

# OF BINAK B/C MANIFOLD

REFERENCE DRAWING	DRG. No.
ELECTRICAL LOAD LIST - EXTENSION OF BINAK B/C MANIFOLD	BK-W0078-PEDCO-110-EL-LI-0001
ELECTRICAL TYPICAL SCHEMATIC DIAGRAMS FOR LV PANELS	BK-GCS-PEDCO-120-EL-DG-0002

[illegible]

## LEGEND

LEGEND			
	WITHDRAWABLE AIR CIRCUIT BREAKER WITH MOTORIZED & MANUALLY CHARGED STORED ENERGY MECHANISM		
	CONTACTOR (CONTACT OPEN IN THE UNOPERATED POSITION)(N.O.)		
	PUSH BUTTON STATION START-STOP WITH AMMETER (W/P)		
	ZERO SEQUENCE CURRENT TRANSFORMER (CORE-BALANCE)		
	SYNCHRONIZING CHECK RELAY		
	UNDER VOLTAGE RELAY		
	REVERSE PHASE OR PHASE BALANCE CURRENT RELAY		
	PHASE SEQUENCE OR PHASE BALANCE VOLTAGE RELAY		
	THERMAL OVERLOAD RELAY		
	INSTANTANEOUS OVER CURRENT RELAY		
	TIME DELAYED OVER CURRENT RELAY		
	INSTANTANEOUS EARTH FAULT RELAY		
	INVERSE TIME EARTH FAULT RELAY		
	INSTANTANEOUS EARTH FAULT RELAY (BY ZERO SEQUENCE CT)		
	INSTANTANEOUS EARTH FAULT RELAY (BY ZERO SEQUENCE CT)		
	OVER VOLTAGE RELAY		
	LIQUID AND GAS PRESSURE RELAY		
	GROUND DETECTOR RELAY		
	TRIP CIRCUIT SUPERVISION		
	LOCK OUT RELAY		
	INTERTRIP RECEIVE RELAY		
	THERMAL OVERLOAD RELAY (49)		
	PHASE SEQUENCE OR PHASE BALANCE RELAY (47)		
	MOULDED CASE CIRCUIT BREAKER, MANUALLY OPERATED WITH THERMAL MAGNETIC OVER CURRENT RELAY		
	OPERATING DEVICE GENERAL SYMBOL		
	PUSH BUTTON STATION START-STOP WITH AMMETER (EX.)		
	LOAD BREAK SWITCH		
	PUSH BUTTON STATION START-STOP (W/P)		
	PUSH BUTTON STATION START-STOP (EX.)		
	SWITCH FUSE		
	VOLTMETER SELECTOR SWITCH		
	AMMETER SELECTOR SWITCH		
	SELECTOR SWITCH		
	LED TYPE SIGNAL LAMP		
	TRANSFORMER		
	CURRENT TRANSFORMER		
	MOTOR		
	ALARM WINDOW WITH RESET & ACKNOWLEDGE		
	CABLE GLAND		
	CABLE SEALING END		
	WITHDRAWABLE PART		
	MECHANICAL INTERLOCK		
	POWER CABLE		
	CONTROL CABLE		
	MOTOR PROTECTION RELAY		
	START PUSH BUTTON		
	EMERGENCY STOP, MUSHROOM TYPE		

[illegible]

### LEGEND

REFERENCE DRAWING	DRG. No.
ELECTRICAL LOAD LIST - EXTENSION OF BINAK B/C MANIFOLD	BK-W0078-PEDCO-110-EL-U-0001
ELECTRICAL TYPICAL SCHEMATIC DIAGRAMS FOR LV PANELS	BK-GCS-PEDCO-120-EL-DG-0002

### KEY PLAY

[illegible]

(VENDOR TITLE BLOCK)\*\*

NOTES:

- 1– ALL AMMETERS OF MOTORS HAVE TO BE 6xIn.
- 2– CATEGORY DESCRIPTION:

F1: SIMPLE 4–POLE MCCB FEEDER WITH THERMAL/MAGNETIC TRIPS, FOR I<63A FEEDERS.

