

HOBBBS OGD
DEC 04 2013

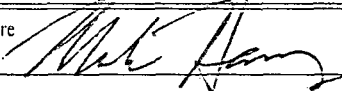
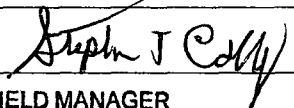
Operator Copy

FORM APPROVED
OMB No. 1004-0137
Expires October 31, 2014RECEIVED
UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
APPLICATION FOR PERMIT TO DRILL OR REENTER

1a. Type of work: ☒ DRILL ☐ REENTER		5. Lease Serial No. NMNM114984
1b. Type of Well: ☒ Oil Well ☐ Gas Well ☐ Other ☐ Single Zone ☐ Multiple Zone		6. If Indian, Allottee or Tribe Name
2. Name of Operator MANZANO, LLC		7. If Unit or CA Agreement, Name and No.
3a. Address PO BOX 2107 ROSWELL, NM 88202-2107		8. Lease Name and Well No. CHILI PARLOR 17 FEDERAL - 1A
3b. Phone No. (include area code) 575-623-1996		9. API Well No. 30-025-41540
4. Location of Well (Report location clearly and in accordance with any State requirements.)* At surface 330' FSL & 2200' FEL - SECTION 17 - T22S - R33E At proposed prod. zone BHL: 330' FNL & 2200' FEL - SECTION 17-T22S-R33E		10. Field and Pool, or Exploratory RED TANK, BONE SPRING, EAST
14. Distance in miles and direction from nearest town or post office* 25 WEST OF EUNICE, NM		11. Sec., T. R. M. or Blk. and Survey or Area SECTION 17 - T22S - R33E
15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig: unit line, if any) 330'	16. No. of acres in lease 320 ACRES	17. Spacing Unit dedicated to this well 160 ACRES (W/2E2 OF SECTION 17)
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. NONE	19. Proposed Depth TVD 10860' MD 15280'	20. BLM/BIA Bond No. on file NM-2567
21. Elevations (Show whether DF, KDB, RT, GL, etc.) 3596' GL	22. Approximate date work will start* 11/01/2013	23. Estimated duration 45 DAYS
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. | 4. Bond to cover the operations unless covered by an existing bond on file (see Item 20 above). |
| 2. A Drilling Plan. | 5. Operator certification |
| 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). | 6. Such other site specific information and/or plans as may be required by the BLM. |

25. Signature 	Name (Printed/Typed) MIKE HANAGAN	Date 07/29/2013
Title MANAGING MEMBER		
Approved by (Signature) 	Name (Printed/Typed) STEPHEN J. COLBY	Date NOV 26 2013
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.

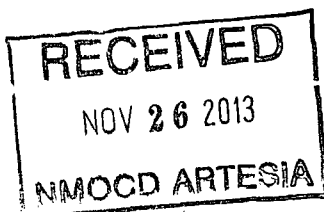
APPROVAL FOR TWO YEARS

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)

*(Instructions on page 2)

Capitan Controlled Water Basin

K2
12/09/13
Approval Subject to General Requirements
& Special Stipulations AttachedSEE ATTACHED FOR
CONDITIONS OF APPROVAL

DEC 10 2013

MANZANO, LLC
DRILLING PLAN

Chili Parlor 17 Fed #1H
 SHL: 330' FSL & 2200' FEL
 BHL: 330' FNL & 2200' FEL
 Section 17-T22S-R33E
 Lea County, New Mexico

In conjunction with Form 3160-3, Application for Permit to Drill subject well, Manzano, LLC submits the following Drilling Plan in accordance with BLM Onshore Oil and Gas Order Number 1 Section III.D.3. and BLM Onshore Oil and Gas Order Number 2 Section III.A-C.:

a. The estimated tops of geologic markers are as follows:

<u>Geologic Marker</u>	<u>Depth (TVD)</u>
Red Beds (Permian)	Surface
Rustler	970'
Top of Salt	1120'
Castile	3160'
Lamar	4875'
Delaware	4950'
Bone Spring	8705'
1 st Bone Spring Sand	9915'
2 nd Bone Spring Sand	10540'
Maximum TVD	10900'
Measured Depth @ TD	15280'

b. The estimated depths at which anticipated water, oil or gas formations are expected to be encountered:

Water	200'-500'
Oil/Gas in Delaware	8500'-8650'
Oil/Gas in Bone Springs	10825'-15280'

No other formations are expected to give up oil, gas, or fresh water in measurable quantities.

The surface fresh water sands will be protected by setting 13 3/8" casing at 1075' (~100' into the Rustler Anhydrite and below the Magenta Dolomite Marker) in a 17 1/2" hole and circulating cement back to surface. After the 13 3/8" casing is set and cemented, the hole size will be reduced to 12 1/4" and drilling will continue to a depth of ~~4900'~~ 4900'. The salt sections will be isolated by setting 9 5/8" casing to ~~4900'~~ and circulating cement back to surface.

The 9 5/8" casing will be drilled out with a 8 3/4" bit and drilled to a kick off point at 10382' tvd. At that point, directional drilling tools will be installed and the well will be "kicked off" and drilled at a rate of 12 degree's of angle per 100' of depth to a Target Depth of 10,860'TVD/11132'MD in the 2nd Bone Spring Sand. Once the curve has been landed at 90 degree's, the hole size will be reduced to 7.875" and the lateral will be drilled across the section from south to north with an anticipated TVD of 10,860' and an expected measured depth of 15,280' at TD.

Upon reaching Total Depth, 5 1/2" production casing with centralizers on every joint from TD to ~10300' (TD-Top of curve) will be run and cement will be circulated to surface.

c. Minimum Specifications for Pressure Control:

All blowout preventer and related equipment shall comply with well control requirements as described in Onshore Oil and Gas Order No. 2 Section III.A.2.a-h and API RP 53 section 17.

See COA

A 13 5/8" x 2000# Annular system (see Drilling Plan-Exhibit 1) with a 2000# choke manifold (see Drilling Plan-Exhibit 2) will be installed after running the 13 3/8" casing and tested as per Onshore Oil and Gas Order No. 2 Section III.A.2.i-i-xi by an independent tester. A 11" x 3000# Double Ram BOP (see Drilling Plan-Exhibit 3) and a 3000# Annular (see Drilling Plan-Exhibit 4) will be installed after running the 9 5/8" casing and tested as per Onshore Oil and Gas Order No. 2 Section III.A.2.i-i-xi by an independent tester.

Pressure tests will be conducted prior to drilling out all casing strings. The BLM shall be notified a minimum of 4 hours in advance of such tests with the results of each test reported to the BLM.

BOPE will be inspected and operated as recommended in Onshore Order #2 Section III.A.2.a-i.

Pipe rams will be operationally checked each 24 hour period. Blind rams will be operationally checked on each trip out of the hole. These checks will be noted on the daily tour sheets. Other accessories to the BOP equipment will include; (a) a Kelly cock will be in the drill string at all times, a full opening drill pipe stabbing valve with the appropriate connections will be on the rig floor at all times, choke lines and choke manifold with the appropriate WP rating.

- d. Proposed Casing Program:** The proposed casing program was designed in accordance with Onshore Oil and Gas Order No.1Section III.D.3.d and Onshore Oil and Gas Order No.2 Section III.B. All casing is new and API approved.

