



“ PACIFIC BORA ”

INTERNATIONAL ASSOCIATION of DRILLING CONTRACTORS

STANDARD FORMAT EQUIPMENT LIST for DRILLSHIP UNITS

Rev	Issue date	Reason for issue	Prepared	Checked	Approved
F1	11/Aug/09	Standardization	CvD	CvD	CvD
F2	11/Nov/09	Handling Tools & Drill Pipe	CvD	CvD	CvD
H1	4/April/10	Aux. equipment	CvD	CvD	CvD
H2	22/July/10	Remove Pacific Mistral reference	CvD	CvD	CvD
H3	1/Sept/10	Additional information	CvD	CvD	CvD
H4	23/May/13	Added 2 nd BOP + Updated Info	CN	CvD	CvD
H5	05/APR/18	Internal Rig Review	CN	DV	CvD
H6	07/AUG/19	Updated Riser Section	SS	FJ/CN	DV

TABLE OF CONTENTS

SECTION A - UNIT SPECIFICATIONS

A1	Main Dimensions / Technical Description	Page	5
A2	Storage Capacities	Page	5
A3	Propulsion / Thrusters	Page	6
A4	Operational Capabilities	Page	6
A5	Variable Loading	Page	7
A6	Environmental Limits	Page	7
A7	Mooring System	Page	7
A8	Marine Loading Hoses	Page	9
A9	Cranes, Hoists, and Materials Handling	Page	10
A10	Helicopter Landing Deck	Page	13
A11	Auxiliary Equipment	Page	13

SECTION B - GENERAL RIG SPECIFICATIONS

B1	Derrick and Substructure	Page	15
B2	Drawworks and Associated Equipment	Page	16
B3	Derrick Hoisting Equipment	Page	17
B4	Rotating System	Page	18

SECTION C POWER SUPPLY SYSTEMS

C1	Rig Power Plant	Page	20
C2	Emergency Generator	Page	22

SECTION D DRILLSTRING EQUIPMENT

D1	Tubulars	Page	24
D2	Handling Tools	Page	35
D3	Fishing Equipment	Page	40

SECTION E - WELL CONTROL/SUBSEA EQUIPMENT

E1	Lower Riser Diverter Assembly	Page	48
E2	Primary BOP Stack	Page	48
E3	Primary Lower Marine Riser Package	Page	51
E4	Secondary BOP Stack	Page	51
E5	Secondary Lower Marine Riser Package	Page	53
E6	Primary Marine Riser System	Page	54
E7	Secondary Marine Riser System	Page	57
E8	Diverter BOP	Page	59
E9	Subsea Support System	Page	60
E10	BOP Control System	Page	61
E11	Subsea Control System	Page	62
E12	Acoustic Emergency BOP Control System	Page	63
E13	Subsea Auxiliary Equipment	Page	63
E14	Choke Manifold	Page	64
E15	BOP Testing Equipment	Page	65
E16	Wellhead Running / Retrieving / Testing Tools	Page	65

SECTION F - MUD SYSTEM/BULK SYSTEM

F1	High Pressure Mud System	Page 67
F2	Low Pressure Mud System	Page 69
F3	Bulk System	Page 73

SECTION G - CASING / CEMENTING EQUIPMENT

G1	Casing Equipment	Page 75
G2	Cement Equipment	Page 78

SECTION H - INSTRUMENTATION / COMMUNICATION

H1	Drilling Instrumentation at Driller's Position	Page 80
H2	Drilling Parameter Recorder	Page 82
H3	Instrumentation at Choke Manifold	Page 82
H4	Standpipe Pressure Gauge	Page 82
H5	Deviation Equipment	Page 82
H6	Calibrated Pressure Gauges	Page 83
H7	Rig Communication System	Page 83
H8	Environmental Instrumentation	Page 84
H9	DP, Vessel Control and Navigation Systems	Page 84
H10	Radio Equipment	Page 89

SECTION I - PRODUCTION TEST EQUIPMENT

I1	Burners	Page 93
I2	Burner Booms	Page 93
I3	Lines Required on Burner Booms	Page 93
I4	Sprinkler System	Page 94
I5	Fixed Lines for Well Testing	Page 94
I6	Auxiliary Power Availability	Page 95

SECTION J - WORKOVER TOOLS

J1	N/A	Page 96
----	-----	---------

SECTION K – ACCOMMODATION

K1	Offices	Page 97
K2	Living Quarters	Page 97



RIG AND EQUIPMENT SPECIFICATIONS PACIFIC BORA

SECTION L - SAFETY EQUIPMENT

L1	General Safety Equipment	Page	99
L2	Gas / Fire / Smoke Detection	Page	100
L3	Fire Fighting Equipment	Page	102
L4	Breathing Apparatus	Page	104
L5	Emergency First Aid Equipment	Page	105
L6	Helideck Rescue Equipment	Page	106
L7	Rig Safety Store	Page	107
L8	Emergency Warning Alarms	Page	107
L9	Survival Equipment	Page	108

SECTION M - POLLUTION PREVENTION EQUIPMENT

M1	Sewage Treatment	Page	110
M2	Garbage Compaction	Page	110
M3	Garbage Disposal / Grinder	Page	110

RIG AND EQUIPMENT SPECIFICATIONS PACIFIC BORA

A. UNIT SPECIFICATIONS		
Rig type:		6 th Generation Ultra-Deepwater Drillship
Unit/Design/Shape:		Samsung 10000 Double-Hull DP Drillship
Unit flag:		Liberia
Port of Registry		Monrovia
Call Sign		A8WH8
Official Number		14745
Unit classification:		ABS, ✕A1E, "Drilling Unit", ✕AMS, ✕ACCU, DLA, ✕DPS-3, NBLES.
IMO Certification:	yes/no	Yes
Which code version:		MODU Code 1989 ammended to 2001
Year of Construction:		Pacific Bora 2010 Pacific Mistral 2011
Construction Yard:		Samsung Heavy Industries - Geoje, South Korea
Type of Positioning system		Dynamic Positioning – DP3 Class Kongsberg Simrad SDP-32 as per ABS ✕DPS-3
A.1 MAIN DIMENSIONS & TECHNICAL SPECS		
Deadweight (light ship):	mt	36,000 (per design)
Maximum Loaded Displacement	mt	96,000 (per design)
Maximum Variable Deck Load	mt	20,000
Draft at loadline (deepest):	m	12
Overall length of unit (including anchor racks):	m	228.0
Length Between Perpendiculars	m	219.4
Overall width of unit (including anchor racks):	m	42
Forward deck dimensions	m x m	29.5 x 37.6
Aft deck dimensions	m x m	63.3 x 37.6
Main deck elevation above baseline:	m	19
Number of main columns/diameter:	no x m	N/A
Number of small columns/diameter:	no x m	N/A
Drilling draft/related displacement:	m/mt	12.0 / 96,000 Tonnes (Note not including 5.82m Thruster below keel)
Transit draft/related displacement:	m/mt	8.5 / 66,500 Tonnes (Note not including 5.82m Thruster below keel)
Moon pool dimensions:	m x m	28.8 x 12.48 (length x width)
Maximum opening through moon pool:	m	28.8 x 10.48
Pontoon length:	m	N/A
Pontoon breadth:	m	N/A
Pontoon height:	m	N/A
Maximum Setback, Rotary & Hook Load	lbs	5,640,000
Fuel Consumption (ave drilling)	m3/day	Estimate 55
Accommodation for max. no. of personnel		200 persons
A.2 STORAGE CAPACITIES		
Heavy Fuel or Diesel Oil tank	m3	5,700 (35,850 bbls)
Diesel Oil Tank	m3	500 (3,140 bbls)
Lube Oil Tank	m3	120 (750 bbls)
Drilling water	m3	2,600 (16,350 bbls)
Potable water	m3	1,300 (8,175 bbls)
Active liquid mud	bbl	5,500 + 500 (2 chemicals + 2 slugs) (max 18.2PPG)
Reserve liquid Mud	bbl	6,000 + 3,000 (Reserve or Waste) (max 18.2 PPG)
Brine Storage Tank (Heavy brine)	bbl	5,000
Crude Oil	m3	N/A

RIG AND EQUIPMENT SPECIFICATIONS PACIFIC BORA

Base Oil Tank	bbl	5,000	
Bulk bentonite	m3	113 (3,990 cu.ft)	
Bulk barite	m3	339 (11,972 cu.ft)	
Bulk cement	m3	452 (15,962 cu.ft)	
Sacks storage	sacks	10,000	
Pipe racks area	m2	795	
Load bearing capacity	kg/m2	2,164	
Riser racks area:	m2	730	
Load bearing capacity:	kg/m2	5,600	
Miscellaneous storage area:	m2	Net area at the deck/casing rack for production riser, etc. and 351 m2 intended for miscellaneous equipment.	
Ballast system	m3	68,500	
A.3 PROPULSION & THRUSTERS			
A.3.1 In-line Propulsion		yes/no	No
Shafts:	no.		N/A
Motors per shaft:	no.		N/A
Motors make/type:			N/A
Total HP per shaft:	hp		N/A
Propeller type (fixed/variable blade):			N/A
Nozzled:	yes/no		N/A
A.3.2 Thrusters			
Quantity:	no.	6	
Fixed/azimuthing:		Azimuthing / Rolls Royce / UUC 505	
Motors per thruster:	no.	1	
Make/type motors:		ABB Sami MegaStar	
Total HP per thrusters	bhp	7,478	(5,500 Kw)
Propeller type (fixed/variable blade):		Fixed pitch, variable speed	
Nozzled:	yes/no	Yes	
A.3.3 Dynamic Positioning			
Make		Kongsberg	
Model		Kongsberg K-POS DP32 Kongsberg K-POS DP12 Class 3 backup Designed according to ABS DPS-3	
Full DP or Mooring Assist:		Full DP	
Position Reference:		1 x DGPS Seatex DPS-132 1 x DGPS Seatex DPS 200, 2 x Simrad HiPAP 501 Hydroacoustic Systems	
A.4 OPERATIONAL CAPABILITIES			
Maximum designed water depth capability:	m	3,048	10,000 ft
Outfitted max. water depth capability:	m	3,048	10,000 ft
Drilling depth capability (rated):	m	11,429	37,500 ft
	ft		
Transit speed towed (historical avg.):	kts	N/A	
Transit speed self propelled	kts	12.0 knots at transit draft	

A.5 VARIABLE LOADING (VL)		
Transit VL:	mt	16,500
Drilling VL:	mt	20,000
Survival VL:	mt	20,000
A.6 ENVIRONMENTAL LIMITS		
Drilling		
Air gap (below lower deck)	m	N/A
Max. wave height	m	6.7
Max. wave period	sec	7-10
Max. wind velocity (1 min mean)	kts	52
Max. current velocity	kts	3.5
Max. heave (double amplitude)	m	6
Max. pitch (double amplitude)	degrees	4.4°
Max. roll (double amplitude)	degrees	6°
Design Criteria		
Air gap (below lower deck)	m	N/A
Max. wave height	m	14.4
Max. Wave crest height	m	22
Max. wave period	sec	17
Max. wind velocity	m/sec	51.4 for 1 min. , 61.7 for 3 sec.
Max. current velocity	kts	1.92 @ surface and 0 @ bottom
A.7 MOORING SYSTEM		
A.7.1 Anchor Winches		
Quantity	no.	1
Make/model		Rolls-Royce
Model		Type CU 107 U3 H
		55.4 Tons @ 9m/min
		Max Pull 83.2 tonnes
		Brake holding load 365.1 tonnes
Type (electric/hydraulic/diesel)		Hydraulic
A.7.2 Fairleads		
Quantity:	no.	N/A
Make:		N/A
Free rotating range:	degrees	N/A
A.7.3 Anchors		
A.7.3.1 Anchors – Primary		
Quantity:	no.	1
Type:		Stockless type
Weight:		14.1 tons
It		
A.7.3.2 Anchors - Spare		

Quantity:	no.	0
Make:		N/A
Type:		N/A
Weight:		N/A
It		
A.7.4 Anchor Lines		
Wire		
Quantity: (installed/spare):	no.	N/A
Make/type:		N/A
Specification:		N/A
Diameter:	in	N/A
Weight per unit length:	lbs/ft	N/A
Useful length (nominal):		N/A
ft		
Classification:		N/A
Breaking strength:	It	N/A
Chain		
Quantity: (installed/spare):	no.	Installed
Make/type:		DAI HAN ANCHOR CHAIN MFG.CO.LTD
Diameter:	mm	107 4 1/4 "
Shot length	m	12x27.5MTRS / 1x17.5 MTRS / 1x3.8MTRS
Shot Number	no.	AS ABOVE
Useful length (Class Requirement)	m	330
ft		
A.7.5 Anchors Line Running & Retrieval System		
Primary type (pennant-buoy or chaser):		N/A
A.7.5.1 Pennant Lines		
Quantity:	no.	N/A
Make:		N/A
Type:		N/A
Length:		N/A
ft		
Diameter:	m	N/A
A.7.5.2 Anchor Buoys		
Quantity	no.	N/A
Volume each:	m3	N/A
Type:		N/A
Foam filled:	yes/no	N/A
A.7.5.3 Smit Bracket		
Location		Foc'sle
Quantity	no.	1
Make:		TANKTECH COMPANY LTD
Type:		KETA-45F 200TON
A.7.6 Emergency Towing Gear		



RIG AND EQUIPMENT SPECIFICATIONS PACIFIC BORA

Location		Poopdeck
Type		KET-40A
Hook-up system		Fully-rigged Fairlead & Strongpoint
Rating:		200 T
A.7.7 Mooring Winches		
Quantity	no.	9
Locations		Foc'sle, midships & poopdeck
Type		Wire 200m x 32mm plus 11m nylon rope tail
Minimum Breaking Load of wires	mT	65
Power Rating	mT x m/min	20 x 15
A.7.8 Mooring Lines		
Quantity	no.	8
Locations (port/stbd/both):		Both
Type		Polypropylene 8-strand Flexply
Size:		220m coils x 180mm
A.7.9 Supplyboat Mooring Lines		
		(As above)
Quantity	no.	N/A
Locations (port/stbd/both):		N/A
Type;		N/A
Size:		N/A
A.8 MARINE LOADING HOSES		
Locations of loading manifolds (port/stbd/both):		Both
A.8.1 Potable Water Hose		
Quantity:	no.	1
Size:	in	4" x 130' single-length
Make/type:		Titan / SW 333 150 PSI Swaged nipples
Color coding:	yes/no	Blue
Make/type connection:		4" Male Weco Hammerlock & cover
A.8.2 Drilling Water Hose		
Quantity:	no.	2
Size:	in	4" x 130' single-length
Make/type:		Powerflex Oil Transfer 150 PSI Swaged nipples
Color coding:	yes/no	Yes
Make/type connection:		4" Male Weco Hammerlock
A.8.3 Fuel Oil Hose		
Quantity:	no.	2
Size:	in	4" x 130' single-length – swaged nipples
Make/type:		Goodall N2492 Petral 2000 Petroleum 200 PSI
Color coding:	yes/no	Yes
Make/type connection:		4" Male Weco Hammerlock with 4" ball valve close coupled

A.8.4 Mud Hose		
Quantity:	no.	2
Size:	in	4" x 130' single-length
Make/type:		Powerflex Oil Transfer 150 PSI Swaged nipples
Color coding:	yes/no	Yes
Make/type connection:		4" Male Weco Hammerlock with 4" ball valve close coupled
A.8.5 Cement Hose		
Quantity:	no.	2
Size:	in	5" x 130' single-length
Make/type:		Soft Wall 6" x 150 ft long Swaged nipples
Color coding:	yes/no	Yes
Make/type connection:		5" Male Weco Hammerlock & cover
A.8.6 Barite/Bentonite Hose		
Quantity:	no.	2
Size:	in	5" x 130' single-length
Make/type:		Soft Wall 6" x 150 ft long Swaged nipples
Color coding:	yes/no	Yes
Make/type connection:		5" Male Weco Hammerlock & cover
A.8.7 Base Oil Hose		
Quantity:	no.	2
Size:	in	4" x 130' single-length
Make/type:		Powerflex Oil Transfer 150 PSI Swaged nipples
Color coding:	yes/no	Yes
Make/type connection:		4" Male Weco Hammerlock with 4" ball valve close coupled
A.8.8 Brine Hose		
Quantity:	no.	2
Size:	in	4" x 130' single-length
Make/type:		Powerflex Oil Transfer 150 PSI Swaged nipples
Color coding:	yes/no	Yes
Make/type connection:		4" Male Weco Hammerlock
A.9 CRANES, HOISTS & MATERIALS HANDLING		
A.9.1 Cranes, Revolving, Main		
Quantity:	no.	4
Specification (API, etc):		API
Make:		NOV
Type:		Knuckle-Boom Electro-Hydraulic Crane
Location (stbd,port,aft, frwd):		Stbd aft, Stbd Fwd, Port Aft, Port Fwd
Boom length:	m	42.3
Hook reach below main deck	m	ABLE TO REACH MINIMUM OF 19MTRS

RIG AND EQUIPMENT SPECIFICATIONS PACIFIC BORA

Load/radius		85 mT @ 18m 34 mT @ 39m 17 mT @ 42m Able to lift 85 mton x-mas tree between moon-pool area and supply boat
Hoisting Speed		0-10 m/min
Maximum Luffing Speed		100 secs from max to min radius
Maximum Load Slewing Speed		0.5 to 1.0 RPM
Drum Capacity for Hoisting Height		240m below slewing bearing on single part
Hook load indicator automatically corrected for boom angle:	yes/no	Yes
Alarm (audible, visual, both):		Audible
Automatic brake:	yes/no	Yes
Safety latch on hooks:	yes/no	Yes
Crown saver (limit switch):	yes/no	Yes
Boom illumination:	yes/no	Yes
Boom CCTV Camera for Operator	yes/no	No
Riser & Pipe Handling Equipment	yes/no	Yes – 2 Riser handling Yokes & 1 pipe gripper
Baskets for personnel transfer	no.	1
A.9.2 Helideck Crane		
Quantity:	no.	1
Specification (API, etc):		API
Make:		Hochang
Type:		Electro-Hydraulic
Location (stbd,port,aft, frwd):		Helideck aft
Boom length:	m	20
Capacity		10 mT SWL
Working Radius		4.5m to 20m
Hoisting Speed		10m/min @ SWL 20m/min @ no load
Luffing Time		60 seconds
Slewing Speed		1.0 RPM
Hook load indicator automatically corrected for boom angle:	yes/no	No
Alarm (audible, visual, both):		Audible
Automatic brake:	yes/no	Yes
Safety latch on hooks:	yes/no	Yes
Crown saver (limit switch):	yes/no	Yes
Boom illumination:	yes/no	Yes
Baskets for personnel transfer:	no.	1
A.9.3 Forklifts		
Quantity:	no.	2
Make/type:		Doosan
Rated capacity:	lt	3 tons
Explosion proof:	yes/no	No
A.9.4 Monorail Overhead Cranes		
Quantity:	no.	0
Make:		N/A
Type:		N/A
Related Capacity:		N/A
Location:		N/A

Electric Chain Hoist			
Quantity:	no.	3	
Make:		LK Hoist Co. Ltd	
Type:		3 phase induction motor	
Power:	KW	0.4	
LT			STBD/PORT/Centr/Engine room
Location:			
Motor for the electric chain hoist			
Quantity:	no.	3	
Make:		LK Hoist Co. Ltd	
Type:		3 phase induction motor	
Power:		2/0.5	
Location:			STBD/PORT/Centr/Engine room
Electric Chain Hoist			
Quantity:		3	
Make:		LK Hoist Co. Ltd	
Type:		LTD-2W	
Rated capacity:		2 Ton	
Location:			STBD/PORT/Centr/Engine room
A.9.5 BOP Handling System			
Make		NOV	
Type		BOP Gantry Crane	
Rated capacity:	mt	2 x main hoists 200 mt each 2 x aux hoists of 35 mt each	
Make		NOV	
Type		BOP Trolley	
Rated capacity:	mt	420	
Make		NOV	
Type		BOP Bulkhead Guiding	
Rated capacity:	mt	400	
Make:		NOV	
Type:		Base Plate 200 mT / X-mas Tree Trolley	
Quantity:	no	1 Each	
Rated capacity:	mt	200 with 2 each 120 mT X-mas Tree skids	
A.9.6 Air Hoists/Derrick Winches			
A.9.6.1 Rig Floor Winches (Non man-riding)			
Quantity:	no.	4	
Make:		NOV	
Type:		Hydraulic	
Rated capacity:	mt	5	
Wire diameter:	mm	19	
Wire Length	m	120	
Automatic brakes:	yes/no	Yes	
Overload protection:	yes/no	Yes	
Automatic spooling:	yes/no	Yes	

