15-4

Form 3160-3
(March 2012)

~~OCD Artesia~~ OCD Hobbs

~~OCD Hobbs~~

HOBBS OCD

MAY 0 5 2015

RECEIVED

FORM APPROVED
OMB No. 1004-0137
Expires October 31, 2014

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

5. Lease Serial No. NMNM117126

6. If Indian, Allotee or Tribe Name

1a. Type of work: ☑ DRILL ☐ REENTER

7. If Unit or CA Agreement, Name and No.

1b. Type of Well: ☑ Oil Well ☐ Gas Well ☐ Other ☑ Single Zone ☐ Multiple Zone

8. Lease Name and Well No. COM (314797)
TALCO 9 26 35 FEDERAL #2H

2. Name of Operator
CHEVRON U.S.A. INC. (4323)

9. API Well No.
30-025-42547

3a. Address 15 SMITH ROAD
MIDLAND, TEXAS 79705

3b. Phone No. *(include area code)*
432-687-7375

10. Field and Pool, or Exploratory (98110)
WC-025 G-09 S253509D; BS

4. Location of Well *(Report location clearly and in accordance with any State requirements.*)*
At surface 235' FSL, & 1980' FEL, UL (O)
At proposed prod. zone 280' FNL, & 1980' FEL, UL (B)

11. Sec., T. R. M. or Blk. and Survey or Area
SEC 9, T-26S, R-35E

14. Distance in miles and direction from nearest town or post office*
17 MILES FROM JAL, NEW MEXICO

12. County or Parish
LEA

13. State
NM

15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any)	16. No. of acres in lease	17. Spacing Unit dedicated to this well
235' FSL	1080	160

18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft.	19. Proposed Depth	20. BLM/BIA Bond No. on file
4139' EAST OF SHEARIN-FED #1 SINCLAIR OIL & GAS	MD - 17,500 TVD - 13,000	CA0329

21. Elevations (Show whether DF, KDB, RT, GL, etc.)	22. Approximate date work will start*	23. Estimated duration
3178'		

24. Attachments

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

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

25. Signature	Name *(Printed/Typed)*	Date
Denise Pinkerton	DENISE PINKERTON	07/24/2014

Title
REGULATORY SPECIALIST

Approved by *(Signature)*	Name *(Printed/Typed)*	Date
/S/ STEPHEN J. CAFFEY		APR 24 2015

Title	Office
FIELD MANAGER	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)

*(Instructions on page 2)

PM

Carlsbad Controlled Water Basin

KZ
05/05/15

APPROVAL SUBJECT TO
GENERAL REQUIREMENTS
AND SPECIAL STIPULATIONS
ATTACHED

SEE ATTACHED FOR
CONDITIONS OF APPROVAL

MAY 06 2015

1. FORMATION TOPS

The estimated tops of important geologic markers are as follows:

FORMATION	SUB-SEA	KBTVD	MD
Rustler	2166	1037	
Magenta Dolomite	2119	1084	
Salado	1884	1319	
Castile	-432	3635	
Lamar	-2094	5297	
Bell Canyon	-2140	5343	
Cherry Canyon	-3123	6326	
Brushy Canyon	-4615	7818	
Bone Spring Limestone	-5995	9198	
1st Bone Spring	-7192	10395	
2nd Bone Spring	-7990	11193	
3rd Bone Spring	-8998	12201	
Pilot TD	-9626	12786	12786
Lateral TD (3rd Bone Spring)	(9,388)	12,591	17157

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		1,084
Water	Rustler	1037
Water	Bell Canyon	5343
Water	Cherry Canyon	6326
Oil/Gas	Brushy Canyon	7818
Oil/Gas	Bone Spring Limestone	9198
Oil/Gas	1st Bone Spring	10395
Oil/Gas	2nd Bone Spring	11193
Oil/Gas	3rd Bone Spring	12201
Oil/Gas	Wolfcamp A	12666

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

3. BOP EQUIPMENT

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 foor on surface casing. BOPE will be nippled 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:

see COA

Purpose	From	To	Hole Size	Csg Size	Weight	Grade	Thread	Condition
Surface	0'	~~1,100~~ 1140	17-1/2"	13-3/8"	54.5 #	J-55	STC	New
Intermediate	0'	9,200'	12-1/4"	9-5/8"	43.5 #	HCP-110	LTC	New
Production	0'	17,157'	8-1/2"	5-1/2"	17.0 #	HCP-110	CDC	New

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 recalcuated & 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.**

