

BLOWOUT PREVENTOR SCHEMATIC

Minimum Requirements

OPERATION: Intermediate and Production Hole Sections

Minimum System Pressure Rating : 5,000 psi

	SIZE	PRESSUR	1	1					
A		N/A	Bell Nipple						
В	13 5/8		Annular	Flowline to Shaker					
C	13 5/8		Pipe Ram	A Plowline to Shaker					
D	13 5/8		Blind Ram	Fill Up Line					
E	13 5/8	~ 5,000 psi	Mud Cross						
F									
-	DSA C-Sec	As require	ed for each hole size	B					
	B-Sec	42.54	B" 5K x 11" 5K						
	A-Sec		SOW x 13-5/8" 5K						
L									
		KIII	Line	663 0 c					
		PRESSURE	DESCRIPTION	C C					
-	2"	5,000 psi	Gate Valve						
	2" 2"	5,000 psi	Gate Valve						
-	2	5,000 psi	Check Valve	CLO TO D					
-				Kill Line- 2" minimum Choke Line to Choke Manifold- 3"					
<u> </u>				minimum					
			e Line						
	SIZE	5,000 psi	DESCRIPTION " Gate Valve						
ļ	3"	5,000 psi	HCR Valve	HCR Valve					
			TICK Valve) [[*********					
									
L				u					
	E	nstallatio	n Checklist						
	1	he following	item must be verified and	d checked off prior to pressure testing of BOP equipment.					
_	TI	a installed R	OP equipment meets at l	east the minimum requirements (rating, type, size, configuration) as shown on					
L	th	is schematic.	. Components may be su	bstituted for equivalent equipment rated to higher pressures. Additional ng as they meet or exceed the minimum pressure rating of the system.					
_		-							
L	AI	ll valves on th	e kill line and choke line	will be full opening and will allow straight though flow.					
			d choke line will be straig hored to prevent whip an	tht unless turns use tee blocks or are targeted with running tess, d reduce vibration.					
			heels) or automatic lock manual valves on the ch	ing devices will be installed on all ram preventers. Hand wheels will also be oke line and kill line.					
	A valve will be installed in the closing line as close as possible to the annular preventer to act as a locking device. This valve will remain open unless accumulator is inoperative.								
Γ	Upper kelly cock valve with handle will be available on rig floor along with safety valve and subs to fit all drill string connections in use.								
Ai	ter Ins	tallation Chec	klist is complete, fill out	the information below and email to Superintendent and Drilling Engineer					
		w	ellname:						
			entative:						
			Dotos						
			Date:						

CHOKE MANIFOLD SCHEMATIC

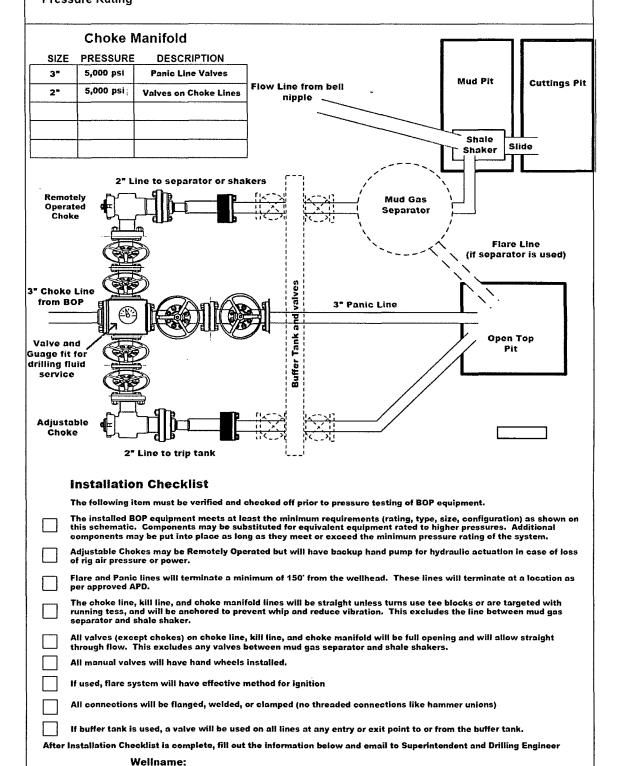
Minimum Requirements

OPERATION: Intermediate and Production Hole Sections

Minimum System : 5,000 psi

Representative:

