

OCD-ARTESIA

Form 3160-3
(April 2004)UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

FORM APPROVED
OMB No 1004-0137
Expires March 31, 2007

EA-11-886

1a. Type of work: ☒ DRILL ☐ REENTER		5. Lease Serial No NMLC-068282b
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 (231429)		7. If Unit or CA Agreement, Name and No
3a. Address PO BOX 2107 Roswell, NM 88202	3b. Phone No. (include area code) 575-623-1996	8. Lease Name and Well No Golden Spur Federal #1H (38720)
4. Location of Well (Report location clearly and in accordance with any State requirements*) At surface 330' FSL & 1980' FWL, Sec 25, T26S, R31E (N) At proposed prod. zone 330' FNL & 1980' FWL, Sec 25, T26S, R31E (BHL)		9. API Well No 30-015-39235
14. Distance in miles and direction from nearest town or post office* 26 miles southwest from Jal, NM		10. Field and Pool, or Exploratory Wildcat- Bonesprings Bone Springs (96403)
15. Distance from proposed* location to nearest property or lease line, ft (Also to nearest drg unit line, if any) SHL 330' BHL 330'		11. Sec, T R M or Blk. and Survey or Area Sec. 25, T26S, R31E
16. No. of acres in lease 940	17. Spacing Unit dedicated to this well 160	12. County or Parish Eddy County
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. 330'	19. Proposed Depth MD-13688' TVD- 9362'	13. State NM
20. BLM/BIA Bond No on file NM-2567	21. Elevations (Show whether DF, KDB, RT, GL, etc) 3135'	22. Approximate date work will start* 08/01/2011
23. Estimated duration 35 Days		24. Attachments

The following, completed in accordance with the requirements of Onshore Oil and Gas Order No 1, shall 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 shall 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 authorized officer

25. Signature <i>Paul Ragsdale</i>	Name (Printed/Typed) Paul Ragsdale	Date 05/16/2011
Title Operations Manager		
Approved by (Signature) <i>James A. Amos</i>	Name (Printed/Typed) James A. Amos	Date JUL - 8 2011
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

*(Instructions on page 2)

Witness Surface Casing

K 07/26/11

Carlsbad Controlled Water Basin

SEE ATTACHED FOR
CONDITIONS OF APPROVALAPPROVAL SUBJECT TO
GENERAL REQUIREMENTS
AND SPECIAL STIPULATIONS
ATTACHED

Manzano, LLC
DRILLING AND OPERATIONS PROGRAM

Golden Spur Federal #1H
Surface Location:
330' FSL & 1980' FWL
Section 25, T26S, R31E
Bottom Hole Location
330' FNL & 1980' FWL
Section 25, T26S, R31E
Eddy County, New Mexico

In conjunction with Form 3160-3, Application for Permit to Drill subject well, Manzano LLC submits the following ten items of pertinent information in accordance with BLM requirements.

1. Geological surface formation: Permian

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

Rustler	920'
Top of Salt	1180'
Base of the Salt	4050'
*Delaware	4130'
*Bone Spring	7900'

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

A lease map of the surrounding wells is included as Exhibit 2D

Water: Fresh water will be protected by setting surface casing at 650' and cementing to surface. Fresh water is generally not found in this area but would be at a depth from 150 to 250 feet if it is present.

Hydrocarbons: Oil and gas are anticipated in the above (*) formations. These zones will be protected by casing if necessary.

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 980' and circulating cement back to surface. Potash/ water sands will be protected by setting 9 5/8" casing at 4100'+/- and circulating cement back to surface.

4. Proposed Casing Program:

Hole Size	Interval	OD Casing	New or Used	Wt	Collar	Grade	Collapse Design Factor	Burst Design Factor	Tension Design Factor
17.5"	0'-980' / 100	13 3/8"	New	48#	STC	H40	1.125	1.125	1.6
12.25"	0'-4100'	9 5/8"	New	40	STC / LTC	N80	1.125	1.125	1.6
8.75"	0'-9625'	7"	New	26#	LTC	P-110	1.125	1.125	1.6
6.125	9425'-13,600'	4.5" liner	New	11.6#	LTC	P-110	1.125	1.125	1.6

5. Proposed Cement Program:

a. **13 3/8" Surface:** 500 sks BJ Lite Class "C" (35:65:4) w/ 5% Salt, 2.5 SMS, 5% MPA5, 1/8#/sk Cello Flake & 5#/sk LCM1 (yd @2.15 cuft/sk @12.5 PPG). Tail w/ 200 sks Class "C" w/ 2% CaCl2 (yd @1.34 cuft/sk @ 14.8 PPG) Using 100 % excess.
Cement will be circulated to surface.

b. **9 5/8" Intermediate:** 1200 sks BJ Lite Class "C" (35:65:4) w/ 5# sk LCM 1 & ¼ #/sk celloflake (yd @2.13 cuft/sk @ 12.5 PPG). Tail w/ 200 sks Class "C" Neat (yd @ 1.33 cuft/sk @ 14.8 PPG).
Using 100 % excess, cement will be circulated to surface.

c. **7" Production:** 400 sks BJ Lite Class "H" (35:65:6 w/ 5% salt, 5#/sk LCM1, 5% MPA5, .2% FL52, & .4% SMS (yield @ 2.47 cuft/sk @12 PPG). Tail w/ 400 sks Class "H" w/ 1% Salt & .2 % FL52 (yield @ 1.18 cuft/sk @ 15.6 PPG)
Using 100% excess, top of cement will be an estimated 3000' inside the intermediate casing.

d. **4 ½" Liner:** The 4 ½" liner will be run with an anticipated 20 stages of packers/ports system to total depth of the horizontal lateral. The liner will be hung inside the 7" with approximately 200' of overlap. The packers will be set by hydraulic pressure and the rig will be moved off.
NO CEMENT WILL BE RUN ON THE LINER.

