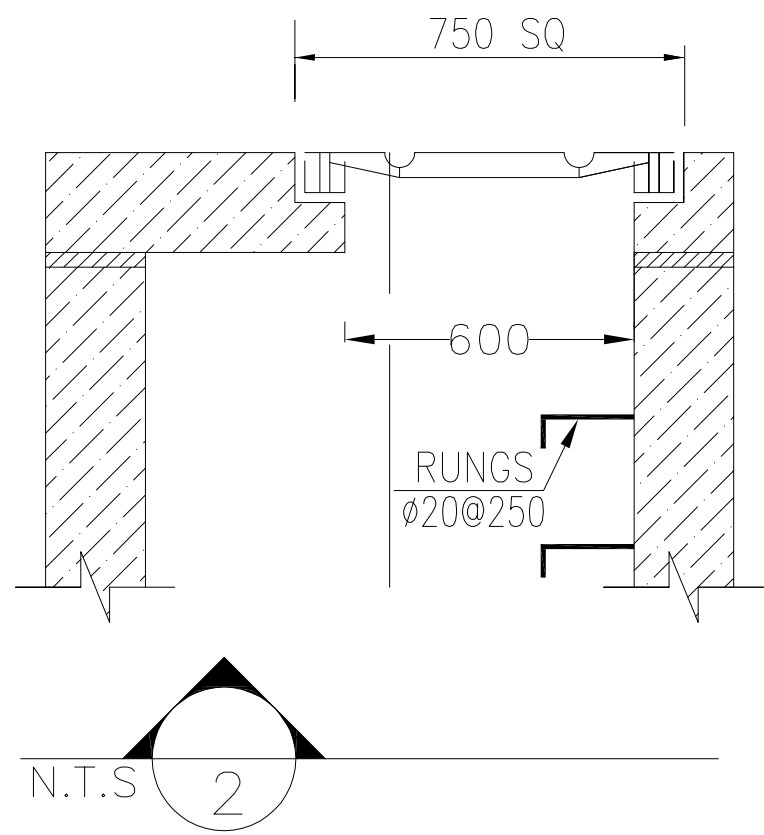


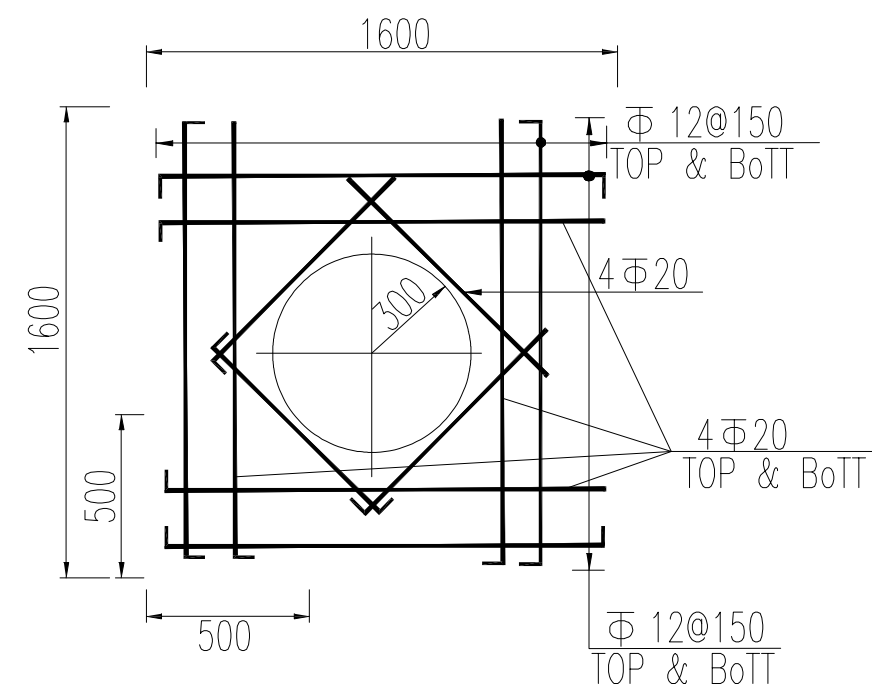
N.T.S 1 MANHOLE FOR ALL AREAS



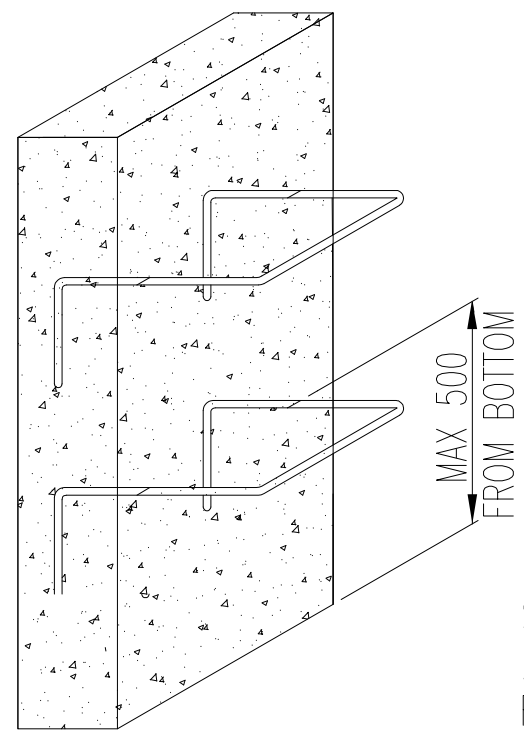
#### MANHOLE DIMENSIONS

FOR  $H \leq 2000$   $D=150$   
SINGLE SQUARE MESH  
FOR  $2000 < H \leq 3000$   $D=250$   
DOUBLE SQUARE MESH  
FOR  $H > 3000$   $D=300$   
DOUBLE SQUARE MESH

