

HOBBS OCD

Form 3160-3
(August 2007)

APR 26 2013

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

RECEIVED

APPLICATION FOR PERMIT TO DRILL OR REENTER

FORM APPROVED
OMB No. 1004-0137
Expires July 31, 20105. Lease Serial No.
NM94186

6. If Indian, Allottee or Tribe Name

1a. Type of work: ☒ DRILL ☐ REENTER1b. Type of Well: ☒ Oil Well ☐ Gas Well ☐ Other ☒ Single Zone ☐ Multiple Zone

2. Name of Operator

DEVON ENERGY PRODUCTION COMPANY, L.P.

3a. Address 333 W. SHERIDAN AVENUE,
OKLAHOMA CITY, OK 73102-50103b. Phone No. (include area code)
405.552.7848

4. Location of Well (Report location clearly and in accordance with any State requirements.)*

At surface 280 FNL & 380 FWL, Unit D

PP: 380 FNL & 380 FWL

At proposed prod. zone 330 FSL & 380 FWL, Unit M; 33-23S-33E

14. Distance in miles and direction from nearest town or post office*
APPROX. 36 MILES E OF LOVING, NM7. If Unit or CA Agreement, Name and No.
Thistle Unit NM88526X8. Lease Name and Well No.
THISTLE UNIT 30H

9. API Well No.

10. Field and Pool, or Exploratory
BRINNINSTOOL; DELAWARE

11. Sec., T. R. M. or Blk. and Survey or Area

Sec. 28-T23S-R33E

12. County or Parish
LEA13. State
NM15. Distance from proposed*
location to nearest
property or lease line, ft.
(Also to nearest drig. unit line, if any)

See Attached Map

16. No. of acres in lease

960 Acres Fed lease
640 5117. Spacing Unit dedicated to this well
320 Acres18. Distance from proposed location*
to nearest well, drilling, completed,
applied for, on this lease, ft.

See Attached Map

19. Proposed Depth
18,658' MD 8,951' TVD
PH: 9238' 9238'20. BLM/BIA Bond No. on file
CO1104; NMB-00080121. Elevations (Show whether DF, KDB, RT, GL, etc.)
3681' GL

22. Approximate date work will start*

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.

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)

DAVID H. COOK

Date

08/20/2012

Title

REGULATORY SPECIALIST

Approved by (Signature)

/s/George MacDonell

Name (Printed/Typed)

Date

APR 24 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)

Carlsbad Controlled Water Basin

K2
04/26/13Approval Subject to General Requirements
& Special Stipulations AttachedSEE ATTACHED FOR
CONDITIONS OF APPROVAL

APR 29 2013

DRILLING PROGRAM

Devon Energy Production Company, LP

Thistle Unit 30H

Surface Location: 280 FNL & 380 FWL, Unit D, Sec 28 T23S R33E, Lea, NM

Bottom Hole Location: 330 FSL & 380 FWL, Unit M, Sec 33 T23S R33E, Lea, NM

1. Geologic Name of Surface Formation

a. Quaternary Alluvium

2. Estimated Tops of Geological Markers & Depths of Anticipated Fresh Water, Oil or Gas:

Formation	Depth (ft)	Hydrocarbon/Water Bearing Zones
Quaternary	Surface	
Fresh Water	400'	
Rustler	1,303'	
Top of Salt	1,949'	
Base of Salt	4,910'	
Delaware Bell Canyon	5,212'	Oil/Gas
Cherry Canyon	6,122'	Oil/Gas
Brushy Canyon	7,592'	Oil/Gas
Bone Spring	9,038'	Oil/Gas
PTD (Pilot Hole)	9,238'	
Total Depth	MTVD 8,951' MD 18,658'	

No other formations are expected to yield oil, gas or fresh water in measurable volumes. The surface fresh water sands will be protected by setting 13 3/8" casing at 1,850' and circulating cement back to surface. (Fresh water sands ^{salt}) will be protected by setting 9 5/8" casing at 5,100' and circulating cement to surface. The Delaware Group intervals will be isolated by setting 5 1/2" casing to total depth and circulating cement above the base of the 9 5/8" casing.

Casing Program: (All casing is new and API approved)

See CDA

Hole Size	Hole Interval	OD Csg	Casing Interval	Weight	Collar	Grade
17 1/2"	0'-1,850'	13 3/8"	0 - 1,850'	54.5#	STC	H-40
12 1/4"	1,850'-5,100'	9 5/8"	0 - 5,100'	36#	LTC	HCK-55
8 3/4"	5,100'-8,100'	5 1/2"	0 - 8,100'	17#	LTC	HCP-110
8 3/4"	8,100'-18,659'	5 1/2"	8,100' - 18,659'	17#	BTC	HCP-110

1370'
1370'
40#
J-55

Maximum TVD: 8,951'

Pilot Hole: pilot hole will be drilled to 9,232' and plugged back to ~8,170', ~200' above KOP (8,378'). The pilot hole will be plugged back with approximately 385 sks of Class H, 15.6 ppg 1.16 cf/sk cement.

Design Parameter Factors:

Casing Size	Collapse Design Factor	Burst Design Factor	Tension Design Factor
13 3/8"	1.31	3.15	5.10
9 5/8"	1.13	1.33	3.07
5 1/2"	1.78	2.54	1.40
5 1/2"	1.97	2.81	3.16

3. Cement Program:

13 3/8" Surface: **Lead:** 1180 sx Class C Cmt + 2% bwoc Calcium Chloride + 0.125#/sx Poly-E- Flake + 4% bwoc Bentonite + 70.1% FW, 13.5 ppg. Yield: 1.75cf/sx. TOC @ surface.

Tail: 410 sx Class C Cmt + 2% bwoc Calcium Chloride + 0.125#/sx Poly-E- Flake + 63.1% FW, 14.8 ppg. Yield: 1.35cf/sx.

9 5/8" Intermediate: **Lead:** 1,050 sx (65:35) Poz (Fly Ash):Class C Cmt + 5% bwow Sodium Chloride + 0.125 lbs/sx Poly-E- Flake + 6% bwoc Bentonite + 70.9% FW, 12.9 ppg, Yield: 1.85cf/sx; TOC @ surface.