The above cement volumes could be revised pending the caliper measurement from the open hole logs.
All casing is new and API approved.

6. Minimum Specifications for Pressure Control:

Depth (feet)	Mud Weight (lb/gal)	Anticipated BHP (psig)	Bottom hole temp (deg F)
980'	8.4	210	70
4100'	10.0	1750	80
7900'	8.8	2600 top of Bone Springs	95
9362' TVD	8.8	3000 Total depth	115

Plan to nipple up on 13 3/8" with a 2M annular system and test to 1000 psig with a 3rd party tester. Nipple up on 9 5/8 with a 1" X 3000 psi system and test to 3000 psig with independent tester.

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. A 2" kill line and a 3" choke line will be included in the drilling spool located below the ram-type BOP. Other accessories to the BOP equipment will include a Kelly cock, floor safety valve (inside BOP), choke lines and choke manifold with 3000 psi WP rating.

A. All blowout preventer (BOP) and related equipment shall comply with well control requirements as described in Onshore Oil and Gas Order No. 2 and API RP 53 Sec. 17.

B. Minimum working pressure of the blowout preventer (BOP) and related equipment required for drilling below the surface casing shoe shall be 2000 (2m) psi.
See Exhibit 3

-1-1-

C. Minimum working pressure of the blowout preventer (BOP) and related equipment required for drilling below the intermediate casing shoe shall be 3000 (5m) psi.

See Exhibit 3A

Exhibit 3B is a schematic of the choke manifold system.

Exhibit 3C is a layout of the drilling rig on location.

D. The appropriate BLM office shall be notified a minimum of 4 hours in advance for a representative to witness the test

- a. The test shall be done by an independent service company.
- b. The results of the test shall be reported to the appropriate BLM office.
- c. All tests are required to be recorded on a calibrated test chart. A copy of the BOP/BOPE test chart and a copy of independent service company test will be submitted to the appropriate BLM office.
- d. The BOP/BOPE test shall include a low pressure test from 250 to 300 psi. The test will be held for a minimum of 10 minutes if test is done with a test plug and 30 minutes without a test plug

7. **Mud Program:** The applicable depths and properties of this system are as follows:

Depth	Type System	Mud Weight	Viscosity (sec)	Waterloss (cc)
0' - 980' <i>11cc</i>	Fresh Water Gel	8.4 - 8.9	32-34	N.C.
980' - 4100'	Brine	10.0 - 10.0	34-36	N.C
4100' - 9700'	Fresh Water Gel	8.4-8.9	32-34	N.C.
9700' - 13,600'	Fresh Water Gel	8.4-9.2	32-34	4-10

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

8. **Auxiliary Well Control and Monitoring Equipment:**

- a. A Kelly cock will be in the drill string at all times.
- b. A full opening drill pipe stabbing valve having the appropriate connections will be on the rig floor at all times.
- c. Hydrogen Sulfide detection equipment will be in operation after drilling out the 13 3/8" casing shoe until total depth is reached and isolated from surface. Breathing equipment will be on location upon drilling the 13 3/8" shoe until total depth is reached.

9. **Testing, Logging and Coring Program:**

- a. No drill stem test are planned
- b. The open hole electrical logging program will be:
 - i. Total Depth to Intermediate Casing: Dual Laterolog-Micro Laterolog and Gamma Ray, Compensated Neutron - Z-Density log with Gamma Ray and Caliper.
 - ii. Total Depth to Surface: Compensated Neutron with Gamma Ray
 - iii. No coring program is planned

- iv. Additional testing will be initiated subsequent to setting the 4 ½" production casing. Specific intervals will be targeted based on log evaluation, geological sample shows and drill stem tests.

10. Potential Hazards:

a. No abnormal pressures or temperatures are expected. There is no known presence of H2S in this area. If H2S is encountered the operator will comply with the provisions of Onshore Oil and Gas Order No. 6. No lost circulation is expected to occur. All personnel will be familiar with all aspects of safe operation of equipment being used to drill this well. No H2S is anticipated to be encountered.

HYDROGEN SULFIDE DRILLING OPERATIONS PLAN

1. All company and Contract personnel admitted on location must be trained by a qualified H2S safety instructor to the following:
 - a. Characteristics of H2S
 - b. Physical effects and hazards
 - c. Proper use of safety equipment and life support systems
 - d. Principle and operations of H2S detectors, warning system and briefing areas
 - e. Evacuation procedures, routes and first aid
 - f. Proper use of 30-minute pressure demand air pack
2. H2S Detection and alarm System
 - a. H2S detectors and audio alarm system to be located at bell nipple, end of blooie line (mud pit) and on derrick floor or doghouse.
3. Windsock and/or wind streamers
 - a. Windsock at mud pit area should be high enough to be visible
 - b. Windsock at briefing area should be high enough to be visible
 - c. There should be a windsock at entrance to location
4. Condition Flags and Signs
 - a. Warning Sign on access road to location
 - b. Flags to be displayed on sign at entrance to location. Green flag, normal safe condition. Yellow flag indicates potential pressure or danger. Red flag, danger, H2S present in Dangerous concentration. Only emergency personnel admitted to location.



Weatherford

Drilling Services

Proposal

MANZANO LLC

GOLDEN SPUR FED #1H

LEA CO, NM

WELL FILE: **PLAN 2**

APRIL 19, 2011

Weatherford International, Ltd.

