HOBBS OCD

DEC 09 2013

RECEIVED

OCD Hobbs

ATS-13-1165

Form 3160-3
(March 2012)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

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

5. Lease Serial No. NMNM-094118(BH)

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. (40279)
RAGIN CAJUN 14 FEDERAL 1H

2. Name of Operator Devon Energy Production Company, L.P. (6137)

9. API Well No.
30-025-41541

3a. Address 333 W. Sheridan
Oklahoma City, OK 73102-5010

3b. Phone No. *(include area code)*
405-235-3611

10. Field and Pool, or Exploratory (97997)
JABALINA; DELAWARE, S

4. Location of Well *(Report location clearly and in accordance with any State requirements.*)*
At surface 330' FSL & 330' FEL, P
At proposed prod. zone 990' FSL & 330' FEL, P Sec 11 PP: 330' FSL & 330' FEL Sec 14

11. Sec., T. R. M. or Blk. and Survey or Area
Sec 14, T26S, R34E

14. Distance in miles and direction from nearest town or post office*
Appox. 14 miles SW of Jal, NM

12. County or Parish
LEA

13. State
NM

15. 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
1760 ac (NMNM-094118)

17. Spacing Unit dedicated to this well
200 ac

18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft.
See Attached Map

19. Proposed Depth
TVD: 9010'
MD: 14704'

20. BLM/BIA Bond No. on file
CO-1104; NMB-000801

21. Elevations (Show whether DF, KDB, RT, GL, etc.)
3223.7 (GL)

22. Approximate date work will start*
As Soon As Possible

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 Cook

Date 8/28/2013

Title
Regulatory Compliance Specialist

Approved by *(Signature)* /s/ James Stovall

Name *(Printed/Typed)*

Date DEC - 5 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

KZ
12/09/13

Approval Subject to General Requirements & Special Stipulations Attached

SEE ATTACHED FOR CONDITIONS OF APPROVAL

DEC 10 2013

DRILLING PROGRAM

Devon Energy Production Company, L.P.
RAGIN CAJUN 14 FEDERAL 1H

Surface Location: 330 FSL & 330 FEL, Unit P, Sec 14 T26S R34E, LEA, NM
Bottom Hole Location: 990 FSL & 330 FEL, Unit P, Sec 11 T26S R34E, LEA, NM

1) Geologic Name of Surface Formation: Quaternary

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

a.	Fresh Water	180'	
b.	Rustler	727'	Barren
c.	Salado	915'	Barren
d.	Top of Salt	990'	Barren
e.	Castile	3531'	Barren
f.	Base of Salt	4910'	Barren
g.	Delaware	5191'	Oil/Gas
h.	Bell Canyon	5236'	Oil
i.	Cherry Canyon	6216'	Oil
j.	Brushy Canyon	7755'	Oil
	Total Depth	9010' TVD	
		14704' MD	

3) Pressure Control Equipment:

The BOP system used to drill the intermediate hole will consist of a 13-5/8" Double Ram and Annular preventer. The BOP system will be tested as per BLM Onshore Oil and Gas Order No. 2, a 3M system will be installed and tested prior to drilling out the surface casing shoe.

The BOP system used to drill the production hole will consist of a 13-5/8" Double Ram and Annular preventer. The BOP system will be tested as per BLM Onshore Oil and Gas Order No. 2 a 3M system will be installed and tested prior to drilling out the intermediate casing shoe.

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.

See COA

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)

See COA

Hole Size (in)	Hole Interval (ft)	Casing OD (in)	Casing Interval (ft)	Weight (lb)	Collar	Grade	Collapse Design Factor	Burst Design Factor	Tension Design Factor
17-1/2	0-800 1050'	13-3/8	0-800	48	STC	H-40	2.06	4.62	8.39
12-1/4	800-5050 5250'	9-5/8	0-5050	40	LTC	HCK-55	2.13	1.34	3.12
8-3/4	5050-8200	5-1/2	0-8200	17	LTC	HCP-110	1.77	2.52	1.78
8-3/4	8200-14704	5-1/2	8200-14704	17	BTC	HCP-110	2.24	2.77	5.14

Maximum Lateral TVD: 9010'

5) Proposed Mud Circulation System:

See COA

Depth (ft)	Mud Weight	Viscosity	Fluid Loss	Type System
0-800 1050'	8.4-9.0	30-34	N/C	FW
800-5050 5250'	9.8-10.0	28-32	N/C	BRINE
5050-14704	8.6-9.0	28-32	N/C-12	FW

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 Program:

String	No. of sx	Wt. #/gal	Yld. cf/sx	Stage; Lead/Tail	Slurry Description
Surface	870	14.8	1.33	Lead	Class C Cement + 0.125 lbs/sack Poly-E-Flake + 63.5% Fresh Water
Intermediate	1130	12.9	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	1.33	Tail	Class C Cement + 0.125 lbs/sack Poly-E-Flake + 63.5% Fresh Water
Production	230	11.5	2.57	1st Lead	(50:50) Class H Cement: Poz (Fly Ash) + 10% BWOC Bentonite + 0.15% SA-1015 + 0.1% BWOC HR-601 + 0.25 lb/sk D-Air 5000 + 80.01 % Fresh Water
	330	12.5	1.96	2nd Lead	(65:35) Class H Cement: Poz (Fly Ash) + 6% BWOC Bentonite + 0.25% BWOC HR-601 + 0.125 lbs/sack Poly-E-Flake + 74.1 % Fresh Water
	1630	14.5	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

TOC For All Strings:

Surface @ 0'

Intermediate @ 0'

Production @ ~~4550'~~ See COA

Cementing Notes:

*Cement volumes are based on excess of at least 100% surface, 75% intermediate, and 25% production.

