TARPON OPERATING & DEVELOPMENT, LLC
CONDUCTOR CASING DESIGN

Well	:	OCS-G 32181 Subsea Well No. 1
Location	:	Eugene Island Block 305
Setting Depth	:	1000 ' (MD) 1000 ' (TVD)
Mud Weight Set In	:	9.3 ppg
Estimated BHP	:	8.8 ppg 458 psi
Frac Grad @ Shoe	:	11.6 ppg

CASING TYPE **18-5/8", 87.5#, J55, Butt**

PERFORMANCE PROPERTIES:

Collapse	=	630	psi
Burst	=	2250	psi
Tensile Strength	=	1368	kips
Weight (lb/ft)	=	87.5	lb/ft
Coupling OD	=	20.000	inches
API Drift	=	17.567	inches

COLLAPSE CALCULATIONS

Collapse Load	=	[	(MWnhs - PPcs)	(TVD)	(MWcs)	(.052)	]/	(MWnhs)	
	=	[(	9.4 - 8.8	)(1000.0	)(9.3)	0.052	]/	9.4	
	=		30.9	psi					

Collapse Safety Factor	=	Collapse Rating/Collapse Load	
	=	**20.41**	**Drilling Condition**

BURST CALCULATIONS:

MASP	=		(TVD)	(FG)	(.052)	-	[(TVD)	(Gas Grad)]	
	=	(	1000	)(11.6	)(0.052)	-	[(1000	)(0.1	)]
	=		503	psi					

Burst Safety Factor	=	Burst Rating/MASP	
	=	**4.47**	**Drilling Condition**

TENSION CALCULATIONS:

Tension Load	=	[	(MD)	(WP)	(BF)	+ 50000]/	(TVD)	
	=	(	1000	)(87.5	)(0.858)	+ 50000]/	1000	
	=		125.1	kips				

Tension Safety Factor	=	**10.94**

nhs = next hole section
cs = casing seat

TARPON OPERATING & DEVELOPMENT, LLC
SURFACE CASING DESIGN

Well	:	OCS-G 32181 Subsea Well No. 1
Location	:	Eugene Island Block 305
Setting Depth	:	4000 ' (MD) 4000 ' (TVD)
Mud Weight Set In	:	9.4 ppg
Estimated BHP	:	8.9 ppg 1851 psi
Frac Grad @ Shoe	:	14.2 ppg

CASING TYPE **13-3/8", 61#, J-55, BTC**

PERFORMANCE PROPERTIES:

Collapse	=	1560	psi
Burst	=	3090	psi
Tensile Strength	=	962	kips
Weight (lb/ft)	=	61	lb/ft
Coupling OD	=	14.375	inches
API Drift	=	12.359	inches

COLLAPSE CALCULATIONS

Collapse Load	=	(MWnhs - PPcs)	(MW)	(.052)	(TVD)	/	(MWnhs)		
	=	(10.1 - 8.9	)(9.4	)(0.052)	4000	/	10.1		
	=	232	psi						
Collapse Safety Factor	=	Collapse Rating/Collapse Load							
	=	**6.72**	**Drilling Condition**						

BURST CALCULATIONS:

MASP	=	[(TVD)	(FG)	(.052)]	-	[(TVD) (Gas Grad)]	
	=	[(4000	)(14.2	) (.052)]	-	[(4000)(.1)]	
	=	2554	psi				
Burst Safety Factor	=	Burst Rating/MASP					
	=	**1.21**	**Drilling Condition**				

TENSION CALCULATIONS:

Tension Load	=	[(MD)	(WP)	(BF) +	50000]	/	1000
	=	(4000	)(61	) (0.857)+	50000	/	1000
	=	259	kips				
Tension Safety Factor	=	**3.71**					

TARPON OPERATING & DEVELOPMENT, LLC
INTERMEDIATE CASING DESIGN

Well	:	OCS-G 32181 Subsea Well No. 1
Location	:	Eugene Island Block 305
String Section	:	Intermediate
Setting Depth	:	9030 ' (MD) 9000 ' (TVD)
Mud Weight Set In	:	10.1 ppg
Estimated BHP	:	9.6 ppg 4493 psi