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Manzano, LLC
Golden Spur Fed 1H
Lea Co., New Mexico

SECTION DETAILS										
Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSec	Target
1	0.00	0.00	359.79	0.00	0.00	0.00	0.00	0.00	0.00	
2	8500.00	0.00	359.79	8500.00	0.00	0.00	0.00	0.00	0.00	
3	9854.03	90.00	359.79	9362.00	861.99	-3.18	6.65	359.79	862.00	
4	13688.32	90.00	359.79	9362.00	4696.26	-17.32	0.00	0.00	4696.29	PBHL

TARGET DETAILS								
Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
PBHL	9362.00	4696.26	-17.32	371534.50	727153.90	32°01'12.033N	103°44'01.614W	Point

WELL DETAILS							
Name	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
1H	0.00	0.00	366838.24	727171.22	32°00'25.559N	103°44'01.716W	N/A

FIELD DETAILS
 Lea Co., NM (NAD 83)
 Geodetic System: US State Plane Coordinate System 1983
 Ellipsoid: GRS 1980
 Zone: New Mexico, Eastern Zone
 Magnetic Model: IGRF2010
 System Datum: Mean Sea Level
 Local North: Grid North

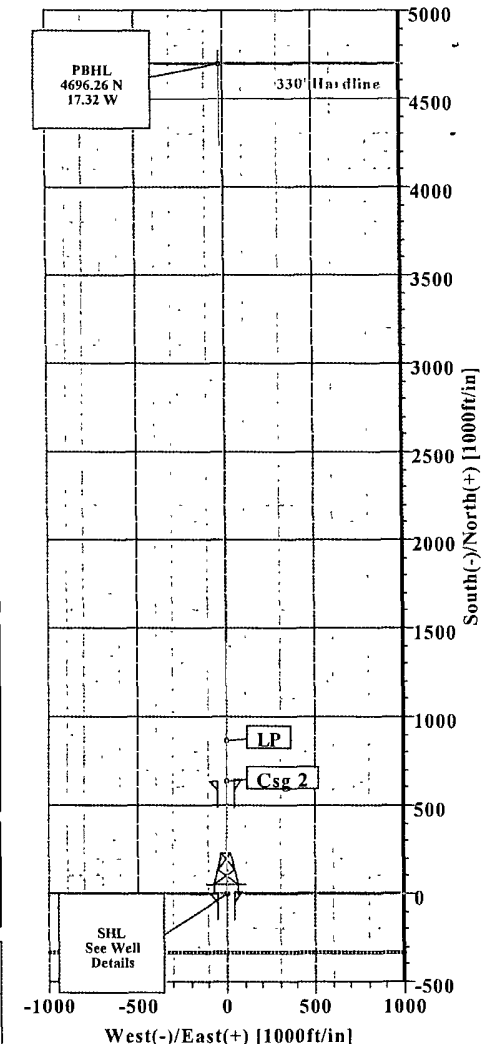
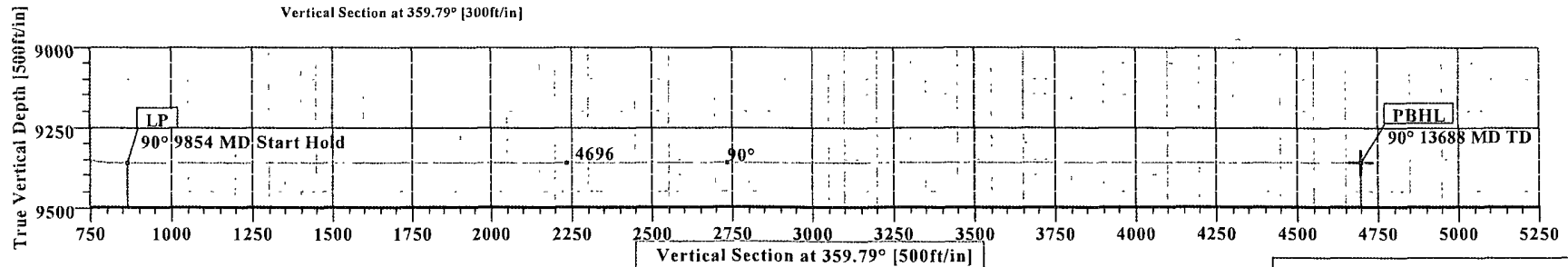
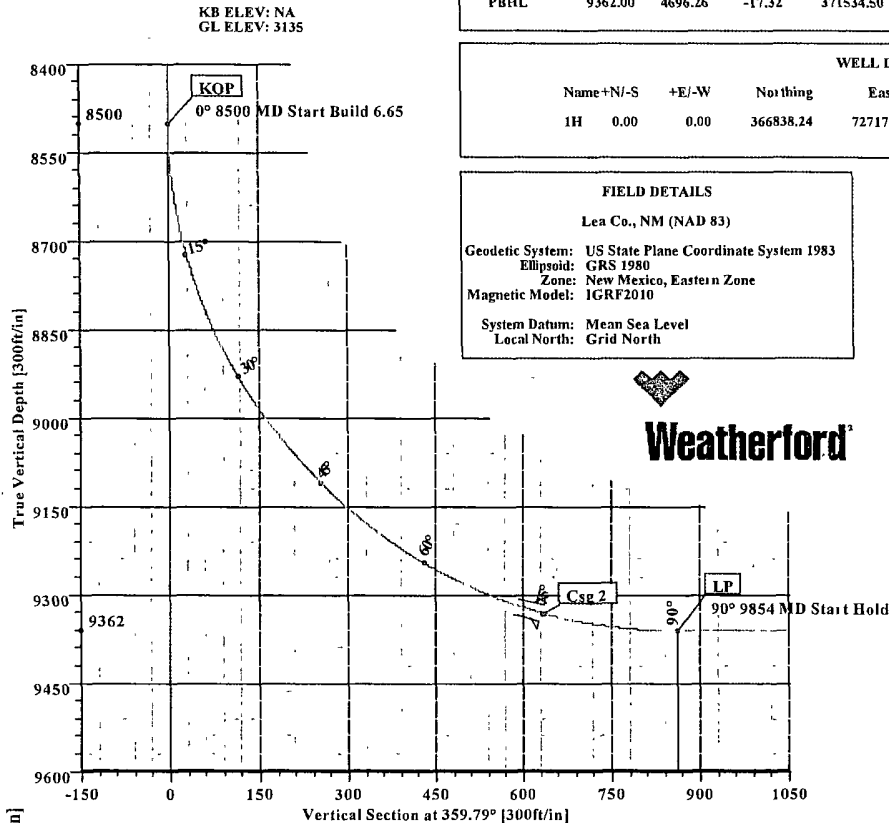
SITE DETAILS
 Golden Spur Fed 1H
 Site Centre Northing: 366838.24
 Easting: 727171.22
 Ground Level: 3135.00
 Positional Uncertainty: 0.00
 Convergence: 0.32