*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. The open hole electrical logging program will be:
   i. Total Depth to Intermediate Casing:
      - Dual Laterolog
      - Micro Laterolog with SP & 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 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 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 being used to drill this well. Estimated BHP 4000psi and Estimated BHT 142 degrees. No H2S is anticipated to be encountered.

c. 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

---

devon

RAGN ~~BEGIN~~ CAJUN 14 FEDERAL 1H

LEA COUNTY, NM

WELL FILE: **PLAN 1**

AUGUST 27, 2013

Weatherford International, Ltd.
P.O. Box 61028
Midland, TX 79711 USA
+1.432.561.8892 Main
+1.432.561.8895 Fax
www.weatherford.com

devon

Ragin Cajun 14 Federal 1H
Lea County, New Mexico

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSec	Target
1	0.00	0.00	359.49	0.00	0.00	0.00	0.00	0.00	0.00	
2	8437.04	0.00	359.49	8437.04	0.00	0.00	0.00	0.00	0.00	
3	9337.04	90.00	359.49	9010.00	572.94	-5.09	10.00	359.49	572.96	
4	14704.41	90.00	359.49	9010.00	5940.09	-52.80	0.00	0.00	5940.32	PBHL

WELL DETAILS

Name	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
Ragin Cajun 14 Federal 1H	0.00	0.00	378377.46	820253.28	32°02'13.353N	103°25'59.628W	N/A

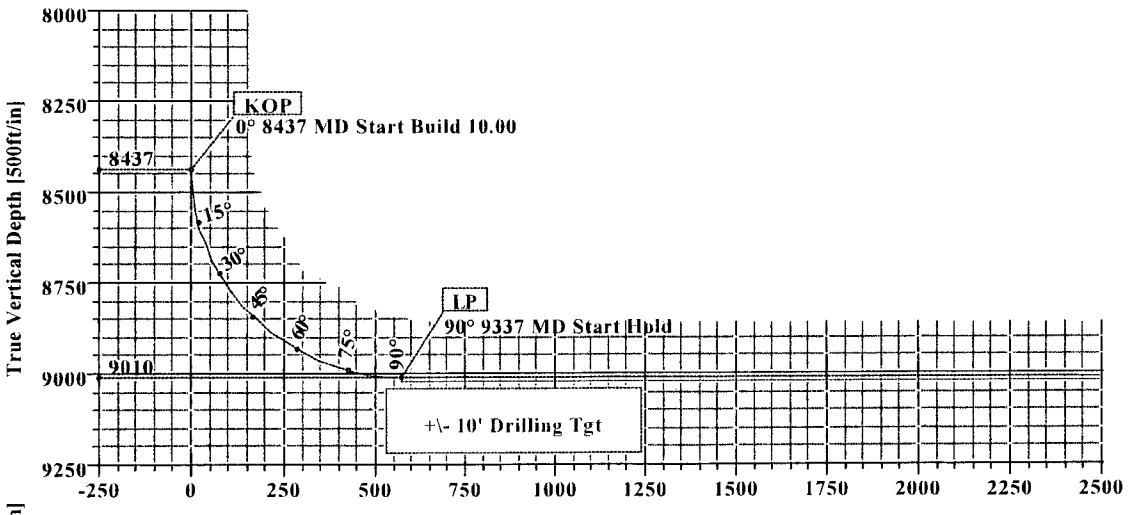
TARGET DETAILS

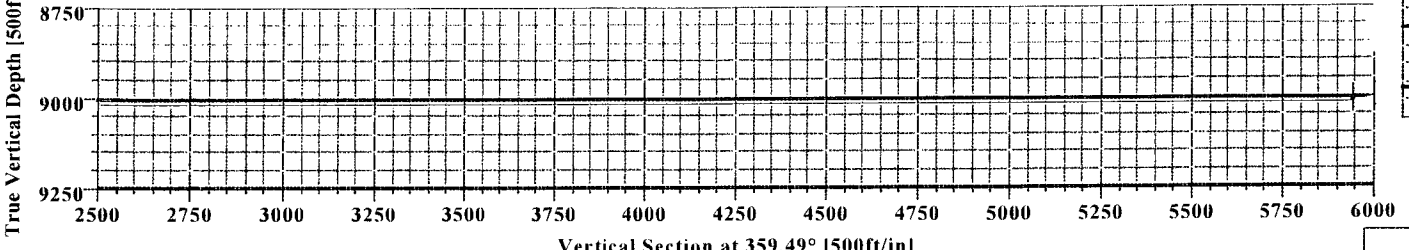
Name	TVD	+N/-S	+E/-W	Northing	Easting	Shape
PBHL	9010.00	5940.09	-52.80	384317.55	820200.48	Rectangle (5367x25)

