

R-111-POTASH
OCD-HOBBS

Form 3160-3
(August 2007)

HOBBS OCD

FORM APPROVED
OMB No. 1004-0137
Expires July 31, 2010

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

AUG 03 2011

APPLICATION FOR PERMIT TO DRILL OR REENTER

RECEIVED

5. Lease Serial No. NM-112275
6. If Indian, Allottee or Tribe Name
7. If Unit or CA Agreement, Name and No.
8. Lease Name and Well No. Queenie "15" Fed #1 h
9. API Well No. 30-025-40230
10. Field and Pool, or Exploratory Salt Lake Delaware 53565
11. Sec., T. R. M. or Blk. and Survey or Area Sec 15-T20S-R32E
12. County or Parish Lea
13. State NM
14. Distance in miles and direction from nearest town or post office* 30 miles east of Carlsbad
15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any) SHL- 200'
16. No. of acres in lease 320
17. Spacing Unit dedicated to this well 120
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. 130'
19. Proposed Depth TVD-4950' MD - 9328'
20. BLM/BIA Bond No. on file NM-2567
21. Elevations (Show whether DF, KDB, RT, GL, etc.) GL-3532'
22. Approximate date work will start* 08/01/2011
23. Estimated duration 30 DAYS

1a. Type of work: ☒ DRILL ☐ REENTER
1b. Type of Well: ☒ Oil Well ☐ Gas Well ☐ Other ☐ Single Zone ☐ Multiple Zone
2. Name of Operator Manzano, LLC
3a. Address P.O. BOX 2107, Roswell, NM 88203
3b. Phone No. (include area code) 575-623-3940
4. Location of Well (Report location clearly and in accordance with any State requirements *) At surface 200' FSL & 795' FWL, Sec 14-T20S-R32E Unit m At proposed prod. zone BHL 400' FNL & 990' FEL, Sec 15-T20S-R32E Unit A
14. Distance in miles and direction from nearest town or post office* 30 miles east of Carlsbad
15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any) SHL- 200'
16. No. of acres in lease 320
17. Spacing Unit dedicated to this well 120
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. 130'
19. Proposed Depth TVD-4950' MD - 9328'
20. BLM/BIA Bond No. on file NM-2567
21. Elevations (Show whether DF, KDB, RT, GL, etc.) GL-3532'
22. Approximate date work will start* 08/01/2011
23. Estimated duration 30 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 Paul Ragsdale	Name (Printed/Typed) Paul Ragsdale	Date 07/07/2011
------------------------------------	---------------------------------------	--------------------

Title Drilling Manager	Name (Printed/Typed) Jesse J. Juen	Date JUL 25 2011
---------------------------	---------------------------------------	---------------------

Title STATE DIRECTOR	Office NM STATE OFFICE
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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

KE 08/11/11

**SEE ATTACHED FOR
CONDITIONS OF APPROVAL**

**Approval Subject to General Requirements
& Special Stipulations Attached**

AUG 15 2011

Manzano, LLC
DRILLING AND OPERATIONS PROGRAM

Queenie 15 Federal #1
Surface Location
200' FSL & 795' FWL
Section 14, T20S, R32E
Bottom Hole Location
400' FNL & 990' FEL
Section 15, T20S, R32E
Lea County, New Mexico

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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	1200	Capitan	3500
Top of Salt	1300	Delaware	4763
Base of Salt	1900	Cherry Canyon	5001
Yates	2700	Belco B Sand	5288

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

	125	Water
Delaware	4763	Oil
Cherry Canyon	5001	Oil
Belco B Sand	5288	Oil

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 1200' and circulating cement back to surface. Potash / fresh water sands will be protected by setting 9 5/8" casing at 3450' and circulating cement back to surface. The Capitan Reef will be protected by setting 7" casing at 4750'. The Delaware intervals will be isolated by setting a 4 1/2" liner with a production packer system to total depth. No cement will be used in the liner.

4. Proposed Casing Program:

See
COA

Hole Size	Interval Depth (TVD)	OD Casing	New or Used	Wt	Collar	Grade	Collapse Design Factor	Burst Design Factor	Tension Design Factor
17 1/2"	0' - 1200' 125	13 3/8"	New	54.5#	STC	J-55	1.125	1.125	1.6
12.25"	1200' - 3450' 26 1/2"	9 5/8"	New	36#	STC	J-55	1.125	1.125	1.6
8.75"	3450' - 4750' 45 1/2"		New	23#	LTC	P-110	1.125	1.125	1.6
6.125"	4750' - 9328' 4350	4 1/2"	New	11.6#	LTC	J-55	1.125	1.125	1.6

5. Proposed Cement Program:

- a. 13 3/8" Surface 700 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
- b. 9 5/8" Int 1200 sks BJ Lite Class "C" (35:65:4) w/ 5# sk LCM 1 & 1/4 #/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
- c. 7" 525 sks BJ Lite Class "C" (35:65:4) w/ 5# sk LCM 1 & 1/4 #/sk celloflake (yd @2.13 cuft/sk @ 12.5 PPG). Tail w/ 300 sks Class "C" Neat (yd @ 1.33 cuft/sk @ 14.8 PPG). Using 100 % excess *TOC - Surface*
- d. 4.5" A packer type completion will be used with a liner hanger and 15 stages of packers. No cement will be used.

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:

Plan to nipple up on 13 3/8" with a 2M annular system and test to 1000 psig with a 3rd party testing unit. Nipple up on 9 5/8" with a 3m system and test to 3000 psig with independent tester. Nipple up on 7" with a 3m system and test to 3000 psig with an 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.

