ATS-14-187

Form 3160-3
(March 2012)

OCD Hobbs OCD

OCT 03 2014

RECEIVED

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

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

5. Lease Serial No.
NM 27205

6. If Indian, Allotee or Tribe Name

1a. Type of work: ☑ DRILL ☐ REENTER

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

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

8. Lease Name and Well No. <313760>
ISABEL 23 FEE FED COM 1H

2. Name of Operator Devon Energy Production Company, L.P. <6137>

9. API Well No.
30-025-42166

3a. Address 333 W. Sheridan Ave.
Oklahoma City, OK 73102

3b. Phone No. *(include area code)*
405-552-7848

10. Field and Pool, or Exploratory <34270>
Featherstone; Bone Spring East

4. Location of Well *(Report location clearly and in accordance with any State requirements.*)*
At surface 330 FSL & 660 FWL Unit M PP: 580 FSL & 660 FWL
At proposed prod. zone 330 FNL & 660 FWL Unit D

11. Sec., T. R. M. or Blk. and Survey or Area
23-20S-35E

14. Distance in miles and direction from nearest town or post office*
Approximately 20 miles southwest of Hobbs, NM

12. County or Parish
Lea County

13. State
NM

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 160 acres 80	17. Spacing Unit dedicated to this well 160 acres
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. See attached map	19. Proposed Depth TVD: 10,098' MD: 14,520' PH: 10,780'	20. BLM/BIA Bond No. on file CO-1104 & NMB-000801
21. Elevations (Show whether DF, KDB, RT, GL, etc.) 3,673.3' GL	22. Approximate date work will start* 01/01/2014	23. Estimated duration 25 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 11/13/2013
Title Regulatory Specialist		
Approved by *(Signature)* Steve Caffey	Name *(Printed/Typed)*	Date SEP 26 2014
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)

Lea County Controlled Water Basin

KA 10/03/14

E-PERMITTING - - New Well P-NM
Comp_____ P&A_____ TA_____
CSNG_____ Loc Chng_____
ReComp_____ Add New Well_____
Cancl Well_____ Create Pool_____

SEE ATTACHED FOR
CONDITIONS OF APPROVAL

Approval Subject to General Requirements
& Special Stipulations Attached

OCT 09 2014

Operators Representative:

The Devon Energy Production Company, L.P. representatives responsible for ensuring compliance of the surface use plan are listed below.

Justin Lazzari - Operations Engineer
Devon Energy Production Company, L.P.
333 W. Sheridan
Oklahoma City, OK 73102-5010
(405) 228-8466 (office)
(405) 464-9261 (Cellular)

Don Mayberry - Superintendent
Devon Energy Production Company, L.P.
Post Office Box 250
Artesia, NM 88211-0250
(575) 748-3371 (office)
(575) 746-4945 (home)

HOBBS OCD

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Certification

I hereby certify that I, or persons under my direct supervision, have inspected the proposed drill site and access road proposed herein; that I am familiar with the conditions that presently exist; that I have full knowledge of State and Federal laws applicable to this operation; that the statements made in this APD package are, to the best of my knowledge, true and correct; and that the work associated with the operations proposed herein will be performed in conformity with this APD package and the terms and conditions under which it is approved. I also certify that I, or Devon Energy Production Company, L.P. am responsible for the operations conducted under this application. These statements are subject to the provisions of 18 U.S.C. 1001 for the filing of false statements.

I hereby also certify that I, or Devon Energy Production Company, L.P. have made a good faith effort to provide the surface owner with a copy of the Surface Use Plan of Operations and any Conditions of Approval that are attached to the APD.

Executed this _13th__ day of __November, 2013.
Printed Name: David H. Cook
Signed Name: _____
Position Title: Regulatory Specialist
Address: 333 W. Sheridan, OKC OK 73102
Telephone: (405)-552-7848

DRILLING PROGRAM

Devon Energy Production Company, L.P.
Isabel 23 Fee Fed Com 1H

1. **Geologic Name of Surface Formation:** Quaternary

2. **Estimated Tops of Geological Markers & Depths of Anticipated FW, Oil, or Gas:**

a.	Fresh Water	150'		
b.	Rustler	2,033'	Barren	
c.	Top of Salt	2,338'	Barren	
d.	Base of Salt	3,269'	Barren	
e.	Capitan Reef	3,270'	Barren	
f.	Queen	4,963'	Oil/Gas	
g.	Grayburg	5,841'	Oil/Gas	
h.	Delaware	5,886'	Oil/Gas	
i.	Brushy Canyon	5,968'	Oil/Gas	
j.	Lower Brushy Canyon	7,998'	Oil/Gas	
k.	Bone Spring Lime	8,243'	Oil/gas	
l.	1st Bone Spring Sand	9,468'	Oil/gas	
m.	2nd Bone Spring Lime	9,763'	Oil/Gas	
n.	2nd Bone Spring Sand	10,133'	Oil/Gas	
	Total Depth	10,098' TVD	14,520' MD	Pilot Hole: 10,780'

3. **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.

See COA

Devon requests a variance to use a flexible line with flanged ends between the BOP and the choke manifold (choke line); **if an H&P rig drills this well. Otherwise no flex line is needed**. The line will be kept as straight as possible with minimal turns.

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.

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

Hole Size	Hole Interval	Casing OD	Casing Interval	Weight (lb/ft)	Collar	Grade	Collapse Design Factor	Burst Design Factor	Tension Design Factor
17-1/2"	0 – 2,100'	13-3/8"	0 – 2,100'	54.5	STC	J-55	1.19	3.00	7.45
12-1/4"	2,100-3,800'	9-5/8"	0-3,800'	40	BTC	HCK-55	2.16	2.40	6.09
8-3/4"	3,800-14,520'	5-1/2"	0-14,520'	17	BTC	P-110	1.48	2.28	3.10

*An 8-3/4" pilot hole will be drilled to 10,780' and plugged back to KOP (for volumes and TOC see cement table)

Maximum Lateral TVD: 10,098'

5. **Proposed mud Circulations System:**

Depth	Mud Weight	Viscosity (cp)	Fluid Loss	Type System
0-2,100'	8.5-8.7	4 - 6	N/C	Aquagel/spud mud
2,100-3,800'	9.8-10.0	1 - 5	<100	Brine
3,800-14,520'	8.4-9.0	1 - 5	<100	Cut brine

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. If abnormal pressures are encountered, electronic/mechanical mud monitoring equipment will be installed.