LEGEND

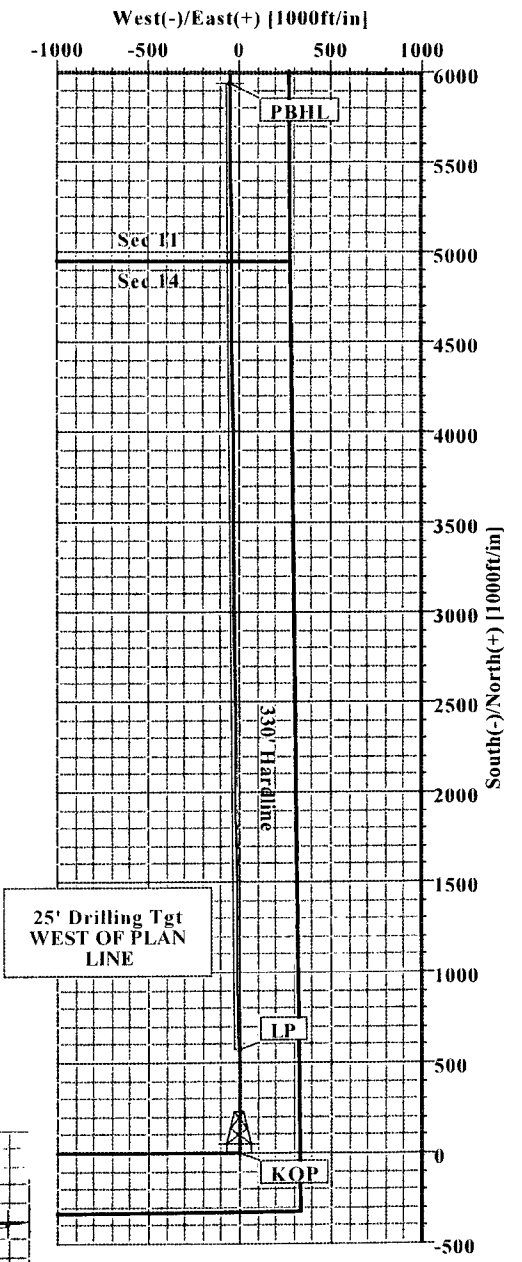
1
Plan #1

KB ELEV: 3249
GL ELEV: 3224





Weatherford



25' Drilling Tgt
WEST OF PLAN
LINE

Plan: Plan #1 (Ragin Cajun 14 Federal 1H/1)

Created By: Russell W. Joyner Date: 8/27/2013

Weatherford
WFT Plan Report - X & Y's

Company:	Devon Energy	**Date:** 8/27/2013 **Time:** 10:54:57	**Page:** 1
Field:	Lea County, New Mexico (NAD 83)	**Co-ordinate(NE) Reference:**	Well: Ragin Cajun 14 Federal 1H
Site:	Ragin Cajun 14 Federal 1H	**Vertical (TVD) Reference:**	SITE 3249.0
Well:	Ragin Cajun 14 Federal 1H	**Section (VS) Reference:**	Well (0.00N,0.00E,359.49Azi)
Wellpath:	1	**Survey Calculation Method:**	Minimum Curvature **Db:** Sybase

Plan:	Plan #1	**Date Composed:**	8/27/2013
		Version:	1
Principal:	Yes	**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:	Ragin Cajun 14 Federal 1H							
Site Position:		**Northing:**	378377.46 ft	**Latitude:**	32	2	13.353	N
From:	Map	**Easting:**	820253.28 ft	**Longitude:**	103	25	59.628	W
Position Uncertainty:	0.00 ft			**North Reference:**			Grid	
Ground Level:	3224.00 ft			**Grid Convergence:**			0.48	deg

Well:	Ragin Cajun 14 Federal 1H			**Slot Name:**				
Well Position:	+N/-S 0.00 ft	**Northing:**	378377.46 ft	**Latitude:**	32	2	13.353	N
	+E/-W 0.00 ft	**Easting :**	820253.28 ft	**Longitude:**	103	25	59.628	W
Position Uncertainty:	0.00 ft							

Wellpath:	1			**Drilled From:**	Surface
				Tie-on Depth:	0.00 ft
Current Datum:	SITE	**Height**	3249.00 ft	**Above System Datum:**	Mean Sea Level
Magnetic Data:	10/30/2013			**Declination:**	7.22 deg
Field Strength:	48306 nT			**Mag Dip Angle:**	59.98 deg

Vertical Section: Depth From (TVD)	**+N/-S**	**+E/-W**	**Direction**
ft	ft	ft	deg
0.00	0.00	0.00	359.49

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	359.49	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
8437.04	0.00	359.49	8437.04	0.00	0.00	0.00	0.00	0.00	0.00	
9337.04	90.00	359.49	9010.00	572.94	-5.09	10.00	10.00	0.00	359.49	
14704.41	90.00	359.49	9010.00	5940.09	-52.80	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	
8400.00	0.00	359.49	8400.00	0.00	0.00	0.00	0.00	378377.46	820253.28	
8437.04	0.00	359.49	8437.04	0.00	0.00	0.00	0.00	378377.46	820253.28	KOP
8500.00	6.30	359.49	8499.87	3.46	-0.03	3.46	10.00	378380.92	820253.25	
8600.00	16.30	359.49	8597.81	23.02	-0.20	23.02	10.00	378400.48	820253.08	
8700.00	26.30	359.49	8690.87	59.29	-0.53	59.29	10.00	378436.75	820252.75	
8800.00	36.30	359.49	8776.21	111.17	-0.99	111.17	10.00	378488.63	820252.29	
8900.00	46.30	359.49	8851.24	177.07	-1.57	177.08	10.00	378554.53	820251.71	
9000.00	56.30	359.49	8913.69	255.01	-2.27	255.02	10.00	378632.47	820251.01	
9100.00	66.30	359.49	8961.66	342.61	-3.05	342.62	10.00	378720.07	820250.23	
9200.00	76.30	359.49	8993.69	437.20	-3.89	437.22	10.00	378814.66	820249.39	
9300.00	86.30	359.49	9008.80	535.92	-4.76	535.94	10.00	378913.38	820248.52	
9337.04	90.00	359.49	9010.00	572.94	-5.09	572.96	10.00	378950.40	820248.19	LP
9400.00	90.00	359.49	9010.00	635.89	-5.65	635.92	0.00	379013.35	820247.63	
9500.00	90.00	359.49	9010.00	735.89	-6.54	735.92	0.00	379113.35	820246.74	
9600.00	90.00	359.49	9010.00	835.88	-7.43	835.92	0.00	379213.34	820245.85	
9700.00	90.00	359.49	9010.00	935.88	-8.32	935.92	0.00	379313.34	820244.96	
9800.00	90.00	359.49	9010.00	1035.87	-9.21	1035.92	0.00	379413.33	820244.07	