Date:



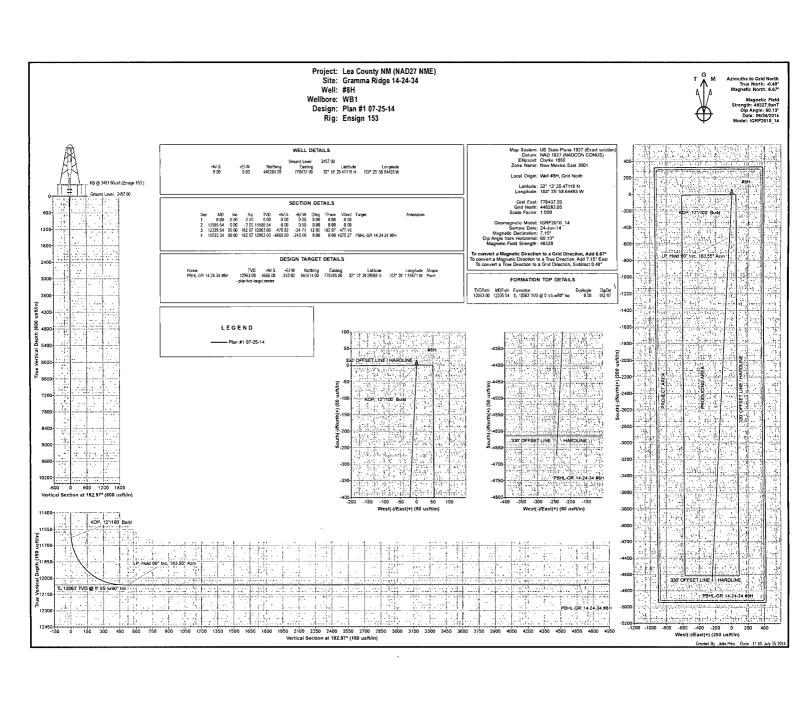
BOPE Testing

Minimum Requirements

Closing Unit and Accumulator Checklist

The following item must be performed, verified, and checked off at least once per well prior to low/high pressure testing of BOP equipment. This must be repeated after 6 months on the same well.

