

OCD Hobbs

HOBBS OCD

FORM APPROVED
OMB No. 1004-0137
Expires October 31, 2014UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

MAY 05 2015

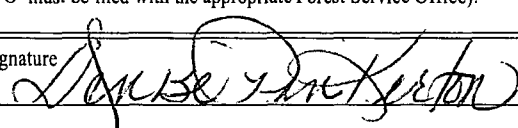
APPLICATION FOR PERMIT TO DRILL OR REENTER RECEIVED

1a. Type of work: ☒ DRILL ☐ REENTER		5. Lease Serial No. NM114998
1b. Type of Well: ☒ Oil Well ☐ Gas Well ☐ Other ☒ Single Zone ☐ Multiple Zone		6. If Indian, Allottee or Tribe Name
2. Name of Operator CHEVRON U.S.A. INC. (4323)		7. If Unit or CA Agreement, Name and No.
3a. Address 15 SMITH ROAD MIDLAND, TEXAS 79705		8. Lease Name and Well No. TALCO 25 25 35 FEDERAL #1H (314798)
3b. Phone No. (include area code) 432-687-7375		9. API Well No. 30-025-42548
4. Location of Well (Report location clearly and in accordance with any State requirements. *) At surface 280' FNL, & 660' FWL, UL: D At proposed prod. zone 330' FSL, & 660' FWL, UL: M		10. Field and Pool, or Exploratory WC-025 G-08 52533340; B5 (57088)
14. Distance in miles and direction from nearest town or post office 11 MILES FROM JAL, NEW MEXICO		11. Sec., T. R. M. or Blk. and Survey or Area SEC 25, T-25S, R-35E
15. Distance from proposed* 280' FNL location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any)	16. No. of acres in lease 760	17. Spacing Unit dedicated to this well 160
18. Distance from proposed location* 5000' FROM to nearest well, drilling, completed, WE HARPER FED applied for, on this lease, ft. (SUN OIL)	19. Proposed Depth TVD: 12,300-11917 MD: 16800; 16384	20. BLM/BIA Bond No. on file CA0329
21. Elevations (Show whether DF, KDB, RT, GL, etc.) 3097' GL	22. Approximate date work will start*	23. Estimated duration

24. Attachments

The following, completed in accordance with the requirements of Onshore Oil and Gas Order No. 1, must be attached to this form:

- Well plat certified by a registered surveyor.
- A Drilling Plan.
- A Surface Use Plan (if the location is on National Forest System Lands, the SUPO must be filed with the appropriate Forest Service Office).
- Bond to cover the operations unless covered by an existing bond on file (see Item 20 above).
- Operator certification
- Such other site specific information and/or plans as may be required by the BLM.

25. Signature 	Name (Printed/Typed) DENISE PINKERTON	Date 11/12/2014
Title REGULATORY SPECIALIST		
Approved by (Signature) /S/ STEPHEN J. CAFFEY	Name (Printed/Typed)	Date APR 24 2015
Title FIELD MANAGER		Office CARLSBAD FIELD OFFICE

Application approval does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.

Conditions of approval, if any, are attached.

APPROVAL FOR TWO YEARS

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

(Continued on page 2)

Carlsbad Controlled Water Basin

*(Instructions on page 2)

APPROVAL SUBJECT TO
GENERAL REQUIREMENTS
AND SPECIAL STIPULATIONS
ATTACHEDK
05/05/15
SEE ATTACHED FOR
CONDITIONS OF APPROVAL

MAY 06 2015

ONSHORE ORDER NO. 1
Chevron Operating Inc.
Talco 25-25-35 Fed 1H
Lea, NM

CONFIDENTIAL -- TIGHT HOLE
DRILLING PLAN
PAGE: 1

HOBBSOCD

MAY 05 2015

RECEIVED

1. FORMATION TOPS

The estimated tops of important geologic markers are as follows:

FORMATION	SUB-SEA	KBTVD	MD
Rustler	2347	775	
Magenta Dolomite	2297	825	
Salado	1961	1161	
Castile	-155	3277	
Lamar	-1920	5042	
Bell Canyon	-1965	5087	
Cherry Canyon	-2859	5981	
Brushy Canyon	-4354	7476	
Bone Spring Limestone	-5516	8638	
1st Bone Spring	-6811	9933	
2nd Bone Spring	-7460	10582	
3rd Bone Spring	-8548	11670	
Lateral TD (3rd Bone Spring)	(8,895)	12,017	16496

11917 16384

2. ESTIMATED DEPTH OF WATER, OIL, GAS & OTHER MINERAL BEARING FORMATIONS

The estimated depths at which the top and bottom of the anticipated water, oil, gas, or other mineral bearing formations are expected to be encountered are as follows:

Substance	Formation	Depth
Deepest Expected Base of Fresh Water		825
Water	Rustler	775
Water	Bell Canyon	5087
Water	Cherry Canyon	7476
Oil/Gas	Brushy Canyon	7476
Oil/Gas	Bone Spring Limestone	8638
Oil/Gas	1st Bone Spring	9933
Oil/Gas	2nd Bone Spring	10582
Oil/Gas	3rd Bone Spring	11670

All shows of fresh water and minerals will be reported and protected.

3. BOP EQUIPMENT

see COA Will have a minimum of a 5000 psi rig stack (see proposed schematic) for drill out below surface casing. Stack will be tested as specified in the attached testing requirements. Chevron requests a variance to use A coflex hose with a metal protective covering that will be utilized between the BOP and Choke manifold. Please see the attached testing and certification information.

Chevron requests a variance to use a GE/Vetco SH-2 Multibowl wellhead, which will be run through the rig floor on surface casing. BOPE will be nipped up and test after cementing surface casing. Subsequent tests will be performed as needed, not to exceed 30 days. The field report from GE/Vetco and BOP test information will be provided in a subsequent report at the end of the well. Please see the attached wellhead schematic. An installation manual has been placed on file with the BLM office and remains unchanged from previous submittal.

4. **CASING PROGRAM**

a. The proposed casing program will be as follows:

Purpose	From	To	Hole Size	Csg Size	Weight	Grade	Thread	Condition
Surface	0' 850	1,120	17-1/2"	13-3/8"	54.5 #	J-55	STC	New
Intermediate	0' 8090	8,650	12-1/4"	9-5/8"	43.5 #	HCP-110	LTC	New
Production	0'	16,496	8-1/2"	5-1/2"	17.0 #	HCP-110	CDC	New

16384

b. Casing design subject to revision based on geologic conditions encountered.

c. ***A "Worst Case" casing design for wells in a particular area is used below to calculate the Casing Safety Factors. If for any reason the casing design for a particular well requires setting casing deeper than the following "worst case" design, then the Casing Safety Factors will be recalculated & sent to the BLM prior to drilling.

d. Chevron will fill casing at a minimum of every 20 jts (840') while running for intermediate and production casing in order to maintain collapse SF.

SF Calculations based on the following "Worst Case" casing design.