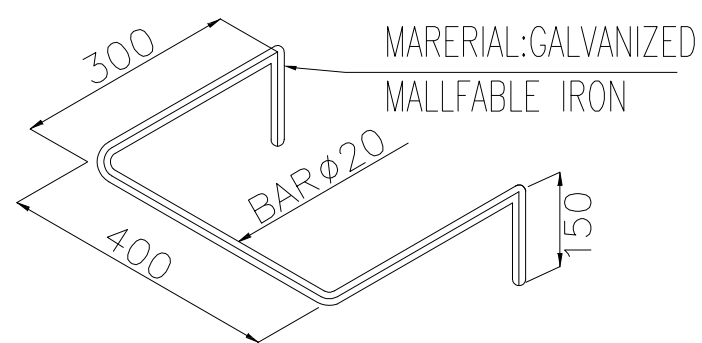
STANDARD INSIDE DIMENSIONS:  
 $A = 1200 \times 1200$  FOR PIPE OUTLET DIAM. 8" ~ 12"



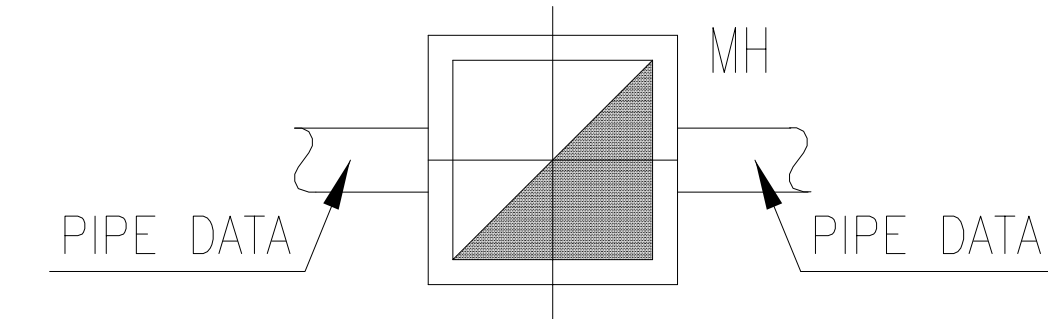
N.T.S 5 COVER REINFORCMENT PLAN  
SC:N.T.S



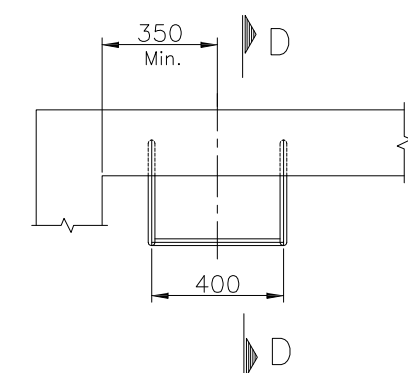
N.T.S 6 LADDER RUNG DETAIL  
SC:N.T.S



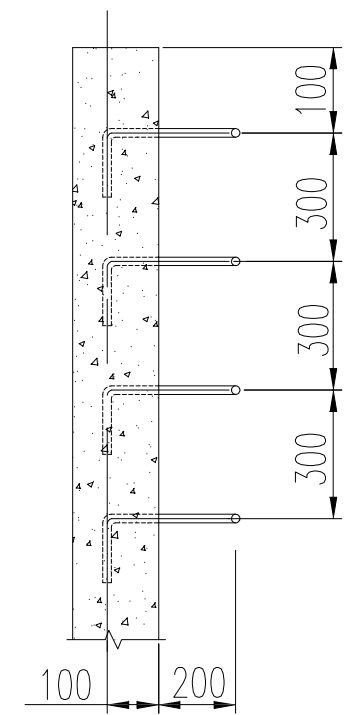
N.T.S 7 IRON STEP PERSPECTIVE  
SC:N.T.S