6. Cementing Table:

String	Number of sx	Weight lbs/gal	Water Volume g/sx	Yield cf/sx	Stage; Lead/Tail	Slurry Description
Surface	1295	13.5	9.07	1.72	Lead	Class C Cement + 0.25 lbs/sack Poly-E-Flake + 4% bwoc Bentonite + 70.8% Fresh Water
	550	14.8	6.34	1.34	Tail	Class C Cement + 1% bwoc Calcium Chloride + 0.125 lbs/sack Poly-E-Flake + 63.1% Fresh Water
Intermediate	640	12.9	9.81	1.85	Lead	(65:35) Class C Cement: Poz (Fly Ash): 6% BWOC Bentonite + 5% BWOW Sodium Chloride + 0.125 lbs/sack Poly-E-Flake + 70.9 % Fresh Water
	430	14.8	6.32	1.33	Tail	Class C Cement + 0.125 lbs/sack Poly-E-Flake + 63.9% Fresh Water
Production	685	10.4	15.24	2.91	Lead	Tuned Light Class C Based + 2 lbs/sack Kol-Seal+ 0.125 lbs/sack Poly-E-Flake + 0.2 lb/sack HR-800 + 70.01 % Fresh Water
	1255	14.5	5.38	1.22	Tail	(50:50) Class H Cement: Poz (Fly Ash) + 1 lb/sk Sodium Chloride + 0.5% bwoc HALAD-344 + 0.4% bwoc CFR-3 + 0.2% bwoc HR-601 + 2% bwoc Bentonite + 58.8% Fresh Water
PH Plug	455	15.6	5.39	1.19	Lead	Class H Cement + 0.2% Halad-9 + 0.2% HR-601 + 60.5 % Fresh Water

See COA

TOC for all Strings:

Surface @ 0'
Intermediate @ 0'
Production @ 3,300' 50' above Capitan Reef

Notes:

- Cement volumes Surface 100%, Intermediate 75%, Production based on at least 25% excess
- Actual cement volumes will be adjusted based on fluid caliper and caliper log data

7. Logging, Coring, and Testing Program:

a. Drill stem tests will be based on geological sample shows.
b. 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.
c. Resistivity and porosity logs are planned below the intermediate casing point. Stated logs run will be named in the Completion Report and submitted to the BLM.
d. No coring program is planned
e. 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.

8. Potential Hazards:

a. No abnormal pressures or temperatures are expected. There is no knows presence of H2S in this area, and none is anticipated to be encountered. 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 being used to drill this well. Estimated BHP: 4,700 psi, and estimated BHT: 160 degrees.

See COA

b. 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.

9. 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

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devon

ISABEL 23 FEE FED COM 1H

LEA COUNTY, NM

WELL FILE: **PLAN 1**

OCTOBER 11, 2013

Weatherford International, Ltd.
P.O. Box 61028
Midland, TX 79711 USA
+1.432.561.8892 Main
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www.weatherford.com

devon

Isabel 23 Fee Fed Com 1H
Lea County, New Mexico

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSec	Target
1	9620.54	0.00	0.00	9620.54	0.00	0.00	0.00	0.00	0.00	
2	10370.54	90.00	359.57	10098.00	477.45	-3.58	12.00	359.57	477.47	
3	14520.08	90.00	359.57	10098.00	4626.87	-34.73	0.00	0.00	4627.00	PBHL

WELL DETAILS

Name	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
Isabel 23 Fee Fed Com 1H	0.00	0.00	565831.46	818319.30	32°33'08.317N	103°26'03.839W	N/A

TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Shape
PBHL	10098.00	4626.87	-34.73	570458.33	818284.57	Rectangle (4150x50)