) :	Precharge pressure for c	each accumulator botti	e must fall within th	e range below. Bottle:	s may be further charged					
	with nitrogen gas only. Through the end of the w	Tested precharge pres vell. Test will be condu	sures must be record acted prior to connec	ded for each individual sting unit to BOP stack	bottle and kept on location					
Check one tha	nraccura rating	Minimum acceptable operating pressure	Desired precharge pressure	Maximum acceptable precharge pressure	Minimum acceptable precharge pressure					
applie	1500 psi	1500 psi	750 psi	800 psi	700 psi					
\Box	2000 psi	2000 psi	1000 psi	1100 psi	900 psi					
	3000 psi	3000 psi	1000 psi	1100 psi	900 psi					
ا لـــا	Accumulator will have sufficient capacity to open the hydraulically-controlled choke line valve (if used), close all rams, close the annular preventer, and retain a minimum of 200 psi above the maximum acceptable precharge pressure (see table above) on the closing manifold without the use of the closing pumps. This test will be performed with test pressure recorded and kept on location through the end of the well									
	Accumulator fluid reservoir will be double the usable fluid volume of the accumulator system capacity. Fluid level will be maintained at manufacturer's recommendations. Usable fluid volume will be recorded. Reservior capacity will be recorded. Reservoir fluid level will be recorded along with manufacturer's recommendation. All will be kept on location through the end of the well.									
	Closing unit system will have two independent power sources (not counting accumulator bottles) to close the preventers.									
- 1		nanifold pressure decr	eases to the pre-set		ps will automatically start ded to check that air line to					
_ا	(if used) plus close the a	innular preventer on th eptable precharge pre:	e smallest size drill ssure (see table abo	pipe within 2 minutes a ve) on the closing man	ly-operated choke line valve and obtain a minimum of 200 ifold. Test pressure and					
	all preventer and the ch	oke line valve (if used)		•	ble of opening and closing					
	Remote controls for the floor (not in the dog hou				and located on the rig					
	Record accumulator tes									
		BOPE T	est Checklist							
	Ti	he following item must	be ckecked off prior	to beginning test						
	BLM will be given at leas	st 4 hour notice prior to	beginning BOPE te	sting						
	Valve on casing head be	low test plug will be o	pen							
	Test will be performed u	ising clear water.								
	The follow	ving item must be perf	ormed during the BO	PE testing and then ch	eoked off					
	BOPE will be pressure to following related repairs party on a test chart and	, and at a minimum of	30 days intervals. T	est pressure and times	ressure is broken, s will be recorded by a 3™					
	Test plug will be used									
	Ram type preventer and	all related well contro	l equipment will be t	ested to 250 psi (low)	and:5,000 psi (high).					
	Annular type preventer v	will be tested to 250 ps	i (low) and 3,500 psi	(high).						
	Valves will be tested fro held open to test the kill		e side with all down	stream valves open. 1	The check valve will be					
	Each pressure test will be held for 10 minutes with no allowable leak off.									
	Master controls and rem	note controls to the clo	sing unit (accumulat	tor) must be function to	ested as part of the BOP testi					
	Record BOP tests and p	ressures in drilling repo	orts and IADC sheet							
	Installation Checklist is any/all BOP and accumu				dent and Drilling Engineer <u>alo</u>					
	Wellnar	me:								
	Representati	ive:								
	Da	ate:		***************************************						



Chevron

Lea County NM (NAD27 NME) Gramma Ridge 14-24-34 #8H

WB1

Plan: Plan #1 07-25-14

HOBBS OCD
AUG 21 2014

Standard Planning Report

25 July, 2014

Phoenix Technology Services

Planning Report

GCR DB

Database: Company: Chevron'

Company: Project: Lea County NM (NAD27 NME) Gramma Ridge 14-24-34

#8H Wellbore: WB1

Design: Plan #1 07-25-14 Local Co-ordinate Reference:

TVD Reference: MD Reference: North Reference:

Survey Calculation Method:

Well #8H

KB @ 3481 50 usft (Ensign 153)

KB @ 3481.50usft (Ensign 153')

Grid

Minimum Curvature

Project Lea County NM (NAD27 NME)

Map System: Geo Datum:

US State Plane 1927 (Exact solution)

NAD 1927 (NADCON CONUS)

Map Zone:

New Mexico East 3001

System Datum:

Mean Sea Level

Gramma Ridge 14-24-34 Site

Site Position: From: Map Northing: Easting:

446,243.20 usft 773,870.90 usft Latitude: Longitude:

32° 13′ 25.45288 N 103° 26' 51.79837 W

0.47

Position Uncertainty:

Slot Radius: 0.00 usft

0.00

13-3/16 " **Grid Convergence:**

Well

39.80 usft +N/-S

+E/-W

Northing: Easting:

446,283.00 usft 778,437.00 usft

7 15

Latitude: Longitude:

32° 13' 25.47118 N 103° 25' 58.64493 W

48.328

Position Uncertainty

Well Position

4,566.10 usft 0.00 usft

Wellhead Elevation:

Ground Level:

60,13

3,457.00 usft

Wellbore

Magnetics

IGRF2010_14

Declination: (°)

Dip Angle (°) Field Strength

(nT)

Design

Audit Notes:

Version:

Phase: PLAN

06/24/14

Tie On Depth:

0.00

Vertical Section: Depth From (TVD) (usft)

+N/-S (usft) 0.00

0.00

Direction

(°) 182.97

Plan Sections	a Santana a sanahan da sanah Sanah	kanila jako (n Markerika	antin and and the second		A STATE OF THE PARTY OF THE PAR	eria periodo de Markon Priodina esta esta el tra-l	And de money to the growth principal and the	a distribution di construire d		
Measured			Vertical			Doglea	Build	Türn		
The second secon	lination /	Azimuth	Depth	+N/2S	+E/-W	Rate	Rate	Rate	TFO	
(usft)	(°)	(°)	(usft)	(usft)	(usft)	(°/100usft)	(°/100üsft) (°/100usft)	(°)	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
11,585.54	0.00	0.00	11,585.54	0.00	0.00	0.00	0.00	0.00	0.00	
12,335.54	90.00	182.97	12,063.00	-476.82	-24.71	12.00	12.00	0.00	182.97	
16,533.34	90.00	182.97	12,063.00	-4,669.00	-242.00	0.00	0.00	0.00	0.00	PBHL-GR 14-24-34 #

Phoenix Technology Services

Planning Report

GCR DB Dátabáse:

Chevron

Company: Project: Lea County NM (NAD27 NME) Site: Well: Gramma Ridge 14-24-34 #8H' Wellbore:

Local Co-ordinate Reference: TVD Reference:

MD Reference: North Reference:

Survey Calculation Method:

Well #8H

KB @ 3481 50usft (Ensign 153.) KB @ 3481.50 usft (Ensign 153')

