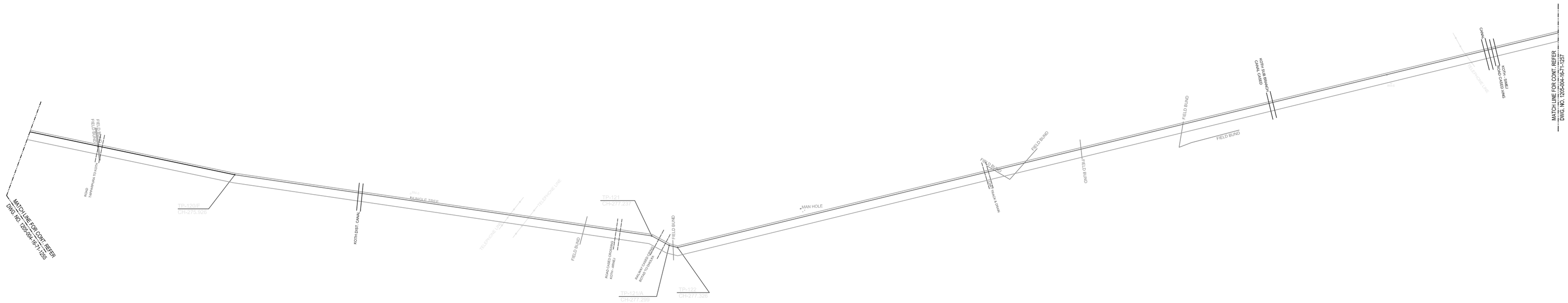
TURNING POINT (TP)	TP-120/F; TP-121; TP-121/A; TP-122
DEFLECTION ANGLE ("_" '_")	3°30'00"L; 20°00'00"R; 14°00'00"L; 28°00'00"L
DISTANCE BETWEEN TP's (m)	651.500; 1311.380; 62.010; 27.340; 2947.77
STATE & DISTRICT	DHOLKA; AHEMADABAD; GUJARAT

