OIL & GAS DEVELOPMENT COMPANY LIMITED
PROCUREMENT DEPARTMENT, ISLAMABAD
FOREIGN SECTION A

and stamped by the

ANNEXURE 'A'

Material Sodium Carboxy Methyl Cellulose–Low Viscosity (CMC–LV)
Tender Enquiry No PROC–FA/CB/WS/CMC–LV–4782/2020
Due Date
Evaluation Criteria FULL

SCHEDULE OF REQUIREMENT

Sr No	Description	Unit	Quantity	Unit Price (FOB)	Total Price (FOB)	Unit Price C & F BY SEA	Total Price C & F BY SEA	Deviated From Tender Spec. If Any
1	SODIUM CARBOXY METHYL CELLULOSE (LOW VISCOSITY), CMC–LV	Metric Ton	300					

Note:

1. **Bid Bond Amount:** Bid(s) must be accompanied by an upfront bid bond in the form of pay order/ demand draft or bank guarantee issued by scheduled bank of Pakistan or a branch of foreign bank operating in Pakistan for an amount of US $7,500/= (United States Dollar Seven Thousand Five Hundred Only) or equivalent Pak Rupees, with technical bid and valid for 150 days from the date of opening of the bids.
2. **Delivery period:** Delivery period of the quoted product should not be more than 180 days from the date of establishment of Letter of Credit (LC).

Vetted PLZ

M. 05/09/2020
M. FARASAT SHARIF
Mud Engineer
Ext: 2917

TECHNICAL SPECIFICATIONS SHEET OF CARBOXY METHYL CELLULOSE – LOW VISCOSITY

Carboxy Methyl Cellulose- Low-Viscosity Grade (CMC-LV), is an effective organic Polymer Designed to control filtration (Water loss) in all types of water base drilling fluids ranging from fresh to salt saturated waters, while having a minimal effect on viscosity. It is readily dispersible in water base mud systems from fresh to salt saturated muds.

Each bidder of CMC-LV should invariably fill-in the table given below with exact value of these properties of their quoted product. Only to write conforming to or OK will not be sufficient.

A) *TECHNICAL SPECIFICATIONS*

SR. NO.	*PHYSICAL PROPERTIES*	*REQUIRED SPECIFICATIONS*	*EXACT VALUE OF THE OFFERED PRODUCT*
01.	Appearance	Hygroscopic free flowing powder	
02.	Moisture content	8% Maximum	
03.	Bulk Density (g/l)	Minimum 650	

B) PERFORMANCE EVALUATION

PERFORMANCE TESTING (AS PER API SECTION 9)			
SR. NO.	**PERFORMANCE TEST**	**REQUIRED SPECIFICATIONS**	**EXACT VALUE OF THE OFFERED PRODUCT**
1.	Viscometer dial reading at 600 RPM	90 Maximum	
2.	Filtrate volume	10 cm^3 Maximum	

Note: Detailed procedure for performance testing is enclosed at Annexure-B

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Checked by:
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Sr Engineer Mud

Approved by:
Riaz Ahmed Mangi
Manager I/C (DS)

C) NECESSARY DATA

S. No.	Description		
01.	A	Name of Bidder	
	B	Name of authorized signatory of bidder	
	C	Complete address, telephone, e-mail and fax numbers of bidder	
02.	A	Name of Local agent	
	B	Name of authorized signatory of local agent	
	C	Complete address, telephone, e-mail and fax numbers of local agent	
03.	A	Name of Manufacturer	
	B	Name of authorized signatory of manufacturer	
	C	Complete address, telephone, e-mail and fax numbers of manufacturer	
	D	Website of manufacturer	
04.	Brand Name of Product		
05.	Country of origin		
06.	Port of shipment		
07.	Minimum shelf life of product		

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D) Sales achievement (E & P companies only) other than OGDCL whom supplied the quoted product in bulk quantity (not less than 50 M.Ton) during the last Five (05) years commencing from year 2015 as a proof of Five (05) years' experience by the manufacturer.