Hole Size	Hole Interval	Casing Size	Wt./Ft.	Grade & Coupling	Length
17 1/2"	0-1075'	13 3/8"	54.50#	J-55 ST&C	1075'
12 1/4"	1075'-4900'	9 5/8"	40.00#	J-55 LT&C	4900'
8 3/4"	4900'-11132'	5 1/2"	17.00#	P-110 LT&C	11132'
7 7/8"	11132'-15280'	5 1/2"	17.00#	P-110 LT & C	4148'

See COA

Minimum casing design factors: Collapse of 1.125, Burst of 1.125 and tensile strength of 1.6.

- e. **Proposed Cement Program:** The proposed cementing program has been designed in accordance with Onshore Oil and Gas Order No.1 Section III.D.3.e and Onshore Oil and Gas Order No.2 Section III.B.

13 3/8" surface casing at 1075' : 500 sx Class "C" w/4% gel + 2% CaCl₂ + 0.125#/sk Cello Flake (yield = 2.15 cuft/sk, weight = 12.5 PPG). Tail in w/250 sx Class "C" w/2% CaCl₂ (yield = 1.34 cuft/sk, weight = 14.8 PPG) Using 100 % excess. Cement circulated to surface.

9 5/8" intermediate casing at 4900' : 1100 sx EconoCem C w/5# sk Kol-Seal + 0.25 #/sk Poly-E-Flake + 3% Salt (yield = 2.07 cuft/sk, weight = 12.5 PPG). Tail in w/300 sx HalCem-C Neat (yield = 1.33 cuft/sk, weight = 14.8 PPG). Using 100% excess in open hole + 50% excess inside 13 3/8". Cement circulated to surface

See COA
5 1/2" production casing at 15275 (MD): 1500 sx EconoCem H w/0.5% Halad-332 + 0.25 #/sk D-AIR 5000 + 0.20% HR-601 (yield = 2.29, weight = 11.9 PPG). Tail w/750 sx VersaCem-H w/0.5% Halad-344 + 0.4% CFR-3 + 1 #/sk Salt + 0.1% HR-601 (yield @ 1.28 cuft/sk, weight = 14.2 PPG). Using 100 % excess in open hole + 50% excess inside 9 5/8". Cement circulated to surface.

The above cement volumes could be revised pending the caliper measurement from the open hole logs and using fluid calipers to calculate cement volumes.

- f. **Mud Program:** The proposed mud program has been designed in accordance with Onshore Oil and Gas Order No.1 Section III.D.3.f and Onshore Oil and Gas Order No.2 Section III.C.1-7. The applicable depths and properties of this system are as follows:

See COA

Depth	Type System	Weight(lb/gal)	Viscosity	Water Loss
0-1075' <i>4800</i>	fresh water gel	8.4-8.9	32-34	No control
1075'-4900'	Brine	9.5-10.0	28-29	No control
4900'-15275'	Fresh water gel	8.4-9.1	28-36	15 cc

The necessary mud products for weight addition and fluid loss control will be on location at all times.

Visual mud monitoring equipment will be in place to detect volume changes indicating loss or gain of circulating fluid volume. Visual pit level monitors and audible alarms will be utilized and will be available to the control room and the supervisors. Mud properties will be monitored daily and reported on the automatic monitoring system. Although no abnormal pressures are expected, a mud-gas separator will be rigged up and functional prior to drilling out the 13 3/8" shoe.

g. Testing, Logging and Coring Program:

1. No drill stem test are planned
2. 10' samples from 4900' to TD.
3. A mud log will be run from the top of the Delaware to TD.
4. A gyro will be run from surface to the kick-off point & a Gamma Ray log will be run from the kick-off point to TD.
5. A cased hole Gamma Ray-Neutron log will be run from surface to the Kick-off point after the 5.5" production casing has been set and cemented.

h. Downhole Conditions, Estimated BHP & Potential Hazards:

From: 0' -1075' – No abnormal downhole conditions. Est. BHP 535 PSI

From: 1075'-4900' – Possible salt water flows. Est BHP 2450 PSI

From: 4900'-15280' – Oil and Gas shows. Est BHP – 5450 PSI

BHT is estimated at <165 degrees F.

1. No abnormal pressures or temperatures are expected. H2S has sometimes been detected in the Delaware and Bone Spring zones in this area during drilling. Hydrogen sulfide detection equipment will be in operation after drilling out the 13 3/8" casing shoe @ 1075' until production casing has been set and cemented at total depth (see attached Hydrogen Sulfide Drilling Operations Plan). The rig will be equipped with H2S monitors, H2S warning signs and pit monitors. Wind socks will indicate wind direction. If H2S is encountered the operator will comply with the provisions of Onshore Oil and Gas Order No. 6. All personnel will be familiar with all aspects of safe operation of equipment being used to drill this well. Estimated maximum BHP: 5450 psi. Estimated BHT: <165°.

*See
CWA*

i. Anticipated Starting Date and Duration of Operations:

1. Road and location construction will begin after the receipt of an approved APD from the BLM. The anticipated spud date will be as soon as an acceptable drilling rig can be contracted after receipt of the approved APD from the BLM. As this lease is subject to timing limitation stipulations associated with the lesser prairie chicken that will likely not allow for drilling activities between March 1st to June 15th, we would ask that this APD be approved as soon as is possible so as to allow this well to be drilled and completed prior to March 1. Drilling operations are expected to take 35-50 days from rig move-in to rig move-out and completion operations will require another 30-45 days.
2. Drilling Plan-Exhibit 5 is a directional well plan for this well.



Weatherford[®]

Drilling Services

Proposal

MANZANO LLC

CHILI PARLOR FEDERAL #1H

LEA CO, NM

WELL FILE: **PLAN 1**

JULY 28, 2013

Weatherford International, Ltd.