Surface Casing: 1500'

Intermediate Casing: 9100'

Production Casing: 16800' MD/12300' TVD (5000' VS @ 90 deg inc)

Casing String	Min SF Burst	Min SF Collapse	Min SF Tension
Surface	1.2	1.2	1.6
Deep Intermediate	1.2	1.2	1.6
Production	1.2	1.2	1.6

Min SF is the smallest of a group of safety factors that include the following considerations:

	Surf	Int	Prod
Burst Design			
Pressure Test- Surface, Int, Prod Csg P external: Water P internal: Test psi + next section heaviest mud in csg	X	X	X
Displace to Gas- Surf Csg P external: Water P internal: Dry Gas from Next Csg Point	X		
Frac at Shoe, Gas to Surf- Int Csg P external: Water P internal: Dry Gas, 15 ppg Frac Gradient		X	
Stimulation (Frac) Pressures- Prod Csg P external: Water P internal: Max inj pressure w/ heaviest injected fluid			X
Tubing leak- Prod Csg (packer at KOP) P external: Water P internal: Leak just below surf, 8.7 ppg packer fluid			X
Collapse Design			
Full Evacuation P external: Water gradient in cement, mud above TOC P internal: none	X	X	X
Cementing- Surf, Int, Prod Csg P external: Wet cement P internal: water	X	X	X
Tension Design			
100k lb overpull	X	X	X

5. CEMENTING PROGRAM

Slurry	Type	Top	Bottom	Weight	Yield	%Excess	Sacks	Water
Surface				(ppg)	(sx/cu ft)	Open Hole		gal/sk
Lead	C + 4% Gel+2%CaCl	0'	820'	13.5	1.75	150	766	9.18
Tail	Class C+2%CaCl	820'	1,120'	14.8	1.36	150	441	6.39
Intermediate								
1st Stage Lead	50% Class H+ 50% Silicalite +2% Gel	5,050'	8,050'	11.3	2.54	30	481	15.51
1st Stage Tail	Class C	8,050'	8,650'	14.8	1.33	30	213	6.57
2nd Stage Lead	65C/35Poz +6%Gel +5%Salt	0'	4,750'	12.9	1.87	100	1442	9.87
2nd Stage Tail	Class C	4,750'	5,050'	14.8	1.33	100	141	6.57
Production								
1st Lead	50% Class H+ 50% Silicalite +2% Gel	4,550'	11,039'	11.3	2.54	75	798	15.07
2nd Lead	Versacem (Halliburton)	11,039'	12,289'	13.2	1.61	75	315	8.10
Tail	Acid Soluble Cement	12,289'	16,496'	15	2.6	35	493	11.2

1. Final cement volumes will be determined by fluid caliper.
2. Surface casing shall have at least one centralizer installed on each of the bottom three joints starting with the shoe joint.
3. Production casing will have one horizontal type centralizer on every joint for the first 1000' from TD, then every other joint to EOB, and then every third joint to KOP. Bowspring type centralizers will be run from KOP to intermediate casing.
4. Intermediate cement job will be performed in 2 stages with a DV tool with at ~5050'. An ECP will placed below the DV tool and inflated before pumping the 2nd stage

6. MUD PROGRAM

From	To	Type	Weight	F. Vis	Filtrate
0'	1,120'	Spud Mud	8.3 - 8.7	32 - 34	NC - NC
1,120'	3,277'	Brine	9.5 - 10.1	28 - 29	NC - NC
3,277'	8,650'	Sprayberry Mud	8.9 - 9.3	3 - 9	5 - 7
8,650'	11,539'	FW/Cut Brine	8.3 - 9.5	28 - 29	NC - NC
11,539'	12,289'	Weighted Polymer	9.5 - 11.0	28 - 30	15 - 25
12,289'	16,435'	Weighted Polymer	9.5 - 11.0	28 - 29	15 - 25

After drilling through the salt section in the 12.25" hole with a saturated Brine, the mud system will be changed to a Sprayberry type mud to allow for decreased mud weights without excessive salt washout.

All fluids and cuttings will be disposed of in accordance with New Mexico Oil Conservation Division rules and regulations.

A mud test shall be performed every 24 hours after mudding up to determine, as applicable: density, viscosity, gel strength, filtration, and pH.

Visual mud monitoring equipment shall be in place to detect volume changes indicating loss or gain of circulating fluid volume. When abnormal pressures are anticipated -- a pit volume totalizer (PVT), stroke counter, and flow sensor will be used to detect volume changes indicating loss or gain of circulating fluid volume.

A weighting agent and lost circulating material (LCM) will be onsite to mitigate pressure or lost circulation as hole conditions dictate.

7. TESTING, LOGGING, AND CORING

The anticipated type and amount of testing, logging, and coring are as follows:

- Drill stem tests are not planned.
- The logging program will be as follows:

TYPE	Logs	Interval	Timing	Vendor
Mudlogs	2 man mudlog	5000' to TD	Drillout of Surf Csg	TBD
LWD	MWD Gamma	Curve and Lateral	While Drilling	TBD
-	-	-	-	-
-	-	-	-	-
-	-	-	-	-
-	-	-	-	-

- No coring is planned
- A Directional Survey will be run.

8. ABNORMAL PRESSURES AND HYDROGEN SULFIDE

- Increased pressure is expected in the base of the 3rd Bone Spring sand. No abnormal temperatures are expected. Estimated BHP is: 6561 psi
- Hydrogen sulfide gas is not anticipated. An H2S Contingency plan is attached with this APD in the event that H2S is encountered



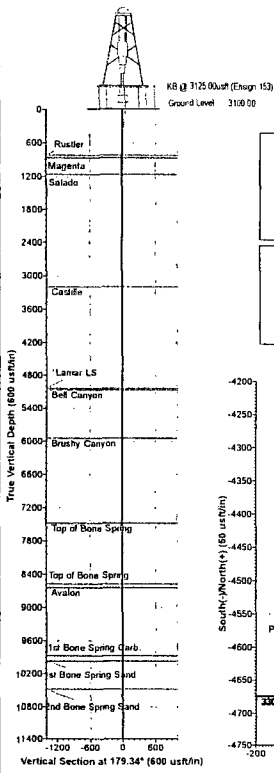
Project: Lea County NM (NAD27 NME)
Site: Talco 25-25-35 Federal
Well: #1H
Wellbore: WB2
Design: Plan 4 10-14-14
Rig: Ensign 153



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Azimuths to Grid 1h
True North: 0
Magnetic North: 6
Magnetic F
Strength: 48241.8
Dip Angle: 60
Date: 10/11/12
Model: IGRF2011



WELL DETAILS									
W-S	E-W	North	Ground Level	3100.00	Latitude	Longitude			
0.00	0.00	404355.00	Easting	811542.00	32° 5' 27.78668 N	103° 19' 37.87147 W			

SECTION DETAILS									
Sec	MD	Inc	As	TVD	W-S	E-W	Deg	T-Base	V-Base
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	11439.54	0.00	0.00	11439.54	0.00	0.00	0.00	0.00	0.00
3	12189.54	90.00	179.34	11917.00	-477.43	5.52	12.00	179.34	477.46
4	12384.38	90.00	179.34	11917.00	-487.00	54.00	0.00	0.00	4572.31