A.9.6.2 Monkey Board Work Winch		
Quantity:	no.	2
Make:		NOV
Type:		Hydraulic
Rated capacity:	lb	2200
Wire diameter:	in	1/4
Wire Length	m	40
Automatic brakes:	yes/no	Yes
Overload protection:	yes/no	N/A
A.9.6.3 Rig Floor "Man-Riding" Winch		
Quantity:	no.	3
Make:		NOV
Type:		Hydraulic
Rated capacity:	kg	150
Wire diameter:	mm	10
Wire Length	m	140
Non-twist wire:	yes/no	Yes
Automatic brakes:	yes/no	Yes
Overload protection:	yes/no	Yes
Automatic spooling:	yes/no	Yes
Certified for man-riding:	yes/no	Yes
A.9.6.4 Utility Winch (Moonpool)		
Quantity:	no.	4
Make:		NOV
Type:		Hydraulic
Rated capacity:	mt	5
Wire diameter:	mm	19
Wire Length	m	120
Automatic brakes:	yes/no	Yes
Overload protection:	yes/no	Yes
Automatic spooling:	yes/no	Yes
A.9.6.5 Moonpool "Man-Riding" Winch		
Quantity:	no.	3
Make:		NOV
Type:		Hydraulic
Rated capacity:	lt	150 kg
Wire diameter:	in	10mm
Non-twist wire:	yes/no	Yes
Automatic brakes:	yes/no	Yes
Overload protection:	yes/no	Yes
Automatic spooling:	yes/no	Yes
A.10 HELICOPTER LANDING DECK		
Location:		Forward (above accommodation)
Type		Aluminium
Dimensions:	m x m	Octagonal 27.2 x 27.2
Perimeter safety net:	yes/no	Yes



RIG AND EQUIPMENT SPECIFICATIONS PACIFIC BORA

Load capacity: mt Designed for helicopter type: Tie down points: yes/no Covered by foam fire system: yes/no Helideck lighting to aviation specification as required by country of operation: yes/no Helicopter Beacon Transmitter: yes/no	21.3 Chinook (exceeds S-92 req.) Yes Yes 3 fire monitors CAP 437 compliant Yes
A.10.1 Helicopter Refueling System	
Specification Fuel storage capacity: Lt Jettisonable: yes/no Fuel transport containers: qty Volume (ea): Lt Covered by foam fire system: yes/no	CAP-437 3 Transportable tanks of 2,900lt capacity each Yes 0 NA No
A.11 AUXILIARY EQUIPMENT	
A.11.1 Water Distillation	
Quantity: no. Make/type: Capacity (each/total): T/day	3 SASAKURA / EX-40E 40T/120T

A.11.2 Boilers	
Quantity: no. Make/type: Capacity (total system): lbs/hr	2 Kangrim Industries Co. LTD MB0101DR02 Working Press 15.7 Bar 10,000 kg/hr (1)
A.11.3 Air Conditioning	
Quantity: no. Make/type: Capacity (total system):	2 (accommodations) Hi-Air Korea Condensing Units Total 1,216 kW
A.11.4 Electric Welding Sets	
Quantity: no. Current capacity: amp Make/model: Type: fixed/portable	2 400 UNITOR / UWI-400 Fixed
A.11.5 High Pressure Cleaner	
Quantity: no. Make/type: Electric/pneumatic/diesel: Max delivered pressure: psi	1 UNITOR TYPE KEW Electric 2,240

RIG AND EQUIPMENT SPECIFICATIONS PACIFIC BORA

B. GENERAL RIG SPECIFICATIONS		
B.1 DERRICK AND SUBSTRUCTURE		
Make		NOV
Type		Dual Dynamic bottle-neck Type API Spec 4 /RP4E, one drawworks and one topdrive only, in main activity centre
Rated for wind speed		
With full set back:	kts	60 (1,200mt set back)
With no set back:	kts	100 (900mt set back)
Free Internal Lifting Height:		161 ft 49m
	ft	
Distance between Well centers	ft	40
Dimensions of base:	ft x ft	60 x 80
Water Table Dimensions Main Well :	ft x ft	20 x 20
Water Table Dimensions Aux Well :	ft x ft	20 x 20
Gross nominal capacity:	lb	2,000,000 Main Well and 1,000,000 Aux. simultaneously
Maximum number of lines Main Well:	no.	14
Maximum number of lines AUX Well:	no.	N / A
Personal Elevator	yes/no	Yes
Ladders with safety cages and rests:	yes/no	Yes
Platform for crown sheave access:	yes/no	Yes
Counter balance, system for rig tongs and pipe spinning tong:	yes/no	N/A
Lighting system explosion proof:	yes/no	Yes
B.1.2 Racking Platform		
Make/type:		NOV
Racking platform capacity of 6 5/8" DP:	ft	32,130' (252 stds) + 14,025' (110 stds x 5 7/8)
or		
Racking platform capacity of 5 7/8" or 5 1/2" DP	ft	46,155' (362 stds of 127.5')
and		
Racking platform capacity of 9 1/2 DC:	no.	6 stds (720')
and		
Racking platform capacity of 8 1/4 DC	no.	12 stds (1,440')
and		
Racking platform capacity of 6 3/4 DC:	no.	6 stds (720')
and		
Racking platform capacity of 4 3/4 DC:	no.	11 stds (1,320')
and		
Racking platform capacity of casing: (± 127.5') no.		80 x 13 3/8" (10,200') or 105 x 9 5/8" (13,388') or 105 x 7" (13,388')
B.1.3 Racking Arm		
Make		NOV
Type		2 each NOV - HydraRacker HR IV 3 1/2", 4 3/4", 5", 5 7/8", 6 5/8", 6 3/4", 7", 7 5/8", 8 1/4", 9 5/8", 10 3/4", 13 3/8", 14", 20"
B.1.4 Maintenance Work Basket		

RIG AND EQUIPMENT SPECIFICATIONS PACIFIC BORA

Make		Hydralift 2 each in derrick, 2 each in moonpool
Type		STB-300-90C 120-10
Adjustable from/to height above rotary:	m/m	0 to 20
B.1.5 Substructure		
Make/type:		SHI
Height (above main deck):	m	18
Length:	m	29.54
	ft	
Width:	m	29.49
Setback capacity:	kip	2640 (2 x 770 + 1,100 casing)
Simultaneous setback + hookload capacity	kip	2,640 + 2,000 + 1,000
Clear height below R/table beams (x-mas trees handling):		8,2 m clear height above xmas tree trolley
B.1.6 Weather Proofing		
Rig floor windbreaks height:	ft	16 ½
Derrickman windbreaks height:	ft	30 level 108 to 138
B.1.7 Derrick TV Camera System		
Camera located at:		Monkey board, crown, stabbing board, drill floor, shakers, moonpool, on-and offline pipe handling system, Drawworks, Flow divider
Make/type:		Hernis Scan Systems AS
Zoom/Pan/Tilt-function:	yes/no	Yes
Monitor located at:		Doghouse, toolpusher office, bridge, company man office, ET workshop and ECR
B.2 DRAWWORKS AND ASSOCIATED EQUIPMENT		
B.2.1 Drawworks		
Make		NOV
Type		SSGD 1,000-5,750
Motors make/type:		Baylor CM 628-TUT/ AC motor
Quantity:	no.	5
Maximun input power continuous:	hp	5,750
Maximun output power intermittent:	hp	5,750
Drum type:		Lebus grooved
Drum diameter:	in	55
Drum Lenght	in	82
Wire diameter:	in	2
Maximum line pull 14 lines:	lb	2,000,000
Maximum line pull 12 lines:	lb	1,738,000
Spinning cathead type:		None
Breakout cathead type:		NOV / Model CAR –P15-2 Hydraulic cathead – dual.
Crown block safety device make/type:		NOV-Hi-Tec integrated control system



RIG AND EQUIPMENT SPECIFICATIONS PACIFIC BORA

Complete with spring assembly/hook locking device: yes/no	N/A
--	-----

<p>B.3.4 Swivel</p> <p>Make Type Rated capacity: kips Test/working pressure: psi/psi Gooseneck and washpipe minimum ID >= 76mm: yes/no Left hand pin connection size: in Access fitting for wireline entry on top of gooseneck: yes/no</p> <p>B.3.5 Drilling Line</p> <p>Diameter: in Type: Length (original): ft Support frame for drum: yes/no Drilling line drum power driven: yes/no Spare reel drilling line: yes/no Location (rig, shore, etc.):</p> <p>B.3.6 Anchor Dead Line</p> <p>Make Type Weight sensor: yes/no</p> <p>B.3.7 Crown Mounted Motion Compensator</p> <p>Make Type Stroke: ft Capacity - compensated: kips Capacity - locked : kips</p> <p>B.3.8 Block Guidance System</p> <p>Make Type</p> <p>B.3.9 Retraction System for Traveling Block</p> <p>Make Type</p> <p>B.4 ROTATING SYSTEM</p>	<p>See B.4.4</p> <p>2,000 7,500</p> <p>Yes 78mm 7 5/8" Reg (Righth hand - Top Drive)</p> <p>Yes</p> <p>2 6x19 EIPS IWRC 15,000 Yes Yes Yes, 15,000' Shore</p> <p>NOV FRH 200 CHR, Rotary Slip Deadline Yes</p> <p>NOV CMC (passive + active mode) 25 1,000 2,000</p> <p>NOV Complete set of guide tracks to accommodate the retractable HPS10002E-AC-KT</p> <p>NOV Block Retract system</p>
---	---



RIG AND EQUIPMENT SPECIFICATIONS PACIFIC BORA

Rotating Mousehole	N/A
B.4.1 Rotary Table	
Make	NOV-Varco
Type	BJ-RST60.5
Maximum opening:	60 ½ in
Rated capacity:	2,000 kips
Static load capacity:	2,000 kips
Rotating load capacity:	1,500 @ 15 rpm max. kips @ rpm
Two speed gearbox:	No yes/no
Emergency chain drive:	No yes/no
Driven by an independent electric motor:	No/Hydraulic drive yes/no
Electric motor type/make:	
Maximum continuous torque:	45,000 ft lbs
Drip pan/mud collection system:	Yes yes/no
B.4.2 Master Bushings	
Make/type:	NOV-Varco
Type	MPCH
Insert bowls #3, #2, #1:	1 set each no.
B.4.3 Kelly Bushing	
Make/type:	N/A
Lock down assembly:	N/A yes/no
B.4.4 Top Drive	
Make	NOV
Model	HPS10002E-AC-KT
Type (electric/hydraulic):	Electric AC
Rated capacity:	1,000 st
Test/working pressure:	7,500 psi/psi
If driven by electric motor	
Make/type:	2 x GEB 20 B2 AC
Output power:	1,150 hp
Maximum continuous torque:	78,000 ft lbs
Two speed gearbox:	No yes/no
Maximum rotary speed:	280 rpm
Remote operated kelly cock:	Yes yes/no
Cooling system type:	Local Blower
B.4.4.1 Top Drive Makeup/Breakout System	
Make:	NOV
Model:	
Type:	Pipe Handler
Max. breakout torque that can be applied by system:	115,000 ft-lbs

C. POWER SUPPLY SYSTEMS		
C.1 RIG POWER PLANT		
C.1.1 Diesel Engines		
Quantity:	no.	6
Make		Wartsila
Type		16V32/40
Maximum continuous power:	kw	7,290
At rotation speed of:	rpm	720
Equipped with spark arrestors:	yes/no	Yes
Mufflers installed:	yes/no	Yes
C.1.2 DC – Generator		
Quantity:	no.	0
Make/type:		N/A
Continuous power:	kw	N/A
At rotation speed of:	rpm	N/A
Output volts:	volts	N/A
C.1.3 AC – Generator		
Quantity:	no.	6
Make		ABB
Type		AMG 0900XU10
Continuous power:	kva	8,750 @ 0.8 pf
At rotation speed of:	rpm	720
Output volts:	volts	11,000
C.1.4 VFD System		
Number of Diode Supply units:	no.	4 (Total 8 Units, 4 in each SWBD)
Make/type:		ABB/ ACS 800-507LC-3820-7
Rating :	kva	3824
Supply volts:	volts	690
No. phase		3 phase
No. of pulses		12 pulse
Number of Top drives & Mud Pumps VFD:	no.	12
Make/type:		ABB/ ACS800LC-1370-7
Nominal Power:	kva	1370
Output volts:	volts	690
Number of Drawworks VFD:	no.	10
Make/type:		ABB/ ACS800LC-1590-7
Nominal Power:	kva	1590
Output volts:	volts	690 VAC
Number of Dynamic Braking Unit:	no.	8
Make/type:		ABB/ ACS800-607LC-1300-7
Braking Power:	kw	1200 KW (each)
Input volts (Max):	volts	1200 Vdc.



RIG AND EQUIPMENT SPECIFICATIONS PACIFIC BORA

Quantity:	no.	2	(Drilling)
Make/type:		ABB / RESIBLOC, Dry type transformer	
Continuous power (each):	kva	7,200	
Output volts:	volts	725	
Frequency:	Hz	60	
Quantity:	no.	6	(Thruster Drive)
Make/type:		ABB / RESIBLOC, Dry type transformer	
Continuous power (each):	kva	6,500	
Output volts:	volts	1672	
Frequency:	Hz	60	
Quantity:	no.	2	(Thruster Aux 2&3)
Make/type:		ABB / RESIBLOC, Dry type transformer	
Continuous power (each):	kva	2,000	
Output volts:	volts	450	
Frequency:	Hz	60	
Quantity:	no.	3	(AFT E/R TRANSFORMERS)
Make/type:		ABB / RESIBLOC, Dry type transformer	
Continuous power (each):	kva	2,000	
Output volts:	volts	450	
Frequency:	Hz	60	
Quantity:	no.	2	(TOP SIDE)
Make/type:		SANIL	
Continuous power (each):	kva	2,700	
Output volts:	volts	450	
Frequency:	Hz	60	
Quantity:	no.	1	(THRUSTER 1 AUX)
Make/type:		ABB / RESIBLOC, Dry type transformer	
Continuous power (each):	kva	4,000	
Output volts:	volts	450	
Frequency:	Hz	60	
Quantity:	no.	6	(THRUSTER AUX PANEL)
Make/type:		ABB	
Continuous power (each):	kva	25	
Output volts:	volts	230	
Frequency:	Hz	60	
Quantity:	no.	4	(FWD 220)
Make/type:		SANIL	
Continuous power (each):	kva	200	
Output volts:	volts	230	
Frequency:	Hz	60	
Quantity:	no.	3	(Aft Machinery)
Make/type:		SANIL	
Continuous power (each):	kva	125	
Output volts:	volts	230	
Frequency:	Hz	60	
Quantity:	no.	2	(Emergency)
Make/type:		SANIL	
Continuous power (each):	kva	250	



RIG AND EQUIPMENT SPECIFICATIONS PACIFIC BORA

Output volts:	volts	230
Frequency:	Hz	60
C.1.6 Emergency Shutdown		
Emergency shutdown switches for the complete power system (AC & DC), located at the following points:		Drilling Control Station, Emergency HQ Room and Aft CO2 room, plus through Vessel management system on bridge and ECR
C.1.7 Auxiliary Power Supply		
Power supply for a mud logging unit:	yes/no	Yes
Power supply available		
Output volts:	volts	440
Frequency:	Hz	60
Current:	amps	100
Phase:	single/three	Three
C.1.8 Compressed Air System		
Air Compressors - High Pressure:		
Quantity:	no.	3
Make:		Hamworthy
Model:		(4SW80)
Rated capacity:	m3/hr	120 (each)
Working press:	Bar	207 (Normal WP)
Prime mover (electric/diesel):		Electric
Continuous power:	kw	43
Air dryers:		Yes
Quantity:	no.	2
Make/type:		Twin Tower / Hamworthy
Rated capacity:	cfm	75
Air Compressors – Medium pressure		
Quantity:	no.	4
Make:		Tamrotor
Model:		M 132-10 EWNA
Rated capacity:	cfm	700
Working press:	psi	130
Prime mover (electric/diesel):		Electric
Continuous power:	hp	137
Air dryers:		Yes
Quantity:	no.	2
Make/type:		Kyung Nam Dryer / KHDM-3000
Rated capacity:	cfm	1,400 (each)
Air Compressors – Medium pressure		
Quantity:	no.	3 (Starting air compressor)
Make:		Jonghap-Tanabe
Model:		H-73
Rated capacity:	m3/hr	141
Working press:	bar	30
Prime mover (electric/diesel):		Electric
Continuous power:	kw	37
Air dryers:		NO



RIG AND EQUIPMENT SPECIFICATIONS PACIFIC BORA

Quantity:	no.	N/A
Make/type:		N/A
C.2 EMERGENCY GENERATOR		
C.2.1 Engine		
Quantity:	no.	1
Make		STX (CUMMINS MARINE)
Type		QSK60DMGE
Maximum output:	kw	1,350
At rotation speed:	rpm	1,800
Starting methods (automatic, manual, air/hydraulic):		Automatic, manual hydraulic/electric/battery

C.2.2 AC – Generator		
Quantity:	no.	1
Make/type:		Stamford
Type		PM734E1
Maximum output:	rpm	1,800
At rotation speed:	kw	1,350
Output volts:	volts	450, 60Hz, 3-phase
Capable of back-feeding power to main bus:	yes/no	No, but possible to feed FWD aux. Switchboard

D. DRILLSTRING EQUIPMENT		
D.1 TUBULARS		
D.1.1 Kellys		
Quantity:	no.	N/A
Nominal size OD:	in	N/A
Shape type (hexagonal, square, triangular):		N/A
Total/working length:	ft	N/A
Connection type:		N/A
API classification:		N/A
D.1.2 Kelly Saver Subs		
Quantity:	no.	N/A
Nominal kelly size:	in	N/A
Connection type:		N/A
API classification:		N/A
Protector:	yes/no	N/A
D.1.3 Drill Pipe		
Drill pipe OD: (Landing String)	in	6 5/8
Grade:		V-150
Total length:	ft	10,000
Range:		Range 3
Weight:	ppf	50.4 (61.6 adj)
Internally plastic coated:	yes	Yes TK34XT
Tool joint OD/ID:	in/in	8.688 x 3.5
Tool joint pin length (original):	in	16
Tapered shoulder tool joints (box/pins):	degree/degree	18° / 18°
Connection type:		6 5/8 FH
Type of hardfacing:		None
API classification:		Premium (pipe is new)
Thread protectors:	yes/no	Yes
Drill pipe OD (Shear Joints)	in	6 5/8 (shear, joints, above casing hanger)
Grade:		S135
Total length:	ft	209
Range:		Range 3
Weight:	ppf	34.00
Internally plastic coated:	yes/no	Yes TK34XT
Tool joint OD/ID:	in/in	8.50 / 4 1/4
Tool joint pin length (original):	in	10
Tapered shoulder tool joints (box/pins):	degree/degree	18° / 18°
Connection type:		6 5/8 FH
Type of hardfacing:		TCSTi -(flush)
API classification:		Premium (pipe is new)
Thread protectors:	yes/no	Yes



RIG AND EQUIPMENT SPECIFICATIONS PACIFIC BORA

Drill pipe OD:	in	5 7/8
Grade:		S135
Total length:	ft	25,000
Range:		Range 3
Weight:	ppf	26.30
Internally plastic coated:	yes/no	Yes (TK34XT)
Tool joint OD/ID:	in/in	7 x 4 1/2
Tool joint pin length (original):	in	10
Tapered shoulder tool joints (box/pins):	degree/degree	18° / 18°
Connection type:		Turbotorque 585
Type of hardfacing:		TCSTi -(flush)
API classification:		Premium (pipe is new)
Thread protectors:	yes/no	Yes
Drill pipe OD:	in	5
Grade:		S-135
Total length:	ft	10,000
Range:		Range 3
Weight:	lbs/ft	19.50
Internally plastic coated:	yes/no	Yes
Tool joint OD/ID:	in/in	6 5/8 / 3 1/4
Tool joint pin length (original):	in	12
Tapered shoulder tool joints (box/pins):	degree/degree	18°/18°
Connection type:		GPDS50
Type of hardfacing:		TCSTi
API classification:		Premium (pipe is new)
Thread protectors:	yes/no	Yes
D.1.4 Drill Pipe Pup Joints		
6 5/8"		
Tool joint OD/ID:	in/in	8 3/4 x 4
Grade:		Drill collar material
Length:	ft	5,10,15,20,30
Quantity:	no.	2 x (5',10',15',20',30')
Length:	ft	
Quantity:	no.	
Length:	ft	
Quantity:	no.	
Weight:	lbs/ft	50.41
Connection type:		6 5/8 FH
Internally plastic coated:	yes/no	Yes
Thread protectors:	yes/no	Yes
5 7/8"		
Tool joint OD/ID:	in/in	7 x 4 1/2
Grade:		Drill collar material
Length:	ft	5,10,15, 20, 30
Quantity:	no.	2 x (5',10',15',20',30')
Weight:	lbs/ft	26.340
Connection type:		Turbotorque 585



RIG AND EQUIPMENT SPECIFICATIONS PACIFIC BORA

Internally plastic coated:	yes/no	Yes
Thread protectors:	yes/no	Yes
5"		
Tool joint OD/ID:	in/in	6 5/8 / 3 1/4
Grade:		Drill collar material
Length:	ft	5, 10, 15, 20, 30
Quantity:	no.	2 of each
Weight:	lbs/ft	19.50
Connection type:		GPDS50
Internally plastic coated:	yes/no	Yes
Thread protectors:	yes/no	Yes
D.1.5 Drill Pipe Casing Protectors		
Initial stock:	no.	N/A
Make/type:		N/A
OD:	in	N/A
Installation tools (manual/hydraulic/none):		N/A
D.1.6 Heavy Weight Drill Pipe (e.g. Hevi-Wate)		
Quantity:	no.	40
Nominal size OD:	in	5 7/8
Weight:	lbs/ft	61
Range:		2
Tool joint OD:	in	7
Tool joint ID:	in	4
Type of hardfacing:		Smooth
Internally plastic coated:	yes/no	No
Connection type:		Turbotorque 585
Thread protectors:	yes/no	Yes
Quantity:	no.	40
Nominal size OD:	in	5
Weight:	lbs/ft	49.3
Range:		2
Tool joint OD:	in	6 5/8
Tool joint ID:	in	3
Type of hardfacing:		Smooth
Internally plastic coated:	yes/no	No
Connection type:		NC-50 (4 1/2 IF)
Thread protectors:	yes/no	Yes
D.1.7 Drill Collars		
Quantity:	no.	12
OD body:	in	9 1/2
ID body:	in	3
Nominal length of each joint:	ft	31
Drill collar body (slick/spiral):		Spiral
Recess for "zip" elevator:	yes/no	Yes
Recess for slips:	yes/no	Yes
Stress relief pin groove:	yes/no	Yes



