ऑयल इंडिया लिमिटेड
(भारत सरकार का उद्यम)
Oil India Limited
(A Government of India Enterprise)

C&P Department (Rajasthan Field)
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CORRIGENDUM

Amendment No. 04 dated 23.05.2021 To
TENDER NO. SJI6628P22

1.0 This addendum has been issued to upload revised Technical specifications, Quantity, Scope of Work and Notes for the Tender items i.e **Annexure – AA** (Page No. 12 to 42 of Total Page of 75). The revised Technical specifications, Quantity, Scope of Work and Notes for the Tender items is enclosed as per **ANNEXURE – AA (REVISED).**

2.0 This addendum has been issued to upload revised **SECTION-III=>PROFORMA-II (PRICE SCHEDULE/PRICE BID FORMAT (SUMMERY)** (Page No. 71 to 74 of Total Page of 75). The revised PRICE SCHEDULE/PRICE BID FORMAT (SUMMERY) is enclosed as per **SECTION-III (REVISED)=>PROFORMA-II (REVISED).**

3.0 This addendum has been issued to incorporate following clauses under **II. BID EVALUATION CRITERIA** i.e **Annexure – IB (BEC-BRC) (Page No. 48 of Total Page of 75)** as under:

Clause No. 1.1

Tender has been invited for 02 Nos. (I.E Units) of Down Hole Heater & Accessories for two different wells viz-a-viz ***Horizontal (well BGW#09)*** *and* ***Vertical (well BGW#13)*** *wells as specified in detailed scope of work of NIT. Bidder should submit their offer for Electric Down Hole Heater & accessories for both the wells separately as per Price Bid Format provided as per* ***SECTION—III (REVISED) => (PROFORMA-II) (REVISED).*** *Evaluation shall be done on total value basis for each well independently. Bidders to take note of it and shall submit their offer accordingly.*

Clause No. 1.2

All the items required for one well to be procured from the same source for the reason of compatibility and smooth operations. Therefore, bidder must quote for all the items required for EDH of their quoted well failing which their bid shall be rejected. Bidder to note that evaluation for each well shall be done independently on total value basis of that particular well.

4.0 All the Terms & Conditions of the Bid Document remain unaltered.

sd/-
A. D. SINGH
Manager (C&P)

ANNEXURE – AA (REVISED)

OIL INDIA LIMITED invites the bid for items detailed below:

Item No./Mat. Code	Material Description	QTY.	UOM
10 0C000260	DOWN HOLE HEATER & ACCESSORIES (The Down Hole Heater accessories include the following: a.Design of electrical Down Hole Heating system. b. Well head penetrator system, Cable splice kit (if required), Cable Protectors and centralizers/clamping etc. c.Any other allied accessories, tools, tackles etc. as per design and operational requirement of supplied EDH.	2	NO
20 0C000242	GENERATING SET (Generating Set with the control panel and accessories.)	2	NO
30 0C000662	WELL HEAD	2	NO
40	Step Up Transformer (If required as per Bidder's design of EDH)	2	NO
50	Surface Electrical Power Cable	2	NO
60	INSTALLATION & COMMISSIONING (Installation and commissioning of the Electrical Down Hole system) for both the equipment	1	AU
70	Annual Maintenance Contract for a Period of One Year for both equipment after completion of initial one warranty/guarantee	1	AU
80	Recommended spares & consumables for 2 years for both equipment	Bidder should declare the quantity of each item for the period of two years	NO.

ANNEXURE – II

SECTION-I

SCOPE OF WORK/TERMS OF REFERENCE/TECHNICAL SPECIFICATIONS

1. INTRODUCTION

OIL INDIA LIMITED (OIL), a premier National Oil Company, is engaged in the business of exploration, production and transportation of crude oil and natural gas for over five decades. It is a Navratna Company under Ministry of Petroleum and Natural Gas, Government of India and the second largest National Oil Company in the country.

Rajasthan Project, one of the projects of OIL, is engaged in exploration and production of Natural Gas from Jaisalmer Basin and exploration of Heavy oil in Bikaner-Nagaur basin within Jodhpur Sandstone of Infracambrian age of Western Rajasthan in India. OIL intends to exploit heavy oil from Baghewala structures with state of the art technology. This document addresses the requirement of equipment & services from a reputed BIDDER having adequate knowledge base and past experience in the field of Heavy Oil production.

2. DEFINITIONS:

COMPANY	Oil India Limited
BIDDER	Organization that supplies the equipment and provides the service according to the Functional Specification.
COUNTRY OF OPERATION	India.
OPERATING AREA	Means the onshore area defined as Baghewala.
MINING LEASE	A legal contract for the right to work in a mine and extract the mineral or other valuable deposits from it under prescribed conditions of time, price, rental, or royalties
NELP	New Exploration Licensing Policy, conceptualized by the Government of India, during 1997-98 to provide an equal platform to both Public and Private sector companies in exploration and production of hydrocarbons with Directorate General of Hydrocarbons (DGH) as a nodal agency for its implementation.
OPERATING ENVIRONMENT	Operating environment is the set of conditions, which the SYSTEM / SERVICE PACKAGE is exposed to during its full life cycle.
FUNCTIONAL SPECIFICATION	Features, characteristics, process conditions, boundaries and exclusions defining the performance of a product or service, including the quality assurance requirements.
SYSTEM PACKAGE	The equipment and the related services identified under the term Electrical Down Hole Heater at the head of the functional specification document and as listed under ‘Appendix A, B & C of the same document.

FULL LIFE CYCLE	The period of time in which the device is fully functional in the well, including its installation and retrieval.
STANDARD OPEARTING PROCEDURE	Step-by-step written procedure that guides personnel to perform an activity safely in a consistent manner.
SCOPE	State scope of document as intention, i.e. what the document intended to achieve.
SHALL	Is used to indicate requirements that MUST be satisfied in order to comply with the Scope of Work.
SHOULD	Is used to indicate requirements that are preferred. BIDDER proposes alternatives shall clearly identify as such and shall be supported with objective evidence.
MAY	Is used to indicate that a provision is OPTIONAL.

3. ABBREVIATED TERMS:

Term	**Definition**
ML	Mining Lease
NELP	New Exploration Licensing Policy
LOA	Letter of Award
LOT	Leak off Test
DST	Drilling Stem Testing
BGW	Baghewala
NW	North West
ENE	East North East
WSW	West South West
BHA	Bottom Hole Assembly
ASTM	American Society for Testing and Materials
API	American Petroleum Institute
bbls	Barrels
BHP	Bottom Hole Pressure
BHT	Bottom Hole Temperature
BOD	Basis of Design
PEP	Project Execution Plan
SOP	Standard Operating Procedure
cp	Centipoise
Deg F	Degree Fahrenheit
IEEE	Institute of Electrical and Electronics Engineers
ISO	International Organization for Standardization

Term	Definition
ALARP	As Low As Reasonably Practicable
NACE	National Association of Corrosion Engineers
NEMA	National Electrical Manufacturers Association
PCP	Progressive Cavity Pump
OD	Outside Diameter
ID	Inside Diameter

4. SCOPE:

Scope of this document is to provide COMPANY's functional specification minimum requirements for the engineering design of **Electrical Down hole heater** (EDHH) including 'Thermal-Modeling' nodal analysis and 'Tubing-Force Analysis', equipment supply, installation, commissioning and start-up of EDHH system and all the related accessories as specified under 'Annexure-A' and 'Annexure-B' of the document.

The scope of supply is broadly divided into three (3) modules:

Module 1: Design of Electrical Down hole heating (EDHH) system;

Module 2: Material supply and transportation to COMPANY's designated locations;

Module 3: Equipment preparation, installation, commissioning and start-up, Annual Maintenance Contract (AMC);

5. APPLICABLE DOCUMENTS:

BIDDER should follow the industry recognized standards, specifications, codes, regulations and recommended practices listed in the following table. BIDDER shall comply with the latest edition of the listed documents unless otherwise stated.

5.1. RECOMMENDED PRACTICES AND INTERNATIONAL STANDARD:

Reference (API Standard)	Description
API Spec 5CT	Specification For Casing and Tubing
API Spec 5D	Specification For Drill Pipe
API Spec 4F	Specification For Drilling and Well Servicing Structures
API Bull 5C2	Bulletin On Performance Properties of Casing, Tubing and Drill Pipe
API Spec 7	Specification For Rotary Drilling Equipment
API Spec 8	Specification For Drilling and Production Hoisting Equipment
API Spec 6A	Specifications for valves and wellhead equipment
API Spec 5L	Specification For Line Pipe
Reference (API)	**Description**

API Spec 5 B	Specification for Threading Gauging
API Bull 5A2	Bulletin On Thread Compounds For Casing, Tubing and Line Pipe
API Spec 13	Specification For Oil Well Drilling Fluid Materials
API Q1	Specification for Quality Program
API Spec 11D2 &D3	Design, design validation, manufacturing and data control, performance ratings, functional evaluation, repair, handling and storage of Progressive cavity pump.
API 11 B	Rod type, Grade and Chemical Properties, Mechanical Properties and Heat Treatment of Sucker Rods and Pony Rods
API Spec RP 17B	Recommended practice for flexible pipes
API 505	Recommended Practice For Classification of Locations For Electrical Installations at Petroleum Facilities Classified as Class 1, Zone 0, Zone 1 and Zone 2

Reference (API-RP)	**Description**
API RP 5A&D3	Recommended Practice For Field Inspection of New Casing, Tubing and Plain End Drill Pipe cavity pump.
API RP 5C/C1	Recommended Practice For Care and Use of Casing and Tubing
API RP 11S5/API RP 11 S6	TEC line Cable
API RP 13F	Bulletin On Oil Gas Well Drilling Fluid Chemicals
API RP 54	Recommended Practices For Safety and Health For Oil and Gas Well Drilling and
API RP 59	Recommended Practices For Well Control Operations
API RP 44	Recommended practice for sampling petroleum reservoir fluids
API RP 520	Recommended practice for sizing, selection and installation of pressure relieving devices.
API RP 521	Recommended practice for pressure relieving and depressurizing systems

Reference (ASTM)	**ASTM Specifications**
ASTM A370	Standard Method and Definitions for Mechanical Testing of Steel
ASTM E18	Standard Test Methods for Rockwell Hardness and Rockwell Superficial Hardness of
ASTM E317	Practice for Evaluating Performance Characteristics of Ultrasonic Pulse-Echo Testing
ASTM E428	Standard Practice for Fabrication and Control of Metal, Other than Aluminum Reference, Blocks used in Ultrasonic Examination
ASTM D1418	Standard Practice for Rubber and Rubber Lattices

ASTM A 751	Methods, Practices and Definitions fo Chemical Analysis of Steel
ASTM D 395	Test Methods for Rubber Property- Compression Set
ASTM D 471	Standard Test Method for Rubber Property – Effect of Liquids
ASTM D 412	Standard Test Methods for Vulcanized Rubber and Thermoplastic Elastomers.
ASTM D 2240	Test Methods for Rubber Property- Durometer Hardness

Reference (NACE)	**Description**
NACE TM-01-77	Laboratory Testing of Metals for Resistance to Specific Forms of Environmental
NACE MR-01-75	Sulphide Stress Cracking Resistance Metallic Material for Oilfield

Reference (IS)	**Description**
ISO 14310	Petroleum and gas Industries – Down hole Equipment – Packers and bridge plugs
ISO 11960	Specification for Casing & Tubing
ISO TS29001	Petroleum, petrochemical and natural gas industries Sector- specific, Quality Management systems Requirements for product and service supply organizations
ISO 15156 part 1,2 and 3	Petroleum and natural gas industries - Materials for use in H2S-containing environments in oil and gas production
ISO 15136 Part 1	Petroleum and natural gas industries – Progressive Cavity Pumps Systems for Artificial Lift – Part 1: Pumps
ISO 15136-2 Part 2	Petroleum and natural gas industries – Progressive Cavity Pumps Systems for Artificial Lift – Part 2: Surface Drive Systems