7. Estimated BHP:

From: 0'	To:1200'	Anticipated Max. BHP 555 PSI
From: 1200'	To:3450'	Anticipated Max. BHP 1722 PSI
From: 3450'	To:4750'	Anticipated Max. BHP 2171 PSI
From: 4750'	To:5094'	Anticipated Max. BHP 2473 PSI

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

Depth ^(TVD)	Type System	Mud Weight	Viscosity (sec)	Waterloss (cc)
0' - 1200'	Fresh Water Gel	8.4 - 8.9	32-34	N.C.
1200' - 3450'	Brine	10.0 - 10.0	28-29	N.C
3450' - 4750'	Fresh water Gel	8.4-8.9	32-34	N.C
3450' - 9328'	Fresh water Gel	8.4-8.9	32-34	15 c.c.

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

9. 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 the 4 1/2" liner is set. Breathing equipment will be on location upon drilling the 13 3/8" shoe until total depth is reached.

10. Testing, Logging and Coring Program: *see COA*

- 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 1/2" production liner. Specific intervals will be targeted based on log evaluation, geological sample shows and drill stem tests.

11. 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. Estimated BHP: 2437 psi. Estimated BHT: 99°. No H₂S is anticipated to be encountered.



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Drilling Services

Proposal

MANZANO LLC

QUEENIE 15-1

LEA CO, NM

WELL FILE: **PLAN 3**

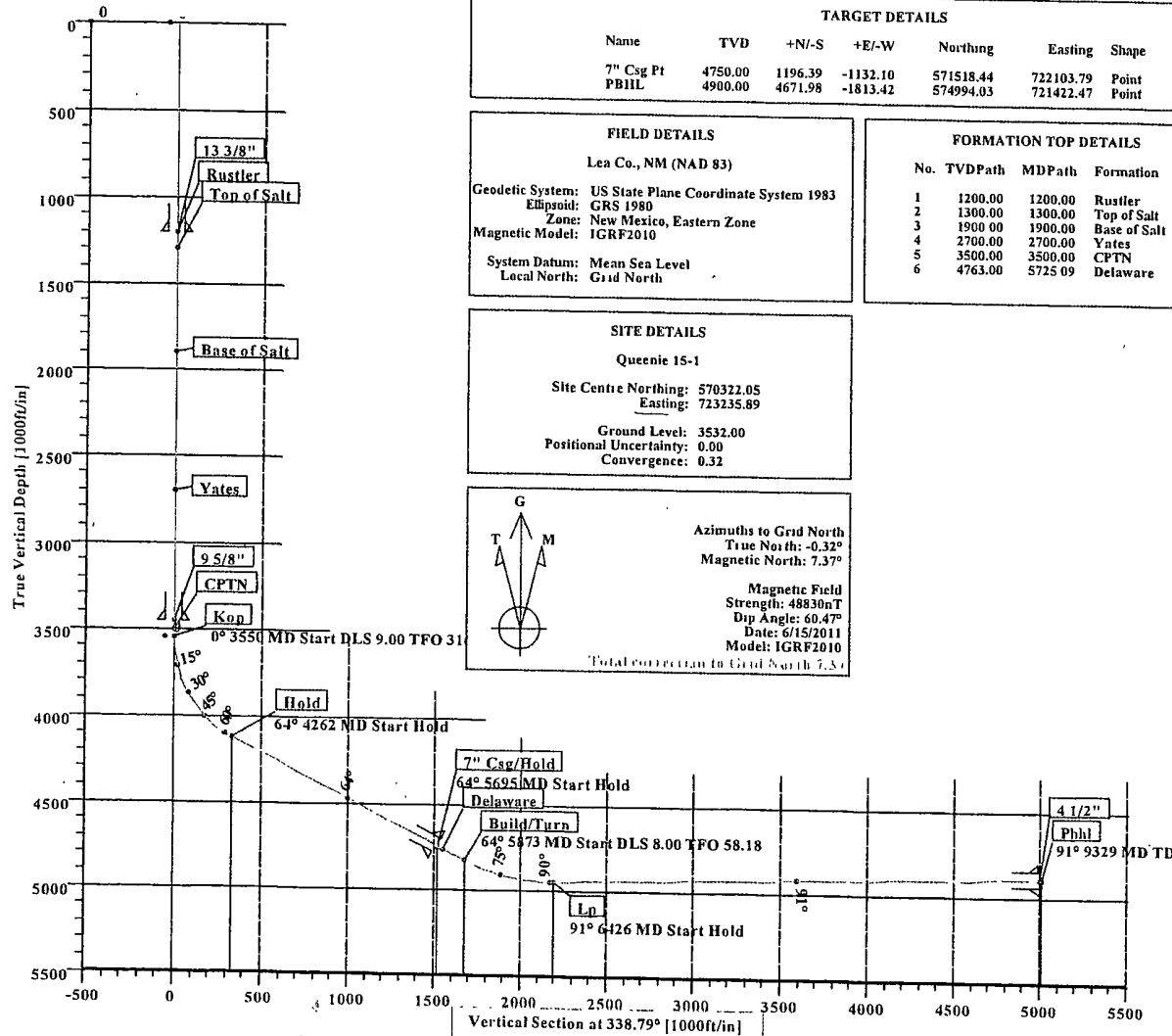
MAY 19, 2011

Weatherford International, Ltd.
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Manzano, LLC
Queenie 15-1
Lea County, New Mexico

CASING DETAILS				
No.	TVD	MD	Name	Size
1	1200.00	1200.00	13 3/8"	13.375
2	3450.00	3450.00	9 5/8"	9.625
3	4750.00	5695.39	7"	7.000
4	4900.15	9320.17	4 1/2"	4.500

