

**COMPARATIVE STATEMENT / TECHNICAL PROPOSALS FOR 552(110489) NEW NAME (1086) PROCUREMENT OF EQUIPMENT / MACHINERY,
FURNITURE & LIBRARY BOOKS FOR GPIS IN KHYBER PAKHTUNKHWA
DATE OF TENDER OPENING 09-06-2021 (BASIC GEOLOGY AND DRILLING LAB)**

Item No.	Name of Items	Electrical Engineering Services, Lahore.							Anmol Scientific Corporation, Lahore							Al- Waqas Associates, Lahore										
		C.S		P.C		P.L.P		T	Model	C.S		P.C		P.L.P		T	Model	C.S		P.C		P.L.P		T	Model	
		40	5	5	2	4	4	60		40	5	5	2	4	4	60		40	5	5	2	4	4	60		
1.	Hydrometers API 1-11API 9-21API 19-31API 29-41API 39-51API 49-61API 59-71API 69-81API 79-91API 89-101API	0	0	0	0	0	0	0	Not Quoted	40	-	5	-	-	4	49	China	40	-	5	-	-	4	49	China	
2.	Say bolt Viscometer (Universal Orifice) DIGITALSTOPWATCH, hand-held, 0.1s resolution, SAYBOLT VISCOSITY KIT (E102), comprises Cup Adaptor (sty 2), Say bolt viscometer Cup (sty 2), Universal Orifice Tip (sty 2), Withdrawl Tube, Thermometers 0-150c (qty 2), Thermometer Support (qty 2), Filter Funnel, 60ml Receiving Flask (qty 2), Displacement Ring (qty 2), Cover (qty 2), Spirit Level (qty 2). 1000W heater, Cooling coil	40	-	5	-	-	4	49	LOCAL	40	-	5	-	4	4	53	ASC-PT-3010 PAK	0	0	0	0	0	0	0	0	Not Quoted
3.	Saybolt Viscometer (Furrol Orifice) (Petrotest / Equivalent) DIGITALSTOPWATCH, hand-held, 0.1s resolution, SAYBOLT VISCOSITY KIT (D88), comprises Cup Adaptor (qty 2), Saybolt Viscometer Cup (qty 2), Furrol Orifice Tip (qty 2), Withdrawl Tube, Thermometers 50-300c (qty 2), Thermometer Support (qty 2), Filter Funnel, 60ml Receiving Flask (qty 2),	40	-	5	-	-	4	49	LOCAL	40	-	5	-	4	4	53	ASC-PT-3011 PAK	0	0	0	0	0	0	0	0	Not Quoted

1. Engr. Fazli Saeed, _____
Lecturer (Chemical) GCT, Peshawar

2. Engr. Iatizaz Hassan, _____
Lecturer (Petroleum) GPI, Karak

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Item No.	Name of Items	Electrical Engineering Services, Lahore.							Anmol Scientific Corporation, Lahore							Al- Waqas Associates, Lahore									
		C.S		P.C		P.L.P		T	Model	C.S		P.C		P.L.P		T	Model	C.S		P.C		P.L.P		T	Model
		40	5	5	2	4	4	60		40	5	5	2	4	4	60		40	5	5	2	4	4	60	
	Displacement Ring (qty 2), Cover (qty 2), Spirit Level (qty 2). 1000W heater, Cooling coil																								
4.	ASTM Distillation Apparatus With ISO 3405-2007 Distillation range, ambient to 400°C Mains supply 220 V Heater power 750 W Overall dimensions (W x D x H) 450 x 450 x 535 mm	0	0	0	0	0	0	0	Not Quoted	40	-	5	-	4	4	53	ASC-PT-3012 PAK	40	-	5	-	-	4	49	SYD-6536 China
5.	Microscope Microscopes can be equipped for phase contrast or dark field applications. • Solid and stable stand • SMP semi-plan and PL plan DIN objectives for a high resolution and a flat image • Inverted equipped with infinity-type objectives • Compensating KHWF 10x DIN eyepieces – field no. 20 – correct the image of the objective and produce a large field of view • Flat-top mechanical stage – fitted with ball-bearings – 171 x 140 mm	0	0	0	0	0	0	0	Not Quoted	40	-	5	-	4	4	53	ASC-PT-3013 PAK	39	-	5	-	-	4	48	XJP-6A China
6.	Vernier Caliper (digital) With inside , outside and depth = 150 mm measurement range	0	0	0	0	0	0	0	Not Quoted	40	-	5	-	4	4	53	ASC-PT-3014 PAK	40	-	5	-	-	4	49	China
7.	Mud Balance 4-Scale Mud Balance, Machined ARM, Complete W/Case	0	0	0	0	0	0	0	Not Quoted	40	-	5	-	4	4	53	ASC-PT-3015 PAK	40	-	5	-	4	4	53	YM-3 China
8.	Marsh Funnel 12-Mesh Half Circle Screen Plastic Measuring Cup, 1000 mL Stainless Steel Measuring Cup, 1000 mL Thermometer w/Metal Dial, 5" Stem, 0-220°F Thermometer w/Metal Dial, 5" Stem, Dual Scale, 50/500°F, 0/250°C	0	0	0	0	0	0	0	Not Quoted	40	-	5	-	4	4	53.	ASC-PT-3016 PAK	37	-	5	-	-	4	46	MLN-4 China