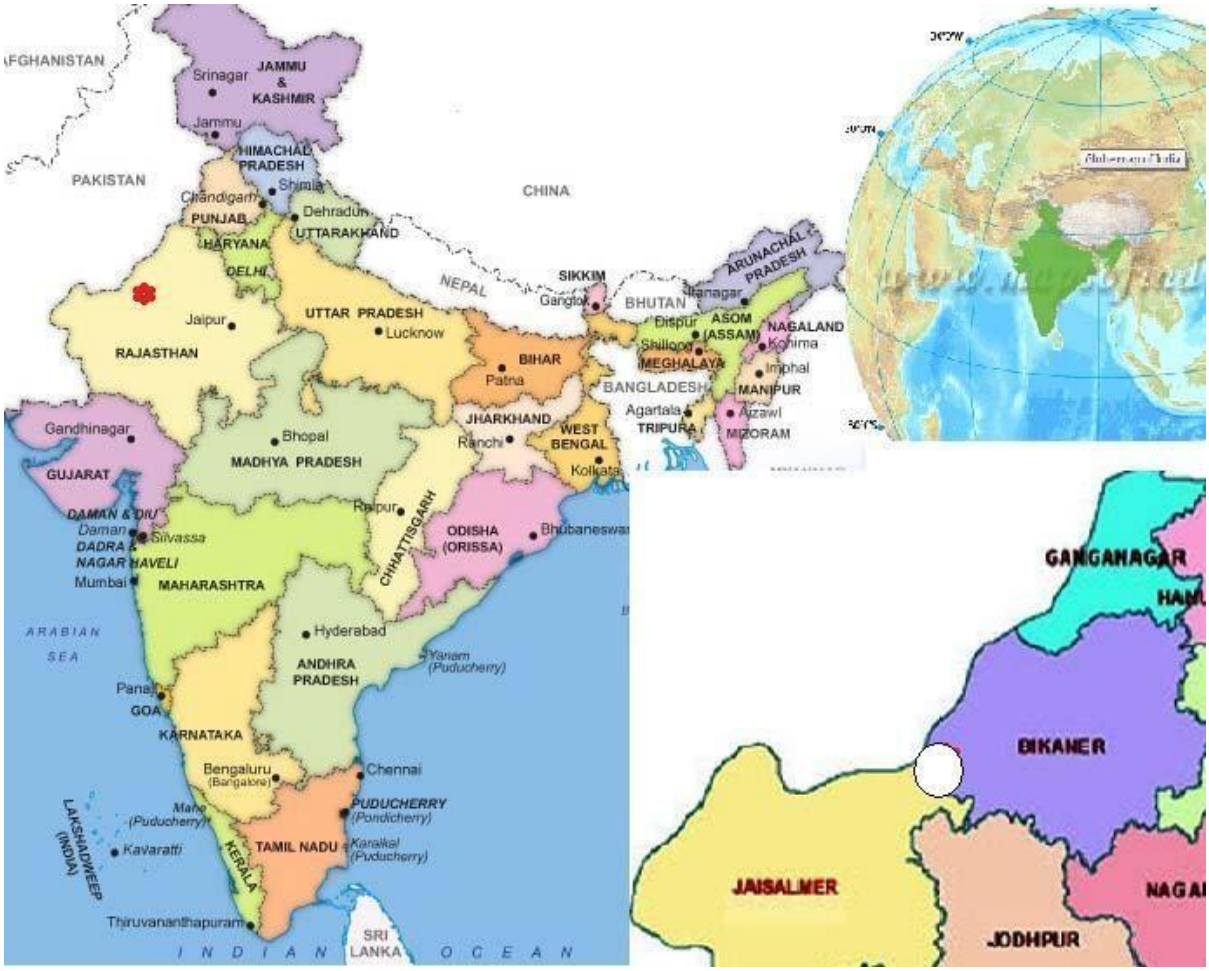
NOTE: The above list is not intended as being fully exhaustive and as such the BIDDER shall comply with any other applicable Specifications, Standards or Codes in consultation with COMPANY.

6. OPERATING AREA:

6.1. GEOGRAPHIC LOCATION:

Baghewala, the area of operation, is located at the western part of the country India and in the States of Rajasthan. Rajasthan encompasses most of the area of Great Indian Desert (Thar Desert), which has an edge paralleling the Sutlej-Indus river valley along its border with Pakistan. The region borders Pakistan to the west, Gujarat to the southwest, Madhya Pradesh to the southeast, Uttar Pradesh and Haryana to the northeast and Punjab to the north.

The nearest airport to the operating area is Jodhpur Airport and is located at a distance of around 350 km.



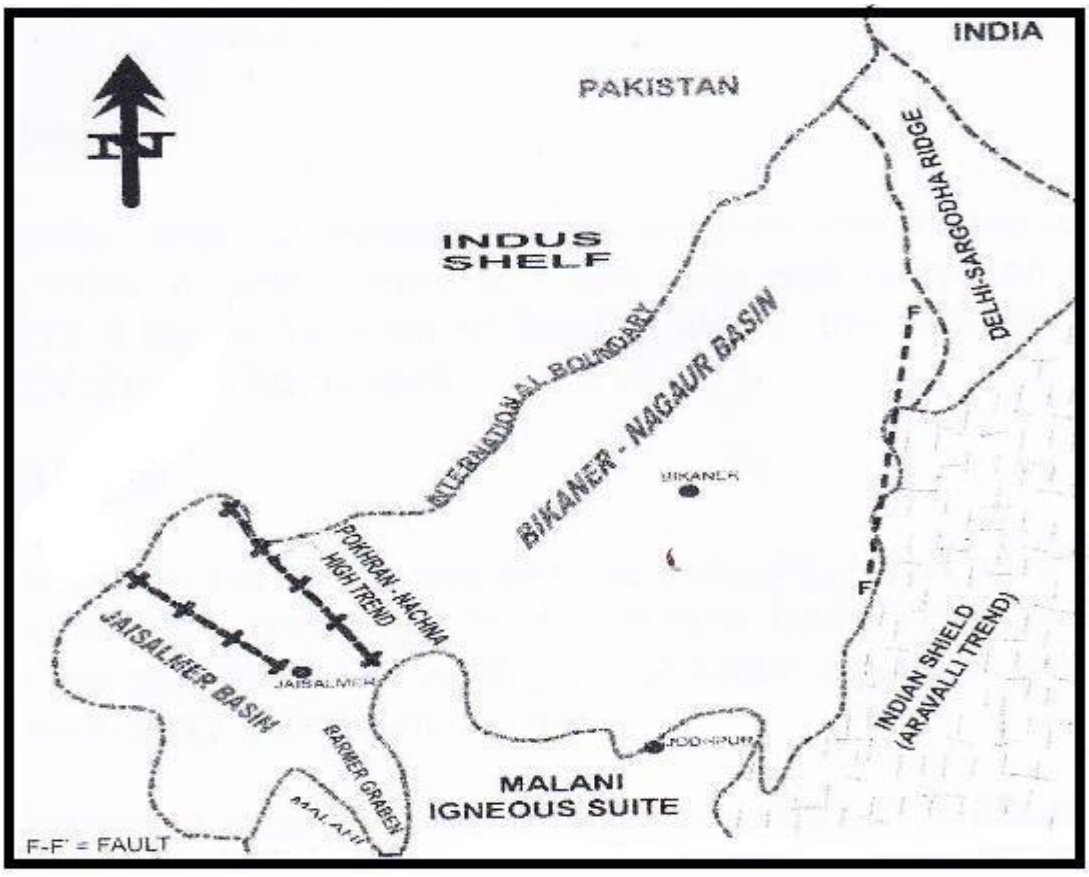
6.2. ENVIRONMRNTAL CONDITIONS:

Components	International System (SI)
Ambient Temperature (Max. / Min.)	**50 / -1 Deg C**
Humidity (Max.)	**40-60%**
Average Rainfall	**25 mm/year**
Wind velocity (Max.)	**128 KM/Hr**
Frequecy of Sand strom	**March to September and occasional during the remaining period.**
Seismic	**Zone III, Moderate**
Weather	**Four distinct seasons - Pre monsoon, monsoon, post-monsoon and Winter**
Topography of Site	**Part of Thar Desert**

7. REGIONAL STRATIGRAPHIC:

7.1. REGIONAL GEOLOGY:

Baghewala Mining Lease (ML) is located in the Bikaner-Nagaur basin of west Rajasthan. The Bikaner-Nagaur basin constitutes a Late Proterozoic-Early Paleozoic basin in the north western part of peninsular Indian shield. Structurally, Bikaner-Nagaur basin is bounded by the Aravalli ranges to the southeast, Delhi-Sargoda ridge to the northeast, and the pokhran-Nachna High to the southwest which separates it from Jaisalmer basin. To the northwest, the Bikaner-Nagaur basin extends to the Salt Range of the Upper Indus basin of Pakistan.



Tectonic Map of Bikaner Nagaur Basin

The Bikaner-Nagaur Basin of northwest Rajasthan is the remnant of a continental rim basin with sediments deposited in an epiric sea. The continental rim basin was developed on the margin of Gondwanaland during the late Neoproterozoic through Permian time. The generally accepted plate tectonic reconstruction for the end of Neoproterozoic time shows the relationship of the Arabian Salt basins with the Indian salt basin (Allen, 2007). The Bikaner-Nachna basin is bounded on the south-southeast by outcrops of the constituent formations. The western boundary is the Jaisalmer-Sulaiman basins that form the northward extension of the West India Rift-basin trend. The north and eastern margins are formed by the Salt Range thrust belt and the Lahore-Delhi arch. Only the outcrop belt has any resemblance to the edges of the original basin. The Pokhran- Nachna Arch is a basement high initiating from the outcrop of the Jalor Granite member of the Malani Group southwest of the town of Pokhran (Roy, 2001), plunges northward west of Nachna and through the area of the Baghewala ML. This structural high originated in the Neoproterozoic, and it has been reactivated several times through geologic history.

At Baghewala ML, the Pokhran-Nachna Arch is expressed as a structural high where the Jodhpur Sandstone is absent or present as a thin layer over the crests of local highs. Seismic data near these wells show dipping beds of the Malani Rhyolite in nonconformity with a dacite intrusive body.

7.2. STRUCTURE:

The Baghewala anticline is interpreted as a ramp anticline formed by the offset of a fault in the basement. Seismic data also suggest that a younger phase of deformation was super imposed. It is characterized by normal faulting which is considered to be Jurassic-Cretaceous or younger in age. Seismic lines and cross sections show that the post-Jurassic sedimentary sequences become thicker and deeper towards the Himalayan Mountain Front. They also show that the folded post-Infra cambrian sequences are eroded on the crest of the structures by the Permian unconformity.

7.3. STRATIGRAPHIC SUCCESSION

The Stratigraphic Sucession of Bikaner Nagaur basin as under:

AGE			FORMATION	THICKNESS(m)	LITHOLOGY
QUARTERNARY	RECENT		Alluvium / Shumar	70-95	Fine to Medium Grained Sand
	PLEISTOCENE				
TERTIARY	EOCENE		Palana and Marh	20 - 110	Clayey limestone and dark grey claystone
	PALEOCENE				
MESOZOIC	CRETACEOUS		Parh Equivalent	30 - 35	Dark grey claystone and sandstone
	JURASSIC		Jaisalmer + Lathi	290 - 380	Red claystone and ferruginous sandstone with minor coal
	TRIASSIC		Bap and Badhaura	58 - 70	Red yellow and grey claystone and silts with conglomerate
PALEOZOIC	PERMIAN				
	MARWAR SUPERGROUP	INFRA CAMBRIAN	Upper Carbonate	250 - 600	Laminated dolostone and limestone with red claystone interbeds and occasional marl
			Nagaur	150 - 300	Mottled claystone with siltstone, fine grained sandstone and minor dolostone
			Hanseran Evaporite Group	140 - 150	Anhydrite, Halite, claystone and dolostone
			Bilara	50 - 120	Dolostone, fine grained sandstone & reddish brown claystone
			Jodhpur	25 - 30	Coarse to fine grained, well sorted sandstone (pinkish), with siltstone and claystone
PROTEROZOIC	PRE-CAMBRIAN		Malani Suits	120 - 350	Volcanoclastics with basalt and Rhyolitic flows
			Crystalline Basement	--	Granitoid Rocks

8.`1. RESERVOIR/ROCK MATRIX/PETROPHYSICAL CHARACTERISTICS:

Description	Parameters	Value
Reservoir Parameters	Reservoir Depth	1050 – 1300 m
	Pay Thickness	5 – 23 m
	Bottom Hole Pressure	1600 psi @ 1100m at BGW structure and 1044 psi @ 1190m in neighboring Punam Structure
	Bottom Hole Temperature	50C – 52C
Rock Matrix Characteristics	Porosity	18 – 20%
	Permeabilty	<1000 MD
Petro-physical Characteristics	°API	14 – 18 API
	Pour Point(°C)	21 – 27 deg
	Sp. Gravity	0.9679 – 0.9229
	Viscosity (cp)	Approx 13000 cp at 50 deg C
Crude Characteristics		Resin: 12.5 %; Asphaltenes: 7.25 %; Paraffin: 17.5%
Gas specific Gravity		Nil
Water cut		Almost Nil

8.2. WELL COMPLETION OUTLINE:

OIL intends to procure two numbers of Electric Downhole Heaters to be used in **Horizontal (well BGW#09)** and **Vertical (well BGW#13)** wells. The average production from the horizontal well is 25 bbl/day and from the vertical well is 5 -7 bbl/day.

