

## Mud logging unit

Item	Description	Unit	Qty.
<b>I.</b>	<b>Cabin A0</b> <b>AC</b>		
1	Pressurized Ex-proof Cabin with DNV certificate for A0 Zone 2 c/w Pressurization Air Duct A0 fire-proof door, A0 fire-proof emergency exit, A60 window, Indoor noise $\leq 70$ dB, 4mm, high-strength corrosion-resistance steel, ISO 668	set	1
1.1	Dimension: 8.00 x 2.44 x 2.79 (L x W x H, m), Length with skid: 8.50m		
1.2	Weight: 13.5T		
2	Indoor Decoration		
2.1	B0 Marine Fire-proof Metope, Flame Retardant Cupboard, Flame Retardant Cabinet, SS Surface Table, SS Sink, Sofa, Exhaust Fan	set	1
2.2	Lighting Facilitie	set	1
	Including: Industrial Grade Tri-proof Light Component and Compartment Ex-proof Lamp		
2.3	Office Facilitie	set	1
	Including: Flame Retardant Printer Frame, BSTCG (60 x 90 mm), 2 ea Chair		
2.4	Standard shockproof Instruments Cabinet	set	1
3	Cabin configuration		
3.1	Ex-proof air conditioning 1.5 P	set	2
3.2	Heater with temperature control, 1700W	set	1
3.3	Refrigerator (50L)	set	1
3.4	ABC extinguisher 2kg	bottle	2
3.5	Electronic clock with thermometer and hygrometer	set	1
3.6	Fabric hose for in flow	set	1
4	Slings for 8m-cabin	set	1
	Single sling $\leq 200$ Kn, Max Enduring Capacity is 44T		
<b>II</b>	<b>Power system</b>		
1	Distribution system	set	1
	A transmission and Subtransmission Control, Leakage Protection, Over-current Protection, Open-phase Protection, Zero Line Charged Protection		
2	FLP transformer: 20KVA	set	1
	3-phase Input: option for 480V, 440V, 380V, 220V, 3-phase Output: 380V		
3	SK-9U03 UPS (3KVA), Input: 220V $\pm$ 30%, 35HZ-65HZ. Output: 220V $\pm$ 2%, 50HZ $\pm$ 1HZ, Waveform distortion $\leq$ 10%, battery duration $\geq$ 15 min	set	2
4	Marine Power Cable, CEF92-SA 4 $\times$ 6mm <sup>2</sup> , 40A, 100m	set	1
5	Ground Pile with yellow/green cable, 6mm <sup>2</sup> , 5m	set	2
6	Trunking	set	1

7	Ex-proof box (3 Video Ports, 6 Intel-telephone Outputs, 1 CAN BUS Interface)	set	1
8	Arrester	set	1
<b>III Pressurized Explosion-proof System</b>			
1	EX-proof blower	set	1
2	Pressurization Air Duct (with 30-meter-hose)	set	1
3	Ex-proof Control box	set	1
4	Pressure-difference Sensor (0-250Pa)	set	1
5	H <sub>2</sub> S Sensor (0-100ppm)	set	1
6	Combustible Gas Detector (0-100%LEL)	set	3
7	Smoke Alarm Sensor (0-100% SFA)	set	1
8	A0 Fire-proof Air Brake	set	2
10	Ex-proof Emergency Lamp	set	1
11	Ex-proof Switch	set	1
12	DNV Certificate	set	1
<b>IV Gas Equipment System</b>			
1	SK-3Q04 FID Chromatograph (10.4" TFT touch screen, transmission data by Serial port, ethernet port, integrator and recorder, analysis cycle: 30" or 90", TG range: 20 ppm-100%, component range: 5ppm-100%(30") and 30ppm-100%(90"))	set	2
	SK-9G02 Sample gas pretreatment system	set	1
	HP 4500 printer (with cable)	set	1
2	SK-9F02 Sample gas line back flush system	set	1
3	SK-3H04 CO <sub>2</sub> detector (0.1-100%)	set	1
4	H <sub>2</sub> S transmitter (0-100ppm)	set	2
	C/W SK-9N12 explosion-proof node assembly, marine type, PG terminal	set	
5	SK-9K06 Air compressor	set	1
6	SK-9Q400Z Hydrogen generator	set	2
7	SK-7R02 thermal vacuum degasser	set	1
8	SK-7T05 electronic degasser	set	2
9	Power cable for electric degasser 4×0.75mm <sup>2</sup> 50m	root	2
10	non-absorption tube (Φ6 × Φ4 × 50m)	ea	2
11	Nylon tube (Φ6 × Φ4 × 50m)	ea	2
12	Constant temperature heating tube (60℃, 50m)	ea	2
13	Heat preservation tube (2m)	ea	50
14	Bandage for heat preservation tube	loop	80
15	dry tube, inject tube, blow-off tube	set	1
16	Sample gas		
16.1	Pure sample gas: 99.9% C1 8L (with pressure reducing value)	bottle	1
16.2	Pure sample gas: 99% CO <sub>2</sub> 1L (with pressure reducing value)	bottle	
16.3	Mixture sample gas: 10%C <sub>1</sub> +2.5% (C <sub>2</sub> , C <sub>3</sub> , iC <sub>4</sub> , nC <sub>4</sub> )+2% (iC <sub>5</sub> , nC <sub>5</sub> ) 8L (with pressure reducing value)	bottle	1
16.4	Mixture sample gas: 1%C <sub>1</sub> +0.25% (C <sub>2</sub> , C <sub>3</sub> , iC <sub>4</sub> , nC <sub>4</sub> )+0.2% (iC <sub>5</sub> , nC <sub>5</sub> ) 8L (with pressure reducing value)	bottle	1
16.5	H <sub>2</sub> S sample, 50ppm, Ampoules	bottle	10