RIG AND EQUIPMENT SPECIFICATIONS PACIFIC BORA

Boreback on box:	yes/no	Yes
Connection type:		7 5/8 Reg
Quantity:	no.	30
OD body:	in	8 1/4
ID body:	in	3
Nominal length of each joint:	ft	31
Drill collar body (slick/spiral):		Spiral
Recess for "zip" elevator:	yes/no	Yes
Recess for slips:	yes/no	Yes
Stress relief pin groove:	yes/no	Yes
Boreback on box:	yes/no	Yes
Connection type:		6 5/8 Reg
Quantity:	no.	30
OD body:	in	6 3/4
ID body:	in	2-13/16
Nominal length of each joint:	ft	31
Drill collar body (slick/spiral):		Spiral
Recess for "zip" elevator:	yes/no	Yes
Recess for slips:	yes/no	Yes
Stress relief pin groove:	yes/no	Yes
Boreback on box:	yes/no	Yes
Connection type:		NC-50 (4 1/2 IF)
D1.8 Short Drill Collars		
Quantity:	no.	N/A
OD body:	in	N/A
ID body:	in	N/A
Nominal length of each joint:	ft	N/A
Stress relief pin groove:	yes/no	N/A
Boreback on box:	yes/no	N/A
Connection type:		N/A
D.1.9 Non-Magnetic Drill Collars		
Quantity:	no.	N/A
OD body:	in	N/A
ID body:	in	N/A
Nominal length of each joint:	ft	N/A
Drill collar body (slick/spiral):		N/A
Recess for "zip" elevator:	yes/no	N/A
Recess for slips:	yes/no	N/A
Stress relief pin groove:	yes/no	N/A
Boreback on box:	yes/no	N/A
Connection type:		N/A
D.1.10 Core Barrels		
Quantity:	no.	N/A
Make:		N/A
Model:		N/A
Size OD x ID:	in x in	N/A
Length:	ft	N/A

Top connection type:		N/A
Spiral stabilizing ribs:	yes/no	N/A
Subs and handling tools:	yes/no	N/A
D.1.11 Stabilizers		
Hole size:	in	N/A
Quantity:	no.	N/A
Make:		N/A
OD blades:	in	N/A
Type blades (straight/spiral/welded/integral/sleeve):		N/A
Type of blade hardfacing:		N/A
OD body or fishing neck:	in	N/A
ID body:	in	N/A
Connection type:		N/A
Float valve receptacle:	yes/no	N/A
D.1.12 Roller Reamers		
Hole size:	in	N/A
Quantity:	no.	N/A
Make:		N/A
OD body:	in	N/A
ID body:	in	N/A
OD fishing neck:	in	N/A
Cutters, supplied sets:	no.	N/A
Cutters, type:		N/A
Connection, type:		N/A
D.1.13 Shock Absorbers (Damping Sub)		
Quantity:	no.	N/A
Make/type:		N/A
OD body:	in	N/A
ID body:	in	N/A
OD fishing neck:	in	N/A
Connection type:		N/A
D.1.14 Drilling Jars		
Quantity:	no.	N/A
Make:		N/A
Type (mechanical/hydraulic;up/down):		N/A
OD body:	in	N/A
Min. ID body:	in	N/A
OD fishing neck:	in	N/A
Stroke:	in	N/A
Connection type:		N/A
D.1.15 Inside BOP Valve		
Quantity:	no.	2
Make:		VAM-(Omsco)
OD:	in	8 (ID-2-13/16")
Min. drill pipe ID required:	in	(Check valve)



RIG AND EQUIPMENT SPECIFICATIONS PACIFIC BORA

Connection type:		6 5/8 FH
Working pressure rating:	psi	15,000
Quantity:	no.	2
Make:		VAM-(Omsco)
OD:	in	6 5/8
Min. drill pipe ID required:	in	(Check valve)
Connection type:		NC-50 (4 1/2 IF)
Working pressure rating:	psi	15,000
Quantity:	no.	2
Make:		VAM-(Omsco)
OD:	in	7
Min. drill pipe ID required:	in	(check valve)
Connection type:		5 7/8" Turbotorque 585
Working pressure rating:	psi	15,000
D.1.16 Fast Shut-Off Coupling		
Make/type:		N/A
Quantity:	no.	N/A
Size tool joint to fit:	in	N/A
D.1.17 Circulation Head		
Quantity:	no.	N/A
Make/type:		N/A
Valve make:		N/A
Valve type:		N/A
Valve size (ID):	in	N/A
Valve working pressure:	psi	N/A
Bottom connection type:		N/A
Top connection type:		N/A
Wireline stripper:	yes/no	N/A
D.1.18 IBOP Valves		
Upper:		
Quantity:	no.	2
Make/type:		Hydrill
Working pressure:	psi	15 Kpsi
Max. OD body:	in	8-5/8
Min. ID body:	in	3-1/16
Connection type:		7-5/8"Reg
Lower:		
Quantity:	no.	2
Make/type:		Hydrill
Working pressure:	psi	15 Kpsi
Max. OD body:	in	8-5/8
Min. ID body:	in	3-1/16
Connection type:		7-5/8"Reg
D.1.19 Circulation Subs		
Quantity:	no.	1



RIG AND EQUIPMENT SPECIFICATIONS PACIFIC BORA

Make/type:		VAM
OD body:	in	8 ½
Ball size:	in	Side Entry Type 2" Weco 1502
Dressing kits:	no.	Side Entry Type
Connection type:		6 5/8 FH
Quantity:	no.	1
Make/type:		Vam
OD body:	in	5 7/8
Ball size:	in	Side Entry Type 2" Weco 1502
Dressing kits:	no.	Side Entry Type
Connection type:		Turbotorque 585
D.1.20 Cup Type Testers		
Quantity:	no.	N/A
Make:		N/A
Size test cup for casing weight:	in-lb/ft	N/A
Size test cup for casing weight:	in-lb/ft	N/A
Size test cup for casing weight:	in-lb/ft	N/A
Connection:		N/A
D.1.21 Plug Type Testers		
Quantity:	no.	N/A
Make:		N/A
Size test plugs:	in	N/A
Connection:		N/A
D.1.22 Drop-In Valves		
Quantity:	no.	2
For nom. OD drillpipe:	in	5 7/8" Turbotorque
Make/type:		Hydrill
Max. OD of dart.:	in	TBA
Quantity:	no.	2
For nom. OD drillpipe:	in	5" GPDS50
Make/type:		Hydrill
Max. OD of dart.:	in	TBA
D.1.23 Bit Subs (Box-Box)		
Quantity:	no.	2
OD size:	in	9 ½
ID size:	in	3
Top connection:		7 5/8" Reg
Bottom connection:		7 5/8" Reg
Bored for float valve:	yes/no	Yes
Float size:	in	5F-6R
Quantity:	no.	2
OD size:	in	9 ½
ID size:	in	3
Top connection:		7 5/8 Reg
Bottom connection:		6 5/8 REG



RIG AND EQUIPMENT SPECIFICATIONS PACIFIC BORA

Bored for float valve:	yes/no	Yes
Float size:	in	5F-6R
Quantity:	no.	4
OD size:	in	8 1/4
ID size:	in	3
Top connection:		6 5/8 Reg
Bottom connection:		6 5/8 Reg
Bored for float valve:	yes/no	Yes
Float size:	in	5F-6R
Quantity:	no.	2
OD size:	in	7
ID size:	in	2 13/16
Top connection:		TurboTorque 585
Bottom connection:		4 1/2 REG
Bored for float valve:	yes/no	Yes
Float size:	in	4R
Quantity:	no.	2
OD size:	in	6 3/4
ID size:	in	2 13/16
Top connection:		GPDS50
Bottom connection:		4 1/2 Reg
Bored for float valve:	yes/no	Yes
Float size:	in	4 R
D.1.24 Crossover Subs		
Quantity:	no.	2
OD size (max/min):	in/in	8 1/4 x 6 5/8
ID size:	in	3
Top connection size:		6 5/8 Reg
Type (pin/box):		Box
Bottom connection size:		GPDS50
Type (pin/box):		Box
Quantity:	no.	NA
OD size (max/min):	in/in	
ID size:	in	
Top connection size:		
Type (pin/box):		
Bottom connection size:		
Type (pin/box):		
Quantity:	no.	NA
OD size (max/min):	in/in	
ID size:	in	
Top connection size:		
Type (pin/box):		
Bottom connection size:		
Type (pin/box):		
Quantity:	no.	NA
OD size (max/min):	in/in	
ID size:	in	



RIG AND EQUIPMENT SPECIFICATIONS PACIFIC BORA

Top connection size: Type (pin/box):		
Bottom connection size: Type (pin/box):		
Quantity:	no.	2
OD size (max/min):	in/in	8 ¼ x 9 ½
ID size:	in	3
Top connection size: Type (pin/box):		6 5/8 Reg Box
Bottom connection size: Type (pin/box):		7 5/8 Reg Pin
Quantity:	no.	2
OD size (max/min):	in/in	9 ½ x 8 ¼
ID size:	in	3
Top connection size: Type (pin/box):		7 5/8 Reg Box
Bottom connection size: Type (pin/box):		6 5/8 Reg Pin
Quantity:	no.	2
OD size (max/min):	in/in	9 ½ x 8 1/2
ID size:	in	3
Top connection size: Type (pin/box):		7 5/8 Reg Box
Bottom connection size: Type (pin/box):		6 5/8 FH Pin
Quantity:	no.	4
OD size (max/min):	in/in	8 1/2 x 9 ½
ID size:	in	3
Top connection size: Type (pin/box):		6 5/8 FH Box
Bottom connection size: Type (pin/box):		7 5/8 Reg Pin
Quantity:	no.	4
OD size (max/min):	in/in	8 ½ x 8 ¼
ID size:	in	3
Top connection size: Type (pin/box):		6 5/8 FH Box
Bottom connection size: Type (pin/box):		6 5/8 Reg Pin
Quantity:	no.	2
OD size (max/min):	in/in	8 ¼ x 7
ID size:	in	3
Top connection size: Type (pin/box):		6 5/8 Reg Box
Bottom connection size: Type (pin/box):		5 7/8" Turbotorque 585 Pin
Quantity:	no.	2
OD size (max/min):	in/in	6 ¾
ID size:	in	2 13/16



RIG AND EQUIPMENT SPECIFICATIONS PACIFIC BORA

Top connection size: Type (pin/box):		5" GPDS50 Box
Bottom connection size: Type (pin/box):		4 1/2 Reg Pin
Quantity:	no.	2
OD size (max/min):	in/in	6 3/4 x 5
ID size:	in	2
Top connection size: Type (pin/box):		5" GPDS50 Box
Bottom connection size: Type (pin/box):		NC 38 Pin
Quantity:	no.	2
OD size (max/min):	in/in	7 x 8 1/2
ID size:	in	3 1/16
Top connection size: Type (pin/box):		5 7/8 Turbotorque 585 Box
Bottom connection size: Type (pin/box):		6 5/8 FH Pin
Quantity:	no.	4
OD size (max/min):	in/in	7 x 8 1/4
ID size:	in	3
Top connection size: Type (pin/box):		5 7/8 Turbotorque 585 Box
Bottom connection size: Type (pin/box):		6 5/8 Reg Pin
Quantity:	no.	2
OD size (max/min):	in/in	7 x 9 1/2
ID size:	in	3
Top connection size: Type (pin/box):		5 7/8 Turbotorque 585 Box
Bottom connection size: Type (pin/box):		7 5/8 Reg Pin
Quantity:	no.	2
OD size (max/min):	in/in	6 3/4 x 8 1/2
ID size:	in	2 13/16
Top connection size: Type (pin/box):		5 GPDS50 Box
Bottom connection size: Type (pin/box):		6 5/8 FH Pin
Quantity:	no.	2
OD size (max/min):	in/in	8 1/4
ID size:	in	3
Top connection size: Type (pin/box):		6 5/8 Reg Pin
Bottom connection size: Type (pin/box):		6 5/8 Reg Pin
Quantity:	no.	2
OD size (max/min):	in/in	7
ID size:	in	3



RIG AND EQUIPMENT SPECIFICATIONS PACIFIC BORA

Top connection size:		5 7/8 Turbotorque 585
Type (pin/box):		Pin
Bottom connection size:		5 7/8 Turbotorque
Type (pin/box):		Pin
Quantity:	no.	2
OD size (max/min):	in/in	8 1/2
ID size:	in	3
Top connection size:		6 5/8 FH
Type (pin/box):		Pin
Bottom connection size:		6 5/8 FH
Type (pin/box):		Pin
Quantity:	no.	2
OD size (max/min):	in/in	6 3/4
ID size:	in	2 13/16
Top connection size:		4 1/2 Reg
Type (pin/box):		Pin
Bottom connection size:		5" GPDS50
Type (pin/box):		Pin
Quantity:	no.	2
OD size (max/min):	in/in	4 3/4
ID size:	in	2 1/4
Top connection size:		3 1/2 Reg
Type (pin/box):		Pin
Bottom connection size:		3 1/2 NC38
Type (pin/box):		Pin
Quantity:	no.	2
OD size (max/min):	in/in	6 3/4
ID size:	in	2 13/16
Top connection size:		5" GPDS50
Type (pin/box):		Pin
Bottom connection size:		5" GPDS50
Type (pin/box):		Pin
Quantity:	no.	2 Circulating sub
OD size (max/min):	in/in	8 1/2
ID size:	in	
Top connection size:		2" Weco 1502 Female (non-wing)
Type (pin/box):		
Bottom connection size:		6 5/8 FH
Type (pin/box):		Pin
Quantity:	no.	2 Circulating sub
OD size (max/min):	in/in	8 1/2
ID size:	in	
Top connection size:		2" Weco 1502 Female (non-wing)
Type (pin/box):		
Bottom connection size:		6 5/8 FH
Type (pin/box):		Box
Quantity:	no.	2 Circulating sub
OD size (max/min):	in/in	7
ID size:	in	



RIG AND EQUIPMENT SPECIFICATIONS PACIFIC BORA

Top connection size: Type (pin/box):		2" Weco 1502 Female (non-wing)
Bottom connection size: Type (pin/box):		5 7/8 Turbotorque585 Pin
Quantity:	no.	2 Circulating sub
OD size (max/min):	in/in	7
ID size:	in	
Top connection size: Type (pin/box):		2" Weco 1502 Female (non-wing)
Bottom connection size: Type (pin/box):		5 7/8 Turbotorque585 Box
Quantity:	no.	2 Circultaing sub
OD size (max/min):	in/in	6 ¾
ID size:	in	
Top connection size: Type (pin/box):		2" Weco 1502 Female (non-wing)
Bottom connection size: Type (pin/box):		5 GPDS50 Pin
Quantity:	no.	2 Circulating sub
OD size (max/min):	in/in	6 ¾
ID size:	in	
Top connection size: Type (pin/box):		2" Weco 1502 Female (non-wing)
Bottom connection size: Type (pin/box):		5 GPDS50 Box
Quantity:	no.	2 Double Side Entry sub
OD size (max/min):	in/in	7"
ID size:	in	2"
Top connection size: Type (pin/box):		2 x 2" Weco 1502 Female (non wing)
Bottom connection size: Type (pin/box):		5 7/8 Turbotorque 585 (Pin)
D.1.25 Drilling Bumper Subs		
Quantity:	no.	1 + 1
Make:		TBA
OD:	in	8 + 6 1/2
Stroke:	in	60
Connection type:		6 5/8 Reg + NC50
D.1.26 Hole Openers		
Quantity:	no.	N/A
Make:		N/A
OD:	in	N/A
Connection type:		N/A
D.1.27 Undreamer		
Quantity:	no.	N/A
Make/type:		N/A



RIG AND EQUIPMENT SPECIFICATIONS PACIFIC BORA

OD Min/OD Max:	in/in	N/A
Connection type:		N/A
D.2 HANDLING TOOLS		
D.2.1 Drill Pipe Elevators		
Size:	in	9 ½ DC, 8 ¼ DC, 6 ¾ DC, 6 5/8 DP, 5 7/8 DP, 5 DP (inserts for)
Quantity:	no.	2 each
Make:		Blohm&Voss
Model:		VES-SD 500 T/750 T (Hydr)
Rated capacity:	st	500 ton/ 750 ton (square shoulder only)
Size:	in	6 5/8 DP, 5 7/8 DP, 5 DP, 3 ½ DP (inserts for)
Quantity:	no.	2 Sets
Make:		Blohm&Voss
Model:		VES-CL-500 (Hydr)
Rated capacity:	st	500 T
Size:	in	6 5/8
Quantity:	no.	1
Make:		Blohm&Voss
Model:		CL-1000 (Hydr)
Rated capacity:	st	1000 T
D.2.2 Drill Collar Elevators		
Size:	in	N/A
Quantity:	no.	N/A
Make:		N/A
Model:		N/A
Rated capacity:	st	N/A
D.2.3 Tubing Elevators		
Size (max/min):	in/in	N/A
Quantity:	no.	N/A
Make:		N/A
Model:		N/A
Rated capacity:	st	N/A
D.2.4 Drill Pipe Hand Slips		
Size:	in	6 5/8 – 750 Ton
Quantity:	no.	2
Make/type:		Blohm&Voss / LRS
Size:	in	5 7/8 – 750 Ton
Quantity:	no.	2
Make/type:		Blohm&Voss / LRS
Size:	in	5 – 750 Ton
Quantity:	no.	2
Make/type:		Blohm&Voss / LRS

Size:	in	3 ½
Quantity:	no.	2
Make/type:		Blohm&Voss / RSM
D.2.5 Semi-Automatic DP Slips		
Size range (largest/smallest):	in/in	DC 9 ½, 8 ¼, 6 ¾, 4 ¾ (inserts) DP 5, 5 ½, 5 7/8, 6 5/8 (inserts)
Quantity:	no.	2
Make/type:		Blohm&Voss PS 1000 (1000 Ton)
D.2.6 Drill Collar Slips		
Size:	in	8 ½ to 10
Quantity:	no.	2
Make/type:		Blohm&Voss / DCL
Size:	in	8 – 9 ½
Quantity:	no.	2
Make/type:		Blohm&Voss / DCL
Size:	in	5 ½ to 7
Quantity:	no.	2
Make/type:		Blohm&Voss / DCM
Size:	in	4 ½ - 6
Quantity:	no.	2
Make/type:		Blohm&Voss / DCM
D.2.7 Drill Collar Safety Clamps		
Quantity:	no.	2 Blohm&Voss / C-Clamp
Range:	in-in	4 ½ - 5 5/8
Quantity:	no.	2 Blohm&Voss / C-Clamp
Range:	in-in	9 ½ - 10 5/8
Quantity:	no.	1 Blohm&Voss / C-Clamp + air kit
Range:	in-in	29 ½ - 30 ½
D.2.8 Tubing Slips		
Size:	in	N/A
Quantity:	no.	N/A
Make/type:		N/A
D.2.9 Tubing Spider		
Slip size (max/min):	in/in	N/A
Quantity:	no.	N/A
Make:		N/A
Adapter Plate:		N/A
D.2.10 Drill Collar Lifting Subs		



RIG AND EQUIPMENT SPECIFICATIONS PACIFIC BORA

Quantity:	no.	8
For OD DC:	in	9 ½
Connection Type:		7 5/8" Reg Pin
Quantity:	no.	14
For OD DC:	in	8 ¼
Connection Type:		6 5/8" Reg Pin
Quantity:	no.	12
For OD DC:	in	6 ¾
Connection Type:		4 ½" lf Pin
Quantity:	no.	10
For OD DC:	in	4 ¾
Connection Type:		3 ½" lf Pin
D.2.11 DC/DP Lifting Plugs		
Quantity:	no.	63
For OD DC:	in	9 ½ - 8 ¼ - 6 ¾ - 4 ¾
Connection Type:		7 5/8 Reg – 6 5/8 Reg – 6 5/8 FH – 5 7/8 TT585 – 5 GPDS50 – 4 ½ reg – NC38
D.2.12 Bit Breakers		
Quantity:	no.	1
For bit size:	in	26
Quantity:	no.	1 + 1
For bit size:	in	17 ½ + 16
Quantity:	no.	1
For bit size:	in	12 ¼
Quantity:	no.	1
For bit size:	in	8 ½
Quantity:	no.	1
For bit size:	in	6
D.2.13 Elevator Links		
Quantity of sets:	no.	1
Make/type:		NOV-Varco
Size:	in	5 ½
Length:		200
in		
Rated capacity:	st	1000
Quantity of sets:	no.	1
Make/type:		NOV-Varco
Size:	in	3 ½
Length:		144
in		
Rated capacity:	st	500

