

30-015-37403

Doc BHU State #4H**Contingency Casing Design**

If hole conditions dictate, 7" casing will be set at 8,123' MD (7,850' TVD). A 6 1/8" hole will then be drilled to 9,626' MD (7,850' TVD) where 4 1/2" casing will be set and cemented with one stage up to dv tool. After completion procedures, the 4 1/2" casing will be cut and pulled at 7300'.

2nd Intermediate

0 ft to 100 ft				Make up Torque ft-lbs			Total ft = 100
O.D.	Weight	Grade	Threads	opt.	min.	mx.	
7 inches	26 #/ft	J-55	LT&C	3670	2750	4590	
Collapse Resistance	Internal Yield	Joint Strength		Body Yield		Drift	
4,320 psi	4,980 psi	367,000 #		415,000 #		6.151	

100 ft to 5,700 ft				Make up Torque ft-lbs			Total ft = 5,600
O.D.	Weight	Grade	Threads	opt.	min.	mx.	
7 inches	23 #/ft	J-55	LT&C	3130	2350	3910	
Collapse Resistance	Internal Yield	Joint Strength		Body Yield		Drift	
3,270 psi	4,360 psi	313,000 #		366,000 #		6.25	

5,700 ft to 8,123 ft				Make up Torque ft-lbs			Total ft = 2,423
O.D.	Weight	Grade	Threads	opt.	min.	mx.	
7 inches	26 #/ft	J-55	LT&C	3670	2750	4590	
Collapse Resistance	Internal Yield	Joint Strength		Body Yield		Drift	
4,320 psi	4,980 psi	367,000 #		415,000 #		6.151	

DV tool placed at 6800'

Stage I: Cemented w/300sx PVL (YLD 1.41 Wt 13) TOC= 6800'

Stage II: Cemented w/810sx PVL (YLD 1.41 Wt 13) TOC= 3000'

Production

0 ft to 9,626 ft				Make up Torque ft-lbs			Total ft = 9,626
O.D.	Weight	Grade	Threads	opt.	min.	mx.	
4.5 inches	11.6 #/ft	HCP-110	LT&C	3020	2270	3780	
Collapse Resistance	Internal Yield	Joint Strength		Body Yield		Drift	
8,650 psi	10,690 psi	279,000 #		367,000 #		3.875	

DV tool placed at approx. 7300' and cemented with one stage up to dv tool. After completion procedures, the 4 1/2" casing will be cut and pulled at 7300'.

Cemented w/310sx PVL (YLD 1.41 Wt 13) TOC= 7300'

CASING DESIGN AND CEMENT PROGRAM					
CASING DESIGN FACTORS:		BURST 1.0 TENSILE 1.8 COLLAPSE 1.125			
CASING DESIGN (TOP TO BOTTOM)					
STRING	INTERVAL(FT)	SIZE (IN)	#S/FT	GRADE	T&C
SURFACE	0 - 650	13 3/8	48	H-40	ST&C
INTERMEDIATE	0 - 100	9 5/8	40	J-55	ST&C
	100 - 3300	9 5/8	36	J-55	ST&C
	3300 - 3550	9 5/8	40	J-55	ST&C
PRODUCTION	0 - 8200	5 1/2	17	HCP-110	LT&C
	8200 - 9626	5 1/2	17	L-80	LT&C
CEMENT:					
SURFACE: lead w/325sx C Lite (YLD 1.64 WT 14.8) tail w/200sx Class C (YLD 1.34 WT 14.8) TOC= Surface					
INTERMEDIATE: lead w/750sx Poz C(YLD 1.96WT 12.6) tail w/200sx Class C(YLD 1.32 WT 14.8)TOC=Surface					
PRODUCTION: Production cement to be done in two stages with stage tools at approx. 6800'.					
Stage I from 6800'-9626': cement w/850sx Pecos Valley Lite (YLD 1.41 WT 13) TOC=6800'					
Stage II from 3000'-6800': lead w/550sx Lite crete(YLD 3.19 Wt 9.9).					
tail w/100sx Pecos Valley Lite (YLD 1.41 WT 13) TOC=3000'					