-Grid

Minimum Curvature

Design: Pla	n #1.07-25-14		ining and a specimental					description of the second	
Planned Survey						TEXTER DELIVER		7	A TO THE RESERVE AND A SECOND
									N. Ali
Measured			Vertical			Vertical **	Dogleg	Build	Turn
		Azimuth	Depth		/+E/-W	Section	Rate	Rate	Rate
(usft)	(°)	(°)	(usft)	(usft)	(usft)	(usn),	(°/100usft) (°/100usft),	°/100usft)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
11,585.54	0.00	0.00	11,585.54	0.00	0.00	0.00	0.00	0.00	0.00
11,600.00	1.74 5.16	182.97 182.97	11,600.00 11,628.48	-0.22 -1.93	-0.01 -0.10	0.22 1.94	12.00 12.00	12.00 12.00	0.00 0.00
11,628.54 KOP, 12°/100′ Bui		102.97		-1.53		1.54	12.00	ε j /	,,7.5
11,700.00	13.74	182.97	11,698.91	-13.64	-0.71	13.66	12.00	12.00	0.00
11,800.00	25.74	182.97	11,792.86	-47.30	-2.45	47.36	12.00	12.00	0.00
11,900.00	37.74	182.97	11,877.75	-99.73	-5.17	99.87	12.00	12.00	0.00
12,000.00	49.74	182.97	11,949.88	-168.65	-8.74	168.87	12.00	12.00	0.00
12,100.00	61.74	182.97	12,006.07	-251.03	-13.01	251.37	12.00	12.00	0.00
12,200.00	73.74	182.97	12,043.89	-343.28	-17.79	343.74	12.00	12.00	0.00
12,300.00	85.74	182.97	12,061.68	-441.37	-22.88	441.96	12.00	12.00	0.00
12,335.54	90.00	182.97	12,063.00	-476.82	-24.71	477.46	12.00	12.00	0.00
TL-12063' TVD.@	0' VS w/90° Ir	ici 🖟 🚶 🖖	** ; :	The second second					
12,378.54	90.00	182.97	12,063.00	-519.77	-26.94	520.47	0.00	0.00	0.00
LP, Hold 90° Inc,	183:55° Azm	8 1 1 1 1							
12,400.00	90.00	182.97	12,063.00	-541.20	-28.05	541.93	0.00	0.00	0.00
12,500.00	90.00	182.97	12,063.00	-641.07	-33.23	641.93	0.00	0.00	0.00
12,600.00	90.00	182.97	12,063.00	-740.94	-38.40	741.93	0.00	0.00	0.00
12,700.00	90.00	182.97	12,063.00	-840.80	-43.58	841.93	0.00	0.00	0.00
12,800.00	90.00	182.97	12,063.00	-940.67	-48.76	941.93	0.00	0.00	0.00
12,900.00	90.00 90.00	182.97 182.97	12,063.00 12,063.00	-1,040.53 -1,140.40	-53.93 -59.11	1,041.93 1,141.93	0.00 0.00	0.00 0.00	0.00 0.00
13,000.00									
13,100.00	90.00	182.97	12,063.00	-1,240.26	-64.28	1,241.93	0.00	0.00	0.00 0.00
13,200.00	90.00 90.00	182.97 182.97	12,063.00 12,063.00	-1,340.13 -1,440.00	-69.46 -74.64	1,341.93 1,441.93	0.00 0.00	0.00 0.00	0.00
13,300.00 13,400.00	90.00	182.97	12,063.00	-1,539.86	-79.81	1,541.93	0.00	0.00	0.00
13,500.00	90.00	182.97	12,063.00	-1,639.73	-84.99	1,641.93	0.00	0.00	0.00
13,600.00	90.00	182.97	12,063.00	-1,739.59	-90.17	1,741.93	0.00	0.00	0.00
13,700.00	90.00	182.97	12,063.00	-1,839.46	-95.34	1,841.93	0.00	0.00	0.00
13,800.00	90.00	182.97	12,063.00	-1,939.33	-100.52	1,941.93	0.00	0.00	0.00
13,900.00	90.00	182.97	12,063.00	-2,039.19	-105.69	2,041.93	0.00	0.00	0.00
14,000.00	90.00	182.97	. 12,063.00	-2,139.06	-110.87	2,141.93	0.00	0.00	0.00
14,100.00	90.00	182.97	12,063.00	-2,238.92	-116.05	2,241.93	0.00	0.00	0.00
14,200.00	90.00	182.97	12,063.00	-2,338.79	-121.22	2,341.93	0.00	0.00	0.00
14,300.00	90.00	182.97	12,063.00	-2,438.66	-126.40	2,441.93	0.00	0.00	0.00
14,400.00 14,500.00	90.00 90.00	182.97 182.97	12,063.00 12,063.00	-2,538.52 -2,638.39	-131.57 -136.75	2,541.93 2,641.93	0.00 0.00	0.00 0.00	0.00 0.00
14,600.00	90.00	182.97	12,063.00	-2,738.25 -2,838.12	-141.93 -147.10	2,741.93 2,841.93	0.00 0.00	0.00 0.00	0.00 0.00
14,700.00 14,800.00	90.00 90.00	182.97 182.97	12,063.00 12,063.00	-2,636.12 -2,937.99	-147.10	2,941.93	0.00	0.00	0.00
14,900.00	90.00	182.97	12,063.00	-3,037.85	-157.46	3,041.93	0.00	0.00	0.00
15,000.00	90.00	182.97	12,063.00	-3,137.72	-162.63	3,141.93	0.00	0.00	0.00
15,100.00	90.00	182.97	12,063.00	-3,237.58	-167.81	3,241.93	0.00	0.00	0.00
15,200.00	90.00	182.97	12,063.00	-3,337.45	-172.98	3,341.93	0.00	0.00	0.00
15,300.00	90.00	182.97	12,063.00	-3,437.32	-178.16	3,441.93	0.00	0.00	0.00
15,400.00	90.00	182.97	12,063.00	-3,537.18	-183.34	3,541.93	0.00	0.00	0.00
15,500.00	90.00	182.97	12,063.00	-3,637.05	-188.51	3,641.93	0.00	0.00	0.00
15,600.00	90.00	182.97	12,063.00	-3,736.91	-193.69	3,741.93	0.00	0.00	0.00
15,700.00	90.00	182.97	12,063.00	-3,836.78	-198.86	3,841.93	0.00	0.00	0.00
15,800.00	90.00	182.97	12,063.00	-3,936.65	-204.04	3,941.93	0.00	0.00	0.00
15,900.00	90.00	182.97	12,063.00	-4,036.51	-209.22 214.39	4,041.93	0.00 0.00	0.00	0.00 0.00
16,000.00	90.00	182.97	12,063.00	-4,136.38	-214.39	4,141.93	0.00	0.00	0.00