P.O. Box 61028

Midland, TX 79711 USA

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www.weatherford.com

Drilling Plan - Exhibit 5

Manzano, LLC
Chili Parlor 17 Fed #1H
Lea County, New Mexico

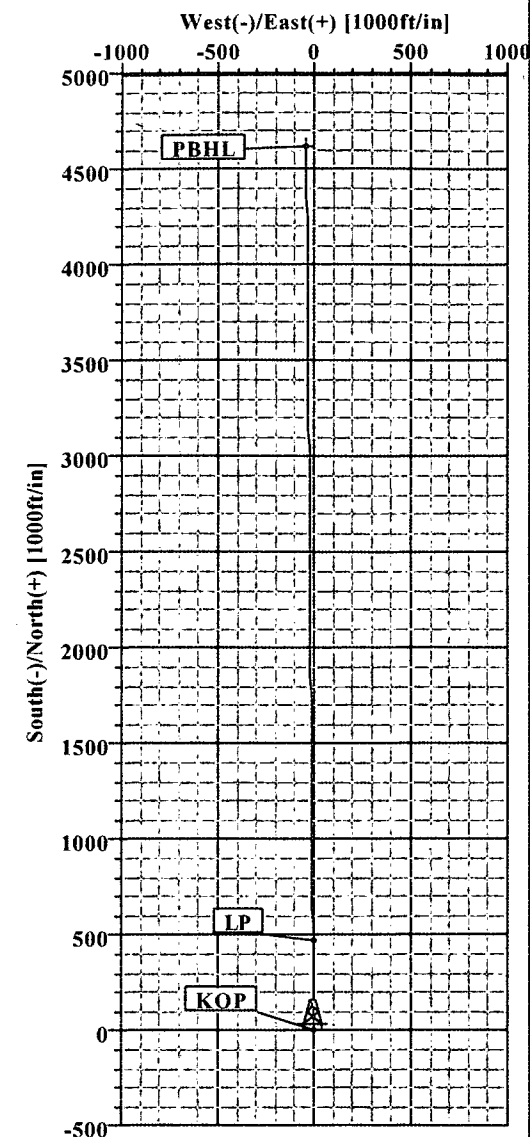
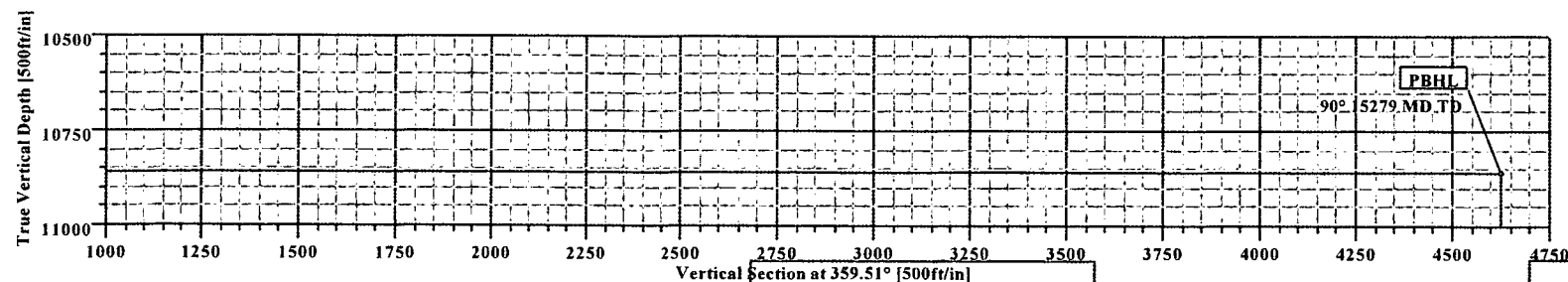
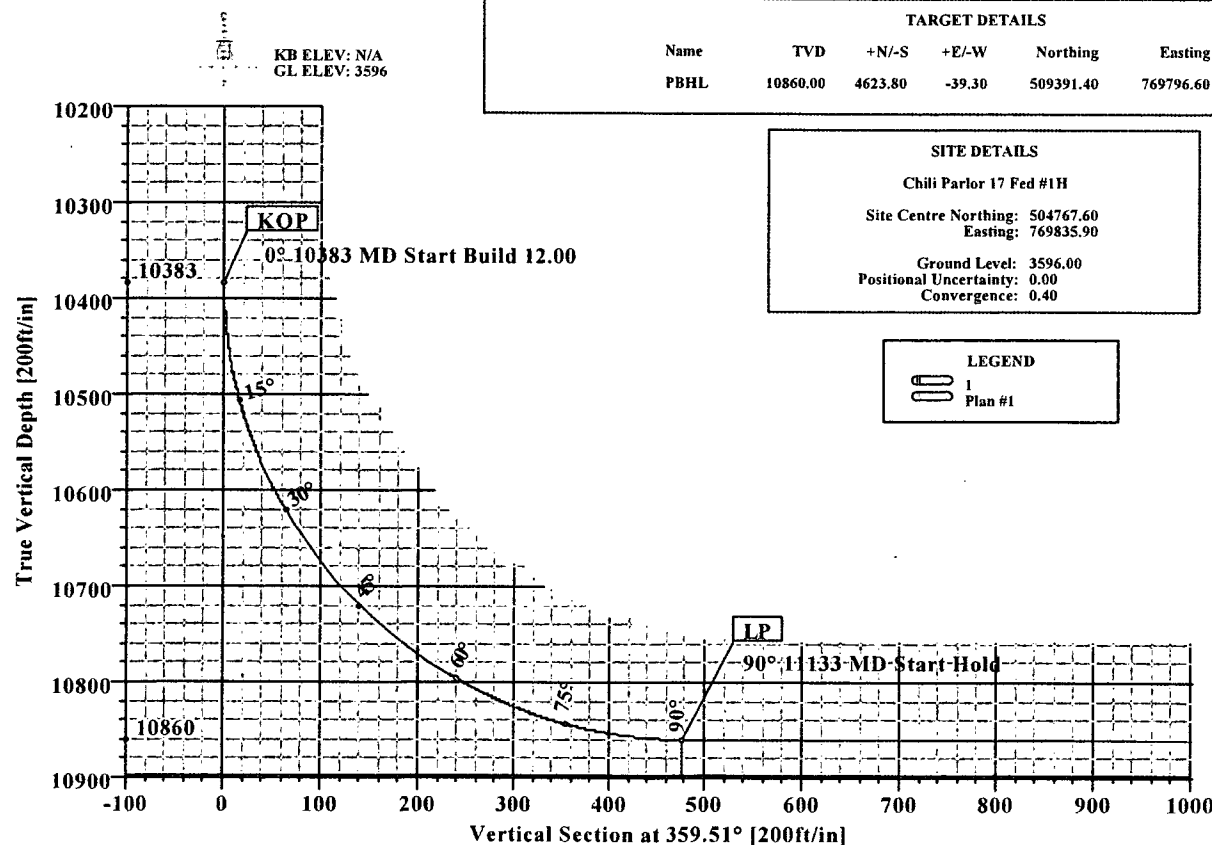
SECTION DETAILS										
Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSec	Target
1	0.00	0.00	359.51	0.00	0.00	0.00	0.00	0.00	0.00	
2	10382.54	0.00	359.51	10382.54	0.00	0.00	0.00	0.00	0.00	
3	11132.54	90.00	359.51	10860.00	477.45	-4.06	12.00	359.51	477.46	
4	15279.04	90.00	359.51	10860.00	4623.80	-39.30	0.00	0.00	4623.97	PBHL

WELL DETAILS								
Name	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot	
Chili Parlor 17 Fed #1H	0.00	0.00	504767.60	769835.90	32°23'07.796N	103°35'35.208W	N/A	

TARGET DETAILS							
Name	TVD	+N/-S	+E/-W	Northing	Easting	Shape	
PBHL	10860.00	4623.80	-39.30	509391.40	769796.60	Point	

SITE DETAILS	
Chili Parlor 17 Fed #1H	
Site Centre Northing:	504767.60
Easting:	769835.90
Ground Level:	3596.00
Positional Uncertainty:	0.00
Convergence:	0.40

LEGEND	
	1
	Plan #1



Weatherford International Ltd.

WFT Plan Report - X & Y's



Weatherford

Company: Manzano LLC	Date: 7/26/2013	Time: 23:21:04	Page: 1
Field: Lea Co., NM (NAD 83)	Co-ordinate(NE) Reference:	Site: Chili Parlor 17 Fed #1H, Grid Nort	
Site: Chili Parlor 17 Fed #1H	Vertical (TVD) Reference:	SITE 3596.0	
Well: Chili Parlor 17 Fed #1H	Section (VS) Reference:	Well (0.00N,0.00E,359.51Azi)	
Wellpath: 1	Survey Calculation Method:	Minimum Curvature	Db: Sybase

Plan: Plan #1	Date Composed: 7/26/2013
Principal: Yes	Version: 1
	Tied-to: From Surface

Site: Chili Parlor 17 Fed #1H

Site Position:	Northing: 504767.60 ft	Latitude: 32 23 7.796 N
From: Map	Easting: 769835.90 ft	Longitude: 103 35 35.208 W
Position Uncertainty: 0.00 ft		North Reference: Grid
Ground Level: 3596.00 ft		Grid Convergence: 0.40 deg

Well: Chili Parlor 17 Fed #1H	Slot Name:
Well Position: +N/-S 0.00 ft	Northing: 504767.60 ft
+E/-W 0.00 ft	Easting: 769835.90 ft
Position Uncertainty: 0.00 ft	Latitude: 32 23 7.796 N
	Longitude: 103 35 35.208 W