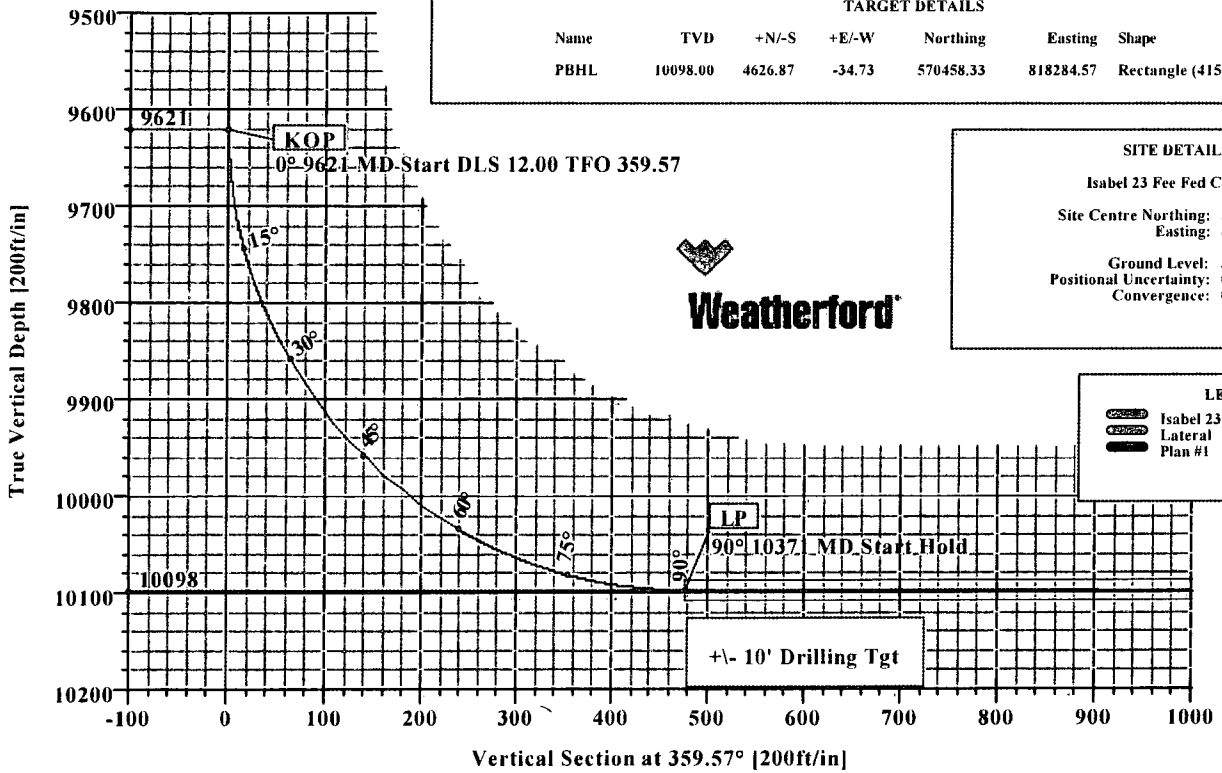
SITE DETAILS

Isabel 23 Fee Fed Com 1H

Site Centre Northing: 565831.46
Easting: 818319.30

Ground Level: 3673.00
Positional Uncertainty: 0.00
Convergence: 0.48

KB ELEV: 3698
GL ELEV: 3673



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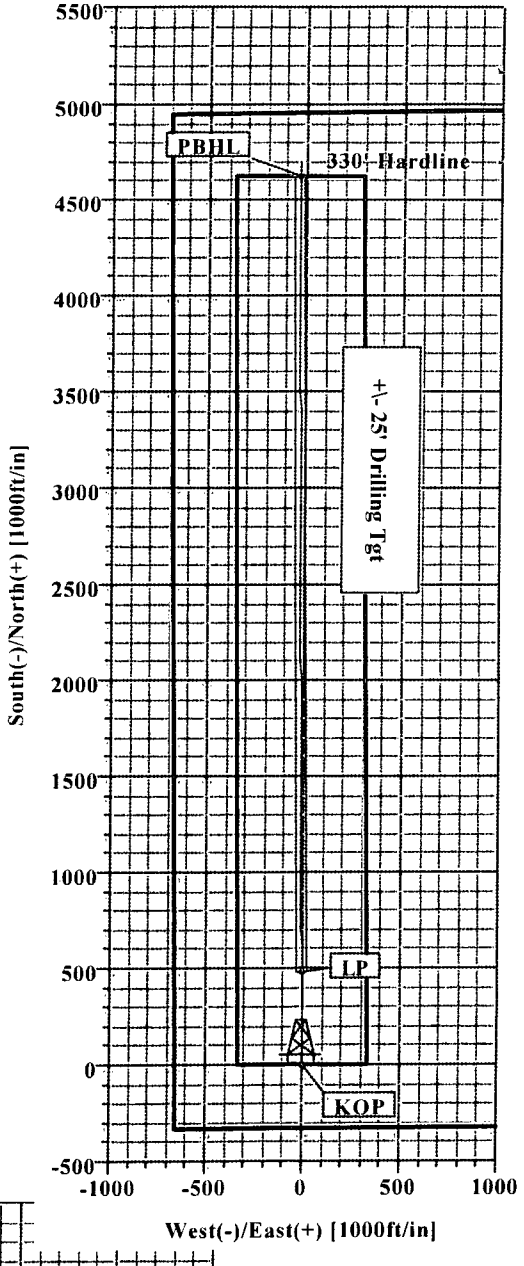
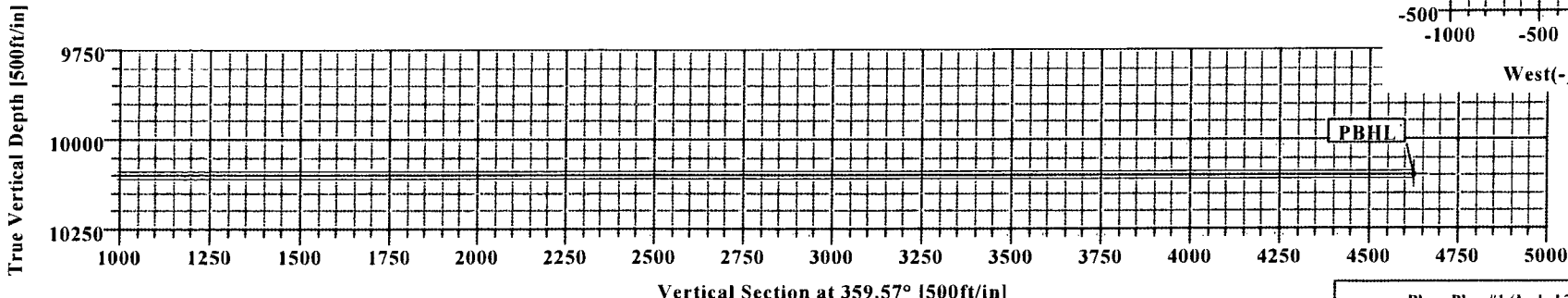
LEGEND

Isabel 23 Fee Fed Com 1H (Pilot)
Lateral
Plan #1





Plan: Plan #1 (Isabel 23 Fee Fed Com 1H/Lateral)

Created By: Russell W. Joyner Date: 10/17/2013

Weatherford
Wft Plan Report X Y's.

Company:	Devon Energy	**Date:** 10/17/2013 **Time:** 08:55:11	**Page:** 1
Field:	Lea County, New Mexico (NAD 83)	**Co-ordinate(NE) Reference:**	Well: Isabel 23 Fee Fed Com 1H
Site:	Isabel 23 Fee Fed Com 1H	**Vertical (TVD) Reference:**	SITE 3698.0
Well:	Isabel 23 Fee Fed Com 1H	**Section (VS) Reference:**	Well (0.00N,0.00E,359.57Azi)
Wellpath:	Lateral	**Survey Calculation Method:**	Minimum Curvature **Db:** Sybase

Plan:	Plan #1	**Date Composed:**	10/11/2013
		Version:	1
Principal:	Yes	**Tied-to:**	User Defined

Site:	Isabel 23 Fee Fed Com 1H								
Site Position:		**Northing:**	565831.46	ft	**Latitude:**	32	33	8.317	N
From:	Map	**Easting:**	818319.30	ft	**Longitude:**	103	26	3.839	W
Position Uncertainty:	0.00 ft				**North Reference:**			Grid	
Ground Level:	3673.00 ft				**Grid Convergence:**			0.48	deg

Well:	Isabel 23 Fee Fed Com 1H				**Slot Name:**				
Well Position:	**+N/-S** 0.00 ft	**Northing:**	565831.46	ft	**Latitude:**	32	33	8.317	N
	+E/-W 0.00 ft	**Easting :**	818319.30	ft	**Longitude:**	103	26	3.839	W
Position Uncertainty:	0.00 ft								

Wellpath:	Lateral		**Drilled From:**	Pilot	
			Tie-on Depth:	9620.54	ft
Current Datum:	SITE	**Height** 3698.00 ft	**Above System Datum:**	Mean Sea Level	
Magnetic Data:	2/5/2014		**Declination:**	7.22	deg
Field Strength:	48589 nT		**Mag Dip Angle:**	60.45	deg

Vertical Section: Depth From (TVD) ft	**+N/-S** ft	**+E/-W** ft	**Direction** deg
0.00	0.00	0.00	359.57

