

OIL & GAS DEVELOPMENT COMPANY LIMITED



TENDER ENQUIRY NO. PROC-SERVICES/CB/DO-5048/2021

HIRING OF H2S SAFETY SERVICES ON OGDCL WELLS AT RIGS

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TERMS OF REFERENCE (TOR)

TWO YEARS RATE RUNNING CONTRACT AND EXTENDABLE WITH MUTUAL CONSENT OF BOTH THE PARTIES.

HIRING OF H2S SAFETY SERVICES ON OGDCL WELLS AT RIGS ANYWHERE IN PAKISTAN ON AS AND WHEN REQUIRED BASIS

4. **Scope of Work:** The firm should provide reliable services at OGDCL drilling well sites anywhere in Pakistan to proactively monitor and timely handle H2S with the following mandatory efficient H2S Safety Package:

- H2S Detection System
- Respiratory Protection
- Miscellaneous Equipment
- H2S Engineers and Trainers & Auditors

The firm will be required to mobilize **H2S Safety Equipment and Professional Crew** to the desired location anywhere in Pakistan within 48 hours of Mobilization Notice on as & when required basis.

B. Timeframe:

Reliable and efficient **H2S Safety Package** (or Packages e.g. 2 -3) would be required on a drilling rig site for a specified time, but for at least for two weeks, subject to OGDCL requirements.

C. Details of H2S Safety

Package: 1.H2S Gas

Detection System

1.1 Fixed Point Gas Detection Systems:

The gas detection system should comprise of ambient air hydrogen sulfide and flammable hydrocarbon gas detectors. Once the concentration registered by the sensor has reached the TLV (Threshold Limit Value) for the gas sensed, a relay should be energized to provide power to a remotely located explosion and non-explosion proof strobe light. If the concentration passes the STEL (Short Term Exposure Limit) a second relay will be activated providing power to an explosion and non-explosion proof siren. These combination alarm units will be strategically placed to provide warning in areas the personnel may be working and usually unaware of a condition change.

1.1.1 H2S Sensor Assembly: H2S sensors should cover but not be limited to the following areas at:

Rig floor	x 2	Cellar	x 1	Waste pit	x 1
Mud tanks	x 1	Shakers	x 1		
Trip tank	x 1	Choke	x 1		
Flare pit	x 1	Rig site camp	x 1	Total	10


Note: Calibration-kit complete with appropriate cylinder calibration gases should be provided to calibrate H2S fixed point sensors as well portable detectors. The calibration report will be submitted to the client well site representative after each calibration performed.

1.1.2 Fixed LEL Gas Sensors

Rig floor	x 1	Cellar	x 1	Choke	x 1
Mud tanks	x 1	Shakers	x 1	Total	05

1.1.3 Central Controller:

The Stand Alone 'Wireless' System should be installed to develop wireless communication between the central controller and detector unit. Each detector should handle two H2S sensors and powered by a solar panel.


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#	Location	Quantity
a	H2S Unit	1

1.2 Audible and Visual Alarm System:

1.2.1. Explosion Proof Audible and Visual Alarm System:

Explosion proof audible and visual alarms system should be installed at different places on the rig to provide both low level and high-level warnings. Flexibility in provision of alarms must be considered so as to overcome potential dead sound areas where personnel make become at risk. The explosion proof audible and visual alarms should be installed at the following places:

H2S Alarm & Siren

Rig floor stairs	x 1	Rig floor	x 1
Mud tanks	x 1	Shakers	x 1
Engine room	x 1	Mini camp	x 2
Generator	x 1	Main gate	x 1
		Total	09

LEL Alarm & Siren

Shakers	x 1	Rig Floor	x 3
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1.2.2 Non-Explosion Proof Audible and Visual Alarm System: Non- explosion proof should be located at the following area:

#	Location	Quantity
a	Mud Logging Unit	1

1.3 Portable Detectors: H2S portable detectors should be used to check/monitor H2S and assigned to the personnel involved directly in the operations or where direct contact with H2S could be expected.

1.3.1 Multi Gas Detector: 1 (one) unit of multi gas (LEL, O2, CO, H2S) electronic portable, rechargeable detector complete with built insuction pump, probe and carry case should be used. Portable detector is designed to be place between the worker and the source of H2S/combustible gas or in a confined space like mud tanks etc. The multi gas detector should assign but not limited to the following:

#	Description	Qty.
a	H2S/ HSE Engineer (back to back)	2
c	H2S/ HSE Trainer & Auditor	1
	Total	3 units

1.3.2 Personal Monitors:

Minimum 15 as tabulated below (actual to be determined & provided after risk assessment); However 4 units of personal H2S Gas Detectors be distributed to OM; Rig Tool Pusher, Driller and H2S/ HSE Engineer.