N.T.S 4 SYMBOL ON U/G DWG



N.T.S 8 IRON STEP PLAN  
SC:N.T.S



D SC:N.T.S

- NOTES
- 1- ALL DIMENSION ARE IN MILLIMETERS UNLESS OTHERWISE STATED.
  - 2- 15mm OF BUTTMENTOUS MATERIAL IS TO PROVIDED AS JOINTS BETWEEN PAVING AND MANHOLES.
  - 3- MANHOLE TOP COVER ELEV. FOR PAVED AREAS HAS THE SAME LEVEL AS FINISHED GRADE AND FOR UNPAVED AREAS IS 50 mm , AS SHOWN IN DRAWING.
  - 4- ACCORDING TO THE SPECIFICATION OF CONCRETE WORKS, 28 DAYS CHARACTERISTIC COMPRESSIVE STRENGTH OF CONCRETE IS 25MPa. (ON CYLINDRICAL SPECIMEN).
  - 5- ACCORDING TO THE SPECIFICATION OF CONCRETE WORKS, 28 DAYS CHARACTERISTIC COMPRESSIVE STRENGTH OF LEAN CONCRETE IS 10MPa. (ON CYLINDRICAL SPECIMEN).
  - 6- TYPE II CEMENT SHALL BE USED UNLESS OTHERWISE INDICATED IN THE GEOTECHNICAL SITE REPORT.
  - 7- REINFORCING BARS SHALL BE S400 ACCORDING TO: ISIRI3132 AND INBC9 WITH MINIMUM TENSILE YIELD STRENGTH 400 N/mm<sup>2</sup>
  - 8- FOR LADDER RUNGS DETAIL SEE SHEET 3/3.
  - 9- UNDERGROUND CONCRETE SHALL BE PROTECTED AND COATED ACCORDING TO RELEVANT SPECIFICATION.
  - 10- AFTER THE APPROVAL OF THE **GEOTECHNICAL REPORT**, THE TYPE OF CEMENT WILL BE ANNOUNCED
  - 11- TO PROTECT THE CONCRETE BODY IN CONTACT WITH THE SOIL SEE BK-GNRL-PEDCO-000-CV-DW-0040

#### LEGEND




- REINFORCED CONCRETE
- LEAN CONCRETE
- BACKFILL
- GRAVEL
- UNPAVED AREA

#### REFERENCE DRAWING

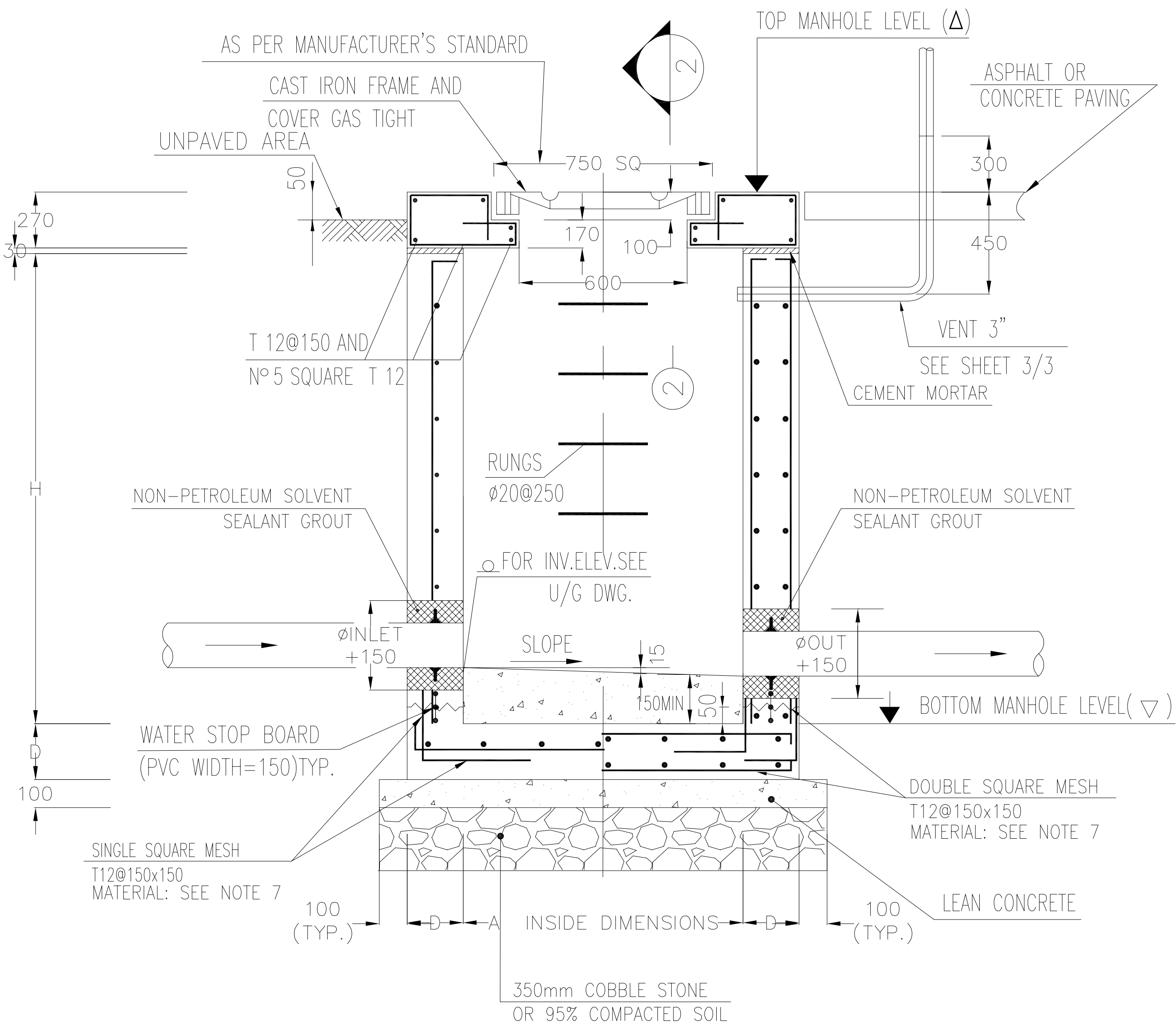
REFERENCE DRAWING	DRG. No.
Specification For Concrete Work	BK-GNRL-PEDCO-000-ST-SP-0001
Specification For Sewerage & Drainage	BK-GNRL-PEDCO-000-CV-SP-0005
Underground System Manholes	NI02C-SD-1006-2/10-A3
General Notes-Reinforced Concrete Structures	BK-GNRL-PEDCO-000-ST-DW-0012
SIPHON PIPE SEAL, HOLES REINFORCEMENT & LADDER RUNGS	NI02C-SD-1006-10/10-A3
STANDARD DETAILS OF MISCELLANEOUS ITEMS	BK-GNRL-PEDCO-000-CV-DW-0040