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
9620.54	0.00	0.00	9620.54	0.00	0.00	0.00	0.00	0.00	0.00	
10370.54	90.00	359.57	10098.00	477.45	-3.58	12.00	12.00	-0.06	359.57	
14520.08	90.00	359.57	10098.00	4626.87	-34.73	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
9620.54	0.00	0.00	9620.54	0.00	0.00	0.00	0.00	565831.46	818319.30	KOP
9700.00	9.54	359.57	9699.63	6.60	-0.05	6.60	12.00	565838.06	818319.25	
9800.00	21.54	359.57	9795.80	33.33	-0.25	33.33	12.00	565864.79	818319.05	
9900.00	33.54	359.57	9884.32	79.47	-0.60	79.48	12.00	565910.93	818318.70	
10000.00	45.54	359.57	9961.30	143.01	-1.07	143.01	12.00	565974.47	818318.23	
10100.00	57.54	359.57	10023.39	221.16	-1.66	221.17	12.00	566052.62	818317.64	
10200.00	69.54	359.57	10067.87	310.52	-2.33	310.53	12.00	566141.98	818316.97	
10300.00	81.54	359.57	10092.80	407.17	-3.06	407.18	12.00	566238.63	818316.24	
10370.54	90.00	359.57	10098.00	477.45	-3.58	477.47	12.00	566308.91	818315.72	LP
10400.00	90.00	359.57	10098.00	506.91	-3.80	506.92	0.00	566338.37	818315.50	
10500.00	90.00	359.57	10098.00	606.91	-4.56	606.92	0.00	566438.37	818314.74	
10600.00	90.00	359.57	10098.00	706.90	-5.31	706.92	0.00	566538.36	818313.99	
10700.00	90.00	359.57	10098.00	806.90	-6.06	806.92	0.00	566638.36	818313.24	
10800.00	90.00	359.57	10098.00	906.90	-6.81	906.92	0.00	566738.36	818312.49	
10900.00	90.00	359.57	10098.00	1006.90	-7.56	1006.92	0.00	566838.36	818311.74	
11000.00	90.00	359.57	10098.00	1106.89	-8.31	1106.92	0.00	566938.35	818310.99	
11100.00	90.00	359.57	10098.00	1206.89	-9.06	1206.92	0.00	567038.35	818310.24	
11200.00	90.00	359.57	10098.00	1306.89	-9.81	1306.92	0.00	567138.35	818309.49	
11300.00	90.00	359.57	10098.00	1406.89	-10.56	1406.92	0.00	567238.35	818308.74	
11400.00	90.00	359.57	10098.00	1506.88	-11.31	1506.92	0.00	567338.34	818307.99	
11500.00	90.00	359.57	10098.00	1606.88	-12.06	1606.92	0.00	567438.34	818307.24	
11600.00	90.00	359.57	10098.00	1706.88	-12.81	1706.92	0.00	567538.34	818306.49	
11700.00	90.00	359.57	10098.00	1806.87	-13.56	1806.92	0.00	567638.33	818305.74	
11800.00	90.00	359.57	10098.00	1906.87	-14.31	1906.92	0.00	567738.33	818304.99	

Weatherford
Wft Plan Report X Y's.

Company:	Devon Energy	**Date:** 10/17/2013 **Time:** 08:55:11	**Page:** 2
Field:	Lea County, New Mexico (NAD 83)	**Co-ordinate(NE) Reference:**	Well: Isabel 23 Fee Fed Com 1H
Site:	Isabel 23 Fee Fed Com 1H	**Vertical (TVD) Reference:**	SITE 3698.0
Well:	Isabel 23 Fee Fed Com 1H	**Section (VS) Reference:**	Well (0.00N,0.00E,359.57Azi)
Wellpath:	Lateral	**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
11900.00	90.00	359.57	10098.00	2006.87	-15.06	2006.92	0.00	567838.33	818304.24	
12000.00	90.00	359.57	10098.00	2106.87	-15.81	2106.92	0.00	567938.33	818303.49	
12100.00	90.00	359.57	10098.00	2206.86	-16.57	2206.92	0.00	568038.32	818302.73	
12200.00	90.00	359.57	10098.00	2306.86	-17.32	2306.92	0.00	568138.32	818301.98	
12300.00	90.00	359.57	10098.00	2406.86	-18.07	2406.92	0.00	568238.32	818301.23	
12400.00	90.00	359.57	10098.00	2506.85	-18.82	2506.92	0.00	568338.31	818300.48	
12500.00	90.00	359.57	10098.00	2606.85	-19.57	2606.92	0.00	568438.31	818299.73	
12600.00	90.00	359.57	10098.00	2706.85	-20.32	2706.92	0.00	568538.31	818298.98	
12700.00	90.00	359.57	10098.00	2806.85	-21.07	2806.92	0.00	568638.31	818298.23	
12800.00	90.00	359.57	10098.00	2906.84	-21.82	2906.92	0.00	568738.30	818297.48	
12900.00	90.00	359.57	10098.00	3006.84	-22.57	3006.92	0.00	568838.30	818296.73	
13000.00	90.00	359.57	10098.00	3106.84	-23.32	3106.92	0.00	568938.30	818295.98	
13100.00	90.00	359.57	10098.00	3206.83	-24.07	3206.92	0.00	569038.29	818295.23	
13200.00	90.00	359.57	10098.00	3306.83	-24.82	3306.92	0.00	569138.29	818294.48	
13300.00	90.00	359.57	10098.00	3406.83	-25.57	3406.92	0.00	569238.29	818293.73	
13400.00	90.00	359.57	10098.00	3506.83	-26.32	3506.92	0.00	569338.29	818292.98	
13500.00	90.00	359.57	10098.00	3606.82	-27.07	3606.92	0.00	569438.28	818292.23	
13600.00	90.00	359.57	10098.00	3706.82	-27.82	3706.92	0.00	569538.28	818291.48	
13700.00	90.00	359.57	10098.00	3806.82	-28.57	3806.92	0.00	569638.28	818290.73	
13800.00	90.00	359.57	10098.00	3906.81	-29.33	3906.92	0.00	569738.27	818289.97	
13900.00	90.00	359.57	10098.00	4006.81	-30.08	4006.92	0.00	569838.27	818289.22	
14000.00	90.00	359.57	10098.00	4106.81	-30.83	4106.92	0.00	569938.27	818288.47	
14100.00	90.00	359.57	10098.00	4206.81	-31.58	4206.92	0.00	570038.27	818287.72	
14200.00	90.00	359.57	10098.00	4306.80	-32.33	4306.92	0.00	570138.26	818286.97	
14300.00	90.00	359.57	10098.00	4406.80	-33.08	4406.92	0.00	570238.26	818286.22	
14400.00	90.00	359.57	10098.00	4506.80	-33.83	4506.92	0.00	570338.26	818285.47	
14500.00	90.00	359.57	10098.00	4606.80	-34.58	4606.92	0.00	570438.26	818284.72	
14520.08	90.00	359.57	10098.00	4626.87	-34.73	4627.00	0.00	570458.33	818284.57	PBHL