SURVEY DETAILS

PLANIMETRY

SCALE :-

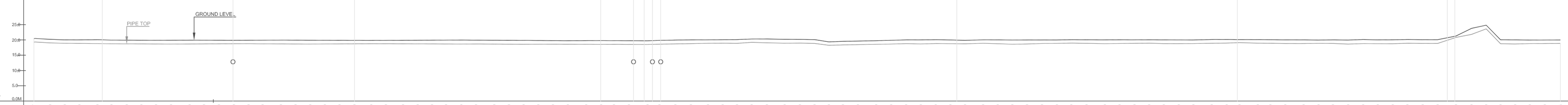
ALONG LINE 1:5000
ACROSS LINE 1:5000



GROUND PROFILE

SCALE :-

HORIZONTAL 1:5000
VERTICAL 1:500



REFERENCE DATUM

GROUND LEVELS(m)	20.427; 20.185; 20.000; 19.990; 20.040; 19.920; 19.900; 19.880; 19.860; 19.870; 19.900; 19.890; 19.920; 19.900; 19.880; 19.860; 19.840; 19.830; 19.810; 19.830; 19.850; 19.870; 19.910; 19.920; 19.930; 19.900; 19.870; 19.850; 19.830; 19.790; 19.760; 19.730; 19.750; 19.770; 19.740; 19.720; 19.700; 19.830; 19.940; 19.990; 20.010; 20.060; 20.080; 20.270; 20.290; 20.180; 20.130; 20.090; 19.340; 19.510; 19.610; 19.730; 19.860; 20.000; 20.060; 19.970; 19.850; 20.010; 19.990; 19.950; 19.970; 19.960; 19.970; 20.060; 20.100; 19.990; 20.020; 20.010; 20.020; 19.990; 19.980; 19.960; 20.100; 20.110; 20.090; 20.070; 20.050; 20.000; 20.000; 19.930; 19.990; 19.930; 20.100; 19.990; 20.030; 20.100; 20.060; 20.050; 20.050; 21.250; 23.750; 24.800; 20.030; 19.990; 19.930; 19.950; 19.966
PIPE TOP LEVELS(m)	19.253; 19.00; 18.870; 18.820; 18.780; 18.720; 18.690; 18.670; 18.650; 18.630; 18.640; 18.670; 18.700; 18.720; 18.730; 18.690; 18.670; 18.650; 18.630; 18.660; 18.680; 18.710; 18.720; 18.740; 18.710; 18.690; 18.670; 18.650; 18.630; 18.640; 18.620; 18.590; 18.550; 18.570; 18.580; 18.560; 18.540; 18.510; 18.530; 18.480; 18.580; 18.680; 18.770; 18.870; 18.920; 18.850; 19.180; 19.030; 18.900; 18.940; 18.820; 18.220; 18.340; 18.430; 18.540; 18.620; 18.760; 18.660; 18.790; 18.750; 18.710; 18.870; 18.730; 18.570; 18.640; 18.810; 18.840; 18.940; 18.880; 18.730; 18.810; 18.860; 18.910; 18.760; 18.760; 18.780; 18.880; 18.950; 19.050; 18.910; 18.880; 18.800; 18.790; 18.840; 18.830; 18.610; 18.780; 18.750; 18.740; 18.880; 18.820; 18.820; 20.800; 21.780; 23.580; 18.740; 18.650; 18.780; 18.800; 18.816
DISTANCE BETWEEN LEVEL POINTS (IN METRES)	53.0; 48.0; 48.0; 59.0; 46.0; 50.0; 48.0; 48.0; 49.0; 61.0; 47.0; 49.0; 49.0; 48.0; 46.0; 60.0; 48.0; 48.0; 48.0; 48.0; 49.0; 55.0; 48.0; 56.0; 48.0; 47.0; 46.0; 50.0; 48.0; 60.0; 48.0; 48.0; 48.0; 49.0; 60.0; 49.0; 49.0; 61.0; 39.0; 52.0; 51.0; 56.0; 48.0; 47.0; 48.0; 50.0; 58.0; 50.0; 48.0; 47.0; 46.0; 49.0; 60.0; 49.0; 49.0; 48.0; 49.0; 48.0; 48.0; 59.0; 48.0; 48.0; 48.0; 49.0; 49.0; 47.0; 50.0; 60.0; 48.0; 49.0; 48.0; 48.0; 48.0; 48.0; 60.0; 49.0; 42.0; 60.0; 41.0; 49.0; 60.0; 49.0; 47.0; 50.0; 49.0; 48.0; 49.0; 48.0; 50.0; 49.0; 60.0; 51.0; 48.0; 47.0; 48.0; 48.0; 49.0; 51.0
SURFACE /TERRAIN DETAILS	CANAL; CANAL; CANAL

PIPELINE DETAILS

CLASS/ZONE LOCATION	NOT APPLICABLE
DESIGN FACTOR	0.72
LINE PIPE DETAILS – MATERIAL	API 5L Gr. X-70, HSAW/ LSAW
LINE PIPE DETAILS – O.D.X. WALL THICKNESS (mm x mm)	610, 7.1; 610, 7.9; 610, 7.1
CUMULATIVE CHAINAGE (KM METRES) (000 + 000)	275.274; 275.327; 275.375; 275.423; 275.482; 275.538; 275.578; 275.626; 275.674; 275.723; 275.794; 275.831; 275.880; 275.929; 275.977; 276.023; 276.083; 276.131; 276.179; 276.227; 276.275; 276.324; 276.379; 276.427; 276.483; 276.531; 276.578; 276.624; 276.674; 276.722; 276.782; 276.830; 276.878; 276.926; 276.974; 277.023; 277.083; 277.132; 277.174; 277.223; 277.284; 277.323; 277.375; 277.426; 277.482; 277.530; 277.577; 277.625; 277.675; 277.733; 277.783; 277.831; 277.878; 277.924; 277.973; 278.033; 278.082; 278.131; 278.179; 278.228; 278.276; 278.324; 278.383; 278.431; 278.479; 278.527; 278.576; 278.625; 278.672; 278.722; 278.782; 278.830; 278.879; 278.927; 278.975; 279.024; 279.072; 279.132; 279.181; 279.223; 279.283; 279.324; 279.373; 279.433; 279.482; 279.529; 279.579; 279.628; 279.676; 279.725; 279.773; 279.823; 279.872; 279.932; 279.983; 280.031; 280.078; 280.126; 280.174; 280.223; 280.274
SPECIAL PROVISIONS	275/274 KM; 276/KM; 277/KM; 278/KM; 279/KM; 280/KM; 280/274 KM
PIPE LINE COVER MINIMUM (METRES)	1.0; 1.2; 1.0; 1.5; 1.0; 1.2; 1.0; 1.2; 1.0; 1.2; 1.0; 1.5; 1.0; 1.5; 1.5; 1.0
CROSSINGS	ROAD CASED CROSSING 275+459 275+530; KOTH DIST. CANAL 276+289 276+339; ROAD CASED CROSSING 277+113 277+150; RAILWAY CASED CROSSING 277+223 277+265.5; CART TRACK & DRAIN 278+258 278+310; KOTH SUB BRANCH CANAL CASED 279+198 279+234; CANAL 279+488 279+538; ROAD CASED CROSSING 279+882 279+932; NCPL ABUT ROAD CASED CROSSING
SPECIAL INSTALLATION FITTING/MARKERS	W; W; W; W; W; K; W; W; K
COATING SCHEME	LINE PIPE: THREE LAYER POLYETHYLENE COATING (3LPE) (MIN. 2.5 mm THK) AS PER SPEC. No. 6-71-0041 AND FIELD JOINT COATING HEAT SHRINK SLEEVE AS PER SPEC. NO. 6-71-0044
CATHODIC PROTECTION INSTALLATIONS	REFER GENERAL NOTE-4