Tail: 430 sx Class C Cmt + 0.125 lbs/sx Poly-E- Flake + 63.5% FW, 14.8 ppg, Yield: 1.33 cf/sx.

5 ½" Production: 1st Stage Lead: 385 sx (65:35) Poz (Fly Ash):Class H Cmt + 6% bwoc Bentonite + 0.2% bwoc HR-601 + 74.1% FW, 12.5 ppg, Yield: 1.95 cf/sk.

Tail: 2670 sx (50:50) Poz (Fly Ash):Class H Cmt + 1 #/sx Sodium Chloride + 0.5% bwoc HALAD-344 + 0.4 bwoc CFR-3 + 0.1% bwoc HR-601 + 2% bwoc Bentonite + 58.8% FW, 14.5 ppg; Yield: 1.22 cf/sx

DV TOOL at ~6,000 ft

2nd Stage Lead: 95 sx Class C Cmt + 3% bwoc Econolite + 0.125 lbs/sx Poly-E- Flake + 82.4% FW, 11.4 ppg; Yield: 2.87 cf/sk;

Tail: 120 sx Class C Cmt + 0.125 #/sx Poly-E- Flake + 63.5% FW, 14.8 ppg; Yield: 1.33cf/sx

TOC ~ 4,600'

Pilot Hole: 385 sks of Class H, 15.6 ppg Yield: 1.16 cf/sk

The above cement volumes could be revised pending the caliper measurement from the open hole logs. All cement volumes based on at least 25% excess.

Pressure Control Equipment

A 3M 13-5/8" BOP system (Double Ram and Annular preventer) will be installed and tested prior to drilling out the surface casing shoe. The BOP system used to drill the intermediate hole will be tested per BLM Onshore Oil and Gas Order 2.

A 3M 13-5/8" BOP system (Double Ram and Annular preventer) will be installed and tested prior to drilling out the intermediate casing shoe. The BOP system used to drill the production hole will be tested per BLM Onshore Oil and Gas Order 2.

The pipe rams will be operated and checked each 24 hour period and each time the drill pipe is out of the hole. These tests will be logged in the daily driller's log. A 2" kill line and 3" choke line will be incorporated into the drilling spool below the ram BOP. In addition to the rams and annular preventer, additional BOP accessories include a kelly cock, floor safety valve, choke lines, and choke manifold rated at 3,000 psi WP.

Devon requests a variance to use a flexible line with flanged ends between the BOP and the choke manifold (choke line). The line will be kept as straight as possible with minimal turns.

9/22
CJA

Mud Program

see COA

Depth	Wt. (ppg)	VIS	Fluid Loss	Type System
0-1,850'	8.8-9.0	30-34	N/C	FW
1,850'-5,100'	9.8-10.0	28-32	N/C	Brine
5,100'-18,659'	8.6-9.0	28-32	N/C-12	FW

N/C= no control

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

4. Auxiliary Well Control and Monitoring Equipment:

- A Kelly cock will be in the drill string at all times.
- A full opening drill pipe stabbing valve having the appropriate connections will be on the rig floor at all times.
- Hydrogen Sulfide detection equipment will be in operation after drilling out the 13 3/8" casing shoe until the 5 1/2" casing is cemented. Breathing equipment will be on location upon drilling the 13 3/8" shoe until total depth is reached.

5. Logging, Coring, and Testing Program:

- Drill stem tests will be based on geological sample shows.
- If a drill stem test is anticipated; a procedure, equipment to be used and safety measures will be provided via sundry notice to the BLM.
- The open hole electrical logging program will be:
 - Total Depth to Intermediate Casing: Neutron-Density, Resistivity, Gamma Ray.
 - Total Depth to Surface: Neutron, Gamma Ray
 - No coring program is planned
 - Additional testing will be initiated subsequent to setting the 5 1/2" production casing. Specific intervals will be targeted based on log evaluation, geological sample shows and drill stem tests.

6. Potential Hazards:

- See COA*
- 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 3,997 psi and Estimated BHT 110°. Assume normal pressure gradient: 0.433psi/ft.
 - No H2S is anticipated to be encountered.

7. Anticipated Starting Date and Duration of Operations:

- a. Road and location construction will begin after the BLM has approved the APD. Anticipated spud date will be as soon after BLM approval and as soon as a rig will be available. Move in operations and drilling is expected to take 32 days. If production casing is run then an additional 30 days will be needed to complete well and construct surface facilities and/or lay flow lines in order to place well on production.



Weatherford®

Drilling Services

Proposal



devon

THISTLE UNIT #30H

LEA COUNTY, NM

WELL FILE: PLAN 1

JULY 24, 2012

Weatherford International, Ltd.

P.O. Box 61028

Midland, TX 79711 USA

+1.432.561.8892 Main

+1.432.561.8895 Fax

www.weatherford.com



Thistle Unit #30H
Lea County, New Mexico

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSec	Target
1	0.00	0.00	179.59	0.00	0.00	0.00	0.00	0.00	0.00	
2	8378.04	0.00	179.59	8378.04	0.00	0.00	0.00	0.00	0.00	
3	9278.04	90.00	179.59	8951.00	-572.94	4.14	10.00	179.59	572.96	
4	18659.20	90.00	179.59	8951.00	-9953.86	72.00	0.00	0.00	9954.12	PBHL

WELL DETAILS

Name	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
Thistle Unit #30H	0.00	0.00	467200.70	772731.45	32°16'55.871N	103°35'04.504W	N/A

TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Shape
PBHL	8951.00	-9953.86	72.00	457246.84	772803.45	Rectangle (9381x50)

SITE DETAILS

Thistle Unit #30H
Site Centre Northing: 467200.70
Easting: 772731.45
Ground Level: 3681.00
Positional Uncertainty: 0.00
Convergence: 0.40



Azinuths to Grid North
True North: -0.40°
Magnetic North: 7.01°
Magnetic Field
Strength: 48525nT
Dip Angle: 60.20°
Date: 12/15/2012
Model: IGRF2010