SR. NO.	NAMES OF CLIENTS WITH ADDRESS AND TELEPHONE NOS. & E-MAIL ADDRESS	CONTRACT / PURCHASE ORDER NOS. WITH DATE	QUANTITY SUPPLIED

E) NECESSARY ATTACHMENTS FOR TECHNICAL BID:

SR. NO.	DESCRIPTION	ATTACHED/ PROVIDED OR NOT.
01.	Product Data Memorandums of (CMC-LV) in original printed by manufacturer.	Attached/ Not attached
02.	Material Safety Data Sheets of (CMC-LV) in original printed by manufacturer.	Attached/ Not attached
03.	Valid ISO-9001-2008 certificate for manufacturing / Production of the quoted product / mud chemical.	Attached/ Not attached
04.	Original authority letter issued by the manufacturer to bidder for quoting their product.	Attached/ Not attached
05.	1 kg sample of offered product.	Provided/ Not provided

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PACKAGING:

The chemical should be packed as **25kgs** net per bag in export quality new multi-wall paper bags having thick, high density inner polythene liner for rendering the material completely moisture proof. The material should be palletized as **500-1000** KG, wrapped with thick polyethylene sheet and tightly strapped. The packaging of the required mud chemical should be of international standards and capable to safe transportation during ocean / road journey from port of shipment to well site and to withstand harsh weather conditions at the storage points and at the well sites / locations.

MARKING:

Each bag should have clearly legible marking, as given below;

(a) Name of the product.
(b) Name of the Manufacturer.
(c) Date/month/ year of manufacture.
(d) Minimum shelf life
(e) Supply order number against which supplies are made.
(f) Lot No._____/ Batch No._____.

INSTRUCTIONS TO THE BIDDERS/ TERMS & CONDITIONS:

1. Bids evaluation criteria is technically responsive and financially the lowest.
2. The manufacturer of the quoted product must have minimum **05** years' experience of manufacturing & supplying of indented chemical to E & P companies specifically, duly supported by valid authentic **ISO 9001-2008** certificate as a proof for manufacturing/ production of the quoted product / Mud chemical consecutively from last 05 years. Bidder must provide inquiry guidance to confirm authenticity of ISO certificate. In case of any ambiguity, the certificate will be verified from issuing authority. The certificate duly submitted along with bid will be considered final. No additional certificate will be entertained at any stage of the case.
3. **Minimum shelf life** of the quoted product before each consignment delivery **should not be less than 03 years**.
4. Technical Specifications Sheet of the quoted product duly filled-in must be enclosed in the technical bid.
5. **Delivery period** of the quoted product should not be more than **180 Days after opening of letter of credit (LC)**. However, the supplier must commence consignment wise delivery within 90 days as per following schedule, failing which action will be taken as per rules

Description	1st Consignment	2nd Consignment
CMC-LV	150 M.Ton within 90 days after opening of Letter of Credit (LC)	150 M.Ton in next 90 days with valid expiry date of 03 years.

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6. All submitted bids will be evaluated strictly as per TOR of tender inquiry as well as on the basis of previous performance (supply record as per shipment) of bidder, manufacturer and local agent, failing which will lead to disqualification of Bid thereof.

7. An authority letter in original issued by the manufacturer for allowing the bidder to quote their product for this particular tender enquiry, duly signed/stamped, must be attached with the technical bid in case the bidder is not manufacturer, which will be verified from manufacturer.

8. All the bidders may provide/ submit the **1 Kg sample** of the quoted product (conforming to OGDCL requirement as per Section **(A & B)** within 15 days of technical bid opening, if could not provide with the technical bid. The valid receipt/tracking details supplied through national / international courier services has to be accompanied with the sample.

9. The quoted product or item from country of origin **"INDIA"** is not acceptable as per SRO-927(I)/2019 dated 09-08-2019.

10. Prior to shipment of the material, if desired by OGDCL, the supplier of the product will be responsible for carrying out the inspection & Lab analysis of the material from the OGDCL approved inspecting agency/Lab for confirmation of material as per tender specifications. The inspector will be hired by OGDCL .After physical inspection, one representative sample of the chemical will be dispatched by the inspectors directly to OGDCL. Later on its Lab Evaluation report will be submitted directly to OGDCL. After examination/scrutiny, OGDCL will inform about acceptance/rejection of material/report.