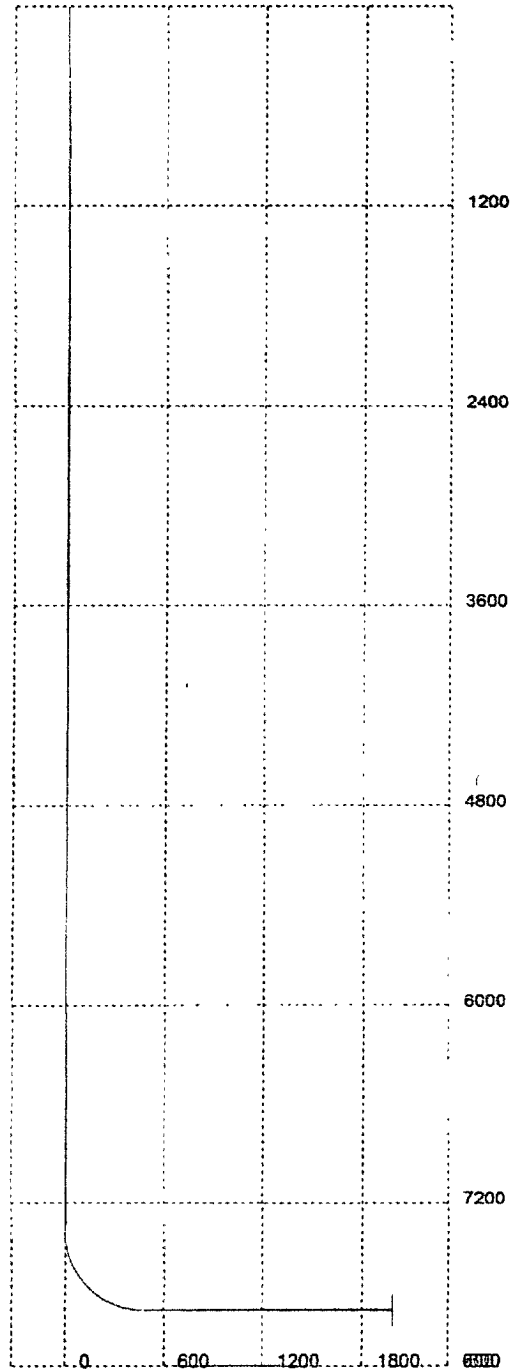
M.D.	Inclination	Azimuth	T.V.D.	N+S	E+W	D.L.S.	Tool Face	T.F. Ref (HS/GN)	
0	0	0	0	0	0	0			
625	0	0	625	0	0	0			RUSTLER
695	0	0	695	0	0	0			TOP OF SALT
3,455	0	0	3,455	0	0	0			BASE OF SALT
4,065	0	0	4,065	0	0	0			BELL CANYON
5,430	0	0	5,430	0	0	0			CHERRY CANYON
6,670	0	0	6,670	0	0	0			BRUSHY CANYON
7,240	0	0	7,240	0	0	0			BRUSHY CANYON MARKER
7373	0	0	7373	0	0	12	0	GN	KOP
7375	0.24	0	7375	0	0	12	0	HS	
7400	3.24	0	7399.99	0.76	0	12	0	HS	
7425	6.24	0	7424.9	2.83	0	12	0	HS	BONE SPRINGS
7450	9.24	0	7449.67	6.2	0	12	0	HS	
7475	12.24	0	7474.23	10.85	0	12	0	HS	
7500	15.24	0	7498.51	16.79	0	12	0	HS	
7525	18.24	0	7522.45	23.99	0	12	0	HS	
7550	21.24	0	7545.97	32.43	0	12	0	HS	
7575	24.24	0	7569.03	42.1	0	12	0	HS	
7600	27.24	0	7591.54	52.95	0	12	0	HS	
7625	30.24	0	7613.46	64.97	0	12	0	HS	
7650	33.24	0	7634.72	78.12	0	12	0	HS	
7675	36.24	0	7655.26	92.37	0	12	0	HS	
7700	39.24	0	7675.03	107.67	0	12	0	HS	
7725	42.24	0	7693.97	123.98	0	12	0	HS	
7750	45.24	0	7712.03	141.26	0	12	0	HS	
7775	48.24	0	7729.16	159.47	0	12	0	HS	
7800	51.24	0	7745.32	178.54	0	12	0	HS	
7825	54.24	0	7760.45	198.44	0	12	0	HS	
7850	57.24	0	7774.52	219.1	0	12	0	HS	
7875	60.24	0	7787.49	240.46	0	12	0	HS	
7900	63.24	0	7799.33	262.48	0	12	0	HS	
7925	66.24	0	7810	285.09	0	12	0	HS	
7950	69.24	0	7819.47	308.22	0	12	0	HS	
7975	72.24	0	7827.71	331.82	0	12	0	HS	
8000	75.24	0	7834.71	355.82	0	12	0	HS	
8025	78.24	0	7840.45	380.15	0	12	0	HS	
8050	81.24	0	7844.9	404.75	0	12	0	HS	
8075	84.24	0	7848.06	429.54	0	12	0	HS	
8100	87.24	0	7849.91	454.47	0	12	0	HS	
8123.15	90.02	0	7850.47	477.61	0	12	0	HS	BONE SPRINGS PAY
9625.54	90.02	0	7850	1980	0	0			LATERAL TD

Well will be drilled vertically to 7373'. At 7373' well will be kicked off at 12 degrees per 100' with an 8 3/4" hole to 8123' MD (7,850' TVD). If hole conditions dictate, 7" casing will be set. A 6 1/8" hole will then be drilled to 9,626' MD (7,850' TVD) where 4 1/2" casing will be set and cemented. If 7" is not set, then hole size will be reduced to 7 7/8" and drilled to 9,626' MD (7,850' TVD) where 5 1/2" casing will be set and cemented. Penetration point of producing zone will be at 807' FSL and 660' FWL, 5-25S-30E. Deepest TVD in the well is 7850' in the lateral.

3D³ Directional Drilling Planner - 3D View

Company: Yates Petroleum Corporation

Vell: Doc BHU State #4H



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