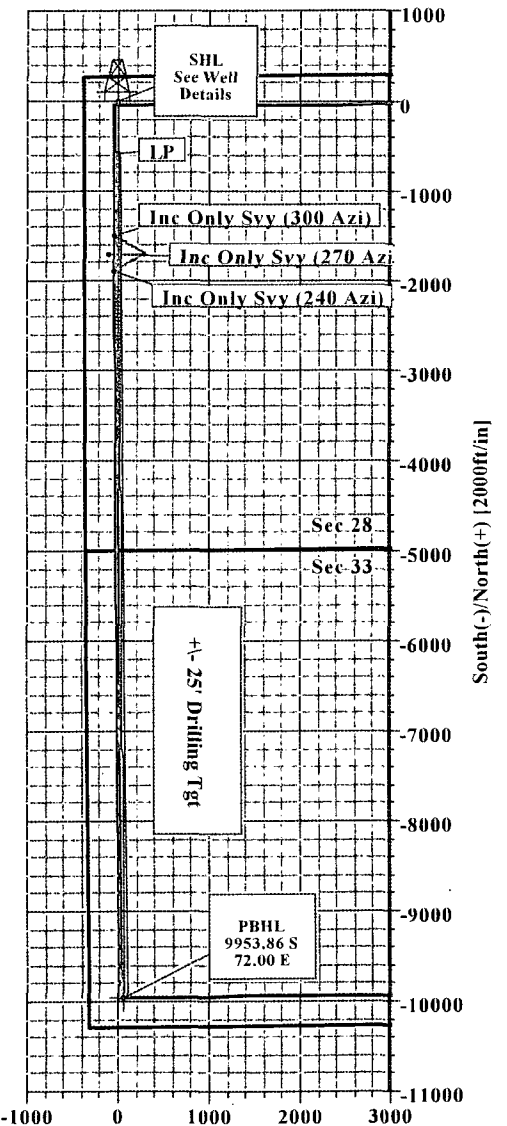
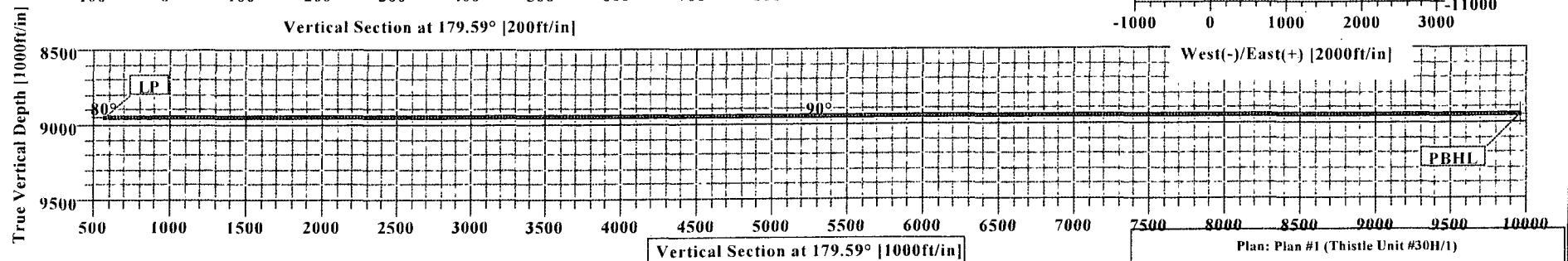
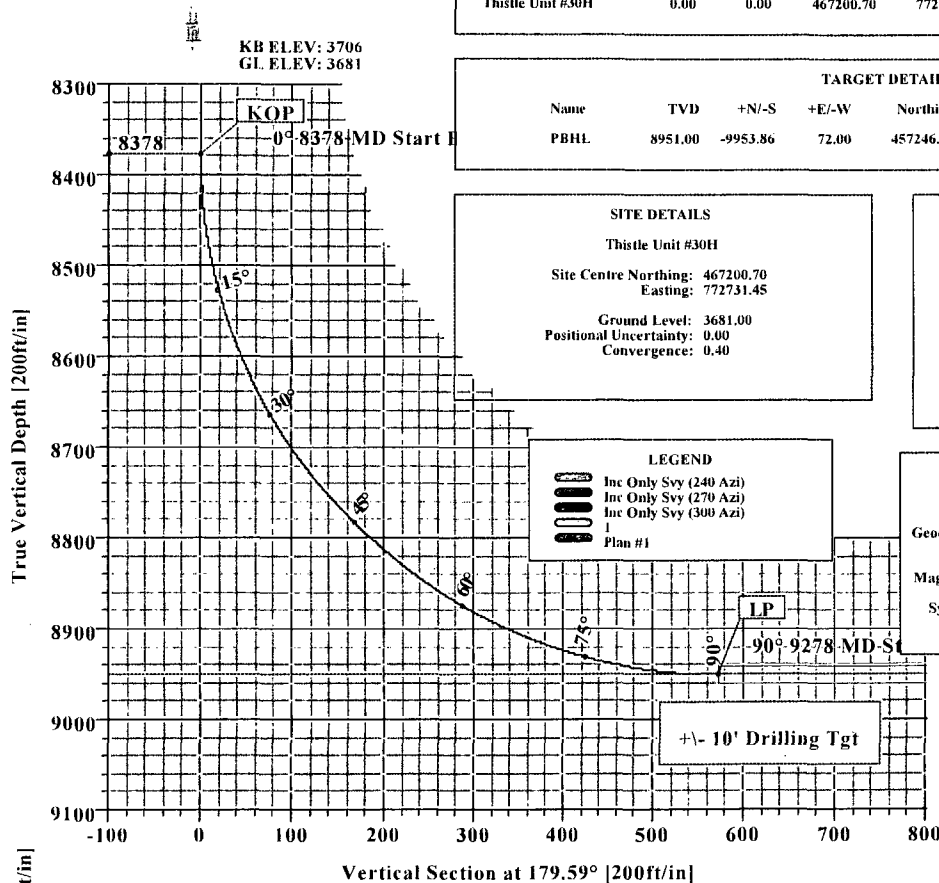
Total Correction to Grid North: 7.01°

FIELD DETAILS

Lea County, New Mexico (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

LEGEND

- Inc Only Svy (240 Azi)
- Inc Only Svy (270 Azi)
- Inc Only Svy (300 Azi)
- Plan #1