Azimuths to Grid North
 True North: -0.32°
 Magnetic North: 7.30°
 Magnetic Field
 Strength: 48466nT
 Dip Angle: 59.95°
 Date: 9/20/2011
 Model: IGRF2010
 Total correction to Grid North 7.30°

LEGEND

 1 Plan #2

CASING DETAILS				
No.	TVD	MD	Name	Size
1	4400.00	4400.00	Csg 1	9.625
2	9331.75	9625.00	Csg 2	7.000



Plan: Plan #2 (1H/1)
 Created By: Russell W. Joyner Date: 4/19/2011

Weatherford International Ltd.

WFT Plan Report - X & Y's



Weatherford

Company: Manzano LLC Field: Lea Co., NM (NAD 83) Site: Golden Spur Fed 1H Well: 1H Wellpath: 1	Date: 4/19/2011 Co-ordinate(NE) Reference: Site: Golden Spur Fed 1H, Grid North Vertical (TVD) Reference: SITE 0.0 Section (VS) Reference: Well (0.00N,0.00E,359.79Azi) Survey Calculation Method: Minimum Curvature Db: Sybase
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Plan: Plan #2	Date Composed: 4/13/2011
Principal: Yes	Version: 1
	Tied-to: From Surface

Field: Lea Co., NM (NAD 83)	
Map System: US State Plane Coordinate System 1983	Map Zone: New Mexico, Eastern Zone
Geo Datum: GRS 1980	Coordinate System: Site Centre
Sys Datum: Mean Sea Level	Geomagnetic Model: IGRF2010

Site: Golden Spur Fed 1H			
Site Position:	Northing:	Latitude:	
From: Map	366838.24 ft	32 0 25.559 N	
Position Uncertainty:	Easting:	Longitude:	
	727171.22 ft	103 44 1.716 W	
Ground Level:		North Reference:	
3135.00 ft		Grid	
		Grid Convergence:	0.32 deg

Well: 1H	Slot Name:
Well Position:	
+N/-S 0.00 ft	Northing: 366838.24 ft
+E/-W 0.00 ft	Latitude: 32 0 25.559 N
Position Uncertainty:	Longitude: 103 44 1.716 W
0.00 ft	

Wellpath: 1	Drilled From: Surface
Current Datum: SITE	Tie-on Depth: 0.00 ft
Magnetic Data: 9/20/2011	Above System Datum: Mean Sea Level
Field Strength: 48466 nT	Declination: 7.61 deg
Vertical Section: Depth From (TVD)	Mag Dip Angle: 59.95 deg
ft	+E/-W
	Direction
	deg
9362.00	0.00
0.00	359.79

Plan Section Information										
MD	Incl	Azim	TVD	+N/-S	+E/-W	DLS	Build	Turn	TFO	Target
ft	deg	deg	ft	ft	ft	deg/100ft	deg/100ft	deg/100ft	deg	
0.00	0.00	359.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
8500.00	0.00	359.79	8500.00	0.00	0.00	0.00	0.00	0.00	0.00	
9854.03	90.00	359.79	9362.00	861.99	-3.18	6.65	6.65	0.00	359.79	
13688.32	90.00	359.79	9362.00	4696.26	-17.32	0.00	0.00	0.00	0.00	PBHL