RIG AND EQUIPMENT SPECIFICATIONS PACIFIC BORA

Quantity of sets:	no.	1+1
Make/type:		NOV-Varco
Size:	in	2 ¾
Length:		72" + 45'
Rated capacity:	st	350
Quantity of sets:	no.	1
Make/type:		Blohm&Voss
Size:	in	4 ¾
Length:		180"
Rated capacity:	st	750
D.2.14 Kelly Spinner		
Make/type:		N/A
D.2.15 Drillpipe Spinner		
Make/type:		NOV- Hydratong MPT
Size (max/min):	in/in	3 ½ – 9 ¾
D.2.16 Mud Bucket		
Make:		NOV - Hydratong with Mud Bucket. Hydraulic operated
Size:	in	2 7/8 – 9 ¾
D.2.17 Hydraulic Make-Up/Breakout Machine (e.g. Ezy Torque)		
Make/type:		NOV
Maximum line pull:	st	16,674 st (146 Kn)
D.2.18 Rotary Rig Tongs		
Quantity (sets):	no.	2
Make/type:		Blohm&Voss / BV-100
Size range (max OD/min OD):		4" to 12"
Torque rating:	ft-lbs	100,000
D.2.19 Tubing Tongs (manual)		
Quantity (sets):	no.	N/A
Make/type:		N/A
Size range (max OD/min OD):		N/A
Torque rating:	ft-lbs	N/A
D.2.20 Tubing Tong Power		
Quantity:	no.	1 Insert for Hydratong (iron roughneck)
Make/type:		Farr KT 7585
Size range (max OD/min OD):	in/in	2 3/8 to 8 5/8



RIG AND EQUIPMENT SPECIFICATIONS PACIFIC BORA

Max output torque:	ft-lbs	25,000
Torque indicator:	yes/no	Yes
Back-up arm:	yes/no	Yes
Quantity:	no.	1 Insert for Hydratong (iron roughneck)
Make/type:		Farr KT2000
Size range (max OD/min OD):	in/in	8 5/8 to 20
	in/in	
Max output torque:	ft-lbs	50,700
Torque indicator:	yes/no	Yes
Back-up arm:	yes/no	Yes
D.2.21 Iron Roughneck		
Make/type:		Hydratong MPT TF-975 w/ TE-1190 (2 each)
Size range (max OD/min OD):	in/in	3 1/2 to 9 3/4
Max output torque:	ft-lbs	147,000
D.3 FISHING EQUIPMENT		
D.3.1 Overshots		
Quantity:	no.	1
Make/type:		Bowen 150 FS
Overshot OD:	in	11 3/4
To catch size:	in	4 7/8 to 10 1/8
Overshot guide OD:	in	11 3/4
Extension sub length:	in	36 , 60
Lipped guide (oversize, Regular):		15" , 22"
Grapples (spiral, basket, both):		To fish contractor's new + used tubelars
Pack offs:	yes/no	Yes
Top sub connection type:		6 5/8" Reg Box
Quantity:	no.	1
Make/type:		Bowen 150 FS
Overshot OD:	in	9 5/8
To catch size:	in	4 7/8 to 8
Overshot guide OD:	in	9 5/8
Extension sub length:	in	36 , 48
Lipped guide (oversize, Regular):		15"
Grapples (spiral, basket, both):		To fish contractor's new + used tubelars
Pack offs:	yes/no	yes
Top sub connection type:		6 5/8 Reg Box
Quantity:	no.	1
Make/type:		Bowen 150 SH
Overshot OD:	in	8 1/8
To catch size:	in	4 7/8 to 7
Overshot guide OD:	in	8 1/8
Extension sub length:	in	42
Lipped guide (oversize, Regular):		Standard 8 1/8"
Grapples (spiral, basket, both):		Spiral 7" , 6 7/8" , 6 3/4" , 6 5/8"
Pack offs:	yes/no	Yes
Top sub connection type:		4 1/2 IF Box
Quantity:	no.	1



RIG AND EQUIPMENT SPECIFICATIONS PACIFIC BORA

Make/type:		Bowen 150 FS
Overshot OD:	in	7 7/8 reinforced to 8 1/8 (FS)
To catch size:	in	4 7/8 to 6 3/4
Overshot guide OD:	in	8 1/8
Extension sub length:	in	42
Lipped guide (oversize, Regular):		
Grapples (spiral, basket, both):		To fish contractor's new + used tubelars
Pack offs:	yes/no	Yes
Top sub connection type:		4 1/2 IF Box
D.3.2 Hydraulic Fishing Jar		
Quantity:	no.	1
Make/type:		Bowen / Type "Z" #52711/015
OD body:	in	8
Min. ID:	in	3 1/16
Stroke:	in	20
Connection type:		6 5/8 REG
Repair kit:	yes/no	Yes
Quantity:	no.	1
Make/type:		Bowen / Type "Z" #5244/015
OD body:	in	6 1/2
Min. ID:	in	2 1/4
Stroke:	in	20
Connection type:		4 1/2IF
Repair kit:	yes/no	Yes
D.3.3 Jar Intensifier		
Quantity:	no.	1
Make:		Bowen # 55910/006
Type:		Jar intensifier
OD body:	in	8
Min. ID:	in	3 1/16
Connection type:		6 5/8 Reg
Repair kit:	yes/no	Yes
Quantity:	no.	1
Make:		Bowen # 55905/010
Type:		Jar intensifier
OD body:	in	6 1/2
Min. ID:	in	2 1/4
Connection type:		4 1/2 IF
Repair kit:	yes/no	Yes
D.3.4 Surface Jar		
Quantity:	no.	N/A
Make/type:		N/A
OD body:	in	N/A
Stroke:	in	N/A
Connection type:		N/A
Repair kit:	yes/no	N/A
D.3.5 Fishing Bumper subs		



RIG AND EQUIPMENT SPECIFICATIONS PACIFIC BORA

Quantity:	no.	1
Make/type:		Bowen / Fishing bumper sub # 26595/005
OD body:	in	8
Min. ID:	in	3 ½
Stroke:	in	20
Connection type:		6 5/8 REG
Quantity:	no.	1
Make/type:		Bowen / Fishing bumper sub # 10257/007
OD body:	in	6 ½
Min. ID:	in	2 ¼
Stroke:	in	20
Connection type:		4 ½ IF
D.3.6 Safety Joints		
Quantity:	no.	1
Make/type:		Bowen / Safety Joint
OD body:	in	8
Min. ID:	in	3 ½
Stroke:	in	N/A
Connection type:		6 5/8 FH
Quantity:	no.	1
Make/type:		Bowen / Safety Joint # 149406/009
OD body:	in	6 ½
Min. ID:	in	3 ¾
Stroke:	in	N/A
Connection type:		4 ½ IF
Quantity:	no.	1
Make/type:		Bowen / Safety Joint
OD body:	in	7
Min. ID:	in	TBA
Stroke:	in	N/A
Connection type:		5 7/8" Turbotorque 585
D.3.7 Junk Baskets (Reverse Circulation)		
Quantity:	no.	1
Make/type:		Bowen # 2708/005
For hole size:	in	17 ½
OD body:	in	15
Connection type:		6 5/8 Reg
Inside magnet available:	yes/no	Yes
Mill shoes type B	yes/no	Yes
Quantity:	no.	1
Make/type:		Bowen # 2690/005
For hole size:	in	12 ¼
OD body:	in	11 ¾
Connection type:		6 5/8 Reg
Inside magnet available:	yes/no	Yes
Mill shoes type B:	yes/no	Yes



RIG AND EQUIPMENT SPECIFICATIONS PACIFIC BORA

Quantity:	no.	1
Make/type:		Bowen # 2567/009
For hole size:	in	8 ½
OD body:	in	8 ¼
Connection type:		4 ½ IF
Inside magnet available:	yes/no	Yes
Mill shoes type B:	yes/no	Yes
Quantity:	no.	1
Make/type:		Bowen
For hole size:	in	8 ½
OD body:	in	6 5/8
Connection type:		4 ½ IF
Inside magnet available:	yes/no	Yes
Mill shoes type B:	yes/no	Yes
D.3.8 Junk Subs		
Quantity:	no.	1
Make/type:		Bowen # 15485/006
For hole size:	in	12 ¼
OD body:	in	9 5/8
Connection type:		6 5/8 Reg
Quantity:	no.	1
Make/type:		Bowen # 15475/005
For hole size:	in	8 ½
OD body:	in	7
Connection type:		4 ½ REG
D.3.9 Flat Bottom Junk Mill		
Quantity:	no.	1
Make/type:		Bowen
OD flat mill:	in	14 ¾
Connection type:		7 5/8 REG Pin
Quantity:	no.	1
Make/type:		Bowen # 41695/120
OD flat mill:	in	12
Connection type:		6 5/8 REG Pin
Quantity:	no.	1
Make/type:		Bowen # 41665/018
OD flat mill:	in	8 1/8
Connection type:		4 ½ REG Pin
D.3.10 Magnet Fishing Tools		
Quantity:	no.	1
Make/type:		Bowen # 32310/005
OD body:	in	8
Connection type:		4 ½ REG Pin
Quantity:	no.	1
Make/type:		Bowen # 32370/005



RIG AND EQUIPMENT SPECIFICATIONS PACIFIC BORA

OD body: in Connection type:	11 ½ 6 5/8 REG Pin
D.3.11 Taper Taps	
Quantity: no. Make/type: OD (Max/Min): in/in OD body: in Length: in Connection type:	1 Bowen # 15243/049 1 ¾ to 4 ¾ 7 ¾ 49 6 5/8 REG Box
Quantity: no. Make/type: OD (Max/Min): in/in OD body: in Length: in Connection type:	1 Bowen # 15240/038 1 13/16 to 3 11/16 6 3/4 38 4 ½ IF Box
D.3.12 Die Collars	
Quantity: no. Make/type: OD (Max/Min): in/in OD body: in Length: ft Connection type:	N/A N/A N/A N/A N/A N/A

Purposely Left Void

<h1>Purposely Left Void</h1>	
------------------------------	--

Purposely Left Void



RIG AND EQUIPMENT SPECIFICATIONS PACIFIC BORA

--	--

<p>E. WELL CONTROL / SUBSEA EQUIPMENT</p> <p>E.1 LOWER RISER DIVERTER ASSEMBLY (used when drilling for the surface casing)</p> <p>E.1.1 Hydraulic Connector</p> <p>Size: in N/A Make: N/A Surface controlled hydraulic operated N/A dump valves: no. Size: in N/A</p> <p>E.1.2 Flex Joint/Riser Adapter</p> <p>Flex joint Make/type: N/A Size: in N/A Max. deflection: degrees N/A</p> <p>Riser adapter: Make/type: N/A Size: in N/A</p> <p>E.2 PRIMARY BOP STACK (from bottom to top)</p> <p>Stack complete with -guide frame: yes/no Yes -pick up attachment: yes/no Yes for LMRP, No for stack alone. -transport base: yes/no Yes Size (bore): in 18-3/4 Working pressure: psi 15,000 H2S service: yes/no Yes</p> <p>E.2.1 Alternate Hydraulic Connector</p> <p>Alternate connector available: yes/no No Connector make/model: Adapter available: yes/no No, our connector is set for 27" only</p> <p>E.2.2 Hydraulic Wellhead Connector</p> <p>Size: in 18-3/4 Make/type: Vetco style SHD (H4)</p>	
---	--



RIG AND EQUIPMENT SPECIFICATIONS PACIFIC BORA

Lower rams:	Ram#4	Variable 5" – 7"
Lower rams:	Ram#5	Fixed 9 5/8" (CVX)
Lower rams:	Ram#6	Variable rams 5" - 7"
Position of side outlets - kill:		
Upper:		Below Ram #3
Lower:		Below Ram #5
Position of side outlets-choke:		
Upper:		Below Upper Annular
Upper Middle		Below Shear Ram # 1
Lower Middle		Below Ram # 4
Lower:		Below Ram # 6

E.2.5 Annular Type Preventer On Stack		
Size:	in	18 ¾
Working pressure:	psi	10,000
Make/type:		18-3/4" 10,000 psi WP NOV-Shaffer Wedge Cover "Standard" Spherical Blowout Preventer
E.2.6 Mandrel		
Make/type:		BOP Mandrel, with a H-4 profile up (Inconel 625 lined VX gasket groove), and an 18-3/4" x 10 ksi WP flange down (Inconel 625 lined BX gasket groove). H2S service in accordance with NACE MR-01-75.
Size:	in	18-3/4
E.2.7 Fail-Safe Hydraulic Valves (Kill and Choke)		
Quantity on each side outlet:	no.	1x Dual Block (= 2 valves) on each outlet
Size (ID):	in	3-1/16
Make/type:		Gate Valve, Dual Block, Hydraulic Operated, API-6A, 3-1/16" 15,000 psi WP NOV-Shaffer Type "HB", 3-1/16" bore, 3-1/16" 15,000 psi WP straight body, short sea chest, BX-154 stainless steel lined ring grooves
Working pressure:	psi	15,000
Solid block:	yes/no	Yes
E.2.8 Subsea Accumulators (see also E.10.1. Surface Accumulator Unit)		
Quantity:	no.	2x 80 gal for LMRP, 3x110 gal Piston Type Bottle, 6x 7 1/2 gal Depth Compensated Bottles for BOP
Useful capacity per accumulator (w/o precharge):	U.S.gal	6x 7 ½ gal DCB, 3x110 gal PTB
Bottle working pressure:	psi	7,500
E.2.9 Hydraulic Control Pod/Receptacles		
Quantity:	no.	2 (one for each pod)
Redundancy:	%	100



RIG AND EQUIPMENT SPECIFICATIONS PACIFIC BORA

Color coded:	yes/no	Yes
Remote Regulation of operating pressure for functions requiring lower operating pressure:	yes/no	Yes
Spare control pod:	yes/no	No

<p>E.3 PRIMARY LOWER MARINE RISER PACKAGE (From Bottom to Top)</p> <p>E.3.1 Hydraulic Connector</p> <p>Make/type:</p> <p>Size: in</p> <p>Working pressure: psi</p> <p>Hot tap for underwater intervention: yes/no</p> <p>Spare connector same type: yes/no</p> <p>E.3.2 Annular Type Preventer (LMRP)</p> <p>Size: in</p> <p>Working pressure: psi</p> <p>Make/type:</p> <p>E.3.3 Flex Joint</p> <p>Make/type:</p> <p>Size: in</p> <p>Max deflection: degrees</p> <p>Working pressure: psi</p> <p>Cocking stiffness: ft-lbs/deg.</p> <p>E.3.4 Riser Adapter</p> <p>Make/type:</p> <p>Size: in</p> <p>E.3.5 Connection Lines to Riser</p> <p>Type (rigid loops, 51 oflexip, etc.):</p> <p>E.4 SECONDARY BOP STACK (from bottom to top)</p> <p>Stack complete with</p>	<p>Vetco 18-3/4" Style ExF HAR Modified H4. 15,000 PSI MWP. Studded top x 18-3/4" 51 oflexi 625 lined VX/VT gasket</p> <p>18 ¾</p> <p>15,000</p> <p>Yes</p> <p>No</p> <p>18 ¾</p> <p>10,000</p> <p>18-3/4" 10,000 psi WP NOV-Shaffer Wedge Cover "Standard" Spherical Blowout Preventer. 18-3/4" vertical bore. Internal H2S trim</p> <p>Oil States Flexjoint, 18-3/4" -10M</p> <p>18 ¾</p> <p>10 deg offset from centre</p> <p>6,000</p> <p>30,000 up to 5', 20,000 at 10'</p> <p>Riser Adapter, Type « FT-H » x 18-3/4" 10M</p> <p>18 ¾</p> <p>Coflexip hoses</p> <p>Yes</p>
---	--



RIG AND EQUIPMENT SPECIFICATIONS PACIFIC BORA

-guide frame:	yes/no	Yes
-pick up attachment:	yes/no	Yes for LMRP, No for stack alone.
-transport base:	yes/no	Yes
Size (bore):	in	18-3/4
Working pressure:	psi	15,000
H2S service:	yes/no	Yes
E.4.1 Alternate Hydraulic Connector		
Alternate connector available:	yes/no	No
Connector make/model:		
Adapter available:	yes/no	No, our connector is set for 27" only
E.4.2 Hydraulic Wellhead Connector		
Size:	in	18-3/4
Make/type:		Vetco style SHD (H4)
Working pressure:	psi	15,000
Hot tap for underwater intervention:	yes/no	Yes
Spare connector same type:	yes/no	No
E.4.3 Ram Type Preventers		
Preventers		
Quantity:	no	1 Lower Triple
Bore Size:	in	18-3/4
Working pressure:	psi	15,000
Make:		NOV-Shaffer
Model:		NXT
Type (single/double):		Triple
Ram locks:	yes/no	Yes, individually operated
Preventers connection type - top:		Studded, 18-3/4" 15,000 psi WP, BX164
Preventers connection type - bottom:		Flanged, 18-3/4" 15,000 psi WP, BX164
Side outlets:	yes/no	Yes
Size:	in	3-1/16
Connection type:		Studded, 3-1/16" 15,000 psi WP, BX154
Pipe rams		
Quantity:	no.	2 Sets
Size:	in	5-7/8" fixed
Quantity:	no.	
Size:	in	
Quantity:	no.	
Size:	in	
Blind/Shear rams		
Quantity:	no.	1 set of CVX Blind Shears 1 set of Casing Shear Rams
Variable rams		
Quantity:	no.	2 sets
Size range (max/min):	in/in	5 – 7 multi rams
Quantity:	no.	2 sets
Size range (max/min):	in/in	3 1/2 – 5 7/8 multi rams
E.4.4 Stack Configuration (Blind/Shear/Pipe/Variable)		



RIG AND EQUIPMENT SPECIFICATIONS PACIFIC BORA

Top rams:		Shear Blind Rams CVX
Middle upper rams:		Casing Shear rams
Middle lower rams:		Variable 3 1/2" - 5 7/8"
Spacing between Middle Lower and Lower rams:	in	Variable 5" - 7" Fixed 9 5/8" (CVX) Variable rams 5" - 7"
Lower rams:		
Position of side outlets-kill:		
Upper:		Below Ram #3
Lower:		Below Ram #5
Position of side outlets-choke:		
Upper:		Below Upper Annular
Middle:		Below Ram #2
Lower:		Below Ram # 4
E.4.5 Annular Type Preventer On Stack		
Size:	in	18 3/4
Working pressure:	psi	10,000
Make/type:		18-3/4" 10,000 psi WP NOV-Shaffer Wedge Cover "Standard" Spherical Blowout Preventer
E.4.6 Mandrel		
Make/type:		BOP Mandrel, with a H-4 profile up (Inconel 625 lined VX gasket groove), and an 18-3/4" x 10 ksi WP flange down (Inconel 625 lined BX gasket groove). H2S service in accordance with NACE MR-01-75.
Size:	in	18-3/4
E.4.7 Fail-Safe Hydraulic Valves (Kill and Choke)		
Quantity on each side outlet:	no.	1x Dual Block (= 2 valves) on each outlet
Size (ID):	in	3-1/16
Make/type:		Gate Valve, Dual Block, Hydraulic Operated, API-6A, 3-1/16" 15,000 psi WP NOV-Shaffer Type "HB", 3-1/16" bore, 3-1/16" 15,000 psi WP straight body, short sea chest, BX-154 stainless steel lined ring grooves
Working pressure:	psi	15,000
Solid block:	yes/no	Yes
E.4.8 Subsea Accumulators (see also E.10.1 Surface Accumulator Unit)		
Quantity:	no.	2x 80 gal for LMRP, 3x 110 gal Piston Type Bottle, 6x 7 1/2 gal Depth Compensated Bottles for BOP
Useful capacity per accumulator (w/o precharge):	U.S.gal	6x 7 1/2 gal DCB, 3x 110 gal PTB
Bottle working pressure:	psi	7,500

E.4.9 Hydraulic Control Pod/Receptacles		
Quantity:	no.	2 (one for each pod)
Redundancy:	%	100
Color coded:	yes/no	Yes
Remote Regulation of operating pressure for functions requiring lower operating pressure:	yes/no	Yes
Spare control pod:	yes/no	No
E.5 SECONDARY LOWER MARINE RISER PACKAGE (From Bottom to Top)		
E.5.1 Hydraulic Connector		
Make/type:		Vetco 18-3/4" Style ExF HAR Modified H4. 15,000 PSI MWP. Studded top x 18-3/4" 54oflexi 625 lined VX/VT gasket
Size:	in	18 ¾
Working pressure:	psi	15,000
Hot tap for underwater intervention:	yes/no	Yes
Spare connector same type:	yes/no	No
E.5.2 Annular Type Preventer (LMRP)		
Size:	in	18 ¾
Working pressure:	psi	10,000
Make/type:		18-3/4" 10,000 psi WP NOV-Shaffer Wedge Cover "Standard" Spherical Blowout Preventer. 18-3/4" vertical bore. Internal H2S trim
E.5.3 Flex Joint		
Make/type:		Oil States Flexjoint, 18-3/4" -10M
Size:	in	18 ¾
Max deflection:	degrees	10 deg offset from centre 6,000 30,000 up to 5°, 20,000 at 10°
E.5.4 Riser Adapter		
Make/type:		Riser Adapter, Type « FT-H » x 18-3/4" 10M
Size:	in	18 ¾
E.5.5 Connection Lines to Riser		
Type (rigid loops, coflexip, etc):		Conduit Coflexip hoses
E.6 PRIMARY MARINE RISER SYSTEM		
E.6.1 Marine Riser Joints		
Make/model:		Shaffer Class "H" FT-H Type / Slick
OD:	in	21
ID:	in	19.25
Wall thickness:	in	15/16



