

ELECTRICAL TYPICAL SCHEMATIC
DIAGRAMS FOR MV PANEL

[illegible][illegible]

ITEM No.	SYMBOLS	DESCRIPTION	ITEM No.	SYMBOLS	DESCRIPTION
39		LIGHTING ARRESTER OR SURGE ARRESTER	58		INSTANTANEOUS OVER CURRENT RELAY
40		AMMETER TRANSDUCER	59		AC TIME OVER CURRENT RELAY
41		VOLT TRANSDUCER	60		SENSITIVE EARTH FAULT RELAY
42		KILO WATT TRANSDUCER	61		INSTANTANEOUS EARTH FAULT RELAY
43		KILO VAR TRANSDUCER	62		AC INVERSE TIME EARTH FAULT RELAY
44		POWER FACTOR TRANSDUCER	63		TRIP COIL SUPERVISION RELAY
45		POWER FACTOR METER	64		LOCK OUT RELAY
46		WATT METER	65		TOO FREQUENT START RELAY
47		VAR METER	66		WINDING OVER TEMPERATURE RELAY
48		CLOSING COIL	67		LOCKED ROTOR RELAY
49		SHUNT TRIP	68		INTERTRIP RECEIVE RELAY
50		AUXILIARY RELAY	69		
51		AUXILIARY RELAY	70		
52		UNDER VOLTAGE RELAY	71		
53		INDUCED VOLTAGE RELAY	72		
54		POSITION SWITCH	73		
55		BEARING PROTECTIVE DEVICE	74		
56		REVERSE-PHASE OR PHASE- BALANCE CURRENT RELAY	75		
57		MACHINE THERMAL RELAY	76		

NOTES	
1- MAX. TWO WIRES SHOULD BE CONNECTED TO ONE TERMINAL.	
2- PANEL HEATER SHOULD BE INSTALLED IN SUITABLE POSITION.	
3- THE BURDEN OF C.T. & V.T. SHOULD BE FINALIZED BY PANEL MANUFACTURE.	
ABBREVIATION	
A	AMPERE
M	MOTOR
AS	AMMETER SWITCH
CT	CURRENT TRANSFORMER
Hz	HERTZ
IP	DEGREE OF PROTECTION BY ENCLOSURE
KA	KILO AMPERE
KV	KILO VOLT
KW	KILO WATT
MV	MEDIUM VOLTAGE
VS	VOLTMETER SWITCH
VI	VOLTAGE TRANSFORMER
KVA	KILOVOLT-AMPERE
KWH	KILOWATT-HOUR
VCB	VACUUM CIRCUIT BREAKER
TCS	TRIP COIL SUPERVISION
KVAR	KILOVAR
SWGR	SWITCH GEAR

REFERENCE/INOR DRAWING	DRG. No.
ELECTRICAL LOAD LIST	BK-GCS-PEDCO-120-EL-1A-0001
EXPURMENT MV PPHCHCHBAR EXPANSION SINGLE LINE DIAGRAM	BK-GCS-PEDCO-120-EL-PL-0003

D06	PREP.2025	PI	ELSHADIA	ELFADHARAN	ELSHADIA	ELSHADIA	ELSHADIA	ELSHADIA
D05	MAY.2025	PI	ELSHADIA	ELFADHARAN	ELSHADIA	ELSHADIA	ELSHADIA	ELSHADIA
D04	DEC.2022	PI	ELSHADIA	ELFADHARAN	ELSHADIA	ELSHADIA	ELSHADIA	ELSHADIA
D03	JUL.2022	PI	ELSHADIA	ELFADHARAN	ELSHADIA	ELSHADIA	ELSHADIA	ELSHADIA
D02	APR.2022	PI	ELSHADIA	ELFADHARAN	ELSHADIA	ELSHADIA	ELSHADIA	ELSHADIA
D01	MAR.2022	PI	ELSHADIA	ELFADHARAN	ELSHADIA	ELSHADIA	ELSHADIA	ELSHADIA
D00	JAN.2022	PI	ELSHADIA	ELFADHARAN	ELSHADIA	ELSHADIA	ELSHADIA	ELSHADIA
REV.	DATE	P.O.L.F.	PREP.	CHK.	APP.	AUT.		

PROJECT NAME:		BINAK OILFIELD DEVELOPMENT/SURFACE FACILITIES GAS COMPRESSOR STATION	
PROJECT NO.:		971020	
EPC CONTRACTOR:		EPD/EPC CONTRACTOR (GO):	
 HIRAN ENERGY COMPANY		 PETROIRAN DEVELOPMENT COMPANY	

اموال و حق کپی این نقشه و کلیه اسناد فنی در مالکیت شرکت ملی نفت ایران می باشد.