Expected Flowing Well head pressure is hydrostatic and temperature is ambient temperature. The down hole heater will be run alongwith the tubing and the heating zone will be end of the tubing near to perforation zone. The well completion details are as below. **The wells are completed with Sucker Rod Pump as an Artificial lift.**

In the horizontal well BGW#09, the current production tubing of 2.7/8" (Grade L-80 13 CR premium connection tubing) size may be changed to 3.1/2" tubing (Grade L-80 premium connection tubing). The supplier has to provide necessary cross overs for both 2.7/8" (Grade L-80) and 3.1/2" (Grade L-80) tubing for the well. The cross over should be of EUE (Box or Pin) to thread of the down hole heater.

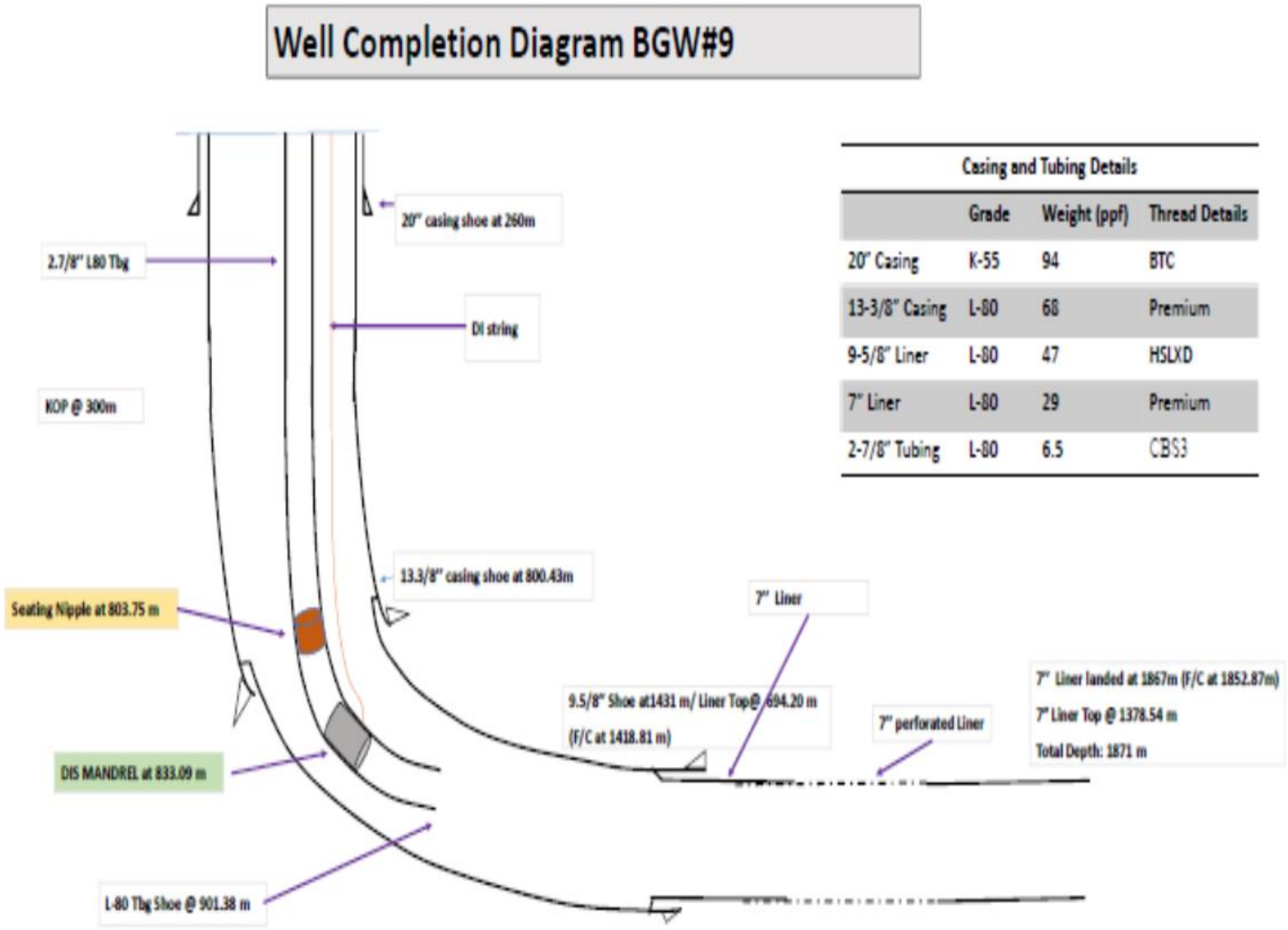
Both the horizontal and vertical well are completed with **Diluent injection string (DIS)** as shown in the **Well Diagram**. So, the hanger flange that will be provided for installation of down hole heater should have 1/2" NPT Box thread (both top and bottom side of the flange) port for DIS string.

The basic well details of both the well is as given below.

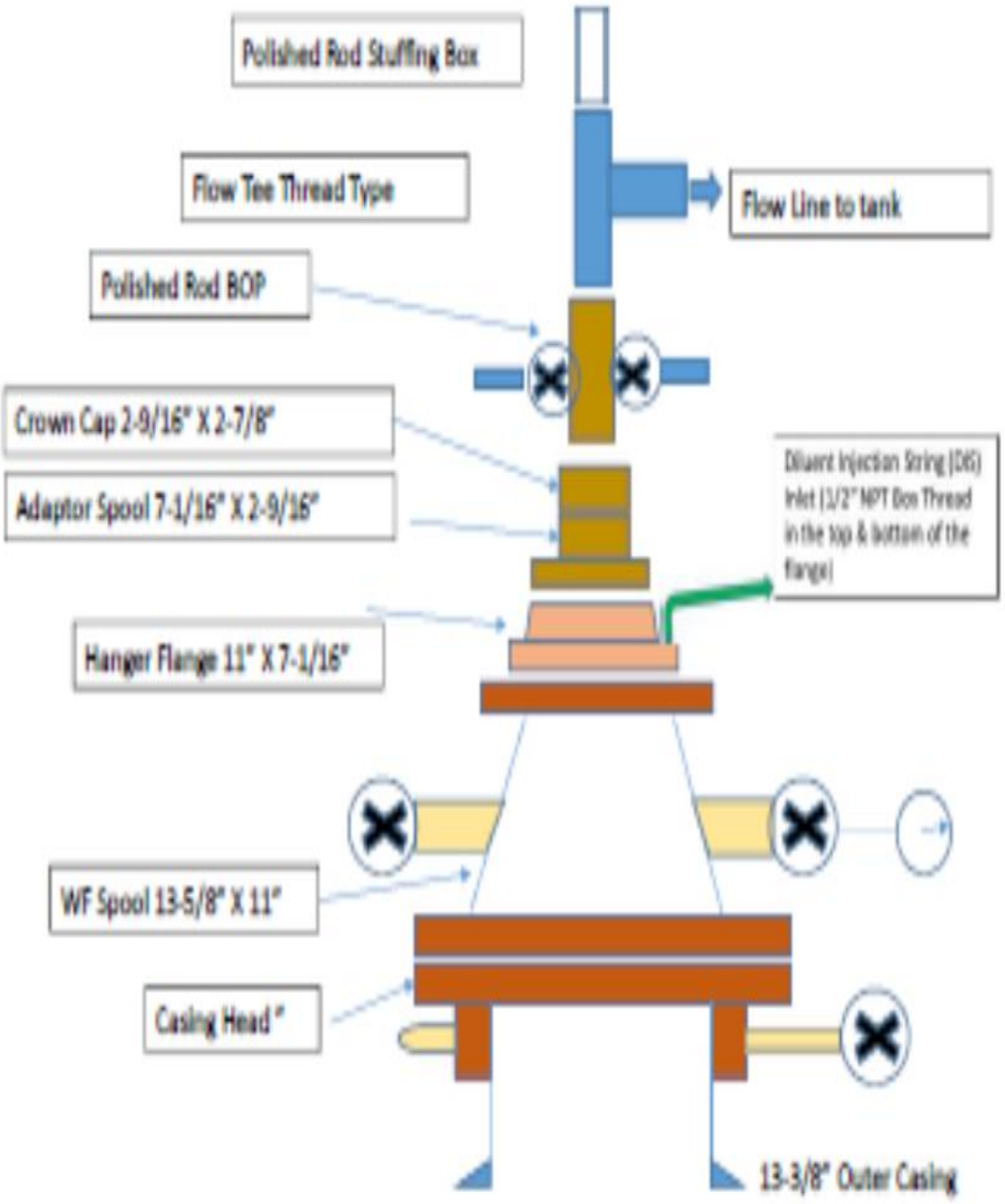
1st WELL-BAGHEWALA WELL NO. 9 (HORIZONTAL WELL)

A. BASIC DATA

D.F.Elevation	: 150.0 m. asl
G.L.Elevation	: 144.0 m. asl
13.3/8" casing shoe/float collar at	: 800.43 m/ 788.2 m
9.5/8 Liner Hanger shoe at	: 1431.0 m (Liner Top at 694.20 m)
2.7/8" tubing **(Grade L-80 13 CR premium connection tubing)** with tubing pump	: 901.38 m **(Current tubing of 2.7/8" size may be changed to 3.1/2" tubing)**
Open Hole in the range	**: 1431.0 – 1871 m (Open-Horizontal section)**
7" Perforated Liner shoe at	: 1867.0 m (Liner Top at 1378.54 m)
Final Depth of the well	: 1871.0 m