11. Shipment is required to be made in containers for minimizing damages to the costly Chemical.

12. The final acceptance of the requisite consignment will be made after physical inspection of shipment & Lab analysis of representative sample for conforming to technical specs of tender documents. The lab analysis will be undertaken at OGDCL own or any other reputable lab of OGDCL choice and acceptance of the results will be binding on the supplier.

13. Material must have to be lifted back by the vendor if not found as per technical specification of this particular tender enquiry even after its delivery at the base stores and have to replace with the material conforming to technical specifications with no cost to OGDCL.

14. If any of the information provided by the bidders proves wrong or any counterfeited/unlawful document is submitted to mislead department, OGDCL reserves the right to disqualify such bids without further assigning any reason. Such bidders will not be eligible to bid for any future procurement.

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SECTION 9
TECHNICAL-GRADE LOW-VISCOSITY CMC (CMC-LTV)

9.1 Description

a. Technical-grade low-viscosity carboxymethylcellulose (CMC-LVT), an alkali metal salt of carboxymethylcellulose that is chemically modified to obtain a water soluble polymer. The manufacturer shall maintain documentation of analysis of the cellulosic raw material used.

b. The product obtained is a free-flowing or granulated powder and is not normally purified of byproducts formed in the reaction. It is known as CMC-LVT.

c. CMC-LVT shall be deemed to meet this specification if a composite sample representing no more than one day's production conforms to the physical requirements of Table 9.1, represents the product produced, and is controlled by the manufacturer.

TABLE 9.1
CMC-LVT
PHYSICAL REQUIREMENTS

Requirement	Specification
Solution Properties	
Viscometer Dial Reading at 600 rpm	99, maximum
Filtrate Volume	10 cm³, maximum

SOLUTION PROPERTIES

9.2 Equipment

a. Thermometer: 32-220 ±1°F (0-105 ±0.5°C)

b. Balance: precision of 0.01 g

c. Mixer (e.g., Multimixer Model 9B with 9B29X impellers or equivalent as shown in Fig 2.1): Each spindle will be fitted with a single sine-wave impeller approximately one inch (25mm) in diameter mounted flash side up.

d. Mixer Container: approximate dimensions — 7 inches (180 mm) deep, 3-13/16 inch (97 mm) ID top, 2-3/4 inch (70 mm) ID bottom (e.g., Hamilton Beach mixer cup No. M110-D, or equivalent)

e. Spatula

f. Motor-Driven Direct Indicating Viscometer: as referenced in API RP 13B-1, 1st edition, June, 1990, Par. 2.4

g. Deionized (or distilled) water

h. Timers: two interval, mechanical or electrical, precision of 0.1 minute

i. Sealed container: about 500-cm³ with lid

j. Filter press: as referenced in API RP 13B-1, 1st edition, June, 1990, Par. 3.2

k. Graduated cylinders: one 10 ±0.1 cm³ (TC), one 100 ±1 cm³ (TD), and one 500 ±5 cm³ (TD)

l. pH meter (optional): precision of 0.1 pH unit

m. Container, glass or plastic, with stopper or lid for salt solutions

n. API Standard Evaluation Base Clay (see Par. 1.4)

o. Sodium chloride: (CAS #7647-14-5)

p. Sodium bicarbonate: (CAS #144-55-8)

9.3 Procedure — 600 rpm Dial Reading

a. Prepare a solution of CMC-LVT. Add 10.5 ±0.01 g CMC-LVT to 350 ±5 cm³ of deionized water at a uniform rate over a time interval of about 60 seconds while stirring on the mixer.