Wellpath: 1	Drilled From: Surface
Current Datum: SITE	Tie-on Depth: 0.00 ft
Magnetic Data: 10/1/2013	Above System Datum: Mean Sea Level
Field Strength: 48507 nT	Declination: 7.33 deg
Vertical Section: Depth From (TVD)	Mag Dip Angle: 60.28 deg
ft	+E/-W
	ft
	Direction
	deg
10860.00	0.00
	0.00
	359.51

Plan Section Information

MD ft	Incl deg	Azim deg	TVD ft	+N/-S ft	+E/-W ft	DLS deg/100ft	Build deg/100ft	Turn deg/100ft	TFO deg	Target
0.00	0.00	359.51	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
10382.54	0.00	359.51	10382.54	0.00	0.00	0.00	0.00	0.00	0.00	
11132.54	90.00	359.51	10860.00	477.45	-4.06	12.00	12.00	0.00	359.51	
15279.04	90.00	359.51	10860.00	4623.80	-39.30	0.00	0.00	0.00	0.00	PBHL

Survey

MD ft	Incl deg	Azim deg	TVD ft	N/S ft	E/W ft	VS ft	DLS deg/100ft	MapN ft	MapE ft	Comment
10300.00	0.00	359.51	10300.00	0.00	0.00	0.00	0.00	504767.60	769835.90	
10382.54	0.00	359.51	10382.54	0.00	0.00	0.00	0.00	504767.60	769835.90	KOP
10400.00	2.10	359.51	10400.00	0.32	0.00	0.32	12.00	504767.92	769835.90	
10425.00	5.10	359.51	10424.94	1.89	-0.02	1.89	12.00	504769.49	769835.88	
10450.00	8.10	359.51	10449.78	4.76	-0.04	4.76	12.00	504772.36	769835.86	
10475.00	11.10	359.51	10474.42	8.93	-0.08	8.93	12.00	504776.53	769835.82	
10500.00	14.10	359.51	10498.82	14.38	-0.12	14.38	12.00	504781.98	769835.78	
10525.00	17.10	359.51	10522.90	21.10	-0.18	21.10	12.00	504788.70	769835.72	
10550.00	20.10	359.51	10546.59	29.07	-0.25	29.07	12.00	504796.67	769835.65	
10575.00	23.10	359.51	10569.83	38.27	-0.33	38.27	12.00	504805.87	769835.57	
10600.00	26.10	359.51	10592.56	48.67	-0.41	48.67	12.00	504816.27	769835.49	
10625.00	29.10	359.51	10614.71	60.25	-0.51	60.25	12.00	504827.85	769835.39	
10650.00	32.10	359.51	10636.23	72.97	-0.62	72.98	12.00	504840.57	769835.28	
10675.00	35.10	359.51	10657.05	86.80	-0.74	86.81	12.00	504854.40	769835.16	
10700.00	38.10	359.51	10677.12	101.71	-0.86	101.71	12.00	504869.31	769835.04	
10725.00	41.10	359.51	10696.38	117.64	-1.00	117.64	12.00	504885.24	769834.90	
10750.00	44.10	359.51	10714.78	134.56	-1.14	134.56	12.00	504902.16	769834.76	
10775.00	47.10	359.51	10732.27	152.41	-1.30	152.42	12.00	504920.01	769834.60	
10800.00	50.10	359.51	10748.81	171.16	-1.45	171.17	12.00	504938.76	769834.45	
10825.00	53.10	359.51	10764.34	190.75	-1.62	190.76	12.00	504958.35	769834.28	
10850.00	56.10	359.51	10778.82	211.12	-1.79	211.13	12.00	504978.72	769834.11	
10875.00	59.10	359.51	10792.21	232.23	-1.97	232.24	12.00	504999.83	769833.93	
10900.00	62.10	359.51	10804.49	254.00	-2.16	254.01	12.00	505021.60	769833.74	

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WFT Plan Report - X & Y's



Weatherford

Company: Manzano LLC
Field: Lea Co., NM (NAD 83)
Site: Chili Parlor 17 Fed #1H
Well: Chili Parlor 17 Fed #1H
Wellpath: 1

Date: 7/26/2013 Time: 23:21:04 Page: 2
Co-ordinate(NE) Reference: Site: Chili Parlor 17 Fed #1H, Grid Nort
Vertical (TVD) Reference: SITE 3596.0
Section (VS) Reference: Well (0.00N,0.00E,359.51Azi)
Survey Calculation Method: Minimum Curvature Db: Sybase