SUB-SOIL DETAILS

SOIL RESISTIVITY (OHM-M) 1.50 2.50	REFER GENERAL NOTE-5
SOIL STRATIFICATION DEPTH IN (m)	REFER GENERAL NOTE-5

TOPOGRAPHIC SYMBOLS

PROPOSED PIPE LINE; EXISTING PIPE LINE; TURNING POINT; INTERMEDIATE POINT; METALLED ROAD; UNMETALLED ROAD; RAILWAY LINE; STREAM > 5m WIDTH; STREAM <5m WIDTH (DRY); STREAM (PERENNIAL) > 5 m; CANAL (DESCRIBED); BRIDGE; POWER LINE; TELEPHONE LINE; FENCES; GROUND PROFILE; DAM (DESCRIBED); WATER TANK, LAKE OR RESERVOIR; QUARRY; SWAMP OR MARSH; MUD; WELL (DESCRIBED)/TUBEWELL; PLACE OF WORSHIP; MONUMENT; HUTS (TEMPORARY); HUTS (PERMANENT); GRAVES; TREE

PIPELINE SYMBOLS

CATHODIC PROTECTION TEST STATION; POTENTIAL GRADIENT CONTROL MAT (PGCM); TRANSFORMER RECTIFIER; AC INTERFERANCE MITIGATION Zn RIBBON PARALLEL TO PIPE; ANODE GROUND BED; EXISTING CABLE/ PIPELINE CROSSING; HOT BEND (RHID); CS CODUIT FOR OFC; OFC PULLING PIT; UNCASED CROSSING; CASED CROSSING; CONTINUOUS CONCERETE WEIGHTING; GEOTEXTILE BAGS; INTERMEDIATE SCRAPER STATION; INSULATING JOINT; SCRAPER TRAP; KM MARKER; PIPE LINE WARNING SIGN; AERIAL MARKER; NAVIGABLE WATER WAY PIPE LINE WARNING SIGN; DIRECTION MARKER; HDPE DUCT FOR OFC; SECTIONALISING VALVES; ZINC GROUNDING CELL

SOIL SYMBOLS

INORGANIC CLAY WITH HIGH PLASTICITY; INORGANIC CLAY WITH MEDIUM PLASTICITY; CLAYEY SAND; SILTY SAND/ POORLY GRADED SAND (BLACK COTTON); INORGANIC CLAY WITH LOW PLASTICITY; INORGANIC SILTY CLAY WITH MEDIUM PLASTICITY; WELL GRADED SAND; INORGANIC CLAY WITH LOW PLASTICITY; ROCK; WELL GRADED GRAVELS; SILT ROCK WITH KANKRES; WHITE LIME WITH KANKARS; POORLY GRADED SAND; CLAY WITH KANKAR BASALT; POORLY GRADED GRAVELS; SILTY GRAVELS/POORLY GRADED; CLAYEY GRAVELS/POORLY GRADED; CLAY WITH KANKAR; WEATHERED BASALT; CLAY; SILTY CLAY; SILTY SAND; SANDY CLAY WITH KANKAR; MOORUM WITH BOULDERS; WEATHERED ROCK; MOORUM; RED CLAY WITH KANKARS; SANDY MOORUM; RED ROCK; HARD ROCK; MOORUM WITH GRAVELS; EXPOSED ROCK; GREYISH CLAY; EXPOSED WEATHERED BASALT; SILTY CLAY WITH MOORUM; CLAY WITH MOORUM; BLACK COTTON SOIL WITH KANKAR; SANDY GRAVEL; BLACK COTTON SOIL WITH KANKARS; SILTY CLAY WITH SAND; SANDY CLAY; RED ROCK; CLAYEY SILT; SILTY CLAY WITH KANKARS; SILTY SAND WITH KANKARS; CLAYEY SILT WITH KANKARS; BLACK SILTY CLAY; SANDY SILT; EXPOSED WEATHERED ROCK; CLAY WITH GRAVELS