16.6	Calibration tank for H <sub>2</sub> S sample	ea	1
<b>V Engineer sensor system</b>			
1	SK-8B06FG RPM sensor assembly	set	1
2	SK-8N02 torque sensor assembly (tensioner type)	set	1
	including SK-8Y21A and SK-8N02		
3	SK-8Y34A Stand pipe pressure sensor assembly	set	1
4	SK-8Y36A Casing pressure sensor assembly	set	1
5	SK-8Y21A Hook load sensor assembly	set	1
6	SK-8J06 Drawwork sensor assembly	set	1
7	Pressure Check Table	suit	1
8	High-pressure oiling pump 4T (Attached: Tee with quick coupling, pressure gauge, oiling box)	suit	1
9	Hydraulic pressure oil	kg	5
10	Pay-off rack	set	1
11	Wire rope $\phi$ 5	m	100
12	Wire line shoe $\phi$ 5	pc	20
13	Pothook	pc	30
14	Chain block 0.5T/3m	pc	2
<b>VI Mud Sensors System</b>			
1	SK-8M04G Mud density sensor (inlet)	set	1
2	SK-8M04G Mud density sensor (outlet)	set	1
3	SK-8W01A Mud temperature sensor (inlet)	set	1
4	SK-8W01A Mud temperature sensor (outlet)	set	1
5	SK-8D08 Mud conductivity sensor (inlet)	set	1
6	SK-8D08 Mud conductivity sensor (outlet)	set	1
7	SK-8C05L Ultrasonic liquid level sensor	set	5
8	SK-8L03A Mud return flow sensor	set	1
9	SK-8B06FG spm sensor assembly	set	2
10	Mud sensor fix arm	set	11
<b>VII CAN BUS System</b>			
1	CAN Bus Cable		
1.1	CAN Bus Cable (100m)	set	1
1.2	CAN Bus Cable (50m)	set	2
2	SK-9N23 CAN analog signal explosion-proof node assembly, marine type, PG terminal	set	1
2.1	SK-9N13-A2 node (hook load, spp, casing pressure, flow return, hydraulic torque)	pc	5
2.2	SK-9N13-B node (rotary speed)	pc	1
2.3	SK-9N13-C node (drawwork)	pc	1
3	SK-9N23 CAN analog signal explosion-proof node assembly, marine type, PG terminal	set	1
3.1	SK-9N13-A2 node (temperture, density, conductivity, pit 1, pit 2)	pc	5
4	SK-9N23 CAN analog signal explosion-proof node assembly, marine type, PG terminal	set	1

4.1	SK-9N13-A2 node (temperature, density, conductivity, pit 3, pit 4, pit 5)	pc	6
4.2	SK-9N13-B node (pump stroke 1, pump stroke2)	pc	2
5	9N21 Terminal resistance	set	1
6	CAN card	set	2
7	Fix box	set	5
8	Signal cable for sensor (15 m with joint)	set	5
<b>VIII Computer system</b>			
1	IPC duo E5400, 2G, 500G, GPU (dual screen output), 19" TFT LCD, DVD-R/W, wireless keyboard and mouse	set	2
2	DAQ Computer duo E5400, 2G, 500G, 19" TFT LCD, DVD-R/W, wireless keyboard and mouse	set	2
3	Note book Lenovo	set	1
4	32" TFT LCD and Installation support	set	2
5	Sound box	set	1
6	Terminal display		
6.1	19" TFT display	set	2
a	Transformer 220V/220V 100W		2
6.2	Net cable 75m 8*0.5	set	3
b	VGA (receiving end)UTP8201AR-300		3
6.3	SK-4X03 EX-proof display	set	1
7	Computer connection cable	set	1
8	SK-3F02 Auxiliary unit		
8.1	Video distributor (8 channels)	set	1
8.2	HUB 10/100M	set	1
8.3	Power switch 24VDC 4A	set	1
8.4	H <sub>2</sub> S alarm pannel	set	1
8.5	VGA (sending end)UTP8201AT	set	3
9	DLQ 3500 (with cable)	set	1
10	Printer(with cable)	set	1
11	Point Card of Relay	set	2
12	Software		
12.1	CMS application software	set	1
12.2	SK-Ploter	set	1
12.3	Win XP professional SP3	set	2
12.4	Windows Business Server 2003 R2 (including SQL Server 2005)	set	2
12.5	Microsoft Office 2010(professional)	set	1
12.6	Mouse set(backup)	set	1
<b>IX Accessory Equipments</b>			
1	PBX (for telephone)	set	1
1.1	Telephone (2 EX-proof)	set	6
1.2	Telephone line (100m/loop)	loop	7