F2: SIMPLE 4–POLE MCCB FEEDER WITH THERMAL/MAGNETIC TRIPS, FOR 63A=<I<100A FEEDERS.

F3: SIMPLE 4–POLE MCCB FEEDER WITH THERMAL/MAGNETIC TRIPS, FOR 100A=<I FEEDERS.

F4: SIMPLE 3–POLE MCCB FEEDER WITH THERMAL/MAGNETIC TRIPS, FOR I<63A FEEDERS.

F5: SIMPLE 3–POLE MCCB FEEDER WITH THERMAL/MAGNETIC TRIPS, FOR 63A=<I<100A FEEDERS.

F6: SIMPLE 3–POLE MCCB FEEDER WITH THERMAL/MAGNETIC TRIPS, FOR 100A=<I FEEDERS.

F7: SIMPLE 2–POLE MCCB FEEDER FOR FEEDING SINGLE PHASE LOADS (PH+N OR 2–PH)

M1: DIRECT ON LINE MOTOR STARTER FEEDERS FOR P < 4kW  
(SWITCH FUSE + CONTACTOR + BIMETAL + R/L SIGNALING)



M2: DIRECT ON LINE MOTOR STARTER FEEDERS FOR 4kW ≤ P < 18.5kW  
(SWITCH FUSE + CONTACTOR + BIMETAL + R/L SIGNALING + R/L AMMETER)

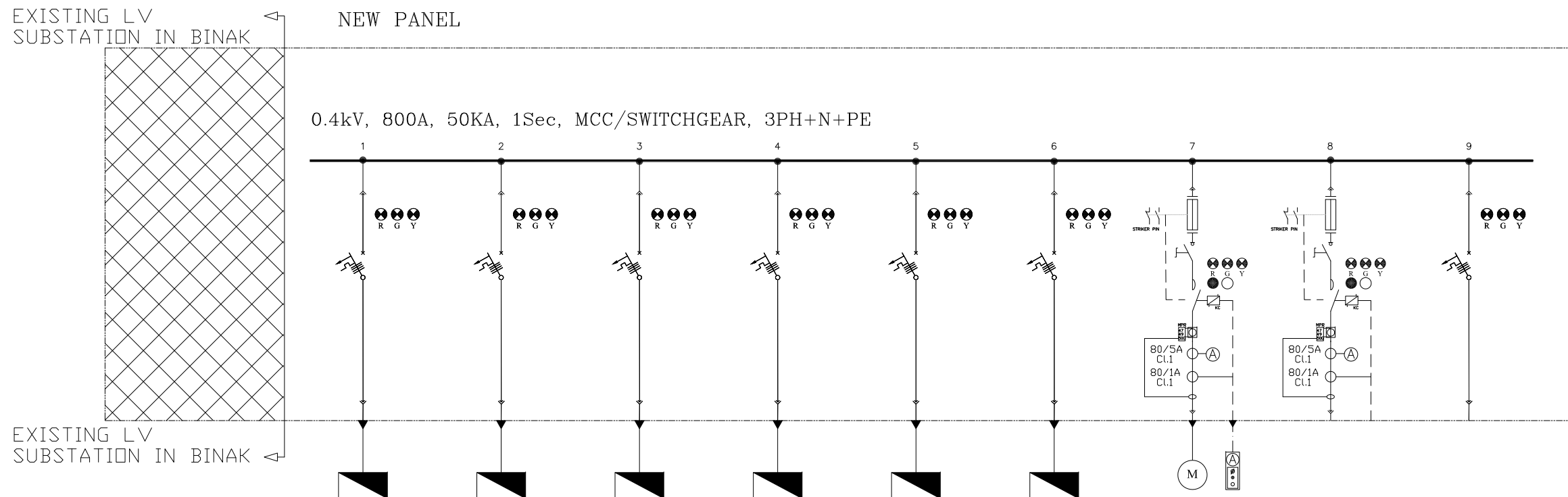
M3: DIRECT ON LINE MOTOR STARTER FEEDERS FOR 18.5kW ≤ P < 30kW  
SWITCH FUSE + CONTACTOR + BIMETAL + R/L SIGNALING + R/L AMMETER + (49, 50G + PHASE CONTROL)