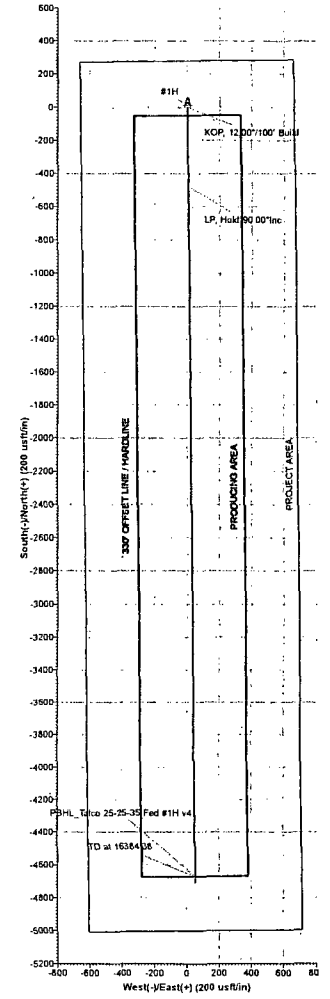
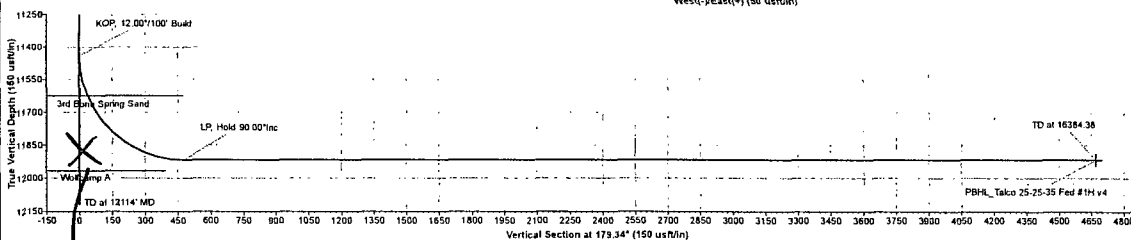
DESIGN TARGET DETAILS									
Name	TVD	W-S	E-W	North	Easting	Latitude	Longitude	Shape	
PBH_Talco 25-25-35 Fed #1H v4	11917.00	-477.00	54.00	399633.00	811539.00	32° 5' 41.52833 N	103° 19' 37.75663 W	Point	

Map System: US State Plane 1927 (Exact solution)
Datum: NAD 1927 (NADCON CONUS)
Ellipsoid: Clarke 1866
Zone Name: New Mexico East 3001
Local Origin: Well #1H, Grid North
Latitude: 32° 5' 27.78668 N
Longitude: 103° 19' 37.87147 W
Grid East: 811542.00
Grid North: 404355.00
Scale Factor: 1.000
Geomagnetic Model: IGRF2011.14
Sample Date: 11-Oct-14
Magnetic Declination: 7.05°
Dip Angle from Horizontal: 60.04°
Magnetic Field Strength: 48242

To convert a Magnetic Direction to a Grid Direction, Add 6.52°
To convert a Magnetic Direction to a True Direction, Add 7.05° East
To convert a True Direction to a Grid Direction, Subtract 5.53°

FORMATION TOP DETAILS				
TVD (ft)	MD (ft)	Formation	Dip Angle	Dip Dir
822.00	822.00	Rustler	0.00	179.34
866.00	866.00	Magenta	0.00	179.34
1164.00	1164.00	Salado	0.00	179.34
3129.00	3129.00	Castile	0.00	179.34
5041.00	5041.00	Laramie LS	0.00	179.34
5071.00	5071.00	Bell Canyon	0.00	179.34
5250.00	5250.00	Brushy Canyon	0.00	179.34
7480.00	7480.00	Top of Bone Spring	0.00	179.34
8574.00	8574.00	Top of Bone Spring	0.00	179.34
8642.00	8642.00	Avalon	0.00	179.34
9867.00	9867.00	1st Bone Spring Carb.	0.00	179.34
9967.00	9967.00	1st Bone Spring Sand	0.00	179.34
10482.00	10482.00	2nd Bone Spring Sand	0.00	179.34
11625.00	11625.00	3rd Bone Spring Sand	0.00	179.34

LEGEND
— #1H, WB1, Pilot Hole V0
— Plan 4 10-14-14



Created By: Jordan Anzures Date: 10/25/2014

No Pilot Hole

Chevron



Chevron

Lea County NM (NAD27 NME)

Talco 25-25-35 Federal

#1H

WB2

Plan: Plan 4 10-14-14

Standard Planning Report

14 October, 2014



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TECHNOLOGY SERVICES



Phoenix Technology Services
Planning Report



Database:	Compass 5000 GCR DB	Local Co-ordinate Reference:	Well #1H
Company:	Chevron	TVD Reference:	KB @ 3125.00usft (Ensign 153)
Project:	Lea County NM (NAD27 NME)	MD Reference:	KB @ 3125.00usft (Ensign 153)
Site:	Talco 25-25-35 Federal	North Reference:	Grid
Well:	#1H	Survey Calculation Method:	Minimum Curvature
Wellbore:	WB2		
Design:	Plan 4 10-14-14		

Project	Lea County NM (NAD27 NME)		
Map System:	US State Plane 1927 (Exact solution)	System Datum:	Mean Sea Level
Geo Datum:	NAD 1927 (NADCON CONUS)		
Map Zone:	New Mexico East 3001		

Site	Talco 25-25-35 Federal		
Site Position:		Northing:	399,689.00 usft
From:	Map	Easting:	811,266.00 usft
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "
		Latitude:	32° 5' 41.54291 N
		Longitude:	103° 19' 41.58675 W
		Grid Convergence:	0.53 °

Well	#1H		
Well Position	+N/-S	4,676.00 usft	Northing:
	+E/-W	276.00 usft	Easting:
Position Uncertainty	0.00 usft		Wellhead Elevation:
			Ground Level:
			3,100.00 usft

Wellbore	WB2		
Magnetics	Model Name	Sample Date	Declination
			(°)
	IGRF2010_14	10/11/14	7.05
			Dip Angle
			(°)
			60.04
			Field Strength
			(nT)
			48,242

Design	Plan 4 10-14-14		
Audit Notes:			
Version:	Phase:	PLAN	Tie On Depth:
			0.00
Vertical Section:	Depth From (TVD)	+N/-S	+E/-W
	(usft)	(usft)	(usft)
	0.00	0.00	0.00
			Direction
			(°)
			179.34

Plan Sections										
Measured	Inclination	Azimuth	Vertical	+N/-S	+E/-W	Dogleg	Build	Turn	TFO	Target
Depth	(°)	(°)	Depth	(usft)	(usft)	Rate	Rate	Rate	(°)	
(usft)			(usft)			(°/100usft)	(°/100usft)	(°/100usft)		
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
11,439.54	0.00	0.00	11,439.54	0.00	0.00	0.00	0.00	0.00	0.00	
12,189.54	90.00	179.34	11,917.00	-477.43	5.52	12.00	12.00	0.00	179.34	
16,384.38	90.00	179.34	11,917.00	-4,672.00	54.00	0.00	0.00	0.00	0.00	PBHL_Talco 25-25-35