RIG AND EQUIPMENT SPECIFICATIONS PACIFIC BORA

Average length of each joint:	ft	90'
Weight of one complete joint (in air):	lbs	36,887
Quantity:	no.	9
Pipe material:	grade	API 5L X80 Seemed pipe
Minimum yield strength:	lb	2X10 ⁶ (coupling rate)
Type riser connectors:		FT-H Type (3,500,000 lbs rated)
Bolts	no.	8
Make/model:		Shaffer Class "H" FT-H Type / Dressed with 2000 ft water depth rated Buoyancy
OD:	in	21"
ID:	in	19.25
Wall thickness:	in	7/8
Average length of each joint:	ft	90
Weight of one complete joint (in air):	lbs	61,007
Quantity:	no.	18
Pipe material:	grade	API 5L X80 Seemed pipe
Minimum yield strength:	lb	2X10 ⁶ (coupling rate)
Type riser connectors:		FT-H Type (3,500,000 lbs rated)
Bolts:	no.	8
Make/model:		Shaffer Class "H" FT-H Type / Dressed with 4000 ft water depth rated Buoyancy
OD:	in	21
ID:	in	19.25
Wall thickness:	in	7/8
Average length of each joint:	ft	90
Weight of one complete joint (in air):	lbs	63,905
Quantity:	no.	22
Pipe material:	grade	API 5L X80 Seemed pipe
Minimum yield strength:	lb	2X10 ⁶ (coupling rate)
Type riser connectors:		FT-H Type (3,500,000 lbs rated)
Bolts:	no.	8
Make/model:		Shaffer Class "H" FT-H Type / Dressed with 6000 ft water depth rated Buoyancy
OD:	in	21
ID:	in	19.25
Wall thickness:	in	7/8
Average length of each joint:	ft	90
Weight of one complete joint (in air):	lbs	65,161
Quantity:	no.	22
Pipe material:	grade	API 5L X80 Seemed pipe
Minimum yield strength:	lb	2X10 ⁶ (coupling rate)
Type riser connectors:		FT-H Type (3,500,000 lbs rated)
Bolts:	no.	8
Make/model:		Shaffer Class "H" FT-H Type / Dressed with 8000 ft water depth rated Buoyancy
OD:	in	21
ID:	in	19.25
Wall thickness:	in	7/8
Average length of each joint:	ft	90



RIG AND EQUIPMENT SPECIFICATIONS PACIFIC BORA

Weight of one complete joint (in air):	lbs	67,161
Quantity:	no.	12
Pipe material:	grade	API 5L X80 Seamed pipe
Minimum yield strength:	lb	2X10 ⁶ (coupling rate)
Type riser connectors:		FT-H Type (3,500,000 lbs rated)
Bolts:	no.	8
Pup		
Quantity:	no.	
Length:	ft	1 40', 1 x 25' 1x 20' 2 x 15' 1 x 10' 1 x 5'
Quantity:	no.	
Length:	ft	
Quantity:	no.	2 (1 x on top of LMRP – BOP guide system)
Length:	ft	55
E.6.2 Telescopic Joint		
		2 each (1x back-up onboard)
Make/type:		NOV-Shaffer Type "FT" Telescopic Joint
Size (ID):	in	19 3/8
Stroke:	ft	70
Double seals:	yes/no	Yes
Spare telescoping joint:	yes/no	Yes
Location:		Rig
Rotating support ring for riser tensioners:	type	NOV-Shaffer
Connection points:	no.	16

E.6.3 Kill/Choke Lines		
Quantity:	no.	2
Outside diameter:	in	6 ½
Inside diameter:	in	4 ½
Working pressure:	psi	15,000
E.6.4 Booster Lines (if Fitted)		
Quantity:	no.	1
Outside diameter:	in	5
Inside diameter:	in	4
Working pressure:	psi	7,500
E.6.5 Hydraulic Supply Lines		
Quantity:	no.	2
Outside diameter:	in	2.875
Inside diameter:	in	2.323
Working pressure:	psi	5,000
E.6.6 Upper Ball (Flex) Joint		
Make/type:		Oilstates flex type
Size:	in	18-3/4
Maximum deflection:	deg.	15
Spare upper ball (flex) joint:	yes/no	No

E.6.7 Buoyancy Modules (if Fitted)		
Make:		NOV
Quantity of buoyed riser joints:	no.	101
Riser tub OD:	in	21
OD of buoyed riser joints:	in	54.5
Length of each module:	ft	13' 10 ½ "
Volume of each module:	ft3	80.52 (161.04 per pair)
Buoyancy in seawater:	st/ft3	-90 %
Rated water depth:	ft	18 x 2k, 22 x 4k, 22 x 6k, 22 x 8k 17 x 10k
E.6.8 Marine Riser Spider		
Make/type:		NOV-Shaffer Type FT-H Riser Spider, with lower mounting for 60-1/2" rotary table. 1,000 Ton capacity
E.6.9 Marine Riser Gimbal		
Make/type:		NOV-Shaffer / Heavy Duty 1,000 ton
E.6.10 Riser Handling Tools		
Quantity:	no.	2
Type:		NOV-Shaffer Type FT-H, Hydraulic Running + test tool, 1,000 ton (+solid body NOV elevators)

E.6.11 Riser Test Tools		
Quantity:	no.	See E.6.10
Type:		
E.6.12 Instrumented Riser Joint		
Quantity:	no.	N/A
Make:		N/A
Type:		N/A
Length:		N/A
ft		
Functions:		N/A
Tension:	yes/no	N/A
Mud temp:	yes/no	N/A
Mud weight:	yes/no	N/A
Other:		N/A
E.6.13 Riser Flood/Fill System		
Quantity:	no.	N/A
Make:		N/A
Type:		N/A
Length:		N/A
ft		
Automatic operation:	yes/no	N/A



RIG AND EQUIPMENT SPECIFICATIONS PACIFIC BORA

Manual override:	yes/no	N/A
No. of inlet valves:	no.	N/A
Size of valves (ID):	in	N/A
E.7 SECONDARY MARINE RISER SYSTEM		N/A
E.7.1 Marine Riser Joints		
Make/model:		N/A
OD:	in	N/A
ID:	in	N/A
Wall thickness:	in	N/A
Average length of each joint:	ft	N/A
Weight of one complete joint (in air):	lbs	N/A
Quantity:	no.	N/A
Pipe material:	grade	N/A
Minimum yield strength:	psi	N/A
Type riser connectors		N/A
Dogs:	no.	N/A
Pup joints		
Quantity:	no.	N/A
Length:	ft	N/A
Quantity:	no.	N/A
Length:	ft	N/A
Quantity:	no.	N/A
Length:	ft	N/A
Quantity:	no.	N/A
Length:	ft	N/A

E.7.2 Telescopic Joint		
Make/type:		N/A
Size (ID):	in	N/A
Stroke:	ft	N/A
Double seals:	yes/no	N/A
Spare telescoping joint:	yes/no	N/A
Location:		N/A
Rotating support ring for riser tensioners:	type	N/A
Connection points:	no.	N/A
E.7.3 Kill/Choke Lines		
Quantity:	no.	N/A
Outside diameter:	in	N/A
Inside diameter:	in	N/A
Working pressure:	psi	N/A
E.7.4 Booster Lines (if Fitted)		
Quantity:	no.	N/A
Outside diameter:	in	N/A
Inside diameter:	in	N/A
Working pressure:	psi	N/A

E.7.5 Hydraulic Supply Lines		
Quantity:	no.	N/A
Outside diameter:	in	N/A
Inside diameter:	in	N/A
Working pressure:	psi	N/A
E.7.6 Upper Ball (Flex) Joint		
Make/type:		N/A
Size:	in	N/A
Maximum deflection:	deg.	N/A
Spare upper ball (flex) joint:	yes/no	N/A
E.7.7 Buoyancy Modules (if Fitted)		
Make:		N/A
Quantity of buoyed riser joints:	no.	N/A
OD of buoyed riser joints:	in	N/A
Length of each module:	ft	N/A
Volume of each module:	ft ³	N/A
Buoyancy in seawater:	st/ft ³	N/A
Rated water depth:	ft	N/A
E.7.8 Marine Riser Spider		
Make/type:		N/A
E.7.9 Marine Riser Gimbal		
Make/type:		N/A
E.7.10 Riser Handling Tools		
Quantity:	no.	N/A
Type:		N/A
E.7.11 Riser Test Tools		
Quantity:	no.	N/A
Type:		N/A
E.7.12 Instrumented Riser Joint		
Quantity:	no.	N/A
Make:		N/A
Type:		N/A
Length:	ft	N/A
Functions:		N/A
Tension:	yes/no	N/A
Mud temp:	yes/no	N/A
Other:		N/A
E.7.13 Riser Flood/Fill System		



RIG AND EQUIPMENT SPECIFICATIONS PACIFIC BORA

Quantity: no. Make: Type: Length: ft Automatic Operation: yes/no Manual Override: yes/no No. of inlet valves: no. Size of Valves (ID): in	N/A N/A N/A N/A N/A N/A N/A N/A
E.8 DIVERTER BOP (For installation in fixed bell nipple)	
Make/type: Max. bore size: in Working pressure: psi Number of Diverter outlets: no. Outlet OD: in Insert packer size ID: in	NOV-Shaffer 21 1/4 500 2 3 each 18, 1 each 6 and 1 each 4 21 1/4"
E.8.1 Diverter Flowlines	
Quantity: no. OD of Flowlines: in Running from Diverter to: Valve types: Size: in Working pressure: psi Control valve type (air/hydraulic/etc.): Remote: controlled from: location	2 18 Overboard Piper 18 16 1/8 Bore 500psi Hydraulic Rig Floor Toolpushers office Diverter Panel

E.8.2 Diverter Control Panels	
Driller's panel Make: Model: Location: Locking/unlocking control: yes/no	NOV-Shaffer Drilling station, rig floor No
Remote panel Make: Model: Location: Locking/unlocking control: yes/no	NOV-Shaffer Toolpushers office No
E.9 SUBSEA SUPPORT SYSTEM	
E.9.1 Riser Tensioners	
Quantity: no. Make/type: Capacity each Tensioner: lbs Maximum stroke: ft	16 NOV-Hydralift 200,000 12.5



RIG AND EQUIPMENT SPECIFICATIONS PACIFIC BORA

Wireline size:	in	2 1/2
Line travel:	ft	50
Independent air compressors:	yes/no	Yes
Independent air drying unit:	yes/no	Yes
 E.9.2 Guideline System		
Quantity:	no.	N/A
Make/type:		N/A
Capacity each Tensioner:	st	N/A
Maximum stroke:	ft	N/A
Wireline size:	in	N/A
Line travel:	ft	N/A
Line storage drums with tensioners:	yes/no	N/A
 E.9.3 Remote Guideline Replacement Tool		
Make/type:		N/A
 E.9.4 Remote Guideline Cutting Tool		
Make/Type:		N/A
 E.9.5 Pod Line Tensioners		
Quantity:	no.	N/A
Make/type:		N/A
Capacity each Tensioner:	st	N/A
Maximum stroke:	ft	N/A
Wireline size:	in	N/A
Line travel:	ft	N/A

E.9.6 Tensioner/Compensator Air Pressure Vessels		
Quantity:	no.	52
Total capacity:	ft ³	58.45
Rated working pressure:	psi	3,000
Pressure relief valve installed:	yes/no	Yes
 E.10 BOP CONTROL SYSTEM		
 E.10.1 Surface Accumulator Unit (see also E.2.8 & E.4.8 - Subsea Accumulators)		
Make:		NOV-Shaffer
Model/type:		5 th generation Mux
Location:		Subsea Module
Soluble oil reservoir capacity:	U.S.gal	1500
Oil/water mix capacity:	U.S.gal/min	30
Glycol reservoir capacity:	U.S. gal	500
No. of bottles installed:	no.	63



RIG AND EQUIPMENT SPECIFICATIONS PACIFIC BORA

Useful capacity per accumulator (w/o pre-charge):	U.S.gal	15
Bottle working pressure:	psi	5,000
Control manifold model:		NOV-Koomey
Regulator type:		
Total useful accumulator volume (surface and stack) equals all Preventer opening and closing volumes:	yes/no	Yes
E.10.2 Accumulator Hydraulic Pumps		
Electric driven		
Quantity:	no.	3 (1 x for additional redundancy)
Make:		Odessa
Model:		Triplex
Each driven by motor of power:	hp	150 (#3 135)
Air driven		
Quantity:	no.	N/A
Make:		N/A
Model:		N/A
Each driven by motor of power:	hp	N/A
Flow rate of each pump:	U.S.gals/min	N/A
At minimum operating pressure:	psi	N/A
E.10.3 Driller's Control Panel		
Graphic control panel at Driller's position showing Subsea functions with controls for the following functions of the BOP stack		
Marine riser connector:	yes/no	Yes
All annular type Bop's:	yes/no	Yes
All ram type Bop's:	yes/no	Yes
Lock for ram type Bop's :	yes/no	Yes
Wellhead and LMRP connector:	yes/no	Yes
Inner and outer kill and choke line valves:	yes/no	Yes
Low acc. pressure warning:	yes/no	Yes
Low reservoir level warning:	yes/no	Yes
Low rig air pressure warning:	yes/no	Yes
Pressure Regulator for annular:	yes/no	Yes
Flowmeter:	yes/no	Yes
Quantity of pressure gauges:	no.	28
Emergency push button for automatic riser disconnection:		Yes
Other control functions:	yes/no	Yes
Control panel make:		NOV-Shaffer
Control panel model:		5 th generation Mux
E.10.4 Remote Control Panels		
Ability to operate main closing unit valves directly:	yes/no	Yes
Quantity:	no.	1 (Toolpushers)
Make/model:		NOV-Shaffer
Locations:		Toolpushers office



RIG AND EQUIPMENT SPECIFICATIONS PACIFIC BORA

<p>Operating system routing (Direct/via Primary Control Panel)</p> <p>E.11 SUBSEA CONTROL SYSTEM</p> <p>E.11.1 Hose Reels</p> <p>Quantity: no. 2 Location: Moonpool Make/type: NOV Maximum storage length each: ft 11,000' Drive motor type: Air</p> <p>E.11.2 Pod Hose</p> <p>Location: Moonpool MUX Length: 11,000 feet ft OD hose: in 1.1' Control line ID: in N/A Quantity total: no. N/A Quantity spare (when new): no. N/A Control line ID: in N/A Quantity total: no. N/A Quantity spare (when new): no. N/A Control line ID: in N/A Quantity total: no. N/A Quantity spare (when new): no. N/A</p> <p>E.11.3 Pod Hose Manifold</p> <p>Make/model: N/A Surface test stump: yes/no N/A</p> <p>E.11.4 Surface Test Pod yes/no No Pod test stand</p> <p>E.12 ACOUSTIC EMERGENCY BOP CONTROL SYSTEM</p> <p>Make/model: Kongsberg Type (fixed/portable): Both Number of functions: no. 6 Type of functions: LMRP connector release: yes/no Yes Shear ram close: yes/no Yes (Blind-Shear) Other: Ram 2 close, BSR close, Retract all stabs, RC unlock</p> <p>E.13 SUBSEA AUXILIARY EQUIPMENT</p> <p>E.13.1 Hole Position Indicator</p> <p>Make/type: Via DP system Quantity of monitors: no. N/A Monitor location: N/A Monitor location: N/A</p>	<p>Silvertech PLC unit</p> <p>Mux Cable</p>
---	--



RIG AND EQUIPMENT SPECIFICATIONS PACIFIC BORA

Recorder:	yes/no	N/A
E.13.2 Riser Angle Indicator		
Make/type		NOV-Shaffer
Quantity of monitors:	no.	4
Monitor location:		Drillers station, Toolpushers office, BOP Central Control Console and DP Operator
Recorder:	yes/no	No
Make/type		
Quantity of monitors:	no.	
Monitor location:		
Recorder:	yes/no	
E.13.3 Slope Indicators		
Make:		NOV-Shaffer
Quantity:	no.	4
Provision for installation on		
BOP:	yes/no	Yes (LMRP & BOP)
Pin connector:	yes/no	Yes
Other:		
E.13.4 Underwater TV System		
Make/type:		
Quantity of TV monitors:	no.	N/A
Monitor location:		
Reels/cables for maximum water depth:	ft	N/A
Pan/tilt unit:	yes/no	N/A
Spare camera:	yes/no	N/A
Spare cable:	yes/no	N/A

E.13.5 ROV System		
Quantity:	no.	Port side
Location		Provision for installation 1 port aft & 1 stbd aft
Make:		N/A
Type:		N/A
Monitor location:		N/A
Monitor location:		N/A
Provided by (operator, contractor):		Operator
Maximum water depth:	ft	N/A
Cameras - color:	no.	N/A
Cameras - B&W:	no.	N/A
Manipulators		N/A
Quantity:	no.	N/A
Type (specially correspondent, rate, grabber):		N/A
Sonar		N/A
Type:		N/A

E.14 CHOKE MANIFOLD		
E.14.1 Choke Manifold (for instrumentation, see H.3)		
Make:		RB PipeTech Ltd.
Minimum ID:	in	3
Maximum WP:	psi	15,000
H2S service:	yes/no	Yes
Quantity of fixed chokes:	no.	N/A
Make:		N/A
Model:		N/A
Size (ID):	in	N/A
Quantity of adjustable chokes:	no.	2
Make:		Masterflo
Model:		P25
Size (ID):	in	1.45
Quantity of power chokes:	no.	2
Make:		Masterflo
Model:		P25
Size (ID):	in	1.45
Power choke remote control panel:	yes/no	Yes
Make:		Hitec
Location		Drillers Doghouse
Glycol injection:	yes/no	Yes
E.14.2 Flexible Choke & Kill Lines (Connecting riser to drilling unit)		
Quantity:	no.	2
Make/type:		Techflow Flexibles
ID:	in	3
Working pressure:	psi	15,000
E.15 BOP TESTING EQUIPMENT		
E.15.1 Hydraulic BOP Test Pump		
Make:		Hydroplex
Model/type:		HP 550 Series
Pressure rating:	psi	25,500
Chart recorder:	yes/no	Yes
E.15.2 BOP Test Stump		
Quantity:	no.	2
Test pressure:	psi	15,000
Type:		H4
Size:	in	18 ¾
Connected to deck (welded/bolted):		1 x bolted. 1x hydraulic extend/retract
E.16 WELLHEAD RUNNING / RETRIEVING/ TESTING TOOLS (RT/RRT/TT)		



RIG AND EQUIPMENT SPECIFICATIONS PACIFIC BORA

Wellhead make:		N/A
Wellhead type:		N/A
Wellhead size:	in	N/A
Pressure rating:	psi	N/A
E.16.1 RT's for Casing Installation		
Mechanical RT- casing housing sizes:	in	N/A
Hydraulic RT - casing housing sizes:	in	N/A
Pack Off RT - casing housing sizes:	in	N/A
Hanger RT - casing hanger sizes:	in	N/A
Hanger RT - casing type:		N/A
Seal Assembly RT - casing sizes:	in	N/A
E.16.2 RRT's for Casing Installation		
Seal Assembly RRT - casing sizes:	in	N/A
Wear Bushing RRT - casing sizes:	in	N/A
Seat Protector RRT - casing sizes:	in	N/A
E.16.3 Miscellaneous Tools		
Temporary guide base RT:	yes/no	N/A
BOP stack TT:	yes/no	N/A
Multi-purpose TT:	yes/no	N/A
Conductor casing jetting head:	yes/no	N/A
Clean out tool:	yes/no	N/A
Lock ring wellhead release tool:	yes/no	N/A
Seal assembly torque tool:	yes/no	N/A
Utility guide frame:	yes/no	N/A
Guide frame adapter sizes:		N/A
E.16.4 Booster Lines (if Fitted)		
OD drill pipe:	in	N/A
Quantity:	no.	N/A
Connection type:		N/A
Grade:		N/A
Hang off method (sq. shoulder/doughnut):		N/A
E.16.5 Mini Hose Bundle For Use With Hydraulic Running Tools		No
	yes/no	
Control line ID:	in	N/A
Quantity of lines:	no.	N/A
Control line ID:	in	N/A
Quantity of lines:	no.	N/A
E.16.6 Emergency BOP Recovery System		
Emergency BOP recovery system:	yes/no	Yes
Make/type:		Clamp below annular + slings rated for LMRP + BOP, total weight estimated 360 tons