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		40	5	5	2	4	4	60		40	5	5	2	4	4	60		40	5	5	2	4	4	60		
	T-Handle Reamer 3/16" Digital Stopwatch																									
9.	Filter Press Filter Press With Dead Weight Assy	40	-	5	-	4	4	53	ZNS-5A China	40	-	5	-	4	4	53	ASC-PT-3017 PAK	0	0	0	0	0	0	0	0	Not Quoted
10.	DIGITAL MICROMETER For direct reading to 0.01 mm carbide tipped anvil & spindle , face lightly polished, friction –locking device, suitable for With inside , outside and depth = 150 mm measurement range	0	0	0	0	0	0	0	Not Quoted	40	-	5	-	4	4	53	ASC-PT-3018 PAK	40	-	5	-	-	4	49	China	
11.	Redwood Viscometer 1 VISCOSITY KIT (IP 70), comprises No. 1 Cup Adaptor (qty 2), Redwood No. 1 Viscometer Cup (qty 2), Clip (qty 2), Kohlrausch Flask (qty 20), Cup Cover (qty 2), Spirit Level (qty 2). Thermometer	40	-	5	-	-	4	49	Local	40	-	5	-	4	4	53	ASC-PT-3019 PAK	0	0	0	0	0	0	0	0	Not Quoted
12.	Redwood Viscometer 2 VISCOSITY KIT (IP 70, BS 434), comprises No. 2 Redwood Adaptor Key, IP 70 Viscometer Cup (qty 2), BS 434 Viscometer Cup (qty 2), Clip (qty 2), Kohlrausch Flask (qty 20), Cup Cover (qty 2), Spirit Level (qty 2). Thermometer	40	-	5	-	-	4	49	Local	40	-	5	-	4	4	53	ASC-PT-3020 PAK	0	0	0	0	0	0	0	0	Not Quoted
13.	Pensky Marten Flash and Fire Point Apparatus Method: Pensky-Martens Closed Cup Tests: P-M Procedures A, B & C GB/T 261 Search mode for unknown samples Temperature Range: Ambient to 400°C Barometric Correction: Automatic Bath: Solid Block/Air Heating: Bottom and side heaters	40	-	5	-	4	4	53	SYD-261 China	40	-	5	-	4	4	53	ASC-PT-3021 PAK	39	-	5	-	4	4	52	K16273+K16225 -250-000-09C +250-000-10C KOEHLER USA	