Phoenix Technology Services Planning Report



Database:	Compass 5000 GCR DB	Local Co-ordinate Reference:	Well #1H
Company:	Chevron	TVD Reference:	KB @ 3125.00usft (Ensign 153)
Project:	Lea County NM (NAD27 NME)	MD Reference:	KB @ 3125.00usft (Ensign 153)
Site:	Taico 25-25-35 Federal	North Reference:	Grid
Well:	#1H	Survey Calculation Method:	Minimum Curvature
Wellbore:	WB2		
Design:	Plan 4 10-14-14		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	0.00
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00
400.00	0.00	0.00	400.00	0.00	0.00	0.00	0.00	0.00	0.00
500.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	0.00	0.00
600.00	0.00	0.00	600.00	0.00	0.00	0.00	0.00	0.00	0.00
700.00	0.00	0.00	700.00	0.00	0.00	0.00	0.00	0.00	0.00
800.00	0.00	0.00	800.00	0.00	0.00	0.00	0.00	0.00	0.00
900.00	0.00	0.00	900.00	0.00	0.00	0.00	0.00	0.00	0.00
1,000.00	0.00	0.00	1,000.00	0.00	0.00	0.00	0.00	0.00	0.00
1,100.00	0.00	0.00	1,100.00	0.00	0.00	0.00	0.00	0.00	0.00
1,200.00	0.00	0.00	1,200.00	0.00	0.00	0.00	0.00	0.00	0.00
1,300.00	0.00	0.00	1,300.00	0.00	0.00	0.00	0.00	0.00	0.00
1,400.00	0.00	0.00	1,400.00	0.00	0.00	0.00	0.00	0.00	0.00
1,500.00	0.00	0.00	1,500.00	0.00	0.00	0.00	0.00	0.00	0.00
1,600.00	0.00	0.00	1,600.00	0.00	0.00	0.00	0.00	0.00	0.00
1,700.00	0.00	0.00	1,700.00	0.00	0.00	0.00	0.00	0.00	0.00
1,800.00	0.00	0.00	1,800.00	0.00	0.00	0.00	0.00	0.00	0.00
1,900.00	0.00	0.00	1,900.00	0.00	0.00	0.00	0.00	0.00	0.00
2,000.00	0.00	0.00	2,000.00	0.00	0.00	0.00	0.00	0.00	0.00
2,100.00	0.00	0.00	2,100.00	0.00	0.00	0.00	0.00	0.00	0.00
2,200.00	0.00	0.00	2,200.00	0.00	0.00	0.00	0.00	0.00	0.00
2,300.00	0.00	0.00	2,300.00	0.00	0.00	0.00	0.00	0.00	0.00
2,400.00	0.00	0.00	2,400.00	0.00	0.00	0.00	0.00	0.00	0.00
2,500.00	0.00	0.00	2,500.00	0.00	0.00	0.00	0.00	0.00	0.00
2,600.00	0.00	0.00	2,600.00	0.00	0.00	0.00	0.00	0.00	0.00
2,700.00	0.00	0.00	2,700.00	0.00	0.00	0.00	0.00	0.00	0.00
2,800.00	0.00	0.00	2,800.00	0.00	0.00	0.00	0.00	0.00	0.00
2,900.00	0.00	0.00	2,900.00	0.00	0.00	0.00	0.00	0.00	0.00
3,000.00	0.00	0.00	3,000.00	0.00	0.00	0.00	0.00	0.00	0.00
3,100.00	0.00	0.00	3,100.00	0.00	0.00	0.00	0.00	0.00	0.00
3,200.00	0.00	0.00	3,200.00	0.00	0.00	0.00	0.00	0.00	0.00
3,300.00	0.00	0.00	3,300.00	0.00	0.00	0.00	0.00	0.00	0.00
3,400.00	0.00	0.00	3,400.00	0.00	0.00	0.00	0.00	0.00	0.00
3,500.00	0.00	0.00	3,500.00	0.00	0.00	0.00	0.00	0.00	0.00
3,600.00	0.00	0.00	3,600.00	0.00	0.00	0.00	0.00	0.00	0.00
3,700.00	0.00	0.00	3,700.00	0.00	0.00	0.00	0.00	0.00	0.00
3,800.00	0.00	0.00	3,800.00	0.00	0.00	0.00	0.00	0.00	0.00
3,900.00	0.00	0.00	3,900.00	0.00	0.00	0.00	0.00	0.00	0.00
4,000.00	0.00	0.00	4,000.00	0.00	0.00	0.00	0.00	0.00	0.00
4,100.00	0.00	0.00	4,100.00	0.00	0.00	0.00	0.00	0.00	0.00
4,200.00	0.00	0.00	4,200.00	0.00	0.00	0.00	0.00	0.00	0.00
4,300.00	0.00	0.00	4,300.00	0.00	0.00	0.00	0.00	0.00	0.00
4,400.00	0.00	0.00	4,400.00	0.00	0.00	0.00	0.00	0.00	0.00
4,500.00	0.00	0.00	4,500.00	0.00	0.00	0.00	0.00	0.00	0.00
4,600.00	0.00	0.00	4,600.00	0.00	0.00	0.00	0.00	0.00	0.00
4,700.00	0.00	0.00	4,700.00	0.00	0.00	0.00	0.00	0.00	0.00
4,800.00	0.00	0.00	4,800.00	0.00	0.00	0.00	0.00	0.00	0.00
4,900.00	0.00	0.00	4,900.00	0.00	0.00	0.00	0.00	0.00	0.00
5,000.00	0.00	0.00	5,000.00	0.00	0.00	0.00	0.00	0.00	0.00
5,100.00	0.00	0.00	5,100.00	0.00	0.00	0.00	0.00	0.00	0.00
5,200.00	0.00	0.00	5,200.00	0.00	0.00	0.00	0.00	0.00	0.00
5,300.00	0.00	0.00	5,300.00	0.00	0.00	0.00	0.00	0.00	0.00