Survey										
MD	Incl	Azim	TVD	N/S	E/W	VS	DLS	MapN	MapE	Comment
ft	deg	deg	ft	ft	ft	ft	deg/100ft	ft	ft	
8500.00	0.00	359.79	8500.00	0.00	0.00	0.00	0.00	366838.24	727171.22	KOP
8600.00	6.65	359.79	8599.78	5.79	-0.02	5.79	6.65	366844.04	727171.20	
8700.00	13.29	359.79	8698.21	23.10	-0.09	23.10	6.65	366861.34	727171.14	
8800.00	19.94	359.79	8793.98	51.68	-0.19	51.68	6.65	366889.92	727171.03	
8900.00	26.59	359.79	8885.80	91.15	-0.34	91.15	6.65	366929.40	727170.88	
9000.00	33.23	359.79	8972.43	140.99	-0.52	140.99	6.65	366979.23	727170.70	
9100.00	39.88	359.79	9052.71	200.52	-0.74	200.52	6.65	367038.76	727170.48	
9200.00	46.53	359.79	9125.56	268.94	-0.99	268.94	6.65	367107.18	727170.23	
9300.00	53.17	359.79	9190.00	345.34	-1.27	345.34	6.65	367183.58	727169.95	
9400.00	59.82	359.79	9245.17	428.67	-1.58	428.68	6.65	367266.92	727169.64	
9500.00	66.47	359.79	9290.32	517.84	-1.91	517.84	6.65	367356.08	727169.31	
9600.00	73.12	359.79	9324.84	611.63	-2.26	611.63	6.65	367449.87	727168.97	
9625.00	74.78	359.79	9331.75	635.65	-2.34	635.66	6.65	367473.90	727168.88	Csg 2
9700.00	79.76	359.79	9348.28	708.79	-2.61	708.79	6.65	367547.03	727168.61	
9800.00	86.41	359.79	9360.31	808.00	-2.98	808.01	6.65	367646.25	727168.24	
9854.03	90.00	359.79	9362.00	861.99	-3.18	862.00	6.65	367700.24	727168.04	LP
9900.00	90.00	359.79	9362.00	907.97	-3.35	907.97	0.00	367746.21	727167.87	

Weatherford International Ltd.

WFT Plan Report - X & Y's



Weatherford

Company: Manzano LLC
Field: Lea Co., NM (NAD 83)
Site: Golden Spur Fed 1H
Well: 1H
Wellpath: 1

Date: 4/19/2011 Time: 14 44.12 Page: 2
Co-ordinate(NE) Reference: Site: Golden Spur Fed 1H, Grid North
Vertical (TVD) Reference: SITE 0 0
Section (VS) Reference: Well (0.00N,0 00E,359.79Azi)
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
10000.00	90.00	359.79	9362.00	1007.97	-3.72	1007.97	0.00	367846.21	727167.50	
10100.00	90.00	359.79	9362.00	1107.97	-4.09	1107.97	0.00	367946.21	727167.13	
10200.00	90.00	359.79	9362.00	1207.97	-4.46	1207.97	0.00	368046.21	727166.77	
10300.00	90.00	359.79	9362.00	1307.96	-4.82	1307.97	0.00	368146.21	727166.40	
10400.00	90.00	359.79	9362.00	1407.96	-5.19	1407.97	0.00	368246.21	727166.03	
10500.00	90.00	359.79	9362.00	1507.96	-5.56	1507.97	0.00	368346.21	727165.66	
10600.00	90.00	359.79	9362.00	1607.96	-5.93	1607.97	0.00	368446.21	727165.29	
10700.00	90.00	359.79	9362.00	1707.96	-6.30	1707.97	0.00	368546.20	727164.92	
10800.00	90.00	359.79	9362.00	1807.96	-6.67	1807.97	0.00	368646.20	727164.55	
10900.00	90.00	359.79	9362.00	1907.96	-7.04	1907.97	0.00	368746.20	727164.18	
11000.00	90.00	359.79	9362.00	2007.96	-7.41	2007.97	0.00	368846.20	727163.82	
11100.00	90.00	359.79	9362.00	2107.96	-7.77	2107.97	0.00	368946.20	727163.45	
11200.00	90.00	359.79	9362.00	2207.96	-8.14	2207.97	0.00	369046.20	727163.08	
11300.00	90.00	359.79	9362.00	2307.96	-8.51	2307.97	0.00	369146.20	727162.71	
11400.00	90.00	359.79	9362.00	2407.96	-8.88	2407.97	0.00	369246.20	727162.34	
11500.00	90.00	359.79	9362.00	2507.96	-9.25	2507.97	0.00	369346.20	727161.97	
11600.00	90.00	359.79	9362.00	2607.96	-9.62	2607.97	0.00	369446.20	727161.60	
11700.00	90.00	359.79	9362.00	2707.96	-9.99	2707.97	0.00	369546.20	727161.23	
11800.00	90.00	359.79	9362.00	2807.95	-10.36	2807.97	0.00	369646.20	727160.86	
11900.00	90.00	359.79	9362.00	2907.95	-10.73	2907.97	0.00	369746.20	727160.50	
12000.00	90.00	359.79	9362.00	3007.95	-11.09	3007.97	0.00	369846.20	727160.13	
12100.00	90.00	359.79	9362.00	3107.95	-11.46	3107.97	0.00	369946.20	727159.76	
12200.00	90.00	359.79	9362.00	3207.95	-11.83	3207.97	0.00	370046.19	727159.39	
12300.00	90.00	359.79	9362.00	3307.95	-12.20	3307.97	0.00	370146.19	727159.02	
12400.00	90.00	359.79	9362.00	3407.95	-12.57	3407.97	0.00	370246.19	727158.65	
12500.00	90.00	359.79	9362.00	3507.95	-12.94	3507.97	0.00	370346.19	727158.28	
12600.00	90.00	359.79	9362.00	3607.95	-13.31	3607.97	0.00	370446.19	727157.91	
12700.00	90.00	359.79	9362.00	3707.95	-13.68	3707.97	0.00	370546.19	727157.55	
12800.00	90.00	359.79	9362.00	3807.95	-14.04	3807.97	0.00	370646.19	727157.18	
12900.00	90.00	359.79	9362.00	3907.95	-14.41	3907.97	0.00	370746.19	727156.81	
13000.00	90.00	359.79	9362.00	4007.95	-14.78	4007.97	0.00	370846.19	727156.44	
13100.00	90.00	359.79	9362.00	4107.95	-15.15	4107.97	0.00	370946.19	727156.07	
13200.00	90.00	359.79	9362.00	4207.94	-15.52	4207.97	0.00	371046.19	727155.70	
13300.00	90.00	359.79	9362.00	4307.94	-15.89	4307.97	0.00	371146.19	727155.33	
13400.00	90.00	359.79	9362.00	4407.94	-16.26	4407.97	0.00	371246.19	727154.96	
13500.00	90.00	359.79	9362.00	4507.94	-16.63	4507.97	0.00	371346.19	727154.59	
13600.00	90.00	359.79	9362.00	4607.94	-17.00	4607.97	0.00	371446.19	727154.23	
13688.32	90.00	359.79	9362.00	4696.26	-17.32	4696.29	0.00	371534.50	727153.90	PBHL