KB ELEV: 3552
 GL ELEV: 3532



SECTION DETAILS										
Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSec	Target
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2	3550.00	0.00	0.00	3550.00	0.00	0.00	0.00	0.00	0.00	
3	4261.57	64.04	316.58	4122.39	260.00	-246.03	9.00	316.58	331.41	
4	5695.39	64.04	316.58	4750.00	1196.39	-1132.10	0.00	0.00	1524.97	7" Csg Pt
5	5872.59	64.04	316.58	4827.56	1312.11	-1241.61	0.00	0.00	1672.47	
6	6425.70	90.99	352.95	4950.00	1791.20	-1457.27	8.00	58.18	2197.13	
7	9328.84	90.99	352.95	4900.00	4671.98	-1813.42	0.00	0.00	5011.58	PBHL

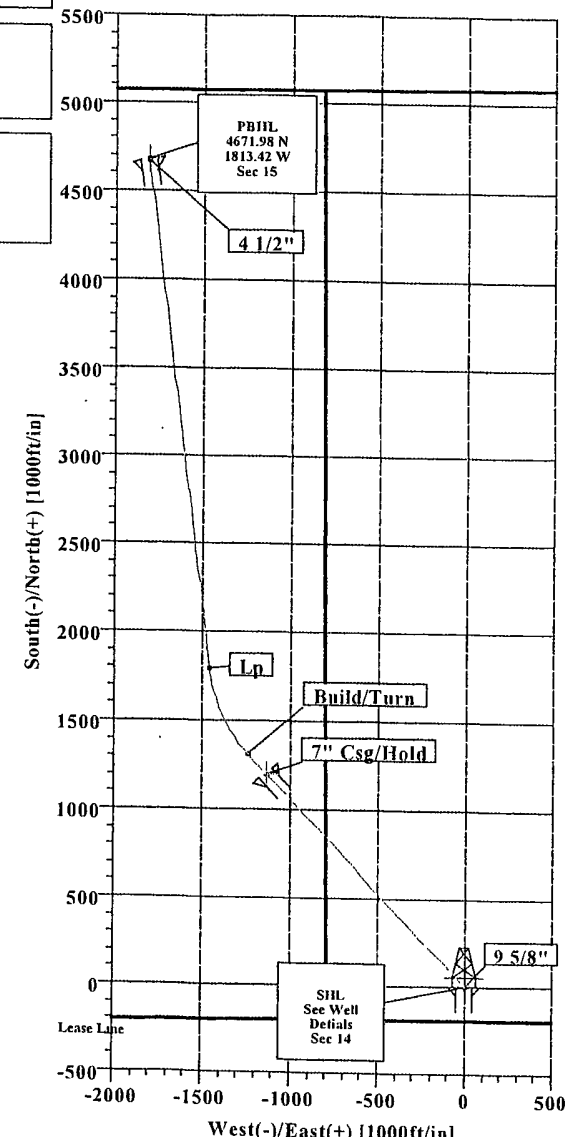
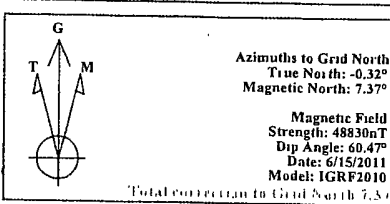
WELL DETAILS						
Name	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
15-1	0.00	0.00	570322.05	723235.89	32°33'59.331N	103°44'34.410W

TARGET DETAILS						
Name	TVD	+N/-S	+E/-W	Northing	Easting	Shape
7" Csg Pt	4750.00	1196.39	-1132.10	571518.44	722103.79	Point
PBHL	4900.00	4671.98	-1813.42	574994.03	721422.47	Point

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

FORMATION TOP DETAILS			
No.	TVDPath	MDPath	Formation
1	1200.00	1200.00	Rustler
2	1300.00	1300.00	Top of Salt
3	1900.00	1900.00	Base of Salt
4	2700.00	2700.00	Yates
5	3500.00	3500.00	CFTN
6	4763.00	5725.09	Delaware

SITE DETAILS
 Queenie 15-1
 Site Centre Northing: 570322.05
 Easting: 723235.89
 Ground Level: 3532.00
 Positional Uncertainty: 0.00
 Convergence: 0.32



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WFT Plan Report - X & Y's



Weatherford

Company: Manzano LLC	Date: 5/19/2011	Time: 11:05:04	Page: 1
Field: Lea Co., NM (NAD 83)	Co-ordinate(NE) Reference: Site. Queenie 15-1, Grid North		
Site: Queenie 15-1	Vertical (TVD) Reference: SITE 3532.0		
Well: 15-1	Section (VS) Reference: Well (0.00N,0.00E,338.79Azi)		
Wellpath: 1	Survey Calculation Method: Minimum Curvature	Db: Sybase	

Plan: Plan #3	Date Composed: 3/17/2011
Principal: Yes	Version: 1
	Tied-to: From Surface

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

Site: Queenie 15-1

Site Position:	Northing: 570322.05 ft	Latitude: 32 33 59 331 N
From: Map	Easting: 723235.89 ft	Longitude: 103 44 34.410 W
Position Uncertainty: 0.00 ft		North Reference: Grid
Ground Level: 3532.00 ft		Grid Convergence: 0.32 deg

Well: 15-1	Slot Name:
Well Position: +N/-S 0.00 ft	Latitude: 32 33 59 331 N
+E/-W 0.00 ft	Longitude: 103 44 34.410 W
Position Uncertainty: 0.00 ft	

Wellpath: 1	Drilled From: Surface
Current Datum: SITE	Tie-on Depth: 0.00 ft
Magnetic Data: 6/15/2011	Above System Datum: Mean Sea Level
Field Strength: 48830 nT	Declination: 7.69 deg
Vertical Section: Depth From (TVD)	Mag Dip Angle: 60.47 deg
ft	+N/-S
	+E/-W
	Direction
	deg
0 00	0.00
	0.00
	338.79