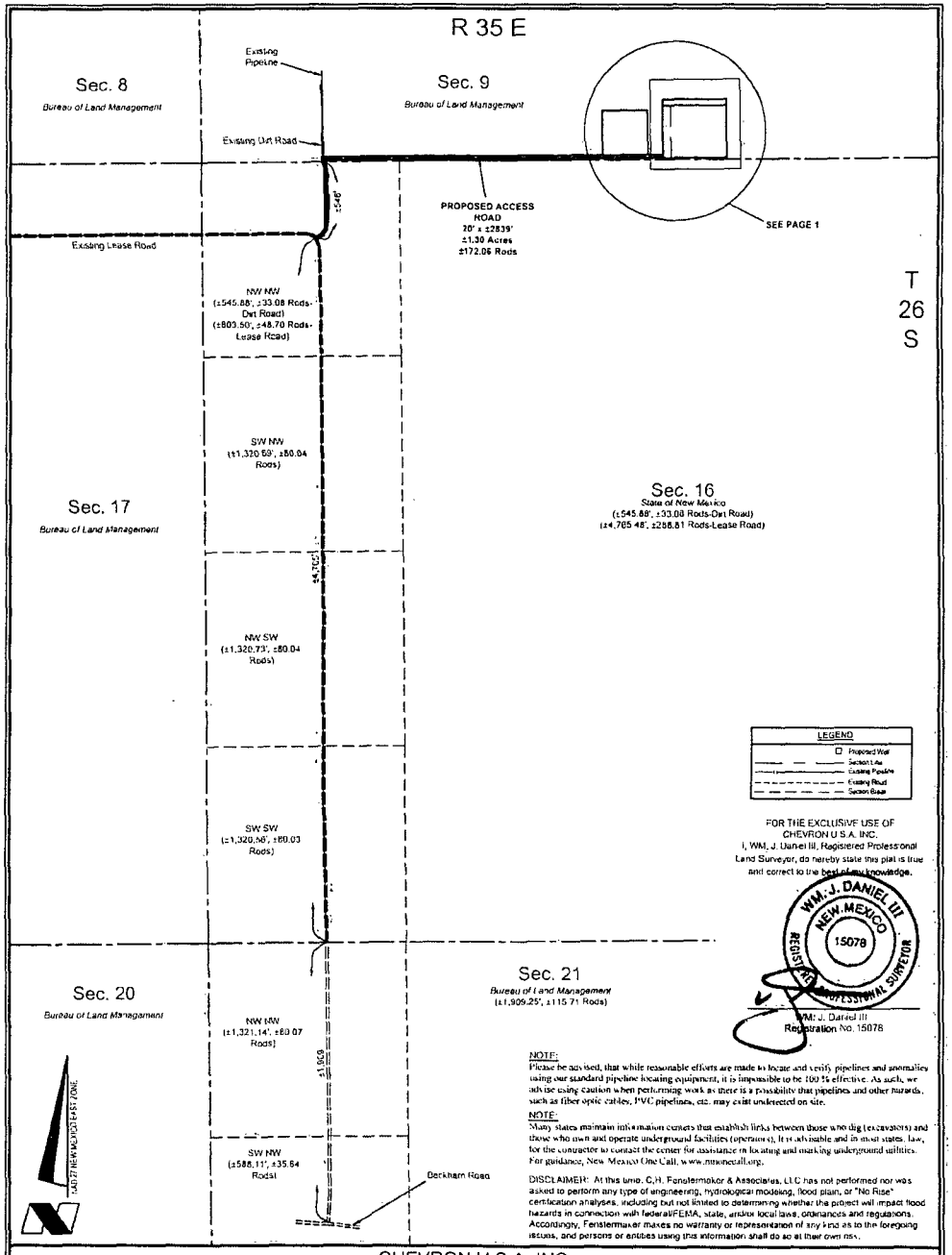
SF Calculations based on the following "Worst Case" casing design.

Surface Casing: 1500'
Intermediate Casing: 9300
Production Casing: 17500' MD/13000' 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


R 35 E
Sec. 8
Bureau of Land Management
Sec. 9
Bureau of Land Management
Existing Pipeline
Existing Dirt Road
Existing Lease Road
PROPOSED ACCESS ROAD
20' x ±2839'
±1.30 Acres
±172.06 Rods
SEE PAGE 1
T 26 S
NW NW
(±545.88', ±33.08 Rods-Dirt Road)
(±803.50', ±48.70 Rods-Lease Road)
SW NW
(±1,320.59', ±80.04 Rods)
Sec. 17
Bureau of Land Management
Sec. 16
State of New Mexico
(±545.88', ±33.08 Rods-Dirt Road)
(±4,765.48', ±288.81 Rods-Lease Road)
NW SW
(±1,320.73', ±80.04 Rods)
SW SW
(±1,320.56', ±80.03 Rods)
Sec. 20
Bureau of Land Management
Sec. 21
Bureau of Land Management
(±1,909.25', ±115.71 Rods)
NW NW
(±1,321.14', ±80.07 Rods)
SW NW
(±588.11', ±35.64 Rods)
Beckham Road
LEGEND
Proposed Well
Section Line
Existing Pipeline
Existing Road
Section Base
FOR THE EXCLUSIVE USE OF CHEVRON U.S.A. INC.
I, WM. J. Daniel III, Registered Professional Land Surveyor, do hereby state this plat is true and correct to the best of my knowledge.
WM. J. DANIEL III
NEW MEXICO
15078
REGISTERED PROFESSIONAL SURVEYOR
WM. J. Daniel III
Registration No. 15078
NOTE:
Please be advised, that while reasonable efforts are made to locate and verify pipelines and anomalies using our standard pipeline locating equipment, it is impossible to be 100 % effective. As such, we advise using caution when performing work as there is a possibility that pipelines and other hazards, such as fiber optic cables, PVC pipelines, etc. may exist undetected on site.
NOTE:
Many states maintain information centers that establish links between those who dig (excavators) and those who own and operate underground facilities (operators). It is advisable and in most states, law, for the contractor to contact the center for assistance in locating and marking underground utilities. For guidance, New Mexico One Call, www.nmonecall.org.
DISCLAIMER: At this time, C.H. Fenstermaker & Associates, LLC has not performed nor was asked to perform any type of engineering, hydrological modeling, flood plain, or "No Rise" certification analyses, including but not limited to determining whether the project will impact flood hazards in connection with federal/FEMA, state, and/or local laws, ordinances and regulations. Accordingly, Fenstermaker makes no warranty or representation of any kind as to the foregoing issues, and persons or entities using this information shall do so at their own risk.
NAD 27 NEW MEXICO EAST ZONE
CHEVRON U.S.A. INC.
PROPOSED PAD, ACCESS AND FRAC POND
TALCO 9 26 35 NO. 2H WELL
SECTIONS 9 & 16, T26S-R35E
LEA COUNTY, NEW MEXICO
PAGE 2 OF 2
FENSTERMAKER
135 Regency Sq. Lafayette, LA 70508
Ph. 337-237-2200 Fax. 337-232-3299
www.fenstermaker.com
SCALE: 1"=600'
600' 0 300' 600'
DRAWN BY: VHV
PROJ. MGR.: VHV
DATE: JUNE 26, 2014
REVISIONS
No. 1 DATE: JULY 22, 2014 REVISED BY: VHV
No. # DATE: REVISED BY:
FILENAME: T:\201-N\214801\DWG\Talco 9 26 35 2H_SUP.dwg