Targets

Name	Description Dip.	Dir.	TVD ft	+N/-S ft	+E/-W ft	Map Northing ft	Map Easting ft	<--- Latitude --->			<--- Longitude --->		
PBHL			9362.00	4696.26	-17.32	371534.50	727153.90	32	1	12.033 N	103	44	1.614 W

Casing Points

MD ft	TVD ft	Diameter in	Hole Size in	Name
4400.00	4400.00	9.625	9.625	Csg 1
9625.00	9331.75	7.000	7.000	Csg 2

Weatherford International Ltd.

WFT Plan Report - X & Y's



Weatherford

Company: Manzano LLC Field: Lea Co., NM (NAD 83) Site: Golden Spur Fed 1H Well: 1H Wellpath: 1	Date: 4/19/2011 Time: 14:44:12 Page: 3 Co-ordinate(NE) Reference: Site: Golden Spur Fed 1H, Grid North Vertical (TVD) Reference: SITE 0.0 Section (VS) Reference: Well (0.00N,0.00E,359.79Azi) Survey Calculation Method: Minimum Curvature Db: Sybase
---	--

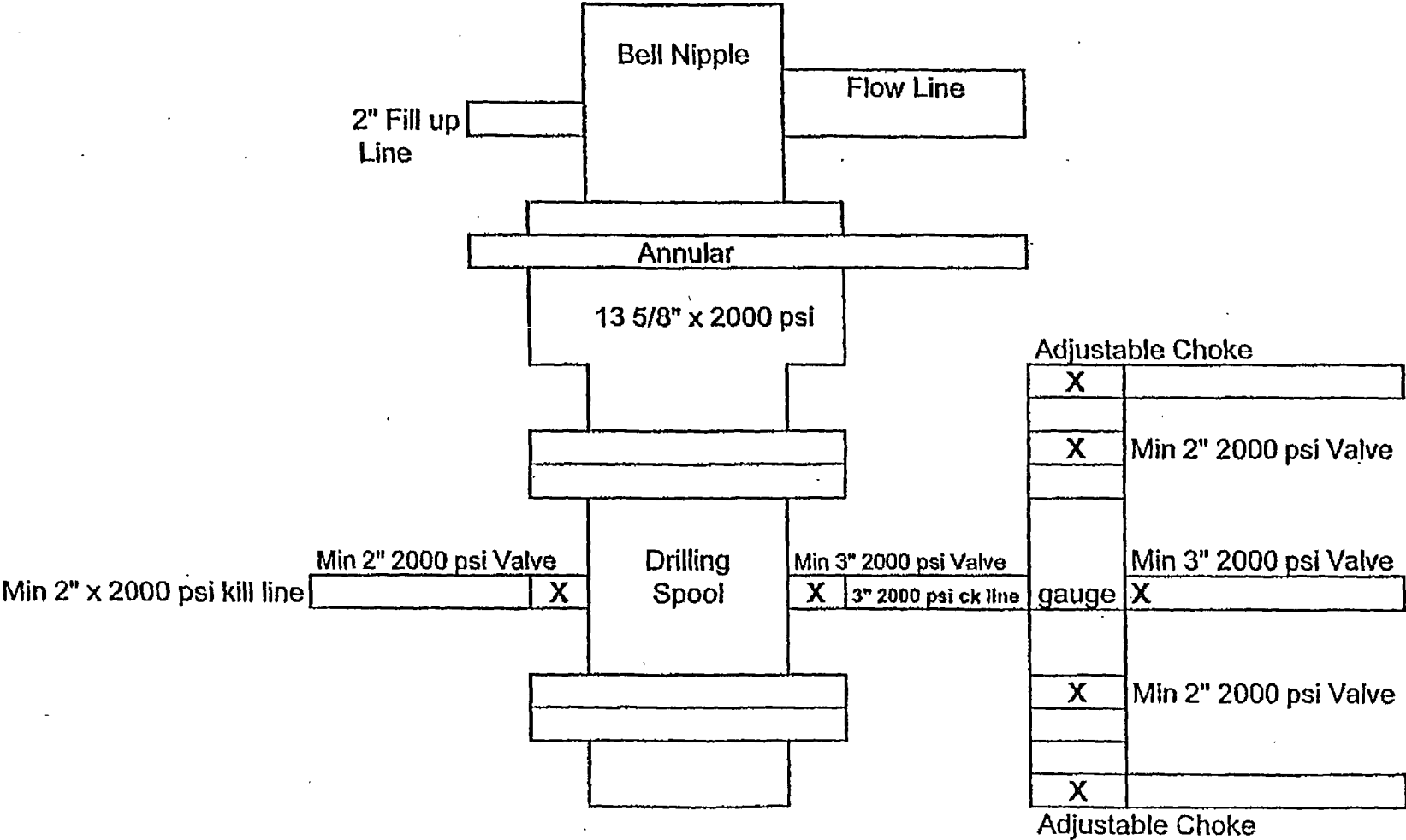
Annotation

MD ft	TVD ft	
8500.00	8500.00	KOP
9854.03	9362.00	LP
13688.32	0.00	PBHL

Formations

MD	TVD	Formations	Lithology	Dip Angle	Dip Direction

13 3/8" 2000 psi Annular B.O.P Stack



3-M WP BOPE WITH 3-M WP ANNULAR

MANIFOLD EQUIPMENT-CONFIGURATION MAY VARY

11" x 3000 psig B.O.P.