Phoenix Technology Services Planning Report



Database:	Compass 5000 GCR DB	Local Co-ordinate Reference:	Well #1H
Company:	Chevron	TVD Reference:	KB @ 3125.00usft (Ensign 153)
Project:	Lea County NM (NAD27 NME)	MD Reference:	KB @ 3125.00usft (Ensign 153)
Site:	Talco 25-25-35 Federal	North Reference:	Grid
Well:	#1H	Survey Calculation Method:	Minimum Curvature
Wellbore:	WB2		
Design:	Plan 4 10-14-14		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
5,400.00	0.00	0.00	5,400.00	0.00	0.00	0.00	0.00	0.00	0.00
5,500.00	0.00	0.00	5,500.00	0.00	0.00	0.00	0.00	0.00	0.00
5,600.00	0.00	0.00	5,600.00	0.00	0.00	0.00	0.00	0.00	0.00
5,700.00	0.00	0.00	5,700.00	0.00	0.00	0.00	0.00	0.00	0.00
5,800.00	0.00	0.00	5,800.00	0.00	0.00	0.00	0.00	0.00	0.00
5,900.00	0.00	0.00	5,900.00	0.00	0.00	0.00	0.00	0.00	0.00
6,000.00	0.00	0.00	6,000.00	0.00	0.00	0.00	0.00	0.00	0.00
6,100.00	0.00	0.00	6,100.00	0.00	0.00	0.00	0.00	0.00	0.00
6,200.00	0.00	0.00	6,200.00	0.00	0.00	0.00	0.00	0.00	0.00
6,300.00	0.00	0.00	6,300.00	0.00	0.00	0.00	0.00	0.00	0.00
6,400.00	0.00	0.00	6,400.00	0.00	0.00	0.00	0.00	0.00	0.00
6,500.00	0.00	0.00	6,500.00	0.00	0.00	0.00	0.00	0.00	0.00
6,600.00	0.00	0.00	6,600.00	0.00	0.00	0.00	0.00	0.00	0.00
6,700.00	0.00	0.00	6,700.00	0.00	0.00	0.00	0.00	0.00	0.00
6,800.00	0.00	0.00	6,800.00	0.00	0.00	0.00	0.00	0.00	0.00
6,900.00	0.00	0.00	6,900.00	0.00	0.00	0.00	0.00	0.00	0.00
7,000.00	0.00	0.00	7,000.00	0.00	0.00	0.00	0.00	0.00	0.00
7,100.00	0.00	0.00	7,100.00	0.00	0.00	0.00	0.00	0.00	0.00
7,200.00	0.00	0.00	7,200.00	0.00	0.00	0.00	0.00	0.00	0.00
7,300.00	0.00	0.00	7,300.00	0.00	0.00	0.00	0.00	0.00	0.00
7,400.00	0.00	0.00	7,400.00	0.00	0.00	0.00	0.00	0.00	0.00
7,500.00	0.00	0.00	7,500.00	0.00	0.00	0.00	0.00	0.00	0.00
7,600.00	0.00	0.00	7,600.00	0.00	0.00	0.00	0.00	0.00	0.00
7,700.00	0.00	0.00	7,700.00	0.00	0.00	0.00	0.00	0.00	0.00
7,800.00	0.00	0.00	7,800.00	0.00	0.00	0.00	0.00	0.00	0.00
7,900.00	0.00	0.00	7,900.00	0.00	0.00	0.00	0.00	0.00	0.00
8,000.00	0.00	0.00	8,000.00	0.00	0.00	0.00	0.00	0.00	0.00
8,100.00	0.00	0.00	8,100.00	0.00	0.00	0.00	0.00	0.00	0.00
8,200.00	0.00	0.00	8,200.00	0.00	0.00	0.00	0.00	0.00	0.00
8,300.00	0.00	0.00	8,300.00	0.00	0.00	0.00	0.00	0.00	0.00
8,400.00	0.00	0.00	8,400.00	0.00	0.00	0.00	0.00	0.00	0.00
8,500.00	0.00	0.00	8,500.00	0.00	0.00	0.00	0.00	0.00	0.00
8,600.00	0.00	0.00	8,600.00	0.00	0.00	0.00	0.00	0.00	0.00
8,700.00	0.00	0.00	8,700.00	0.00	0.00	0.00	0.00	0.00	0.00
8,800.00	0.00	0.00	8,800.00	0.00	0.00	0.00	0.00	0.00	0.00
8,900.00	0.00	0.00	8,900.00	0.00	0.00	0.00	0.00	0.00	0.00
9,000.00	0.00	0.00	9,000.00	0.00	0.00	0.00	0.00	0.00	0.00
9,100.00	0.00	0.00	9,100.00	0.00	0.00	0.00	0.00	0.00	0.00
9,200.00	0.00	0.00	9,200.00	0.00	0.00	0.00	0.00	0.00	0.00
9,300.00	0.00	0.00	9,300.00	0.00	0.00	0.00	0.00	0.00	0.00
9,400.00	0.00	0.00	9,400.00	0.00	0.00	0.00	0.00	0.00	0.00
9,500.00	0.00	0.00	9,500.00	0.00	0.00	0.00	0.00	0.00	0.00
9,600.00	0.00	0.00	9,600.00	0.00	0.00	0.00	0.00	0.00	0.00
9,700.00	0.00	0.00	9,700.00	0.00	0.00	0.00	0.00	0.00	0.00
9,800.00	0.00	0.00	9,800.00	0.00	0.00	0.00	0.00	0.00	0.00
9,900.00	0.00	0.00	9,900.00	0.00	0.00	0.00	0.00	0.00	0.00
10,000.00	0.00	0.00	10,000.00	0.00	0.00	0.00	0.00	0.00	0.00
10,100.00	0.00	0.00	10,100.00	0.00	0.00	0.00	0.00	0.00	0.00
10,200.00	0.00	0.00	10,200.00	0.00	0.00	0.00	0.00	0.00	0.00
10,300.00	0.00	0.00	10,300.00	0.00	0.00	0.00	0.00	0.00	0.00
10,400.00	0.00	0.00	10,400.00	0.00	0.00	0.00	0.00	0.00	0.00
10,500.00	0.00	0.00	10,500.00	0.00	0.00	0.00	0.00	0.00	0.00
10,600.00	0.00	0.00	10,600.00	0.00	0.00	0.00	0.00	0.00	0.00
10,700.00	0.00	0.00	10,700.00	0.00	0.00	0.00	0.00	0.00	0.00