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'	800'	13.5	1.75	150	746	9.18
Tail	Class C+2%CaCl	800'	1,100'	14.8	1.36	150	441	6.39
Intermediate								
1st Stage Lead	50% Class H+ 50% Silicalite +2% Gel	5,200'	8,600'	11.3	2.54	30	545	15.51
1st Stage Tail	Class C	8,600'	9,200'	14.8	1.33	30	213	6.57
2nd Stage Lead	65C/35Poz +6%Gel +5%Salt	0'	4,900'	12.9	1.87	100	1494	9.87
2nd Stage Tail	Class C	4,900'	5,200'	14.8	1.33	100	141	6.57
Production								
1st Lead	50% Class H+ 50% Silicalite +2% Gel	4,700'	11,614'	11.3	2.54	75	843	15.07
2nd Lead	Versacem (Halliburton)	11,614'	12,864'	13.2	1.61	75	315	8.10
Tail	Acid Soluble Cement	12,864'	17,157'	15	2.6	35	511	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 ~5200'. An ECP will placed below the DV tool and inflated before pumping the 2nd stage

Pilot Hole Plugging Plan:
The 8-1/2" pilot hole will TD in the Wolfcamp Shale at ~12,786' (exact depth of Pilot TD will depend on geologic tops encountered whil drilling). An open hole cemented whipstock will be utilized with 2-7/8" tail pipe. The tail 2-7/8" tail pipe will be cemented in place from the Pilot hole TD of 12,786' MD/TVD to the whipstock/KOP at 12114' MD/TVD (KOP subject to change after evaluating Pilot Hole logs).

Plug	Slurry	Type	Top	Bottom	Weight	Yield	%Excess	Sacks	Mix Water
					(ppg)	(sx/cu ft)	Open Hole		Gal/Sk
Pilot Hole Plug	Plug Cement	Class H	12,114'	12,786'	17.2	0.97	35	391	3.61

6. MUD PROGRAM

From	To	Type	Weight	F. Vis	Filtrate
0'	~~1,100'~~ 1140	Spud Mud	8.3 - 8.7	32 - 34	NC - NC
~~1,100'~~ 1140	3,635'	Brine	9.5 - 10.1	28 - 29	NC - NC
3,635'	9,200'	Sprayberry Mud	8.9 - 9.3	3 - 9	5 - 7
9,200'	12,114'	FW/Cut Brine	8.3 - 9.5	28 - 29	NC - NC
12,114'	12,864'	Weighted Polymer	9.5 - 11.0	28 - 30	15 - 25
12,864'	17,157'	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:

a. Drill stem tests are not planned.
b. 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
Wireline	Quad Combo	Pilot TD to 9200	After Pilot TD	TBD
-	-	-	-	-
-	-	-	-	-
-	-	-	-	-

c. No coring is planned
d. A Directional Survey will be run.

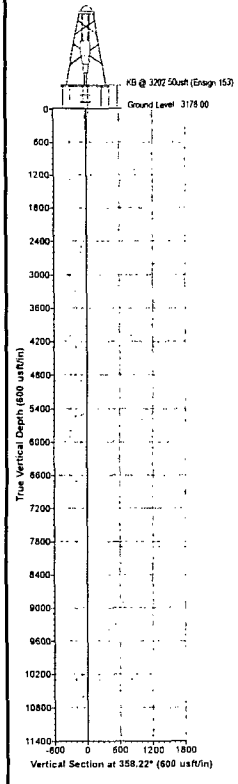
8. ABNORMAL PRESSURES AND HYDROGEN SULFIDE

a. Increased pressure is expected in the base of the 3rd Bone Spring sand and Wolfcamp. No abnormal temperatures are expected. Estimated BHP is: 6875 psi
b. 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 9-26-35
Well: #2H
Wellbore: WB1
Design: Plan #1 07-10-14
Rig: Ensign 153

Azimuths to Grid North
True North: -0.51°
Magnetic North: 8.59°

Magnetic Field
Strength: 48228.2snT
Dip Angle: 59.98°
Date: 07/10/2014
Model: IGRF2010_14



WELL DETAILS

+N/-S	+E/-W	Northing	Easting	Ground Level 3178.00 Latitude	Longitude
0.00	0.00	383633.00	798525.00	32° 3' 3.80764 N	103° 22' 10.18518 W

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Target	Annotation
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
2	12113.54	0.00	0.00	12113.54	0.00	0.00	0.00	0.00	0.00		KOP, 12°/100' Build
3	12863.54	90.00	358.22	12591.00	477.24	-14.81	12.00	358.22	477.46		LP, Hold 90° inc, 358.22° Azm
4	17157.37	90.00	358.22	12591.00	4769.00	-148.00	0.00	0.00	4771.30	PBHL-Talco 9-26-35 #2H	TD at 17157.37' MD

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
LTP-Talco 9-26-35 #2H	12400.75 - plan hits target center	95.00	-2.96	383729.00	798522.02	32° 3' 4.75785 N	103° 22' 10.20963 W	Point
PBHL-Talco 9-26-35 #2H	12591.00 - plan hits target center	4769.00	-148.00	388402.00	798477.00	32° 3' 51.01113 N	103° 22' 11.41005 W	Point

LEGEND

Plan #1 07-10-14

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 #2H, Grid North

Latitude: 32° 3' 3.80764 N
Longitude: 103° 22' 10.18518 W

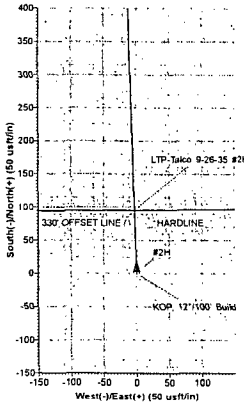
Grid East: 798525.00
Grid North: 383633.00
Scale Factor: 1.000