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 (4150x50)			10098.00	4626.87	-34.73	570458.33	818284.57	32	33	54.099 N	103	26	3.788 W

Casing Points

MD	TVD	Diameter	Hole Size	Name

Formations

MD	TVD	Formations	Lithology	Dip Angle	Dip Direction

Annotation

MD ft	TVD ft	
9620.54	9620.54	KOP
10370.54	10098.00	LP
14520.08	0.00	PBHL

Weatherford Drilling Services

GeoDec v5.03

Report Date:	October 11, 2013
Job Number:	
Customer:	Devon Energy
Well Name:	Isabel 23 Fee Fed Com 1H
API Number:	
Rig Name:	
Location:	Lea County, NM
Block:	
Engineer:	RWJ

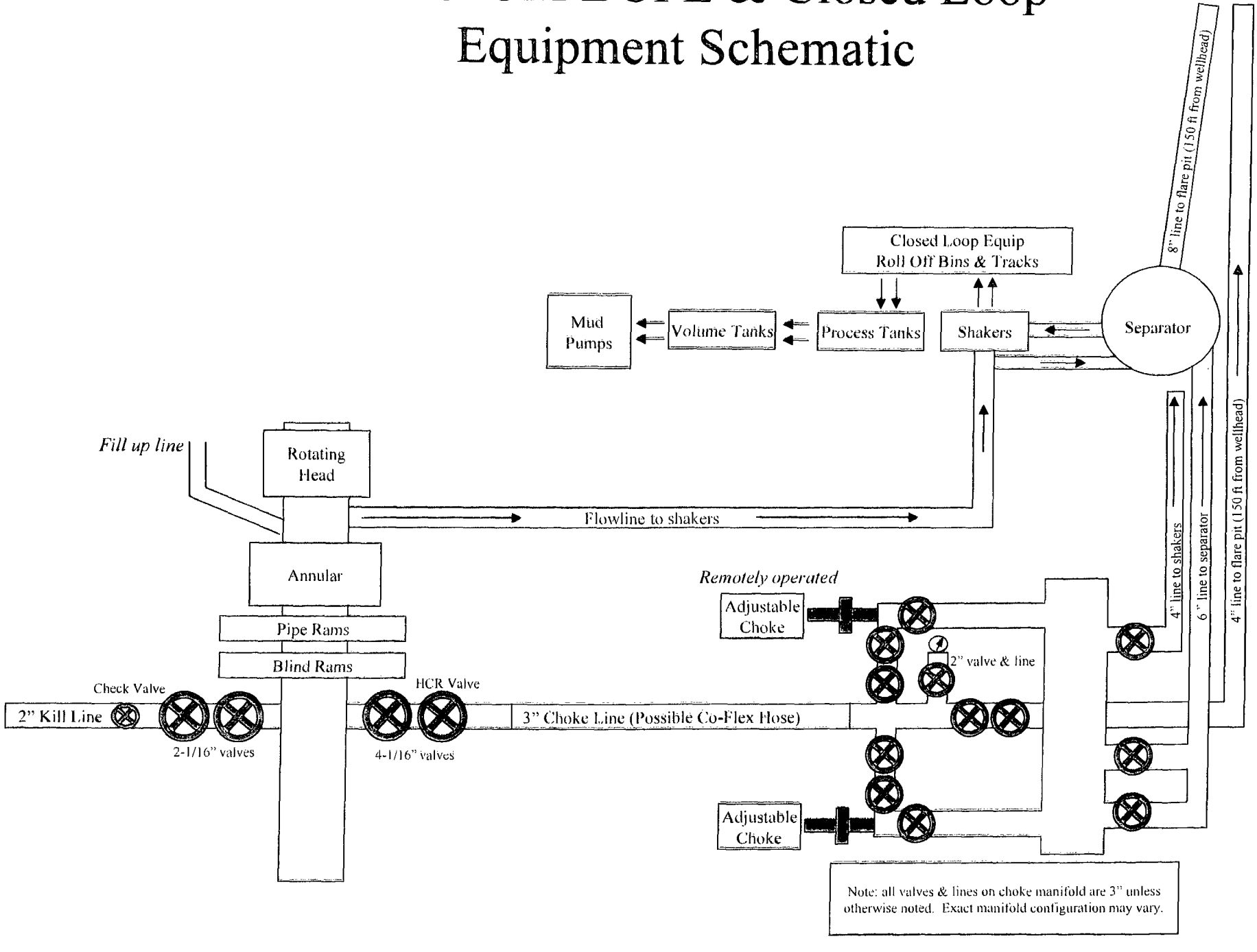
US State Plane 1983	Geodetic Latitude / Longitude
System: New Mexico Eastern Zone	System: Latitude / Longitude
Projection: Transverse Mercator/Gauss Kruger	Projection: Geodetic Latitude and Longitude
Datum: North American Datum 1983	Datum: North American Datum 1983
Ellipsoid: GRS 1980	Ellipsoid: GRS 1980
North/South 565831.460 USFT	Latitude 32.5523133 DEG
East/West 818319.300 USFT	Longitude -103.4343944 DEG
Grid Convergence: .48°	
Total Correction: +6.85°	

Geodetic Location WGS84	Elevation =	0.0 Meters
Latitude =	32.55231° N	32° 33 min 8.328 sec
Longitude =	103.43439° W	103° 26 min 3.820 sec

Magnetic Declination =	7.33°	[True North Offset]	
Local Gravity =	.9988 g	CheckSum =	6660
Local Field Strength =	48575 nT	Magnetic Vector X =	23770 nT
Magnetic Dip =	60.44°	Magnetic Vector Y =	3059 nT
Magnetic Model =	bggm2013	Magnetic Vector Z =	42251 nT
Spud Date =	Feb 05, 2014	Magnetic Vector H =	23966 nT

Signed:_____ Date:_____

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



NOTES REGARDING BLOWOUT PREVENTERS

Devon Energy Production Company, L.P.
Isabel 23 Fee Fed Com 1H

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 filings will be in operable condition to withstand a minimum of 3000psi working pressure.