Weatherford
WFT Plan Report - X & Y's

Company:	Devon Energy	**Date:** 8/27/2013 **Time:** 10:54:57	**Page:** 2
Field:	Lea County, New Mexico (NAD 83)	**Co-ordinate(NE) Reference:**	Well: Ragin Cajun 14 Federal 1H
Site:	Ragin Cajun 14 Federal 1H	**Vertical (TVD) Reference:**	SITE 3249.0
Well:	Ragin Cajun 14 Federal 1H	**Section (VS) Reference:**	Well (0.00N,0.00E,359.49Azi)
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
9900.00	90.00	359.49	9010.00	1135.87	-10.10	1135.92	0.00	379513.33	820243.18	
10000.00	90.00	359.49	9010.00	1235.87	-10.99	1235.92	0.00	379613.33	820242.29	
10100.00	90.00	359.49	9010.00	1335.86	-11.87	1335.92	0.00	379713.32	820241.41	
10200.00	90.00	359.49	9010.00	1435.86	-12.76	1435.92	0.00	379813.32	820240.52	
10300.00	90.00	359.49	9010.00	1535.85	-13.65	1535.92	0.00	379913.31	820239.63	
10400.00	90.00	359.49	9010.00	1635.85	-14.54	1635.92	0.00	380013.31	820238.74	
10500.00	90.00	359.49	9010.00	1735.85	-15.43	1735.92	0.00	380113.31	820237.85	
10600.00	90.00	359.49	9010.00	1835.84	-16.32	1835.92	0.00	380213.30	820236.96	
10700.00	90.00	359.49	9010.00	1935.84	-17.21	1935.92	0.00	380313.30	820236.07	
10800.00	90.00	359.49	9010.00	2035.84	-18.10	2035.92	0.00	380413.30	820235.18	
10900.00	90.00	359.49	9010.00	2135.83	-18.98	2135.92	0.00	380513.29	820234.30	
11000.00	90.00	359.49	9010.00	2235.83	-19.87	2235.92	0.00	380613.29	820233.41	
11100.00	90.00	359.49	9010.00	2335.82	-20.76	2335.92	0.00	380713.28	820232.52	
11200.00	90.00	359.49	9010.00	2435.82	-21.65	2435.92	0.00	380813.28	820231.63	
11300.00	90.00	359.49	9010.00	2535.82	-22.54	2535.92	0.00	380913.28	820230.74	
11400.00	90.00	359.49	9010.00	2635.81	-23.43	2635.92	0.00	381013.27	820229.85	
11500.00	90.00	359.49	9010.00	2735.81	-24.32	2735.92	0.00	381113.27	820228.96	
11600.00	90.00	359.49	9010.00	2835.80	-25.21	2835.92	0.00	381213.26	820228.07	
11700.00	90.00	359.49	9010.00	2935.80	-26.10	2935.92	0.00	381313.26	820227.18	
11800.00	90.00	359.49	9010.00	3035.80	-26.98	3035.92	0.00	381413.26	820226.30	
11900.00	90.00	359.49	9010.00	3135.79	-27.87	3135.92	0.00	381513.25	820225.41	
12000.00	90.00	359.49	9010.00	3235.79	-28.76	3235.92	0.00	381613.25	820224.52	
12100.00	90.00	359.49	9010.00	3335.78	-29.65	3335.92	0.00	381713.24	820223.63	
12200.00	90.00	359.49	9010.00	3435.78	-30.54	3435.92	0.00	381813.24	820222.74	
12300.00	90.00	359.49	9010.00	3535.78	-31.43	3535.92	0.00	381913.24	820221.85	
12400.00	90.00	359.49	9010.00	3635.77	-32.32	3635.92	0.00	382013.23	820220.96	
12500.00	90.00	359.49	9010.00	3735.77	-33.21	3735.92	0.00	382113.23	820220.07	
12600.00	90.00	359.49	9010.00	3835.76	-34.10	3835.92	0.00	382213.22	820219.18	
12700.00	90.00	359.49	9010.00	3935.76	-34.98	3935.92	0.00	382313.22	820218.30	
12800.00	90.00	359.49	9010.00	4035.76	-35.87	4035.92	0.00	382413.22	820217.41	
12900.00	90.00	359.49	9010.00	4135.75	-36.76	4135.92	0.00	382513.21	820216.52	
13000.00	90.00	359.49	9010.00	4235.75	-37.65	4235.92	0.00	382613.21	820215.63	
13100.00	90.00	359.49	9010.00	4335.74	-38.54	4335.92	0.00	382713.20	820214.74	
13200.00	90.00	359.49	9010.00	4435.74	-39.43	4435.92	0.00	382813.20	820213.85	
13300.00	90.00	359.49	9010.00	4535.74	-40.32	4535.92	0.00	382913.20	820212.96	
13400.00	90.00	359.49	9010.00	4635.73	-41.21	4635.92	0.00	383013.19	820212.07	
13500.00	90.00	359.49	9010.00	4735.73	-42.09	4735.92	0.00	383113.19	820211.19	
13600.00	90.00	359.49	9010.00	4835.72	-42.98	4835.92	0.00	383213.18	820210.30	
13700.00	90.00	359.49	9010.00	4935.72	-43.87	4935.92	0.00	383313.18	820209.41	
13800.00	90.00	359.49	9010.00	5035.72	-44.76	5035.92	0.00	383413.18	820208.52	
13900.00	90.00	359.49	9010.00	5135.71	-45.65	5135.92	0.00	383513.17	820207.63	
14000.00	90.00	359.49	9010.00	5235.71	-46.54	5235.92	0.00	383613.17	820206.74	
14100.00	90.00	359.49	9010.00	5335.70	-47.43	5335.92	0.00	383713.16	820205.85	
14200.00	90.00	359.49	9010.00	5435.70	-48.32	5435.92	0.00	383813.16	820204.96	
14300.00	90.00	359.49	9010.00	5535.70	-49.21	5535.92	0.00	383913.16	820204.07	
14400.00	90.00	359.49	9010.00	5635.69	-50.09	5635.92	0.00	384013.15	820203.19	
14500.00	90.00	359.49	9010.00	5735.69	-50.98	5735.92	0.00	384113.15	820202.30	
14600.00	90.00	359.49	9010.00	5835.69	-51.87	5835.92	0.00	384213.15	820201.41	
14700.00	90.00	359.49	9010.00	5935.68	-52.76	5935.92	0.00	384313.14	820200.52	
14704.41	90.00	359.49	9010.00	5940.09	-52.80	5940.32	0.00	384317.55	820200.48	PBHL

