

<p>Directorate General Mines & Minerals (DGMM) Minerals Development Department</p> <p>Attached Department Near Judicial Complex, Khyber Road, Peshawar. Phone No: 091 - 9210236 www.kpdgmm.gov.pk www.khyberpakhtunkhwa.gov.pk /Departments/Mineral email: directorgeneral.dgmm@gmail.com</p>	<p>Khyber Pakhtunkhwa Board of Investment & Trade (KP-BOIT)</p> <p>1st Floor, LCB Building, Plot # 33, Street # 13, Sector E-8, Phase-7, Hayatabad, Peshawar Phone No: 091 - 9217635, 9217655, Fax No: 091 - 9217765 Email: invest@kpboit.com.pk</p>
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TERMS OF REFERENCE (TOR)

INVITATION FOR EXPRESSION OF INTEREST FROM INTERNATIONAL/LOCAL INVESTORS/CONSORTIA FOR EXPLORATION AND RESOURCE ASSESSMENT OF METALLIC MINERALS RESOURCE BLOCKS IN CHITRAL DISTRICT AND HAZARA DIVISION, KHYBER PAKHTUNKHWA, PAKISTAN

1. NATURE OF METALLIC MINERALS RESOURCE BLOCKS

a) CHITRAL DISTRICT

District Chitral has been the subject of voluminous past geological studies, carried out by foreign geoscientific organizations/individual experts, Geological Survey of Pakistan (GSP), Sarhad Development Authority (SDA) and academia. Of particular value to potential investors are the results of regional stream sediment geochemical exploration, conducted by (SDA) in collaboration with AusAID. A valuable collection of data/reports on this regional work is retained by the DGMM and reveals the presence of geochemical anomalies and mineral showings of Gold (Au), Tungsten(W), Silver (Ag), Platinum (Pt), Nickel (Ni), Copper (Cu), Lead (Pb), Zinc (Zn), Antimony (Sb) and Molybdenum (Mo). DGMM has delineated **5 prospective blocks in District Chitral** and intends to offer these for investment through an open and transparent two stage process.

b) HAZARA DIVISION

Hazara Division of Khyber Pakhtunkhwa has also been subject of a large number of geological studies, culminating in a Division wide regional stream sediment geochemical survey. The methodology of the stream survey in Hazara followed the methodology used in Chitral. Lead and zinc are more prominent in Hazara than in Chitral. DGMM has delineated 4 prospective blocks in Hazara Division and intends to offer these for investment through an open and transparent two stage process.

2. DGMM OBJECTIVES

- i) In the **first stage** to prequalify suitable parties who have the technical and financial resources required to participate in the **second stage** competitive

bidding to obtain Exploration License (EL) and to conduct exploration for location of minable concentrations of metallic minerals in District Chitral and Hazara Division.

- ii) All necessary geological, geophysical, hydrological, geotechnical, aditing, drilling and related work required to locate any viable mineral resource/s is required to be done in accordance with an internationally recognized standard such as NI43-101 or JORC. Available geological reports and analysis data can be utilized in further planning.

3. THE SCOPE OF WORK FOR THE SECOND STAGE FOR THE INTERNATIONAL/LOCAL INVESTORS WILL BE AS FOLLOWS:

A. Scope of work for the intending parties for prequalification shall include:

- i. Study and review of the existing geological/exploration reports/studies (summary downloadable from website) or acquired by parties regarding Chitral and Hazara Division blocks of interest to each interested party.
- ii. Decide on its eligibility for participation in the competitive bidding.
- iii. Send an Expression of Interest (EOI) letter with **Rs. 100,000/-** Participation Fee to the following address by due date, along with supporting material listed in Section (i) to (vi) of the 'Call for Expression of Interest in Prequalification'. Parties who prequalify will be informed by a letter from DGMM by **30th March, 2015**.

B. Scope of work for prequalified parties who wish to participate in the bidding competition.

- i) Prepare a report on the outcome of review of existing data.
- ii) Conduct own due diligence, including a field visit to areas of interest, on request to DGMM
- iii) Provide comprehensive exploration and resource assessment plans, in line with 'exploration best practices guidelines', including specific exploration concept, geological, geophysical surveys and drilling/aditing plan, duly supported by techno-economic justifications.
- iv) Decide on offer/options for the benefit of the Community (at least 10% of the declared investment).
- v) Submit "TECHNICAL BID" AND "FINANCIAL BID" in separate sealed envelopes, placed together in one sealed envelope marked "Chitral and Hazara Metallic Minerals Blocks Bid". Technical Bid should be presented under the headings listed in section 1, sub-sections (i to v) of the 'Call for Expression of Interest'.