RIG AND EQUIPMENT SPECIFICATIONS PACIFIC BORA

F. MUD SYSTEM/BULK SYSTEM		
F.1 HIGH PRESSURE MUD SYSTEM		
System working pressure:	psi	7,500 psi
System test pressure:	psi	11,250 psi proof test at construction only
Built to which design pressure:		7,500 psi
F.1.1 Mud Pumps		
Quantity:	no.	4
Make:		NOV
Model:		Model 14-P-220
Type: (Triplex/Duplex):		Triplex
Liner sizes available:	in	7", 6 1/2", 5 1/2" ceramic
Mud pump drive motors:	no.	2 each
Motor type:		General Electric 1,100 hp AC motors (2 ea per pump)
Continuous power rating per motor:	hp	1,100 hp (per motor)
Fluid end:	type	
Maximum working pressure:	psi	7,500 psi
Test pressure:	psi	
Pump stroke counter:	type	Yes
Supercharging pump:	type	Yes (Halco 8" x 6" x 14")
Driven by motor of power:	hp	100 hp
Discharge/Suction line ID:	in/in	6"
M.P. Pulsation Dampener:	type	Yes
Reset Relief Valve:	type	NOV Titan BX
Working flowrate per pump at 90% of spm:	max	
	in	
Pump speed (90% of max.):	spm	105 spm
Pump pressure:	psi	4,615 (7" liner)
Working flowrate @ 100% volumetric output:	U.S.	735 gpm
gal/min		
F.1.2 Transfer Pumps/Mixing Pumps		
Transfer pumps		
Quantity:	no.	6
Make:		NOV Halco
Model:		6 x 8 x 14
Type:		Centrifugal
Drive motor type:		Electrical
Power output:	hp	100 Hp @ 1750 RPM
Mixing pumps		
Quantity:	no.	3
Make:		NOV Halco
Model:		6 x 8 x 14
Type:		Centrifugal
Drive motor type:		Electrical
Power output:	hp	125 Hp @ 1750 RPM



RIG AND EQUIPMENT SPECIFICATIONS PACIFIC BORA

F.1.3 Booster Pump		
Quantity:	no.	N/A (Use a main Mud Pump, with dedicated boost standpipe only in mud pump room)
Make/type:		N/A
Pumping capacity (each): U.S.gals/min		N/A
Drive motor type:		N/A
Power output:	hp	N/A
F.1.4 Standpipe Manifold		
Quantity of standpipes:	no.	2 (+1 each boost standpipe in the mud pump room)
Standpipes ID:	in	5"
H-Type Standpipe manifold:	yes/no	Yes
Kill line outlet:	yes/no	Yes
Fill-up/bleed-off line outlet:	yes/no	Yes
Outlets (total):	no.	2
ID:	in	3" & 2"
Type connections:		Weco Fig 1502 male
Dimensions OD x ID:	in x in	3" & 2"
Design standard:		API
F. 1.5 Rotary Hoses		
Quantity:	no.	2
Make/type:		Gates Rubber
ID x length:	in x ft	4" x 113'
Snubbing lines:	yes/no	Yes
F.1.6 Cementing Hose		
Type (coflexip, etc):		Coflexip (+ cement standpipe)
Length:	ft	144'
ID:	in	3"
Working pressure:	psi	15,000 psi
F.1.7 Chiksan Steel Hoses		
Integral on-screwed:	yes/no	Welded
Make/type		Weco Fig 1502
ID:	in	2"
Section length:	ft	8 ft
Quantity:	no.	4
Section length:	ft	10 ft Swivel loops
Quantity:	no.	5
ID:	in	N/A
Section length:	ft	N/A
Quantity:	no.	N/A
Section length:	ft	N/A
Quantity:	no.	N/A



RIG AND EQUIPMENT SPECIFICATIONS PACIFIC BORA

Sweep swivels, make/type:		Weco Fig 1502
Nom. size ID:	in	2"
Quantity:		8
Nom. size ID:	in	3"
Quantity:		16
Suitable for H2S service:	yes/no	Yes
F.2 LOW PRESSURE MUD SYSTEM		
F.2.1 Mud Tanks		
Quantity:	no.	16 / 5 (active / reserve)
Total capacity:	bbbl	6,000 bbls + 9,000 bbl
Height:	ft	9 ft
Capacity, tank No. 1:	bbbl	500 bbl
Type (active/reserve):		Active
Capacity, tank No. 2:	bbbl	500 bbl
Type (active/reserve):		Active
Capacity, tank No. 3:	bbbl	250 bbl
Type (active/reserve):		Active
Capacity, tank No. 4:	bbbl	250 bbl
Type (active/reserve):		Active
Capacity, tank No. 5:	bbbl	500 bbl
Type (active/reserve):		Active
Capacity, tank No. 6:	bbbl	500 bbl
Type (active/reserve):		Active
Capacity, tank No. 7:	bbbl	500 bbl
Type (active/reserve):		active
Capacity, tank No. 8:	bbbl	500 bbl
Type (active/reserve):		Active
Capacity, tank No. 9:	bbbl	500 bbl
Type (active/reserve):		Active
Capacity, tank No. 10:	bbbl	500 bbl
Type (active/reserve):		Active
Capacity, tank No. 11:	bbbl	500 bbl
Type (active/reserve):		Active
Capacity, tank No. 12:	bbbl	500 bbl
Type (active/reserve):		Active
Capacity, tank Slug No. 1:	bbbl	125 bbl
Type (active/reserve):		Active
Capacity, tank Slug No. 2:	bbbl	125 bbl
Type (active/reserve):		Active
Capacity, tank Chemical No. 1:	bbbl	125 bbl
Type (active/reserve):		Active
Capacity, tank Chemical No. 2:	bbbl	125 bbl
Type (active/reserve):		Active
Capacity, tank Reserve No. 1:	bbbl	1,500 bbl
Type (active/reserve):		Reserve
Capacity, tank Reserve No. 2:	bbbl	1,500 bbl
Type (active/reserve):		Reserve
Capacity, tank Reserve No. 3:	bbbl	1,500 bbl
Type (active/reserve):		Reserve
Capacity, tank Reserve No. 4:	bbbl	1,500 bbl
Type (active/reserve):		Reserve
Capacity, tank Reserve No. 5(Reserve or Waste):	bbbl	3,000 bbl



RIG AND EQUIPMENT SPECIFICATIONS PACIFIC BORA

Type (active/reserve):		Reserve
Capacity Sand Trap:	bbl	60 bbls
Capacity degasser tank:	bbl	60 bbls
Capacity Desilter Tank		60 bbls
Capacity Desander Tank		60 bbls
Capacity Return Tank		60 bbls
Mud agitator in each tank	yes/no	Yes (except Sand trap and Degasser)
Mud guns in each tank:	yes/no	Yes (except mud process tanks)
F.2.2 Settling Tank		
Quantity:	no.	2
Total capacity:	bbl	125 bbl ea.(chem. Tanks .see F.2.1.)
F.2.3 Pill/Slug Tank		
Quantity: 2 ea.	no.	
Capacity:	bbl	125 bbl ea. (see F.2.1.)
Mud agitator:	yes/no	Yes
Mud guns:	yes/no	Yes
F.2.4 Trip Tank		
Capacity:	bbl	60 bbl
Capacity/unit length:	bbl/ft	5.08 bbl/ft
Level indicator:	yes/no	Yes
Electric pump make:		NOV Halco
Number		2
Model/type:		Centrifugal 2,500 Supreme 6" x 5" x 14"
Motor output:	hp	50 hp
Facility for casing fill-up:	yes/no	No
Alarm and strip chart recorder (see H.1.11):	yes/no	Yes
F.2.5 Stripping Tank		
Capacity:	bbl	8 bbl
Capacity/unit length:	bbl/ft	1.56 bbl/ft
Equalizing facility with trip tank:	yes/no	No
Transfer pump:	yes/no	Yes
F.2.6 Chemical Mixing Tank		
Quantity: 2 ea.	no.	
Capacity:	bbl	125 bbl ea. (see F.2.1.)
Chemical mixer type:		NOV-Brandt Agitator / MA-15
F.2.7 Shale Shakers		
Primary:		
Quantity:	no.	7
Make/model:		NOV-Thule VSM 300 with fume extraction hood



RIG AND EQUIPMENT SPECIFICATIONS PACIFIC BORA

Type:		Balanced elliptical motion, low profile, cascade shaker
Driven by no. of electric motors:	no.	2
Design flowrate (total): bbl/min		2000 Gpm – 18" flowline (diverter housing – shakers)
Cascading		
Quantity:	no.	N/A (Primary shakers are cascading type)
Make/model:		N/A
Type:		N/A
Driven by no. of electric motors:	no.	N/A
Design flowrate (total): bbl/min		N/A
F.2.8 Desander/Desander		
Quantity:	no.	1
Make/model:		NOV-Brandt – 2,500 Supreme Mission
Type:		Mission
Number of cones x size:	no. x in	3 X 10"
Centrifugal pump type:		Mission
Centrifugal pump size:	in x i	8" x 6" x 14"
Driven by electric motor of:	hp	150HP
Is pump dedicated to Desander:	yes/no	Yes
Max. flowrate: bbl/min		1600 gpm
F.2.9 Desilter		
Quantity:	no.	1
Make/model:		NOV-Brandt/ 2,500 Supreme
Type:		Mission
Number of cones x size:	no. x in	24 x 4"
Centrifugal pump type:		Mission
Centrifugal pump size:	in x in	8" x 6" x 14"
Driven by electric motor of:	hp	150 HP
Is pump dedicated to Desilter:	yes/no	Shared with mudcleaner
Max. flowrate: bbl/min		1,600 gpm
F.2.10 Mud Cleaner		
Quantity:	no.	1
Make/model:		NOV-Thule /VSM 300
Type:		VSM 300 (with Desilter and Desander cone set above)
Number of cones x size:	no. x in	24 x 4"
Centrifugal pump type:		8" x 6" x 14"
Centrifugal pump size:	in x in	Mission
Driven by electric motor of:	hp	150 HP
Is pump dedicated to Mud Cleaner:	yes/no	Shared with desilter
Max. flowrate:	gpm	1,600 gpm
F.2.11 Mud/Gas Separator (Poor Boy)		



RIG AND EQUIPMENT SPECIFICATIONS PACIFIC BORA

Make/type:		NOV-RB Pipetech / 3122-06
Gas discharge line ID:	in	12
Gas discharge location, primary:		Crown
Can discharge be tied into burner system:	yes/no	No
Mud seal height:	ft	19'
Calculated gas throughput:	mmscf	1000 Gpm
F.2.12 Degasser		
Quantity:		2
Make/type:		NOV-Brandt / D-10
Centrifugal pump type:		Centrifugal
Centrifugal pump size:	in x in	6 x 8 x 14
Driven by electric motor of power:	hp	150 Hp
Discharge line running to:		Crown
Vacuum pump make:		Ingersoll-Rand
Type:		Single stage
F.2.13 Mud Agitators		
Quantity:	no.	10
Make/model:		NOV-Brandt HMA-30RG
Driven by electric motor of:	kw	30 hp
Located in tanks (see F.2.1 for tank numbers):		1, 2, 5, 6, 7, 8, 9, 10, 11, 12, 3 (20 HP), 4 (5 HP)
Quantity:	no.	4
Make/model:		NOV-Brandt VMA – 10
Driven by electric motor of:	kw	10 hp
Located in tanks (see F.2.1 for tank numbers):		Chemical 1 & 2 and Slug 1 & 2
Quantity:	no.	3
Make/model:		NOV-Brandt / VMA-5
Driven by electric motor of:	kw	5 hp
Located in tanks (see F.2.1 for tank numbers):		Return, Desander and Desilter Tanks
Quantity:	no.	7
Make/model:		NOV-Brandt HMA-40RG
Driven by electric motor of:	kw	40 hp
Located in tanks (see F.2.1 for tank numbers):		Reserves 1,2,3 & 4 ; 2 x Res./Waste; Drain tk.
F.2.14 Mud Centrifuge		
Quantity:	no.	2
Make/model:		NOV-Brandt HS-3400
Feed pump make/model:		N/A
Driven by motor of power:	hp	VFD
Capacity:		200 gal / min
bbl/min		
F.2.15 Mud Hopper		
Quantity:	no.	3



RIG AND EQUIPMENT SPECIFICATIONS PACIFIC BORA

Make/model:		NOV- Procon / Auto feed dustfree
Feed pump make/model:		NOV- Supreme 2500 8 x 6 x 14
Driven by motor of power:	hp	125 HP
F.2.16 Mud Laboratory and Facilities		
Separate room:	yes/no	Yes
Equipped with		
Mud balance:	yes/no	Yes
Marsh funnel:	yes/no	Yes
Filtration kit:	yes/no	No
Sand content kit:	yes/no	No
Stopwatch:	yes/no	No

F.3 BULK SYSTEM		
F.3.1 Barite/Bentonite Silos		
Quantity:	no.	4
Capacity of each silo:	lt	113 m3
Locations:		Midship fwd below deck
Type weight loadcell:		Electronic
Manufacturer:		Thames Side – Maywood VC
Pressure rating:	psi	3500
Relief valve(s) installed		65 psi 4.4 bar
yes/no		Yes
Rock-catcher(s) installed		Yes
Dust-collectors installed		Yes
F.3.2 Cement Silos		
Quantity:	no.	4
Capacity of each silo:	lt	113 m3
Locations:		Midship below deck
Type weight loadcell:		Electronic
Manufacturer:		Thames Side – Maywood VC
Pressure rating:	psi	3500
Relief valve(s) installed:		65 psi 4.4 bar
yes/no		Yes
Rock-catcher(s) installed		Yes
Dust-collectors installed		Yes
Separate mud/cement loading facilitates:		Yes
yes/no		
Discharge line for cement independent from barite/bentonite discharge line:		Yes
yes/no		
F.3.3 Cement Day Tanks		

Quantity:	no.	2
Capacity of each silo:	lt	40 m3
Locations:		Outside Cement Room
Type weight loadcell:		Electronic
Manufacturer:		Thames Side – Maywood VC 3500
Pressure rating:	psi	65 psi 4.4 bar
Relief valve(s) installed: yes/no		Yes
F.3.4 Surge Tank for Barite/Bentonite		
Quantity:	no.	2 (one each)
Capacity of each silo:	lt	6 m3
Locations:		Sackroom mixing level
Type weight loadcell:		Electronic
Manufacturer:		Thames Side – Maywood VC 3500
Pressure rating:	psi	65 psi 4.4 bar
Relief valve(s) installed: yes/no		Yes
F.3.5 Surge Tank for Cement		
		Dowell-Schlumberger free placement
Quantity:	no.	1
Capacity of each tank:	lt	70 cuft
Type weight loadcell:		Electronic
Manufacturer:		Thames Side – Maywood VC 3500
Pressure rating:	psi	Non-pressurized
Relief valve(s) installed: yes/no		Yes
F.3.6 Bulk Transfer System (see also C.1.8 - Compressed Air Systems)		
Independent air system for the silos & surge tanks consisting of a high-volume low-\ pressure compressor & air dryer: yes/no		No
Air reduced from main air supply through pressure Regulators: yes/no		Yes
Separate volume tank & drier: yes/no		Yes



RIG AND EQUIPMENT SPECIFICATIONS PACIFIC BORA

G. CASING/CEMENTING EQUIPMENT		
G.1 CASING EQUIPMENT		
G.1.1 API Casing Drifts		
For casing OD, weight, quantity:	in/lbs/ft/no.	20"
For casing OD, weight, quantity:	in/lbs/ft/no.	13 3/8"
For casing OD, weight, quantity:	in/lbs/ft/no.	9 5/8"
For casing OD, weight, quantity:	in/lbs/ft/no.	7"
G.1.2 Clamp-On Type Casing Thread Protectors		
For casing OD, quantity:	in/no.	N/A
For casing OD, quantity:	in/no.	N/A
For casing OD, quantity:	in/no.	N/A
For casing OD, quantity:	in/no.	N/A
G.1.3 Side Door Casing Elevator		
Quantity:	no.	2
For OD casing:	in	36
Make/type:		Blohm&Voss SDS-250-6
Capacity:	st	250
Quantity:	no.	2 sets of inserts (Total 5 sets of 2)
For OD casing:	in	20 + 16 + 13 5/8 + 13 3/8 + 10 3/4
Make/type:		Blohm&Voss VES-SD-500-2
Capacity:	st	500
Quantity:	no.	2 sets of inserts (Total 3 sets of 2)
For OD casing:	in	9 7/8 + 9 5/8 + 7
Make/type:		Blohm&Voss VES-SD-750/1000
Capacity:	st	1000
Quantity:	no.	TBC
For OD casing:	in	
Make/type:		
Capacity:	st	
Quantity:	no.	TBC
For OD casing:	in	
Make/type:		
Capacity:	st	
G.1.4 Single Joint Casing Elevators		
Quantity:	no.	2 + 2
For OD casing:	in	20 + 16
Make/type:		Blohm&Voss
Safety latches:	yes/no	Yes

Quantity:	no.	2 + 2
For OD casing:	in	13 5/8 + 13 3/8
Make/type:		Blohm&Voss
Safety latches:	yes/no	Yes
Quantity:	no.	2
For OD casing:	in	9 5/8
Make/type:		Blohm&Voss
Safety latches:	yes/no	Yes
Quantity:	no.	2
For OD casing:	in	7
Make/type:		Blohm&Voss
Safety latches:	yes/no	Yes
G.1.5 Slip Type Spiders		
Quantity:	no.	2 (inserts only)
Make/type:		Blohm&Voss PS 1000
Capacity:	st	1000
W/slips for OD casing sizes:	in	20, 16, 13 5/8, 13 3/8, 9 5/8, 7
G.1.6 Casing Slips		
Quantity:	no.	1
Make/type:		Blohm&Voss / CSI
For OD casing:	in	20
Quantity:	no.	1
Make/type:		Blohm&Voss / CSI
For OD casing:	in	13 3/8
Quantity:	no.	1
Make/type:		Blohm&Voss / CSI
For OD casing:	in	9 5/8
Quantity:	no.	1
Make/type:		Blohm&Voss / CSI
For OD casing:	in	7
G.1.7 Casing Bowls		
Quantity:	no.	1
Make/type:		Blohm&Voss / 200 Ton hinged casing spider
For OD casing (max/min):	in/in	20
Quantity:	no.	1+1
Make/type:		NOV-Varco / CB
For OD casing (max/min):	in/in	20 + 16
Quantity:	no.	1
Make/type:		Blohm&Voss / Reducing bushing for HCS-200
For OD casing (max/min):	in/in	13 3/8 + 9 5/8



RIG AND EQUIPMENT SPECIFICATIONS PACIFIC BORA

Quantity:	no.	1 Set
Make/type:		NOV-Varco No 1
For OD casing (max/min):	in/in	13 3/8
Quantity:	no.	1 Set
Make/type:		NOV-Varco No 2
For OD casing (max/min):	in/in	9 5/8 - 10 3/4
G.1.8 Casing Tongs		
Quantity (sets):	no.	2
Make/type:		Blohm&Voss / BV-100 (jaws only)
W/jaws for OD casing (max/min):	in/in	20 + 13 3/8
Quantity:	no.	4
Make/type:		Gear-Wrench / Petrol Beltgrip
W/jaws for OD casing (max/min):	in/in	36 – 30' – 26" – 20"
G.1.9 Power Casing Tongs		
Quantity:	no.	1 (insert for Hydratong – iron roughneck)
Make/type:		NOV/FARR Hydraulic KT 7585
W/jaws for OD casing (max/min):	in/in	2 3/8 - 8 5/8
Max output torque:	ft lbs	25,000
Torque indicator:	yes/no	Yes
Back-up arm:	yes/no	Yes
Quantity:	no.	1 ((insert for Hydratong – iron roughneck)
Make/type:		NOV/FARR Hydraulic KT 20000
W/jaws for OD casing (max/min):	in/in	8 5/8 - 20
Max output torque:	ft lbs	50,700
Torque indicator:	yes/no	Yes
Back-up arm:	yes/no	Yes
G.1.10 Power Unit for Casing & Tubing Tongs		
Quantity:	no.	Central HPU for NOV equipment
Driven by electric motor:	yes/no	Yes
G.1.11 Casing Circulating Head (Swedge)		
For OD casing:	in	N/A
Connection type:		N/A
G.1.12 Casing Spears (Internal)		
Quantity:	no.	N/A
Make/type:		
For OD casing:	in	
For casing weight:	lbs/ft	
Pack-off:	yes/no	
G.1.13 Casing Cutters (Internal)		
Quantity:	no.	N/A
Make/type:		N/A



RIG AND EQUIPMENT SPECIFICATIONS PACIFIC BORA

For OD casing (max/min):	in/in	N/A
G.1.14 Crossover to Handle Casing with DP		
Quantity:	no.	N/A
For OD casing:	in	N/A
Casing connection:		N/A
Drill pipe connection type:		N/A
Rated capacity:	st	N/A
G.1.15 Casing Scrapers		
Quantity:	no.	N/A
Make:		N/A
For OD casing:	in	N/A
For casing weight:	lbs/ft	N/A
OD body:	in	N/A
Connection type:		N/A
G.2 CEMENTING EQUIPMENT		
G.2.1 Cement Unit		
Owner:		Schlumberger
Free placement basis:	yes/no	Yes
Make		Schlumberger
Type		CPS-665, remote control type, zone 2
No. of triplex pumps:	no.	2
Maximum working pressure:	psi	15,000
Maximum flowrate (total):	bbbl/min	24.4
Unit power by (electric/diesel):		Diesel, in sound reduction enclosure
Recirculating mixing system:	yes/no	Yes, Mark III Slurry Chief Mixer, 8 + 16 bbls
Capacity:	bbbl	60 sxs/min, 153.6 ton/hr, 11 BBls/min,
Motor power:	hp	1400
Liquid additive system:	yes/no	Yes
Premix/batch tank:		CBS-967, remote control type
Quantity:	no.	2
Capacity (total):	bbbl	200
Pressure recorder:	yes/no	Yes
G.2.2 Cementing Manifold		
Discharge manifold working pressure:	psi	15,000
Cement pump discharge lines min. ID:	in	3
Cement pump discharge lines working pressure:	psi	15,000 (+ cement standpipe available)
G.2.3 Cement Kelly		
Quantity:	no.	N/A
Nominal size OD:	in	N/A
Total length:	ft	N/A
Working length:	ft	N/A
Connection type:		N/A
Cement head:	yes/no	N/A



