

Torpedo BOW State COM #1H

Production Casing Design

5 1/2" 17# P-110 LT&C casing will be set from top of curve to surface and Butress from TD to top of curve
Cement will be set from 9250' to 2000', 500' into intermediate casing, with a DV tool set at 4700'.
There will be a Packer's Plus Packer Port system in the lateral.

2nd Intermediate

0 ft to 9,446 ft				Make up Torque ft-lbs			Total ft =
Collapse Resistance	Weight	Grade	Threads	opt.	min.	mx	
5.5 inches	17 #/ft	P-110	LT&C	4620	3470	5780	
Collapse Resistance	Internal Yield	Joint Strength		Body Yield		Drift	
7,480 psi	10,640 psi	445 ,000 #		546 ,000 #		4.767	

9,446 ft to 14,338 ft				Make up Torque ft-lbs			Total ft =
Collapse Resistance	Weight	Grade	Threads	opt.	min	mx.	
5.5 inches	17 #/ft	P-110	BT&C				
Collapse Resistance	Internal Yield	Joint Strength		Body Yield		Drift	
7,480 psi	10,640 psi	445 ,000 #		546 ,000 #		4.767	

DV tool placed at 4700'.

Stage I. Lead w/635sx 35:65:6PzC (YLD 2.0 Wt 12.5), tail w/200sx PVL (YLD 1.41 Wt 13) 9,250' - 4,700'

Stage II. Lead w/325sx 35:65:6PzC (YLD 2.0 Wt 12.5), tail w/200sx Class C (YLD 1.34 Wt 14.8) 4,700' - 0'

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Contingency Casing Design

If hole conditions dictate, 7" casing will be set at 10,193' MD (9,923' TVD). A 6 1/8" hole will then be drilled to 14,338' MD (9,950' TVD) where a 4 1/2" liner will be set with a packer/port system

2nd Intermediate

0 ft to 100 ft				Make up Torque ft-lbs			Total ft =
O.D.	Weight	Grade	Threads	opt	min.	mx.	
7 inches	26 #/ft	L-80	LT&C	5110	3830	6390	
Collapse Resistance	Internal Yield	Joint Strength		Body Yield		Drift	
5,410 psi	7,240 psi	511 ,000 #		604 ,000 #		6.151	

100 ft to 6,700 ft				Make up Torque ft-lbs			Total ft =
O.D.	Weight	Grade	Threads	opt	min.	mx.	
7 inches	23 #/ft	L-80	LT&C	4350	3260	5440	
Collapse Resistance	Internal Yield	Joint Strength		Body Yield		Drift	
3,830	6,340 psi	435 ,000 #		532 ,000 #		6.25	

6,700 ft to 10,193 ft				Make up Torque ft-lbs			Total ft =
O.D.	Weight	Grade	Threads	opt	min.	mx.	
7 inches	26 #/ft	L-80	LT&C	5110	3830	6390	
Collapse Resistance	Internal Yield	Joint Strength		Body Yield		Drift	
5,410 psi	7,240 psi	511 ,000 #		604 ,000 #		6.151	

DV tool placed at 6100' and 2900'.

Stage I: Lead w/465sx 35'65'6PzC (YLD 2.0 Wt 12.5), tail w/200sx PVL (YLD 1.41 Wt 13) 10,193' - 6,100'

Stage II: Lead w/345sx 35.65.6PzC (YLD 2.0 Wt 12.5), tail w/200sx PVL (YLD 1.41 Wt 13) 6,100' - 2,900'

Stage III: Lead w/300sx 35'65'6PzC (YLD 2.0 Wt 12.5), tail w/200sx Class C (YLD 1.34 Wt 14.8) 2,900' - 0'

Production

9,250 ft to 14,338 ft				Make up Torque ft-lbs			Total ft =
Collapse Resistance	Weight	Grade	Threads	opt.	min.	mx.	
4.5 inches	11.6 #/ft	P-110	BT&C				
Collapse Resistance	Internal Yield	Joint Strength		Body Yield		Drift	
7,580 psi	10,690 psi	279 ,000 #		367 ,000 #		3.875	

4 1/2" liner will have a packer/port system in the lateral No cement.