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
3550.00	0.00	0.00	3550.00	0.00	0.00	0.00	0.00	0.00	0.00	
4261.57	64.04	316.58	4122.39	260.00	-246.03	9.00	9.00	-6.10	316.58	
5695.39	64.04	316.58	4750.00	1196.39	-1132.10	0.00	0.00	0.00	0.00	7" Csg Pt
5872.59	64.04	316.58	4827.56	1312.11	-1241.61	0.00	0.00	0.00	0.00	
6425.70	90.99	352.95	4950.00	1791.20	-1457.27	8.00	4.87	6.58	58.18	
9328.84	90.99	352.95	4900.00	4671.98	-1813.42	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
3500.00	0.00	0.00	3500.00	0.00	0.00	0.00	0.00	570322.05	723235.89	CPTN
3550.00	0.00	0.00	3550.00	0.00	0.00	0.00	0.00	570322.05	723235.89	Kop
3600.00	4.50	316.58	3599.95	1.43	-1.35	1.82	9.00	570323.48	723234.54	
3700.00	13.50	316.58	3698.62	12.78	-12.09	16.29	9.00	570334.83	723223.80	
3800.00	22.50	316.58	3793.62	35.20	-33.31	44.87	9.00	570357.25	723202.58	
3900.00	31.50	316.58	3882.63	68.14	-64.48	86.85	9.00	570390.19	723171.41	
4000.00	40.50	316.58	3963.45	110.79	-104.84	141.22	9.00	570432.84	723131.05	
4100.00	49.50	316.58	4034.09	162.10	-153.39	206.62	9.00	570484.15	723082.50	
4200.00	58.50	316.58	4092.81	220.80	-208.94	281.44	9.00	570542.86	723026.95	
4261.57	64.04	316.58	4122.39	260.00	-246.03	331.41	9.00	570582.06	722989.86	Hold
4300.00	64.04	316.58	4139.21	285.10	-269.78	363.40	0.00	570607.15	722966.11	
4400.00	64.04	316.58	4182.98	350.41	-331.58	446.64	0.00	570672.46	722904.31	
4500.00	64.04	316.58	4226.76	415.72	-393.38	529.89	0.00	570737.77	722842.51	
4600.00	64.04	316.58	4270.53	481.02	-455.17	613.13	0.00	570803.08	722780.72	
4700.00	64.04	316.58	4314.30	546.33	-516.97	696.37	0.00	570868.38	722718.92	

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WFT Plan Report - X & Y's



Weatherford

Company: Manzano LLC
Field: Lea Co., NM (NAD 83)
Site: Queenie 15-1
Well: 15-1
Wellpath: 1