RIG AND EQUIPMENT SPECIFICATIONS PACIFIC BORA

G.2.4 Cementing Tubing		
Size:	in	N/A
Length (total):	ft	N/A
X-overs to drillpipe specified in sect. D.1.3:	yes/no	N/A

H.1.3 Choke Manifold Pressure Gauge	
Quantity:	no. 4
Make/type:	NOV-Hitec with transmitter
Pressure range:	psi - psi 0 – 20,000
Quantity:	no. 4
Make/type:	NOV/Pressure Gauge
Pressure range:	psi - psi 0 – 20,000
H.1.4 Rotary Speed Tachometer	
Make/type:	NOV-Hitec SDI
H.1.5 Rotary Torque Indicator	
Make/type:	NOV-Hitec SDI
H.1.6 Motion Compensator Instruments	
Make/type:	Seatex MRU H / MRU-M-MB2
Hook position indicator:	yes/no Yes
Lock/unlock indicator:	yes/no Yes
H.1.7 Pump Stroke Counters	
Make/type:	NOV
One pump stroke indicator and one cumulative pump stroke counter for each pump:	yes/no Yes
H.1.8 Tong Torque Indicator	
Make/type:	NOV-Hitec SDI
H.1.9 Pit Volume Totalizer	
Make/model:	NOV-Hitec SDI – VEGA
Floats in active mud tanks:	yes/no No (acoustic system installed)
Floats in reserve mud tanks:	yes/no No (acoustic system installed)
Loss/Gain indicator:	yes/no Yes
Alarm (audio and visual):	yes/no Yes
H.1.10 Mud Flow Indicator	
Make/model:	NOV-FLOX-0005H
High/low alarm (audio and visual):	yes/no Yes
H.1.11 Trip Tank Indicator	
Make/model:	NOV-Vega
Chart recorder:	yes/no Yes
Alarm:	yes/no Yes

H.1.12 General Alarm System	yes/no	Yes
H.1.13 Automatic Driller		
Make/type:		Automatic ROP/WOB incorporated in Hitec control system
H.1.14 Remote Choke Control Unit (see E.14.1)		
Make/model:		NOV-Hitec
H.2 DRILLING PARAMETER RECORDER		
Quantity:	no.	Provided by DCS
Location - 1:		Toolpusher Office
Location - 2:		Company Man Office
Location - 3:		
Make/type:		NOV-Hitec SDI system
Quantity of pens:	no.	N/A
H.3 INSTRUMENTATION AT CHOKE MANIFOLD		
H.3.1 Standpipe Pressure Gauge		
Make/type:		R.B. Pipetech
Pressure range (maximum):	psi	10,000
H.3.2 Choke Manifold Pressure Gauge		
Make/type		R.B. Pipetech
Pressure range (maximum)	psi	10,000 and 15,000 (fine scale)
H.3.1 and H.3.2 combined on one panel:	yes/no	Yes
Visible from choke operation position:	yes/no	Yes
H.4 STANDPIPE PRESSURE GAUGE		
Make/type:		SCS Nobel Elektronik / 390-B-M10
Pressure range:	psi	10,000
Visible from Driller's position:	yes/no	No
H.5 DEVIATION EQUIPMENT		
H.5.1 Measuring Device		
Quantity:	no.	1
Make/type:		Totco
Deviation range:	degree	5° + 10°
H.5.2 Wireline Winch		
Make/model:		Matthew / Surveyor II
Wire length (nominal):	ft	35,000



RIG AND EQUIPMENT SPECIFICATIONS PACIFIC BORA

Depth counter:	yes/no	Yes
Wire size:	in	0.105 T-316 Stainless steel
Pull indicator:		Yes
H.6 CALIBRATED PRESSURE GAUGES		
Make/type instrument gauges:		N/A
Size:	in	N/A
Connection:		N/A
Range:	psi	N/A
Quantity:	no.	N/A
Facilities to install gauges on:		N/A
Standpipe manifold:	yes/no	Yes
Choke manifold:	yes/no	Yes
Cement unit:	yes/no	Yes
H.7 RIG COMMUNICATION SYSTEM		
H.7.1 Telephone System		
No. of stations:	no.	109
Make		CMR Korea
Type		IOCS-500
H.7.2 Public Address System		
Can be combined with above:	yes/no	Yes
Make		CMR Korea
Type		CPA-9000
Explosion proof:	yes/no	Yes in hazardous areas
H.7.3 Drill Floor - Derrickman's Talkback		
No. of stations:	no.	13
Location:		Driller's chair, AD's chair, ECR, crownblock,
Make		MRC, Bridge, Cement Unit – Korea
Type		MTB-5002E
Explosion proof:	yes/no	yes
H.7.4 Hand-Held VHF Radios		
Quantity:	no.	5
Make		Icom
Type		IC-GM1600 GMDSS Survival Radio's
Quantity:	no.	5
Make		Icom
Type		ICOM IC-M88-IS Intrinsically-Safe Marine channels
H.7.5 Hand-Held UHF Radios		
Quantity:	no.	12
Make		Motorola

Type		GP340 Intrinsically-Safe UHF 5 channel hand-radios
H.8 ENVIRONMENTAL INSTRUMENTATION		
H.8.1 Temperature Indicators		
Air temperature:	yes/no	Yes
Make/model:		CMR Korea
Sea water temperature:	yes/no	Yes
H.8.2 Barometric Pressure Indicator		
Make		(Sato)
Type		(Sigma II) Barograph
Recorder:	yes/no	Yes
Make/model:		(Weems & Plath)/ Barometer
Recorder:	yes/no	No
H.8.3 Humidity Sensing Indicator		
Make		Brannam
Type		Wet Bulb
Recorder:	yes/no	No
H.8.4 Wave Profile Recorder		
Make		N/A
Model		N/A
Recorder:	yes/no	N/A
H.9 DP, Vessel Control and Navigation Systems		
H.9.1 Dynamic Positioning System		
Make		Kongsberg
Type		DP Class 3
Model		Kongsberg (K-POS DP32) Kongsberg (K-POS DP12) Designed accord. to ABS DP-3 & DP Class 3
H.9.2 PRS – Position Reference Systems		
H.9.2.1 Differential Positioning System		
Make		Kongsberg Simrad
Type		Differential Positioning System
Model		Seatex DPS 132
Differential Links:		GPS L1/L2 – built in DPS 132 IALA – built in DPS 132 Inmarsat/SpotBeam (demodulator Seastar 3510LR) Location: Radio Room

<p>H.9.2.2 Differential Positioning System Make Type Model Differential Links:</p>	<p>Kongsberg Simrad Differential Positioning System Seatex DPS 4D DGPS/GLONASS IMU (MRU5+) Inmarsat/SpotBeam (Demodulator Seastar 3510LR) Location: Subsea Office</p>
<p>H.9.2.3 HPR – Hydroacoustic Positioning System Make Type Model Transducer</p>	<p>Kongsberg Simrad HPR 2 x APOS 501 2 x HIPAP</p>
<p>H.9.3 MRU - Motion Reference Unit Make Model Located at</p>	<p>Seatex MRU 5 MRU-M-MB3 ECR, Port and Starboard HPR Compartment</p>
<p>H.9.4 Gyro Compass Make Model Type Located at: Repeater</p>	<p>Sperry Marine NAVIGAT X Mk1 Digital Gyro Compass ECR, Navigation Room x 2 Yes, Sperry Marine,4881-AB, S/n(11381,10516,13485) Qnty-3, Nav Bridge,Bridge Wings</p>
<p>H.9.5 Wind Sensors Make Model Type Located at:</p>	<p>3 x (Observer Instruments) OMC-160. Rotary Cup Type Radar Mast, Derrick</p>
<p>Make Model Type Located at:</p>	<p>1 x Gill Wind Observer II Ultrasonic Wind Sensors Derrick</p>
<p>H.9.6 DP Logger Make Model Type</p>	<p>Kongsberg Simrad Integrated Navigation System</p>
<p>H.9.7 Integration Navegation System</p>	

<p>Make Model Type</p> <p>H.9.8 Thrusters Control System</p> <p>Quantity Make Model Type</p> <p>IP Class Location</p> <p>H.9.9 Bridge Autopilot</p> <p>Make Model Type</p> <p>H.9.10 Bridge Watch Alarm System</p> <p>Quantity Make Model</p> <p>Type Location</p> <p>H.9.11 Gyro Monitor</p> <p>Quantity Make Model Type Location</p> <p>H.9.12 Horn Control</p> <p>Quantity Make Model Type Location</p> <p>H.9.13 Planning Computer</p> <p>Quantity Make Model Located at</p> <p>H.9.14 Watch Bridge Unit</p> <p>Quantity Make Model</p>	<p>Kongsberg Simrad K-Chief</p> <p>1 Kongsberg Simrad STC-400 STC-400 Included Telegraph THR 4;5 and THR Em'cy Stop 22 K-Bridge Console</p> <p>Kongsberg</p> <p>1 Samsung WAP Bridge Watch Alarm System Included 3 Reset/Push Buttons K-Bridge Console</p> <p>1 Sperry Marine NAVITWIN IV 0735-07 K-Bridge Console</p> <p>1 Saracom HC-7123 Included Auto Signal K-Bridge Console</p> <p>2 Kongsberg K-Bridge-PL Radar integrated Bridge – chart table/K-Bridge-Console</p> <p>1 Kongsberg HA 459 000 A1</p>
--	--



**RIG AND EQUIPMENT SPECIFICATIONS
PACIFIC BORA**

Type Location	Extention Alarm Panal K-Bridge-Console
------------------	---

H.9.15 CCTV	
Make	HERNIS – 34 camera system (including drawworks, iron RN fwd, IR aft, moonpool, drill floor, monkeyboard (2), shale shakers area, pipe decks fwd + aft, crown (2), helideck, thrusters rooms (6), engine rooms (3), main switchboard room (3), purifier room (2), ballast pump room, radar mast, fwd aux machinery room, welltest area (2)
Model	EX286W, EX286, PT9W, PT9W&S7
Type	CCTV
H.9.16 Fire Detection System	
Make	Autronica
Model	Autro Safe-Self verify system
Type	Oil&Gas
Location	Nav Bridge
H.9.17 Doppler Sonar	
Make	JRC
Model	NWW-GOTB
Type	JLN-550 Doppler Sonar
Location	NAV Chart Desk
H.9.18 Echo Sounder	
Quantity	1
Make	JRC
Model	JFE - 680
Located at:	Bridge NAV Chart Desk
Recorder:	Yes
Changeover Echosounder :	JRC,NQE-929
H.9.19 Weather Facsimile	
Quantity	1
Make	JRC
Model	JAX-9 B
Located at:	Bridge NAV Chart Desk
Recorder:	Yes



**RIG AND EQUIPMENT SPECIFICATIONS
PACIFIC BORA**

Paper Code		6ZPT500108
H.9.20 Bridge Radar		
Quantity:	no.	1
Make		Kongsberg
Model		MP 7600 NAV 0575/07
Located at:		Fwd; k-Bridge-Console
Bandwidth:	cm	10 cm
S/N		CZC661100GU
Quantity:	no.	1
Make		Kongsberg
Model		MP7600 NAV 0575/07
Located at:		Fwd; K-Bridge-Console
Bandwidth:	cm	3 cm
S/N		CZC611008Y
Quantity:	no.	1
Make		Kongsberg
Model		MP7600 NAV 0575/07
Located at:		Fwd; K-Bridge-Console
Bandwidth:	cm	3 cm
H.9.21 SVDR Remote Alarm Unit		
Quantity		1
Make		Samsung
Model		WABS
Type		SVDR Remote Alarm Unit Data Voyage
Location		K-Bridge-Console
Recorder		Yes; NAV Instrument Room
H.9.22 Magnetic Compass		
Make		Saracom
Model		MC-180
Type Approval		Class A ISO 499 ISO 2269
Location		Heli Waiting Deck
H.9.23 GPS		
Quantity		2
Make		JRC
Model		JLR – 7700MKII
Type		GPS Navigator: NWZ 4570B RX NNN4331
Selector Switch		Yes, JRC NCZ-777
Location		Chart Desk Console
H.9.24 Course Recorder		
Quantity		1
Make		EPSON
Type		LQ-300II



**RIG AND EQUIPMENT SPECIFICATIONS
PACIFIC BORA**

Channels: Location		All Marine Radio Room ; K-Bridge- Console- 2pcs.
H.10.4 UHF Radio Telephone		
Quantity		3
Make		Motorola
Model		GM-338
Located at:		DP Console ; Radio Room-2
H.10.5 VHF Radio Transceiver		
Quantity:	no.	3
Make		JRC
Model		JHS-7
Quantity:	no.	1
Make		JRC
Model		DSC VHF 32A
Quantity:	no.	2
Make		JRC
Model		DSC VHF NCH 414
H.10.6 Aero Radio Beacon Transmitter		
Quantity:	no.	1
Make		Saracom
Model		TS-1B
Power:	watts	120
H.10.7 Aeronautical VHF Transceiver		
Quantity:	no.	1
Make		Saracom
Model		Jotron TR 810
Quantity:	no.	2
Make/model:		ICOM
Model		IC-A24
H.10.8 Watch Receiver		
Make		JRC
Model		JSB-196GM
Frequency:	kHz	2182
H.10.9 UAIS		
Quantity		1
Make		JRC
Model		JHS-182
Type		Display Unit
Location		K-Bridge-Console

H.10.10 Radio Telex		
Quantity	no.	1
Make		JRC
Model		NDZ-127J Data Terminal
Location		Radio Room GMDSS Console
H.10.11 Satellite Communication System		
Make		JRC
Model		Fleet F77 JUE-410F
Type:		A/B
Facsimile link:	yes/no	Yes
Telex link:	yes/no	Yes
Telephone link:	yes/no	Yes
Video Telephone		Yes
Other capabilities:		Internet Link
H.10.12 SART		
Quantity		2
Make		JRC
Model		JQX-30A
Battery Expiry Date		07/2010
Location		NAV Bridge Port/Stabord
Quantity		6 Lifeboats
H.10.13 Homing Beacon Control		
Quantity		1
Make		SAC
Model		SAC Hoaming Beacon Console
Type		
Location		K-Bridge-Console
H.10.14 Distress Message Control Panel		
Quantity		1
Make		JRC
Model		NCH-321A
Type		
Location		K-bridge-Console
H.10.15 Sound Reception Panel		
Make		MRC
Model		MSR-9200A
Type		
H.10.16 Talk Back Remote Unit		
Make		MRC
Model		
Type		



**RIG AND EQUIPMENT SPECIFICATIONS
PACIFIC BORA**

<p>Talk Back Main</p> <p>Make Model Type Location</p> <p>H.10.17 P/A & T/B REMOTE CONTROLLER</p> <p>Make Model Type</p> <p>P/A Main (1) (2)</p> <p>Quantity Make Model General Alarm Location</p> <p>H.10.18 Bridge Telephone</p> <p>Make Model Type</p> <p>H.10.19 Bridge Sound Powered Telephone</p> <p>Make Model Type</p> <p>H.10.20 Navtex</p> <p>Make Model Type Printer</p> <p>H.10.21 DSC/NBDP Modem</p> <p>Make Model Type Quantity Location</p> <p>H.10.22 Facsimile</p> <p>Make Model Quantity Location</p>	<p>CTA-9200 No: HN 1674</p> <p>Communication Room</p> <p>CMR</p> <p>2</p> <p>CPA-9600-1-1 ; CPA-9600-2-1 Yes Communication Room;ELE EQ. Room</p> <p>CMR</p> <p>CMR</p> <p>JRC NCR-333 NAVTEX Receiver NR IS1NM518-2 DPLI-414</p> <p>JRC NCT-196N DSC/NBDP GA17020 1 GMDSS console</p> <p>Oki Data Corporation Thailand F21005B 1 Radio Room</p>
--	---



RIG AND EQUIPMENT SPECIFICATIONS PACIFIC BORA

H.10.23 Inmarsat-C Make Model Quantity Location		JRC NDZ- 127C1 Data Terminal JUE 85 ; IME model NTF-781GM MASS 1 GMDSS Console
H.10.24 SSAS Make Type Quantity Location		NEQ-3154 Push Button 2 Bridge Console; Cpt. Cabin
I. PRODUCTION TEST EQUIPMENT		
I.1 BURNERS		
Make/type:		N/A (Client Third Party)
Quantity:	no.	N/A
Capacity: bbl/day		N/A
Weight:	st	N/A
Water requirement at 100 psi: bbl/min		N/A
I.2 BURNER BOOMS		
Make/type:		Samsung / Swan neck
Quantity:	no.	1
Length:	ft	80 ft
Horizontal:	yes/no	Swan neck
Height above sea level (at drilling draft):	ft	± 22m TBC
Walkway and handrails:	yes/no	Yes
Burner platform size:	ft x ft	TBA
Burner mounting rotatable:	yes/no	yes
Regulatory approvals:		ABS
I.3 LINES REQUIRED ON BURNER BOOMS		
I.3.1 Oil Line		
ID:	in	4" line
Working pressure:	psi	1,500 psi
Connection type at burner end:	type	TBC
H2S:	yes/no	Yes
Pressure gauge connection at barge end:	in	No
I.3.2 Gas Line		
ID:	in	6" line
Working pressure:	psi	1,500 psi
Extended beyond burner by:	ft	TBC

RIG AND EQUIPMENT SPECIFICATIONS PACIFIC BORA

Connection type at burner end:	type	TBC
H2S:	yes/no	Yes
Pressure gauge connection at barge end:	in	No
I.3.3 Water Line		
ID:	in	3" line
Working Pressure:	psi	300 psi
Connection type at burner end:	type	TBC
Pressure gauge connection at barge end:	in	Yes
I.3.4 Air Line		
ID:	in	4" line
Working Pressure:	psi	150 psi
Connection type at burner end:	type	TBC
Pressure gauge connection at barge end:	in	No

I.3.5 Pilot Gasoline		
ID:	in	1" line
Working Pressure:	psi	150 psi
Connection type at burner end:	type	TBC
Pressure gauge connection at barge end:	in	No
I.4 SPRINKLER SYSTEM		
Sufficient to give protection to rig and personnel against heat radiation damage from the burners:	yes/no	Yes, salt water supplied by dedicated cooling water pump in engine room
I.5 FIXED LINES FOR WELL TESTING		
I.5.1 Drillfloor to Separator Area		
Type (screwed/welded, both):		Welded
Quantity:	no.	1
Size ID:	in	6"
Working pressure:	psi	15,000 psi
Connection type on drill floor:		Clamp N° 8 (BX 155 ring gasket)
Connection type at separator:		TBC
Number of valves/lines:	no.	0
Size of valves:	in	N/A
H2S:	yes/no	Yes
I.5.2 Separator Area to Each Burner Boom		
Type (screwed/welded, both):		Welded
Quantity:	no.	1 (1 Port)
Size ID:	in	4" Oil / 6" Gas / 4" Water / 4" Air



RIG AND EQUIPMENT SPECIFICATIONS PACIFIC BORA

Working pressure:	psi	1440 PSI
Connection type on separator:	type	Weco 602
Connection type at boom:	type	Weco 602
Number of valves/lines:	no.	0 / 4
Size of valves:	in	0
H2S:	yes/no	Yes
Valves installed near separator area for switching gas to either burner:	yes/no	N/A (one burner boom available only, rig will weather vane)
I.5.3 Mud Pumps to Both Burner Booms		
Type (screwed/welded, both):		N/A (Dedicated sea water cooling pump in engine room)
Quantity:	no.	1
Size ID:	in	6"
Working pressure:	psi	300 PSI
Number of valves required:	no.	0
Size of valves:	in	N/A
Connected to fire fighting pumps:	yes/no	No
Rated line capacity at 300 psi:	bbl/hr	TBA
I.5.4 Rig Air System to Burners		
Type (screwed/welded, both):		Welded
Quantity:	no.	1
Size ID:	in	4"
Working pressure:	psi	120 PSI
Non-return valves fitted:	yes/no	Yes
I.5.5 Oil Storage Tank To Overboard		
Type (screwed / welded, both):		N/A
Quantity:	no.	N/A
Size ID:	in	N/A
Working pressure:	psi	N/A
Height above water level:	ft	N/A
Connection type at separator area:	type	N/A
I.5.6 Separator to Ventstack of Rig		
Type (screwed/welded, both):		N/A
Quantity:	no.	N/A
Size ID:	in	N/A
Working pressure:	psi	N/A
Connection type at separator area:	type	N/A
I.6 AUXILIARY POWER AVAILABILITY		
I.6.1 For Field Laboratory		
		Several breaker feeder:1x15 amp, 3X30 Amp, 5x50amp, 3x60 amp plus 1 220 single phase outlet and several 110 single phase outlets
Quantity:	kw	12
Volts:	v	460/480 220/120