NOTE:

- Only prequalified parties will be entitled to proceed to the second stage by submitting technical and financial bids. The bidding fee shall be Pak. **Rs.1.0**

million. For successful bidders this fee will be converted as a security deposit retained by DGMM. For unsuccessful bidders the bidding fee of Rs.1.0 million will be refunded in full.

- Exploration Licenses will be granted to prequalified parties on the basis of cumulative technical and financial bidding as per relevant rules of Procurement of Services & goods of Government of Khyber Pakhtunkhwa.

C. On grant of an EL, the scope of work will include,

- i. Topographic survey/digital mapping, along with geological interpretation of satellite imagery and demarcation of the extent of area under study.
- ii. Location of each surface exploratory activity on a map of 1:5000 scale and super-imposing all vector layers in GIS format.
- iii. Interpretation of surface data/information and identification of drilling/aditing targets and preparation of drilling/aditing plan.
- iv. Implementation of the drilling/aditing plan, including chemical analysis of representative subsurface samples to adequately assess the 3D extent of mineralization.
- v. Chemical and quality control reports should be from accredited laboratories.
- vi. Preparation of lithological and geophysical logs of all drilled boreholes and/or adits.
- vii. Interpretation based on all available data/information.
- viii. Should minable concentration be found, estimate and express Resources/Reserves in accordance with internationally accepted format and terminology.
- ix. Compilation of a Feasibility Study Report written in an internationally acceptable format.
- x. Train and expose the relevant staff of the DGMM throughout the study in methodology used for exploration and resource assessment of block for which the party is granted the EL.

D. Decide to apply for a Mining Lease and submit application as per rules.

4. TERMS & CONDITIONS

The Terms and Conditions would be as under, but not restricted to the following:-

- i. The DGMM has invested substantial amounts on geological, geochemical and limited aditing works to locate anomalies and where possible to trace the mineral showings that indicate the source rocks. Based on this technical information each block will have a reserve price considering its prospective worth.
- ii. The DGMM will provide necessary administrative facilities.
- iii. The successful bidding party will be granted EL on application as per rules and would have to bear all costs and risks incurred on exploration, resource assessment and feasibility study of their EL area/s.
- iv. The DGMM will require a **25% share** in net profit in return for the above services provided, as and when mining/metallurgical operations begin to generate profit.
- v. The Competent Authority reserves the right to amend the ToR's for shortlisted parties at the time of issuance of Request for Proposal (RFP) to pre-qualified parties / firms as per requirement.

5. KEY PROFESSIONALS OF THE TEAM OF THE INVESTORS FOR PREQUALIFICATION STAGE:

Following are the credential requirements of key professionals to be engaged for completing all work leading to the Feasibility Study Report given in the above scope of work for the first stage.

- i) Team Leader should be PhD/MSc. geologist having at least 10 years' experience in mineral exploration and resource assessment, including exploration project management.
- ii) Senior Geologist should be at least M.Sc. (or equivalent) in geology with mineralogy/petrology and/or economic geology as major subjects, preferably with qualifications in inorganic/analytical chemistry.
- iii) Geophysicist will be at least M.Sc. (or equivalent) Geology with major in geophysics or M.Sc. Geophysics or higher qualification with at least 5 years' experience in exploration of metallic minerals and/or gemstones as appropriate.
- iv) GIS Specialist will be M.Sc. GIS or equivalent having at least 5 years' experience in development of geological models and DTMs. Experience in computer aided 3D geological modeling preferred.
- v) B.Sc. Mining Engineering or equivalent/higher with at least 10 years' of experience in mine planning and mining operations. Experience of computer aided 3D mine modeling and/or mineral dressing preferred.

6. DELIVERABLES FOR EL HOLDERS:

The deliverable will be as per KP Mining Concession Rules 2005.

7. SPECIFICATIONS REGARDING DRILLING

As drilling is the most capital intensive exploration activity, special care has to be taken to get the maximum benefit from investment in drilling. Investor is therefore required to follow the following specifications during and after drilling. The drilling rig used should be able to drill inclined holes, should this be required by the geometry of the ore body.

i) **Core Recovery**

The **Investor** shall aim at recovery of at least 95% core in the ore body.

ii) **Preservation of core**

The **Investor** will preserve the entire core in good quality core boxes marking the borehole number & depth etc. on the core boxes, indicating the depth in meters at the end of each core run along with colored photographs of the same.

iii) **Sample analysis**

The Investor will have to adopt sampling method that suits best for the discovered bodies keeping in view the requirements for mineralogical, petrographic, metallurgical and physical tests. Number of samples would be taken based on length of core to be composited and provided the composite sample does not cross a lithological boundary.

iv) **Abandoning of boreholes**

No borehole will be abandoned unless certified in writing by the **DGMM**.

v) **Lithological Logs**

The Investor will prepare the lithological logs in hard as well as electronic form on the specified approved proforma, in good order on completion of each borehole. X,Y, Z coordinates of each borehole collar and calculation of levels for mineralized zones and any other necessary information which will be encountered during drilling should be given on the lithological logs.