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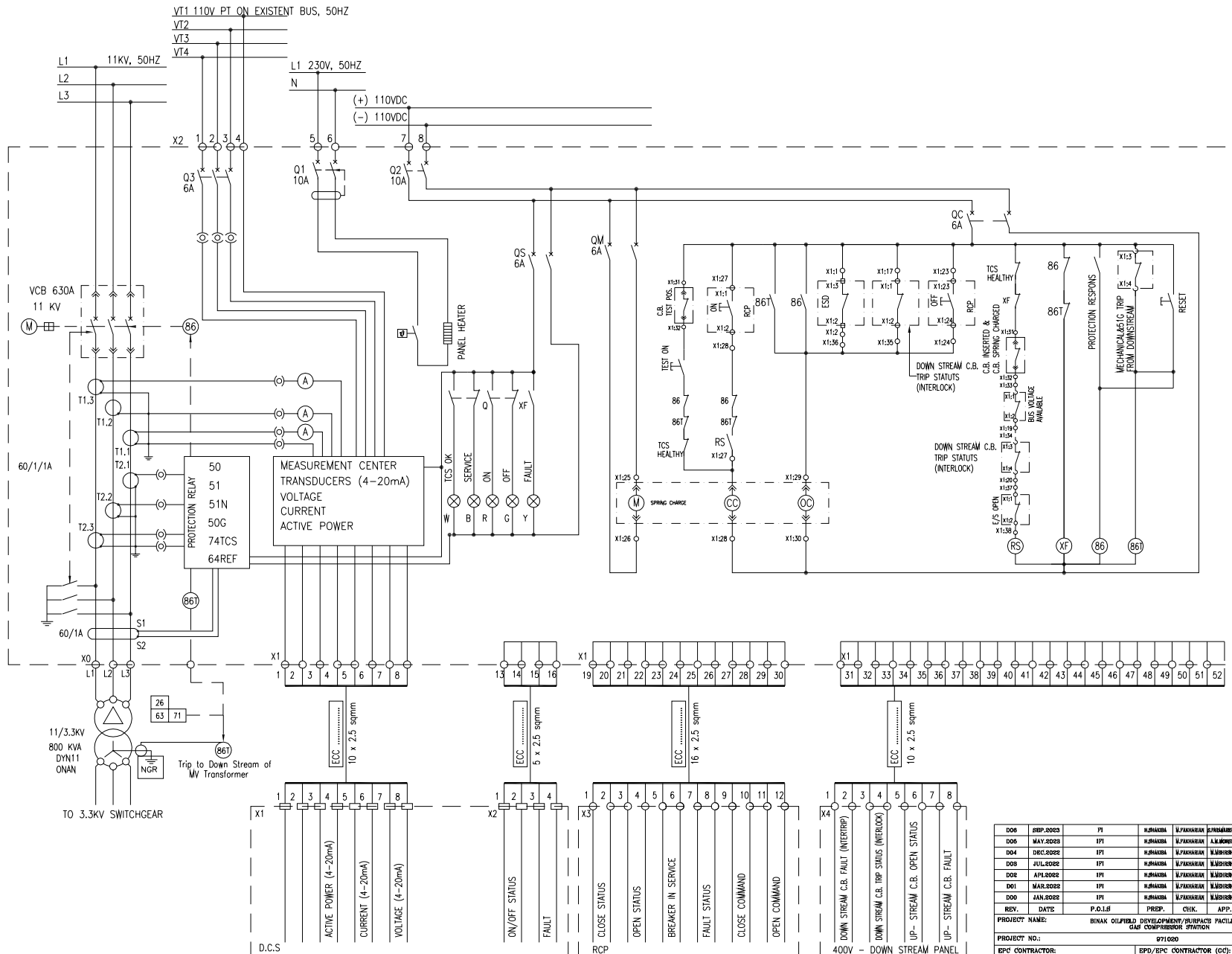
BINAK OILFIELD DEVELOPMENT SURFACE FACILITIES GAS COMPRESSOR STATION

DATE	SCALE	DRAWING BY	CHECKED BY	PROJECT ENG.