Phoenix Technology Services

Planning Report

Database: GCR DB:
Company: Chevron*
Project: Lea County NM (NAD27 NME)
Site: Gramma Ridge 14-24-34
Well #8H
Wellbore: WB1
Design: Plan:#1 07-25-14

Local Co-ordinate Reference:

TVD Reference:

MD Reference:

Survey Calculation Method:

Well #8H

KB @ 3481 50usft (Ensign 153)

KB @ 3481.50usft (Ensign 153)

Grid

Minimum Curvature

Planned Survey					alliant on the same of the sam	CALALAN MAGANISTATA			
Measured			Vertical			Vertical	Dogleg	Build	Turn
Depth	Inclination	Azimuth	Depth	+N/-S	+E/-W	Section	Rate	Rate	Rate
(usft)	(°)	. (°)	(usft)	(usft)	(usft)	(usft)	(°/100usft) (°/	/100usft) (°/100usft)
16,100.00	90.00	182.97	12,063.00	-4,236.24	-219.57	4,241.93	0.00	0.00	0.00
16,200.00	90.00	182.97	12,063.00	-4,336.11	-224.75	4,341.93	0.00	0.00	0.00
16,300.00	90.00	182.97	12,063.00	-4,435.98	-229.92	4,441.93	0.00	0.00	0.00
16,400.00	90.00	182.97	12,063.00	-4,535.84	-235.10	4,541.93	0.00	0.00	0.00
16,500.00	90.00	182.97	12,063.00	-4,635.71	-240.27	4,641.93	0.00	0.00	0.00
16,533.34	90.00	182.97	12,063.00	-4,669.00	-242.00	4,675.27	0.00	0.00	0.00
PBHL-GR 14-2	4-34 #8H	There of the P			· · · · · · · · · · · · · · · · · · ·	The African Police			

Design Targets Target Name - hit/miss target - Shape	Angle: D	ip Dir: (°)	TVD (usft)	+N/-S; (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude	Charles Alleran
PBHL-GR 14-24-34 #8H - plan hits target center - Point	0.00	0.01	12,063.00	-4,669.00	-242.00	441,614.00	778,195.00	32° 12' 39.29069 N	103° 26′ 1.91671 W	

T	Formations Measured Vertical Depth Depth (usft) (usft): Name Lithology	Dip (२)	Dip Direction (°)	
	12,335.54 12,063.00 TL 12063' TVD @ 0' VS w/90° Inc	0.00	182.97	

Plan Annotations	44 A			
			1000	
Measured	Vertical	Local Coordin	nates	
Depth	Depth		+E/-W	
(usft)	(üsft)	· · · (usft) · · ·	-, (usft) - *	Comment:
11,628.54	11,628.48	-1.93	-0.10	KOP, 12°/100' Build
12,378.54	12,063.00	-519.77	-26.94	LP, Hold 90° Inc, 183.55° Azm
16,578.06				TD at 16578.07' MD