Well Head Details BGW#9

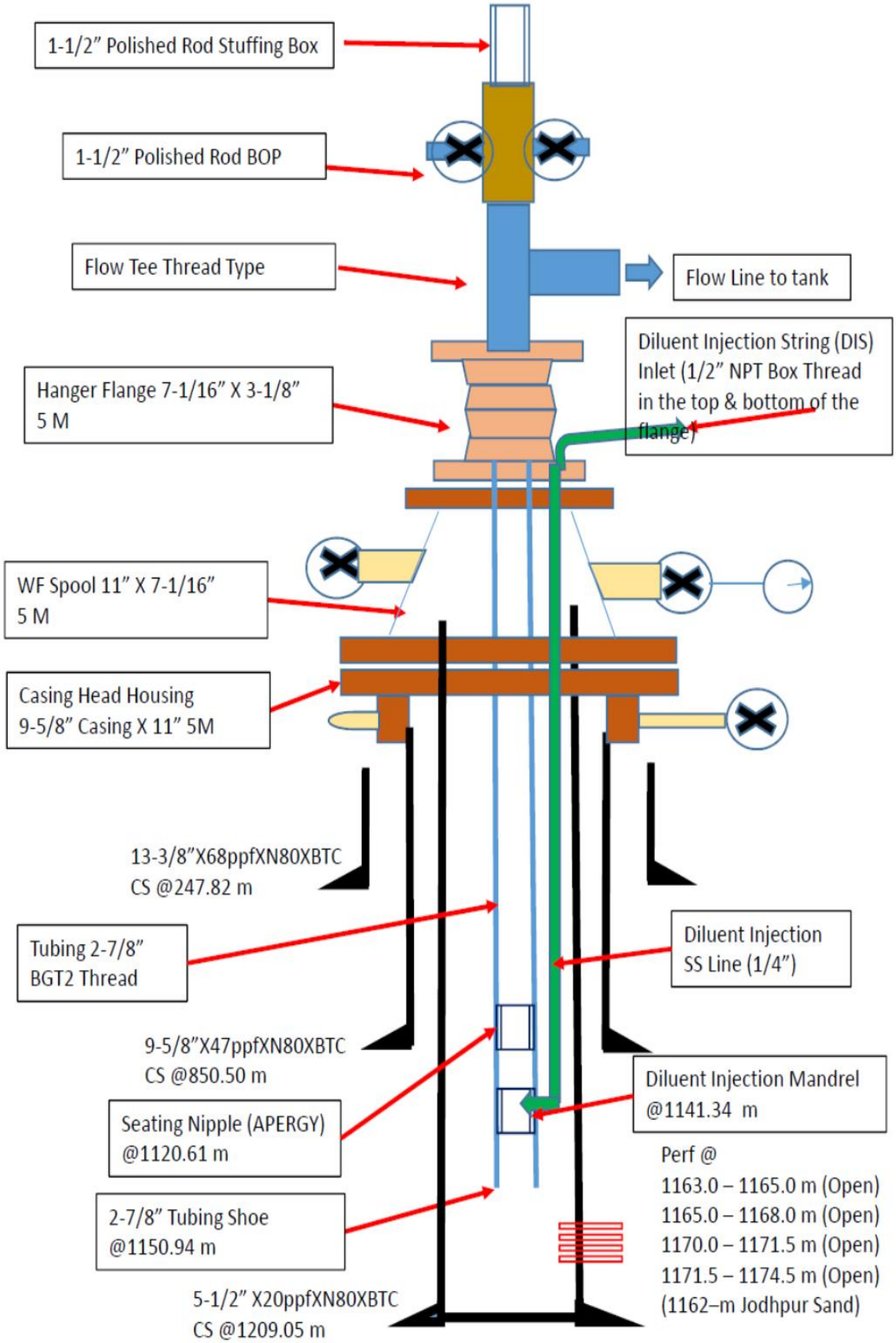


2nd WELL-BAGHEWALA WELL NO. 13 (VERTICAL WELL)

A. BASIC DATA

D.F.Elevation	: 145.1 m. asl
G.L.Elevation	: 139.0 m. asl
13.3/8" casing shoe at	: 247.8 m
9.5/8 casing shoe at	: 850.5 m
2.7/8" tubing **(Grade L-80 13 Cr)** with seating nipple at	: 1150.94 m
Perforation in the range	**: 1163-1165 m (Open)**
	: 1165-1168 m (Open)
	: 1170-1171.5 m (Open)
	: 1171.5-1174.5 m (Open)
	: 1162 m Jodhpur Sandstone
5.1/2" Casing shoe/ Float collar at	: 1209.05/ 1195.99 m
Final Depth of the well	: 1218.70 m

BGW#13


1-1/2" Polished Rod Stuffing Box
1-1/2" Polished Rod BOP
Flow Tee Thread Type
Flow Line to tank
Diluent Injection String (DIS) Inlet (1/2" NPT Box Thread in the top & bottom of the flange)
Hanger Flange 7-1/16" X 3-1/8" 5 M
WF Spool 11" X 7-1/16" 5 M
Casing Head Housing 9-5/8" Casing X 11" 5M
13-3/8"X68ppfXN80XBTC CS @247.82 m
Tubing 2-7/8" BGT2 Thread
Diluent Injection SS Line (1/4")
9-5/8"X47ppfXN80XBTC CS @850.50 m
Diluent Injection Mandrel @1141.34 m
Seating Nipple (APERGY) @1120.61 m
Perf @
1163.0 – 1165.0 m (Open)
1165.0 – 1168.0 m (Open)
1170.0 – 1171.5 m (Open)
1171.5 – 1174.5 m (Open)
(1162–m Jodhpur Sand)
2-7/8" Tubing Shoe @1150.94 m
5-1/2" X20ppfXN80XBTC CS @1209.05 m

HSE DESIGN GUIDELINE:

The design shall follow a process in which significant risks to Health, Safety and the Environment are identified and assessed in the initial design phase.

Inherent safety, control and recovery measures, necessary to reduce risks to ALARP levels, shall be determined and thereafter incorporated in the design, the measures chosen to achieve ALARP HSE risk levels shall be suitable for implementation during the detailed design phase and capable of being maintained during the operational phase.

Hazards and effects studies shall be carried out during the initial phase to provide early design input information. This approach aims to maximize the opportunities for risk reduction offered by a pro-active HSE consideration in design rather than by retrospective HSE review and subsequent design changes. Adopting this approach will create opportunities to minimize and / or eliminate HSE related cost and schedule impacts.

HSE activities during the design process shall focus on the identification of HSE risks and the hazards and effects that generate them. Risk management shall be by control (threat barriers) and recovery (mitigation and emergency response) measures, to ALARP risk levels.

The design, as well as being pro-active in the use of outputs from hazards and effects studies (HAZIDs and HAZOPs), shall use the application of appropriate engineering experience, judgment and applicable codes and standards to achieve the highest practicable reductions in risks to health, safety and the environment.

10. RESPONSIBILITY:

10.1 GENERAL:

BIDDER is responsible for the compliance with the requirements set forth in this document. In no way does this specification relieve the BIDDER from his obligation to meet all the relevant DGMS (Director General of Mines and Safety) Standards, Industry recognized Recommended Practices, practical rules and local authority regulations wherever applicable.

Nothing in this COMPANY's functional specification shall relieve the BIDDER from the responsibility of performing, in addition to the requirements of this specification, such analysis, tests, inspections, and other activities that he considers necessary to ensure that the product, material and workmanship are fully satisfactory for the service intended.

BIDDER shall provide a written warranty for the equipment, its components and all the related accessories / miscellaneous equipment required to perform the job as per the scope of this NIT (Notice Inviting Tender).

The warranty shall cover a minimum of Twelve (12) months from the date of successful commissioning the equipment. The warranty shall fully cover against any manufacturing, handling, installation and commissioning defects and / or malfunctioning. Defective equipment shall be repaired by BIDDER within maximum one (1) month from the receipt of notice from the COMPANY. If the defective equipment can't be repaired, BIDDER shall replace said equipment free of cost with a device of the same specifications free from any defects within one (1) month of detection of malfunctioning / defects.

11. DELIVERY CONDITIONS:

The Equipment shall be packed in robust boxes. On the package outside surface the following information shall be clearly indicated:

Supplier's name; Assembly
Part Number;
Product name / type / model;
Purchase Order number;
Material description (i.e. steel grade and metallurgy); Assembly
drawings reference number;
Instructions / Manual / Technical Data Sheets reference number (these documents shall be handed over to the appointed COMPANY representative);

Equipment shall be suitably protected against corrosion during transit and storage for a period of at least one (1) year under standard storage conditions.

12. DELIVERY PERIOD:

The items are required for wells at Baghewala field. Time is the essence of the supply. BIDDER shall deliver all the equipment within **Eight (08) months** from the date of issue of LOA.

13. TECHNICAL TENDER PROPOSAL:

Section	BIDDER **Technical Tender Proposal Documentation**
A.01	BIDDER shall compile the 'BIDDER's data' column (4) of '**Annexure-A**' and '**Annexure-B**' in every part and may add any additional items which are not listed, but required to perform the Scope of Work.
A.02	Using the 'Annexure-A' and 'Annexure-B' Table format, BIDDER shall provide the detailed technical / functional specifications of each individual item / assembly and of any additional items / assembly as indicated under Section A.01.
A.03	Technical drawings (colour coding is recommended) of each components of the EDHH system.
A.04	BIDDER shall provide the detailed EDHH system 'as-run' Completion drawing / schematic, indicating for each EDHH component the OD, ID (wherever applicable), thread connection, material grade, metallurgy and length.
A.05	BIDDER shall demonstrate the ability to perform the 'Tubing Force Analysis' (TFA) (i.e.Torque & Drag) software modelling. This is to ensure that the 2.875" nom. OD supporting Tubing string and the Heater Cable complete with the Cable Protector Centralizers hardware can safely be run and retrieved from the well bore without damages.

A.06	BIDDER shall own and demonstrate the ability to perform (i.e. by BIDDER) reliable heat transfer software modelling, both under static and dynamic reservoir fluid flow conditions. BIDDER shall provide a preliminary COMPANY's pilot testing heat transfer study.
A.07	BIDDER shall submit COMPANY's system specific EDHH installation, start-up, retrieving and operating procedures in English' language.
A.08	BIDDER shall present copy of worldwide 'Case History' record. The 'Case History' shall indicate the installed systems current status (i.e. active, non-active, failed and / or retrieved). BIDDER shall provide the operating dynamic temperature and power density delivered down hole vs. the unheated static and flowing temperature, the produced fluids API gravity and viscosity of few successful projects. For those systems that have suffered a failure, a detailed root-cause shall be reported.
A.09	BIDDER shall present the overall and Project specific supporting organization chart and shall submit the 'Curriculum-Vitae' of the proposed individuals for the intended work.
A.10	BIDDER shall present a detailed Risk Assessment (HAZID) of the proposed working practices as detailed in the procedures provided as per Section A.07 above.
A.11	BIDDER to submit list of critical spares for smooth operation of the equipment for a period of two years along with the bid in the format provided.

14. BROAD SCOPE OF WORK:

14.1. MODULE - I: DESIGN OF ELECTRICAL DOWN HOLE HEATING SYSTEM:

BIDDER shall design the Down hole heating system to provide minimum 300^0 F temperature near to perforations. Engineering design shall include 'Thermal-Modeling' nodal analysis and the 'Tubing-Force-Analysis' also. Required information for the necessary analysis shall be provided by the COMPANY, on request.

BIDDER shall submit 'Thermal-Modeling' nodal analysis and the 'Tubing-Force-Analysis' report along with the bid.

14.2. MODULE – II : MATERIAL SUPPLY AND TRANSPORTATION TO COMPANY'S DESIGNATED LOCATIONS:

Down Hole Heating System package shall include, but not limited to the following:

a) Heater Unit;
b) Well Head Penetrator System (Eccentric/concentric);
c) Cable splice Kit (If required as per Bidder's design of EDH);
d) Well head, Tubing Hanger/Hanger Flange & Bonnet;
e) Cable Protector Centralizers (Cross Coupling type);
f) Step Up Transformer (If required as per Bidder's design of EDH);
g) Generator Set (Kirloskar/Cummins/Volvo or Equivalent)
h) UPS
i) Thermocouple;
j) Control Panel;
i) Required Electrical Power pack;
j) Surface Electrical power cable (3 Cores x Size 2 AWG + 3 Cores Size 10 AWG Grounding Conductors, Armored (XLPE-PVC 90 °C Jacket or BIDDER to specify as per requirement) and accessories for electrical hook-up.
k) All tools for Installation & Commissioning including Retrieving Spooling Equipment, Running/Retrieving Sheave
l) Thread for the equipment will be EUE thread only. No other threads will be accepted.

(Details of the materials are annexed as Annexure A and B)

14.3. MODULE – III: EQUIPMENT PREPARATION, INSTALLATION, COMMISSIONING AND START-UP ALONG WITH ANNUAL MAINTENANCE CONTRACT FOR PERIOD OF ONE YEAR:

BIDDER shall unpack, clean, prepare, carryout all the necessary test before installation, commissioning and Start-up. BIDDER undertakes the responsibility to install, commissioning and start-up the equipment at the COMPANY designated wells. All materials / tools for installation & commissioning are in the scope of supply of the bidder. Workover rig will be present at site during installation. All tools / equipment required for installation & commissioning has to be arranged by the bidder only.

The BIDDER's Supervisor will be fully responsible for the onsite equipment preparation and installation in full compliance with the agreed and accepted Standard Operating Procedure (SOP) in liaison with COMPANY and drilling Bidder representatives.