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		40	5	5	2	4	4	60		40	5	5	2	4	4	60		40	5	5	2	4	4	60	
	Supplied with: 1 test jar 10 spacer rings 1 insulating plate 1 air jacket 2 thermometer (ASTM 5C and ASTM 6C)																								
16.	Thin Film Aniline Point Apparatus ASTM-test tube, jacket tube, ring-shaped hand stirrer with sleeve, 2 bored corks, one each pipette (5 ml and 10 ml), rubber suction bulb, stand with fixtures and 1 thermometer each ASTM 33C, ASTM 34 C and ASTM 35C. Along with Hester	40	-	5	-	-	4	49	Local	40	-	5	-	4	4	53	ASC-PT-3024 PAK	40	1	5	-	4	4	54	K10191+K10029+250-000-33C +250-000-34C +250-000-35C KOEHLER USA
17.	Carbon Residue Apparatus (Canradson) Porcelain Crucible , wide form, glazed throughout, or a silica crucible; 29- to 31-mL capacity, 46 to 49 mm in rim diameter. Iron Crucible — Skidmore iron crucible, flanged and ringed, 65- to 82-mL capacity, 53 to 57 mm inside and 60- to 67-mm outside diameter of flange, 37 to 39 mm in height supplied with a cover without delivery tubes and having the vertical opening closed. The horizontal opening of about 6.5 mm shall be kept clean. The outside diameter of the flat bottom shall be 30 to 32 mm. Iron Crucible — Spun sheet-iron crucible with cover; 78 to 82 mm in outside diameter at the top, 58 to 60 mm in height, and approximately 0.8 mm in thickness. Place at the bottom of this crucible, and level before each test, a layer of about 25 mL of dry sand, or enough to bring the Skidmore crucible, with cover on, nearly to the top of the sheet-iron crucible. Wire Support — Triangle of bare Nichrome wire of approximately No. 13 B & S gage having an	0	0	0	0	0	0	0	Not Quoted	40	-	5	-	4	4	53	ASC-PT-3025 PAK	40	-	5	-	-	4	49	SYD-268 China

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		40	5	5	2	4	4	60		40	5	5	2	4	4	60		40	5	5	2	4	4	60	
	<p>opening small enough to support the bottom of the sheet-iron crucible at the same level as the bottom of the asbestos block or hollow sheet-metal box .</p> <p>Hood—Circular sheet-iron hood from 120 to 130 mm in diameter the height of the lower perpendicular side to be from 50 to 53 mm; provided at the top with a chimney 50 to 60 mm in height and 50 to 56 mm in inside diameter, which is attached to the lower part having the perpendicular sides by a coneshaped member, bringing the total height of the complete hood to 125 to 130 mm. The hood can be made from a single piece of metal, provided it conforms to the foregoing dimensions. As a guide for the height of the flame above the chimney, a bridge made of approximately 3-mm iron or Nichrome wire, and having a height of 50 mm above the top of the chimney, shall be attached.</p> <p>Insulator—Asbestos block, refractory ring, or hollow sheet-metal box, 150 to 175 mm in diameter if round, or on a side if square, 32 to 38 mm in thickness, provided with a metal-lined, inverted cone-shaped opening through the center; 83 mm in diameter at the bottom, and 89 mm in diameter at the top. In the case of the refractory ring no metal lining is necessary, providing the ring is of hard, heat-resistant material.</p> <p>Burner, Meker type, having an orifice approximately 24 mm in diameter.</p>																								
18.	<p>Reid Vapour Pressure Apparatus (Seta-Stanhole / Equivalent) Vapor Pressure Vessel - REID Gasoline (Wet-Method): ASTM D 323-A+B+D, ISO 3007-A+B+D, IP69-A+B+D Gasoline-Oxygenate Blends (Dry-Method): ASTM D 4953-A For a pressure less than 1.8 bar (180 kPa) Consisting of:</p>	40	-	5	-	-	4	49	Local	40	-	5	-	4	4	53	ASC-PT-3026 PAK	39	-	5	-	4	4	52	K11459+K11500+311-030-002 +250-000-18C +K11800+K11810+371-000-002+K112B-1-0-12 KOEHLER USA

