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BLOWOUT PREVENTOR SCHEMATIC

Minimum Requirements

OPERATION : Intermediate and Production Hole Sections

Minimum Systèm Pressure Rating [:] 5,000 psi

<u> </u>	SIZE	PRESSUR	E DESCRIPTION	
A		N/A	Bell Nipple	
в	13 5/8"	5,000 psi	Annular	
С	13 5/8"	5,000 psi	Pipe Ram	Flowline to Shaker
D	13 5/8"	5,000 psi	Blind Ram	Fill Up Line A
E	13 5/8"	5,000 psi	Mud Cross	
F				
	DSA	As requi	red for each hole size	
(C-Sec			B
Ê	3-Sec	13-5	8" 5K x 11" 5K	
4	A-Sec	13-3/8"	SOW x 13-5/8" 5K	
		Kill	Line	Torino 1
s	IZE P	RESSURE	DESCRIPTION	(C.) c
		5,000 psi	Gate Valve	
1	2"	5,000 psi	Gate Valve	
:	2"	5,000 psi	Check Valve	OF CAO D
		Ì		<u>je vo</u>
				Kill Line- 2" minimum
	_	Chok	e Line	
s	IZE P	RESSURE		
3	<u> </u>	5,000 psi	Gate Valve	
3		5,000 psi	HCR Valve	
				t t
	l			l III
	In	stallati	on Checklist	
		a fallowing	item proof he perified an	d checked off prior to pressure testing of BOP equipment.
	10	e tonowing	item must be verified an	a checked on prior to pressure testing of BOP equipment.
Γ				east the minimum requirements (rating, type, size, configuration) as shown on bstituted for equivalent equipment rated to higher pressures. Additional
				ng as they meet or exceed the minimum pressure rating of the system.
		valves on ti	he kill line and choke line	will be full opening and will allow straight though flow.
	7 The	kill line an	d choke line will be strai	ght unless turns use tee blocks or are targeted with running tess,
L			chored to prevent whip an	
[wheels) or automatic loci manual valves on the ch	ring devices will be installed on all ram preventers. Hand wheels will also be oke line and kill line.
Γ			installed in the closing li remain open unless accu	ne as close as possible to the annular preventer to act as a locking device. mulator is inoperative.
·			-	be available on rig floor along with safety valve and subs to fit all drill string
L		nections in		are areas on the new money with survey value and subs to it an diff Surry
Aft	ter insta	llation Che	cklist is complete, fill out	the information below and email to Superintendent and Drilling Engineer
		v	/ellname:	
		Repres	sentative:	
		•	Date:	
			Uale.	



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 each accumulator bottle must fall within the range below. Bottles may be further charged with nitrogen gas only. Tested precharge pressures must be recorded for each individual bottle and kept on location through the end of the well. Test will be conducted prior to connecting unit to BOP stack.											
Check one that	at pressure rating	Minimum acceptable operating pressure	Desired precharge pressure	Maximum acceptable precharge pressure	Minimum acceptable precharge pressure							
applies	1500 psi 1500 psi 750 psi 800 psi 700 psi											
	2000 psi	2000 psi	1000 psi	1100 psi	900 psi							
	3000 psi	3000 psi	1000 psi	1100 psi	900 psi							
	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											
	will be maintained at ma	nufacturer's recomme luid level will be recor	ndations. Usable flu	rid volume will be reco	tem capacity. Fluid level ded. Reservior capacity will ation. All will be kept on							
	Closing unit system will preventers.			-	·							
		nanifold pressure decr	cases to the pre-set		os will automatically start led to check that air line to							
		nnular preventer on th eptable precharge pres	e smallest size drill ssure (see table abo	pipe within 2 minutes a ve) on the closing mani	y-operated choke line valve and obtain a minimum of 200 Ifold. Test pressure and							
	Master controls for the E all preventer and the ch		cated at the accum	llator and will be capal	le of opening and closing							
	Remote controls for the floor (not in the dog hour				and located on the rig							
	Record accumulator tes	ts in drilling reports an	d IADC sheet									
		BOPE T	est Checklist									
	TI	e following item must	be ckecked off prio	r to beginning test								
	BLM will be given at leas	st 4 hour notice prior to	beginning BOPE te	sting								
	Valve on casing head be		ben									
	Test will be performed u	sing clear water.										
	The follow	ring item must be perfo	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, will be recorded by a 3™							
	Test plug will be used											
	Ram type preventer and	all related well contro	equipment will be f	tested to 250 psi (low)	and:5,000 psi (high).							
	Annular type preventer v	vill be tested to 250 ps	i (low) and 3,500 ps	i (high).								
	Valves will be tested fro held open to test the kill		e side with all down	stream valves open. 1	he check valve will be							
	Each pressure test will t	e held for 10 minutes	with no allowable le	ak off.								
	Master controls and rem	ote controls to the clo	sing unit (accumula	tor) must be function te	ested as part of the BOP testing							
	Record BOP tests and p	essures in drilling repo	orts and IADC sheet									
	Installation Checklist is any/all BOP and accumu				lent and Drilling Engineer <u>along</u>							
	Wellname:											
	Representati	ve:	·····,	*******								
	Da	ite:										