Phoenix Technology Services

Planning Report



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Design:	Plan 4 10-14-14		

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Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
10,800.00	0.00	0.00	10,800.00	0.00	0.00	0.00	0.00	0.00	0.00
10,900.00	0.00	0.00	10,900.00	0.00	0.00	0.00	0.00	0.00	0.00
11,000.00	0.00	0.00	11,000.00	0.00	0.00	0.00	0.00	0.00	0.00
11,100.00	0.00	0.00	11,100.00	0.00	0.00	0.00	0.00	0.00	0.00
11,200.00	0.00	0.00	11,200.00	0.00	0.00	0.00	0.00	0.00	0.00
11,300.00	0.00	0.00	11,300.00	0.00	0.00	0.00	0.00	0.00	0.00
11,400.00	0.00	0.00	11,400.00	0.00	0.00	0.00	0.00	0.00	0.00
11,439.54	0.00	0.00	11,439.54	0.00	0.00	0.00	0.00	0.00	0.00
KOP, 12.00°/100' Build									
11,450.00	1.26	179.34	11,450.00	-0.11	0.00	0.11	12.00	12.00	0.00
11,475.00	4.26	179.34	11,474.97	-1.32	0.02	1.32	12.00	12.00	0.00
11,500.00	7.26	179.34	11,499.84	-3.82	0.04	3.82	12.00	12.00	0.00
11,525.00	10.26	179.34	11,524.54	-7.63	0.09	7.63	12.00	12.00	0.00
11,550.00	13.26	179.34	11,549.02	-12.72	0.15	12.72	12.00	12.00	0.00
11,575.00	16.26	179.34	11,573.19	-19.09	0.22	19.09	12.00	12.00	0.00
11,600.00	19.26	179.34	11,597.00	-26.71	0.31	26.71	12.00	12.00	0.00
11,625.00	22.26	179.34	11,620.37	-35.57	0.41	35.57	12.00	12.00	0.00
11,650.00	25.26	179.34	11,643.25	-45.64	0.53	45.64	12.00	12.00	0.00
11,675.00	28.26	179.34	11,665.57	-56.89	0.66	56.89	12.00	12.00	0.00
11,700.00	31.26	179.34	11,687.27	-69.29	0.80	69.30	12.00	12.00	0.00
11,725.00	34.26	179.34	11,708.29	-82.82	0.96	82.82	12.00	12.00	0.00
11,750.00	37.26	179.34	11,728.58	-97.42	1.13	97.43	12.00	12.00	0.00
11,775.00	40.26	179.34	11,748.07	-113.07	1.31	113.08	12.00	12.00	0.00
11,800.00	43.26	179.34	11,766.72	-129.72	1.50	129.73	12.00	12.00	0.00
11,825.00	46.26	179.34	11,784.47	-147.32	1.70	147.33	12.00	12.00	0.00
11,850.00	49.26	179.34	11,801.28	-165.82	1.92	165.83	12.00	12.00	0.00
11,875.00	52.26	179.34	11,817.09	-185.18	2.14	185.19	12.00	12.00	0.00
11,900.00	55.26	179.34	11,831.87	-205.34	2.37	205.35	12.00	12.00	0.00
11,925.00	58.26	179.34	11,845.57	-226.24	2.61	226.26	12.00	12.00	0.00
11,950.00	61.26	179.34	11,858.16	-247.84	2.86	247.85	12.00	12.00	0.00
11,975.00	64.26	179.34	11,869.61	-270.06	3.12	270.08	12.00	12.00	0.00
12,000.00	67.26	179.34	11,879.87	-292.85	3.38	292.87	12.00	12.00	0.00
12,025.00	70.26	179.34	11,888.93	-316.15	3.65	316.17	12.00	12.00	0.00
12,050.00	73.26	179.34	11,896.76	-339.88	3.93	339.91	12.00	12.00	0.00
12,075.00	76.26	179.34	11,903.33	-364.00	4.21	364.02	12.00	12.00	0.00
12,100.00	79.26	179.34	11,908.63	-388.43	4.49	388.45	12.00	12.00	0.00
12,125.00	82.26	179.34	11,912.65	-413.10	4.77	413.13	12.00	12.00	0.00
12,150.00	85.26	179.34	11,915.36	-437.95	5.06	437.97	12.00	12.00	0.00
12,175.00	88.26	179.34	11,916.78	-462.90	5.35	462.93	12.00	12.00	0.00
12,189.54	90.00	179.34	11,917.00	-477.43	5.52	477.46	12.00	12.00	0.00
LP, Hold 90.00° Inc									
12,200.00	90.00	179.34	11,917.00	-487.90	5.64	487.93	0.00	0.00	0.00
12,300.00	90.00	179.34	11,917.00	-587.89	6.79	587.93	0.00	0.00	0.00
12,400.00	90.00	179.34	11,917.00	-687.88	7.95	687.93	0.00	0.00	0.00
12,500.00	90.00	179.34	11,917.00	-787.88	9.11	787.93	0.00	0.00	0.00
12,600.00	90.00	179.34	11,917.00	-887.87	10.26	887.93	0.00	0.00	0.00
12,700.00	90.00	179.34	11,917.00	-987.86	11.42	987.93	0.00	0.00	0.00
12,800.00	90.00	179.34	11,917.00	-1,087.86	12.57	1,087.93	0.00	0.00	0.00
12,900.00	90.00	179.34	11,917.00	-1,187.85	13.73	1,187.93	0.00	0.00	0.00
13,000.00	90.00	179.34	11,917.00	-1,287.84	14.89	1,287.93	0.00	0.00	0.00
13,100.00	90.00	179.34	11,917.00	-1,387.84	16.04	1,387.93	0.00	0.00	0.00
13,200.00	90.00	179.34	11,917.00	-1,487.83	17.20	1,487.93	0.00	0.00	0.00
13,300.00	90.00	179.34	11,917.00	-1,587.82	18.35	1,587.93	0.00	0.00	0.00
13,400.00	90.00	179.34	11,917.00	-1,687.82	19.51	1,687.93	0.00	0.00	0.00



Phoenix Technology Services

Planning Report



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Site:	Talco 25-25-35, Federal	North Reference:	Grid
Well:	#1H	Survey Calculation Method:	Minimum Curvature
Wellbore:	WB2		
Design:	Plan 4 10-14-14		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
13,500.00	90.00	179.34	11,917.00	-1,787.81	20.66	1,787.93	0.00	0.00	0.00
13,600.00	90.00	179.34	11,917.00	-1,887.80	21.82	1,887.93	0.00	0.00	0.00
13,700.00	90.00	179.34	11,917.00	-1,987.80	22.98	1,987.93	0.00	0.00	0.00
13,800.00	90.00	179.34	11,917.00	-2,087.79	24.13	2,087.93	0.00	0.00	0.00
13,900.00	90.00	179.34	11,917.00	-2,187.78	25.29	2,187.93	0.00	0.00	0.00
14,000.00	90.00	179.34	11,917.00	-2,287.78	26.44	2,287.93	0.00	0.00	0.00
14,100.00	90.00	179.34	11,917.00	-2,387.77	27.60	2,387.93	0.00	0.00	0.00
14,200.00	90.00	179.34	11,917.00	-2,487.76	28.75	2,487.93	0.00	0.00	0.00
14,300.00	90.00	179.34	11,917.00	-2,587.76	29.91	2,587.93	0.00	0.00	0.00
14,400.00	90.00	179.34	11,917.00	-2,687.75	31.07	2,687.93	0.00	0.00	0.00
14,500.00	90.00	179.34	11,917.00	-2,787.74	32.22	2,787.93	0.00	0.00	0.00
14,600.00	90.00	179.34	11,917.00	-2,887.74	33.38	2,887.93	0.00	0.00	0.00
14,700.00	90.00	179.34	11,917.00	-2,987.73	34.53	2,987.93	0.00	0.00	0.00
14,800.00	90.00	179.34	11,917.00	-3,087.72	35.69	3,087.93	0.00	0.00	0.00
14,900.00	90.00	179.34	11,917.00	-3,187.72	36.84	3,187.93	0.00	0.00	0.00
15,000.00	90.00	179.34	11,917.00	-3,287.71	38.00	3,287.93	0.00	0.00	0.00
15,100.00	90.00	179.34	11,917.00	-3,387.70	39.16	3,387.93	0.00	0.00	0.00
15,200.00	90.00	179.34	11,917.00	-3,487.70	40.31	3,487.93	0.00	0.00	0.00
15,300.00	90.00	179.34	11,917.00	-3,587.69	41.47	3,587.93	0.00	0.00	0.00
15,400.00	90.00	179.34	11,917.00	-3,687.68	42.62	3,687.93	0.00	0.00	0.00
15,500.00	90.00	179.34	11,917.00	-3,787.68	43.78	3,787.93	0.00	0.00	0.00
15,600.00	90.00	179.34	11,917.00	-3,887.67	44.93	3,887.93	0.00	0.00	0.00
15,700.00	90.00	179.34	11,917.00	-3,987.66	46.09	3,987.93	0.00	0.00	0.00
15,800.00	90.00	179.34	11,917.00	-4,087.66	47.25	4,087.93	0.00	0.00	0.00
15,900.00	90.00	179.34	11,917.00	-4,187.65	48.40	4,187.93	0.00	0.00	0.00
16,000.00	90.00	179.34	11,917.00	-4,287.64	49.56	4,287.93	0.00	0.00	0.00
16,100.00	90.00	179.34	11,917.00	-4,387.64	50.71	4,387.93	0.00	0.00	0.00
16,200.00	90.00	179.34	11,917.00	-4,487.63	51.87	4,487.93	0.00	0.00	0.00
16,300.00	90.00	179.34	11,917.00	-4,587.62	53.02	4,587.93	0.00	0.00	0.00
16,384.38	90.00	179.34	11,917.00	-4,672.00	54.00	4,672.31	0.00	0.00	0.00
TD at 16384.38									