4. All fittings will be flanged.

5. A fill bore safety valve tested to a minimum of 3000psi 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.

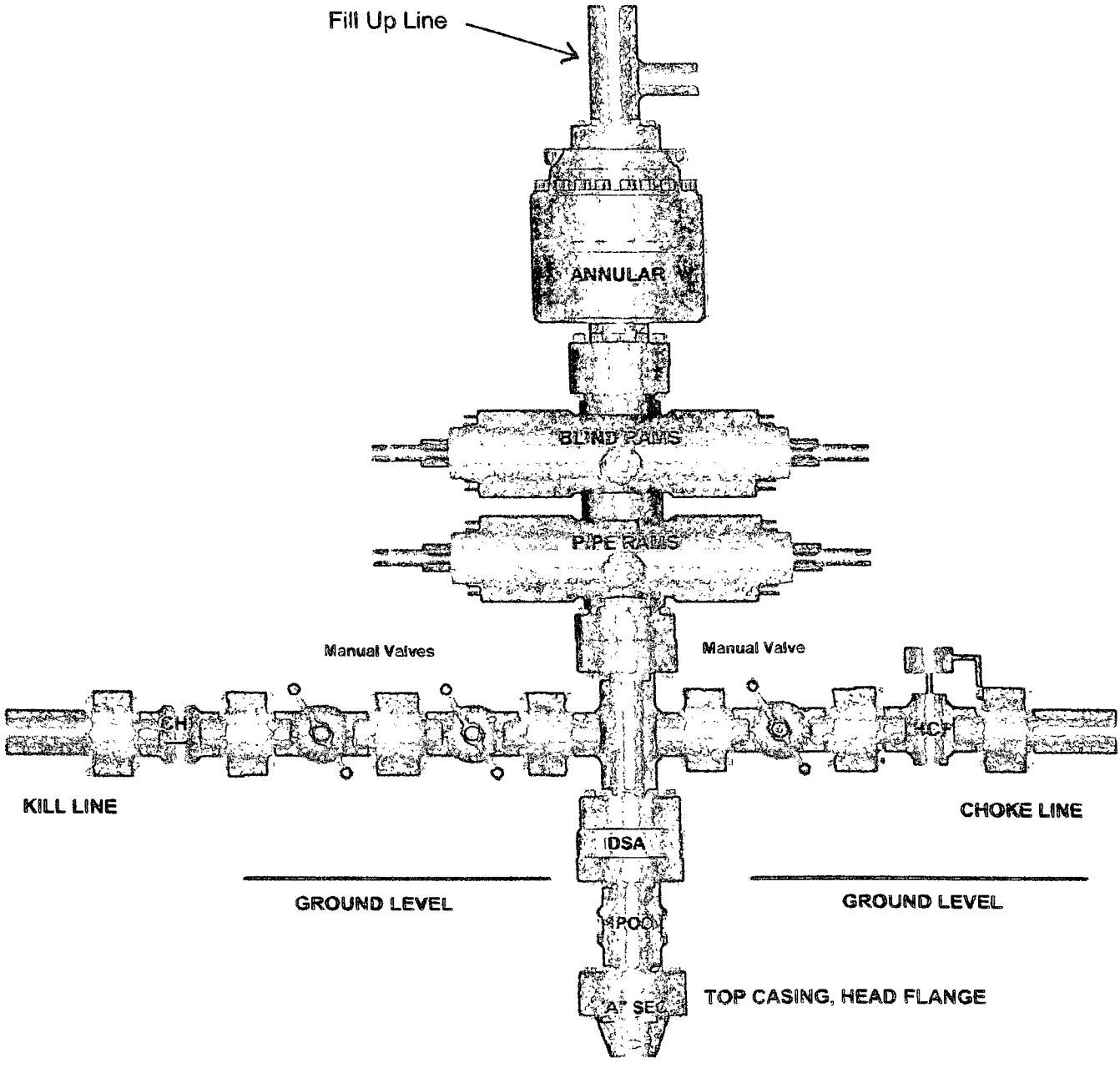
8. Will maintain a kelly cock attached to the kelly.

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



Continental CONTITECH

Fluid Technology

Quality Document

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	Heat N°
3" coupling with	5503 2029	AISI 4130	N1590P
4 1/16" Flange end		AISI 4130	27566

INFOCHIP INSTALLED

API Spec 16 C
Temperature rate:"B"

All metal parts are flawless

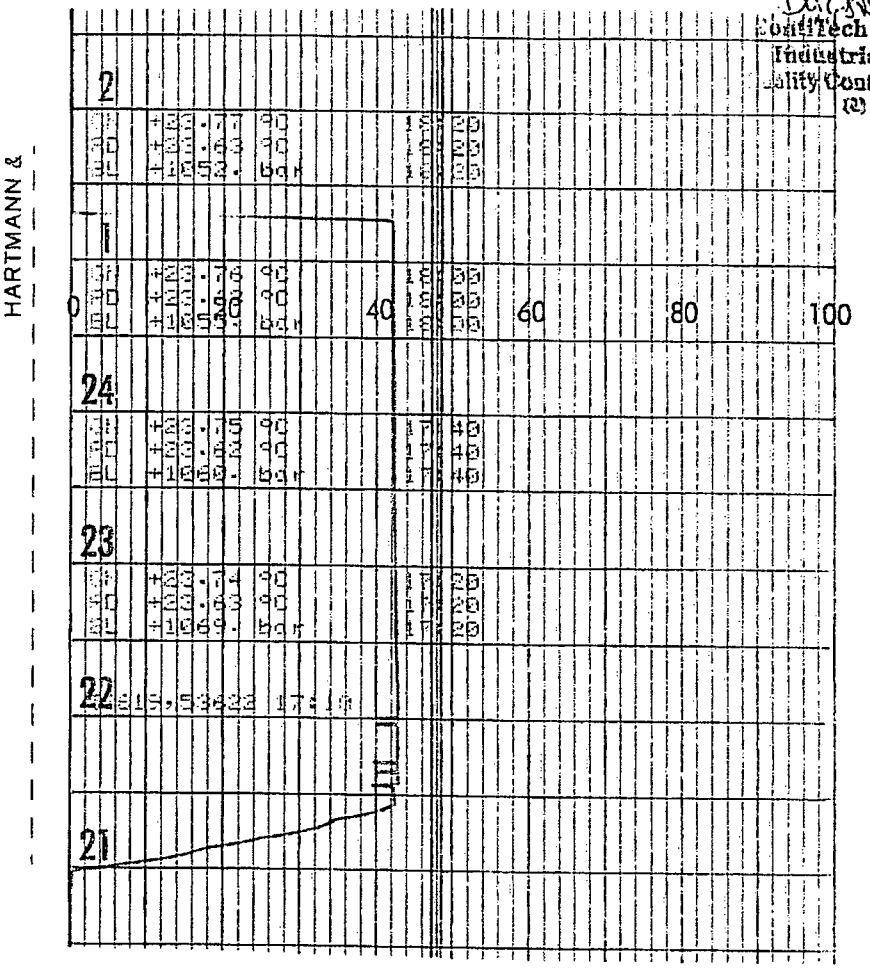
Hose conform to NACE MR 01-75

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:	Inspector	Quality Control
25. August. 2008		ContiTech Rubber Industrial Kft. Quality Control Dept.