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Chevron

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

WB1



Plan: Plan #1 07-25-14

Standard Planning Report

25 July, 2014

Phoenix Technology Services

Planning Report

Database: Company: Project: Site: Well: Wellbore: Design:	Gramma #8H WB1	nty NM (NAD27 NI Ridge 14,24-34 97-25-14	ίĒ).	Local Co-ordin TVD Reference MD Reference North Referen Survey Calcul	e: ce:	KB @ KB @ Grid	#8H 9 3481 50usft (E 9 3481 50usft (E num Curvature	
Project	Lea Coun	tý NM (NAD27 NM	E)					n an
Map System: Geo Datum: Map Zone:	NAD 1927	lane 1927 (Exact s (NADCON CONUS o East 3001	,	System Datum:		Mean S	Sea Level	
Site	Gramma I	Ridge 14-24-34	an a			a an ann an a		an a
Site Position:			Northing:	446,243	20 usft La	titude:		32° 13' 25.45288 N
From:	Мар		Easting:	773,870	90 usft Lo	ngitude:		103° 26' 51.79837 W
Position Uncertainty	y:	0.00 usft	Stot Radius:	1:	-3/16 " Gr	id Convergence	ə:	0.47 °
Well	#8H.	18				ana		
Well Position	+N/-S	39.80 usft	Northing:		16,283.00 ust	a and the second se		32° 13' 25.47118 N
	+E/-W	4,566.10 usft	5		78,437.00 ust			103° 25' 58.64493 W
Position Uncertainty	/	0.00 usft	-	tion:		Ground		3,457.00 usft
Wellbore		I/Name: RF2010_14	Sample Date 06/24/14	Declination (?)	7.15	Dip:Angle (°)	60.13	Field Strength (nT) 48,328
Design	Plań #1.0	7-25-14	service and the service of the servi	an a	5			
Audit Notes:				a sha ta ta sha sha sha ta she				
Version:			Phase:	PLAN	Tie Or	Depth:	0,00	
					ine of	, Doban	0,00	
Vertical Section:		at 1 and the second state of the second state	rom (TVD)	+N/-S	+É/-W	-	Directio	n ta second
Vertical Section:		(usft)	(usft)	+E/-W (usft)	1	Directio (°)	
Vertical Section:		(A Charles and the second s	S State La Carlo	+E/-W	1	Directio	
Plan Sections Measured Depth Incl	ination (((Verti	usft) 0.00 cal	(usft) 0.00 	+E/-W (usft) 0.00 ogleg Sare	Build [®] Bale	Directio (°) 182.97 Tum Rate	
Plan Sections Measured Death Incl	ination (((Verti	usft) 0.00 cal th +N/2S	(usft) 0.00 	+E/-W (usft) 0.00 ogleg Sare	Build [®] Bale	Directio (°) 182.97 Tum Rate	IFO
Plan Sections Measured Depth Incl (usft)	ination: 4	(Verti szimuth) Děr (î) (uš 0.00	usft) 0.00 cal nth +N/-S ft) (usft)	(usft) 0.00	+E/-W (usft) 0.00 ogleg Rate 00usft) ((Build Rate /100us R) (?/1	Directio (?) 182.97 Türn Rate 00usft)	TFO (;) Target
Plan Sections Measured Depth Incl (usft) 0.00	ination 4 (°) 0.00	() Verti zimuth Der (°) (us 0.00 0.00 11,5	usft) 0.00 cal tti +N/-S ft) (usft) 0.00 0.00	(usft) 0.00 D +€//W (usft) (°/1 0.00	+E/-W (usft) 0.00 Ogleg Rate 00usft) (0.00	Build Rate /100ustri) (*/4	Directio (°) 182.97 182.97 Turn Rate 100usft) 0.00	TFO () Target 0.00