NOTE: *CMC-LVT shall be added away from impeller shaft to minimize dusting.*

b. After stirring 5 ±0.1 minutes, remove container from mixer and scrape its sides with the spatula to remove or dislodge any CMC-LVT adhering to container walls. Be sure all CMC-LVT clinging to the spatula is incorporated into the solution.

c. Replace the container on the mixer and continue to stir. The container may need to be removed from the mixer and the sides scraped to dislodge any CMC-LVT clinging to container walls after another 5 and 10 minutes. Total mixing time shall equal 20 ±1 minutes.

d. Age the solution for 2 hours ±5 minutes in a sealed or covered container at room temperature. Record storage temperature.

e. After aging, stir the solution on the mixer for 5 ±0.1 minutes.

f. Pour the solution into the viscometer cup provided with the direct indicating viscometer. The dial reading at the 600 rpm rotor speed setting of the viscometer shall be recorded when a constant value at 600 rpm is reached. The reading shall be taken at a solution test temperature of 77 ±2°F(25 ±1°C).

9.4 Procedure — Filtrate Volume

a. Prepare an ample volume of saturated salt solution by thoroughly mixing in a suitable container 40 to 45 g of sodium chloride per 100 ±1 cm³ of deionized water. Allow solution to stand for approximately 1 hour. Decant solution or filter it into a storage container.

b. Prepare a clay-base suspension by adding 350 ±5 cm³ of the saturated salt solution to the mixer container. Add 1.0 ±0.1 g of sodium bicarbonate and stir on the mixer for about 1 minute.

c. Slowly add 35.0 ±0.1 g of API Standard Evaluation Base Clay while stirring on the mixer.

d. After stirring 5 ±0.1 minutes, remove container from mixer and scrape its sides with the spatula to dislodge any clay adhering to container walls. Be sure all clay clinging to the spatula is incorporated into the suspension.

e. Replace the container on the mixer and continue to stir. The container may need to be removed from the mixer and the sides scraped to dislodge any clay clinging to the container walls after another 5 and 10 minutes. Total stirring time after adding the clay shall equal 20 ±1 minutes.

f. Add 3.15 ±0.01 g (9.01 ±0.03 g/L) of CMC-LVT to the suspension while stirring on the mixer, adding at a uniform rate over about 60 seconds.

g. After stirring 5 ±0.1 minutes, remove the container from the mixer and scrape its sides with the spatula to dislodge any CMC-LVT adhering to container walls. Be sure all material clinging to the spatula is incorporated into the suspension.

h. Replace the container on the mixer and continue to stir. The container may need to be removed from the mixer and the sides scraped to dislodge any CMC-LVT clinging to the container walls after another 5 and 10 minutes. Total stirring time shall equal 20 ±1 minutes.

i. Age the suspension for 2 hours ±5 minutes in a sealed or covered container at room temperature. Record storage temperature.

j. After aging, stir the suspension on the mixer for 5 ±0.1 minutes.

k. Immediately pour CMC-LVT-treated suspension into a filter press cell. Before adding the suspension, be sure each part of the filter cell is dry and that all gaskets are not distorted or worn. The temperature of the suspension shall be 77 ±2°F (25 ±1°C). Pour the suspension to within about 1/2 (13 mm) of the top of the cell. Complete assembly of the filter press cell. Place the filter cell in the frame and close the relief valve. Place a container under the drain tube.

l. Set one timer for 7.5 ±0.1 minutes and the second timer for 30 ±0.1 minutes. Start both timers and adjust pressure on the cell to 100 ±5 psi (690 ±35 kPa). Both of these steps shall be completed in less than 15 seconds. Pressure shall be supplied by compressed air, nitrogen or helium.

m. At 7.5 ±0.1 minutes on the first timer, remove the container and any adhering liquid on the drain tube and discard. Place a dry 10-cm^3 graduated cylinder under the drain tube and continue collecting filtrate to the end of the second timer set at 30 minutes. Remove the graduated cylinder and record the volume of filtrate collected.

9.5 Calculation — Filtrate Volume

Calculate the filtrate volume of the CMC-LVT-treated suspension as:

$$\text{Filtrate vol., cm}^3 = 2 \times V_c \qquad (a)$$

where V_c = volume filtrate collected between 7.5 and 30 minutes

Record calculated value.