Upon job completion the BIDDER Supervisor shall prepare a complete post installation report in the format previously agreed and accepted by COMPANY. Also, Bidder should provide the detailed preventive maintenance schedule, Daily monitoring sheet, Minor Trouble shooting manual covering all the technical parameters during operation, limitations, Dos and Don'ts, SOPs, O&M Manual etc.

BIDDER's personnel are required to carry out the assigned activities and shall mobilize their personnel for Installation and Commissioning of the equipment within 30 days or as intimated by Company on receipt of 'call out' notice from the COMPANY after receipt of the equipment. 'Call Out' notice for Installation and Commissioning of the equipment shall be given by Company 'within a period of 1 (one) year from the receipt of materials at site and bidder must complete the same within 30 days or as intimated by Company on receipt of 'call out' notice from the COMPANY.

No additional cost shall be paid by the COMPANY in the event of re-installation of the equipment due to fault of the equipment. BIDDER shall install and start-up the equipment to the satisfaction of the COMPANY.

Annual Maintenance Contract (AMC)

1. COMPANY reserves the right to avail the Annual Maintenance Contract (AMC) for a period of one year after completion of warranty period of initial 12 Months from the date of successful commissioning of the equipment. The bidder has to quote for Annual Maintenance Contract (AMC) charges for a period of 01 year on monthly basis along with their bid.

2. The AMC will start after completion of warranty period of initial 12 Months from the date of successful commissioning of the equipment. Annual Maintenance Contract will involve carrying out preventive as well as corrective maintenance of the Down Hole Heater, transformer (If required as per Bidder's design of EDH) and its accessories.

3. While quoting for AMC, the bidder should take into account (02) preventive maintenance visit by an OEM trained and authorized service engineer. However, in case of breakdown, the service engineer must come to attend the equipment to make it operational within 15 (fifteen) days after receiving the intimation.

4. The bidders must submit a written undertaking that they would be able to provide AMC service at the quoted rates after expiry of warranty.

5. Bidder must mention the critical spares and consumables which are required for AMC in the Section –III, Proforma-II, Point B in the price bid format along with the prices. All consumables required for maintenance of the equipment during its operation in the period of AMC, will be paid on actual on submission of invoice. In case OIL decides not to enter into an AMC with the successful bidder, the bidder must categorically assure that they will supply all required spares for a period of at least 2 (two) years at the prices they have quoted along with this bid.

6. The bidder must arrange accommodation, transportation and fooding for his personnel posted at well site for the purpose of the AMC.

7. Payments will be made on monthly basis at the end of every month. The bidder must submit the necessary invoices to OIL along with daily report.

8. It is at the sole discretion of OIL whether OIL will utilize the services of AMC. However, for price comparison, the price quoted by bidder for AMC will also be considered.

14.3.1 APPLICABLE CHARGES:

Installation, commissioning and start-up charges shall be paid on lump-sum basis. The charge shall include cost of manpower, material and equipment, including conveyance, required for preparation, installation and commissioning of Equipment. Required Rig service shall be provided by the COMPANY.

70% payment of the materials cost will be made on receipt of all the materials free from any defects against certification from Company (OIL)'s authorised personnel. Remaining 30% of material cost togetherwith Installation & Commissioning charges will be paid after successful Installation and Commissioning of the equipment. Payment against Annual Maintenance Contract cost (if availed by OIL) will be paid at the end of each month.

No additional cost shall be paid by the COMPANY in the event of re-installation of the EDHH system due to fault of the equipment. BIDDER shall install and start-up the equipment to the satisfaction of the COMPANY.

14.3.2 BIDDER PERSONNEL FOOD AND ACCOMODATION:

COMPANY shall provide food and accommodation to BIDDER Personnel at COMPANY Well site during installation and commissioning of the equipment (Module-III) without any charge.

15. BIDDER PERSONNEL:

The BIDDER shall provide competent personnel to ensure trouble free operation, as appropriate, but without limitation to the following on round the clock basis.

BIDDER Project Coordinator:

Project Coordinator is responsible for the coordination, support, skilled advice / supervision and quality control (QC) review throughout the design, planning, preparation and execution phase of the activities performed by BIDDER as specified within the Scope of Work.

BIDDER Installation and Commissioning Supervisor and Team:
The BIDDER's position holder is responsible for the EDHH system preparation, installation and commissioning in compliance with the agreed COMPANY Installation and Commissioning Procedures.

The BIDDER's Installation and Commissioning Supervisor and the team member should have minimum two (2) years of experience in the relevant field.

BIDDER shall provide competent personnel to ensure trouble free operation as appropriate on round the clock basis for continuous operation of seven days after installation & commissioning before hand over to Company.

BIDDER shall be responsible for all the activities carried out under their respective domain. However, single point responsibility shall be entrusted to the Project Coordinator.

The BIDDER must furnish along with the bid the bio- data and supporting documents regarding the experience of all the crew members to be deployed under the contract.

BIDDER personnel should be conversant with the relevant safety practices.

If the BIDDER is unable to provide the personnel initially identified in their offer and seek for deployment of alternate personnel having requisite qualification and experience set forth in the bid documents, BIDDER shall have to obtain prior approval from COMPANY for the same.

Transportation to and fro from COMPANY well site to BIDDER Base office shall be responsibility of the BIDDER.

16. SAFETY, HEALTH AND ENVIRONMENT:

BIDDER shall comply with all the applicable environmental laws, statutory regulations as applicable to Oil Mines in India.

The BIDDER shall provide all its personnel to be deployed during installation and commissioning of the equipment (Module-II), with Personal Protective Equipment as per international practice, which may include, as appropriate, but without limitation the following:

Safety Helmet
100% cotton or fire proof overalls
Safety Foot ware
Safety Goggles
Other PPE, including gloves, hearing protection etc.

17.0 AFTER SALE SERVICES:

The bidders shall submit a written undertaking (along with the bid) that they would be able to supply all the requisite spares and consumables (including bought out items) and support services for a minimum period of 05 (five) years from the Certified date of completion / successful field commissioning of the unit.

18.0 CRITICAL SPARE PARTS

BIDDER shall provide a list of recommended spare & consumable list to cover 2 (two) years of trouble free continuous operations for each unit. COMPANY may purchase the proposed spares parts or part of. Recommended spare & consumable cost should be valid for 2 years from the date of issue of Letter of Award (LOA).

BIDDER shall submit 2 years recommended spare parts / consumable list required for smooth operation of the equipment along with quantity and rate:

Item No.	Part Number	Detailed Item Description	First Year				Second Year				Remarks
			Qty	UOM	Unit Rate (Currency)	Total (Currency)	Qty	UOM	Unit Rate (Currency)	Total (Currency)	

Annexure-A

DOWN HOLE HEATER CABLE SYSTEM TECHNICAL SPECIFICATIONS FOR ONE UNIT OF EDH

Item (1)	GOODS DESCRIPTION (on a per Well basis) (2)	COMPANY'S Minimum Requirement (3)	BIDDER'S Data (4)
A	**Surface Control Equipment: Step Up Transformer (If required as per Bidder's design of EDH)**		
A.01	Make	BIDDER to specify	
A.02	Type	Dry Type	
A.03	Primary Voltage	440 V(+/- 10%), 50 Hz +/- 5 Hz	
A.04	Secondary Voltage	As Required by the Heater Design BIDDER to specify	
A.05	Protection	NEMA 3R (IP14) & Over current protection	
A.06	Temperature Rating	Minimum 300ºF at Perforation	
A.07	Power	As required by the Heater Design BIDDER to specify	
A.08	Alarms	Equipment monitoring Alarms	
A.09	Power control	Automatic based on temperature	
	Quantity (each)	**1**	
B	**Electrical Power Source along with accessories**		
B.01	Generator set	KIRLOSKAR/Cummins/Volvo or Equivalent	
B.02	Control Panel	BIDDER to specify	
C	**Surface Control Equipment: Surface Electrical Power Cable**		
C.01	Make and Type	BIDDER to specify	
C.02	Configuration	3 Cores x Size 2 AWG + 3 Cores Size 10 AWG Grounding Conductors, Armored (XLPE-PVC 90ºC Jacket) or BIDDER to specify	
	Quantity (Meters)	**Bidder to design**	
D	**Well Head Penetrator System Application: OPTION-A: Eccentric Tubing Hanger Mandrel**		
D.01	Make and Type	BIDDER to specify	
D.02	Model	BIDDER to specify	
D.03	Voltage Rating	As per the maximum rating of the Power Cable	
D.04	Amperage Rating	As per the maximum rating of the Power Cable	
D.05	Pressure Rating	3000 psi WP	
D.06	Temperature Rating	Minimum 300ºF at Perforation	
D.07	Working Environment	Class 1 Div.1 & 2 Group D	
D.08	Accessories	Vented Junction Box attached on the Well head with Bracket	
	Quantity (each)	**1**	
E	**Well Head Penetrator System OPTION-B: Concentric Tubing Hanger Mandrel Application**		
E.01	Make and Type	BIDDER to specify	
E.02	Model	BIDDER to specify	
E.03	Voltage Rating	As per the maximum rating of the Power Cable	
E.04	Amperage Rating	As per the maximum rating of the Power Cable	
E.05	Pressure Rating	3000 psi WP	

Item DESCRIPTION (1)	GOODS (on a per Well basis) (2)	COMPANY'S Minimum Requirement (3)	BIDDER'S Data (4)
E.06	Temperature Rating (Minimum)	Minimum 300°F at Perforation	
E.07	Working Environment	Class 1 Div.1 & 2 Group D	
E.08	Accessories	Vented Junction Box attached on the Well head with Bracket	
	Quantity (each)	**1**	
F	**Well Head/ Tubing Hanger/ Hanger Flange and Adapter spool and Bonnet**		
F.01	Tubing Hanger/ Hanger Flange and Adapter spool (Drawing attached)	Bidder has to design the same based on the drawing attached herewith & the diameter required for cables. Bidder has to keep in mind that the inner casing is 5.1/2" inch. or 7" The hanger shall be complete with additional upper seal rings to be energized by pack off adapter flange and lower seal rings to be energized by the tubing weight. The hanger shall be threaded with 2.7/8" EUE box threads at both top & bottom for lifting & hanging 73 mm (2.875 inch) OD, 9.52 kg/m (6.4ppf) tubing. The hanger shall be provisioned for the following: (i) Arrangements for EDHH Wellhead penetrator arrangement. (ii) Two, 1/4" Continuous Control Lines Ports w/1/2" NPT Box connection on top and bottom of the Tubing-Hanger, delivered complete with the ½" NPT x ¼" anti-vibrating Swage lock tube Adapters and 100% back-up; Continuous Control Line chambers test ports are required; (iii) Two, 3/8" Continuous Control Lines Ports w/3/4" NPT Box connection on top and bottom of the Tubing-Hanger, delivered complete with the 3/8" NPT x 3/4" anti- vibrating Swage lock tube Adapters and 100% back-up; Continuous Control Line chambers test ports are required; Crossovers (2 nos) to connect to EUE Tubing thread if required. Note: Design and specification of the Tubing Hanger/Hanger Flange and Adapter spool shall be as per wellhead diagram provided for Well BGW#09 (Horizontal) and Well BGW#13 (Vertical).	
F.02	Bonnet	3.1/8" x 7.1/16", with 1/2" ports, 5000 psi Pack-off Adapter Flange, API monogrammed, to fit over extended seal neck tubing hanger to provide a secondary seal and to be fitted on 7.1/16"-5K x 11""-5K tubing head spool. The adapter flange shall have the provision for EDHH power cables and other control lines as mentioned above. Note: Design and specification of the Tubing Hanger/Hanger Flange and Adapter spool shall be as per wellhead diagram provided for Well BGW#09 (Horizontal) and Well BGW#13 (Vertical)	
	Quantity (each)	**1**	

