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| <br><b>NISOC</b> | نگهداشت و افزایش تولید میدان نفتی بینک<br>سطح الارض<br>احداث ردیف تراکم گاز در ایستگاه جمع آوری بینک |                  |                     |                |            |                |               | <br> |                    |
|                                                                                                   | INSTRUMENT CABLE LIST                                                                                |                  |                     |                |            |                |               |                                                                                                                                                                            |                    |
| شماره پیمان:<br>053 - 073 - 9184                                                                  | پروژه<br>BK                                                                                          | بسته کاری<br>PPL | صادر کننده<br>PEDCO | تجهیزات<br>320 | رشته<br>IN | نوع مدرک<br>LI | سریال<br>0007 | نسخه<br>D01                                                                                                                                                                | شماره صفحه: 1 از 5 |

## طرح نگهداشت و افزایش تولید 27 مخزن

### INSTRUMENT CABLE LIST

#### نگهداشت و افزایش تولید میدان نفتی بینک

|      |          |                           |               |             |                |                 |
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|      |          |                           |               |             |                |                 |
| D01  | FEB.2024 | IFA                       | P.Hajisadeghi | M.Fakharian | S.Faramarzpour |                 |
| D00  | SEP.2023 | IFC                       | P.Hajisadeghi | M.Fakharian | S.Faramarzpour |                 |
| Rev. | Date     | Purpose of Issue / Status | Prepared by:  | Checked by: | Approved by:   | CLIENT Approval |

Class: 1

CLIENT Doc. Number: F0Z-708614

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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| <br><br>NISOC | <p>نگهداشت و افزایش تولید میدان نفتی بینک</p> <p>سطح الارض</p> <p>احداث ردیف تراکم گاز در ایستگاه جمع آوری بینک</p> |       |           |            |         |      |          |  |                    |
|                                                                                               | INSTRUMENT CABLE LIST                                                                                               |       |           |            |         |      |          |                                                                                    |                    |
|                                                                                               | شماره پیمان:                                                                                                        | پروژه | بسته کاری | صادر کننده | تسهیلات | رشته | نوع مدرک | سریال                                                                              | نسخه               |
| 053 - 073 - 9184                                                                              | BK                                                                                                                  | PPL   | PEDCO     | 320        | IN      | LI   | 0007     | D01                                                                                | شماره صفحه: 2 از 5 |

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| <br><br>NISOC | <p>نگهداشت و افزایش تولید میدان نفتی بینک<br/>سطح الارض</p> <p>احداث ردیف تراکم گاز در ایستگاه جمع آوری بینک</p> |           |            |         |      |          |       |      |  |
|                                                                                               | INSTRUMENT CABLE LIST                                                                                            |           |            |         |      |          |       |      |                                                                                    |
| شماره پیمان:<br><br>053 - 073 - 9184                                                          | پروژه                                                                                                            | بسته کاری | صادر کننده | تسهیلات | رشته | نوع مدرک | سریال | نسخه | شماره صفحه: 3 از 5                                                                 |
|                                                                                               | BK                                                                                                               | PPL       | PEDCO      | 320     | IN   | LI       | 0007  | D01  |                                                                                    |

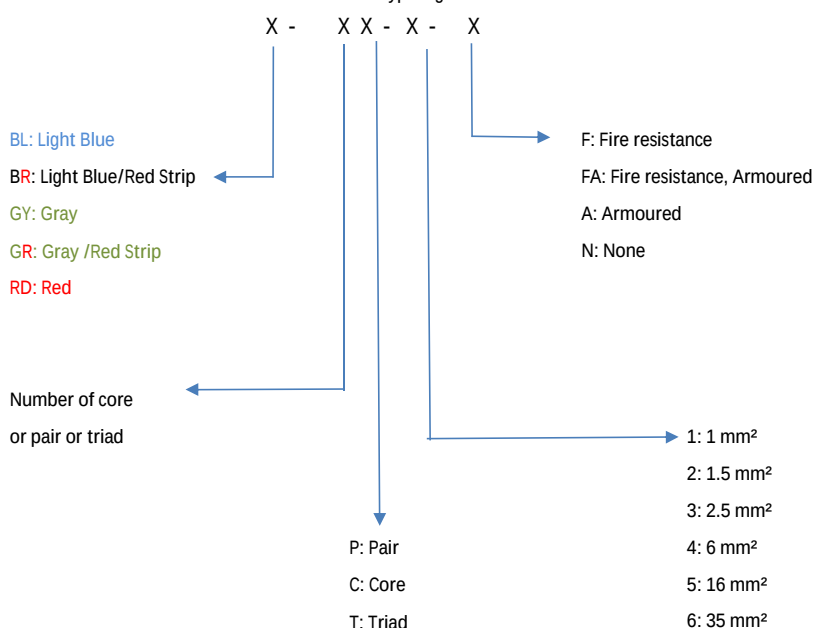
#### GENERAL NOTES:

- 1- Cable length will be finalized after approval of Instrument location.
- 2- Gland Size will be finalized after Instrument Cable/Cable Gland P.O
- 3- Cutting column/Drum no. will be finalized after cable P.O.
- 4- All cables shall be accordance with Flame retardant standard IEC 60332
- 5- Fire Resistant cables shall be accordance with standard IEC 60331.
- 6- All conductors shall be accordance with standard IEC 60228 and the material shall be Tinned copper.
- 7- Outer sheath Material :

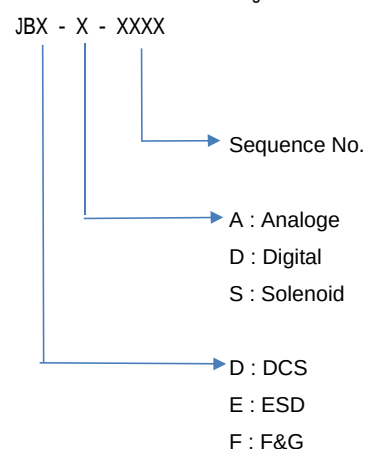
Flame Retardant : PVC , Color : Light Blue for I.S. & Gray for N.I.S

Fire Resistant : PVC , Color : Light Blue with Red Strip for I.S. & Gray with Red Strip for N.I.S & Red for F&G

#### 8- Cable type legend :



#### 9- Junction Box Numbering ::



#### REFERENCES:

- 1 BK-PPL-PEDCO-320-IN-LI-0002\_D02 - I/O LIST FOR CONTROL/ESD SYSTEM
- 2 BK-GNRL-PEDCO-000-IN-SP-0010-D00 SPECIFICATION FOR INSTRUMENT & F&G CABLES
- 3 BK-PPL-PEDCO-320-IN-DG-0007\_D02 INSTRUMENT JUNCTION BOX TERMINATION DIAGRAM

#### ABBREVIATION :

- 1- CU : Conductor (Standard tinned copper)
- 2- XLPE : Insulation (Cross-linked polyethylene, low smoke, zero halogen)
- 3- DW : Drain Wire
- 4- ISC : Individual Screen
- 5- DW : Drain Wire
- 6- OSC : Overall Screen
- 7- PVC : Inner sheath (polyvinyl chloride insulation )
- 8- SWA : Armoure (Steel wire Armord )
- 9- PVC : Outer sheath (polyvinyl chloride insulation)
- 10- FRT : Flame Retardant
- 11- FRS : Fire Resistant

| <br>NISOC | نگهداشت و افزایش تولید میدان نفتی بینک<br>سطح الارض |                                                                                                                        |                     |                |      |          |       |      |  |  |
|-------------------------------------------------------------------------------------------|-----------------------------------------------------|------------------------------------------------------------------------------------------------------------------------|---------------------|----------------|------|----------|-------|------|------------------------------------------------------------------------------------|--|
|                                                                                           | احداث ردیف تراکم گاز در ایستگاه جمع آوری بینک       |                                                                                                                        |                     |                |      |          |       |      |                                                                                    |  |
|                                                                                           | INSTRUMENT CABLE LIST                               |                                                                                                                        |                     |                |      |          |       |      |                                                                                    |  |
| شماره پیمان:                                                                              | پروژه                                               | بسته کاری                                                                                                              | صادرکننده           | تسهیلات        | رشته | نوع مدرک | سریال | نسخه | شماره صفحه: 4 از 5                                                                 |  |
| 9184 – 073 - 053                                                                          | BK                                                  | PPL                                                                                                                    | PEDCO               | 320            | IN   | LI       | 0007  | D01  |                                                                                    |  |
| SUMMARY                                                                                   |                                                     |                                                                                                                        |                     |                |      |          |       |      |                                                                                    |  |
| ITEM                                                                                      | TYPE                                                | DESCRIPTION                                                                                                            | QUANTITY (m)(NOTE1) |                |      |          |       |      |                                                                                    |  |
|                                                                                           |                                                     |                                                                                                                        | ACTUAL (m)          | (PLUS 20%) (m) |      |          |       |      |                                                                                    |  |
| 1                                                                                         | GY-1P-2-A                                           | 1 PAIR * 1.5 mm <sup>2</sup> ,<br>CU/XLPE/DW/OSC/PVC/SWA/PVC,<br>Flame Retardant (IEC-60332) , Gray                    | 40                  | 48             |      |          |       |      |                                                                                    |  |
| 2                                                                                         | GY-7P-1-A                                           | 7 PAIR * 1 mm <sup>2</sup> ,<br>CU/XLPE/DW/OSC/PVC/LC/PVC/SWA/PVC,<br>Flame Retardant (IEC-60332) , Gray               | 450                 | 540            |      |          |       |      |                                                                                    |  |
| 3                                                                                         | GY-1P-3-A                                           | 1 PAIR * 2.5 mm <sup>2</sup> ,<br>CU/XLPE/DW/OSC/PVC/SWA/PVC,<br>Flame Retardant (IEC-60332) , Gray                    | 450                 | 540            |      |          |       |      |                                                                                    |  |
| 4                                                                                         | GR-1P-3-FA                                          | 1 PAIR * 2.5 mm <sup>2</sup> ,<br>CU/Mica-tape/XLPE/DW/OSC/PVC/SWA/PVC,<br>Fire resistant (IEC-60331)-Gray / Red Strip | 450                 | 540            |      |          |       |      |                                                                                    |  |