Co: Yates Petroleum Corporation			Units: Feet, ° 7100ft			VS Az: 90.00		Tgt TVD: 9950.00	
Drillers: 0			Elevation:			Tgt Radius: 0.00		Tgt MD: 0.00	
Well Name: 0			Northing:			Tgt N/S: 0.00		Tgt Displ.: 0.00	
Location: 0			Easting:			Tgt E/W: 4620.00		Method: Minimum Curvature	

No	MD	CL	Inc	Azi	TVD	VS	+N/S	+E/W	BR	WR	DLS	Comments
0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
1	470.00	470.00	0.00	0.00	470.00	0.00	0.00	0.00	0.00	0.00	0.00	CASTILLE
2	740.00	270.00	0.00	0.00	740.00	0.00	0.00	0.00	0.00	0.00	0.00	TOP OF SALT
3	2130.00	1390.00	0.00	0.00	2130.00	0.00	0.00	0.00	0.00	0.00	0.00	BOTTOM OF SALT
4	2360.00	230.00	0.00	0.00	2360.00	0.00	0.00	0.00	0.00	0.00	0.00	BELL CANYON
5	3170.00	810.00	0.00	0.00	3170.00	0.00	0.00	0.00	0.00	0.00	0.00	CHERRY CANYON
6	4260.00	1090.00	0.00	0.00	4260.00	0.00	0.00	0.00	0.00	0.00	0.00	BRUSHY CANYON
7	5550.00	1290.00	0.00	0.00	5550.00	0.00	0.00	0.00	0.00	0.00	0.00	BRUSHY CANYON MRKF
8	5835.00	285.00	0.00	0.00	5835.00	0.00	0.01	0.00	0.00	0.00	0.00	BONE SPRING
9	6800.00	965.00	0.00	0.00	6800.00	0.00	0.01	0.00	0.00	0.00	0.00	FBSG
10	8120.00	1320.00	0.00	0.00	8120.00	0.00	0.01	0.00	0.00	0.00	0.00	SBSG HARKEY SAND
11	8650.00	530.00	0.00	0.00	8650.00	0.00	0.01	0.00	0.00	0.00	0.00	TBSG
12	9050.00	400.00	0.00	0.00	9050.00	0.00	0.01	0.00	0.00	0.00	0.00	WOLFCAMP
13	9445.77	9445.77	0.00	90.00	9445.77	0.00	0.01	0.00	0.00	0.95	0.00	KOP
14	9500.00	54.23	6.51	90.00	9499.88	3.08	0.01	3.08	12.00	0.00	12.00	
15	9600.00	100.00	18.51	90.00	9597.33	24.69	0.01	24.69	12.00	0.00	12.00	
16	9700.00	100.00	30.51	90.00	9688.16	66.10	0.01	66.10	12.00	0.00	12.00	
17	9800.00	100.00	42.51	90.00	9768.39	125.48	0.01	125.48	12.00	0.00	12.00	
18	9900.00	100.00	54.51	90.00	9834.52	200.25	0.01	200.25	12.00	0.00	12.00	
19	10000.00	100.00	66.51	90.00	9883.66	287.13	0.01	287.13	12.00	0.00	12.00	
20	10100.00	100.00	78.51	90.00	9913.67	382.33	0.01	382.33	12.00	0.00	12.00	
21	10192.69	746.92	89.63	90.00	9923.23	474.38	0.01	474.38	12.00	0.00	12.00	WOLFCAMP TARGET EC
22	14338.40	4145.71	89.63	90.00	9950.00	4620.00	0.00	4620.00	0.00	0.00	0.00	EOL 14438 9950 TVD