Survey

MD ft	Incl deg	Azim deg	TVD ft	N/S ft	E/W ft	VS ft	DLS deg/100ft	MapN ft	MapE ft	Comment
10925.00	65.10	359.51	10815.60	276.39	-2.35	276.40	12.00	505043.99	769833.55	
10950.00	68.10	359.51	10825.53	299.33	-2.54	299.34	12.00	505066.93	769833.36	
10975.00	71.10	359.51	10834.25	322.76	-2.74	322.77	12.00	505090.36	769833.16	
11000.00	74.10	359.51	10841.72	346.61	-2.95	346.63	12.00	505114.21	769832.95	
11025.00	77.10	359.51	10847.94	370.82	-3.15	370.84	12.00	505138.42	769832.75	
11050.00	80.10	359.51	10852.88	395.33	-3.36	395.34	12.00	505162.93	769832.54	
11075.00	83.10	359.51	10856.54	420.05	-3.57	420.07	12.00	505187.65	769832.33	
11100.00	86.10	359.51	10858.89	444.94	-3.78	444.95	12.00	505212.54	769832.12	
11125.00	89.10	359.51	10859.94	469.91	-3.99	469.93	12.00	505237.51	769831.91	
11132.54	90.00	359.51	10860.00	477.45	-4.06	477.46	12.00	505245.05	769831.84	LP
11200.00	90.00	359.51	10860.00	544.91	-4.63	544.93	0.00	505312.51	769831.27	
11300.00	90.00	359.51	10860.00	644.91	-5.48	644.93	0.00	505412.51	769830.42	
11400.00	90.00	359.51	10860.00	744.90	-6.33	744.93	0.00	505512.50	769829.57	
11500.00	90.00	359.51	10860.00	844.90	-7.18	844.93	0.00	505612.50	769828.72	
11600.00	90.00	359.51	10860.00	944.90	-8.03	944.93	0.00	505712.50	769827.87	
11700.00	90.00	359.51	10860.00	1044.89	-8.88	1044.93	0.00	505812.49	769827.02	
11800.00	90.00	359.51	10860.00	1144.89	-9.73	1144.93	0.00	505912.49	769826.17	
11900.00	90.00	359.51	10860.00	1244.88	-10.58	1244.93	0.00	506012.48	769825.32	
12000.00	90.00	359.51	10860.00	1344.88	-11.43	1344.93	0.00	506112.48	769824.47	
12100.00	90.00	359.51	10860.00	1444.88	-12.28	1444.93	0.00	506212.48	769823.62	
12200.00	90.00	359.51	10860.00	1544.87	-13.13	1544.93	0.00	506312.47	769822.77	
12300.00	90.00	359.51	10860.00	1644.87	-13.98	1644.93	0.00	506412.47	769821.92	
12400.00	90.00	359.51	10860.00	1744.87	-14.83	1744.93	0.00	506512.47	769821.07	
12500.00	90.00	359.51	10860.00	1844.86	-15.68	1844.93	0.00	506612.46	769820.22	
12600.00	90.00	359.51	10860.00	1944.86	-16.53	1944.93	0.00	506712.46	769819.37	
12700.00	90.00	359.51	10860.00	2044.86	-17.38	2044.93	0.00	506812.46	769818.52	
12800.00	90.00	359.51	10860.00	2144.85	-18.23	2144.93	0.00	506912.45	769817.67	
12900.00	90.00	359.51	10860.00	2244.85	-19.08	2244.93	0.00	507012.45	769816.82	
13000.00	90.00	359.51	10860.00	2344.85	-19.93	2344.93	0.00	507112.45	769815.97	
13100.00	90.00	359.51	10860.00	2444.84	-20.78	2444.93	0.00	507212.44	769815.12	
13200.00	90.00	359.51	10860.00	2544.84	-21.63	2544.93	0.00	507312.44	769814.27	
13300.00	90.00	359.51	10860.00	2644.83	-22.48	2644.93	0.00	507412.43	769813.42	
13400.00	90.00	359.51	10860.00	2744.83	-23.33	2744.93	0.00	507512.43	769812.57	
13500.00	90.00	359.51	10860.00	2844.83	-24.18	2844.93	0.00	507612.43	769811.72	
13600.00	90.00	359.51	10860.00	2944.82	-25.03	2944.93	0.00	507712.42	769810.87	
13700.00	90.00	359.51	10860.00	3044.82	-25.88	3044.93	0.00	507812.42	769810.02	
13800.00	90.00	359.51	10860.00	3144.82	-26.73	3144.93	0.00	507912.42	769809.17	
13900.00	90.00	359.51	10860.00	3244.81	-27.58	3244.93	0.00	508012.41	769808.32	
14000.00	90.00	359.51	10860.00	3344.81	-28.43	3344.93	0.00	508112.41	769807.47	
14100.00	90.00	359.51	10860.00	3444.81	-29.28	3444.93	0.00	508212.41	769806.62	
14200.00	90.00	359.51	10860.00	3544.80	-30.13	3544.93	0.00	508312.40	769805.77	
14300.00	90.00	359.51	10860.00	3644.80	-30.98	3644.93	0.00	508412.40	769804.92	
14400.00	90.00	359.51	10860.00	3744.79	-31.83	3744.93	0.00	508512.39	769804.07	
14500.00	90.00	359.51	10860.00	3844.79	-32.68	3844.93	0.00	508612.39	769803.22	
14600.00	90.00	359.51	10860.00	3944.79	-33.53	3944.93	0.00	508712.39	769802.37	
14700.00	90.00	359.51	10860.00	4044.78	-34.38	4044.93	0.00	508812.38	769801.52	
14800.00	90.00	359.51	10860.00	4144.78	-35.23	4144.93	0.00	508912.38	769800.67	
14900.00	90.00	359.51	10860.00	4244.78	-36.08	4244.93	0.00	509012.38	769799.82	
15000.00	90.00	359.51	10860.00	4344.77	-36.93	4344.93	0.00	509112.37	769798.97	
15100.00	90.00	359.51	10860.00	4444.77	-37.78	4444.93	0.00	509212.37	769798.12	
15200.00	90.00	359.51	10860.00	4544.77	-38.63	4544.93	0.00	509312.37	769797.27	
15279.04	90.00	359.51	10860.00	4623.80	-39.30	4623.97	0.00	509391.40	769796.60	PBHL

Weatherford International Ltd.

WFT Plan Report - X & Y's



Weatherford

Company: Manzano LLC	Date: 7/26/2013	Time: 23:21:04	Page: 3
Field: Lea Co., NM (NAD 83)	Co-ordinate(NE) Reference:	Site: Chili Parlor 17 Fed #1H, Grid Nort	
Site: Chili Parlor 17 Fed #1H	Vertical (TVD) Reference:	SITE 3596.0	
Well: Chili Parlor 17 Fed #1H	Section (VS) Reference:	Well (0.00N,0.00E,359.51Azi)	
Wellpath: 1	Survey Calculation Method:	Minimum Curvature	Db: Sybase

Targets

Name	Description Dip.	Dir.	TVD ft	+N/-S ft	+E/-W ft	Map Northing ft	Map Easting ft	<--- Latitude ---> Deg Min Sec			<--- Longitude ---> Deg Min Sec		
PBHL			10860.00	4623.80	-39.30	509391.40	769796.60	32	23	53.551 N	103	35	35.293 W

Casing Points

MD	TVD	Diameter	Hole Size	Name

Annotation

MD ft	TVD ft	
10382.54	10382.54	KOP
11132.54	10860.00	LP
15279.03	10860.00	PBHL

Formations

MD	TVD	Formations	Lithology	Dip Angle	Dip Direction

Field: Lea Co., NM (NAD 83)

Map System: US State Plane Coordinate System 1983
Geo Datum: GRS 1980
Sys Datum: Mean Sea Level

Map Zone: New Mexico, Eastern Zone
Coordinate System: Site Centre
Geomagnetic Model: IGRF2010

**Weatherford****Weatherford Drilling Services**

GeoDec v5.03

Report Date: July 26, 2013
Job Number: _____
Customer: Manzano, LLC
Well Name: Chili Parlor 17 Fed #1H
API Number: _____
Rig Name: _____
Location: Lea County, New Mexico
Block: _____
Engineer: Patrick Rudolph

US State Plane 1983	Geodetic Latitude / Longitude
System: New Mexico Eastern Zone	System: Latitude / Longitude
Projection: Transverse Mercator/Gauss Kruger	Projection: Geodetic Latitude and Longitude
Datum: North American Datum 1983	Datum: North American Datum 1983
Ellipsoid: GRS 1980	Ellipsoid: GRS 1980
North/South 504767.600 USFT	Latitude 32 23 7.8059065 DMS
East/West 769835.900 USFT	Longitude -103 35 35.1898736 DMS
Grid Convergence: .40°	
Total Correction: +7.04°	

Geodetic Location WGS84	Elevation =	0.0 Meters
Latitude =	32.38550° N	32° 23 min 7.806 sec
Longitude =	103.59311° W	103° 35 min 35.190 sec

Magnetic Declination =	7.44°	[True North Offset]
Local Gravity =	.9988 g	Checksum = 6597
Local Field Strength =	48496 nT	Magnetic Vector X = 23851 nT
Magnetic Dip =	60.26°	Magnetic Vector Y = 3113 nT
Magnetic Model =	bggm2013	Magnetic Vector Z = 42110 nT
Spud Date =	Oct 01, 2013	Magnetic Vector H = 24053 nT