Design Targets

Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
- hit/miss target									
- Shape									
PBHL Talco 25-25-35 F	0.00	0.01	11,917.00	-4,672.00	54.00	399,693.00	811,596.00	32° 5' 41.55204 N	103° 19' 37.75063 W
- plan hits target center									
- Point									



Phoenix Technology Services Planning Report



Database:	Compass 5000 GCR DB	Local Co-ordinate Reference:	Well #1H
Company:	Chevron	TVD Reference:	KB @ 3125.00usft (Ensign 153)
Project:	Lea County NM (NAD27 NME)	MD Reference:	KB @ 3125.00usft (Ensign 153)
Site:	Talco 25-25-35 Federal	North Reference:	Grid
Well:	#1H	Survey Calculation Method:	Minimum Curvature
Wellbore:	WB2		
Design:	Plan 4 10-14-14		

Formations					
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
822.00	822.00	Rustler		0.00	179.34
866.00	866.00	Magenta		0.00	179.34
1,164.00	1,164.00	Salado		0.00	179.34
3,199.00	3,199.00	Castille		0.00	179.34
5,041.00	5,041.00	Lamar LS		0.00	179.34
5,071.00	5,071.00	Bell Canyon		0.00	179.34
5,950.00	5,950.00	Brushy Canyon		0.00	179.34
7,480.00	7,480.00	Top of Bone Spring		0.00	179.34
8,574.00	8,574.00	Top of Bone Spring		0.00	179.34
8,642.00	8,642.00	Avalon		0.00	179.34
9,867.00	9,867.00	1st Bone Spring Carb.		0.00	179.34
9,967.00	9,967.00	1st Bone Spring Sand		0.00	179.34
10,482.00	10,482.00	2nd Bone Spring Sand		0.00	179.34
11,630.01	11,625.00	3rd Bone Spring Sand		0.00	179.34

Plan Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
11,439.54	11,439.54	0.00	0.00	KOP, 12.00°/100' Build
12,189.54	11,917.00	-477.43	5.52	LP, Hold 90.00°Inc
16,384.38	11,917.00	-4,672.00	54.00	TD at 16384.38

BLOWOUT PREVENTOR SCHEMATIC

Minimum Requirements

OPERATION : Intermediate and Production Hole Sections

Minimum System
Pressure Rating : 5,000 psi

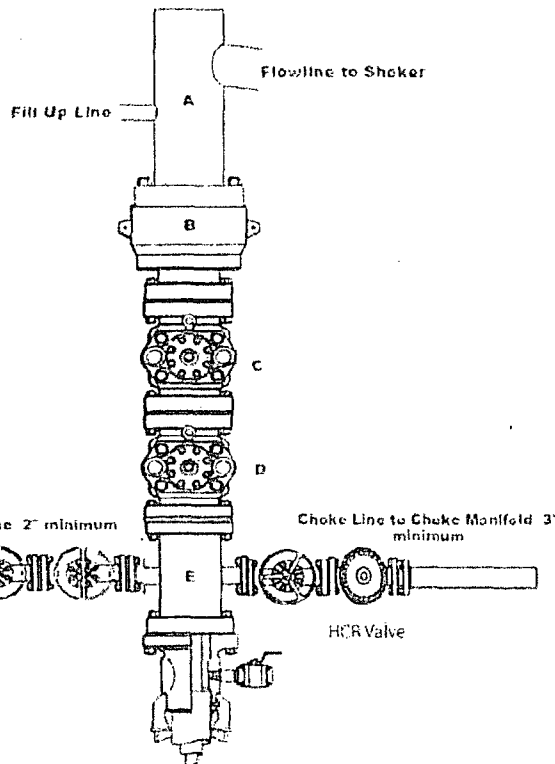
SIZE	PRESSURE	DESCRIPTION
A	N/A	Bell Nipple
B	13 5/8"	5,000 psi Annular
C	13 5/8"	5,000 psi Pipe Ram
D	13 5/8"	5,000 psi Blind Ram
E	13 5/8"	5,000 psi Mud Cross
F		
DSA	As required for each hole size	
C-Sec		
B-Sec	13-5/8" SK x 11" SK	
A-Sec	13-3/8" SOW x 13-5/8" SK	

Kill Line

SIZE	PRESSURE	DESCRIPTION
2"	5,000 psi	Gate Valve
2"	5,000 psi	Gate Valve
2"	5,000 psi	Check Valve

Choke Line

SIZE	PRESSURE	DESCRIPTION
3"	5,000 psi	Gate Valve
3"	5,000 psi	HCR Valve



Installation Checklist

The following items must be verified and checked off prior to pressure testing of BOP equipment.

- ☐ The installed BOP equipment meets at least the minimum requirements (rating, type, size, configuration) as shown on this schematic. Components may be substituted for equivalent equipment rated to higher pressures. Additional components may be put into place as long as they meet or exceed the minimum pressure rating of the system.
- ☐ All valves on the kill line and choke line will be full opening and will allow straight through flow.
- ☐ The kill line and choke line will be straight unless turns use too blocks or are targeted with running tools, and will be anchored to prevent whip and reduce vibration.
- ☐ Manual (hand wheels) or automatic locking devices will be installed on all ram preventors. Hand wheels will also be installed on all manual valves on the choke line and kill line.
- ☐ A valve will be installed in the closing line as close as possible to the annular preventor to act as a locking device. This valve will remain open unless accumulator is inoperative.
- ☐ 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.