M4: DIRECT ON LINE MOTOR STARTER FEEDERS FOR 30kW ≤ P  
(SWITCH FUSE + CONTACTOR + R/L SIGNALING+ R/L AMMETER + MOTOR PROTECTION RELAY(MPR),(49, 50G & PHASE CONTROL)
- 3– CORE BALANCE CT RATING OF EARTH LEAKAGE RELAYS SHALL BE ACCORDING TO RELAY MANUFACTURER STANDARD.
- 4– VOLTAGE AND CURRENT TRANSFORMERS SHALL HAVE APPROPRIATE VA.
- 5– THIS SWITCHGEAR SHALL BE DESIGNED, MANUFACTURED, INSPECTED AND TESTED IN ACCORDING WITH THE APPLICABLE SECTION OF IPS–E–EL–100(1) & IPS–E–EL–143(3)
- 6– ALL SWITCH FUSES SHALL BE EQUIPPED WITH STRIKER PIN
- 7– ALL EQUIPMENT SIZING SHALL BE FINALIZED BY MANUFACTURER BASED ON SITE CONDITION. IN ADDITION, TYPE 2 OF COORDINATION SHALL BE FOLLOWED BY VENDOR.
- 8– WHEN FUNCTION 27 IS ACTIVATED, ALL OUTGOING FEEDERS SHALL BE TRIPPED.
- 9– STATUS FROM BUS TIE & LV INCOMING TO DCS SHALL BE CONSIDERED BY VENDOR.
- 10– STOP & START PUSH BUTTON SHALL BE CONSIDERED ON INCOMINGS & BUS–TIEs.
- 11– CONTROL CIRCUIT VOLTAGE FOR OUTGOING IS 230 VAC WHICH WILL BE SUPPLIED FOR EACH LV CUBICLE. IN OTHER WORDS FOR EACH LV CUBICLE ONE ISOLATED DRY TYPE TRANSFORMER SHALL BE CONSIDERED BY VENDOR.
- 12– FOR FEEDER WITH TYPE M3,M4, CURRENT AND VOLTAGE FAULT SHALL BE CONSIDERED SEPARATELY BY VENDOR
- 13– MICROPROCESSOR TYPE PROTECTIVE RELAYS SHALL BE EQUIPPED WITH RS 485 TO SEND SIGNALS BY SERIAL LINK
- 14– MCCB TYPE OUTGOING FEEDER SHALL BE EQUIPED WITH ROTARY SWITCH
- 15– CONNECTION BETWEEN MEASURING UNIT AND DCS SHALL BE RS 485 TO SEND SIGNALS BY SERIAL LINK.

(VENDOR TITLE BLOCK)\*\*

NOTES													
LEGEND													
REFERENCE DRAWING										DRG. No.			
ELECTRICAL LOAD LIST - EXTENSION OF BINAK B/C MANIFOLD										BK-W007S-PEDCO-110-EL-12-0001			
ELECTRICAL TYPICAL SCHEMATIC DIAGRAMS FOR LV PANELS										BK-GCS-PEDCO-180-EL-DG-0002			
KEY PLAN													