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Plan: Plan #1 (Thistle Unit #30H/1)

Created By: Keith Noack

Date: 7/24/2012



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WFT Plan Report - X & Y's

**Weatherford**

Company: Devon Energy			Date: 7/20/2012		Time: 07:05:38		Page: 1	
Field: Lea County, New Mexico (NAD 83)			Co-ordinate(NE) Reference: Well: Thistle Unit #30H, Grid North					
Site: Thistle Unit #30H			Vertical (TVD) Reference: SITE 3706.0					
Well: Thistle Unit #30H			Section (VS) Reference: Well (0.00N,0.00E,179.59Azi)					
Wellpath: 1			Survey Calculation Method: Minimum Curvature					Db: Sybase

Plan: Plan #1		Date Composed: 7/20/2012	
Principal: Yes		Version: 1	
		Tied-to: From Surface	

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

Site: Thistle Unit #30H					
Site Position:		Northing: 467200.70 ft		Latitude: 32 16 55.871 N	
From: Map		Easting: 772731.45 ft		Longitude: 103 35 4.504 W	
Position Uncertainty: 0.00 ft		North Reference: Grid		North Reference: Grid	
Ground Level: 3681.00 ft		Grid Convergence: 0.40 deg			

Well: Thistle Unit #30H		Slot Name:			
Well Position: +N/-S 0.00 ft		Northing: 467200.70 ft		Latitude: 32 16 55.871 N	
+E/-W 0.00 ft		Easting: 772731.45 ft		Longitude: 103 35 4.504 W	
Position Uncertainty: 0.00 ft					

Wellpath: 1		Drilled From: Surface					
Current Datum: SITE		Tie-on Depth: 0.00 ft					
Magnetic Data: 12/15/2012		Above System Datum: Mean Sea Level					
Field Strength: 48525 nT		Declination: 7.41 deg					
Vertical Section: Depth From (TVD)		Mag Dip Angle: 60.20 deg					
ft		+N/-S ft		+E/-W ft		Direction deg	
0.00		0.00		0.00		179.59	

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	179.59	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
8378.04	0.00	179.59	8378.04	0.00	0.00	0.00	0.00	0.00	0.00	
9278.04	90.00	179.59	8951.00	-572.94	4.14	10.00	10.00	0.00	179.59	
18659.20	90.00	179.59	8951.00	-9953.86	72.00	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	Comments
8300.00	0.00	179.59	8300.00	0.00	0.00	0.00	0.00	467200.70	772731.45	
8378.04	0.00	179.59	8378.04	0.00	0.00	0.00	0.00	467200.70	772731.45	KOP
8400.00	2.20	179.59	8399.99	-0.42	0.00	0.42	10.00	467200.28	772731.45	
8450.00	7.20	179.59	8449.81	-4.51	0.03	4.51	10.00	467196.19	772731.48	
8500.00	12.20	179.59	8499.08	-12.93	0.09	12.93	10.00	467187.77	772731.54	
8550.00	17.20	179.59	8547.43	-25.61	0.19	25.61	10.00	467175.09	772731.64	
8600.00	22.20	179.59	8594.49	-42.46	0.31	42.46	10.00	467158.24	772731.76	
8650.00	27.20	179.59	8639.90	-63.34	0.46	63.34	10.00	467137.36	772731.91	
8700.00	32.20	179.59	8683.32	-88.10	0.64	88.10	10.00	467112.60	772732.09	
8750.00	37.20	179.59	8724.42	-116.55	0.84	116.55	10.00	467084.15	772732.29	
8800.00	42.20	179.59	8762.88	-148.48	1.07	148.48	10.00	467052.22	772732.52	
8850.00	47.20	179.59	8798.41	-183.63	1.33	183.64	10.00	467017.07	772732.78	
8900.00	52.20	179.59	8830.74	-221.75	1.60	221.75	10.00	466978.95	772733.05	
8950.00	57.20	179.59	8859.63	-262.54	1.90	262.55	10.00	466938.16	772733.35	
9000.00	62.20	179.59	8884.85	-305.69	2.21	305.70	10.00	466895.01	772733.66	
9050.00	67.20	179.59	8906.21	-350.88	2.54	350.89	10.00	466849.82	772733.99	
9100.00	72.20	179.59	8923.56	-397.76	2.88	397.77	10.00	466802.94	772734.33	



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WFT Plan Report - X & Y's

**Weatherford**

Company: Devon Energy
Field: Lea County, New Mexico (NAD 83)
Site: Thistle Unit #30H
Well: Thistle Unit #30H
Wellpath: 1