Item (1)	GOODS DESCRIPTION (on a per Well basis) (2)	COMPANY'S Minimum Requirement (3)	BIDDER'S Data (4)
G	**Down hole Electrical Power Cable**		
G.01	Make, Type and size (AWG)	BIDDER to specify	
G.02	Construction Type	Flat Galvanized Armoured or BIDDER to specify	
G.03	Temperature Rating	Minimum 300ºF at Perforation	
G.04	Resistance	BIDDER to specify	
G.05	Power Density	As Required by the Heater Design but not less than 250 W/ M	
G.06	Working Voltage	As Required by the Heater Design	
G.07	Estimate Cable Length (ft)	BIDDER to specify	
	Quantity (Meters) (each)	**BIDDER to specify**	
H	**Down hole Electrical COLD to HOT (Heater Cable) Cables Splice Kit or Integral**		
H.01	Make and Type	Quick Connectors Incorporated (QCI)	
H.02	Amperage and Voltage Rating	As per the maximum rating of the Power Cable	
H.03	Temperature Rating	Minimum 300ºF at Perforation	
H.04	Pressure Rating	3000 psi	
	Quantity (each)	**1 complete set**	
I	**Down hole Electrical Power Cable (Heater Cable Cold Lead)**		
I.01	Temperature Rating	Minimum 300ºF at Perforation	
I.02	Length	Xx ft with the Connector if required to be specified by BIDDER	
	Quantity (Meters) (each)	BIDDER **to specify**	
J	**Down hole Electrical COLD (Heater Cable) & HOT (Heater Cable) Cables Splice Kit or Integral**		
J.01	Make and Type	BIDDER to specify	
J.02	Temperature Rating	Minimum 300ºF at Perforation	
	Quantity (each)	**2**	
K	**Down hole Electrical Heater Cable**		
K.01	Make and Type	BIDDER to specify	
K.02	Insulation	BIDDER to specify	
K.03	Cable Sheath Material	Flat Galvanized Armoured or Nickel Alloy UNS-NO-8825 pipe or BIDDER may specify	
K.04	Power Density (minimum requirement)	As per design	
K.05	Conductor Material	Copper	
K.06	Heavy Oil Flowing in Casing ID Estimated Temperature	152 to 160 ºF	
K.08	Minimum Cable Conductor spacing	25 mm	
	Quantity (Meters) (each)	BIDDER **to specify**	
L	**Down hole Completion Equipment: 2.7/8" EUE Cross Coupling Cable Protector Clamp**		
L.01	Make and Type	BIDDER **to specify**	
L.02	Cross Coupling Cable Protector Clamp to fit COMPANY's 2.7/8" EUE N80 Completion Tubing String (Note: Provision of the AutoCad scaled technical drawing is a mandatory requirement)	To fit COMPANY'S 7,000" 23 PPF L80-1 Slotted Liner drift	
L.03	Number and dimensions of Slots required for the Heater Cable guidance and protection	BIDDER to specify	

L.04	Number and dimensions of Slots required for the Heater Cable guidance and protection	BIDDER to specify	
L.05	Slots to accommodate 3/8" Chemical Injection string	BIDDER to specify	
L.06	Slots to accommodate 11mm X 11mm TEC line	BIDDER to specify	
L.07	Material Grade and Metallurgy	NACE MR-01-75 compliant, HRC≤22	
	Quantity (each)	BIDDER to specify	
N	**Quantity (each)** **Any other equipment for compliance of intended Scope of work**	**1**	

Note: Bidder should note that the items are required to be installed in wells with approximate depth 1865 mts **(Horizontal Well BGW#9)** and 1100 mts (**Vertical Well BGW#13)** depth with perforation range as given in the attached well diagram. Accordingly, bidder to determine& design the lengths of the cables and other materials required.

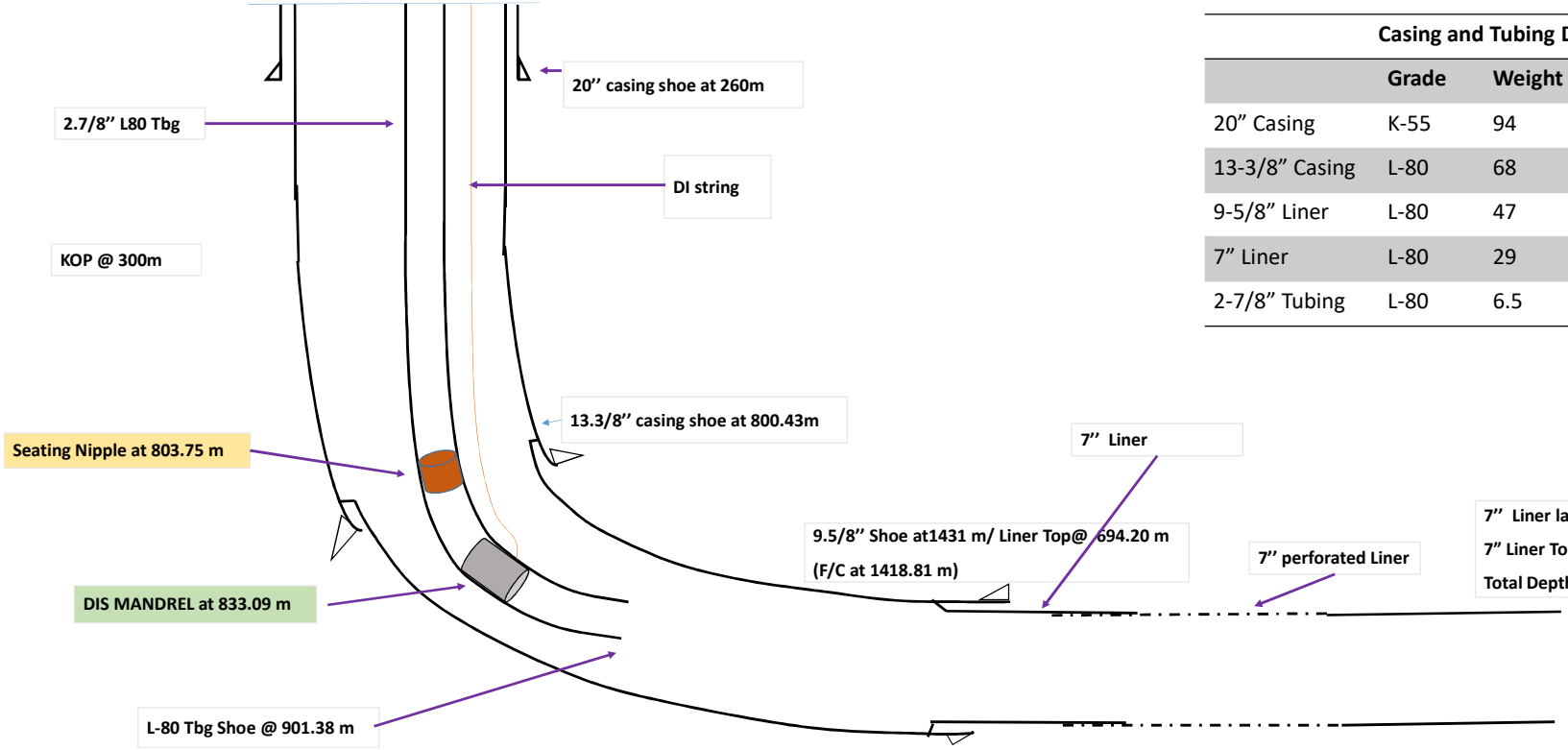
Annexure-B

DOWN HOLE HEATER CABLE SYSTEM SERVICE EQUIPMENT UNDER SCOPE OF SUPPLY OF BIDDER

Item (1)	SERVICE EQUIPMENT Description (on a per Well basis) (2)	COMPANY'S Minimum Requirement (3)	BIDDER'S Data (3)
A	**Down hole Completion Equipment: Heater RUNNING / RETRIEVING SPOOLING UNIT**		
A.01	Make and Type	BIDDER to specify	
A.02	Skid Mounted and driven by an hydraulic Motor remote controlled by an Operator	Required	
A.03	Hydraulically operated level window to ensure a proper unspooling and spooling of the Cable	Required	
A.04	Easy insertion/removal at Well location of the Cable Spool Reel or of an empty Reel	Required	
A.05	Spooling Unit Skid must be shipped complete with pad eyes, slinks and chuckles with copy of the up to date NDE certification.	Required	
A.06	Spooling Unit dimensions, weight and maximum length of Cable that can be loaded	Required	
	Quantity (each)	BIDDER **to specify**	
B	**Down hole Completion Equipment: Heater RUNNING / RETRIEVING Sheave**		
B.01	Make and Type	BIDDER to specify	
B.02	Complete of mechanical locking mechanism	Required	
B.03	Sheave must be supplied complete with pad eyes, slinks and chuckles for it installation where appropriate on the Mast and with copy of the up to date NDE certification	Required	
	Quantity (each)	BIDDER **to specify**	
C	**Down hole Completion Equipment: Cross Coupling Cable Protector Clamps Installation Unit**		
C.01	Make and Type	BIDDER to specify	
C.02	Hydraulic Clamp Closing SYSTEM PACKAGE	Required	
C.03	Hydraulic Installation of the Clamp locking pin	Required	
	Quantity (each)	**1 + 1 (Back Up)**	
D	**Measuring SYSTEM PACKAGEs: Handheld type Megger**		
D.01	Portable, rugged field-proven CFL and HV test module 0 to 20 kV dc testing	BIDDER to specify	
D.02	Ergonomically designed control panel with large XGA integrated display	BIDDER to specify	
	Quantity (each)	BIDDER **to specify**	
E	**Measuring SYSTEM PACKAGEs: Clamp-on type Megger**		
E.01	Portable, rugged field-proven CFL and HV test module 0 to 20 kV dc testing	BIDDER to specify	
E.02	Ergonomically designed control panel with large XGA integrated display	BIDDER to specify	
	Quantity (each)	BIDDER **to specify**	

F	**Miscellaneous Service Equipment**		
F.01	Oil, lubricants including hydraulic fluids required by BIDDER Equipment	BIDDER to specify	
F.02	Toolbox o/w all the required tooling to perform the Scope of Work	BIDDER to specify	
G	**Any other tools required for Installation/commissioning and start-up of EDHH**		