Weatherford
WFT Plan Report - X & Y's

Company:	Devon Energy	**Date:** 8/27/2013 **Time:** 10:54:57	**Page:** 3
Field:	Lea County, New Mexico (NAD 83)	**Co-ordinate(NE) Reference:**	Well: Ragin Cajun 14 Federal 1H
Site:	Ragin Cajun 14 Federal 1H	**Vertical (TVD) Reference:**	SITE 3249.0
Well:	Ragin Cajun 14 Federal 1H	**Section (VS) Reference:**	Well (0.00N,0.00E,359.49Azi)
Wellpath:	1	**Survey Calculation Method:**	Minimum Curvature **Db:** Sybase

Targets

Name	Description Dip.	Dir.	TVD ft	+N/-S ft	+E/-W ft	Map Northing ft	Map Easting ft	<---- Latitude ----> Deg	Min	Sec	<--- Longitude ---> Deg	Min	Sec
PBHL -Rectangle (5367x25)			9010.00	5940.09	-52.80	384317.55	820200.48	32	3	12.135 N	103	25	59.666 W

Casing Points

MD	TVD	Diameter	Hole Size	Name

Annotation

MD ft	TVD ft	
8437.04	8437.04	KOP
9337.04	9010.00	LP
14704.40	9010.00	PBHL

Formations

MD	TVD	Formations	Lithology	Dip Angle	Dip Direction

Weatherford Drilling Services

GeoDec v5.03

Report Date:	August 27, 2013
Job Number:	
Customer:	Devon Energy
Well Name:	Ragin Cajun 14 Federal 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 378377.460 USFT	Latitude 32.0370446 DEG
East/West 820253.280 USFT	Longitude -103.4332246 DEG
Grid Convergence: .48°	
Total Correction: +6.84°	

Geodetic Location WGS84	Elevation =	0.0 Meters
Latitude =	32.03704° N	32° 2 min 13.361 sec
Longitude =	103.43322° W	103° 25 min 59.609 sec

Magnetic Declination =	7.32°	[True North Offset]	
Local Gravity =	.9988 g	CheckSum =	6856
Local Field Strength =	48294 nT	Magnetic Vector X =	23976 nT
Magnetic Dip =	59.96°	Magnetic Vector Y =	3080 nT
Magnetic Model =	bggm2013	Magnetic Vector Z =	41809 nT
Spud Date =	Oct 30, 2013	Magnetic Vector H =	24173 nT

Signed:_____ Date:_____

Weatherford
WFT Plan Report - X & Y's

Company: Devon Energy
Time: 10:55:56 Page: 1
Field: Lea County, New Mexico (NAD 83)
Reference: Well: Ragin Cajun 14 Federal 1H
Site: Ragin Cajun 14 Federal 1H
Reference: SITE 3249.0
Well: Ragin Cajun 14 Federal 1H
Reference: Well (0.00N,0.00E,359.49Azi)
Wellpath: 1
Method: Minimum Curvature Db: Sybase

Date: 8/27/2013
Co-ordinate(NE)
Vertical (TVD)
Section (VS)
Survey Calculation

Plan: Plan #1
8/27/2013
Date Composed:

1
Version:

Principal: Yes
From Surface
Tied-to:

Field: Lea County, New Mexico (NAD 83)

Map System:US State Plane Coordinate System 1983
New Mexico, Eastern Zone
Map Zone:

Geo Datum: GRS 1980
Well Centre
Coordinate System:

Sys Datum: Mean Sea Level
IGRF2010
Geomagnetic Model:

Site: Ragin Cajun 14 Federal 1H

Site Position: Northing: 378377.46 ft Latitude:
32 2 13.353 N
From: Map Easting: 820253.28 ft Longitude:
103 25 59.628 W
Position Uncertainty: 0.00 ft North Reference:
Grid
Ground Level: 3224.00 ft Grid Convergence:
0.48 deg

Well: Ragin Cajun 14 Federal 1H Slot Name:

Well Position: +N/-S 0.00 ft Northing: 378377.46 ft Latitude:
32 2 13.353 N
+E/-W 0.00 ft Easting : 820253.28 ft Longitude:
103 25 59.628 W
Position Uncertainty: 0.00 ft

Wellpath: 1
Surface
Drilled From:

Tie-on Depth:
0.00 ft
Current Datum: SITE Height 3249.00 ft Above System
Datum: Mean Sea Level
Magnetic Data: 10/30/2013
Declination:

7.22 deg
Field Strength: 48306 nT Mag Dip Angle:
59.98 deg
Vertical Section: Depth From (TVD) +N/-S +E/-W
Direction
ft ft ft
deg
0.00 0.00 0.00
359.49