#### KEY PLAN

D05	AUG.2023	AFC	R.BERLOUE	M.PAKHARHAN	A.M.MOSHEMI	***
D04	NOV.2022	IFA	R.BERLOUE	M.PAKHARHAN	M.MEHRSHAD	***
D03	OCT.2022	IFA	R.BERLOUE	M.PAKHARHAN	M.MEHRSHAD	***
D02	AUG.2022	IFA	R.BERLOUE	M.PAKHARHAN	M.MEHRSHAD	***
D01	JAN.2022	IFA	R.BERLOUE	M.PAKHARHAN	M.MEHRSHAD	***
D00	AUG.2021	IFI	M.ASGHARNEJAD	M.PAKHARHAN	SH.GHALIKAR	***
REV.	DATE	P.O.I.S	PREP.	CHK.	APP.	AUT.

PROJECT NAME:		BINAK OILFIELD DEVELOPMENT GENERAL			
PROJECT NO.:		971020			
EPC CONTRACTOR:		EPD/EPC CONTRACTOR (GC):			
 HIRGAN ENERGY - DESIGN & INSPECTION COMPANIES		 PEDCO		 PETROIRAN DEVELOPMENT COMPANY	
DRAWING TITLE:		STANDARD DRAWING FOR MANHOLES OILY MANHOLE DETAIL			
SCALE	SIZE	DRAWING NO.		SHEET NO.	REV.
N.T.S	A3	BK-GNRL-PEDCO-000-CV-DW-0005		01 OF 03	D05

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BINAK OILFIELD DEVELOPMENT GENERAL					
DATE	SCALE	DRAWING BY	CHECKED BY	PROJECT ENG.	
NO CONSTRUCTION PERMITTED UNLESS DRAWING APPROVED					
APPROVED FOR CONSTRUCTION			BY:	DATE:	
SCALE	SIZE	DRAWING NO.	SHEET NO.	REV.	BUDGET REF.
N.T.S	A3	BK-GNRL-PEDCO-000-CV-DW-0005	01 OF 03	D05	053-073-9184