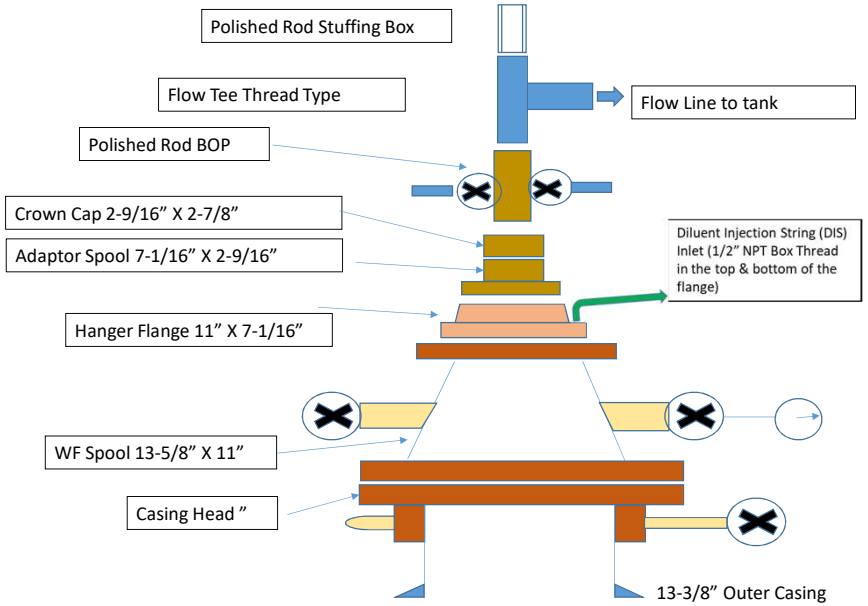
Well Completion Diagram BGW#9



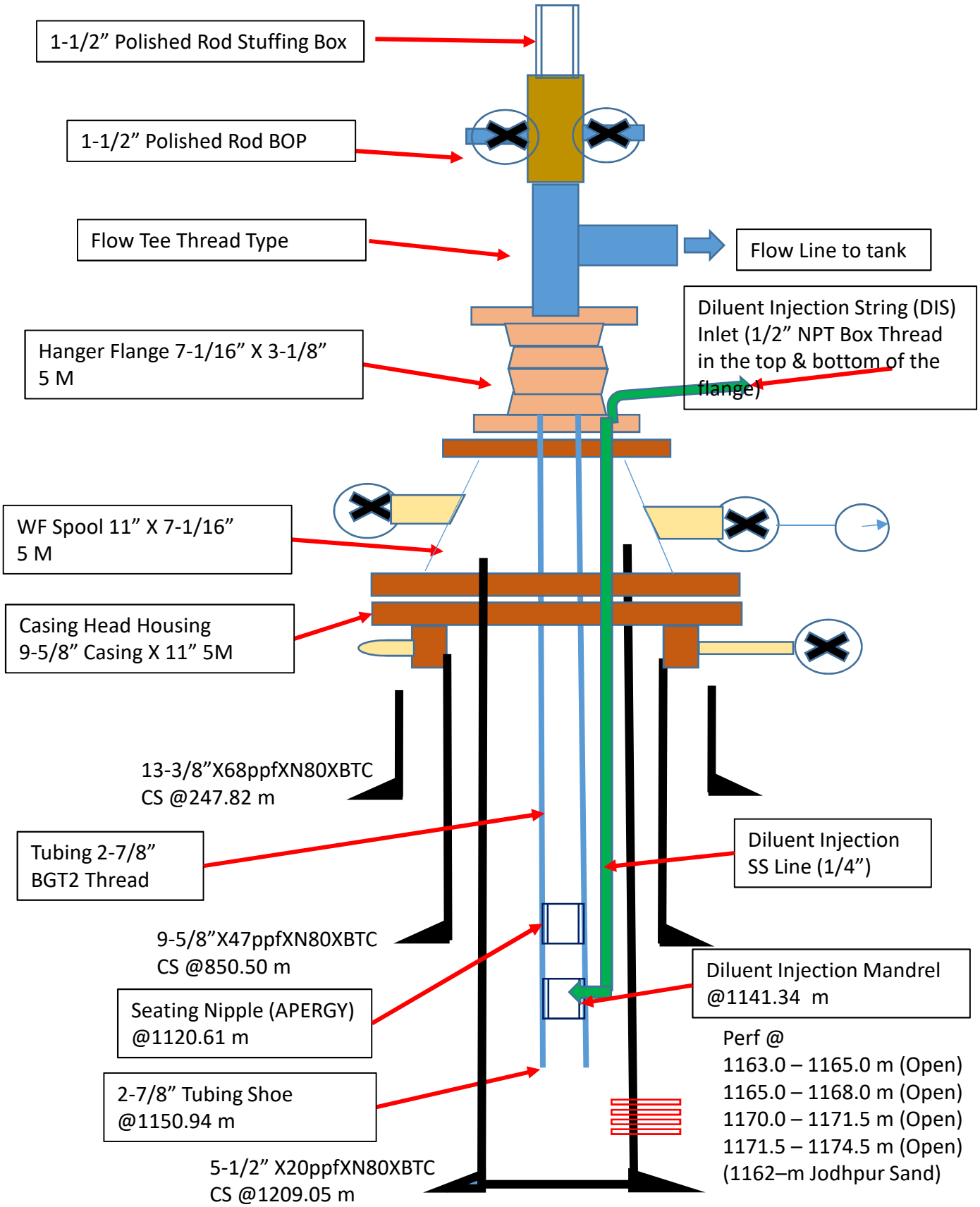
Casing and Tubing Details

	Grade	Weight (ppf)	Thread Details
20" Casing	K-55	94	BTC
13-3/8" Casing	L-80	68	Premium
9-5/8" Liner	L-80	47	HSLXD
7" Liner	L-80	29	Premium
2-7/8" Tubing	L-80	6.5	CBS3

Well Head Details BGW#9



BGW#13


1-1/2” Polished Rod Stuffing Box
1-1/2” Polished Rod BOP
Flow Tee Thread Type
Flow Line to tank
Diluent Injection String (DIS) Inlet (1/2” NPT Box Thread in the top & bottom of the flange)
Hanger Flange 7-1/16” X 3-1/8” 5 M
WF Spool 11” X 7-1/16” 5 M
Casing Head Housing 9-5/8” Casing X 11” 5M
13-3/8”X68ppfXN80XBTC CS @247.82 m
Tubing 2-7/8” BGT2 Thread
Diluent Injection SS Line (1/4”)
9-5/8”X47ppfXN80XBTC CS @850.50 m
Diluent Injection Mandrel @1141.34 m
Seating Nipple (APERGY) @1120.61 m
Perf @
1163.0 – 1165.0 m (Open)
1165.0 – 1168.0 m (Open)
1170.0 – 1171.5 m (Open)
1171.5 – 1174.5 m (Open)
(1162–m Jodhpur Sand)
2-7/8” Tubing Shoe @1150.94 m
5-1/2” X20ppfXN80XBTC CS @1209.05 m

SPECIAL NOTES:

1) The items are required for wells at Baghewala field. Time is the essence of the supply. BIDDER shall complete the delivery all the equipment & components within **Eight (08) months** from the date of issue of LOA.

2) BIDDER's personnel are required to carry out the assigned activities and shall mobilize their personnel for Installation and Commissioning of the equipment within 30 days or as intimated by Company on receipt of 'call out' notice from the COMPANY after receipt of the equipment. 'Call Out' notice for Installation and Commissioning of the equipment shall be given by Company 'within a period of 1 (one) year from the receipt of materials at site and bidder must complete the same within 30 days or as intimated by Company on receipt of 'call out' notice from the COMPANY.

3) Tender has been invited for 02 Nos. (I.E Units) of Down Hole Heater & Accessories for two different wells viz-a-viz Horizontal (well BGW#09) and Vertical (well BGW#13) wells as specified in detailed scope of work of NIT. Bidder should submit their offer for Electric Down Hole Heater & accessories for both the wells separately as per Price Bid Format provided as per SECTION—III (PROFORMA-II) (REVISED). Evaluation shall be done on total value basis for each well independently. Bidders to take note of it and shall submit their offer accordingly.

4) All the items required for one well to be procured from the same source for the reason of compatibility and smooth operations. Therefore, bidder must quote for all the items required for EDH of their quoted well failing which their bid shall be rejected. Bidder to note that evaluation for each well shall be done independently on total value basis of that particular well.

5) VENDOR REGISTRATION ON GOVERNMENT E-MARKETPLACE (GEM):

Reference to OM No. 6/9/2020-PPD dated 24.08.2020 issued by Department of Expenditure, Ministry of Finance, it shall be mandatory for sellers providing goods and services to Central Government Organizations to be registered on GeM and obtain a unique GeM seller ID at the time of placement of order/contract.

View above, all bidders are advised to register themselves on GeM and provide the unique registration ID to OIL along with the bid. Contract/order shall be awarded to the successful bidder only after the bidder provides the GeM unique ID to OIL before the end of bid validity period.

STANDARD NOTES:

1) The tender is invited under SINGLE STAGE-TWO BID SYSTEM. The bidder has to submit both the "TECHNO-COMMERCIAL UNPRICED BID" and "PRICED BID" bid through electronic form in the OIL's e- Tender portal within the Bid Closing Date and Time stipulated in the e-Tender. The "TECHNO-COMMERCIAL UNPRICED BID" is to be submitted as per Scope of Work & Technical Specification of the tender. Upload the same in the Technical RFx Response-> User -> Technical Bid. Please go through the help document in details before uploading the document and ensure uploading of technical bid in the Technical RFx Response-> User - > Technical Bid only and "PRICED BID" as per the Price Bid format under "NOTES & ATTACHMENT" tab.

2) In Technical Bid opening, only Technical Rfx will be opened. Therefore, the bidder should ensure that "TECHNO-COMMERCIAL UNPRICED BID should contain details as mentioned in the technical specifications as well as BEC/ BRC and upload the same in the Technical RFx Response-> User - > Technical Bid. **No price should be given in above Technical Rfx otherwise the offer will be rejected**. Please go through the help document in details before uploading the document and ensure uploading of technical bid in the Technical RFx Response-> User - > Technical Bid only. The "PRICE BID" must contain the price schedule and the bidder's commercial terms and conditions. **The prices of the items should be quoted as per the price bid format under the "**NOTES & ATTACHMENT**"**

3) PRICED BIDS OF ONLY THOSE BIDDERS WILL BE OPENED WHOSE OFFERS ARE FOUND TO BE TECHNO-COMMERCIALLY ACCEPTABLE.

4) All the Bids must be Digitally Signed using "Class 3" digital certificate (e-commerce application) only as per Indian IT Act obtained from the licensed Certifying Authorities operating under the Root Certifying Authority of India (RCAI), Controller of Certifying Authorities (CCA) of India. The bid signed using other than "Class 3" digital certificate, will be liable for rejection.

5) **Bid should be valid for minimum 120 days from bid opening date, failing which offer shall be rejected.**

6) Bid Security is not applicable against this tender. However, all the bidders are required to submit "Bid Security Declaration, as per **Proforma-S** accepting that if they withdraw or modify their bids within the period of validity, or if they are awarded the contract and they fail to sign the contract or to submit a performance security before the deadline defined in the NIT, they will be suspended for period of 02 years. This suspension of 02 years shall be automatic without conducting any enquiry.

7) Performance Security @3% of order value is applicable against this tender. Please refer clause 10.0 of Section A of General Terms and conditions for Local Tender (MM/RP/LOCAL/E-01/2005). The format of Performance Bank Guarantee has been revised, the new format has been uploaded. Bidders are requested to ignore any old Performance Bank Guarantee with them.

Bidders are requested to advise the Bank Guarantee issuing bank to comply with the following and ensure to submit, the receipt of the copy of SFMS message as sent by the issuing bank branch, along with the original Performance Bank Guarantee to OIL's order/contract issuing office.

The bank guarantee issued by the bank must be routed through SFMS platform as per following details:

(i) "MT 760 / MT 760 COV for issuance of bank guarantee
(ii) "MT 760 / MT 767 COV for amendment of bank guarantee
The above message / intimation shall be sent through SFMS by the BG issuing bank branch to Axis Bank, Jodhpur Branch, IFS Code - UTIB0000057; Swift Code: AXISINBB057. Branch Address - AXIS Bank Ltd, Prince Tower, Near Jaljog Circle, Residency Road, Jodhpur - 342003"

8) Bidders to note that Govt. of India under Micro, Small and Medium Enterprises Development (MSMED) Act 2006, has proclaimed the Public Procurement Policy, 2012 with effect from 1st April, 2012 (and amendments issued time to time) in respect of procurement of goods and services, produced and provided by micro and small enterprises, by its Ministries, Departments and Public Sector Undertakings for promotion and development of Micro and Small Enterprises. In this regard, bidders are requested to take note of the following and to submit their offers accordingly.

a) Categorization and various criteria applicable to MSE bidders shall be guided by the Gazette notification no. CG-DL-E-26062020-220191 dated 26.06.2020 issued by Ministry of Micro, Small and Medium Enterprises.

The bidder claiming as MSE status (MSE-General, MSE-SC/ST, MSE -Woman) against this tender has to submit following documents for availing the benefits applicable to MSEs:

i. Udyam Registration No. with Udyam Registration certificate

Note: In case bidding MSE is owned by Schedule Caste or Schedule Tribe entrepreneur, valid documentary evidence issued by the agency who has registered the bidder as MSE owned by SC/ ST entrepreneur/ Woman Entrepreneurs should also be enclosed.

b) For availing benefits under Public Procurement Policy (Purchase preference & EMD exemption), the interested MSE Bidders must ensure that they are the manufacturer/ service provider of tendered item(s) and registered with the appropriate authority for the said item(s). Bids without EMD shall be rejected, if the technical offer does not include a valid copy of relevant MSE Certificate issued by appropriate authority specifying the item as per tender.

9) To ascertain the substantial responsiveness of the bid OIL reserves the right to ask the bidder for clarification in respect of clauses covered under BRC also and such clarifications fulfilling the BRC clauses in toto must be received on or before the deadline given by the company, failing which the offer will be summarily rejected.

10) Bidder's response to all NIT stipulations shall clearly be defined. Bidder shall furnish specific details/specifications of all major components, systems with Make & Model, etc. Generalised response like - 'As per NIT Specifications/Technical Leaflet', 'Noted', 'Accepted' or in any similar fashion is not acceptable.