Phoenix Technology Services

Planning Report

Dátabase: Company. Project:	npany: Chevron ject: Lea County NM (NAD27 NME)					Local Co-ordinate Reference: TVD Reference: MD Reference:			Well #8H KB @ 3481 50usft (Ensign 153.) KB @ 3481 50usft (Ensign 153')		
Site: Well:	Gramma Ridge 14 #8H	-24-34			Reference: Calculation M	ethod:	Grid Minimum Curva	aturê	الم		
Wellbore:	WB1				. was a						
Design:	Plan #1.07-25-14		n and and a substantion Market and a substantion								
Planned Survey			an a		Elen R. S. Maria		The Contract of		a la serie de la s		
Measured		(1) (1)	Vertical			Vertical	Dogleg	Build	Turn		
Depth (usft)	Inclination A	zimuth (°)	Depth (usft)		+E/-W (usft)	Section (usft)	Rate (°/100usft)	Rate (°/100usft)	Rate °/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	182.97	11,600.00	-0.22	-0.01	0.22	12.00	12.00	0.00 0.00		
11,628.54	5.16 Build	182.97	11,628.48	-1.93	-0.10	1.94	12.00	12.00			
11,700.00	ала 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	441.96 477.46	12.00	12.00	0.00 0.00		
12,335.54	90.00 D.@.0' VS w/90° Ind	182.97	12,063.00	-476.82	-24.71	477.46	12.00	12.00			
12,378.54	90,00 90,00	182.97	12,063.00	-519.77	-26.94	520.47	0.00	0.00	0.00		
	Inc, 183:55° Azm	-	المعرية المراجعة المراجع المراج المراجع المراجع		E F F F			1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 -			
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 90.00	182.97 182.97	12,063.00 12,063.00	-840.80 -940.67	-43.58 -48.76	841.93 941.93	0.00 0,00	0.00 0.00	0.00 0.00		
12,800.00 12,900.00	90.00 90.00	182.97	12,063.00	-940.67 -1,040.53	-48.78	1,041.93	0.00	0.00	0.00		
13,000.00	90.00	182.97	12,063.00	-1,140.40	-59.11	1,141.93	0.00	0.00	0.00		
13,100.00	90.00	182.97	12,063.00	-1,240.26	-64.28	1,241.93	0.00	0.00	0.00		
13,200.00	90.00	182.97	12,063.00	-1,340.13	-69.46	1,341.93	0.00	0.00	0.00		
13,300.00	90.00	182.97	12,063.00	-1,440.00	-74.64	1,441.93	0.00	0.00	0.00		
13,400.00	90.00	182.97	12,063.00	-1,539.86	-79.81 -84.99	1,541.93	0.00 0.00	0.00 0.00	0.00 0.00		
13,500.00	90.00	182.97	12,063.00	-1,639.73		1,641.93					
13,600.00 13,700.00	90.00 90.00	182.97 182.97	12,063.00 12,063.00	-1,739.59 -1,839.46	-90.17 -95.34	1,741.93 1,841.93	0.00 0.00	0.00 0.00	0.00 0.00		
13,700.00	90.00	182.97	12,063.00	-1,839.48	-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 14,300.00	90.00 90.00	182.97 182.97	12,063.00 12,063.00	-2,338.79 -2,438.66	-121.22 -126.40	2,341.93 2,441.93	0.00 0.00	0.00 0.00	0.00 0.00		
14,300.00	90.00 90.00	182.97	12,063.00	-2,438.66	-126.40 -131.57	2,441.93 2,541.93	0.00	0.00	0.00		
14,500.00	90.00	182.97	12,063.00	-2,638.39	-136.75	2,641.93	0.00	0.00	0.00		
14,600.00	90.00	182.97	12,063.00	-2,738.25	-141.93	2,741.93	0.00	0.00	0.00		
14,700.00	90.00	182.97	12,063.00	-2,838.12	-147.10	2,841.93	0.00	0.00	0.00		
14,800.00	90.00	182.97	12,063.00	-2,937.99	-152.28	2,941.93	0.00	0.00	0.00		
14,900.00 15,000.00	90.00 90.00	182.97 182.97	12,063.00 12,063.00	-3,037.85 -3,137.72	-157.46 -162.63	3,041.93 3,141.93	0.00 0.00	0.00 0.00	0.00 0.00		
15,100.00 15,200.00	90.00 90.00	182.97 182.97	12,063.00 12,063.00	-3,237.58 -3,337.45	-167.81 -172.98	3,241.93 3,341.93	0.00 0.00	0.00 0.00	0.00 0.00		
15,200.00	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 15,900.00	90.00 90.00	182.97 182.97	12,063.00 12,063.00	-3,936.65 -4,036.51	-204.04 -209.22	3,941.93 4,041.93	0.00 0.00	0.00 0.00	0.00 0.00		
16,000.00	90.00	182.97	12,063.00	-4,038.31	-209.22	4,141.93	0.00	0.00	0.00		
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Phoenix Technology Services