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		40	5	5	2	4	4	60		40	5	5	2	4	4	60		40	5	5	2	4	4	60		
	liquid chamber (valveless) made of stainless steel, air chamber with G 1/2" female manometer coupling and lowering chain Thermostatic Bath REID/LPG, 3-place (round shape) Consisting of: bath made of stainless steel with digital thermost and a thermometer ASTM 18C (+34 bis +42 : 0.1°C) ... for tempering 1 to 3 vapor pressure vessel Power supply: 230 V, 50/60 Hz Manometer ASTM-35 twin-scale (analog) Range: 35 kPa / 5 psi (0.35 bar) Accuracy: class 1 Housing : Ø 100 mm, stainless steel with handle, parts with sample contact are of Cu-Sn/Mn alloy Coupling: NPT ¼" male thread																									
19.	ASTM Distillation Apparatus Distillation Flask 1000ml. Electrical Heater 1000W, Water Cooled Condenser, Thermometer, Receiving Cylinder , Corks	40	-	5	-	-	4	49	Local	40	-	5	-	4	4	53	ASC-PT-3027 PAK	0	0	0	0	0	0	0	0	Not Quoted
20.	Centrifugal Machine Speed 1500rpm 6 sample holder Power Supply 220-240 v	0	0	0	0	0	0	0	Not Quoted	40	-	5	-	4	4	53	ASC-PT-3028 PAK	40	-	5	-	-	4	49	LC-4KII China	
21.	Smoke Point Apparatus Comprises a tripod stand, lamp body, and chimney. The measuring scale is viewed through a curved glass window on the front of the instrument. A mirror can be attached to the chimney to aid smoke detection. SUPILED WITH: candle assembly and certified wick. MIRROR, for fixing to chimney to detect first indication of smoke. WICK TRIMMER, inserts wick and automatically	40	-	5	-	-	4	49	SYD-382 China	40	-	5	-	4	4	53	ASC-PT-3029 PAK	39	-	5	-	4	4	52	K27000+K27021+K27050+K27065+K27060 KOEHLER USA	

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		40	5	5	2	4	4	60		40	5	5	2	4	4	60		40	5	5	2	4	4	60	
	HEIGHT 340 WIDTH 450 DEPTH 430 Volume dm3 3,6 Power W 1200 Voltage 220 v.II Maximum Temperature 1100 deg C																								
23.	HORIZONTAL FLOW OVEN Specification: Capacity: 105 Liters Temperature Range: Ambient+5degree C to 250degree C Sensor PT100 Control: Digital Fuzzy Control Display: Digital LCD with Back-Light Function Timer: 99hr 59min (Delay&Continuous Function Included)	0	0	0	0	0	0	0	Not Quoted	40	-	5	-	4	4	53	ASC-PT-3031 PAK	40	-	5	-	-	4	49	BOV-V125 BIOBASE China
24.	Burning Test Lamp Comprising a fabricated sheet metal oil reservoir, brass burner, glass chimney and wick. SUPPLIED WITH: two spare chimneys and a pack of 10 certified wicks. FLAME GAUGE, A gauge for measuring the height and width of a flame. Mounted on a tripod base and adjustable height support column. Hinged and adjustable with stops for true horizontal and vertical readings.	0	0	0	0	0	0	0	Not Quoted	40	-	5	-	4	4	53	ASC-PT-3032 PAK	0	0	0	0	0	0	0	Not Quoted
25.	Manual Universal Penetrometer A semi-automatic penetrometer with a range of 0 to 40mm (400 Pen).Plunger release and retention is controlled by a solid state timer which can be set for penetration times of 5, 8, 10, 12, 30 and 60 seconds.The head is fitted with a two speed elevating mechanism for quick and precise positioning of the penetration tip. Penetration is shown on a150mm dial, graduated 400 x 0.1mm increments, equipped with a slipping clutch pointer. The machined aluminium base is fitted with a flexible light with dimmer switch, and a spirit level. SUPPLIED WITH: 47.5g plunger, 50g and 100g	39	-	5	-	4	4	52	CT-A China	40	-	5	-	4	4	53	ASC-PT-3033 PAK	39	-	5	-	-	4	48	K16500+K20500-00000+388001-003+388-001-006+357000-001 Koehler USA