**RIG AND EQUIPMENT SPECIFICATIONS
PACIFIC BORA**

Frequency:	Hz	60 hz
1.6.2 For Crude Transfer Pump		
Quantity:	kw	N/A
Volts:	v	N/A
Frequency:	hz	N/A
1.6.3 For Electric Heaters		
		Well test area
Quantity:	no.	2
Volts:	v	440V,1000A ; 220V ,100A
Frequency:	hz	
1.6.4 For ROV		
		Well test area
Quantity:	no.	PORT & STBD
Volts:	v	440V (400/250/100/20 A)

J. WORKOVER TOOLS	N/A
(NOT APPLICABLE TO SEMI-SUBMERSIBLES)	

K. ACCOMMODATIONS		
K.1 OFFICES		
K.1.1 Company Representative's Office		
Quantity:	no.	3
Complete with desk, filing cabinets (s) and other necessary furniture:	yes/no	Yes (as per contract)
Unrestricted view to drill floor:	yes/no	No
K.1.2 Contractor's Representative's Office		
Quantity:	no.	3
Unrestricted view to drill floor:	yes/no	1 only
K.1.3 Radio Room		
Quantity:	no.	1
K.1.4 Hospital Room		
Number of beds/bunks:	no.	3
Wash basin:	yes/no	Yes
Medical cabinet:	yes/no	Yes
Dangerous drugs:	yes/no	Yes
K.2 LIVING QUARTERS		
K.2.1 Accommodations		
Total beds:	no.	200
Quantity of single bed rooms:	no.	4
toilets (private/shared/communal):		Private
Quantity of two bed rooms:	no.	71
toilets (private/shared/communal):		Private
Quantity of three bed rooms:	no.	6
toilets (private/shared/communal):		Private
Quantity of four bed rooms:	no.	9
toilets (private/shared/communal):		Private
Quantity of six bed rooms:	no.	N/A
toilets (private/shared/communal):		N/A
K.2.2 Galley		
Quantity:	no.	1
K.2.3 Mess Seating Capacity		
Main mess:	no.	72 seats
Aux. mess:	no.	N/A
K.2.4 Conference Rooms		
Quantity:	no.	1



RIG AND EQUIPMENT SPECIFICATIONS PACIFIC BORA

K.2.5 Recreation Rooms			
Quantity:	no.	1	
Recreation facilities:			
TV:	no.	Yes (2) + feed to each cabin	
DVD:	no.	Yes (2) + feed to each cabin	
K.2.6 Other Rooms			
Laundry:	no.	2	
Dry food storage:	no.	1	
Refrigerator:	no.	1	(4 sections + handling)
Change rooms:	no.	1	
Coffee Shop		1	
Prayer room:	no.	0	
Training Room		0	
Gymnasium:	no.	1	(Complete with Sauna)



RIG AND EQUIPMENT SPECIFICATIONS PACIFIC BORA

<p>L. SAFETY EQUIPMENT</p> <p>L.1 GENERAL SAFETY EQUIPMENT</p> <p>L.1.1 General Personnel Protective Gear</p> <p>Safety hats (contractor only/everyone/not supplied):</p> <p>Safety boots (contractor only/everyone/not supplied):</p> <p>Safety clothing (contractor only/everyone/not supplied):</p> <p>Ear protection (contractor only/everyone/not supplied):</p> <p>Rubber gloves (contractor only/everyone/not supplied):</p> <p>Rubber aprons (contractor only/everyone/not supplied):</p> <p>Fullface visors (contractor only/everyone/not supplied):</p> <p>Eye shields (for grinding machines, etc.) (contractor only/everyone/not supplied):</p> <p>Dust masks: (contractor only/everyone/not supplied):</p> <p>Rubber gloves (elbow length for chemical handling) (contractor only/everyone/not supplied):</p> <p>Explosion proof hand torches c/w batteries (contractor only/everyone/not supplied):</p> <p>Safety belts c/w lines (contractor only/everyone/not supplied):</p> <p>L.1.2 Eye Wash Stations</p> <p>Quantity: no. 5</p> <p>Make/model: Haws / Shower and facewash</p> <p>Located at: Sackroom</p> <p>Located at: Hopper Area</p> <p>Located at: Shaker room</p> <p>Located at: Rig Floor</p> <p>Located at: Engine room</p> <p>Quantity: no. 19</p> <p>Make/model: Encon / Facewash station</p> <p>Located at: ROV area (1ea)</p> <p>Located at: Pipe Deck (2ea)</p> <p>Located at: Welding Shop (1ea)</p> <p>Located at: Outside BOP Control & HPU room (1 ea)</p> <p>Located at: Mud pit room (2ea)</p> <p>Located at: Aft Port Upper deck @ Old paint Locker (1 ea)</p>	
---	--



RIG AND EQUIPMENT SPECIFICATIONS PACIFIC BORA

Located at:	Upper deck close to moonpool (2ea)
Located at:	C. Engine room Lower level (1 ea)
Located at:	C. Engine Room Workshop (1 ea)
Located at:	P. ER Electrical Workshop Store (1 ea)
Located at:	P. Engine Room Oil Purifier Room (1 ea)
Located at:	S. Engine Room Oil treatment Room (1 ea)
Located at:	Shaker room (1ea)
Located at:	Sackroom (1ea)
Located at:	Outside Mud lab (1ea)
Located at:	Mud Pump Room (1ea)
L.1.3 Derrick Safety Equipment	
Derrick escape chute (rem chute):	no.
Make/type:	N/A
Derrick safety belts:	no.
Make/type:	DBI Sala / Belly Belt
L.1.4 Derrick Climbing Assistant	
Make/type:	Alimak (elevator) / SE-EX 450 DOL
L.1.5 Fresh Air Blowers (Bug Blowers)	
Quantity:	no.
Make/type:	N/A
Located at:	N/A
L.2 GAS/FIRE/SMOKE DETECTION	
L.2.1 H2S Monitoring System	
Make/type:	Kongsberg IES
Sampling points at:	Pump room, discharge manifold area, well test area, bell nipple, moonpool area, drill floor, driller's cabin, mud pits room, mud process room, mud pump room, BOP room, cement room, sackstore, galley and living quarters ventilation system.
General alarm:	
yes/no	
Alarm types (audible, visual, both) at	
Driller's console:	Both
Engine room:	Both



RIG AND EQUIPMENT SPECIFICATIONS PACIFIC BORA

Mud room: Living quarters each level: Central area each structural level: Central alarm panel: yes/no Located at:	Both Both Both Accomodations upper deck
--	--

L.2.2 Combustible Gas Monitoring System		
Make/type:		Detcon / PS 250
Sampling points at:		
Bellnipple:	yes/no	Yes
Drill floor:	yes/no	Yes
Shale shaker:	yes/no	Yes
Mud tanks:	yes/no	Yes
Ventilation system into living quarters:	yes/no	Yes
Other:		Moonpool, thruster rooms ventilation intakes, HPR room, fwd machinery room intakes, well test area, pump room ventilation intakes, engine control room, engine room, drillers cabin air intake, welding shop, mechanical Shop, Electrical shop, warehouse, BOP room, cement room, sack store.
General alarm:	yes/no	
Alarm types (audible, visual, both) at Driller's console:		Both
Other:		Yes Bridge Console, ECR and around the rig
L.2.3 H2S Detectors (Portable)		
Quantity:	no.	6
Make/type:		MSA
Type		Watchman Multigas (remote with pump sensing)
Tests		LEL / O2 / H2S
Quantity:	no.	4
Make/type:		MSA
Type		Altair Multigas-4 (compact hand-held)
Tests		LEL / O2 / H2S / CO



**RIG AND EQUIPMENT SPECIFICATIONS
PACIFIC BORA**

<p>L.2.4 CO2 Gas Detectors (Portable)</p> <p>Quantity: no. 1 Make/type: TBA Phials for CO2: measuring range N/A From 20 to 200 ppm: no. N/A From 100 tp 600 ppm: no. N/A</p> <p>L.2.5 Explosimeters</p> <p>Quantity: no. 1 Make/type: MSA Type: Explosimeter Model 2A Tests: Combustible Gases</p>		
<p>L.2.6 Fire/Smoke Detectors Accommodation</p> <p>Make: Autronica Model: BS-320 Fire detection: yes/no Yes Smoke detection: yes/no Yes Central alarm panel: yes/no Yes Location: Bridge</p> <p>L.3 FIRE FIGHTING EQUIPMENT</p> <p>L.3.1 Fire Pumps</p> <p>Quantity: no. 3 Make/model: 3 x Shinko KV 300 KS Type: Three electrical driven Hyundai Motors 450 KW 750m3/h / 130m head (each)</p> <p>Output (each): U.S.gals/min</p> <p>All offtake points supplied by each pump: yes/no Yes Location of pumps: Port/Stbd Engine Room Location of pumps: FWD Machinery Room Emergency Fire Pump</p> <p>Fire fighting water delivery conforms to IMO MODU Spec: yes/no Yes</p> <p>L.3.2 Hydrants & Hoses</p> <p>Hydrants positioned such that any point may be reached by a single hose length Yes from two separate hydrants: yes/no</p>		



RIG AND EQUIPMENT SPECIFICATIONS PACIFIC BORA

Quantity of hydrants:	no.	81 exterior / 76 interior
Hose connections / hydrant:	no.	2 ½" exterior / 1 ½" NPT interior
Length:	ft	15m
L.3.3 Portable Fire Extinguishers		
Quantity (total):	no.	413
Type 1 - CO2:	no./lbs	58 + 23 (Spare)
Type 2 – Foam		0
Type 2 – Dry Chemical:	no./lbs	199 + 133 (Spare)
Mounted adjacent to access ways and escape routes:	yes/no	Yes
L.3.4 Fire Blankets		
Quantity:	no.	9
Type:		Gel blanket
Location:		Galley (2), Helideck (2), Welders Shop, ER W'shop, Drillers cabin, S. ER Fuel Oil Purifier Room, P ER Oil & Grease Store.
L.3.5 Fixed Foam Fire-Fighting System		
Location		Machinery Spaces
Approval		N/A
Make/type:		N/A
Quantity foam stored on site:	gal.	N/A
Inductor tube:	yes/no	N/A
Foam nozzles: no.		N/A
L.3.6 Fixed Water Fire-Fighting System		
Location		Machinery Spaces
Specifics		ER P/C/S, Puri P/S, Boiler ½
Approval		ABS
Make		Tanktech
Type		X-Mist System
Required Flow		18 m3/hr
Number Nozzles		7 x HL, 60 x LL
Conforms to		SOLAS, IMO & CLASS
L.3.7 Helideck Foam System		



**RIG AND EQUIPMENT SPECIFICATIONS
PACIFIC BORA**

Dedicated system adequate for at least 10 minutes fire fighting at the rate quoted in the IMO MODU code:	yes/no	Yes
Make/type:		SKUM MONITORS
Quantity of monitors:	no.	3
Foam type:		AFFF 3 %
Rate:		3,400 liters/min Total
U.S.gals/min		
L.3.8 Fixed Fire Extinguishing System		
Protected spaces		
Engine room, type (Halon/CO2):		CO2
Paint locker, type (Halon/CO2):		CO2
Emergency generator, type (Halon/CO2):		CO2
SCR room, type (Halon/CO2):		VFD room CO2
Other - location: Cargo pump room, thrusters rooms,		CO2
boiler room, fwd aux. mach. room, buzz type panel rooms,		
engine control room, galley, switchboard rooms, purifier		
rooms, IGG room, drilling switch gear room and cement		
room.		
Alarms (audible, visual or both):		Both
Automatic shutting of mechanical		Auto and Manual
ventilation in protected spaces:	yes/no	
Remote manual release located at:		Main CO2 room, aft deck
Remote manual release located at:		Fwd Emergency Locker
Remote manual release located at:		Engine Room entrance
L.3.9 Manual Water Deluge System		
Protected spaces:		
		Moonpool, Drill Floor, Well Test Area
		Fwd and Aft B-deck.
		4 Lifeboats stations
		Fwd upper Deck "Dry Break System"
		Heli-Fuel station
Water supplied from fire main line:	yes/no	Yes
L.3.10 Water Sprinkler System in Accommodation		
Automatic:	yes/no	No
Working pressure:	psi	
Pressurized tank capacity:	ft3	
L.4 BREATHING APPARATUS		
L.4.1 General Sets		



RIG AND EQUIPMENT SPECIFICATIONS PACIFIC BORA

Quantity:	no.	20 sets + 20 spare cylinders
Make:		Draeger
Type:		TBC
Bottle duration:	min	30 min
Located at:	qty/loc	Helideck room, fwd emerg locker, rig floor, aft emerg locker, engine control room
L.4.2 Escape Sets		
Quantity:	no.	98 sets
Make:		Draeger
Type:		TBC
Bottle duration:	min	10 min
Located at:		Aft & Fwd Emerg lockers, cranes, thrusters rooms, engine rooms, electrical workshop, ET workshop, mud logger unit, mechanical workshop, moonpool, mud lab, mud pit room, mud process room, p-tank room, rig floor, riser deck, ROV area, subsea office, warehouse, welding shop, sackroom

L.4.3 Cascade Stations		
Quantity:	no.	N/A
Make/type:		N/A
Locations/outlets at location:		N/A
L.4.4 Breathing Air Recharge Compressor		
Quantity:	no.	1
Make/type:		Breathing Air Module Junior II E
Located at:		TBC
L.4.5 Compressed Air Breathing Apparatus Trolley Unit		
Positive pressure:	yes/no	N/A
Make/type:		N/A
Air line length:	ft	N/A



RIG AND EQUIPMENT SPECIFICATIONS PACIFIC BORA

Compressed air bottles:		N/A
Quantity:	no.	N/A
Size:	ft3	N/A
Including		N/A
Face mask:	yes/no	N/A
Demand valve:	yes/no	N/A
Microphone:	yes/no	N/A
Safety harness:	yes/no	N/A
Safety line (incorporating phone line)	yes/no	N/A
L.4.6 Air Purity Test Equipment		
Quantity:	no.	1
Make		Draeger
Type		Aerotest Simultan HP
L.5 EMERGENCY FIRST AID EQUIPMENT		
L.5.1 First Aid Kits		
Quantity:	no.	4 (Doctor's grab bags + 1 x ECR; 1 x Dog House; 1 x Helideck)
L.5.2 Burn Kits		
Quantity:	no.	Nil -part of above

L.5.3 Resuscitators		
Quantity:	no.	4 (1 x Hospital) (2 x Fire teams) (1 Helideck)
Charged (spare) oxygen cylinders:	no.	11
L.5.4 Stretchers		
Quantity:	no.	2
Type:		MACA Offshore (Collapsible plastic & fibReglass)
Located at:		Hospital & Helideck
Quantity:	no.	3
Type:		Neil Robertson (Canvas & wood)
Located at:		Helideck; Fire Team 1 & Fire Team 2



RIG AND EQUIPMENT SPECIFICATIONS PACIFIC BORA

Quantity:	no.	1
Type:		Aluminium Scoop
Located at:		Hospital
Quantity:	no.	3
Type:		Stokes Litter Metal baskets
Located at:		Fire Team Station 1 (2) Fire Team Station 2 (1 with floatation)
Quantity:	no.	2
Type:		Plastic Backboard stretchers with straps and head restraints
Located at:		Hospital
Quantity:	no.	1
Type:		Folding (aluminium & plastic)
Located at:		Hospital
Quantity:	no.	1
Type:		KED (Kendrick Extrication Device)
Located at:		Hospital
L.6 HELIDECK RESCUE EQUIPMENT		
L.6.1 Storage Boxes		
Quantity:	no.	2
Construction material:		Fiberglass
Max. height open:	in	1 m
L.6.2 Equipment		
Aircraft axe:	yes/no	Yes
Large fireman's rescue axe:	yes/no	Yes
Crowbar:	yes/no	Yes
Heavy duty hacksaw:	yes/no	Yes
Spare blades:	yes/no	Yes
Grapple hook:	yes/no	Boat Hook
Length of wire rope attached:	ft	N/A
Quick release knife:	yes/no	Yes
Bolt croppers:	yes/no	Yes
L.7 RIG SAFETY STORE		
Equipment to repair, recharge and restock safety equipment as listed below:		Refer also to Section L3.3 "Complete spares"
Foam concentrate:	yes/no	Yes



RIG AND EQUIPMENT SPECIFICATIONS PACIFIC BORA

Dry chemical charges:	yes/no	Yes
CO2 charges for dry chemical extinguishers:	yes/no	Yes
CO2 charges for water extinguishers:	yes/no	Yes
CO2 charges for foam extinguishers:	yes/no	N/A
Discharge hoses, control nozzles and horns & washers for DP extinguishers:	yes/no	Yes
Fire blankets:	yes/no	Yes
Fireproof gloves:	yes/no	Yes
Rubber gloves - elbow length:	yes/no	Yes
Rubber aprons:	yes/no	Yes
Rubber boots:	yes/no	Yes
Full face visors:	yes/no	Yes
Eye shields (for grinding machines, etc.):	yes/no	Yes
Dust masks:	yes/no	Yes
Spare safety helmets, boots, overalls:	yes/no	Yes
Gloves, hand torches, batteries, etc:	yes/no	Yes
Spare lifebuoys:	yes/no	Yes
Spare lifebuoy lights:	yes/no	Yes
Fresh air blowers/inductors for ventilating enclosed spaces:	yes/no	Yes
Spare life jackets:	yes/no	Yes
Safety belts c/w line:	yes/no	Yes
Full safety harnesses:	yes/no	Yes
Spare Derrickman's safety belts:	yes/no	Yes
Spare SCBA bottles, charged:	yes/no	Yes
L.8 EMERGENCY WARNING ALARMS		
Approved system to give warning of different emergencies:	yes/no	Yes

L.9 SURVIVAL EQUIPMENT		
L.9.1. Lifeboats		
Make		Umoe Schat-Harding AS
Type		Totally-enclosed Conventional launching Gravity
Model		TBC
Quantity:	no.	6
Capacity:		70 persons each
person/craft		
Locations (fore, aft, port, stbd):		Port FWD x2, Stbd FWD x2, Port Aft x1, Stbd Aft x1
Fire protection:	yes/no	Water Spray protection



RIG AND EQUIPMENT SPECIFICATIONS PACIFIC BORA

Emergency Air		Yes
Fitted VHF Radio		Yes
SART		Yes
EPIRB		Yes
Flares:	yes/no	Yes
Food:	yes/no	Yes
First aid kits:	yes/no	Yes
L.9.2 Life Rafts		
Make		Viking
Type		25P Inflatable
Quantity:	no.	14 (plus 4 spare)
Capacity:		25
person/craft		
Davit launched:	yes/no	No
Locations (fore, aft, port, stbd):		4xPF, 4xSF, 3xPA, 3xSA + 4xspare
Fire protection:	yes/no	No
Radios:	yes/no	No
Flares:	yes/no	Yes
Food:	yes/no	Yes
First aid kits:	yes/no	Yes
L.9.3 Rescue Boat		
Make		Norsafe AS
Model		Merlin 615
Type		Diesel Water-Jet FRC
Length		6.25m
Capacity		10 persons
Engine power:	hp	164 HP
Speed		28kts @ 3 crew / 15kts @ 10 crew
Range		110 nm @ 3 crew
L.9.4 Life Jackets		
Make		TBC
Type		SOLAS
Quantity:	no.	362
L.9.5 Life Buoys		
Make		Danyang
Type		DY 5555
Quantity:	no.	14
L.9.6 Survival Suits		



**RIG AND EQUIPMENT SPECIFICATIONS
PACIFIC BORA**

Make		Stearns
Type		I590C SOLAS 74
Quantity:	no.	172
L.9.7 Work Vest		
Make/type:		Billy Pugh / Type V
Quantity:	no.	20
L.9.8 Escape Ladders		
Make/type:		Escape Ladders (wood & rope)
Quantity:	no.	3
Locations		Accommodation C-Deck P/S, Poopdeck
L.9.9 Distress Signals		
Type		SART Transponder
Make		JRC JQX-30A
Quantity:	no.	7 (1xeach L/B; 2xBridge)
Type		EPIRB with hydrostatic release
Make		JRC JQE-103 406 MHz
Quantity:	no.	1



**RIG AND EQUIPMENT SPECIFICATIONS
PACIFIC BORA**

<p>M. POLLUTION PREVENTION EQUIPMENT</p> <p>M.1. SEWAGE TREATMENT</p> <p>Make/model: System type: Conforms to (Marpol, Annex IV, etc.):</p> <p>Make/model: System type: Conforms to (Marpol, Annex IV, etc.):</p> <p>M.2 GARBAGE COMPACTION</p> <p>Quantity Make/model: System type: Conforms to (Marpol Annex IV, etc.)</p> <p>M.3 GARBAGE DISPOSAL/GRINDER</p> <p>Make/model: System type: Conforms to (Marpol Annex IV, etc.):</p> <p>Make/model: System type: Quantity Conforms to (Marpol Annex IV, etc.):</p>	<p>1 xHamworthy / ST10 (fwd) Vacuum / Aerobic Yes</p> <p>1 x Hamworthy / STI (aft) Vacuum / Aerobic Yes</p> <p>2 (1xPaper & 1xPlastic) Tech Oil Products / Enviro-Pak Compactor 3000 Pneumatic/Hydraulic Marpol</p> <p>Laboremus TL 5000 Stand alone ships rail grinder Marpol</p> <p>Loipart 51060BS Electrical Grinder installed on galley sink 2 Marpol</p>
---	--