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	359.49	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
8437.04	0.00	359.49	8437.04	0.00	0.00	0.00	0.00	0.00	0.00	
9337.04	90.00	359.49	9010.00	572.94	-5.09	10.00	10.00	0.00	359.49	
14704.41	90.00	359.49	9010.00	5940.09	-52.80	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	
8400.00	0.00	359.49	8400.00	0.00	0.00	0.00	0.00	378377.46	820253.28	
8437.04	0.00	359.49	8437.04	0.00	0.00	0.00	0.00	378377.46	820253.28	KOP
8500.00	6.30	359.49	8499.87	3.46	-0.03	3.46	10.00	378380.92	820253.25	
8600.00	16.30	359.49	8597.81	23.02	-0.20	23.02	10.00	378400.48	820253.08	
8700.00	26.30	359.49	8690.87	59.29	-0.53	59.29	10.00	378436.75	820252.75	
8800.00	36.30	359.49	8776.21	111.17	-0.99	111.17	10.00	378488.63	820252.29	
8900.00	46.30	359.49	8851.24	177.07	-1.57	177.08	10.00	378554.53	820251.71	
9000.00	56.30	359.49	8913.69	255.01	-2.27	255.02	10.00	378632.47	820251.01	
9100.00	66.30	359.49	8961.66	342.61	-3.05	342.62	10.00	378720.07	820250.23	
9200.00	76.30	359.49	8993.69	437.20	-3.89	437.22	10.00	378814.66	820249.39	
9300.00	86.30	359.49	9008.80	535.92	-4.76	535.94	10.00	378913.38	820248.52	
9337.04	90.00	359.49	9010.00	572.94	-5.09	572.96	10.00	378950.40	820248.19	LP
9400.00	90.00	359.49	9010.00	635.89	-5.65	635.92	0.00	379013.35	820247.63	
9500.00	90.00	359.49	9010.00	735.89	-6.54	735.92	0.00	379113.35	820246.74	
9600.00	90.00	359.49	9010.00	835.88	-7.43	835.92	0.00	379213.34	820245.85	

9700.00	90.00	359.49	9010.00	935.88	-8.32	935.92	0.00
379313.34	820244.96						
9800.00	90.00	359.49	9010.00	1035.87	-9.21	1035.92	0.00
379413.33	820244.07						
9900.00	90.00	359.49	9010.00	1135.87	-10.10	1135.92	0.00
379513.33	820243.18						
10000.00	90.00	359.49	9010.00	1235.87	-10.99	1235.92	0.00
379613.33	820242.29						
10100.00	90.00	359.49	9010.00	1335.86	-11.87	1335.92	0.00
379713.32	820241.41						
10200.00	90.00	359.49	9010.00	1435.86	-12.76	1435.92	0.00
379813.32	820240.52						
10300.00	90.00	359.49	9010.00	1535.85	-13.65	1535.92	0.00
379913.31	820239.63						
10400.00	90.00	359.49	9010.00	1635.85	-14.54	1635.92	0.00
380013.31	820238.74						
10500.00	90.00	359.49	9010.00	1735.85	-15.43	1735.92	0.00
380113.31	820237.85						
10600.00	90.00	359.49	9010.00	1835.84	-16.32	1835.92	0.00
380213.30	820236.96						
10700.00	90.00	359.49	9010.00	1935.84	-17.21	1935.92	0.00
380313.30	820236.07						
10800.00	90.00	359.49	9010.00	2035.84	-18.10	2035.92	0.00
380413.30	820235.18						
10900.00	90.00	359.49	9010.00	2135.83	-18.98	2135.92	0.00
380513.29	820234.30						
11000.00	90.00	359.49	9010.00	2235.83	-19.87	2235.92	0.00
380613.29	820233.41						
11100.00	90.00	359.49	9010.00	2335.82	-20.76	2335.92	0.00
380713.28	820232.52						
11200.00	90.00	359.49	9010.00	2435.82	-21.65	2435.92	0.00
380813.28	820231.63						
11300.00	90.00	359.49	9010.00	2535.82	-22.54	2535.92	0.00
380913.28	820230.74						
11400.00	90.00	359.49	9010.00	2635.81	-23.43	2635.92	0.00
381013.27	820229.85						
11500.00	90.00	359.49	9010.00	2735.81	-24.32	2735.92	0.00
381113.27	820228.96						
11600.00	90.00	359.49	9010.00	2835.80	-25.21	2835.92	0.00
381213.26	820228.07						
11700.00	90.00	359.49	9010.00	2935.80	-26.10	2935.92	0.00
381313.26	820227.18						
11800.00	90.00	359.49	9010.00	3035.80	-26.98	3035.92	0.00
381413.26	820226.30						
11900.00	90.00	359.49	9010.00	3135.79	-27.87	3135.92	0.00
381513.25	820225.41						
12000.00	90.00	359.49	9010.00	3235.79	-28.76	3235.92	0.00
381613.25	820224.52						
12100.00	90.00	359.49	9010.00	3335.78	-29.65	3335.92	0.00
381713.24	820223.63						
12200.00	90.00	359.49	9010.00	3435.78	-30.54	3435.92	0.00
381813.24	820222.74						
12300.00	90.00	359.49	9010.00	3535.78	-31.43	3535.92	0.00
381913.24	820221.85						
12400.00	90.00	359.49	9010.00	3635.77	-32.32	3635.92	0.00
382013.23	820220.96						
12500.00	90.00	359.49	9010.00	3735.77	-33.21	3735.92	0.00