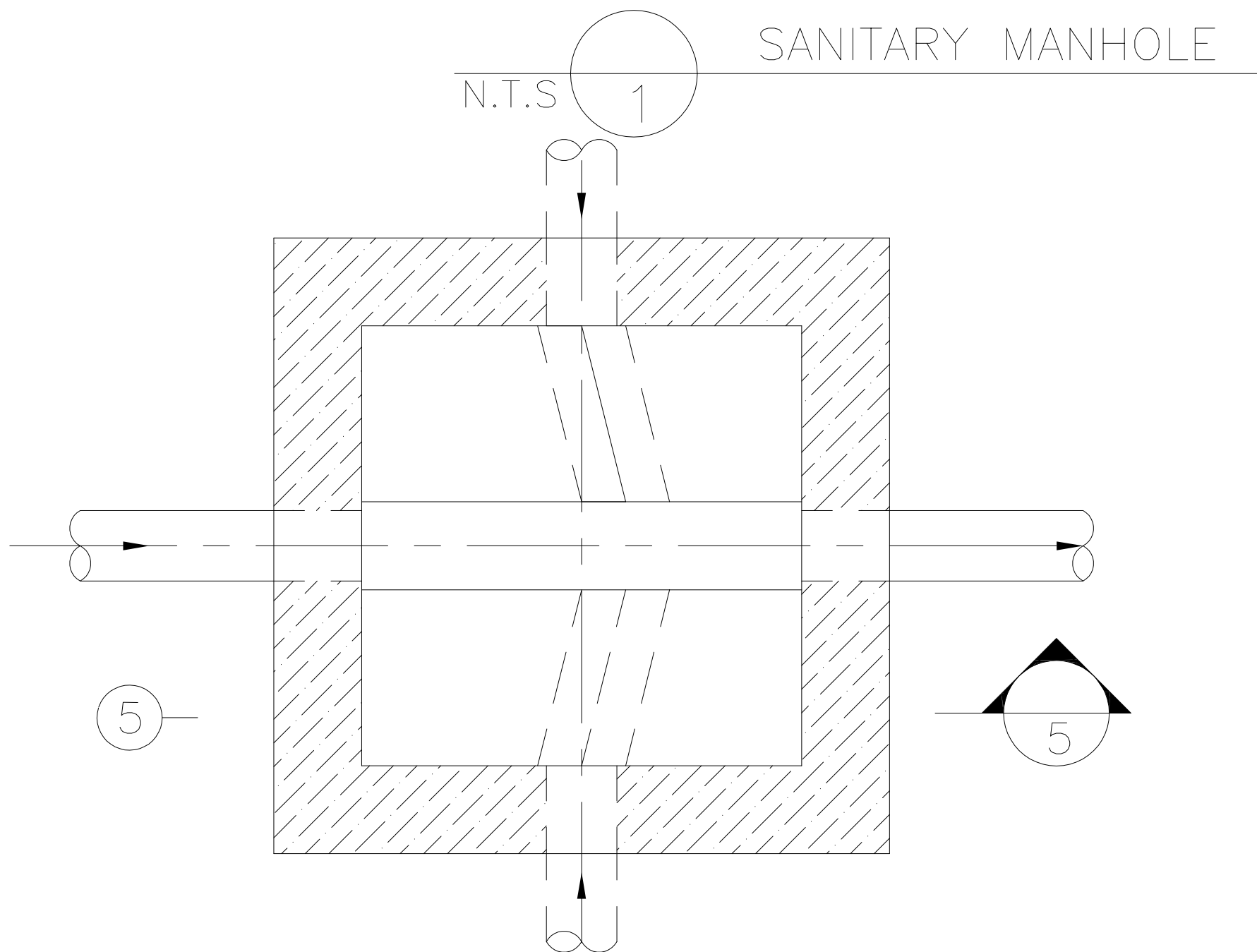
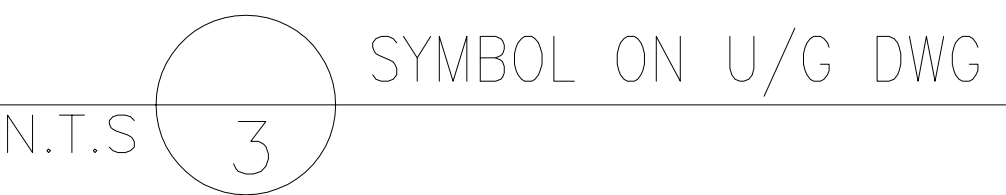
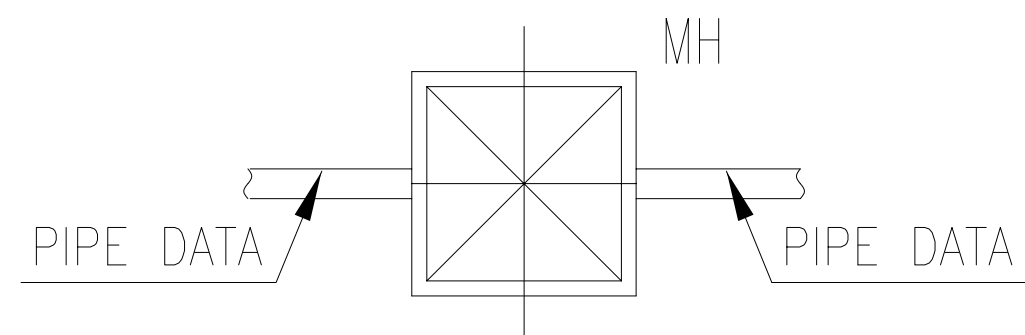
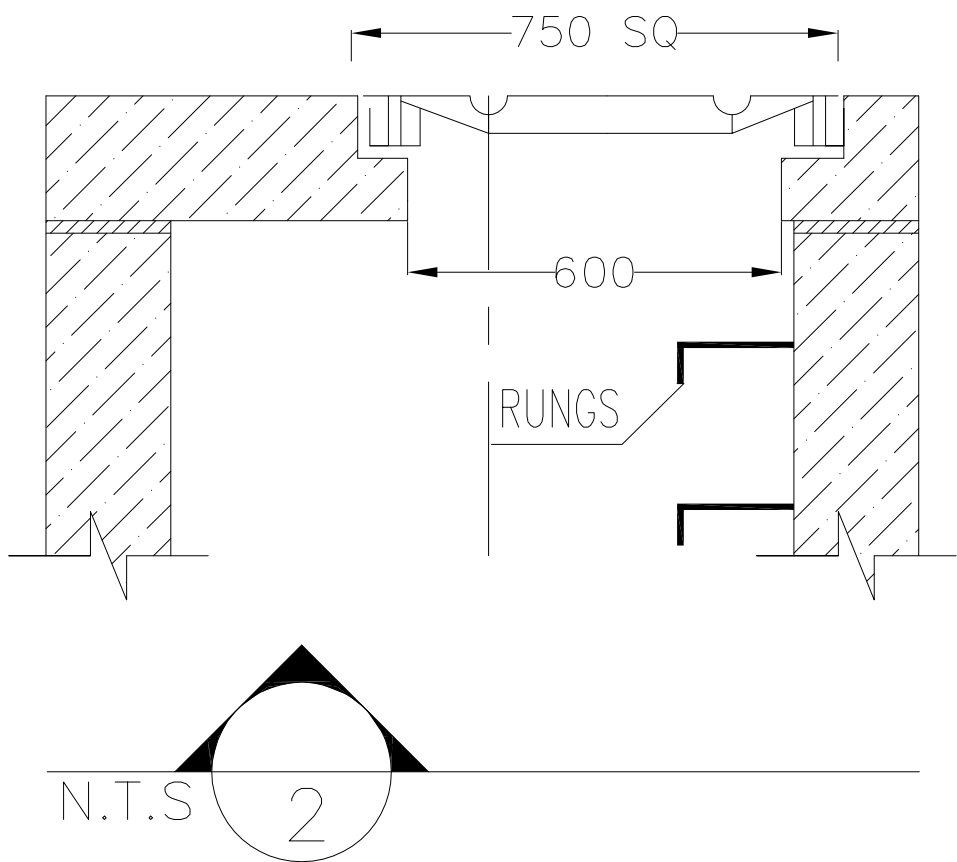
### MANHOLE DIMENSIONS