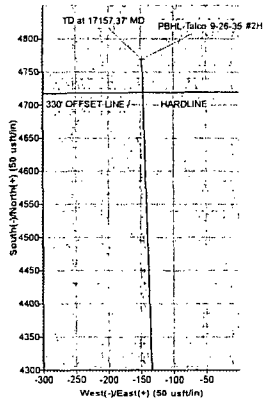
Geomagnetic Model: IGRF2010_14
Sample Date: 10-Jul-14
Magnetic Declination: 7.10°
Dip Angle from Horizontal: 59.98°
Magnetic Field Strength: 48228

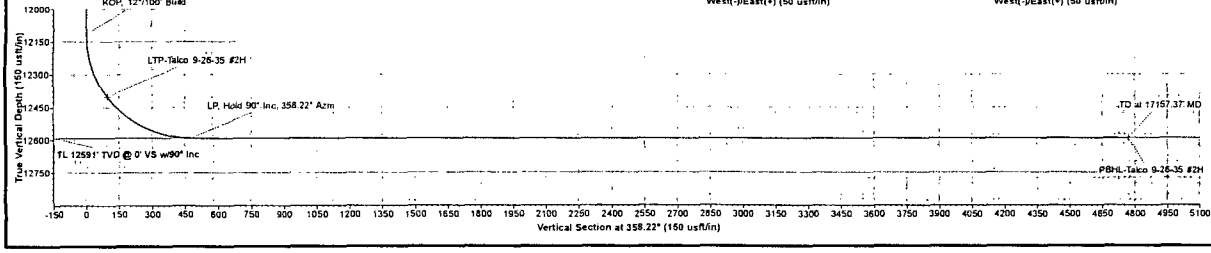
To convert a Magnetic Direction to a Grid Direction, Add 8.59°
To convert a Magnetic Direction to a True Direction, Add 7.10° East
To convert a True Direction to a Grid Direction, Subtract 0.51°

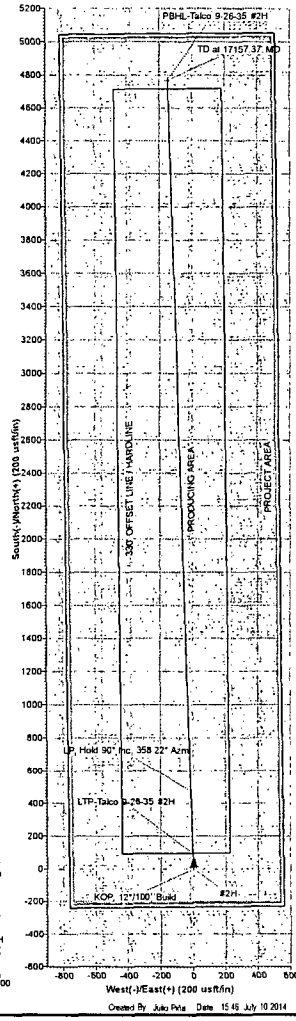
FORMATION TOP DETAILS

TVDPath	MDPath	Formation	DipAngle	DipDir
12591.00	12863.54	TL 12591' TVD @ 0° VS w/90° Inc	0.00	31.33









Created By: Julio Pena Date: 15:45, July 10 2014

Chevron

Lea County NM (NAD27 NME)
Talco 9-26-35
#2H

WB1

Plan: Plan #1 07-10-14

Standard Planning Report

10 July, 2014

Phoenix Technology Services

Planning Report

Database:	GCR DB	**Local Co-ordinate Reference:**	Well #2H
Company:	Chevron	**TVD Reference:**	KB @ 3202.50usft (Ensign 153)
Project:	Lea County NM (NAD27 NME)	**MD Reference:**	KB @ 3202.50usft (Ensign 153)
Site:	Talco 9-26-35	**North Reference:**	Grid
Well:	#2H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	WB1		
Design:	Plan #1 07-10-14		

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 9-26-35

Site Position:		**Northing:**	383,633.00 usft	**Latitude:**	32° 3' 3.80764 N
From:	Map	**Easting:**	798,625.00 usft	**Longitude:**	103° 22' 10.18518 W
Position Uncertainty:	0.00 usft	**Slot Radius:**	13-3/16 "	**Grid Convergence:**	0.51 °

Well #2H

Well Position	**+N/-S**	0.00 usft	**Northing:**	383,633.00 usft	**Latitude:**	32° 3' 3.80764 N
	+E/-W	0.00 usft	**Easting:**	798,625.00 usft	**Longitude:**	103° 22' 10.18518 W
Position Uncertainty		0.00 usft	**Wellhead Elevation:**		**Ground Level:**	3,178.00 usft

Wellbore WB1

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010_14	07/10/14	7.10	59.98	48,228

Design Plan #1 07-10-14

Audit Notes:

Version:		**Phase:**	PLAN	**Tie On Depth:**	0.00

Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.00	0.00	0.00	358.22

Plan Sections

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	TFO (°)	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12,113.54	0.00	0.00	12,113.54	0.00	0.00	0.00	0.00	0.00	0.00	
12,863.54	90.00	358.22	12,591.00	477.24	-14.81	12.00	12.00	0.00	358.22	
17,157.37	90.00	358.22	12,591.00	4,769.00	-148.00	0.00	0.00	0.00	0.00	PBHL-Talco 9-26-35 #

Database:	GCR DB	**Local Co-ordinate Reference:**	Well #2H
Company:	Chevron	**TVD Reference:**	KB @ 3202.50usft (Ensign 153)
Project:	Lea County NM (NAD27 NME)	**MD Reference:**	KB @ 3202.50usft (Ensign 153)
Site:	Talco 9-26-35	**North Reference:**	Grid
Well:	#2H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	WB1		
Design:	Plan #1 07-10-14		