Date: 7/20/2012 Time: 07:05:38 Page: 2
Co-ordinate(NE) Reference: Well: Thistle Unit #30H, Grid North
Vertical (TVD) Reference: SITE 3706.0
Section (VS) Reference: Well (0.00N,0.00E,179.59Azi)
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	Comments
9150.00	77.20	179.59	8936.75	-445.97	3.23	445.98	10.00	466754.73	772734.68	
9200.00	82.20	179.59	8945.69	-495.14	3.58	495.16	10.00	466705.56	772735.03	
9250.00	87.20	179.59	8950.31	-544.91	3.94	544.93	10.00	466655.79	772735.39	
9278.04	90.00	179.59	8951.00	-572.94	4.14	572.96	10.00	466627.76	772735.59	LP
9300.00	90.00	179.59	8951.00	-594.90	4.30	594.92	0.00	466605.80	772735.75	
9400.00	90.00	179.59	8951.00	-694.90	5.03	694.92	0.00	466505.80	772736.48	
9500.00	90.00	179.59	8951.00	-794.89	5.75	794.92	0.00	466405.81	772737.20	
9600.00	90.00	179.59	8951.00	-894.89	6.47	894.92	0.00	466305.81	772737.92	
9700.00	90.00	179.59	8951.00	-994.89	7.20	994.92	0.00	466205.81	772738.65	
9800.00	90.00	179.59	8951.00	-1094.89	7.92	1094.92	0.00	466105.81	772739.37	
9900.00	90.00	179.59	8951.00	-1194.88	8.64	1194.92	0.00	466005.82	772740.09	
10000.00	90.00	179.59	8951.00	-1294.88	9.37	1294.92	0.00	465905.82	772740.82	
10100.00	90.00	179.59	8951.00	-1394.88	10.09	1394.92	0.00	465805.82	772741.54	
10200.00	90.00	179.59	8951.00	-1494.88	10.81	1494.92	0.00	465705.82	772742.26	
10300.00	90.00	179.59	8951.00	-1594.87	11.54	1594.92	0.00	465605.83	772742.99	
10400.00	90.00	179.59	8951.00	-1694.87	12.26	1694.92	0.00	465505.83	772743.71	
10500.00	90.00	179.59	8951.00	-1794.87	12.98	1794.92	0.00	465405.83	772744.43	
10600.00	90.00	179.59	8951.00	-1894.87	13.71	1894.92	0.00	465305.83	772745.16	
10700.00	90.00	179.59	8951.00	-1994.86	14.43	1994.92	0.00	465205.84	772745.88	
10800.00	90.00	179.59	8951.00	-2094.86	15.15	2094.92	0.00	465105.84	772746.60	
10900.00	90.00	179.59	8951.00	-2194.86	15.88	2194.92	0.00	465005.84	772747.33	
11000.00	90.00	179.59	8951.00	-2294.86	16.60	2294.92	0.00	464905.84	772748.05	
11100.00	90.00	179.59	8951.00	-2394.85	17.32	2394.92	0.00	464805.85	772748.77	
11200.00	90.00	179.59	8951.00	-2494.85	18.05	2494.92	0.00	464705.85	772749.50	
11300.00	90.00	179.59	8951.00	-2594.85	18.77	2594.92	0.00	464605.85	772750.22	
11400.00	90.00	179.59	8951.00	-2694.85	19.49	2694.92	0.00	464505.85	772750.94	
11500.00	90.00	179.59	8951.00	-2794.84	20.22	2794.92	0.00	464405.86	772751.67	
11600.00	90.00	179.59	8951.00	-2894.84	20.94	2894.92	0.00	464305.86	772752.39	
11700.00	90.00	179.59	8951.00	-2994.84	21.66	2994.92	0.00	464205.86	772753.11	
11800.00	90.00	179.59	8951.00	-3094.83	22.39	3094.92	0.00	464105.87	772753.84	
11900.00	90.00	179.59	8951.00	-3194.83	23.11	3194.92	0.00	464005.87	772754.56	
12000.00	90.00	179.59	8951.00	-3294.83	23.83	3294.92	0.00	463905.87	772755.28	
12100.00	90.00	179.59	8951.00	-3394.83	24.56	3394.92	0.00	463805.87	772756.01	
12200.00	90.00	179.59	8951.00	-3494.82	25.28	3494.92	0.00	463705.88	772756.73	
12300.00	90.00	179.59	8951.00	-3594.82	26.00	3594.92	0.00	463605.88	772757.45	
12400.00	90.00	179.59	8951.00	-3694.82	26.73	3694.92	0.00	463505.88	772758.18	
12500.00	90.00	179.59	8951.00	-3794.82	27.45	3794.92	0.00	463405.88	772758.90	
12600.00	90.00	179.59	8951.00	-3894.81	28.17	3894.92	0.00	463305.89	772759.62	
12700.00	90.00	179.59	8951.00	-3994.81	28.90	3994.92	0.00	463205.89	772760.35	
12800.00	90.00	179.59	8951.00	-4094.81	29.62	4094.92	0.00	463105.89	772761.07	
12900.00	90.00	179.59	8951.00	-4194.81	30.34	4194.92	0.00	463005.89	772761.79	
13000.00	90.00	179.59	8951.00	-4294.80	31.07	4294.92	0.00	462905.90	772762.52	
13100.00	90.00	179.59	8951.00	-4394.80	31.79	4394.92	0.00	462805.90	772763.24	
13200.00	90.00	179.59	8951.00	-4494.80	32.51	4494.92	0.00	462705.90	772763.96	
13300.00	90.00	179.59	8951.00	-4594.80	33.24	4594.92	0.00	462605.90	772764.69	
13400.00	90.00	179.59	8951.00	-4694.79	33.96	4694.92	0.00	462505.91	772765.41	
13500.00	90.00	179.59	8951.00	-4794.79	34.68	4794.92	0.00	462405.91	772766.13	
13600.00	90.00	179.59	8951.00	-4894.79	35.41	4894.92	0.00	462305.91	772766.86	
13700.00	90.00	179.59	8951.00	-4994.79	36.13	4994.92	0.00	462205.91	772767.58	
13800.00	90.00	179.59	8951.00	-5094.78	36.85	5094.92	0.00	462105.92	772768.30	
13900.00	90.00	179.59	8951.00	-5194.78	37.58	5194.92	0.00	462005.92	772769.03	
14000.00	90.00	179.59	8951.00	-5294.78	38.30	5294.92	0.00	461905.92	772769.75	
14100.00	90.00	179.59	8951.00	-5394.77	39.02	5394.92	0.00	461805.93	772770.47	



Weatherford

WFT Plan Report - X & Y's

**Weatherford**

Company: Devon Energy
Field: Lea County, New Mexico (NAD 83)
Site: Thistle Unit #30H
Well: Thistle Unit #30H
Wellpath: 1