FOR H<2000 D=150  
SINGLE SQUARE MESH

FOR 2000<H<3000 D=250  
DOUBLE SQUARE MESH

FOR H>3000 D=300  
DOUBLE SQUARE MESH

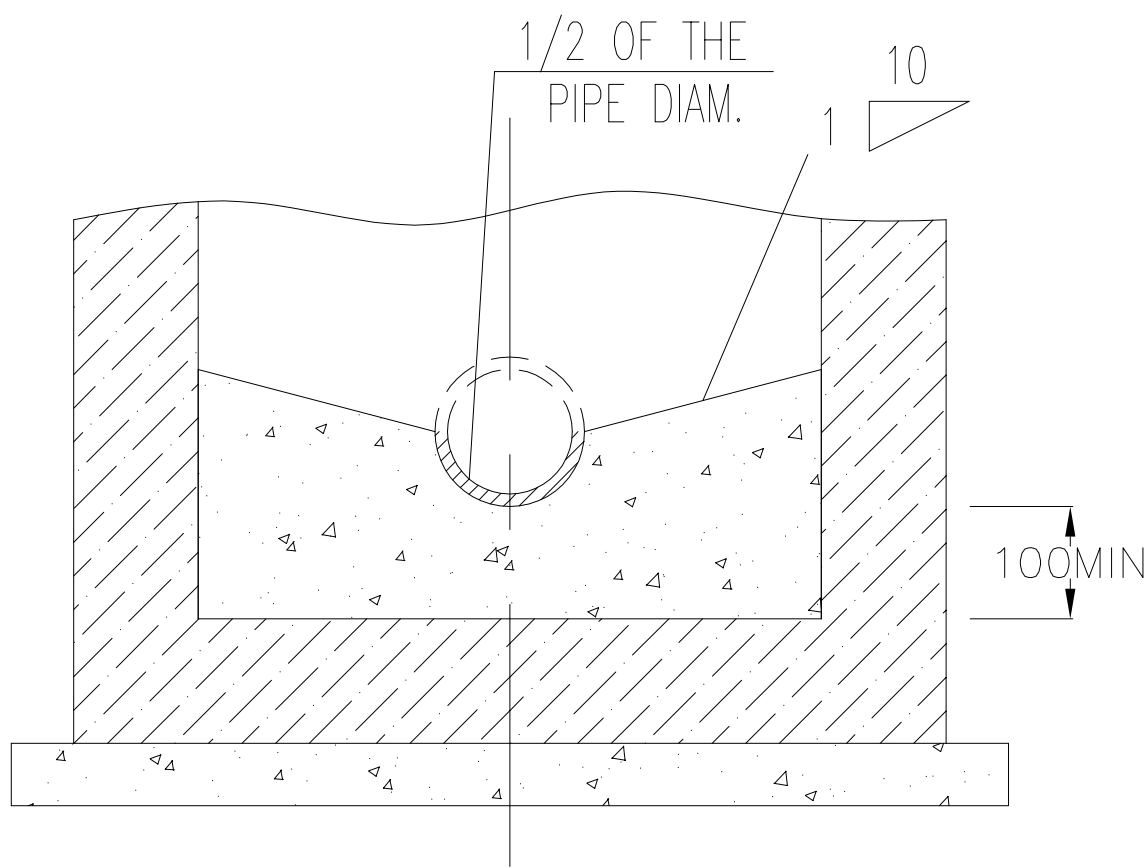
STANDARD INSIDE DIMENSIONS:  
A=1200x1200 FOR PIPE OUTLET DIAM. 6"~12"