Planning Report

Company: C Project: Li Site: G Well: # Wellbore: M	CR DB nevron sa County NM (ramma Ridge 1 sH B 1 an #1 07-25-14	4-24-34		TVD Re MD Refu North R	1. A. M. M. M. M. M. C. M. C. M.		Well #8H KB @ 3481 500 KB @ 3481 500 Grid Grid Minimum Curva	isft (Ensign 153	
Plannéd/Survey Measured Depth in (usft)	clination (°)	Azimuth (°),	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (%/100usft) (Build Rate 7100usft)	THE THE AT A STREET
16,100.00 16,200.00 16,300.00 16,400.00 16,500.00 16,533.34	90.00 90.00 90.00 90.00 90.00 90.00	182.97 182.97 182.97 182.97 182.97 182.97	12,063.00 12,063.00 12,063.00 12,063.00 12,063.00 12,063.00	-4,236.24 -4,336.11 -4,435.98 -4,535.84 -4,635.71 -4,669.00	-219.57 -224.75 -229.92 -235.10 -240.27 -242.00	4,241.93 4,341.93 4,441.93 4,541.93 4,641.93 4,675.27	0.00 0.00 0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00 0.00 0.00 0.00
- Shape	34 #8H Dip Angle D (')	2	/D. +N/ sft) (usf	A COMPANY AND A REAL PROPERTY AND A REAL PROPE	Northin (usft)	g. Eas (us		atitude	Longitude
PBHL-GR 14-24-34 #8H - plan hits target cente - Point Formations	0.00 r	0.01 12,C	63.00 -4,66	\$9.00 -242.C	0 441,6	14.00 77	8,195.00 32° 1	2' 39.29069 N	103° 26' 1.91671 W
Measure Depth (usft) 12,335	.Dept (usfl	lh t)	Nan)63' TVD @ 0' '	an the state of the		Lithology	Dip (°) 0.01	Dip Direction (°) D 182.97	
Plan Annotations Measure Depthicust) (usft) 11.628	Depth (usft)	+ (I	Local Coord N/S isft) -1.93	+E/-W (usft)	Comment KOP, 12°/1	00' Build			
12,378. 16,578.	54 12,063		-1.93 -519.77	-0.10 -26.94		0° Inc, 183.55°	Azm		

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