2	Microwave	set	1
3	Vacuum cleaner	set	1
4	Interphone (professional)	pair	1
<b>X Geological Equipment</b>			
1	SK-2N01G Shale density instrument (Range: 1-3g/cm <sup>3</sup> )	set	1
2	SK-2T03 Automatic calcimeter (Range: 0-100% carbonate)	set	1
3	SK-2Y01G Fluoroscope (wavelength: 350-365nm)	set	1
4	Binocular microscope 2040	ea	1
5	Electronic balance (0~200g, 0.1 g)	ea	1
6	Accessories		
6.1	CaCO <sub>3</sub> AR	g	500
6.2	HCl AR	ml	500
6.3	Glass funnel, 9 cm	ea	2
6.4	Conical beaker, 100ml	ea	2
6.5	Beaker, 500 ml	ea	2
6.6	Graduated flask, 250 ml	ea	2
6.7	Alcohol lamp	ea	2
6.8	Test tube clamp	ea	2
6.9	Test tube Φ12	ea	10
6.10	Horn spoon	ea	1
6.11	Dropper	ea	1
6.12	Ceramic mortar, 130 mm	ea	1
<b>XII Tools and Stationery</b>			
<b>1</b>	<b>Tools</b>		
1.1	External thermal electric iron, 40 w	ea	1
1.2	Tape measure 20M*13	ea	1
1.3	6" adjustable wrench	ea	1
1.4	15" adjustable wrench	ea	2
1.5	Metric wrench full polish (23 pc)	set	1
1.6	Mini screwdriver (6 pc)	set	1
1.7	Normal test pencil (145 mm) with penholder	ea	1
1.8	Anti-static handle standard diagonal pliers, 125mm	ea	1
1.9	Metric Long Hex Key, 12mm, (9 pc)	set	1
1.10	Universal stripper (0.5-6.0mm)	ea	1
1.11	12.5mm Metric Tool set (32 piece)	set	1
1.12	Three dump plastic toolbox 17"	ea	1
1.13	Plastic toolbox 21"	ea	1
1.14	Phillips screwdriver with rubber handle (0#*100mm)	ea	1
1.15	Phillips screwdriver with rubber handle (1#*200mm)	ea	1
1.16	Phillips screwdriver with rubber handle (2*250mm)	ea	1
1.17	Phillips screwdriver with rubber handle (3*200mm)	ea	1
1.18	Flat screwdriver with rubber handle (6*150mm)	ea	1
1.19	Flat hollow screwdriver (8*200mm)	ea	1
1.20	flat screwdriver with rubber handle (3*200mm)	ea	1

1.21	Specific cuspidal nipper	ea	1
1.22	Special metric full polish wrech 10MM 43203	ea	1
1.23	Imperial amphibious wrench 1/4 40101	ea	1
1.24	High light torque	set	1
1.25	Iron stand	ea	1
1.26	41/2 multimeter VC9806	ea	1
1.27	Safety Helmet 2099	ea	3
1.28	Plastic-yarn coated gloves	pair	6
	Note: the tool models will be changed as per the supply.		
<b>2</b>	<b>Stationery</b>		
2.1	Function calculator	ea	1
2.2	Graph plotter (17 pieces)	set	1
2.3	Triangle, 250mm	set	1
2.4	Triangle, 150mm	set	1
2.5	T-square ruler 2#	ea	1
2.6	Ruler, 90cm	ea	1
2.7	Curve ruler, 250mm	ea	1
2.8	Scale ruler, 300mm	ea	1
2.9	Ink pencil, (3 pencil)	set	1
2.10	Magnetic white board pens (Red, Green, Blue, Black)	set	1
2.11	White board rub	ea	1
2.12	Mark pen	ea	6
2.13	Pencil 2H	ea	12
2.14	Pencil HB	ea	12
2.15	Stapler	ea	1
2.16	Staple	box	1
2.17	Ink	bottle	2
2.18	Solid resin	ea	2
2.19	Rubber	ea	6
2.20	Punch	ea	1
2.21	Art design knife	ea	2
2.22	Label paper	ea	5
2.23	Entry plastic mat	ea	1
2.24	Besom	ea	1
2.25	Aluminum alloy mop	ea	1
2.26	Water canister	ea	2
2.27	Towel	ea	6
2.28	Slipper	pair	8
2.29	Medicine cabinet	set	1
2.30	Rubbish canister	ea	1
<b>XIII</b>	<b>Expendable</b>		
1	mud sample bottle, 500ml	ea	20
2	Thermal vacuum grinding jar with a round bottom	ea	5
3	Stainless steel thermal vacuum flask	ea	2
4	Sealed plastic cover	ea	100