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		40	5	5	2	4	4	60		40	5	5	2	4	4	60		40	5	5	2	4	4	60	
	plunger weights, mains lead and instruction manual. SPECIFICATIONS Penetration Range: 0 to 400 Pen (40mm) Penetration Time: 5, 8, 10, 12, 30, 60 seconds, selectable Retention/Release: Automatic Display: 150mm dial, 400 x 0.1mm increments Voltage: 220/240V, 50/60Hz (switchable) Power: 45W																								
26.	Saybolt Chromometer A colorimeter with an integral light source, for visual determination of the colour of highly refined, un-dyed liquid petroleum products, including gasolines, jet fuels, naphthas and kerosines. Comprises of a graduated glass sample column with a clear glass base, and a plain glass tube with a three position turret containing colour filter discs. An eyepiece provides a split-field view of both the column and tube. Illumination is from a light source in the base of the unit. The height of a column of sample is adjusted until it matches the colour disc in the reference tube. The height is then read off the graduations and expressed in Saybolt units. SUPPLIED WITH: 3 whole-colour filter discs and 1 half-colour filter disc, daylight filter, mains lead and instruction manual. SPECIFICATIONS Voltage: 220/240V, 50/60Hz Power: 60W Weight: 4.8kg Fuses: 2 x 0.5A CERTIFIED COLOUR STNDARDS 'O' RING, Viton, pack of 5 . BULB , 60W, pack of 2	0	0	0	0	0	0	0	Not Quoted	40	-	5	-	4	4	53	ASC-PT-3034 PAK	40	-	5	-	4	4	53	K13009+K13019+279-230-002 Koehler USA

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		40	5	5	2	4	4	60		40	5	5	2	4	4	60		40	5	5	2	4	4	60	
	GASKET, for tube, pack of 12																								
27.	Copper Strip Corrosion Test (Seta-Stanhole / Equivalent) to be composed of : - Copper Strip Corrosion Apparatus - Silicon Carbide Grit Paper - Copper Strip Corrosion Standards Technical Data Temperature Range: ambient to 200 °C Stability: +/- 0.1 °C Bath Volume: 20 liters	40	-	5	-	-	4	49	LOCAL	40	-	5	-	4	4	53	ASC-PT-3035 PAK	40	-	5	-	-	4	49	SYD-5096A China
28.	Bending Apparatus high-grade stainless steel housing with two-color powder coating, measuring head with bending mechanism, automatic fixture and adjustment of test plaques; test chamber cooled by solid-state components (Peltier-elements), chamber ventilator, touch-key panel with large LC-display visible up to 10 m distance for measured values and user guidance for temperature pre-selection and test-plaque clamping. Supplied with: 10 test-plaques (41 x 20 x 0.15 mm) 1 insulated hose-set (Ø 8 mm, 2 x 2 m) Power supply: 230 V, 50/60 Hz, 450 W, 2 A, Circulation Cooler: as auxiliary refrigeration of the Peltier-elements. Measuring Range: Resolution : 10 mN Temperature : -45 °C to +60 °C (dependent on cooling circuit temp.)	40	-	5	-	-	4	49	LOCAL	40	-	5	-	4	4	53	ASC-PT-3036 PAK	0	0	0	0	0	0	0	Not Quoted
29.	Ring and ball Softening Point Apparatus electric heater in stainless steel housing with electronic power regulator, 4 heater rods, electric stirrer and support for two test rings. Supplied with: 10 rings (shouldered)	40	-	5	-	-	4	49	LOCAL	40	-	5	-	4	4	53	ASC-PT-3037 PAK	0	0	0	0	0	0	0	Not Quoted

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		40	5	5	2	4	4	60		40	5	5	2	4	4	60		40	5	5	2	4	4	60	
	m ³ /h) with stand - Strainer gauze, pack of 20 - Uniformity Test Set for Air: special adapter and flow-meter - Officially certified thermometer ASTM 3C / IP 73C Thermometer ASTM 3C Range: -5 to +400 : 1 °C Length: 415 mm, Immersion: 76 mm, Ø 6.5 mm Strainer Gauze , metal, pack of 20 Beaker, Berzelius , 100 ml, glass, pack of 10 Ø 50 x 78mm Heating Element , Power supply: 230 V (for dry heat bath) Conical Air-Outlet (for dry heat bath)																								

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