After Installation Checklist is complete, fill out the information below and email to Superintendent and Drilling Engineer:

Wellname: _____

Representative: _____

Date: _____

CHOKE MANIFOLD SCHEMATIC

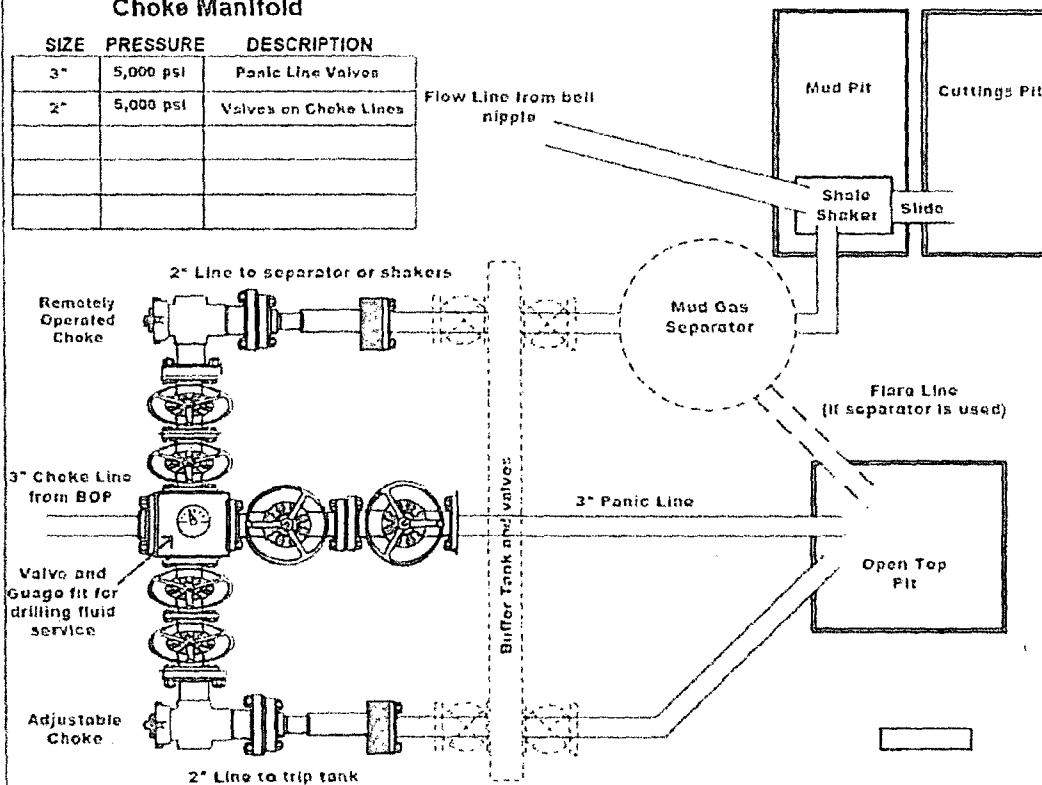
Minimum Requirements

OPERATION : Intermediate and Production Hole Sections

Minimum System Pressure Rating : 5,000 psi

Choke Manifold

SIZE	PRESSURE	DESCRIPTION
3"	5,000 psi	Panic Line Valves
2"	5,000 psi	Valves on Choke Lines



Installation Checklist

The following items must be verified and checked off prior to pressure testing of BOP equipment.

- ☐ The installed BOP equipment meets at least the minimum requirements (rating, type, size, configuration) as shown on this schematic. Components may be substituted for equivalent equipment rated to higher pressures. Additional components may be put into place as long as they meet or exceed the minimum pressure rating of the system.
- ☐ Adjustable Chokes may be Remotely Operated but will have backup hand pump for hydraulic actuation in case of loss of rig air pressure or power.
- ☐ Flare and Panic lines will terminate a minimum of 150' from the wellhead. These lines will terminate at a location as per approved APD.
- ☐ The choke line, kill line, and choke manifold lines will be straight unless turns use tee blocks or are targeted with running tees, and will be anchored to prevent whip and reduce vibration. This excludes the line between mud gas separator and shale shaker.
- ☐ All valves (except chokes) on choke line, kill line, and choke manifold will be full opening and will allow straight through flow. This excludes any valves between mud gas separator and shale shakers.
- ☐ All manual valves will have hand wheels installed.
- ☐ If used, flare system will have effective method for ignition.
- ☐ All connections will be flanged, welded, or clamped (no threaded connections like hammer unions).
- ☐ If buffer tank is used, a valve will be used on all lines at any entry or exit point to or from the buffer tank.

After Installation Checklist is complete, fill out the information below and email to Superintendent and Drilling Engineer

Wellname: _____

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 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 applies	Accumulator working pressure rating	Minimum acceptable operating pressure	Desired precharge pressure	Maximum acceptable precharge pressure	Minimum acceptable precharge pressure
☐	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.
- ☐ 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. Reservoir 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.
- ☐ Power for the closing unit pumps will be available to the unit at all times so that the pumps will automatically start when the closing valve manifold pressure decreases to the pre-set level. It is recommended to check that air line to accumulator pump is "ON" during each tour change.
- ☐ With accumulator bottles isolated, closing unit will be capable of opening the hydraulically-operated choke line valve (if used) plus close the annular preventer on the smallest size drill pipe within 2 minutes and obtain a minimum of 200 psi above maximum acceptable precharge pressure (see table above) on the closing manifold. Test pressure and closing time will be recorded and kept on location through the end of the well.
- ☐ Master controls for the BOPE system will be located at the accumulator and will be capable of opening and closing all preventer and the choke line valve (if used).
- ☐ Remote controls for the BOPE system will be readily accessible (clear path) to the driller and located on the rig floor (not in the dog house). Remote controls will be capable of closing all preventers.
- ☐ Record accumulator tests in drilling reports and IADC sheet.

BOPE Test Checklist

The following item must be checked off prior to beginning test

- ☐ BLM will be given at least 4 hour notice prior to beginning BOPE testing
- ☐ Valve on casing head below test plug will be open
- ☐ Test will be performed using clear water.

The following item must be performed during the BOPE testing and then checked off

- ☐ BOPE will be pressure tested when initially installed, whenever any seal subject to test pressure is broken, following related repairs, and at a minimum of 30 days intervals. Test pressure and times will be recorded by a 3rd party on a test chart and kept on location through the end of the well.
- ☐ Test plug will be used
- ☐ Ram type preventer and all related well control equipment will be tested to 250 psi (low) and 5,000 psi (high).
- ☐ Annular type preventer will be tested to 250 psi (low) and 3,500 psi (high).
- ☐ Valves will be tested from the working pressure side with all down stream valves open. The check valve will be held open to test the kill line valve(s).
- ☐ Each pressure test will be hold for 10 minutes with no allowable leak off.
- ☐ Master controls and remote controls to the closing unit (accumulator) must be function tested as part of the BOP testing
- ☐ Record BOP tests and pressures in drilling reports and IADC sheet

After Installation Checklist is complete, fill out the information below and email to Superintendent and Drilling Engineer along with pay all BOP and accumulator test charts and reports from 3rd parties.

Wellname: _____

Representative: _____

Date: _____

Exhibit D

Talco 25-25-35 Fed 1H Pad Layout (330' x 370')

Ensign 153