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
12,113.54	0.00	0.00	12,113.54	0.00	0.00	0.00	0.00	0.00	0.00
KOP, 12°/100' Build									
12,200.00	10.38	358.22	12,199.53	7.80	-0.24	7.81	12.00	12.00	0.00
12,300.00	22.38	358.22	12,295.30	35.93	-1.12	35.95	12.00	12.00	0.00
12,400.00	34.38	358.22	12,383.12	83.35	-2.59	83.39	12.00	12.00	0.00
12,421.67	36.98	358.22	12,400.72	95.98	-2.98	96.03	12.00	12.00	0.00
LTP-Talco 9-26-35 #2H									
12,500.00	46.38	358.22	12,459.16	147.98	-4.59	148.05	12.00	12.00	0.00
12,600.00	58.38	358.22	12,520.10	227.00	-7.04	227.11	12.00	12.00	0.00
12,700.00	70.38	358.22	12,563.27	316.96	-9.84	317.11	12.00	12.00	0.00
12,800.00	82.38	358.22	12,586.78	413.92	-12.85	414.12	12.00	12.00	0.00
12,863.54	90.00	358.22	12,591.00	477.24	-14.81	477.46	12.00	12.00	0.00
LP, Hold 90° Inc, 358.22° Azm - TL 12591' TVD @ 0' VS w/90° Inc									
12,900.00	90.00	358.22	12,591.00	513.68	-15.94	513.93	0.00	0.00	0.00
13,000.00	90.00	358.22	12,591.00	613.63	-19.04	613.93	0.00	0.00	0.00
13,100.00	90.00	358.22	12,591.00	713.59	-22.15	713.93	0.00	0.00	0.00
13,200.00	90.00	358.22	12,591.00	813.54	-25.25	813.93	0.00	0.00	0.00
13,300.00	90.00	358.22	12,591.00	913.49	-28.35	913.93	0.00	0.00	0.00
13,400.00	90.00	358.22	12,591.00	1,013.44	-31.45	1,013.93	0.00	0.00	0.00
13,500.00	90.00	358.22	12,591.00	1,113.39	-34.55	1,113.93	0.00	0.00	0.00
13,600.00	90.00	358.22	12,591.00	1,213.35	-37.65	1,213.93	0.00	0.00	0.00
13,700.00	90.00	358.22	12,591.00	1,313.30	-40.76	1,313.93	0.00	0.00	0.00
13,800.00	90.00	358.22	12,591.00	1,413.25	-43.86	1,413.93	0.00	0.00	0.00
13,900.00	90.00	358.22	12,591.00	1,513.20	-46.96	1,513.93	0.00	0.00	0.00
14,000.00	90.00	358.22	12,591.00	1,613.15	-50.06	1,613.93	0.00	0.00	0.00
14,100.00	90.00	358.22	12,591.00	1,713.10	-53.16	1,713.93	0.00	0.00	0.00
14,200.00	90.00	358.22	12,591.00	1,813.06	-56.27	1,813.93	0.00	0.00	0.00
14,300.00	90.00	358.22	12,591.00	1,913.01	-59.37	1,913.93	0.00	0.00	0.00
14,400.00	90.00	358.22	12,591.00	2,012.96	-62.47	2,013.93	0.00	0.00	0.00
14,500.00	90.00	358.22	12,591.00	2,112.91	-65.57	2,113.93	0.00	0.00	0.00
14,600.00	90.00	358.22	12,591.00	2,212.86	-68.67	2,213.93	0.00	0.00	0.00
14,700.00	90.00	358.22	12,591.00	2,312.82	-71.78	2,313.93	0.00	0.00	0.00
14,800.00	90.00	358.22	12,591.00	2,412.77	-74.88	2,413.93	0.00	0.00	0.00
14,900.00	90.00	358.22	12,591.00	2,512.72	-77.98	2,513.93	0.00	0.00	0.00
15,000.00	90.00	358.22	12,591.00	2,612.67	-81.08	2,613.93	0.00	0.00	0.00
15,100.00	90.00	358.22	12,591.00	2,712.62	-84.18	2,713.93	0.00	0.00	0.00
15,200.00	90.00	358.22	12,591.00	2,812.58	-87.28	2,813.93	0.00	0.00	0.00
15,300.00	90.00	358.22	12,591.00	2,912.53	-90.39	2,913.93	0.00	0.00	0.00
15,400.00	90.00	358.22	12,591.00	3,012.48	-93.49	3,013.93	0.00	0.00	0.00
15,500.00	90.00	358.22	12,591.00	3,112.43	-96.59	3,113.93	0.00	0.00	0.00
15,600.00	90.00	358.22	12,591.00	3,212.38	-99.69	3,213.93	0.00	0.00	0.00
15,700.00	90.00	358.22	12,591.00	3,312.34	-102.79	3,313.93	0.00	0.00	0.00
15,800.00	90.00	358.22	12,591.00	3,412.29	-105.90	3,413.93	0.00	0.00	0.00
15,900.00	90.00	358.22	12,591.00	3,512.24	-109.00	3,513.93	0.00	0.00	0.00
16,000.00	90.00	358.22	12,591.00	3,612.19	-112.10	3,613.93	0.00	0.00	0.00
16,100.00	90.00	358.22	12,591.00	3,712.14	-115.20	3,713.93	0.00	0.00	0.00
16,200.00	90.00	358.22	12,591.00	3,812.09	-118.30	3,813.93	0.00	0.00	0.00
16,300.00	90.00	358.22	12,591.00	3,912.05	-121.41	3,913.93	0.00	0.00	0.00
16,400.00	90.00	358.22	12,591.00	4,012.00	-124.51	4,013.93	0.00	0.00	0.00
16,500.00	90.00	358.22	12,591.00	4,111.95	-127.61	4,113.93	0.00	0.00	0.00
16,600.00	90.00	358.22	12,591.00	4,211.90	-130.71	4,213.93	0.00	0.00	0.00
16,700.00	90.00	358.22	12,591.00	4,311.85	-133.81	4,313.93	0.00	0.00	0.00

Database:	GCR DB	**Local Co-ordinate Reference:**	Well #2H
Company:	Chevron	**TVD Reference:**	KB @ 3202.50usft (Ensign 153)
Project:	Lea County NM (NAD27 NME)	**MD Reference:**	KB @ 3202.50usft (Ensign 153)
Site:	Talco 9-26-35	**North Reference:**	Grid
Well:	#2H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	WB1		
Design:	Plan #1 07-10-14		