CASING TYPE **9-5/8", 53.5#, P-110, LT&C**

PERFORMANCE PROPERTIES:

Collapse		=	7950	psi
Burst		=	10900	psi
Tensile	(Joint Strength)	=	1422	kips
Tensile	(Body Yield)	=	1710	kips
Weight	(lb/ft)	=	53.5	lb/ft
Coupling OD		=	10.625	inches
API Drift		=	8.379	inches

COLLAPSE CALCULATIONS

Collapse Load	=	(MW)	(TVD)	(MW)	(.1)			9000	
	=	[10.1	9000	0.052	]-[	0.1	x	9000]	
	=	3826.8	psi						

Collapse Safety Factor = Collapse Rating/Collapse Load
= **2.08** **Drilling Condition**

BURST CALCULATIONS:

MASP = (BHP) - [(TVD) (Gas Gradient)]
= 8139 - [(10795) (0.15)]
= 6520 psi

Burst Safety Factor = Internal Yield / MASP on top of a 15.0# MW with a 9.0# Minimum pore pressure @ top of 7-5/8" li
= 10900/ [6520 +(15.0 - 9.0)(.052)(8900)
= **1.17** **Producing Condition**

TENSION CALCULATIONS:

Tension Load	=	(WP)	(MD)	(BF)	+ 50000	/	1000
	=	53.5	9030	0.8458	+ 50000	/	1000
	=	459	kips				

Tension Safety Factor = **3.73**

TARPON OPERATING & DEVELOPMENT, LLC
PRODUCTION LINER DESIGN

Well	:	OCS-G 32181 Subsea Well No. 1
Location	:	Eugene Island Block 305
String Section	:	Production Liner
Top of Liner	:	8900 ' (MD) 8873 ' (TVD)
Section Setting Depth	:	10870 ' (MD) 10795 ' (TVD)
Mud Weight Set In	:	15.0 ppg
Estimated BHP	:	14.5 ppg 8139 psi

CASING TYPE **7-5/8", 33.7#, HC-Q125, LT&C**

PERFORMANCE PROPERTIES:

Collapse		=	8800	psi
Burst		=	11800	psi
Tensile	(Joint Strength)	=	1009	kips
Tensile	(Body Yield)	=	1215	kips
Weight	(lb/ft)	=	33.7	lb/ft
Coupling OD		=	8.500	inches
API Drift		=	6.640	inches

COLLAPSE CALCULATIONS

Collapse Load	=	(TVD)	(MW)	(.052)	-	(GG)	(TVD)	
	=	(10795)	(15.0)	(0.052)	-	0.15	10795	
	=	6801	psi					
Collapse Safety Factor	=	Collapse Rating/Collapse Load						
	=	**1.29**	**Producing Condition**					

BURST CALCULATIONS:

MASP	=	(BHP)	-	[(TVD)	(Gas Grad)]		
	=	(8139)	- [(	10795)	(0.15)]		
	=	6520	psi				
Burst Safety Factor	=	Burst Rating/MASP					
	=	**1.81**	**Producing Condition**				

TENSION CALCULATIONS:

Tension Load	=	(WP)	(MD)	(BF)	+ 50000	/	1000
	=	33.7	1970	0.771	+ 50000	/	1000
	=	101	kips				
Tension Safety Factor	=	**12.01**					

Tarpon Operating & Development, L.L.C.
OCS-G 32181 #1
Eugene Island Block 305

Rig: HERCULES 300

RKB - MSL =	100'
Water Depth =	226'
RKB - ML =	326'
RKB - MLH =	325'

Cement Volume Calculations

Cement Volume Requirements:

Conductor Casing - Cement to Mudline Hanger at 325' RKB
Surface Casing - Cement To Mudline Hanger at 325' RKB
Intermediate Casing - 5,530' of Fill.
Production Liner - 1970' of Fill

18-5/8" 87.5# J-55 Conductor Casing @ 1000' / 24" x .75" Drive Pipe @ 500' (203' BML)
Cement to MLH @ 325' (1' AML)