ContiTech Rubber
Industrial Kft.
Quality Control Dept.

Continental CONTITECH

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.

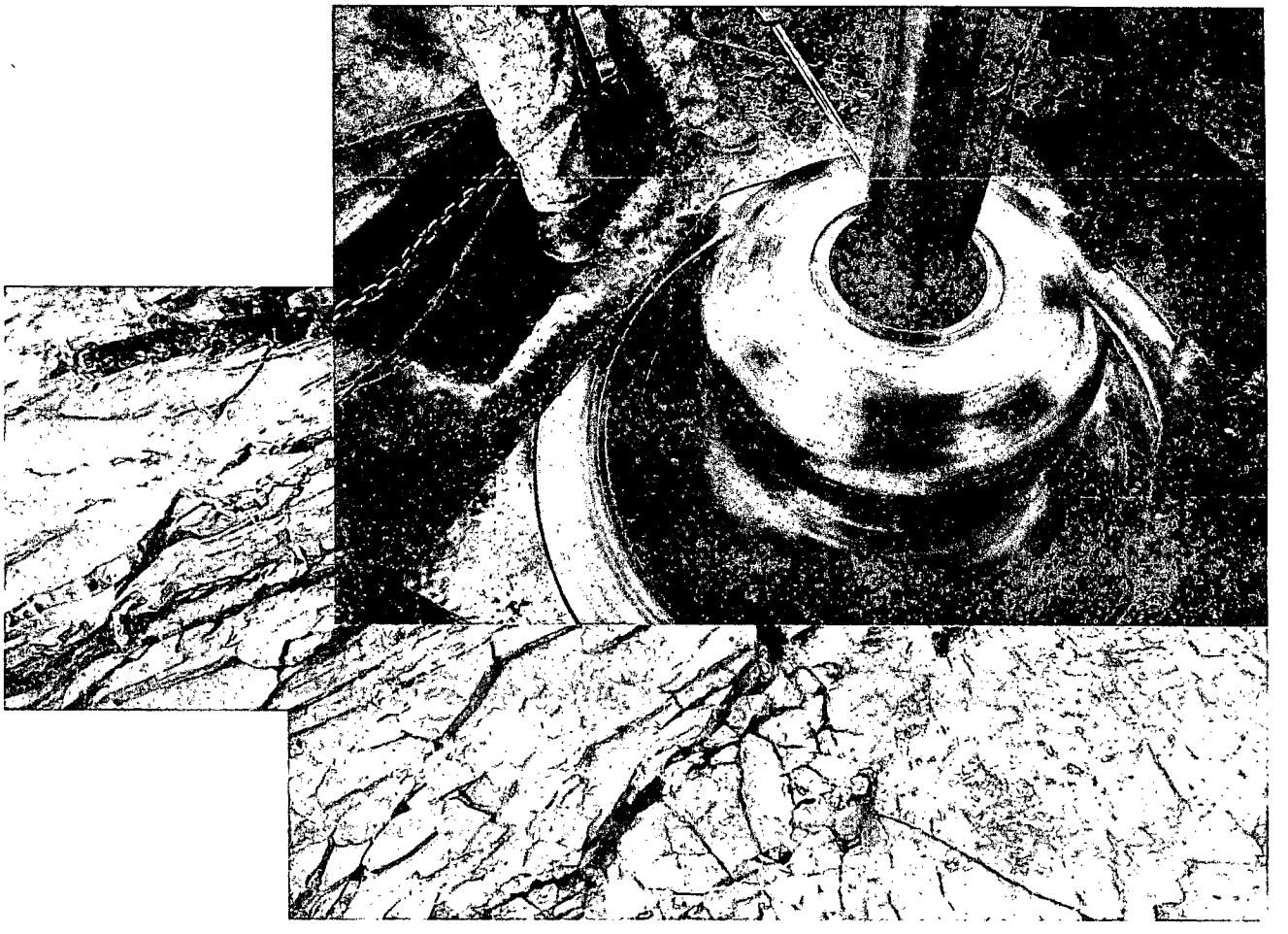
Best regards,

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

devon

Commitment Runs Deep



Design Plan
Operation and Maintenance Plan
Closure Plan

SENM - Closed Loop Systems
August 2013

I. Design Plan

Devon uses MI SWACO closed loop system (CLS). The MI SWACO CLS is designed to maintain drill solids at or below 5%. The equipment is arranged to progressively remove solids from the largest to the smallest size. Drilling fluids can thus be reused and savings is realized on mud and disposal costs. Dewatering may be required with the centrifuges to insure removal of ultra fine solids.

The drilling location is constructed to allow storm water to flow to a central sump normally the cellar. This insures no contamination leaves the drilling pad in the event of a spill. Storm water is reused in the mud system or stored in a reserve fluid tank farm until it can be reused. All lubricants, oils, or chemicals are removed immediately from the ground to prevent the contamination of storm water. An oil trap is normally installed on the sump if an oil spill occurs during a storm.

A tank farm is utilized to store drilling fluids including fresh water and brine fluids. The tank farm is constructed on a 20 ml plastic lined, bermed pad to prevent the contamination of the drilling site during a spill. Fluids from other sites may be stored in these tanks for processing by the solids control equipment and reused in the mud system. At the end of the well the fluids are transported from the tank farm to an adjoining well or to the next well for the rig.