|                                                                                                        |            |            |                                       |                                                                                                                          |            |            |            |            |             |           |                                   |                    |                       |            |                |                                                                                                                                                                                   |          |                          |                  |            |        |
|--------------------------------------------------------------------------------------------------------|------------|------------|---------------------------------------|--------------------------------------------------------------------------------------------------------------------------|------------|------------|------------|------------|-------------|-----------|-----------------------------------|--------------------|-----------------------|------------|----------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|--------------------------|------------------|------------|--------|
| <div><br/>NISOC</div> |            |            |                                       | <div>تجهيزات و افزایش تولید میدان نفتی بینک<br/>سطح الارض</div> <div>احداث ردیف تراکم گاز در ایستگاه جمع آوری بینک</div> |            |            |            |            |             |           |                                   |                    |                       |            |                | <div></div> |          |                          |                  |            |        |
| INSTRUMENT CABLE LIST                                                                                  |            |            |                                       |                                                                                                                          |            |            |            |            |             |           |                                   |                    |                       |            |                |                                                                                                                                                                                   |          |                          |                  |            |        |
| شماره پیمان:                                                                                           |            |            |                                       | پروژه                                                                                                                    | پسته کاری  | صادر کننده | تجهيزات    | رشته       | نوع مدرک    | سریال     | نسخه                              | شماره صفحه: 5 از 5 |                       |            |                |                                                                                                                                                                                   |          |                          |                  |            |        |
| 9184 – 073 - 053                                                                                       |            |            |                                       | BK                                                                                                                       | PPL        | PEDCO      | 320        | IN         | LI          | 0007      | D01                               |                    |                       |            |                |                                                                                                                                                                                   |          |                          |                  |            |        |
| <div>D01</div>                                                                                         |            |            |                                       |                                                                                                                          |            |            |            |            |             |           |                                   |                    |                       |            |                |                                                                                                                                                                                   |          |                          |                  |            |        |
| ITEM                                                                                                   | Cable Code | Tag No.    | Description                           | Cable No.                                                                                                                | From       | To.        | SYSTEM     | FRT OR FRS | ARMORE TYPE | IS OR NIS | Qty. OF PAIR/<br>TRIPLE/Core/QUAD | CONDUCTOR TYPE     | CONDUCTOR SIZE ( mm2) | Lead Cover | SCREENING      | OUTER SHEATH COLOR                                                                                                                                                                | DRUM No. | INSULATION RATED VOLTAGE | CABLE LENGTH (M) | GLAND SIZE | Remark |
| 1                                                                                                      | -          | PSOV-3201  | Solenoid Valve                        | IC- PSOVS-3201                                                                                                           | PSOV-3201  | JBD-S-2104 | DCS NOTE 1 | FRT        | YES         | NIS       | 1                                 | Pair               | 2.5                   | NO         | Overall Screen | Gray                                                                                                                                                                              | NOTE 4   | 600/1000 V               | NOTE 3           | M20        |        |
| 2                                                                                                      | -          | ESOV-3201  | Solenoid Valve                        | IC- ESOVS-3201                                                                                                           | ESOV-3201  | JBE-S-2106 | ESD NOTE 1 | FRS        | YES         | NIS       | 1                                 | Pair               | 2.5                   | NO         | Overall Screen | Gray / Red Strip                                                                                                                                                                  | NOTE 4   | 600/1000 V               | NOTE 3           | M20        |        |