382113.23	820220.07					
12600.00	90.00 359.49	9010.00	3835.76	-34.10	3835.92	0.00
382213.22	820219.18					
12700.00	90.00 359.49	9010.00	3935.76	-34.98	3935.92	0.00
382313.22	820218.30					
12800.00	90.00 359.49	9010.00	4035.76	-35.87	4035.92	0.00
382413.22	820217.41					
12900.00	90.00 359.49	9010.00	4135.75	-36.76	4135.92	0.00
382513.21	820216.52					
13000.00	90.00 359.49	9010.00	4235.75	-37.65	4235.92	0.00
382613.21	820215.63					
13100.00	90.00 359.49	9010.00	4335.74	-38.54	4335.92	0.00
382713.20	820214.74					
13200.00	90.00 359.49	9010.00	4435.74	-39.43	4435.92	0.00
382813.20	820213.85					
13300.00	90.00 359.49	9010.00	4535.74	-40.32	4535.92	0.00
382913.20	820212.96					
13400.00	90.00 359.49	9010.00	4635.73	-41.21	4635.92	0.00
383013.19	820212.07					
13500.00	90.00 359.49	9010.00	4735.73	-42.09	4735.92	0.00
383113.19	820211.19					
13600.00	90.00 359.49	9010.00	4835.72	-42.98	4835.92	0.00
383213.18	820210.30					
13700.00	90.00 359.49	9010.00	4935.72	-43.87	4935.92	0.00
383313.18	820209.41					
13800.00	90.00 359.49	9010.00	5035.72	-44.76	5035.92	0.00
383413.18	820208.52					
13900.00	90.00 359.49	9010.00	5135.71	-45.65	5135.92	0.00
383513.17	820207.63					
14000.00	90.00 359.49	9010.00	5235.71	-46.54	5235.92	0.00
383613.17	820206.74					
14100.00	90.00 359.49	9010.00	5335.70	-47.43	5335.92	0.00
383713.16	820205.85					
14200.00	90.00 359.49	9010.00	5435.70	-48.32	5435.92	0.00
383813.16	820204.96					
14300.00	90.00 359.49	9010.00	5535.70	-49.21	5535.92	0.00
383913.16	820204.07					
14400.00	90.00 359.49	9010.00	5635.69	-50.09	5635.92	0.00
384013.15	820203.19					
14500.00	90.00 359.49	9010.00	5735.69	-50.98	5735.92	0.00
384113.15	820202.30					
14600.00	90.00 359.49	9010.00	5835.69	-51.87	5835.92	0.00
384213.15	820201.41					
14700.00	90.00 359.49	9010.00	5935.68	-52.76	5935.92	0.00
384313.14	820200.52					
14704.41	90.00 359.49	9010.00	5940.09	-52.80	5940.32	0.00
384317.55	820200.48	PBHL				

Weatherford
WFT Plan Report - X & Y's

Company: Devon Energy — Date: 8/27/2013
Time: 10:55:56 Page: 3
Field: Lea County, New Mexico (NAD 83) — Co-ordinate(NE)
Reference: Well: Ragin Cajun 14 Federal 1H
Site: Ragin Cajun 14 Federal 1H — Vertical (TVD)
Reference: SITE 3249.0
Well: Ragin Cajun 14 Federal 1H — Section (VS)
Reference: Well (0.00N,0.00E,359.49Azi)
Wellpath: 1 — Survey Calculation
Method: Minimum Curvature Db: Sybase

Targets

Map Name	Description	TVD ft	+N/-S ft	+E/-W ft	Map Northing ft	Map Easting ft	<---- Latitude ---> Deg	Min	Sec	<--- Longitude ---> Deg	Min	Sec	Dip.	Dir.
PBHL		9010.00	5940.09	-52.80	384317.55	820200.48	32	3	12.135 N	103	25	59.666 W		
	-Rectangle (5367x25)													