Date: 5/19/2011 Time: 11:05:04 Page: 2
Co-ordinate(N/E) Reference: Site: Queenie 15-1, Grid North
Vertical (TVD) Reference: SITE 3532.0
Section (VS) Reference: Well (0.00N,0.00E,338.79Azi)
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
4800.00	64.04	316.58	4358.07	611.64	-578.77	779.62	0.00	570933.69	722657.12	
4900.00	64.04	316.58	4401.84	676.94	-640.57	862.86	0.00	570999.00	722595.32	
5000.00	64.04	316.58	4445.62	742.25	-702.37	946.10	0.00	571064.31	722533.52	
5100.00	64.04	316.58	4489.39	807.56	-764.16	1029.35	0.00	571129.61	722471.73	
5200.00	64.04	316.58	4533.16	872.87	-825.96	1112.59	0.00	571194.92	722409.93	
5300.00	64.04	316.58	4576.93	938.17	-887.76	1195.83	0.00	571260.23	722348.13	
5400.00	64.04	316.58	4620.70	1003.48	-949.56	1279.08	0.00	571325.53	722286.33	
5500.00	64.04	316.58	4664.48	1068.79	-1011.35	1362.32	0.00	571390.84	722224.54	
5600.00	64.04	316.58	4708.25	1134.10	-1073.15	1445.56	0.00	571456.15	722162.74	
5695.39	64.04	316.58	4750.00	1196.39	-1132.10	1524.97	0.00	571518.44	722103.79	7" Csg Pt
5700.00	64.04	316.58	4752.02	1199.40	-1134.95	1528.81	0.00	571521.46	722100.94	
5725.09	64.04	316.58	4763.00	1215.79	-1150.45	1549.69	0.00	571537.84	722085.44	Delaware
5800.00	64.04	316.58	4795.79	1264.71	-1196.75	1612.05	0.00	571586.76	722039.14	
5872.59	64.04	316.58	4827.56	1312.11	-1241.61	1672.47	0.00	571634.17	721994.28	Build/Turn
5900.00	65.21	318.63	4839.31	1330.41	-1258.30	1695.57	8.00	571652.46	721977.59	
6000.00	69.70	325.81	4877.68	1403.38	-1314.75	1784.02	8.00	571725.44	721921.14	
6100.00	74.46	332.57	4908.47	1485.06	-1363.37	1877.76	8.00	571807.11	721872.52	
6200.00	79.42	339.01	4931.08	1573.85	-1403.24	1974.96	8.00	571895.90	721832.65	
6300.00	84.51	345.25	4945.06	1668.02	-1433.57	2073.72	8.00	571990.08	721802.32	
6400.00	89.66	351.38	4950.15	1765.75	-1453.76	2172.13	8.00	572087.80	721782.13	
6425.70	90.99	352.95	4950.00	1791.20	-1457.27	2197.13	8.00	572113.26	721778.62	Lp
6500.00	90.99	352.95	4948.72	1864.93	-1466.38	2269.16	0.00	572186.99	721769.51	
6600.00	90.99	352.95	4947.00	1964.16	-1478.65	2366.11	0.00	572286.22	721757.24	
6700.00	90.99	352.95	4945.28	2063.39	-1490.92	2463.05	0.00	572385.45	721744.97	
6800.00	90.99	352.95	4943.55	2162.62	-1503.18	2560.00	0.00	572484.68	721732.71	
6900.00	90.99	352.95	4941.83	2261.85	-1515.45	2656.94	0.00	572583.90	721720.44	
7000.00	90.99	352.95	4940.11	2361.08	-1527.72	2753.89	0.00	572683.13	721708.17	
7100.00	90.99	352.95	4938.39	2460.31	-1539.99	2850.83	0.00	572782.36	721695.90	
7200.00	90.99	352.95	4936.67	2559.54	-1552.26	2947.78	0.00	572881.59	721683.63	
7300.00	90.99	352.95	4934.94	2658.77	-1564.52	3044.72	0.00	572980.82	721671.37	
7400.00	90.99	352.95	4933.22	2758.00	-1576.79	3141.67	0.00	573080.05	721659.10	
7500.00	90.99	352.95	4931.50	2857.23	-1589.06	3238.61	0.00	573179.28	721646.83	
7600.00	90.99	352.95	4929.78	2956.46	-1601.33	3335.56	0.00	573278.51	721634.56	
7700.00	90.99	352.95	4928.05	3055.69	-1613.60	3432.50	0.00	573377.74	721622.29	
7800.00	90.99	352.95	4926.33	3154.92	-1625.86	3529.45	0.00	573476.97	721610.03	
7900.00	90.99	352.95	4924.61	3254.15	-1638.13	3626.39	0.00	573576.20	721597.76	
8000.00	90.99	352.95	4922.89	3353.38	-1650.40	3723.34	0.00	573675.43	721585.49	
8100.00	90.99	352.95	4921.16	3452.61	-1662.67	3820.28	0.00	573774.66	721573.22	
8200.00	90.99	352.95	4919.44	3551.84	-1674.94	3917.23	0.00	573873.89	721560.95	
8300.00	90.99	352.95	4917.72	3651.07	-1687.20	4014.17	0.00	573973.12	721548.69	
8400.00	90.99	352.95	4916.00	3750.30	-1699.47	4111.12	0.00	574072.35	721536.42	
8500.00	90.99	352.95	4914.28	3849.53	-1711.74	4208.06	0.00	574171.58	721524.15	
8600.00	90.99	352.95	4912.55	3948.76	-1724.01	4305.00	0.00	574270.81	721511.88	
8700.00	90.99	352.95	4910.83	4047.99	-1736.27	4401.95	0.00	574370.04	721499.62	
8800.00	90.99	352.95	4909.11	4147.22	-1748.54	4498.89	0.00	574469.27	721487.35	
8900.00	90.99	352.95	4907.39	4246.44	-1760.81	4595.84	0.00	574568.50	721475.08	
9000.00	90.99	352.95	4905.66	4345.67	-1773.08	4692.78	0.00	574667.73	721462.81	
9100.00	90.99	352.95	4903.94	4444.90	-1785.35	4789.73	0.00	574766.96	721450.54	
9200.00	90.99	352.95	4902.22	4544.13	-1797.61	4886.67	0.00	574866.19	721438.28	
9300.00	90.99	352.95	4900.50	4643.36	-1809.88	4983.62	0.00	574965.42	721426.01	
9320.17	90.99	352.95	4900.15	4663.38	-1812.36	5003.17	0.00	574985.43	721423.53	4 1/2"
9328.84	90.99	352.95	4900.00	4671.98	-1813.42	5011.58	0.00	574994.03	721422.47	PBHL

Weatherford International Ltd.

WFT Plan Report - X & Y's



Weatherford

Company: Manzano LLC	Date: 5/19/2011	Time: 11:05:04	Page: 3
Field: Lea Co., NM (NAD 83)	Co-ordinate(NE) Reference:	Site: Queenie 15-1, Grid North	
Site: Queenie 15-1	Vertical (TVD) Reference:	SITE 3532 0	
Well: 15-1	Section (VS) Reference:	Well (0.00N,0.00E,338.79Azi)	
Wellpath: 1	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

Targets

Name	Description Dip.	Dir.	TVD ft	+N/-S ft	+E/-W ft	Map Northing ft	Map Easting ft	<--- Latitude --->			<--- Longitude --->				
								Deg	Min	Sec	Deg	Min	Sec		
7" Csg Pt			4750.00	1196.39	-1132.10	571518.44	722103.79	32	34	11.231	N	103	44	47.562	W
PBHL			4900.00	4671.98	-1813.42	574994.03	721422.47	32	34	45.659	N	103	44	55.301	W

Casing Points

MD ft	TVD ft	Diameter in	Hole Size in	Name
1200.00	1200.00	13.375	17.500	13 3/8"
3450.00	3450.00	9.625	12.250	9 5/8"
5695.39	4750.00	7.000	8.750	7"
9320.17	4900.15	4.500	6.250	4 1/2"

Annotation

MD ft	TVD ft	
3550.00	3550.00	Kop
4261.57	4122.39	Hold
5695.39	4750.00	7" Csg/Hold
5872.59	4827.57	Build/Turn
6425.70	4950.00	Lp
9328.83	4900.00	Pbhl