NO CONSTRUCTION PERMITTED UNLESS DRAWING APPROVED

APPROVED FOR CONSTRUCTION		BY:	DATE:	
DESIGN REF.	LOCATION	SIZE	CLASS	
003-070-0104	P	2	P	709040
03 OF 07	D06			

(VENDOR TITLE BLOCK)**	DRAWING TITLE:				
	ELECTRICAL TYPICAL SCHEMATIC DIAGRAMS FOR MV PANEL				
	SCALE	SIZE	DRAWING NO.	SHEET NO.	REV.
	N.T.S	A3	BK-GCS-PEDCO-120-EL-DG-0001	03 OF 07	D06



FIRE WATER TRANSFORMER OUTGOING: TYPE C5

- NOTES**
- 1- MAX. TWO WIRES SHOULD BE CONNECTED TO ONE TERMINAL.
 - 2- PANEL HEATER SHOULD BE INSTALLED IN SUITABLE POSITION.
 - 3- THE BURDEN OF C.T. & V.T. SHOULD BE FINALIZED BY PANEL MANUFACTURE.
 - 4- IN THE CASE OF MECHANICAL TRIP OF TRANSFORMER, SIGNAL RELAY 86 SHALL BE SENT TO DOWNSTREAM, IN OTHER WORDS VCB & ACB SHALL BE TRIPPED.
 - 5- FOR FIRE WATER PUMP WHICH WILL BE FED FROM 11/3.3 KV TRANSFORMER, A VOLTMETER SHALL BE CONSIDERED ON 3.3 SWITCHGEAR.
 - 6- VOLTAGE & CURRENT SAMPLE FOR CAPACITOR BANKS OF COMPRESSORS SHALL BE CONSIDERED BY VENDOR.
 - 7- SUPPLY VOLTAGE 230 VAC FOR CIRCUIT LIGHTING, SOCKET, SHALL BE CONSIDERED SEPARATELY MCB BY VENDOR. ALSO SUPPLY VOLTAGE 110 VDC FOR CIRCUIT METERING AND PROTECTION, MOTOR SPRING CHARGE, CLOSE AND OPEN COIL, INDICATION, SHALL BE CONSIDERED SEPARATELY MCB BY VENDOR.
 - 8- CAPACITIVE VOLTAGE INDICATOR SHALL BE CONSIDERED FOR MV FEEDERS.
 - 9- SIGNAL SPRING CHARGE SIGNAL SHALL BE SENT TO RCP, JCS, AND RCP.
 - 10- PROTECTIVE RELAYS AND MEASURING UNIT SHALL BE EQUIPPED WITH RS 485 TO SEND SIGNALS BY SERIAL LINK.

ABBREVIATION

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KWH	KILOWATT-HOUR
VCB	VACUUM CIRCUIT BREAKER
TCS	TRIP COIL SUPERVISION
KVAR	KILOVAR
SWGR	SWITCH GEAR

REFERENCE DRAWING	DRG. No.
ELECTRICAL LOAD LIST	BK-GCS-PEDCO-120-EL-14-0001
ESSENTIAL MV PUMP/COMPRESSOR EXPANSION SINGLE LINE DIAGRAM	BK-GCS-PEDCO-120-EL-PL-0003

REV.	DATE	DESCRIPTION	BY	DATE	BY	DATE
D06	MAY.2023	PI	N.BHAKTA	N.FAKHRAH	S.PHILIPPOPOV	REV.
D05	MAY.2023	PI	N.BHAKTA	N.FAKHRAH	A.M.MORONT	REV.
D04	MAY.2022	PI	N.BHAKTA	N.FAKHRAH	N.BHAKTA	REV.
D03	JUL.2022	PI	N.BHAKTA	N.FAKHRAH	N.BHAKTA	REV.
D02	APR.2022	PI	N.BHAKTA	N.FAKHRAH	N.BHAKTA	REV.
D01	MAR.2022	PI	N.BHAKTA	N.FAKHRAH	N.BHAKTA	REV.
D00	JAN.2022	PI	N.BHAKTA	N.FAKHRAH	N.BHAKTA	REV.

PROJECT NAME: BINAK OILFIELD DEVELOPMENT/SURFACE FACILITIES GAS COMPRESSOR STATION

PROJECT NO.: 971020

EPC CONTRACTOR: HIRAN ENERGY - DESIGN & INSPECTION COMPANY

EPD/EPC CONTRACTOR (GO): PETROIRAN DEVELOPMENT COMPANY

SCALE	SHEET	DRAWING NO.	REV.	BUDGET REF.	LOCATION	SIZE	CLASS	SERIAL NO.	SHEET	REVISION
N.B	AS	BK-GCS-PEDCO-120-EL-DG-0001	08 OF 07	D06	003-073-0164	P	2	P	709040	08 OF 07

DATE	SCALE	DRAWING BY	CHECKED BY	PROJECT ENG.