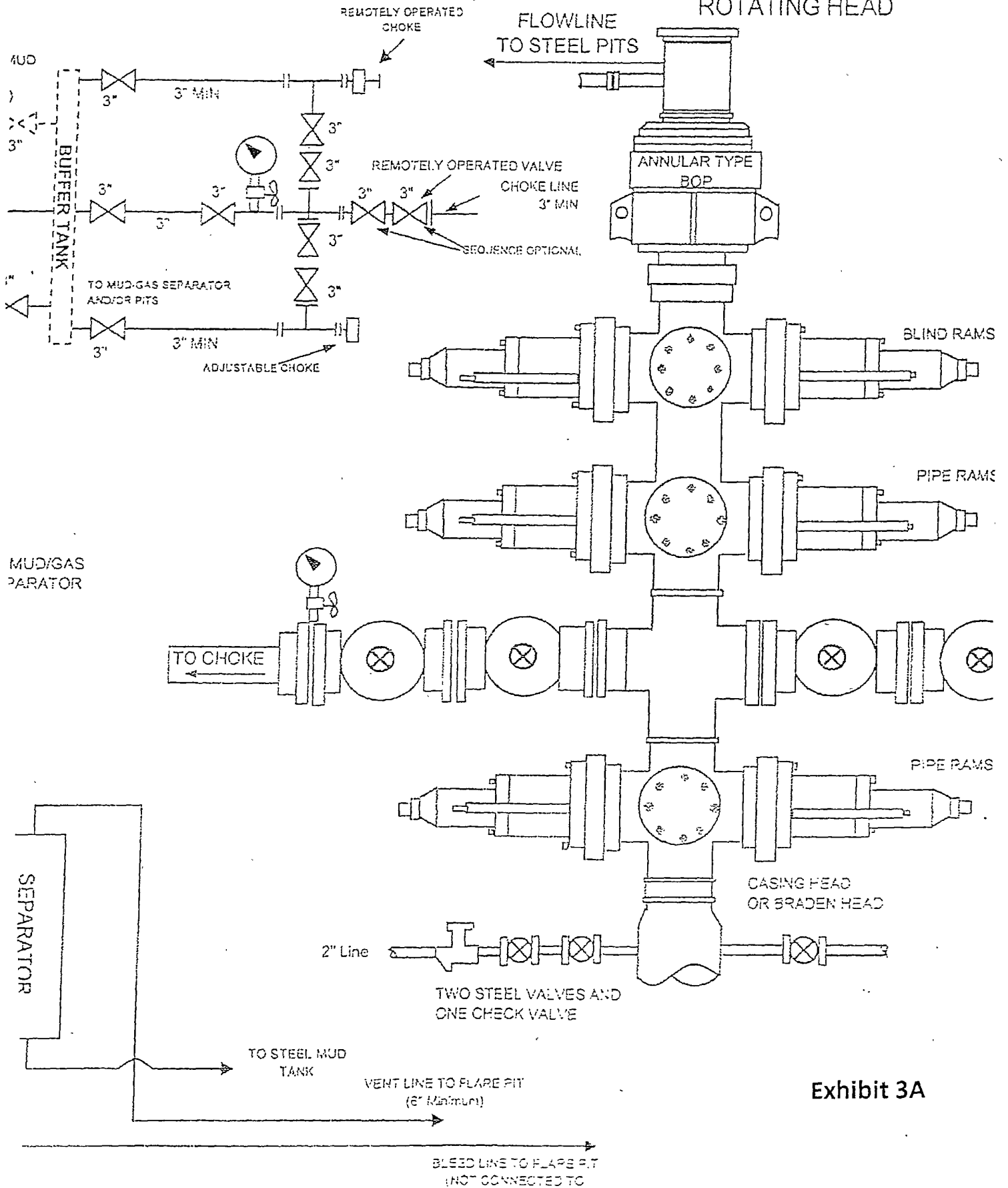


Exhibit 3A

EXHIBIT 3C

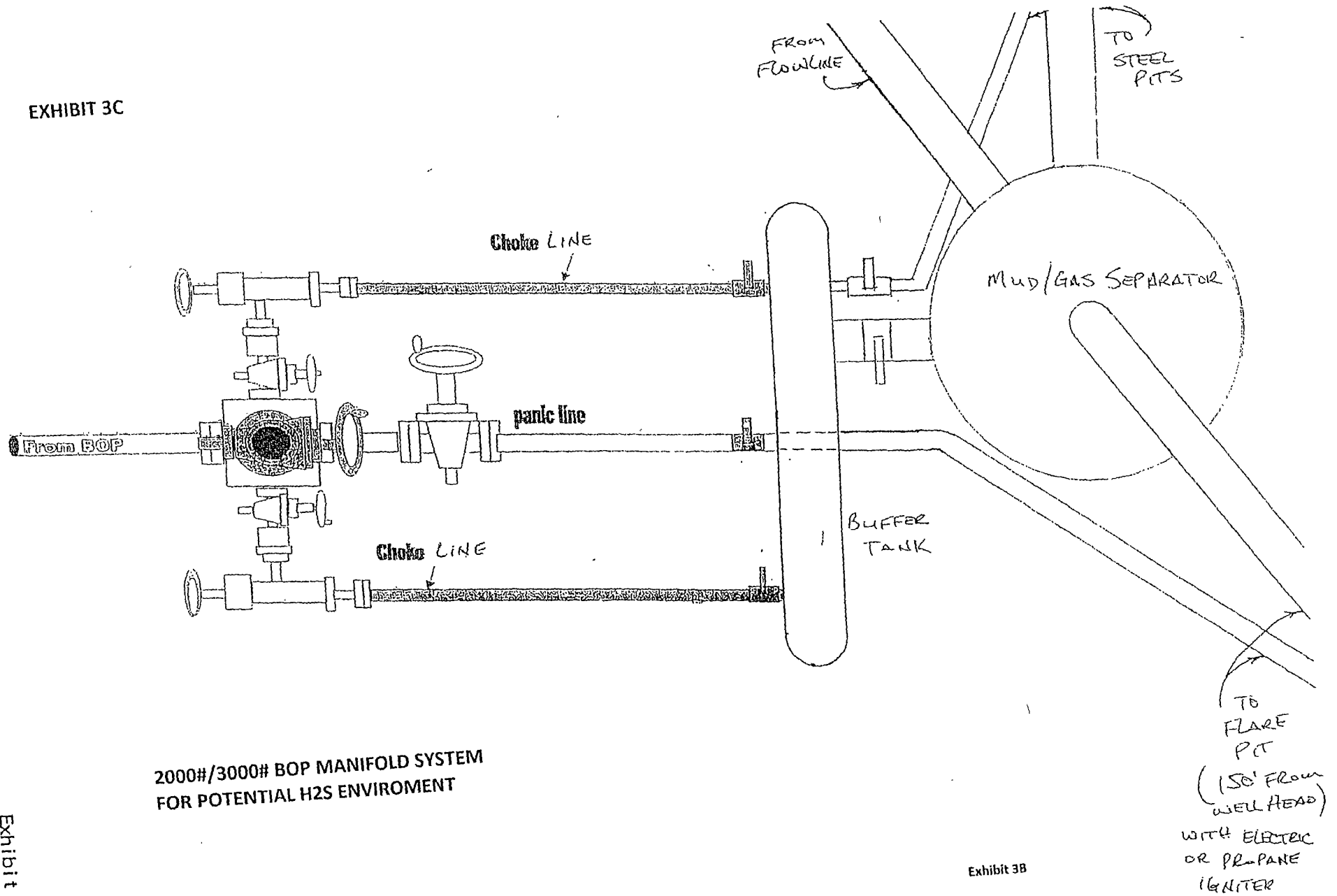


Exhibit 3B

Exhibit 3B

DISTRICT I --- CHECKLIST FOR INTENTS TO DRILL

Operator MANZANO LLC OGRID # 231429
 Well Name & # 38720 GOLDEN SPUR FEN #1H Surface Type (F) (S) (P)
 Location: UL N, Sect 22, Township 26 s, RNG 31 e, Sub-surface Type (F) (S) (P)

A. Date C101 rec'd ____/____/____ C101 reviewed ____/____/____

B. 1. Check mark, Information is OK on Forms:

OGRID X BONDING FEN PROP CODE X, WELL # X, SIGNATURE ____

2. Inactive Well list as of: 7/26/11 # wells 34, # Inactive wells 1

a. District Grant APD but see number of inactive wells:

No letter required X; Sent Letter to Operator ____, to Santa Fe ____

3. Additional Bonding as of: 7/26/11

a. District Denial because operator needs addition bonding:

No Letter required X; Sent Letter to Operator ____, To Santa Fe ____

b. District Denial because of Inactive well list and Financial Assurance:

No Letter required X; Sent Letter to Operator ____, To Santa Fe ____

C. C102 YES ____, NO ____, Signature ____

1. Pool WILDCAT; BONEHOLE, Code 96403

a. Dedicated acreage 160, What Units CPKN