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)
16,800.00	90.00	358.22	12,591.00	4,411.81	-136.91	4,413.93	0.00	0.00	0.00
16,900.00	90.00	358.22	12,591.00	4,511.76	-140.02	4,513.93	0.00	0.00	0.00
17,000.00	90.00	358.22	12,591.00	4,611.71	-143.12	4,613.93	0.00	0.00	0.00
17,100.00	90.00	358.22	12,591.00	4,711.66	-146.22	4,713.93	0.00	0.00	0.00
17,157.37	90.00	358.22	12,591.00	4,769.00	-148.00	4,771.30	0.00	0.00	0.00
TD at 17157.37' MD - LTP-Talco 25-25-35 #1H v2 - PBHL-Talco 25-25-35 #1H v2 - PBHL-Talco 9-26-35 #2H									

Design Targets

Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
LTP-Talco 9-26-35 #2H - plan hits target center - Point	0.00	0.00	12,400.75	96.00	-2.98	383,729.00	798,622.02	32° 3' 4.75785 N	103° 22' 10.20983 W
PBHL-Talco 9-26-35 #2H - plan hits target center - Point	0.00	0.01	12,591.00	4,769.00	-148.00	388,402.00	798,477.00	32° 3' 51.01113 N	103° 22' 11.41005 W

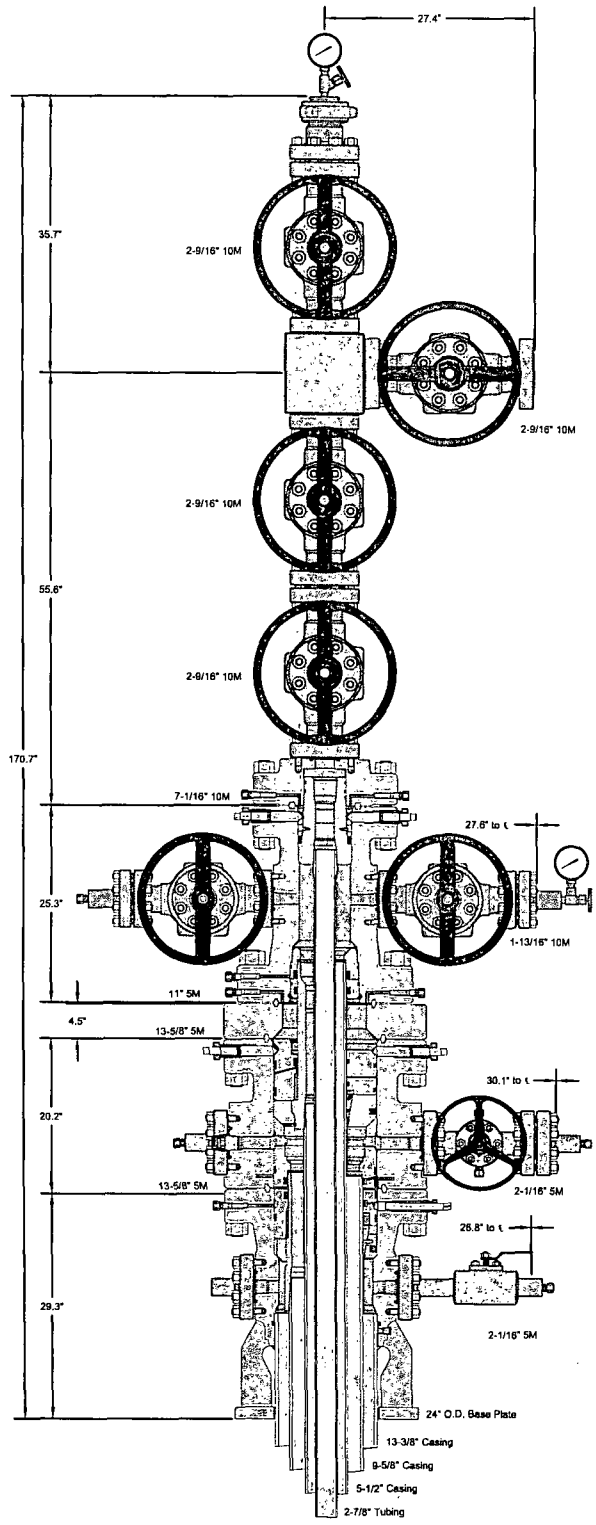
Formations

Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
12,863.54	12,591.00	TL 12591' TVD @ 0' VS w/90° Inc		0.00	31.33

Plan Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates +N/-S (usft)	Local Coordinates +E/-W (usft)	Comment
12,113.54	12,113.54	0.00	0.00	KOP, 12°/100' Build
12,863.54	12,591.00	477.24	-14.81	LP, Hold 90° Inc, 358.22° Azm
17,157.37	12,591.00	4,769.00	-148.00	TD at 17157.37' MD

GE Oil & Gas



CHEVRON USA, INC.
DELAWARE BASIN

13-3/8" x 9-5/8" x 5-1/2" x 2-7/8" 10M SH2/Conventional Wellhead Assembly, With DSA, T-EBS-F Tubing Head, T-EN Tubing Hanger and A5PEN Adapter Flange