Depth to water table encountered in each borehole should be recorded and marked on the lithological logs along with an analysis report on the overall quality of underground water in the exploration area.

vi) Cross Section / Correlation Chart

The Investor will prepare cross sections and correlation charts of the ore body encountered in the boreholes along with interpretation with the help of lithological, chemical and geophysical logs data.

vii) Down hole survey and geophysical logging

The investor will ensure that down-hole survey data and appropriate geophysical logging is carried out as part of the drilling plan.

viii) Preservation of Core and Core logs

The investor will retain the residual core, after sampling, in an orderly manner. On cessation of operations the Investor will deliver the core and core logs to the DGMM at a place to be advised by the DGMM.

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Evaluation Criteria

First Stage - Prequalification

<u>Description</u> (Total Points 100)	<u>Points</u>
i. Five key personnel - qualifications and experience	[0 - 20]
ii. Technical understanding of the issues to be solved	[0 - 30]
iii. Financial capacity with reference to past documents	[0 - 30]
iv. Track Record in the field, past works related to exploration	[0 - 20]
Total	[]

Points will be awarded in each category by the Prequalification Evaluation Committee. A minimum total of 65 points will be required to prequalify. Local parties/investors without National Tax and Registered number and foreign parties/investors without listing on stock exchange will not be considered for prequalification.

Second Stage – Competitive Bidding for Grant of EL/EL's

A. Technical Bidding

- (i) **Company Profile:** 25%
- (ii) **Project Team:** 30%
- (iii) **Equipment Capabilities:** 25%

(iv) Approach & Methodology: 20%

<u>Description</u>	<u>Points</u>
(i) Company Profile:	[100]
a) Number of similar assignments	[50]
b) Value of similar assignments	[40]
c) Organizational structure	[10]
	Total = A ₁

(ii) **Project Team:** [100]

Sr. No	Description (as per Section 5 of TOR)	Points
a).	Team Leader	[30]
b).	Senior Geologist	[20]
c).	Geophysicist	[20]
d).	Mining Engineer	[20]
e)	GIS Specialist.	[10]
TOTAL		A₂

(iii) **Equipment Capabilities:** [100]

Sr No.	DETAILS OF MACHINERY	SCORING		
		No of Rigs	Max. Score	Total Score (R1+R2+R3+R4)
1	Rigs with drilling capacity ≥600m(coring)	No of Rigs		
		Max. Score	60	
		Obtained Score (R1)		
2	Rigs with drilling capacity ≥400m but <600m (coring)	No of Rigs		
		Max. Score	20	
		Obtained Score		
	Sub-total of obtained score	(R2)		
3.	Geophysical Survey instruments	No of Instruments		
		Max. Score	10	
		Obtained Score (R3)		
4.	GIS / Computer Software facilities	No of Instruments		
		Max. Score	10	
		Obtained Score (R4)		
TOTAL				A3

Notes:

- a. Each **drilling rig**(coring) inclusive all accessories with capacity **≥600m** has 20 marks.
- b. Each **drilling rig**(coring) inclusive of all accessories with capacity **≥400m<600m** has 10 marks.
- c. Electrical resistivity/IP survey instruments / equipment, Gravity survey instruments / equipments, Magnetic survey instruments / equipments, complete instruments / equipments for above mentioned each survey will comprise 10 marks.
- d. Arc GIS ESRI Software along with complete necessary hardware (plotter, scanner, GPS etc.) will comprise 10 marks.

(iv) **Approach & Methodology:** **[100]**

a) Understanding & Innovativeness [40]

b) Methodology & Work plan [60]

Total = A_4

	$A_1 \times 0.25$	$A_2 \times 0.30$	$A_3 \times 0.25$	$A_4 \times 0.20$	Cumulative total
Technical Score=	+	+	+	+	=
	100	100	100	100	

The minimum technical score required to qualify in each parameter as well as cumulatively is **65 Points**.

B. Financial Bidding

- i. Financial bid in sealed envelopes are required to be submitted along with the technical bid.
- ii. The procedure of evaluation will be adopted as per relevant rules of procurement of services and goods applicable to Government of Khyber Pakhtunkhwa for the competitive bidding.