| 3                                                                                                      | -          | EZSC-3201  | Emergency shutdown Limit Switch Close | IC- EZSC-3201                                                                                                            | EZSC-3201  | JBD-D-2106 | DCS NOTE 1 | FRT        | YES         | NIS       | 1                                 | Pair               | 1.5                   | NO         | Overall Screen | Gray                                                                                                                                                                              | NOTE 4   | 300/500 V                | NOTE 3           | M20        |        |
| 4                                                                                                      | -          | EZSO-3201  | Emergency shutdown Limit Switch Open  | IC- EZSO-3201                                                                                                            | EZSO-3201  | JBD-D-2106 | DCS NOTE 1 | FRT        | YES         | NIS       | 1                                 | Pair               | 1.5                   | NO         | Overall Screen | Gray                                                                                                                                                                              | NOTE 4   | 300/500 V                | NOTE 3           | M20        |        |
| 5                                                                                                      | -          | PIT-3201A  | Pressure Indicator Transmitter        | IC- PIT-3201A                                                                                                            | PIT-3201A  | JBE-A-2105 | ESD NOTE 1 | FRS        | YES         | IS        | 1                                 | Pair               | 1.5                   | NO         | Overall Screen | LT. Blue / Red Strip                                                                                                                                                              | NOTE 4   | 300/500 V                | NOTE 3           | M20        |        |
| 6                                                                                                      | -          | PIT-3201B  | Pressure Indicator Transmitter        | IC- PIT-3201B                                                                                                            | PIT-3201B  | JBE-A-2105 | ESD NOTE 1 | FRS        | YES         | IS        | 1                                 | Pair               | 1.5                   | NO         | Overall Screen | LT. Blue / Red Strip                                                                                                                                                              | NOTE 4   | 300/500 V                | NOTE 3           | M20        |        |
| 7                                                                                                      | -          | PIT-3201C  | Pressure Indicator Transmitter        | IC- PIT-3201C                                                                                                            | PIT-3201C  | JBE-A-2105 | ESD NOTE 1 | FRS        | YES         | IS        | 1                                 | Pair               | 1.5                   | NO         | Overall Screen | LT. Blue / Red Strip                                                                                                                                                              | NOTE 4   | 300/500 V                | NOTE 3           | M20        |        |
| 8                                                                                                      | GY-1P-3-A  | PSOV-3202  | Solenoid Valve                        | IC- PSOVS-3201                                                                                                           | PSOV-3201  | DCS NOTE 2 | DCS NOTE 2 | FRT        | YES         | NIS       | 1                                 | Pair               | 2.5                   | NO         | Overall Screen | Gray                                                                                                                                                                              | NOTE 4   | 600/1000 V               | 450              | M20        |        |
| 9                                                                                                      | GR-1P-3-FA | ESOV-3202  | Solenoid Valve                        | IC- ESOVS-3201                                                                                                           | ESOV-3201  | ESD NOTE 2 | ESD NOTE 2 | FRS        | YES         | NIS       | 1                                 | Pair               | 2.5                   | NO         | Overall Screen | Gray / Red Strip                                                                                                                                                                  | NOTE 4   | 600/1000 V               | 450              | M20        |        |
| 10                                                                                                     | GY-1P-2-A  | EZSC-3202  | Emergency shutdown Limit Switch Close | IC- EZSC-3201                                                                                                            | EZSC-3201  | JBD-D-3201 | DCS NOTE 2 | FRT        | YES         | NIS       | 1                                 | Pair               | 1.5                   | NO         | Overall Screen | Gray                                                                                                                                                                              | NOTE 4   | 300/500 V                | 20               | M20        |        |
| 11                                                                                                     | GY-1P-2-A  | EZSO-3202  | Emergency shutdown Limit Switch Open  | IC- EZSO-3201                                                                                                            | EZSO-3201  | JBD-D-3201 | DCS NOTE 2 | FRT        | YES         | NIS       | 1                                 | Pair               | 1.5                   | NO         | Overall Screen | Gray                                                                                                                                                                              | NOTE 4   | 300/500 V                | 20               | M20        |        |
| 12                                                                                                     | GY-7P-1-A  | JBD-D-3201 | Junction Box                          | MC- JBD-D-3201                                                                                                           | JBD-D-3201 | DCS NOTE 2 | DCS NOTE 2 | FRT        | SWA         | NIS       | 7                                 | PAIR               | 1                     | Yes        | Overall Screen | Gray                                                                                                                                                                              | NOTE 4   | 300/500 V                | 450              | M32        |        |

NOTE 1: NEW DCS/ESD SYSTEM OF GCS UNIT

NOTE 2: EXISTING DCS/ESD SYSTEM OF SIAHMAKAN

NOTE 3:ITENS 1-7 WILL BE PREPARED IN GCS WORK PACKAGE. THE CABLE LENGTH IS CONSIDERED IN GCS UNIT CABLE LIST.