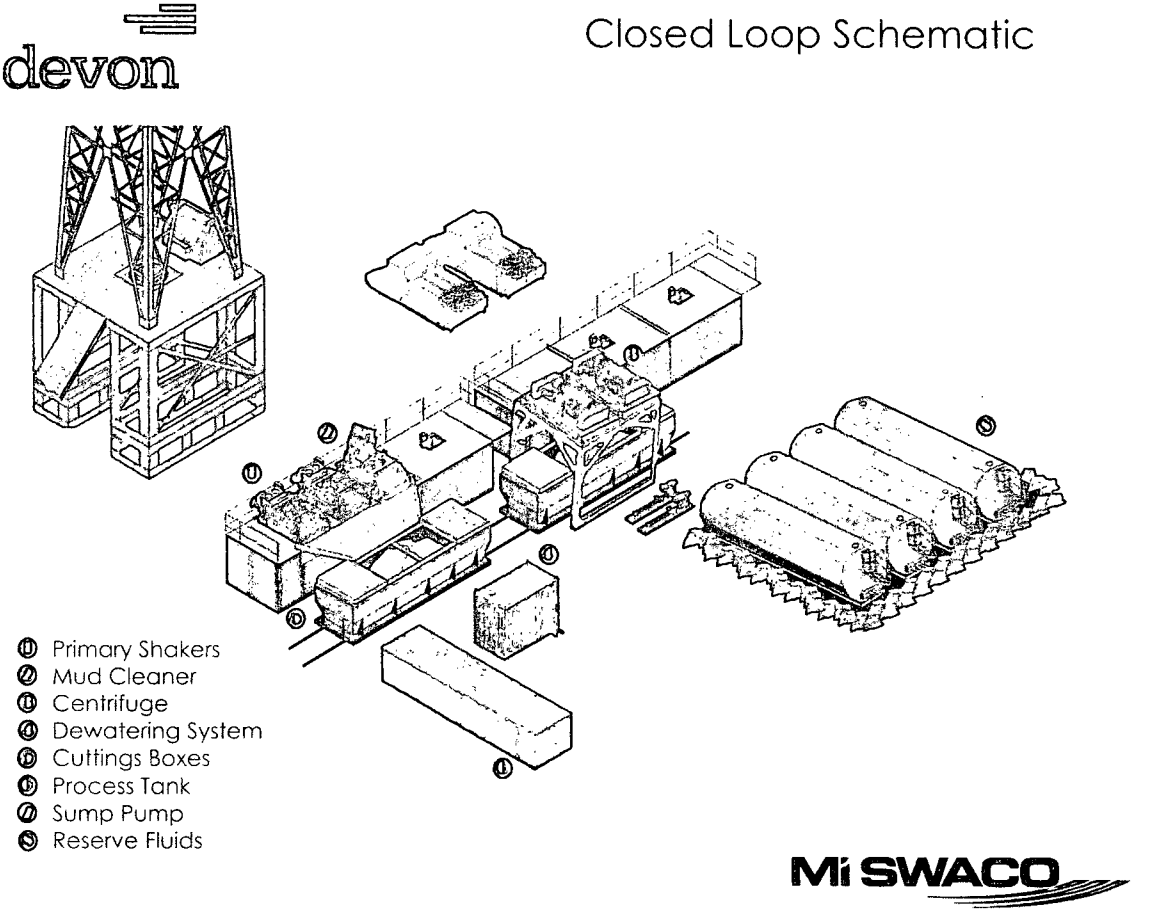
Prior to installing a closed-loop system on site, the topsoil, if present, will be stripped and stockpiled for use as the final cover or fill at the time of closure.

Signs will be posted on the fence surrounding the closed-loop system unless the closed-loop system is located on a site where there is an existing well, that is operated by Devon.

II. Operations and Maintenance Plan

Primary Shakers: The primary shakers make the first removal of drill solids from the drilling mud as it leaves the well bore. The shakers are sized to handle maximum drilling rate at optimal screen size. The shakers normally remove solids down to 74 microns.

Mud Cleaner: The Mud Cleaner cleans the fluid after it leaves the shakers. A set of hydrocyclones are sized to handle 1.25 to 1.5 times the maximum circulating rate. This ensures all the fluid is being processed to an average cut point of 25 microns. The wet discharged is dewatered on a shaker equipped with ultra fine mesh screens and generally cut at 40 microns.



Centrifuges: The centrifuges can be one or two in number depending on the well geometry or depth of well. The centrifuges are sized to maintain low gravity solids at 5% or below. They may or may not need a dewatering system to enhance the removal rates. The centrifuges can make a cut point of 8-10 microns depending on bowl speed, feed rate, solids loading and other factors.

The centrifuge system is designed to work on the active system and be flexible to process incoming fluids from other locations. This set-up is also dependant on well factors.

Dewatering System: The dewatering system is a chemical mixing and dosing system designed to enhance the solids removal of the centrifuge. Not commonly used in shallow wells. It may contain pH adjustment, coagulant mixing and dosing, and polymer mixing and dosing. Chemical flocculation binds ultra fine solids into a mass that is within the centrifuge operating design. The

dewatering system improves the centrifuge cut point to infinity or allows for the return of clear water or brine fluid. This ability allows for the ultimate control of low gravity solids.

Cuttings Boxes: Cuttings boxes are utilized to capture drill solids that are discarded from the solids control equipment. These boxes are set upon a rail system that allows for the removal and replacement of a full box of cuttings with an empty one. They are equipped with a cover that insures no product is spilled into the environment during the transportation phase.

Process Tank: (Optional) The process tank allows for the holding and process of fluids that are being transferred into the mud system. Additionally, during times of lost circulation the process tank may hold active fluids that are removed for additional treatment. It can further be used as a mixing tank during well control conditions.

Sump and Sump Pump: The sump is used to collect storm water and the pump is used to transfer this fluid to the active system or to the tank for to hold in reserve. It can also be used to collect fluids that may escape during spills. The location contains drainage ditches that allow the location fluids to drain to the sump.

Reserve Fluids (Tank Farm): A series of frac tanks are used to replace the reserve pit. These are steel tanks that are equipped with a manifold system and a transfer pump. These tanks can contain any number of fluids used during the drilling process. These can include fresh water, cut brine, and saturated salt fluid. The fluid can be from the active well or reclaimed fluid from other locations. A 20 ml liner and berm system is employed to ensure the fluids do not migrate to the environment during a spill.

If a leak develops, the appropriate division district office will be notified within 48 hours of the discovery and the leak will be addressed. Spill prevention is accomplished by maintaining pump packing, hoses, and pipe fittings to insure no leaks are occurring. During an upset condition the source of the spill is isolated and repaired as soon as it is discovered. Free liquid is removed by a diaphragm pump and returned to the mud system. Loose topsoil may be used to stabilize the spill and the contaminated soil is excavated and placed in the cuttings boxes. After the well is finished and the rig has moved, the entire location is scrapped and testing will be performed to determine if a release has occurred.

All trash is kept in a wire mesh enclosure and removed to an approved landfill when full. All spent motor oils are kept in separate containers and they are removed and sent to an approved recycling center. Any spilled lubricants, pipe

dope, or regulated chemicals are removed from soil and sent to landfills approved for these products.

These operations are monitored by Mi Swaco service technicians. Daily logs are maintained to ensure optimal equipment operation and maintenance. Screen and chemical use is logged to maintain inventory control. Fluid properties are monitored and recorded and drilling mud volumes are accounted for in the mud storage farm. This data is kept for end of well review to insure performance goals are met. Lessons learned are logged and used to help with continuous improvement.

A MI SWACO field supervisor manages from 3-5 wells. They are responsible for training personnel, supervising installations, and inspecting sites for compliance of MI SWACO safety and operational policy.

III. Closure Plan

A maximum 340' X 340' caliche pad is built per well. All of the trucks and steel tanks fit on this pad. All fluid cuttings go to the steel tanks to be hauled by various trucking companies to an agency approved disposal.

H&P Flex Rig Location Layout