Date: 7/20/2012 Time: 07:05:38 Page: 3
Co-ordinate(NE) Reference: Well: Thistle Unit #30H, Grid North
Vertical (TVD) Reference: SITE 3706.0
Section (VS) Reference: Well (0.00N,0.00E,179.59Azi)
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
14200.00	90.00	179.59	8951.00	-5494.77	39.75	5494.92	0.00	461705.93	772771.20	
14300.00	90.00	179.59	8951.00	-5594.77	40.47	5594.92	0.00	461605.93	772771.92	
14400.00	90.00	179.59	8951.00	-5694.77	41.19	5694.92	0.00	461505.93	772772.64	
14500.00	90.00	179.59	8951.00	-5794.76	41.92	5794.92	0.00	461405.94	772773.37	
14600.00	90.00	179.59	8951.00	-5894.76	42.64	5894.92	0.00	461305.94	772774.09	
14700.00	90.00	179.59	8951.00	-5994.76	43.36	5994.92	0.00	461205.94	772774.81	
14800.00	90.00	179.59	8951.00	-6094.76	44.09	6094.92	0.00	461105.94	772775.54	
14900.00	90.00	179.59	8951.00	-6194.75	44.81	6194.92	0.00	461005.95	772776.26	
15000.00	90.00	179.59	8951.00	-6294.75	45.53	6294.92	0.00	460905.95	772776.98	
15100.00	90.00	179.59	8951.00	-6394.75	46.26	6394.92	0.00	460805.95	772777.71	
15200.00	90.00	179.59	8951.00	-6494.75	46.98	6494.92	0.00	460705.95	772778.43	
15300.00	90.00	179.59	8951.00	-6594.74	47.70	6594.92	0.00	460605.96	772779.15	
15400.00	90.00	179.59	8951.00	-6694.74	48.43	6694.92	0.00	460505.96	772779.88	
15500.00	90.00	179.59	8951.00	-6794.74	49.15	6794.92	0.00	460405.96	772780.60	
15600.00	90.00	179.59	8951.00	-6894.74	49.87	6894.92	0.00	460305.96	772781.32	
15700.00	90.00	179.59	8951.00	-6994.73	50.60	6994.92	0.00	460205.97	772782.05	
15800.00	90.00	179.59	8951.00	-7094.73	51.32	7094.92	0.00	460105.97	772782.77	
15900.00	90.00	179.59	8951.00	-7194.73	52.04	7194.92	0.00	460005.97	772783.49	
16000.00	90.00	179.59	8951.00	-7294.72	52.77	7294.92	0.00	459905.98	772784.22	
16100.00	90.00	179.59	8951.00	-7394.72	53.49	7394.92	0.00	459805.98	772784.94	
16200.00	90.00	179.59	8951.00	-7494.72	54.21	7494.92	0.00	459705.98	772785.66	
16300.00	90.00	179.59	8951.00	-7594.72	54.94	7594.92	0.00	459605.98	772786.39	
16400.00	90.00	179.59	8951.00	-7694.71	55.66	7694.92	0.00	459505.99	772787.11	
16500.00	90.00	179.59	8951.00	-7794.71	56.38	7794.92	0.00	459405.99	772787.83	
16600.00	90.00	179.59	8951.00	-7894.71	57.11	7894.92	0.00	459305.99	772788.56	
16700.00	90.00	179.59	8951.00	-7994.71	57.83	7994.92	0.00	459205.99	772789.28	
16800.00	90.00	179.59	8951.00	-8094.70	58.55	8094.92	0.00	459106.00	772790.00	
16900.00	90.00	179.59	8951.00	-8194.70	59.28	8194.92	0.00	459006.00	772790.73	
17000.00	90.00	179.59	8951.00	-8294.70	60.00	8294.92	0.00	458906.00	772791.45	
17100.00	90.00	179.59	8951.00	-8394.70	60.72	8394.92	0.00	458806.00	772792.17	
17200.00	90.00	179.59	8951.00	-8494.69	61.45	8494.92	0.00	458706.01	772792.90	
17300.00	90.00	179.59	8951.00	-8594.69	62.17	8594.92	0.00	458606.01	772793.62	
17400.00	90.00	179.59	8951.00	-8694.69	62.89	8694.92	0.00	458506.01	772794.34	
17500.00	90.00	179.59	8951.00	-8794.69	63.62	8794.92	0.00	458406.01	772795.07	
17600.00	90.00	179.59	8951.00	-8894.68	64.34	8894.92	0.00	458306.02	772795.79	
17700.00	90.00	179.59	8951.00	-8994.68	65.06	8994.92	0.00	458206.02	772796.51	
17800.00	90.00	179.59	8951.00	-9094.68	65.79	9094.92	0.00	458106.02	772797.24	
17900.00	90.00	179.59	8951.00	-9194.68	66.51	9194.92	0.00	458006.02	772797.96	
18000.00	90.00	179.59	8951.00	-9294.67	67.23	9294.92	0.00	457906.03	772798.68	
18100.00	90.00	179.59	8951.00	-9394.67	67.96	9394.92	0.00	457806.03	772799.41	
18200.00	90.00	179.59	8951.00	-9494.67	68.68	9494.92	0.00	457706.03	772800.13	
18300.00	90.00	179.59	8951.00	-9594.66	69.40	9594.92	0.00	457606.04	772800.85	
18400.00	90.00	179.59	8951.00	-9694.66	70.13	9694.92	0.00	457506.04	772801.58	
18500.00	90.00	179.59	8951.00	-9794.66	70.85	9794.92	0.00	457406.04	772802.30	
18600.00	90.00	179.59	8951.00	-9894.66	71.57	9894.92	0.00	457306.04	772803.02	
18659.20	90.00	179.59	8951.00	-9953.86	72.00	9954.12	0.00	457246.84	772803.45	PBHL



Weatherford

WFT Plan Report - X & Y's

**Weatherford**

Company: Devon Energy
Field: Lea County, New Mexico (NAD 83)
Site: Thistle Unit #30H
Well: Thistle Unit #30H
Wellpath: 1

Date: 7/20/2012 **Time:** 07:05:38 **Page:** 4
Co-ordinate(NE) Reference: Well: Thistle Unit #30H, Grid North
Vertical (TVD) Reference: SITE 3706.0
Section (VS) Reference: Well (0.00N,0.00E,179.59Azi)
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 -Rectangle (9381x50)		8951.00	-9953.86	72.00	457246.84	772803.45	32 15 17.371 N	103 35 4.474 W