Signed: _____

Date: _____

Manzano, LLC
Chili Parlor 17 Fed #1H
Lea County, New Mexico

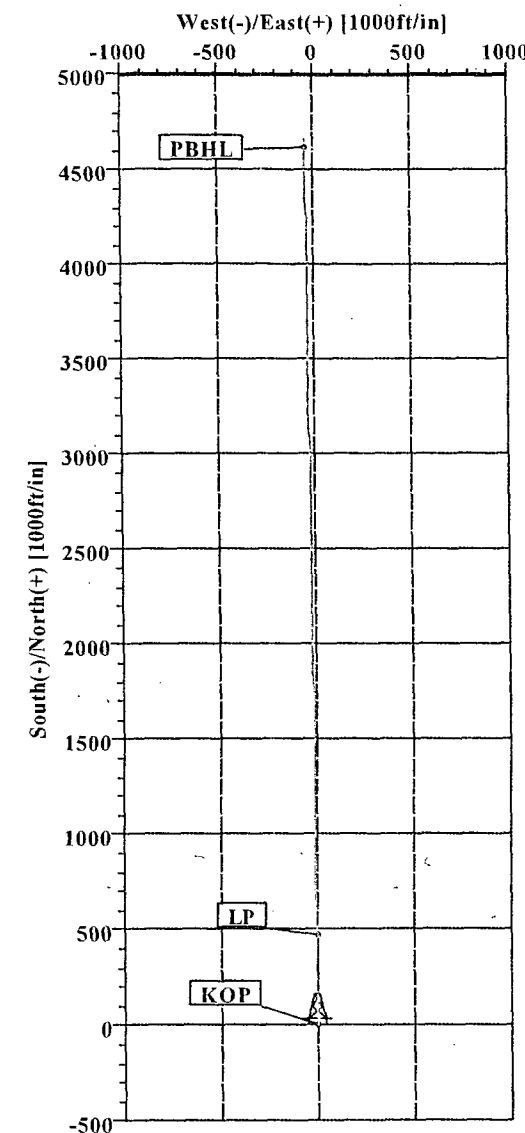
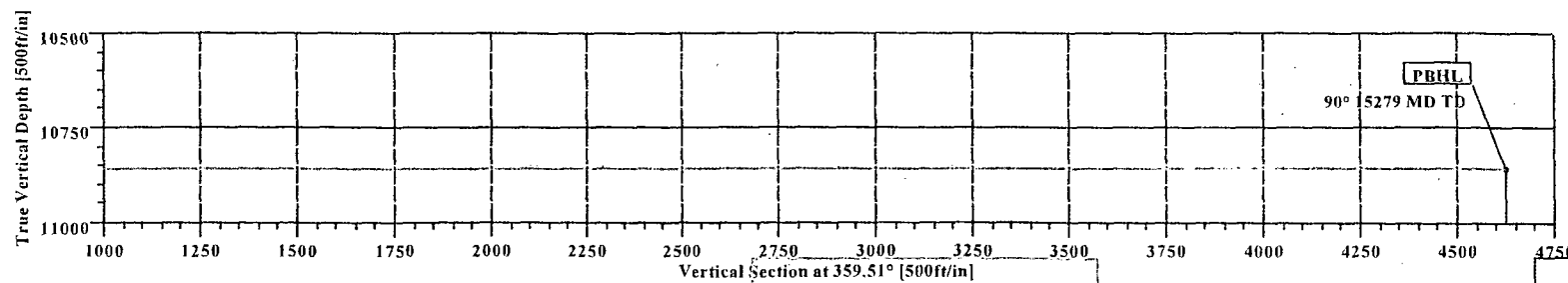
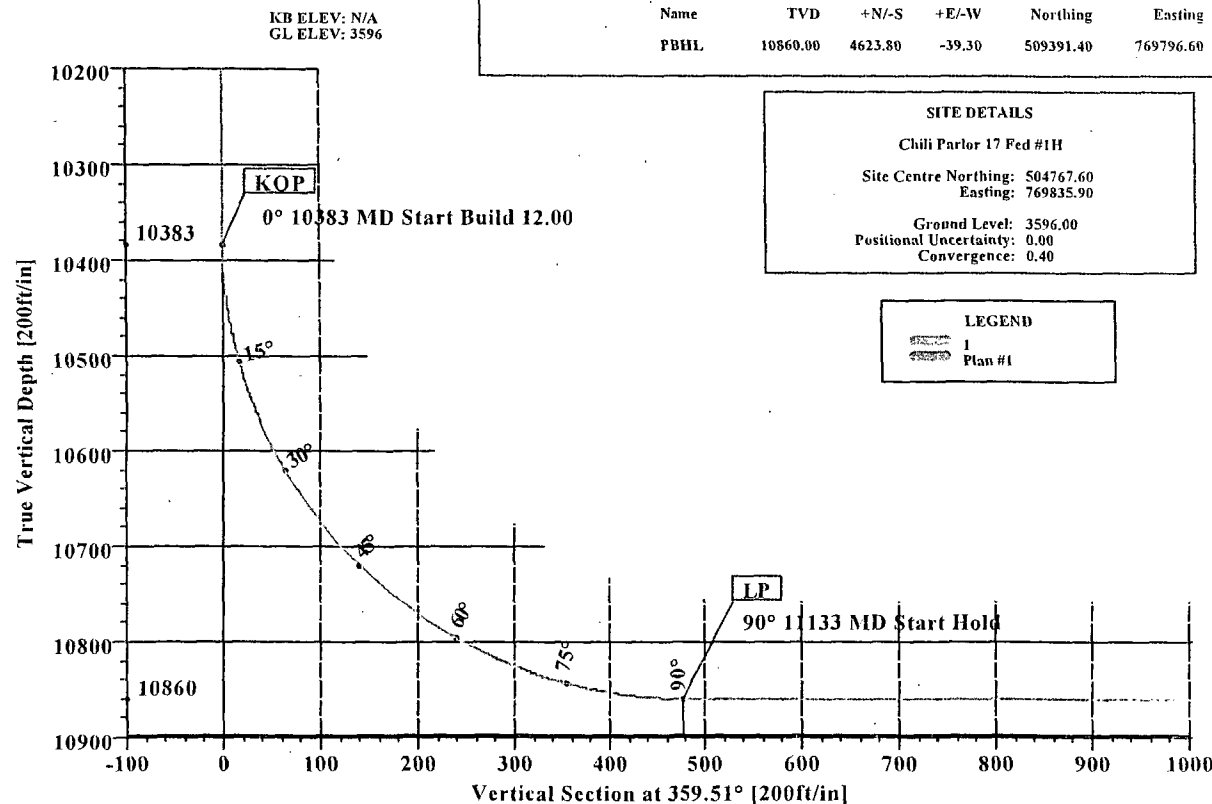
SECTION DETAILS										
Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VS _{ec}	Target
1	0.00	0.00	359.51	0.00	0.00	0.00	0.00	0.00	0.00	
2	10382.54	0.00	359.51	10382.54	0.00	0.00	0.00	0.00	0.00	
3	11132.54	90.00	359.51	10860.00	477.45	-4.06	12.00	359.51	477.46	
4	15279.04	90.00	359.51	10860.00	4623.80	-39.30	0.00	0.00	4623.97	PBHL

WELL DETAILS						
Name	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
Chili Parlor 17 Fed #1H	0.00	0.00	504767.60	769835.90	32°23'07.796N	103°35'35.208W

TARGET DETAILS						
Name	TVD	+N/-S	+E/-W	Northing	Easting	Shape
PBHL	10860.00	4623.80	-39.30	509391.40	769796.60	Point