Conductor Casing		24" x 3/4" DP	Open Hole			
OD	ID	ID	Size	Int Cap	Ann Cap	Ann Cap
in.	in.	in.	in.	cfpf	cfpf	cfpf
18.625	17.755	22.500	22.000	1.7194	0.8692	0.7478
Note: Wash out cmt to 30' BML w/ 2 - 1-1/4" strings,				bpf	bpf	bpf
Spot Lignite Pill				0.3062	0.1548	0.1332

Cmt Cover	Cement Interval		Footage	Vol, cf	Cum Vol, cf	MMS APD
	0	0	0	0.00	0.00	
18-5/8" x 24" DP	325	500	175	152.11	152.11	
18-5/8" x 22" OH	500	1,000	500	373.91	526.02	
18-5/8" Shoe			90	154.75	680.77	
				0.00	680.77	200% Excess
			TOT CF	680.77		2042

OH From, MD ft	OH To, MD ft	Tot OH Ftg, ft	Drill Bit Size, in	Theo OH Cap, bpf	Theo OH Vol,bbls	Theo OH Vol, cf
500	1,000	500	22.000	0.4702	235.09	1319.93
	Actual OH Vol From Log, cf		OH Size From Log Vol, in		Theo Hole Size vs Act Log Size, % Inc	

13-3/8" 61.00# Surface Casing @ 4,000' / 18-5/8" Conductor Pipe
Cement To MLH @ 325' (1' AML)

Surface Casing		18-5/8" Conductor	Open Hole	13-3/8" Csg	13-3/8" x 18-5/8" DP	13-3/8" x 17-1/2" OH
OD	ID	ID	Size	Int Cap	Ann Cap	Ann Cap
in	in	in	in	cfpf	cfpf	cfpf
13.375	12.515	17.755	17.500	0.8543	0.7437	0.6946
Wash out cmt to 30' BML w/ 2 - 1-1/4" strings,				bpf	bpf	bpf
Spot Lignite Pill				0.1522	0.1325	0.1237

Cmt Cover	Cement Interval		Footage	Vol, cf	Cum Vol, cf	MMS APD
	0	0	0	0.00	0.00	
13-3/8" x 18-5/8" CP	325	1,000	675	501.99	501.99	
13-3/8" x 17-1/2" OH	1,000	4,000	3,000	2083.95	2585.93	
13-3/8" Shoe			90	76.88	2662.82	
				0.00	2662.82	100% Excess
			TOT CF	2662.82		5326

OH From, MD ft	OH To, MD ft	Tot OH Ftg, ft	Drill Bit Size, in	Theo OH Cap, bpf	Theo OH Vol,bbls	Theo OH Vol, cf
1,000	4,000	3,000	17.500	0.2975	892.51	5011.09
	Actual OH Vol From Log, cf		OH Size From Log Vol, in		Theo Hole Size vs Act Log Size, % Inc	

9-5/8" 53.50# Intermediate Casing @ 9,030'
5,530' of Fill Cement

Production Casing		13-3/8" Csg	Open Hole	9-5/8" Csg	9-5/8" x 13-3/8" Csg	9-5/8" x 12-1/4" OH
OD	ID	ID	Size	Int Cap	Ann Cap	Ann Cap
in	in	in	in	cfpf	cfpf	cfpf
9.625	8.535	12.515	12.250	0.3973	0.3490	0.3132
				bpf	bpf	bpf
				0.0708	0.0622	0.0558

Cmt Cover	Cement Interval		Footage	Vol, cf	Cum Vol, cf	MMS APD
	0	0	0	0.00	0.00	
9-5/8" x 13-3/8" SP	3,500	4,000	500	156.60	156.60	
9-5/8" x 12-1/4" OH	4,000	9,030	5,030	1575.36	1731.96	
9-5/8" Shoe			90	35.76	1767.72	
						30% Excess
			TOT CF	1767.72		2298

OH From, MD ft	OH To, MD ft	Tot OH Ftg, ft	Drill Bit Size, in	Theo OH Cap, bpf	Theo OH Vol,bbls	Theo OH Vol, cf
4,000	9,030	5,030	12.250	0.1458	733.26	4116.94
	Actual OH Vol From Log, cf		OH Size From Log Vol, in		Theo Hole Size vs Act Log Size, % Inc	