#	Description	Qty.
a	OM or Company man day/night	1
b	Rig Tool Pusher/Night Pusher	1
c	Driller day/night	1
d	H2S/ HSE Engineer	1
e	Floor man	1
f	Derrick man	1
g	Mud Engineer	1
h	Shaker boy	1
i	Rig Manager	1
j	Visitors/ Others	6
	Total	15 units

Calibration kit complete with appropriate cylinder calibration gas will be provided to calibrate both of multi gas and personal type gas detectors.

1.3.3 **Mechanical Plunger:** One mechanical plunger type detector, complete with H2S and CO2 tubes also should be used to measure H2S and CO2 concentration that contained in gas. Any other gases that may later be required to be sampled for can be supplied provided they are manufactured for the above system. The mechanical plunger will be located at:

1.3.4

#	Location	Quantity
a	H2S Unit	1

2. Respiratory Protection System

- 2.1 Continuous supply of compressed air through Breathing Air Manifolds connected with **Cascade Breathing Air Supply System** shall be made available at rig floor, derrick, cellar, shale shaker, trip tank/ degasser, and choke manifold (to be made operational when H2S is encountered). Back to back breathing air compressors (two electrical and two diesel engine operated) should be used in the safe area and recharge the cascade cylinders and BAs. Compressor will be located on Safe Area. Hence the Supplied Air Breathing Apparatus be incorporated with a reliable line safely connected with Cascade Breathing Air Supply System.
- 2.2 30/60-Minute **Self Contained Breathing Apparatus (SCBA)** units shall be made available at emergency response post, muster points, rig floor, dog house, mud cabin and data unit. However total 16 SCBA units be made available.
- 2.3 10/15-Minute **Emergency Escape Breathing Apparatus (EEBA)** shall be made available at OM/ Company Man office, HSE cabin, rig floor, dog house, mud cabin, rig maintenance office/ workshops, power control cabin, engine driver cabin, admin room, and data unit. However total 20 EEBA units be made available.

2.4 **High Pressure & Low-Pressure Cylinders:** The cascade cylinders will be located for the following areas:

#	Location	Quantity	Description
a	Close to Rig floor	1x6 bottles (2400psi)	For Rig floor, wellhead & Monkey Board
b	Close to Rig floor	1x6 bottles (2400psi)	For Shale Shaker, Mud Tanks
c	Close to Rig floor	1x6 bottles (2400psi)	For Rig Floor, Choke Manifold and Trip Tank, Cement Unit
d	Close to Compressor	1x2 bottles (5000psi)	For Cement Unit
Total		3x6 bottles (2400psi) 1x2 bottles (5000psi)	

2.5 **Pressure Regulators & Isolation Valves:** At least 6 Pressure regulators should be used to reduce the high pressure to breathing air pressure. The 6 isolation valves should be used to isolate the individual cascade and to divert the breathing air.

#	Location	Quantity	Description
a	Cascade Racks	6	A combination of regulators and isolation valves

2.6 **Low Pressure Hoses with and w/o Lock System:** The low and high pressure hoses should be used for the supply of breathing air from compressor to cascades and from cascades to manifolds. The low pressure hoses which should be used for the air supply to the manifolds must have lock system and hence cannot be disconnected accidentally. In addition, the low pressure hoses should be used as work lines with Supplied Air Breathing Apparatuses. The minimum quantity required is as follows:

#	Location	Quantity	Description
a	50ft High Pressure Hoses	10	Tested at HP
b	25 ft Lo Pressure Hoses w/lock	25	Tested at LP
c	25 ft Lo Pressure Hoses w/lock	20	Tested at LP

2.7 **Low Pressure Manifolds:** Several manifolds complete with pressure gauges and plug in quick connectors should be connected to high- pressure air storage cylinders via low pressure hoses. The manifolds will be located at:


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#	Location	Quantity
a	Rig floor	2x6 man manifold
b	Shale Shaker	1x4 man manifold
c	Mud tanks	1x6 man manifold
d	Cement Unit	1x4 man manifold
e	Trip Tank	1x4 man manifold
f	Monkey Board	1x4 man manifold
g	Choke Manifold	1x4 man manifold