GENERAL NOTES :-

1. THE LOCATIONS ARE EXACT AS PER FIELD SURVEY.
2. FOR ALL CROSSINGS, THE THICKNESS OF CASING PIPES PROVIDED AS PER SPECIFIC REQUIREMENTS & THE SAME IS TABULATED IN B.O.M. ALL THE CROSSINGS EXECUTED AS PER RELEVANT OIB STANDARD/DRAWINGS.
3. LOCATION OF SLOPE BREAKERS ARE PROVIDED AS PER STANDARD & AS PER INSTRUCTIONS OF ENGINEER-IN-CHARGE.
4. INSTALLATION OF CATHODIC PROTECTION FACILITIES PROVIDED AS PER DRAWINGS/ DOCUMENTS SUBMITTED BY CONTRACTOR AND APPROVED BY COMPANY.
5. FOR DETAILS REGARDING SOIL STRATIFICATION AND SOIL RESISTIVITY ALONG THE ROUTE, REFER M/S PETRO IT'S SOIL INVESTIGATION & RESISTIVITY REPORT.
6. ANTI BUOYANCY CONTROL (CONCRETE WEIGHT COATING) AND GEOTEXTILE BAGS, IF REQUIRE, SHALL BE DECIDED AT SITE (BESIDE THE LOCATION AS SHOWN IN ALIGNMENT SHEET) CASE TO CASE BASIS AND AS PER INSTRUCTION OF ENGINEER-IN-CHARGE.

NOTES :-

1. ALL LEVELS ARE IN "METERS" AND CORRESPOND TO MEAN SEA LEVEL (MSL).
2. 0.00 CHAINAGE CORRESPONDS TO INSULATING JOINT AT VADINAR.
3. ANTI BUOYANCY MEASURES, IF REQUIRED, SHALL BE DECIDED AT SITE IN CONSULTATION WITH ENGINEER-IN-CHARGE.
4. THE EXTENT OF CASED CROSSING PROVIDED AS PER INSTRUCTION OF ENGINEER-IN-CHARGE.

BILL OF MATERIAL FOR THIS DRAWING

DESCRIPTION	ECIL	EIL	BORL		
610	7.1	3LPE		861.926	K.M. POST 1
610	7.9	3LPE		48.080	DIRECTION MARKER 1
					AERIAL MARKER 1
				5000	INSULATING JOINTS 1
					HOT BENDS
					NAVIGABLE WATERWAY
762	10.3	–		35.200	WARNING MARKER 10
762	6.4	–		126.025	OFC JOINT PIT 2
168.3	6.4	–		161.225	CP TEST STATION 10

AS BUILT DRAWING

REFERENCE DRAWINGS

TITLE	NUMBER
CROSSING CHAINAGE(m)	
ROAD 275698	
CANAL 276324	VBPL/CC/AB/SP II/12
ROAD 277131	VBPL/CC/AB/SP II/14
RAILWAY 277274	VBPL/CC/AB/SP II/13
CART TRACK 278304	
CANAL 279216	VBPL/CC/AB/SP II/15
CANAL 279904	
ROAD 279928	VBPL/CC/AB/SP II/16

AS BUILT DRAWING

इंजीनियर्स इण्डिया लिमिटेड (भारत सरकार का उपक्रम) ENGINEERS INDIA LIMITED (A Govt. of India Undertaking)

BHARAT OMAN REFINERIES LIMITED

ESSAR ESSAR CONSTRUCTIONS (INDIA) LIMITED

बीना रिफायनरी परियोजना (वाडीनार बीना पाइपलाइन) | BINA REFINERY PROJECT (VADINAR-BINA PIPELINE)

एलाइनमेन्ट शीट वाडीनार से बीना | ALIGNMENT SHEET VADINAR TO BINA

चैनेज 275.274 से 280.274 कि.मी. | CHAINAGE 275.274 KM TO 280.274 KM

SCALE	JOB NO.	UNIT	DEPT.	SECT.	DWG. NO.	REV.
AS SHOWN	12050	41	67	11	256	0