Tarpon Operating & Development, L.L.C.
OCS-G 32181 #1
Eugene Island Block 305

Rig: HERCULES 300

RKB - MSL =	100'
Water Depth =	226'
RKB - ML =	326'
RKB - MLH =	325'

Cement Volume Calculations

Cement Volume Requirements:

Conductor Casing - Cement to Mudline Hanger at 325' RKB
Surface Casing - Cement To Mudline Hanger at 325' RKB
Intermediate Casing - 5,530' of Fill.
Production Liner - 1970' of Fill

7-5/8" 33.7# HCQ-125 Production Liner Casing @ 10,875'
Cement to Liner Hanger at 8900'

Production Liner		9-5/8" Intermediate	Open Hole	7-5/8" Csg	7-5/8" x 9-5/8" Int	7-5/8" x 9-7/8" OH
OD	ID	ID	Size	Int Cap	Ann Cap	Ann Cap
in.	in.	in.	in.	cfpf	cfpf	cfpf
7.625	6.765	8.535	9.875	0.2496	0.0802	0.2148
Note:				bpf	bpf	bpf
				0.0445	0.0143	0.0383

Cmt Cover	Cement Interval		Footage	Vol, cf	Cum Vol, cf	MMS APD
	0	0	0	0.00	0.00	
7-5/8" x 9-5/8" Intermediate	8,900	9,030	130	10.43	10.43	
7-5/8" x 9-7/8" OH" OH	9,030	10,870	1,840	395.16	405.59	
7-5/8" Shoe			90	22.47	428.05	
				0.00	428.05	30% Excess
			TOT CF	428.05		556

OH From, MD ft	OH To, MD ft	Tot OH Ftg, ft	Drill Bit Size, in	Theo OH Cap, bpf	Theo OH Vol,bbls	Theo OH Vol, cf
9,030	10,870	1,840	9.875	0.0947	174.30	978.65
	Actual OH Vol From Log, cf		OH Size From Log Vol, in		Theo Hole Size vs Act Log Size, % Inc	

Surface Casing			Open Hole			
OD	ID	ID	Size	Int Cap	Ann Cap	Ann Cap
in	in	in	in	cfpf	cfpf	cfpf
0.000	0.000	0.000	0.000	0.0000	0.0000	0.0000
Note:				bpf	bpf	bpf
				0.0000	0.0000	0.0000

Cmt Cover	Cement Interval		Footage	Vol, cf	Cum Vol, cf	MMS APD
	0	0	0	0.00	0.00	
	0	0	0	0.00	0.00	
	0	0	0	0.00	0.00	
			0	0.00	0.00	
				0.00	0.00	
			TOT CF	0.00		0

OH From, MD ft	OH To, MD ft	Tot OH Ftg, ft	Drill Bit Size, in	Theo OH Cap, bpf	Theo OH Vol,bbls	Theo OH Vol, cf
0	0	0	0.000	0.0000	0.00	0.00
	Actual OH Vol From Log, cf		OH Size From Log Vol, in		Theo Hole Size vs Act Log Size, % Inc	

Production Casing		13-3/8" Csg	Open Hole			
OD	ID	ID	Size	Int Cap	Ann Cap	Ann Cap
in	in	in	in	cfpf	cfpf	cfpf
0.000	0.000	0.000	0.000	0.0000	0.0000	0.0000
				bpf	bpf	bpf
				0.0000	0.0000	0.0000

Cmt Cover	Cement Interval		Footage	Vol, cf	Cum Vol, cf	MMS APD
	0	0	0	0.00	0.00	
	0	0	0	0.00	0.00	
	0	0	0	0.00	0.00	
			0	0.00	0.00	
			TOT CF	0.00		

OH From, MD ft	OH To, MD ft	Tot OH Ftg, ft	Drill Bit Size, in	Theo OH Cap, bpf	Theo OH Vol,bbls	Theo OH Vol, cf
0	0	0	0.000	0.0000	0.00	0.00
	Actual OH Vol From Log, cf		OH Size From Log Vol, in		Theo Hole Size vs Act Log Size, % Inc	