3 Miscellaneous Equipment

3.1 Wind Direction Indicators:

Rig floor	x 1	Water pit	x 1
Mud cabin	x 1	Muster point b	x 1
Muster point a	x 1	Near flare pit	x 1
Near fuel tanks	x 1	Total	07

Condition Level Flag (in conjunction with the site condition sign) will be located at:

#	Location	Quantity
a	H2S Condition Flag @ Main Gate	1

3.2 Dangerous and Poisonous Gas Signs: Legible dangerous and poison gas signs should be prominently posted at main entrances of the rig. These signs should be in dual language (English & Urdu), bold lettering and on a reflective background. A site condition sign will be displayed with indications to status of hazardous event. Procedures regarding this will be set down in the H2S

#	Location	Quantity
a	H2S Condition Level Sign Board @ Main Gate	1
b	H2S Danger Sign Boards	1

3.3 Bug Blowers

#	Location	Quantity
a	Cellar	2

3.4 Mask Mounted Voice Amplifier: A mask mounted amplifier should be used for training purpose on breathing apparatuses.

#	Location	Quantity
a	H2S Unit	1

4. H2S/ HSE Engineers and Trainers and Auditors

02 (two) H2S/ HSE Engineers and 01 (one) H2S Trainer & Auditor should be made available for safe drilling operations, one on day shift and one on night shift. The H2S/ HSE Engineers must be trained as Field H2S Safety Engineers to work in an H2S environment for the installation, operation and maintenance of equipment having experience in safety service for sour production facilities, also understand and are able to implement H2S safety procedures, emergency response, confined space entry – permit to work system, lock out tag out and basic fire safety.

The H2S/ HSE Engineers, Trainers & Auditors should be involved on a daily basis with the following:

- Keeping close liaison and contact with the drilling crew
- Routine check of the gas detection and respiratory protective equipment, providing assurances that the equipment is functioning to specification
- Overseeing repair and general maintenance work. This would entail pre job inspection, limiting the exposure of gas releases (venting, etc) and close gas monitoring during the work function
- Daily walk around gas emission check with portable detector to check for leaks from production equipment
- Taking gas sample if necessary
- Supervising with respect to H2S safety pig launching and retrieval operations
- Cleaning, checking and testing the H2S safety equipment. Performing repair works as required.
- Field training of the site personnel for the proper use of respirators, H2S portable detectors and emergency response in the event of H2S/combustible gas exposed to atmosphere
- Conducting weekly H2S Drills
- Producing graphical and tabular inspection/ performance reports twice on daily basis (morning and night)


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D. Technical Evaluation Criteria

Sr. No.	Description	Weightage	Bidders Marks
1	Minimum 05 years active global experience in H ₂ S safety services. (Mandatory)	30%	
2	Capacity to handle two (02) simultaneous H ₂ S safety jobs on different locations for OGDCL.	20% 01 job = 9 Marks More than 02 jobs= 20 marks	
3	Service Company's established base in Pakistan or assurance to set up a base within 30 days of issuance of LOI.	20% Established Base= 20 marks Assurance to establish base= 16 marks	
4	Experienced H ₂ S safety Engineers with three (03) years active experience with the company	25% 01-year experience =08 marks More than 03 years experience = 25 marks	
5	Last 03 years Audited sound financial report of the bidder/Joint venture partner	05% 01 year=1.5 marks More than 03 years= 05 marks	
	Total	100%	


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E. Rate Format

S.No	Description	Operating Rate per Day (US\$)	Stand by Rate per Day (US\$)
01	H2S Gas Detection System (Rental Day Rate)		
02	Respiratory Protection System (Rental Day Rate)		
03	Miscellaneous Equipment (Rental Day Rate)		
04	H2S/ HSE Engineers and Trainers & Auditors		
05	Mobilization & Demobilization of Equipment	Rate per KM	
06	Mobilization & Demobilization of Safety Crew	Rate per KM	
07	Consumables/ Calibration/ Maintenance	Lump sum charges/ Day	