Formations

MD ft	TVD ft	Formations	Lithology	Dip Angle deg	Dip Direction deg
1200.00	1200.00	Rustler		0.00	0.00
1300.00	1300.00	Top of Salt		0.00	0.00
1900.00	1900.00	Base of Salt		0.00	0.00
2700.00	2700.00	Yates		0.00	0.00
3500.00	3500.00	CPTN		0.00	0.00
5725.09	4763.00	Delaware		0.00	0.00
	0.00	Cherry Canyon		0.00	0.00

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

GeoDec v5.03

Report Date: May 19, 2011
Job Number: _____
Customer: Manzano, LLC
Well Name: Queenie 15-1
API Number: _____
Rig Name: _____
Location: Lea County, New Mexico
Block: _____
Engineer: R Joyner

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 570322.050 USFT	Latitude 32.5664839 DEG
East/West 723235.890 USFT	Longitude -103.7428871 DEG
Grid Convergence: .32°	
Total Correction: +7.37°	

Geodetic Location WGS84	Elevation =	0.0 Meters
Latitude =	32.56648° N	32° 33 min 59.342 sec
Longitude =	103.74289° W	103° 44 min 34.394 sec

Magnetic Declination =	7.69°	[True North Offset]	
Local Gravity =	.9988 g	Checksum =	6700
Local Field Strength =	48826 nT	Magnetic Vector X =	23845 nT
Magnetic Dip =	60.48°	Magnetic Vector Y =	3221 nT
Magnetic Model =	IGRF-2010g11	Magnetic Vector Z =	42485 nT
Spud Date =	Jun 15, 2011	Magnetic Vector H =	24062 nT

Signed: _____

Date: _____

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

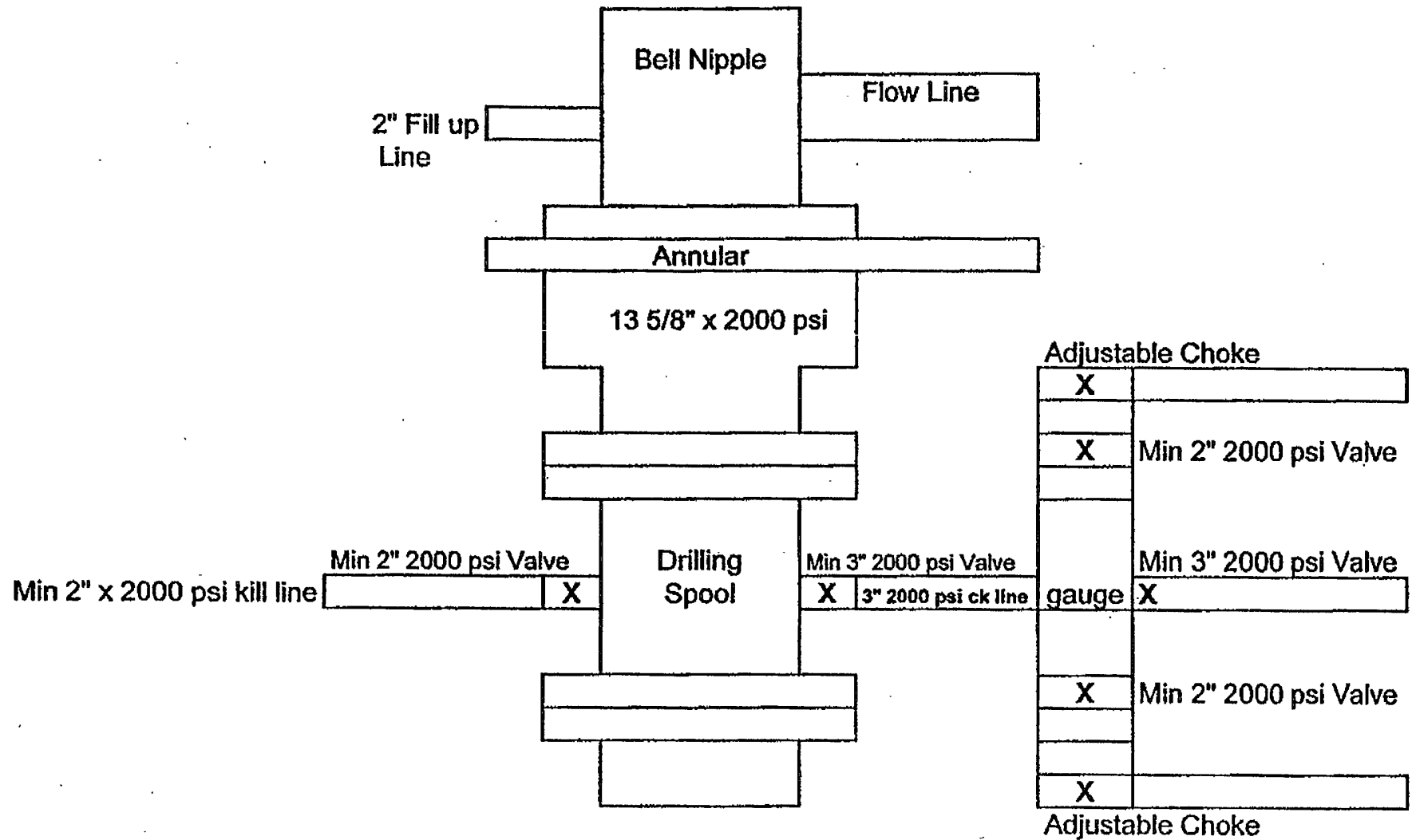
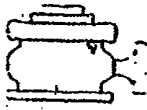
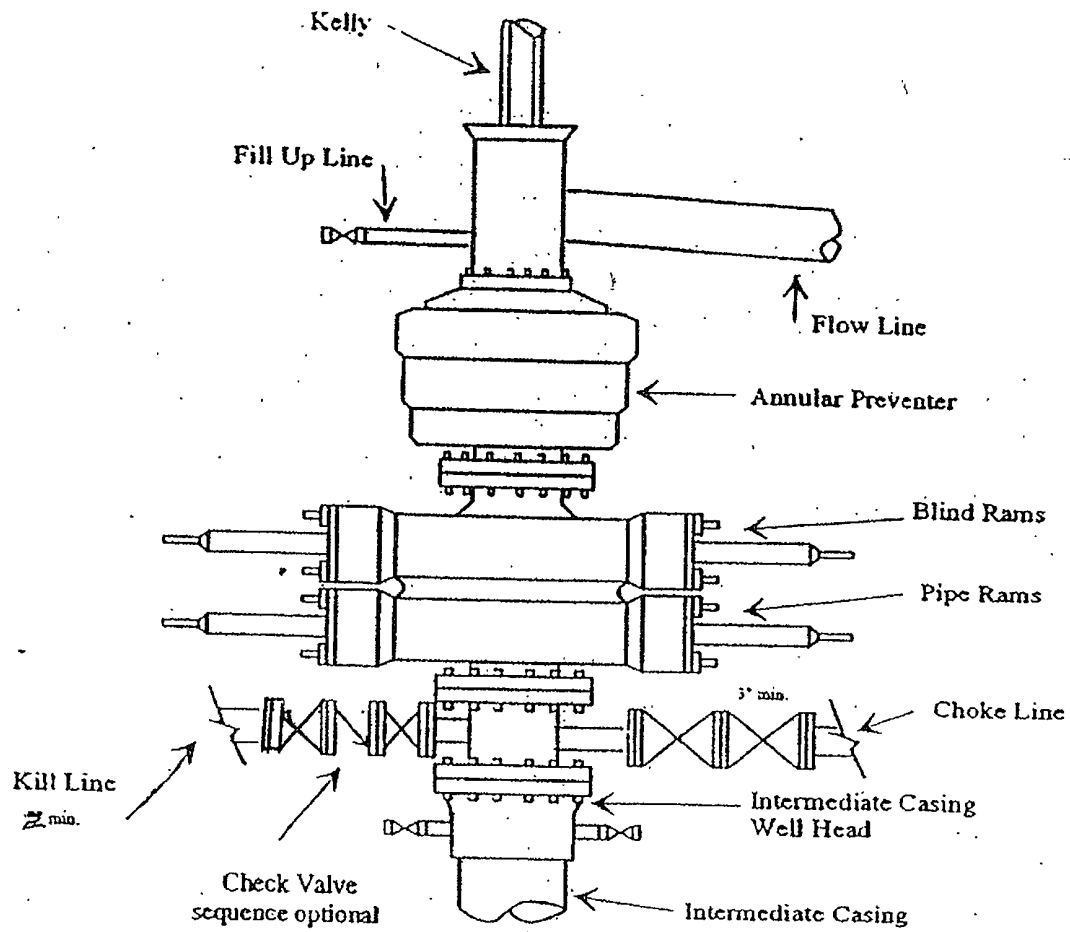