Casing Points

MD	TVD	Diameter	Hole Size	Name

Annotation

MD ft	TVD ft	
8378.04	8378.04	KOP
9278.04	8951.00	LP
18659.20	8951.00	PBHL

Formations

MD	TVD	Formations	Lithology	Dip Angle Dip Direction

NOTES REGARDING BLOWOUT PREVENTERS
Devon Energy Production Company, LP

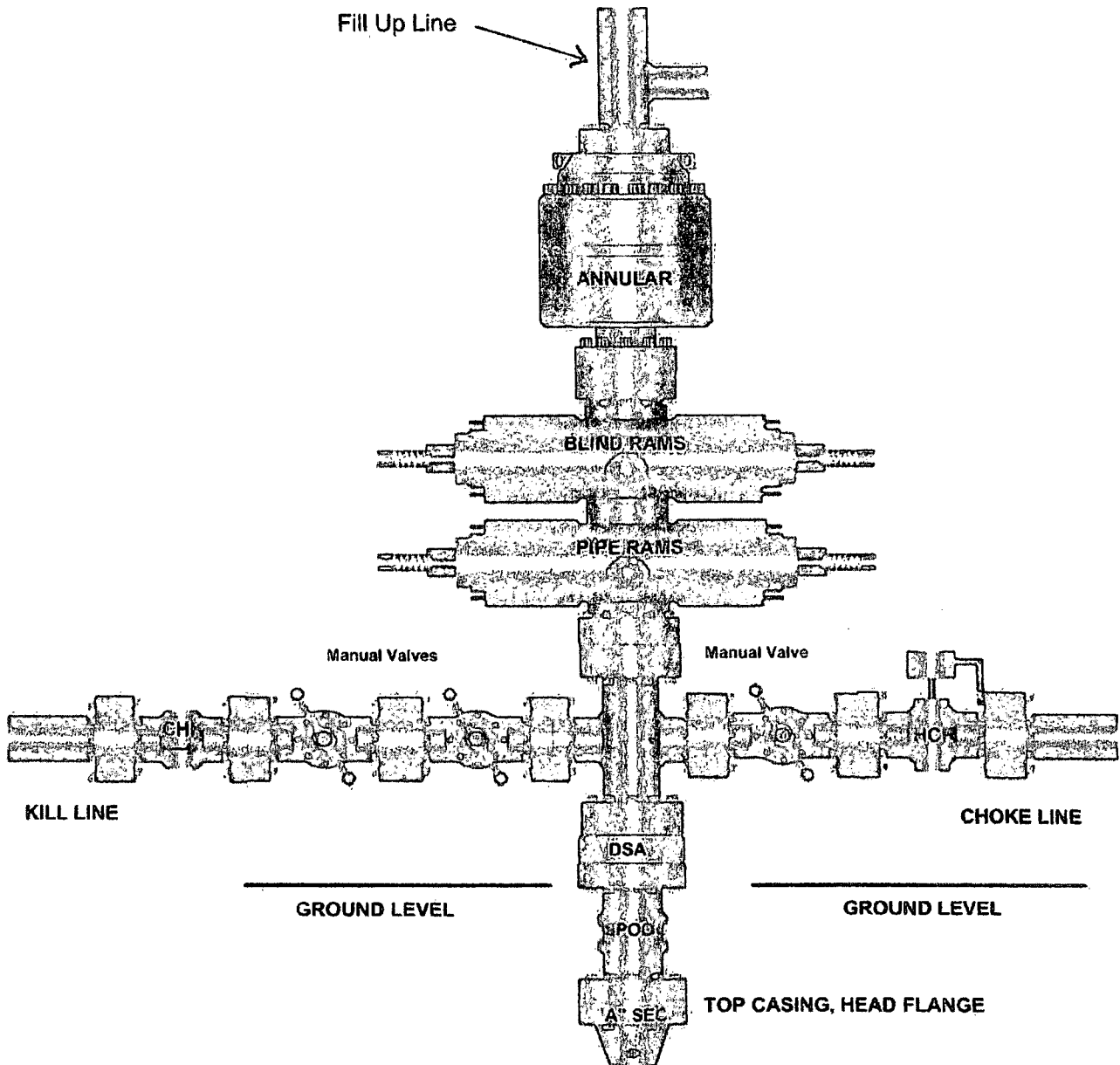
Thistle Unit 30H

Surface Location: 280 FNL & 380 FWL, Unit D, Sec 28 T23S R33E, Lea, NM

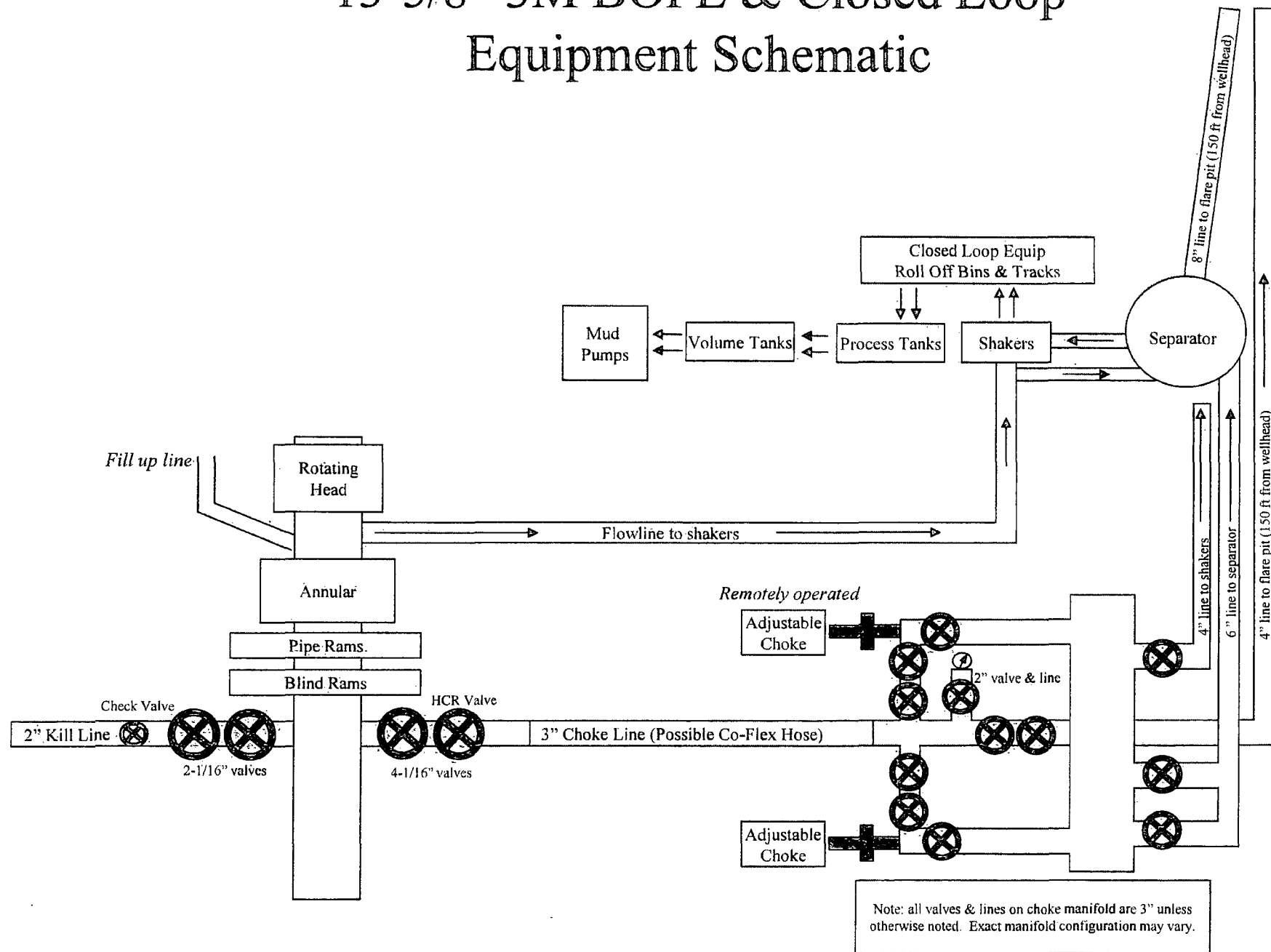
Bottom Hole Location: 330 FSL & 380 FWL, Unit M, Sec 33 T23S R33E, Lea, NM