F. Financial Evaluation Criteria

S.No	Description	Operating Cost for 30 (Days) USD	Stand by Cost for 2 (Days) USD	Total Cost (USD)
1	H2S Gas Detection System (Rental Day Rate)			
2	Respiratory Protection System (Rental Day Rate)			
3	Miscellaneous Equipment (Rental Day Rate)			
4	H2S/ HSE Engineers and Trainers & Auditors			
5	Mobilization & Demobilization of Equipment for 3000 KM	Per KM Rate		
6	Mobilization & Demobilization of Safety Crew for 3000 KM	Per KM Rate		
7	Consumables/ Calibration/ Maintenance for 30 days	Lump sum charges / days		
Total Cost (US\$) of one well (A)= Sum of S.No 01 to 07				
Grand Total (US\$) for one year (B)=A x 06 wells				
Grand Total (US\$) for Two years = B x 02				

- The quoted prices shall be inclusive of all taxes except PST/ICT as per draft contract clause # 05 of OGDCL.


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G. Instructions to Bidder:

- a. Firm should have at least one Base in Pakistan or assurance to set up a base within 30 days of issuance of LOI.
- b. Firm should not be blacklisted.
- c. Firm acquiring MINIMUM 75% MARKS in each aspect and OVERALL 80% MARKS will be eligible for shortlisting.
- d. Following documents must be submitted on **MANDATORY** basis by the Firm, otherwise bid would not be considered:
 - o Evidence of Certificate of Incorporation/ Company Registration Certificate required.
 - o Evidence of Active Tax Payer and attested copies of last 03 years tax returns required.
 - o Affidavit on stamp paper, declaring Firm is not blacklisted by any Govt. agency/authority (Original required).
 - o Consortiums/ collaborations/ JVs should not apply.
- e. The firm will be required to mobilize H2S Safety Equipment and Professional Crew to the desired location anywhere in Pakistan within 48 hours of Mobilization Notice on as & when required basis.
- f. The Firm shall arrange, transport (mobilize), handle, install, operate, maintain, contain and dismantle (demobilize) all the systems and accessories like cables, junction boxes, glands etc. & technical support all by itself to keep the H2S Safety Package safe, secure and operational incessantly.
- g. OGDCL shall be responsible for boarding & lodging of personnel during their stay on well site and will provide the security while on transit and at work in the security-sensitive areas as per routine security arrangements. However OGDCL shall not indemnify for any injury, losses and third party liabilities and equipment throughout the contract period.
- h. The Firm shall provide a copy of its approved Emergency Response Plan (ERP) for the said assignment to OGDCL before mobilizing.
- i. The Firm shall provide to its H2S/ HSE Engineers and Trainers & Auditors proper safety guidelines, protective clothing and other safety gears without involving OGDCL.
- j. Plentiful spares of following equipment may also be made available in stock on site in case requirement emerges:
 - 30/60-Minute Self Contained Breathing Apparatus (SCBA)
 - 10/15-Minute Emergency Escape Breathing Apparatus (EEBA)
- k. Necessary deductions shall be made from the invoice(s) if appropriate services (quality, in-time and incessant) are not rendered.
- l. Payment shall be made in 100% equivalent Pak Rupees, as per actual work done and on monthly basis, against verified invoices at official exchange rate prevalent on the date of payment.


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OTHER IMPORTANT INFORMATION

BIDDING METHOD:

Bids against this tender are invited on 'single stage Two envelop'

AMOUNT OF BID BOND:

Bid Bond /Bid Security amounting to USD 16,000/- is to be attached / provided with the technical bid.
Please see Master Set of Tender Document for further details.

MANDATORY REQUIREMENT

For online payment to vendors/contractors through (IBFT & LFT). Following info is required from your company: -

1. IBAN (INTERNATIONAL BANK ACCOUNT NUMBER 24 DIGITS).
2. VENDOR NAME AS PER TITLE OF THEIR BANK ACCOUNT.
3. NTN NO.
4. CONTACT # OF COMPANY CEO/OWNER (MOBILE & LANDLINE).
5. POSTAL ADDRESS.
6. BANK NAME.
7. BANK BRANCH NAME & ADDRESS.

The master set of tender documents (services) uploaded on OGDCL's website (www.ogdcl.com) is the integral part of this TOR.

Bidders are requested to read TOR & Master Set to Tender Documents (Services) and provide complete information / documents including tender annexures with the bid.

Following is the link for Master Set of Tender Documents for Services:

<https://ogdcl.com/sites/default/files/tender%20download/Tender%20Document%20Services%20Press%20for%20Web%20loading-Bid%20Bond%20%26%20PBG%20Extension%20text%20added%20dated%202009-09-2020.pdf>


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