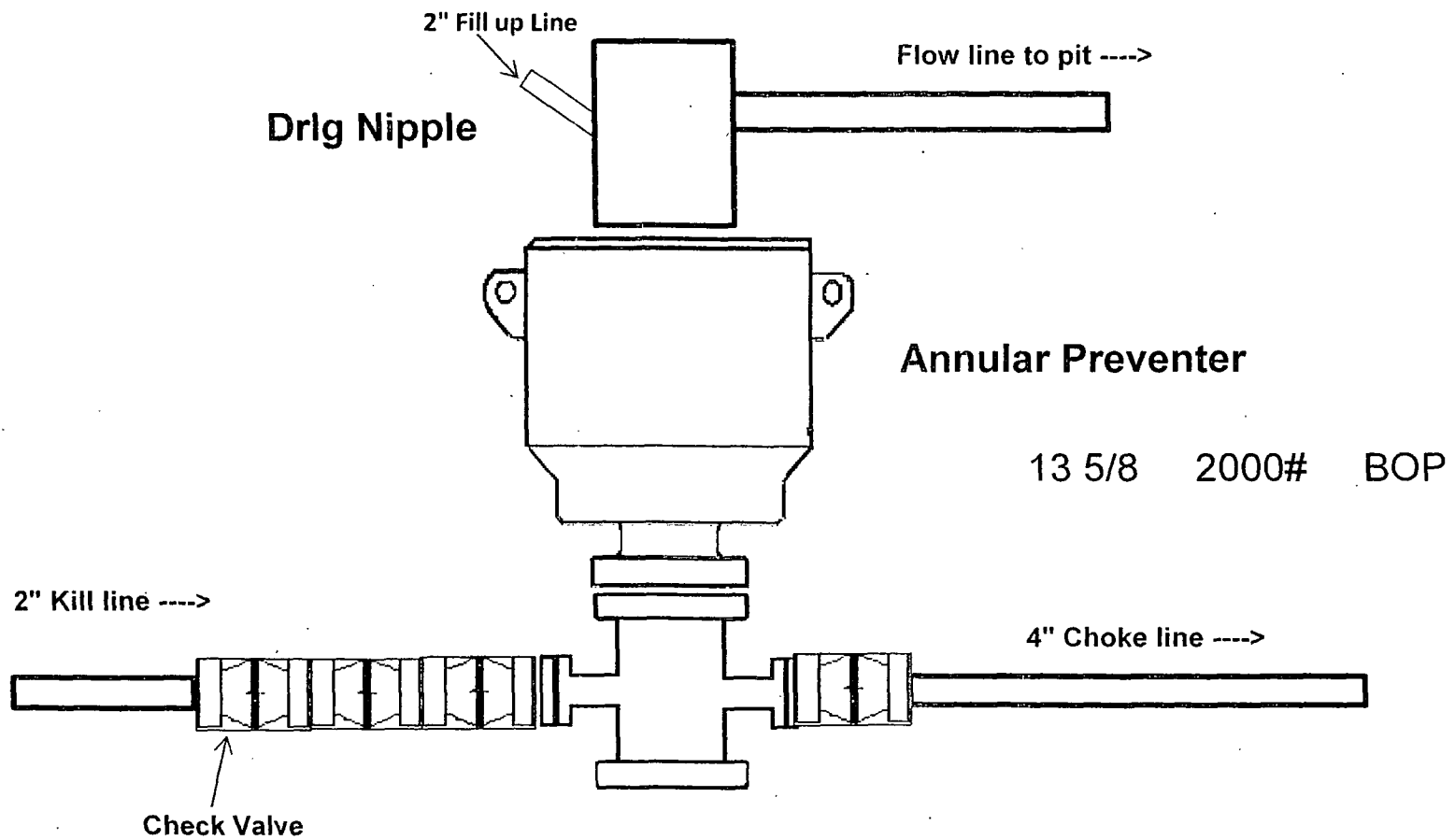
SITE DETAILS	
Chili Parlor 17 Fed #1H	
Site Centre Northing:	504767.60
Easting:	769835.90
Ground Level:	3596.00
Positional Uncertainty:	0.00
Convergence:	0.40