N.T.S

4

TYPICAL PLAN



N.T.S

5

- NOTES
- 1- ALL DIMENSION ARE IN MILLIMETERS UNLESS OTHERWISE STATED.
  - 2- 15mm OF BIUTMENOUS MATERIAL IS TO PROVIDED AS JOINTS BETWEEN PAVING AND MANHOLES.
  - 3- MANHOLE TOP COVER ELEV. FOR PAVED AREAS HAS THE SAME LEVEL AS FINISHED GRADE AND FOR UNPAVED AREAS IS 50 mm , AS SHOWN IN DRAWING.
  - 4- ACCORDING TO THE SPECIFICATION OF CONCRETE WORKS, 28 DAYS CHARACTERISTIC COMPRESSIVE STRENGTH OF CONCRETE IS 25MPa. (ON CYLINDRICAL SPECIMEN).
  - 5- ACCORDING TO THE SPECIFICATION OF CONCRETE WORKS, 28 DAYS CHARACTERISTIC COMPRESSIVE STRENGTH OF LEAN CONCRETE IS 10MPa. (ON CYLINDRICAL SPECIMEN).
  - 6- TYPE II CEMENT SHALL BE USED UNLESS OTHERWISE INDICATED IN THE GEOTECHNICAL SITE REPORT.
  - 7- REINFORCING BARS SHALL BE S400 ACCORDING TO: ISIRI3132 AND INBC9 WITH MINIMUM TENSILE YIELD STRENGTH 400 N/mm<sup>2</sup>
  - 8- FOR LADDER RUNGS DETAIL SEE SHEET 3/3.
  - 9- UNDERGROUND CONCRETE SHALL BE PROTECTED AND COATED ACCORDING TO RELEVANT SPECIFICATION.
  - 10- AFTER THE APPROVAL OF THE **GEOTECHNICAL REPORT**, THE TYPE OF CEMENT WILL BE ANNOUNCED
  - 11- TO PROTECT THE CONCRETE BODY IN CONTACT WITH THE SOIL SEE **BK-GNRL-PEDCO-000-CV-DW-0040**



### LEGEND

- REINFORCED CONCRETE
- LEAN CONCRETE
- BACKFILL
- GRAVEL
- UNPAVED AREA

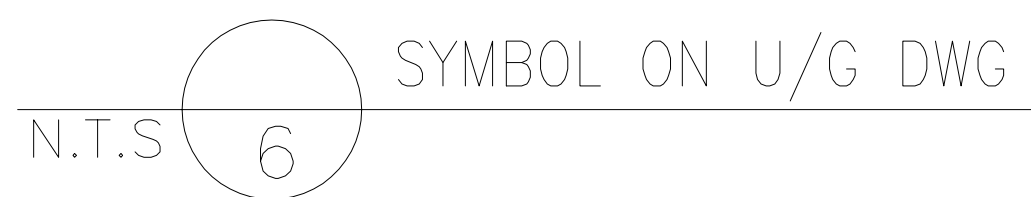
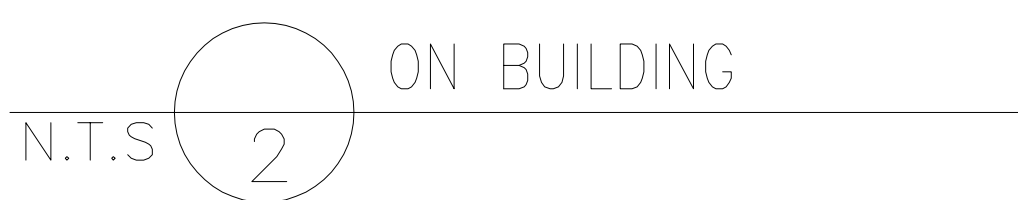
REFERENCE DRAWING	DRG. No.
Specification For Concrete Work	BK-GNRL-PEDCO-000-ST-SP-0001
Specification For Sewerage & Drainage	BK-GNRL-PEDCO-000-CV-SP-0005
Underground System Manholes	NI0EC-SD-1006-2/10-A3
General Notes-Reinforced Concrete Structures	BK-GNRL-PEDCO-000-ST-DW-0012
SIPHON PIPE SEAL, HOLES REINFORCEMENT & LADDER RUNGS	NI0EC-SD-1006-10/10-A3
STANDARD DETAILS OF MISCELLANEOUS ITEMS	BK-GNRL-PEDCO-000-CV-DW-0040

### KEY PLAN

D05	AUG.2023	AFC	R.BERLOUE	M.PAKHARIAN	A.M.MOSHEI	***
D04	NOV.2022	IFA	R.BERLOUE	M.PAKHARIAN	M.MEHRSHAD	***
D03	OCT.2022	IFA	R.BERLOUE	M.PAKHARIAN	M.MEHRSHAD	***
D02	AUG.2022	IFA	R.BERLOUE	M.PAKHARIAN	M.MEHRSHAD	***
D01	JAN.2022	IFA	R.BERLOUE	M.PAKHARIAN	M.MEHRSHAD	***
D00	AUG.2021	IFI	M.ASGHARNEJAD	M.PAKHARIAN	SH.GHALIKAR	***
REV.	DATE	P.O.I.S	PREP.	CHK.	APP.	AUT.