								***	*****	** **	*** ****	** **	*** ****
DOO	SEP 2022	IPC	H.SHAKIBA	M.PAKHARIAN	M.MEHRSHAD	** **	REV.	DESCRIPTION	BY	DATE	BY	DATE	
REV.	DATE	P.O.I.S	PREP.	CHK.	APP.	AUT.		CHECKED			REV. APPR.		
PROJECT NAME: BINAK OILFIELD DEVELOPMENT/SUB-SURFACE WORK PACKAGES W007S WHF & EXTENSION OF BINAK B/C							ا اصل و کلیه نسخ این نقشه و حق افشایی متعلق به شرکت ملی مناطق نفت خیز جنوب میباشد. THE ORIGINAL AND ALL COPIES OF THIS DRAWING TOGETHER WITH THE COPYRIGHT THEREIN ARE THE SOLE PROPERTY OF N.I.S.O.C./ FIELDS						
PROJECT NO.: 971020													
EPC CONTRACTOR:  HIRGAN ENERGY - DESIGN & INSPECTION COMPANIES				EPD/EPC CONTRACTOR (GC):  PETROIRAN DEVELOPMENT COMPANY			BINAK OILFIELD DEVELOPMENT SUB-SURFACE WORK PACKAGES W007S WHF & EXTENSION OF BINAK B/C						
DATE		SCALE		DRAWING BY		CHECKED BY		PROJECT ENG.					
DRAWING TITLE: LV SWITCHGEAR/MCC EXPANSION SLD - EXTENSION OF BINAK B/C MANIFOLD								NO CONSTRUCTION PERMITTED UNLESS DRAWING APPROVED					
								APPROVED FOR CONSTRUCTION		BY:		DATE:	
SCALE	SIZE	DRAWING NO.			SHEET NO.	REV.	BUDGET REF.	LOCATION	SIZE	CLASS	SERIAL NO.	SHEET	REVISION
NTS	A3	BK-W007S-PEDCO-110-EL-SL-0001			03 OF 04	D00	053-073-9184	F	2	P	708027	03 OF 04	D00




CATEGORY	F1	F1	F1	F1	F1	F1	M4	M4	F1
CODE	MANIFOLD-110-UPS-001	MANIFOLD-110-UPS-002	MANIFOLD-110-UPS-BYPASS	MANIFOLD-24-CHG-001	MANIFOLD-24-CHG-002	NON UPS	P-1701	SPARE	SPARE
POWER (kW)	(120A×110V)/0.9 14.7kW	(120A×110V)/0.9 14.7kW	(72A×110V)/0.9 8.8kW	(125.1A×24V)/0.9 3.4kW	(125.1A×24V)/0.9 3.4kW	1.82kW	30KW	30KW	(120A×110V)/0.9 14.7kW
C.B TYPE/RATING	50A	50A	32A	16A	16A	10A	—	—	50A
FUSE TYPE/RATING	N/A	N/A	N/A	N/A	N/A	N/A	aM/80A	aM/80A	N/A
CONTACTOR RATING (A)	N/A	N/A	N/A	N/A	N/A	N/A	30KW (AC3)	30KW (AC3)	N/A
OVER LOAD SETTING RANGE	N/A	N/A	N/A	N/A	N/A	N/A	48 ... 65 A	48 ... 65 A	N/A
CABLE SIZE	—	—	—	—	—	—	—	—	—
DESCRIPTION OF FEEDER	110 VAC FOR INSTRUMENT (CHARGER A)	110 VAC FOR INSTRUMENT (CHARGER B)	110 VAC FOR INSTRUMENT (BYPASS TRANSFORMER)	24VDC FOR F&G (CHARGER A)	24VDC FOR F&G (CHARGER B)	NON UPS POWER FOR INSTRUMENT	OIL SUMP PUMP	SPARE	SPARE

[illegible][illegible]

REFERENCE DRAWING	DRG. No.
ELECTRICAL LOAD LIST - EXTENSION OF BINAK B/C MANIFOLD	BK-W0078-PEDCO-110-EL-LI-0001
ELECTRICAL TYPICAL SCHEMATIC DIAGRAMS FOR LV PANELS	BK-GCS-PEDCO-120-EL-DG-0002

[illegible]

## KEY PLAN

[illegible]

(VENDOR TITLE BLOCK)\*\*