DRAWN	VJK	19MAR13
APPRV	KN	19MAR13

FOR REFERENCE ONLY
DRAWING NO. AE23705

BLOWOUT PREVENTOR SCHEMATIC

Minimum Requirements

OPERATION : Intermediate and Production Hole Sections

Minimum System Pressure Rating : **5,000 psi**

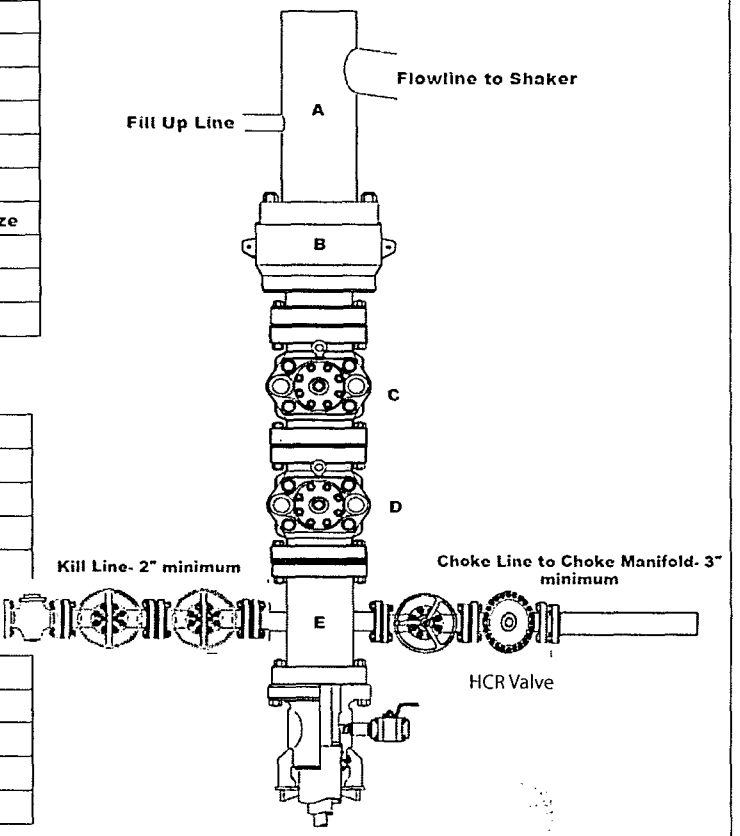
	SIZE	PRESSURE	DESCRIPTION
A		N/A	Bell Nipple
B	13 5/8"	5,000 psi	Annular
C	13 5/8"	5,000 psi	Pipe Ram
D	13 5/8"	5,000 psi	Blind Ram
E	13 5/8"	5,000 psi	Mud Cross
F			
DSA		As required for each hole size	
C-Sec			
B-Sec		13-5/8" 5K x 11" 5K	
A-Sec		13-3/8" SOW x 13-5/8" 5K	

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 item 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 though flow.**
- ☐ **The kill line and choke line will be straight unless turns use tee blocks or are targeted with running tess, and will be anchored to prevent whip and reduce vibration.**
- ☐ **Manual (hand wheels) or automatic locking devices will be installed on all ram preventers. 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 preventer 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

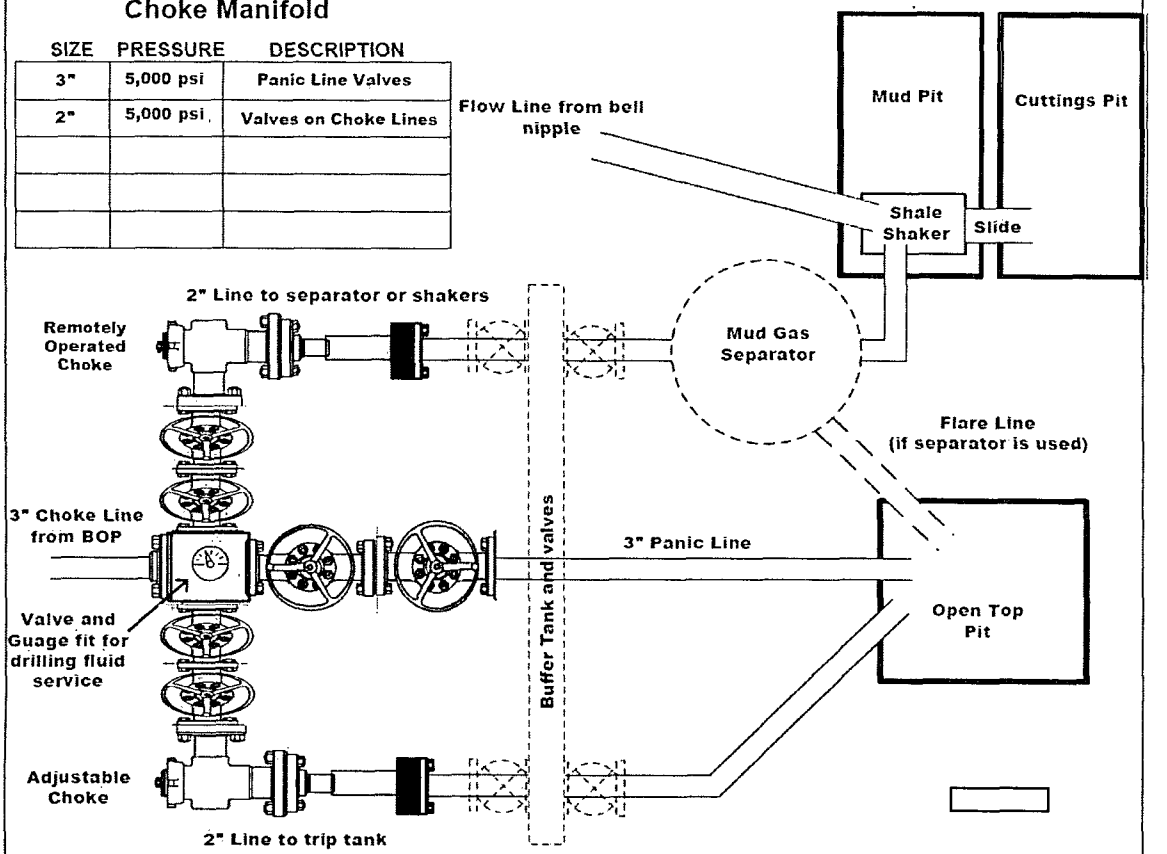
Minimum Requirements

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 item 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 tess, 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. 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.**

☐ **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 ckecked 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 held 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 any/all BOP and accumulator test charts and reports from 3rd parties.