LEGEND	
	1
	Plan #1

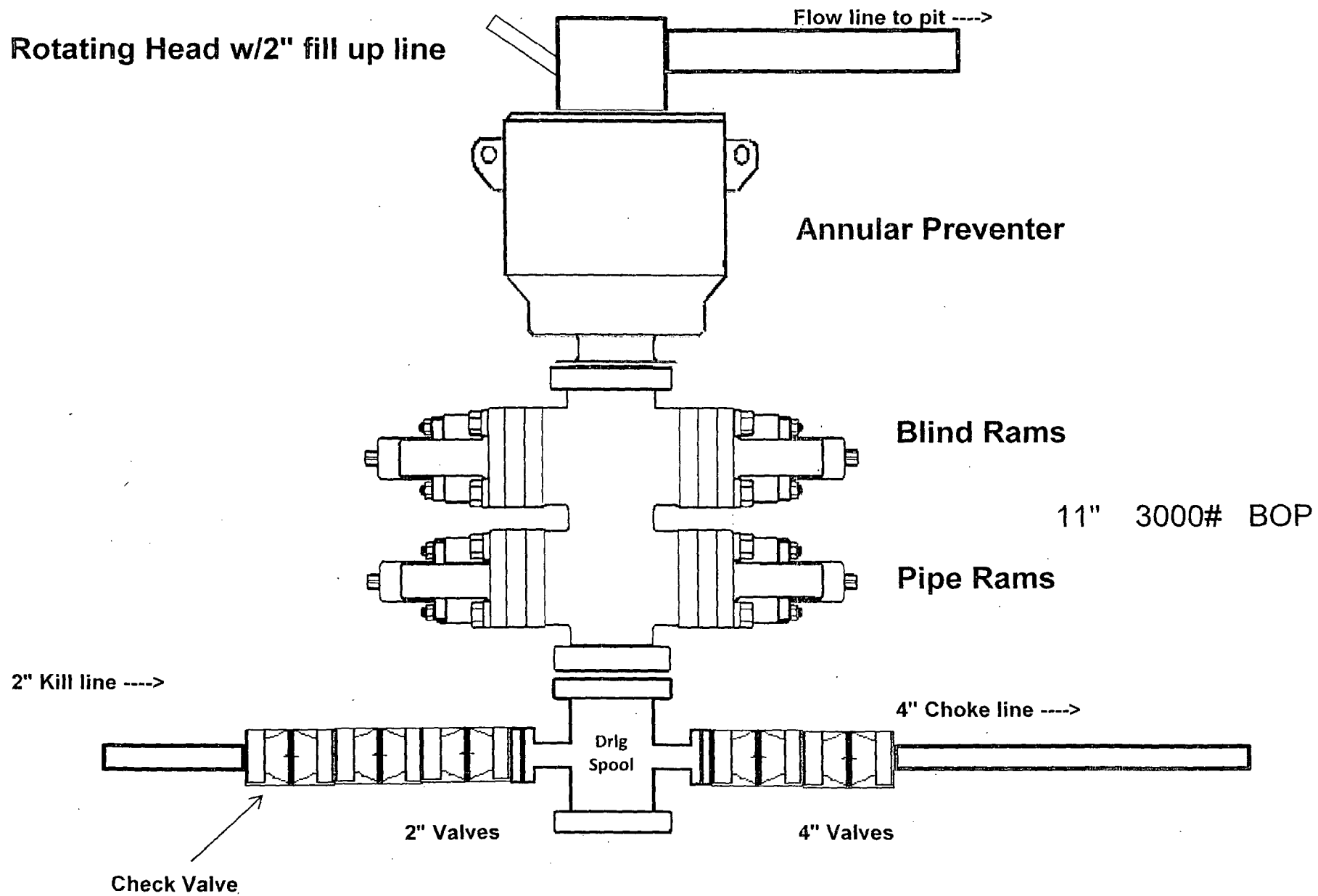


Weatherford

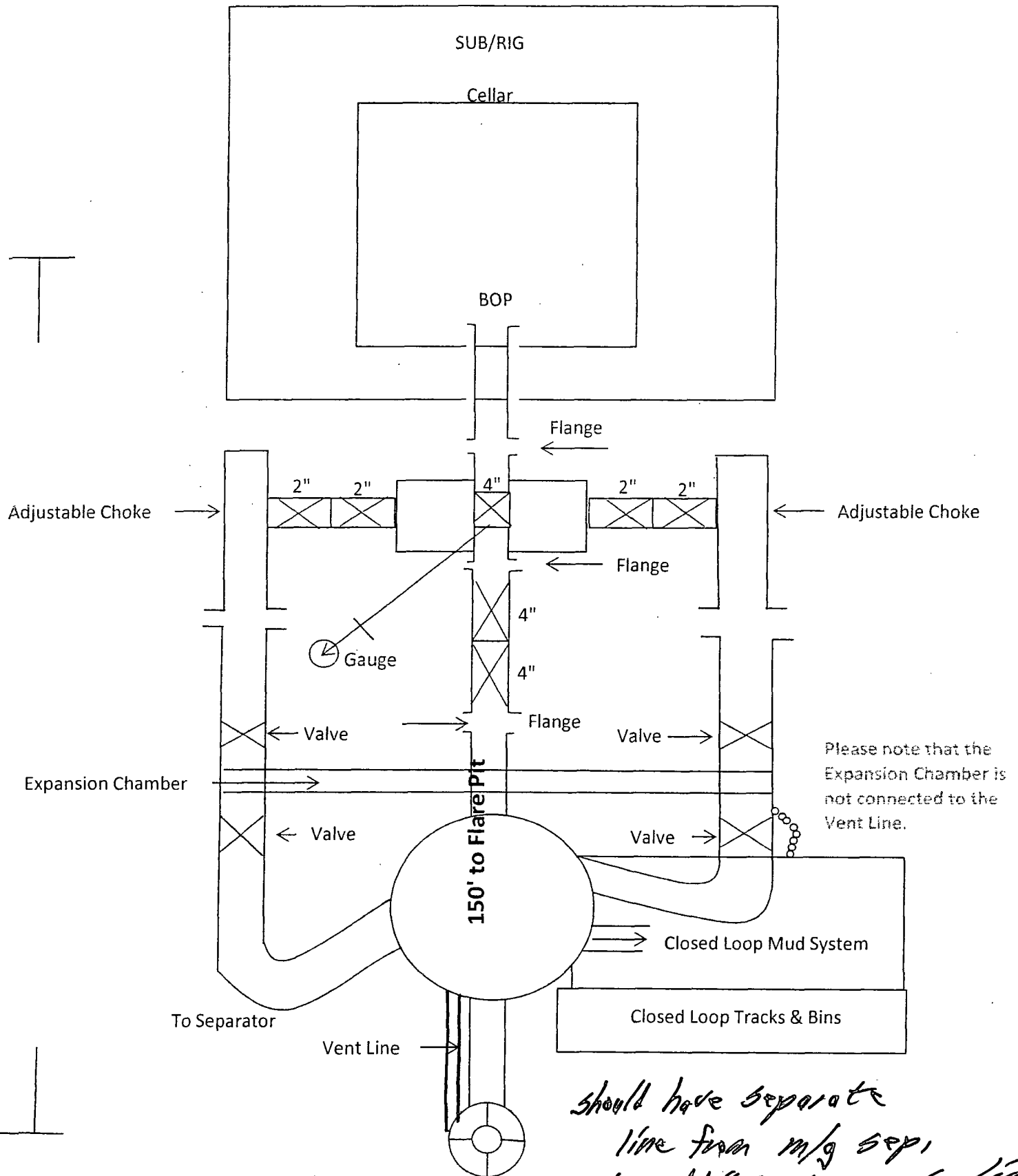
2,000 psi BOP Schematic



3,000 psi BOP Schematic



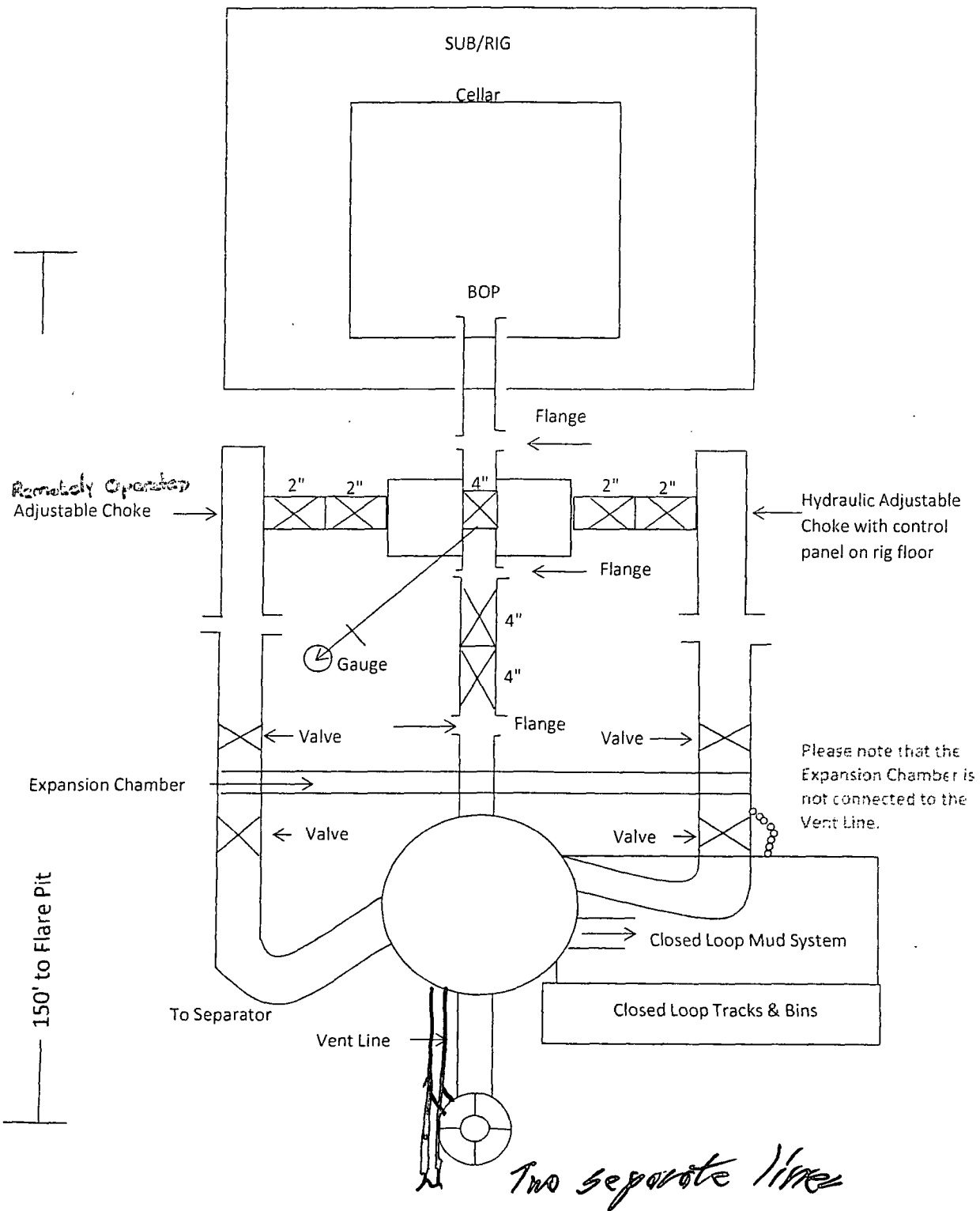
2M Choke Manifold Equipment



*should have separate
line from m/g sep,
in addition to vent line
(look for 3m)*

DRILLING PLAN - EXHIBIT 2

3M Choke Manifold Equipment



DRILLING PLAN - EXHIBIT 4