Exhibit 3

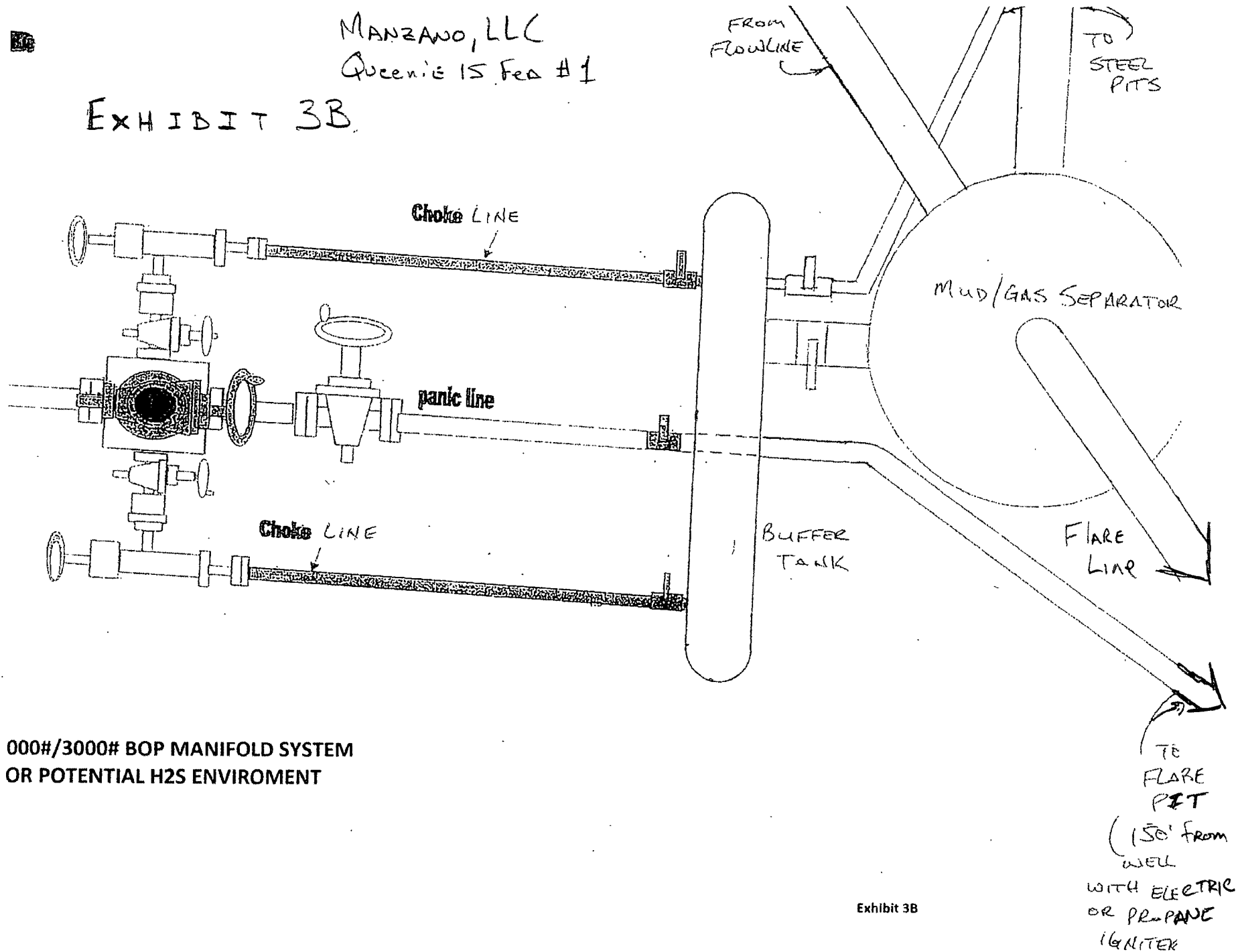


Typical 3,000 psi Pressure System
Schematic
Annular with Double Ram Preventer Stack



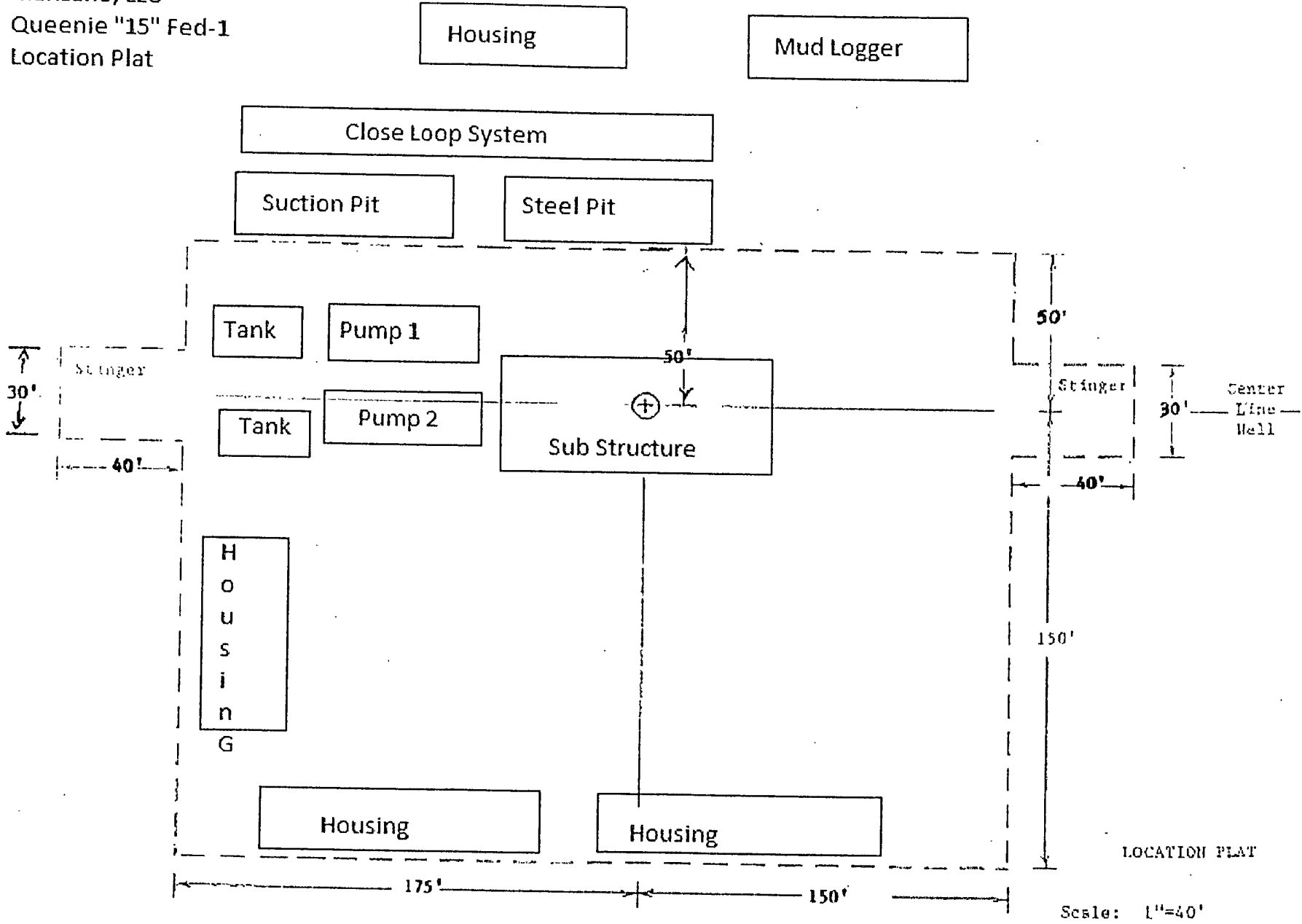
MANZANO, LLC
Queenie 15 Fea #1

EXHIBIT 3B



000#/3000# BOP MANIFOLD SYSTEM
OR POTENTIAL H2S ENVIROMENT

Manzano, LLC
Queenie "15" Fed-1
Location Plat



Manzano, LLC
Queenie 15 Fed #1
200' FSL & 795' FWL
Sec. 15 - T20S - R32E
Lea County, NM