Wellname: _____

Representative: _____

Date: _____

A Tomkins Company

Robsco, Inc.
OILFIELD RUBBER PRODUCTS
4749 Eastpark Drive
Houston, TX 77028
United States of America

Gates Corporation Authorized Rotary and Vibrator Hose Subcontracted Fabricator

Hydrostatic Test Certification

Robsco, Inc. certifies that the following hose assembly has been tested to the Gates Oilfield Roughneck Agreement/Specification requirements and passed the hydrostatic test per API Spec 7K, Fifth Edition, June 2010, Test pressure 9.6.7 and per Table 9 to 15,000 psi in accordance with this product number. Hose burst pressure 9.6.7.2 exceeds the minimum of 2.25 times the working pressure per Table 9.

Assembly Part Number	**Serial Number / Date Code**
36332R3-1/16HUB10K-LL-L	L32461102512R112712-5

		Chart Recorder Information	
Hose Size	**Testers**	**Serial Number**	**Calibration Date**
3.5IN X 32FT	OC CS	Recorder 22349	Oct. 19th 2012

Lloyd's Register Type Approved for Fire Test OD/1000/499 Rev 1

Hydrostatic Test: **Passed**
Visual Inspection: **Passed**

QA Representative Signature

11/28/2012 RS
Date & Initial

Shipper:
GHX - Robsco, Inc.
4749 Eastpark Drive

Houston, TX 77028
Rufus Dominguez 713-672-1777

Shipment Reference: 9415989
Consignee Reference: 491394-156JR
Total Weight: 1687
Total Shipment Pieces: 1

Label 1 of 1

Saia, Inc.
853-1923-A
11/29/2012

Special Instruction

DO NOT STAND CRATES ON END!!!!

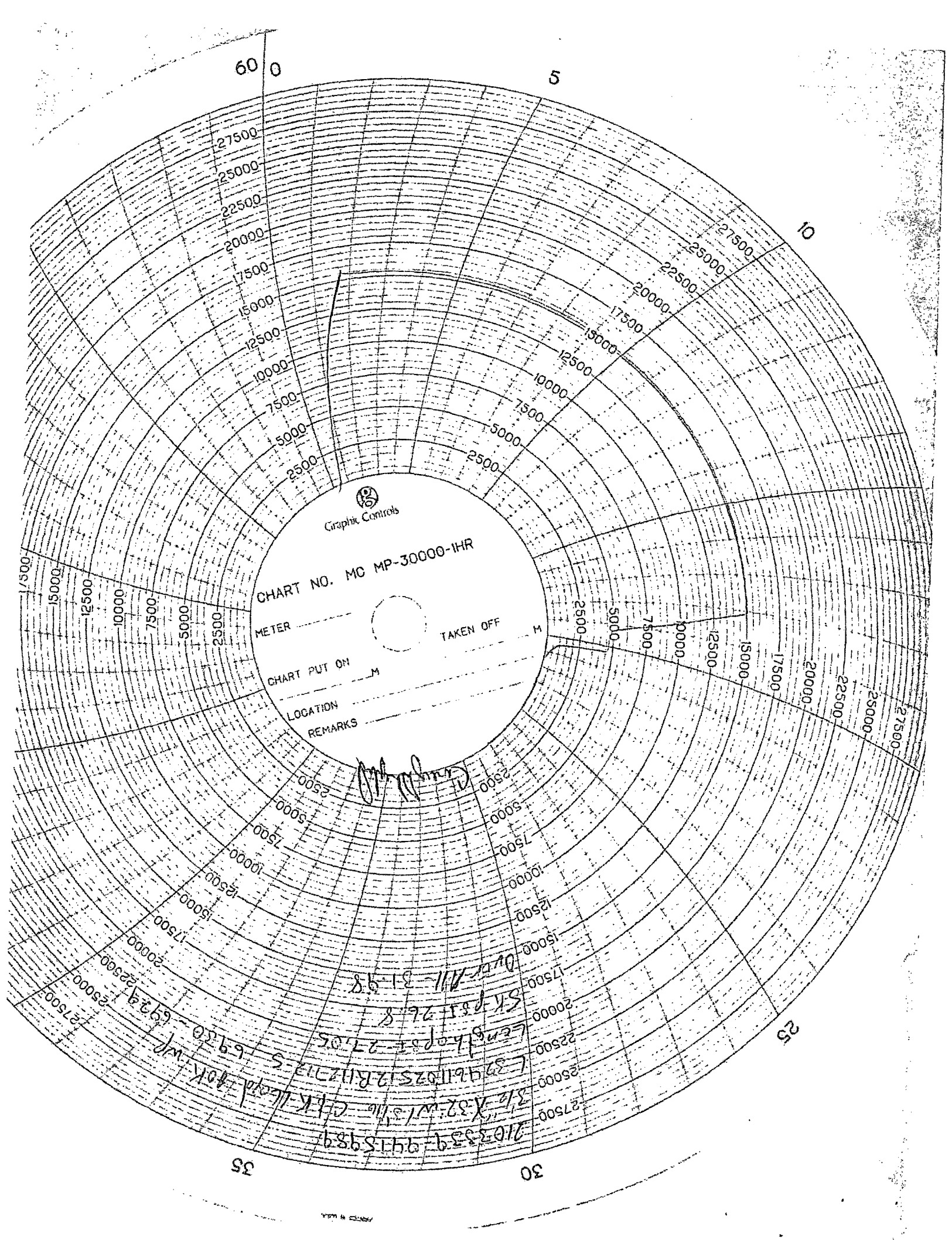
DIM Weight: 1105
qty: 1 (88 x 84 x 29)

00608423360 2

TOTAL SERVICE SUPPLY LP
1620 VICEROY

ODESSA, TX 79763
ATTN: BRUCE

(Fold Sheet Here)


Graphic Controls
CHART NO. MC MP-30000-1HR
METER
TAKEN OFF
M
CHART PUT ON
M
LOCATION
REMARKS