b. SUR. Location Standard X; Non-Standard Location ____

c. Well shares acres: Yes ____, No X # of wells ____ plus this well # ____

2. 2nd. Operator in same acreage, Yes ____, No X

Agreement Letter ____, Disagreement letter ____

3. Intent to Directional Drill Yes X, No ____

a. Dedicated acreage 160, What Units CPKN

b. Bottomhole Location Standard X, Non-Standard Bottomhole ____

4. Downhole Commingle: Yes ____, No X

a. Pool #2 ____, Code ____, Acres ____

Pool #3 ____, Code ____, Acres ____

Pool #4 ____, Code ____, Acres ____

5. POTASH Area Yes ____, No ____

D. Blowout Preventer Yes X, No ____

E. H2S Yes ____, No X

F. C144 Pit Registration Yes ____, No ____, need

G. Does APD require Santa Fe Approval:

1. Non-Standard Location: Yes ____, No X, NSL # ____

2. Non-Standard Proration: Yes ____, No X, NSP # ____

3. Simultaneous Dedication: Yes ____, No X, SD # ____

Number of wells ____ Plus # ____

4. Injection order Yes ____, No X; PMX # ____ or WFX # ____

5. SWD order Yes ____, NO X; SWD # ____

6. DHC from SF ____; DHC-HOB ____; Holding ____

7. OCD Approval Date ____/____/____

API #30-0 14-39235

8. Reviewers ____