 on the condensate pipe line to close ESDV-2112 during pipeline low low pressure.