1. Drilling nipple will be constructed so it can be removed mechanically without the aid of a welder. The minimum internal diameter will equal BOP bore.
2. Wear ring will be properly installed in head.
3. Blowout preventer and all associated fittings will be in operable condition to withstand a minimum 3000 psi working pressure.
4. All fittings will be flanged.
5. A full bore safety valve tested to a minimum 3000 psi WP with proper thread connections will be available on the rotary rig floor at all times.
6. All choke lines will be anchored to prevent movement.
7. All BOP equipment will be equal to or larger in bore than the internal diameter of the last casing string.
8. Will maintain a kelly cock attached to the kelly.
9. Hand wheels and wrenches will be properly installed and tested for safe operation.
10. Hydraulic floor control for blowout preventer will be located as near in proximity to driller's controls as possible.
11. All BOP equipment will meet API standards and include a minimum 40 gallon accumulator having two independent means of power to initiate closing operation.

13-5/8" x 3,000 psi BOP Stack



13-5/8" 3M BOPE & Closed Loop Equipment Schematic





Fluid Technology

ContiTech Beattie Corp.
Website: www.contitechbeattie.com

Monday, June 14, 2010

RE: Drilling & Production Hoses
Lifting & Safety Equipment

To Helmerich & Payne,

A Continental ContiTech hose assembly can perform as intended and suitable for the application regardless of whether the hose is secured or unsecured in its configuration. As a manufacturer of High Pressure Hose Assemblies for use in Drilling & Production, we do offer the corresponding lifting and safety equipment; this has the added benefit of easing the lifting and handling of each hose assembly whilst affording hose longevity by ensuring correct handling methods and procedures as well as securing the hose in the unlikely event of a failure; but in no way does the lifting and safety equipment affect the performance of the hoses providing the hoses have been handled and installed correctly. It is good practice to use lifting & safety equipment but not mandatory.

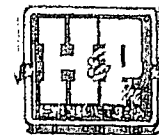
Should you have any questions or require any additional information/clarifications then please do not hesitate to contact us.

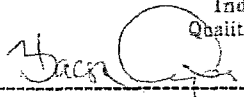
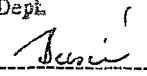
ContiTech Beattie is part of the Continental AG Corporation and can offer the full support resources associated with a global organization.

Best regards,

Robin Hodgson
Sales Manager
ContiTech Beattie Corp

ContiTech Beattie Corp,
11535 Brittmoore Park Drive,
Houston, TX 77041
Phone: +1 (832) 327-0141
Fax: +1 (832) 327-0148
www.contitechbeattie.com



QUALITY CONTROL INSPECTION AND TEST CERTIFICATE				CERT. N°: 1713	
PURCHASER: ContiTech Beattie Co.				P.O. N°: 002808	
CONTITECH ORDER N°: 426127		HOSE TYPE: 3" ID Choke and Kill Hose			
HOSE SERIAL N°: 53622		NOMINAL / ACTUAL LENGTH: 10,67 m			
W.P. 68,96 MPa 10000 psi		T.P. 103,4 MPa 15000 psi		Duration: 60 min.	
Pressure test with water at ambient temperature See attachment. (1 page) ↑ 10 mm = 10 Min. → 10 mm = 25 MPa					
COUPLINGS Type		Serial N°		Quality	
3" coupling with 4 1/16" Flange end		5503 2029		AISI 4130 AISI 4130	
				Heat N° N1590P 27566	
INFOCHIP INSTALLED				API Spec 16 C Temperature rate: "B"	
All metal parts are flawless				Hose conform to NACE MR 01-75	
WE CERTIFY THAT THE ABOVE HOSE HAS BEEN MANUFACTURED IN ACCORDANCE WITH THE TERMS OF THE ORDER INSPECTED AND PRESSURE TESTED AS ABOVE WITH SATISFACTORY RESULT.					
STATEMENT OF CONFORMITY: We hereby certify that the above items/equipment supplied by us are in conformity with the terms, conditions and specifications of the above Purchaser Order and that these items/equipment were fabricated inspected and tested in accordance with the referenced standards, codes and specifications and meet the relevant acceptance criteria and design requirements.					
COUNTRY OF ORIGIN HUNGARY/EU					
Date: 25. August. 2008		Inspector		Quality Control ContiTech Rubber Industrial Kft. Quality Control Dept.  	

HARTMANN &