11) General terms and conditions of Local tender (document MM/RP/LOCAL/E-01/2005) is enclosed. General Terms & Conditions for the orders have been modified. A copy of the same is enclosed Bidders are requested to comply the same.

12) **Price should be maintained as per the price format under " NOTES & ATTACHMENT" tab only. The price quoted in the as per the price format under " NOTES & ATTACHMENT" tab will only be considered.**

13) Bidders without having E-tender Login ID and Password should complete their online registration at least seven (7) days prior to the scheduled bid closing date and time of the tender. For online registration, Bidder may visit the OIL's E-tender site https://etender.srm.oilindia.in/irj/portal.

14) GST (Goods & Service Tax) will be cost loaded as quoted and in line with provisions of the bidding document. Any claim subsequently by the bidders for additional payment/liability shall not be admitted and has to be borne by the bidders. For GST clause please refer **Annexure-GST.**

15) Necessary Login ID & Password will be issued by OIL only after submitting the complete online registration by the Bidder. In the event of late registration/incomplete registration by Bidder, OIL INDIA LIMITED shall not be responsible for late allotment of User ID & Password and request for bid closing date extension on that plea shall not be entertained by Company.

16) **Purchase preference policy (linked with Local Content) (PP-LC):** Purchase Preference on Local Content is applicable against this tender. This tender will be governed by the Purchase preference policy (linked with Local Content) (PP-LC) of Ministry of Petroleum & Natural Gas, Government of India. Bidders are advised to refer notification no. O-27011/44/2015-ONG-II/FP dated 25.04.2017 & notification no. FP-20013/2/2017-FP-PNG dated 17.11.2020 and their subsequent amendments from MoP&NG, Bidders seeking benefits, under Purchase Preference Policy (linked with Local Content) (PP-LC) shall have to comply with all the provisions specified in **Annexure-PPLC** and shall have to submit all undertakings / documents applicable for this policy.

17) BG CONFIRMATION:

Please advise the Bank Guarantee issuing bank to comply with the following and ensure to submit, the receipt of the copy of SFMS message as sent by the issuing bank branch, along with the original Bank Guarantee to OIL's order/contract issuing office.

The bank guarantee issued by the bank must be routed through SFMS platform as per following details:

(i) "MT 760 / MT 760 COV for issuance of bank guarantee
(ii) "MT 760 / MT 767 COV for amendment of bank guarantee
The above message / intimation shall be sent through SFMS by the BG issuing bank branch to Axis Bank, Jodhpur Branch, IFS Code - UTIB0000057; Swift Code: AXISINBB057. Branch Address - AXIS Bank Ltd, Prince Tower, Near Jaljog Circle, Residency Road, Jodhpur - 342003.

18) The Integrity Pact is applicable against this tender. OIL shall be entering into an Integrity Pact with the bidders as per format enclosed vide **Annexure -XII** of the tender document. This Integrity Pact proforma has been duly signed digitally by OIL's competent signatory. The proforma has to be returned by the bidder (along with the technical bid) duly signed (digitally) by the same signatory who signed the bid, i.e., who is duly authorized to sign the bid. Uploading the Integrity Pact with digital signature will be construed that all pages of the Integrity Pact has been signed by the bidder's authorized signatory who sign the Bid. If any bidder refuses to sign Integrity Pact or declines to submit Integrity Pact with the offer, their bid shall be rejected straightway.

OIL's Independent External Monitors at present are as under:

1.Shri Shri Sutanu Behuria, IAS (Retd.);
E-mail: sutanu2911@gmail.com
2. Shri Rudhra Gangadharan, IAS (Retd.), Ex-Secretary, Ministry of Agriculture
E-mail: rudhra.gangadharan@gmail.com
3. Shri Om Prakash Singh, IPS (Retd.);
E-mail: ops2020@rediffmail.com

19) Revision, clarification, addendum, corrigendum, time extension etc to the tender will be hosted on OIL website only. No separate notification shall be issued. Bidders are requested to visit OIL website regularly to keep themselves updated.

END OF ANNEXURE-AA (REVISED)

SECTION-III (REVISED)

PROFORMA-II(REVISED)

PRICE SCHEDULE/PRICE BID FORMAT (SUMMERY)

A: PRICE SCHEDULE FOR DESIGN, SUPPLY, INSTALLATION & COMMISSIONING & AMC OF EDH AND ACCESSORIES FOR 1ST WELL-BAGHEWALA WELL NO. 9 (HORIZONTAL WELL)

Sl no.	Material	Unit	Quantity	Unit Rate (In INR)	Total (In INR)
A1	Material Cost Electrical Down Hole Heating System including all the accessories and items as per Scope of NIT.	No.	1		
A	Total Material Cost, A1				
B	Packing & Forwarding Charges				
C	Total Ex-Works Value, A+B				
D	GST@5% of C against Essentiality Certificate				
E	FOR Despatching Station Value, C+D				
F	Freight charges upto Destination including GST				
G	Insurance charges@0.5% of E upto Destination including GST				
H	Total FOR Destination Value, E+F+G				
I	Equipment preparation, installation, commissioning and start-up charges				
J	GST on (I)				
K	Total cost including Equipment preparation, installation, commissioning andstart-up charges, H+I+J				
L	Annual Maintenance Contract for a period of ONE (1) year	Qty:	Per Month Rate (INR)		
		12 Months			
M	GST on (L) i.e on AMC charges				
N	Total Cost of recommended spare parts and consumable required for smooth operation of the EDH & Accessories (Detailed break-up to be provided as per below Appendix- WELL NO. 9)				
O	Total Value, K+L+M+N				
P	Total Value in words:				
Q	Tentative Gross Weight				
R	Tentative Dimension of the consignment				
S	Name of Manufacturer				
T	Place of Despatch				
U	Country of Origin				
W	Import Content, if any				
X	% Local Content as per PP-LC Policy				

Appendix- WELL NO. 9

B: 2 years recommended spare parts / consumable list required for smooth operationof the supplied equipment along with quantity and rate

Item No.	Part No.	Detailed Item Description	First Year				Second Year				Remarks
			Qty	UOM	Unit Rate (INR)	Total (INR)	Qty	UOM	Unit Rate (INR)	Total (INR)	

Comparison of Offers:

Comparison will be done on Total value basis considering the total cost at **Srl. No. (O) of WELL NO. 9 .**

A: PRICE SCHEDULE FOR DESIGN, SUPPLY, INSTALLATION & COMMISSIONING & AMC OF EDH AND ACCESSORIES FOR 2nd WELL-BAGHEWALA WELL NO. 13 (VERTICAL WELL)

Sl no.	Material	Unit	Quantity	Unit Rate (In INR)	Total (In INR)
A1	Material Cost Electrical Down Hole Heating System including all the accessories and items as per Scope of NIT.	No.	1		
A	Total Material Cost, A1				
B	Packing & Forwarding Charges				
C	Total Ex-Works Value, A+B				
D	GST@5% of C against Essentiality Certificate				
E	FOR Despatching Station Value, C+D				
F	Freight charges upto Destination including GST				
G	Insurance charges@0.5% of E upto Destination including GST				
H	Total FOR Destination Value, E+F+G				
I	Equipment preparation, installation, commissioning and start-up charges				
J	GST on (I)				
K	Total cost including Equipment preparation, installation, commissioning andstart-up charges, H+I+J				
L	Annual Maintenance Contract for a period of ONE (1) year	Qty:	Per Month Rate (INR)		
		12 Months			
M	GST on (L) i.e on AMC charges				
N	Total Cost of recommended spare parts and consumable required for smooth operation of the EDH & Accessories (Detailed break-up to be provided as per below Appendix- WELL NO. 13)				
O	Total Value, K+L+M+N				
P	Total Value in words:				
Q	Tentative Gross Weight				
R	Tentative Dimension of the consignment				
S	Name of Manufacturer				
T	Place of Despatch				
U	Country of Origin				
W	Import Content, if any				
X	% Local Content as per PP-LC Policy				

Appendix- WELL NO. 13

B: 2 years recommended spare parts / consumable list required for smooth operationof the supplied equipment along with quantity and rate

Item No.	Part No.	Detailed Item Description	First Year				Second Year				Remarks
			Qty	UOM	Unit Rate (INR)	Total (INR)	Qty	UOM	Unit Rate (INR)	Total (INR)	

Comparison of Offers:

Comparison will be done on Total value basis considering the total cost at **Srl. No. (O) of WELL NO.13 .**

Common Special Note:

1. Tender has been invited for 02 Nos. (I.E Units) of Down Hole Heater & Accessories for two different wells viz-a-viz Horizontal (well BGW#09) and Vertical (well BGW#13) wells as specified in detailed scope of work of NIT. Bidder should submit their offer for Electric Down Hole Heater & accessories for both the wells separately as per above Price Bid Format. Evaluation shall be done on total value basis for each well independently. Bidders to take note of it and shall submit their offer accordingly.

2. All the items required for one well to be procured from the same source for the reason of compatibility and smooth operations. Therefore, bidder must quote for all the items required for EDH of their quoted well failing which their bid shall be rejected. Bidder to note that evaluation for each well shall be done independently on total value basis of that particular well.

3. Bidder should note that the items are required to be installed in wells with approximate depth 1865 mts **(Horizontal Well BGW#9)** and 1100 mts (**Vertical Well BGW#13)** depth with perforation range as given in the attached well diagram. Accordingly, bidder to determine& design the lengths of the cables and other materials required. Bidder should refer the Clause No. 14.0 BROAD SCOPE OF WORK of Section-I alogwith the **details of the materials which are annexed as Annexure A and B** while quoting their prices.

4. Bidder shall note that no other charges apart from above shall be paid by COMPANY for providing the services mentioned under 14.0 BROAD SCOPE OF WORK of Section-I. Therefore, charges apart from above, if any, Bidder shall load in the above rates only.

5. Domestic bidders must quote inland freight charges up to **Hamira, Jaisalmer (Rajasthan)**. In case bidder fails to quote inland freight charges, highest freight quoted by domestic bidder (considering pro-rata distance) against this tender or OIL's estimated freight, whichever is higher, shall be loaded to their offer for comparison purpose.

6. The AMC (Annual Maintenance Contract) is for a period of one year. Party to quote the same for a period of one year ON MONTHLY BASIS. The rate quoted for AMC will be considered for bid evaluation. But it is at the sole discretion of OIL whether OIL will utilize the services of AMC.

7. The items covered under this enquiry shall be used by OIL in the PEL/ML areas. Hence, GST@ %5 shall be applicable against EC.

8. Other clauses shall be applicable as per **MM-RP-LOCAL-E-01-2005 & Modified Terms & Conditions of the PO** and Goods & Service Tax clauses as per GST CLAUSE uploaded in Tender.

9. If any of the Clauses of this tender document contradict the Clauses of the **booklet MM-RP-LOCAL-E-01-2005** for E-procurement (LCB Tenders) elsewhere; those in the **Modified Terms & Conditions of the PO** shall prevail and tender document shall prevail.

10. If any of the Clauses of this tender document contradict the Clauses of the **booklet MM-RP-LOCAL-E-01-2005 & Modified Terms & Conditions of the PO** for E-procurement (LCB Tenders) elsewhere; those in the tender document shall prevail.

11. Bidders to quote the 8 digit HSN/SAC code for all the offered items and services. In case the same is not quoted by bidder, any liability arising due to non-declaration of the correct 8 digit HSN/SAC code shall be to the bidder's account.

12. If there is any discrepancy between the unit price and the total price, the unit price will prevail and the total price shall be corrected. Similarly, if there is any discrepancy between words and figure, the amounts in words shall prevail and will be adopted for evaluation.

13. In the event of finalization of the contract, whenever any foreign national is engaged for the job, the Visa as well as other statutory permits required for visit of such personnel to site shall be arranged by the bidder at their cost and effort. Necessary invitation letter/certification will be issued by OIL on request.

14. The work site, i.e., Baghewala oil field is located close to international border in the western part of India. As such, for visit by foreign national, a special permit from Ministry of Home Affairs will be required to be obtained by expatriates visiting the locations. Necessary assistance to this effect will be extended by OIL).

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