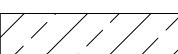
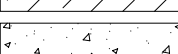
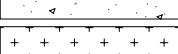



PROJECT NAME:		BINAK OILFIELD DEVELOPMENT GENERAL			
PROJECT NO.:		971020			
EPC CONTRACTOR:		EPD/EPC CONTRACTOR (GC):			
 HIRGAN ENERGY - DESIGN & INSPECTION COMPANIES		 PETROIRAN DEVELOPMENT COMPANY			
DRAWING TITLE: STANDARD DRAWING FOR MANHOLES SANITARY MANHOLE DETAIL					
SCALE	SIZE	DRAWING NO.		SHEET NO.	REV.
N.T.S	A3	BK-GNRL-PEDCO-000-CV-DW-0005		02 OF 03	D05

REV.	DESCRIPTION	BY	DATE	BY	DATE
		CHECKED		REV. APPR.	
احمل و کلیه نسخ این نقشه و حق اقتباس متعلق به شرکت ملی مناطق نفت خیز جنوب میباشد.					
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BINAK OILFIELD DEVELOPMENT GENERAL					
DATE	SCALE	DRAWING BY	CHECKED BY	PROJECT ENG.	
NO CONSTRUCTION PERMITTED UNLESS DRAWING APPROVED					
APPROVED FOR CONSTRUCTION			BY:	DATE:	
BUDGET REF.	LOCATION	SIZE	CLASS	SERIAL NO.	SHEET
053-073-9184	F	4	S	707251	02
					D05







**NOTES**

- 1- MATERIALS: CARBON STEEL. COMMERCIAL PIPE  
ø 3" SCH.40.
- 2- BATTERY LIMIT BETWEEN CIVIL WORKS AND PIPING.
- 3- OUTSIDE PROCESS AND DANGEROUS AREAS.
- 4- TO INSTALL 30m. FAR FROM FURNACES AND FLAMES  
(TO REDUCE TO 15m. IF H>15m.)
- 5- FLAME ARRESTORS TO BE PROVIDED IN DANGEROUS  
AREA AND ALONG ROADS.
- 6- IN DANGEROUS AREAS WITH THE POSSIBILITY OF IGNITION,  
FLAME ARRESTOR SHOULD BE USED FOR OUTLET  
OF THE VENT PIPES.
- 7- AT THE HEIGHT OF VENT PIPE MORE THAN 800mm,  
SUPPORTS SHOULD BE CONSIDERD.
- 8- PROVIDE SLOPE(0.2%) TO THE MANHOLE.MAX DIFFERENCE  
ELEV. IN UNDERGROUND ROUTING IS 100mm.
- 9- AFTER THE APPROVAL OF THE GEOTECHNICAL  
REPORT, THE TYPE OF CEMENT WILL BE ANNOUNCED

LEGEND	
	REINFORCED CONCRETE
	LEAN CONCRETE
	BACKFILL
	GRAVEL
	UNPAVED AREA
	MASS CONCRETE

REFERENCE DRAWING	DRG. No.
Specification For Concrete Work	BK-CNRM-PEDCO-000-ST-SP-0001
Specification For Sewerage & Drainage	BK-CNRM-PEDCO-000-CV-SP-0005
Underground System Manholes	NI0EC-SD-1006-2/10-A3
General Notes-Reinforced Concrete Structures	BK-CNRM-PEDCO-000-ST-DW-0012
SIPHON PIPE SEAL, HOLES REINFORCEMENT & LADDER RUNGS	NI0EC-SD-1006-10/10-A3
STANDARD DETAILS OF MISCELLANEOUS ITEMS	BK-CNRM-PEDCO-000-CV-DW-0040

KEY PLAN
----------

D05	AUG.2023	APC	R.BERLOUE	M.FAKHARAN	A.M.MOSEN	**										
D04	NOV.2022	IFA	R.BERLOUE	M.FAKHARAN	M.MEHRSHAD	**										
D03	OCT.2022	IFA	R.BERLOUE	M.FAKHARAN	M.MEHRSHAD	**										
D02	AUG.2022	IFA	R.BERLOUE	M.FAKHARAN	M.MEHRSHAD	**	***	*****	**..	***.***	**..	***.***				
D01	JAN.2022	IFA	R.BERLOUE	M.FAKHARAN	M.MEHRSHAD	**	REV.	DESCRIPTION	BY	DATE	BY	DATE				
D00	AUG.2021	IFI	M.ASGHARNEJAD	M.FAKHARAN	S.H.GHALKAR	**			CHECKED		REV. APPR.					
REV.	DATE	P.O.I.S	PREP.	CHK.	APP.	AUT.										
PROJECT NAME:							BINAK OILFIELD DEVELOPMENT GENERAL									
PROJECT NO.:							971020									
EPC CONTRACTOR:			EPD/EPC CONTRACTOR (GC):				<div></div> <div>THE ORIGINAL AND ALL COPIES OF THIS DRAWING TOGETHER WITH THE COPYRIGHT THEREIN ARE THE SOLE PROPERTY OF N.I.S.O.C./ FIELDS</div>									
<div></div> <div>HIRGAN ENERGY – DESIGN &amp; INSPECTION COMPANIES</div>			<div></div> <div>PETROIRAN DEVELOPMENT COMPANY</div>													
DRAWING TITLE:																
STANDARD DRAWING FOR MANHOLES VENT DETAIL							NO CONSTRUCTION PERMITTED UNLESS DRAWING APPROVED									
SCALE							APPROVED FOR CONSTRUCTION		BY:		DATE:					
SIZE		DRAWING NO.			SHEET NO.		BUDGET REF.		LOCATION	SIZE	CLASS	SERIAL NO.	SHEET	REVISION		
N.T.S		A3		BK-GNRAL-PEDCO-000-CV-DW-0005			03 OF 03		D05	053-073-9184	F	4	S	707251	03	D05