Casing Points

MD	TVD	Diameter	Hole Size	Name

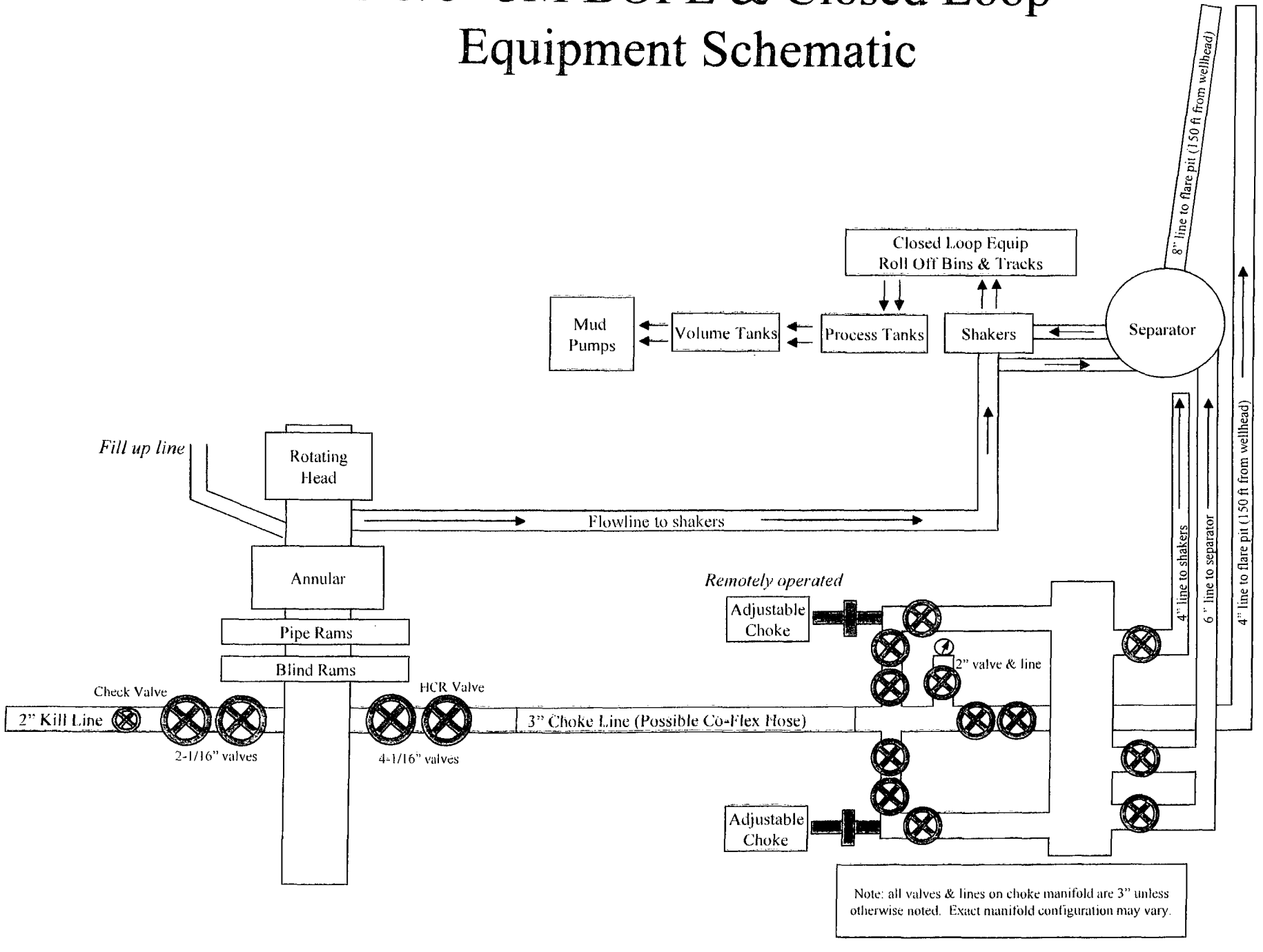
Annotation

MD ft	TVD ft	
8437.04	8437.04	KOP
9337.04	9010.00	LP
14704.40	9010.00	PBHL

Formations

MD	TVD	Formations	Lithology	Dip Angle	Dip Direction

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



NOTES REGARDING BLOWOUT PREVENTERS

Devon Energy Production Company, LP
RAGIN CAJUN 14 FEDERAL 1H

Surface Location: 330 FSL & 330 FEL, Unit P, Sec 14 T26S R34E, LEA, NM
Bottom Hole Location: 990 FSL & 330 FEL, Unit P, Sec 11 T26S R34E, 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 of 3000psi working pressure.

4) All fittings will be flanged.

5) A full bore safety valve tested to a minimum 3000psi WP with proper thread connections will be available on the roatary 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.

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

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

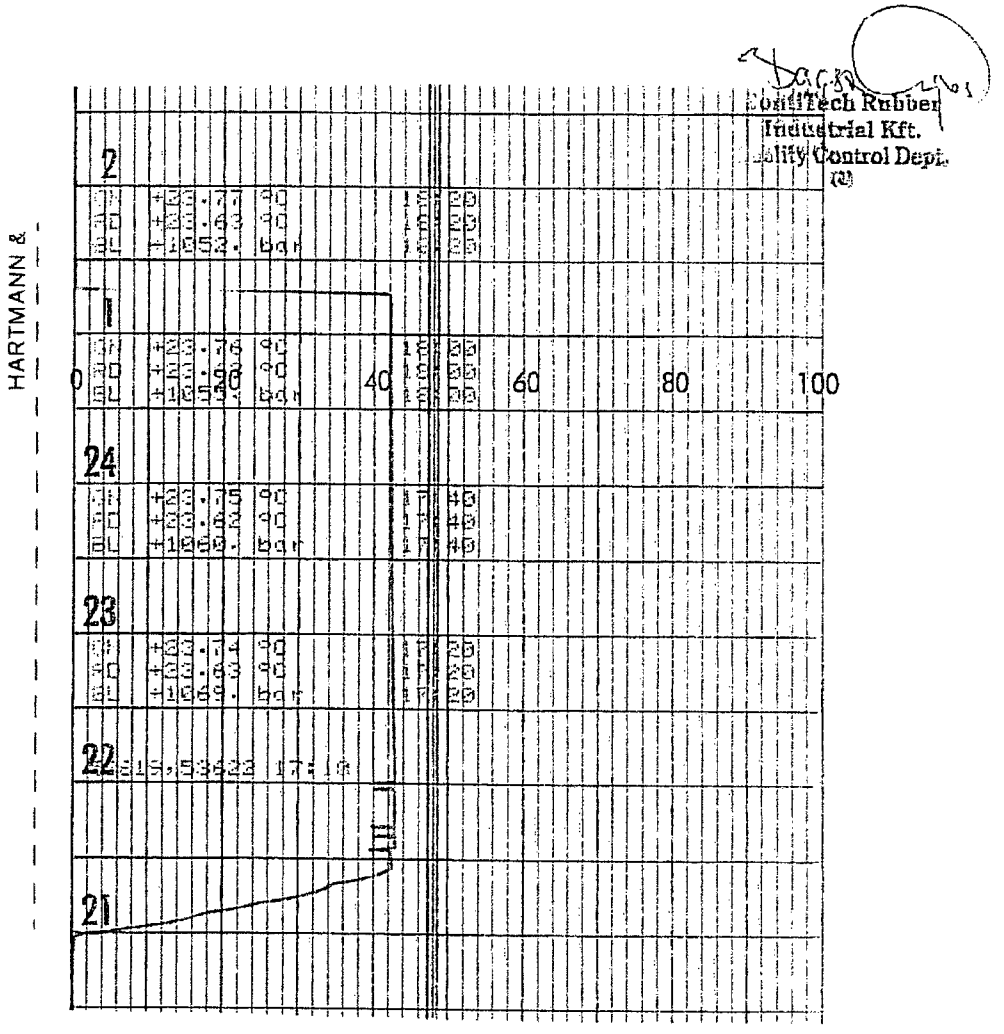
Hose conform to NACE MR 01-75

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

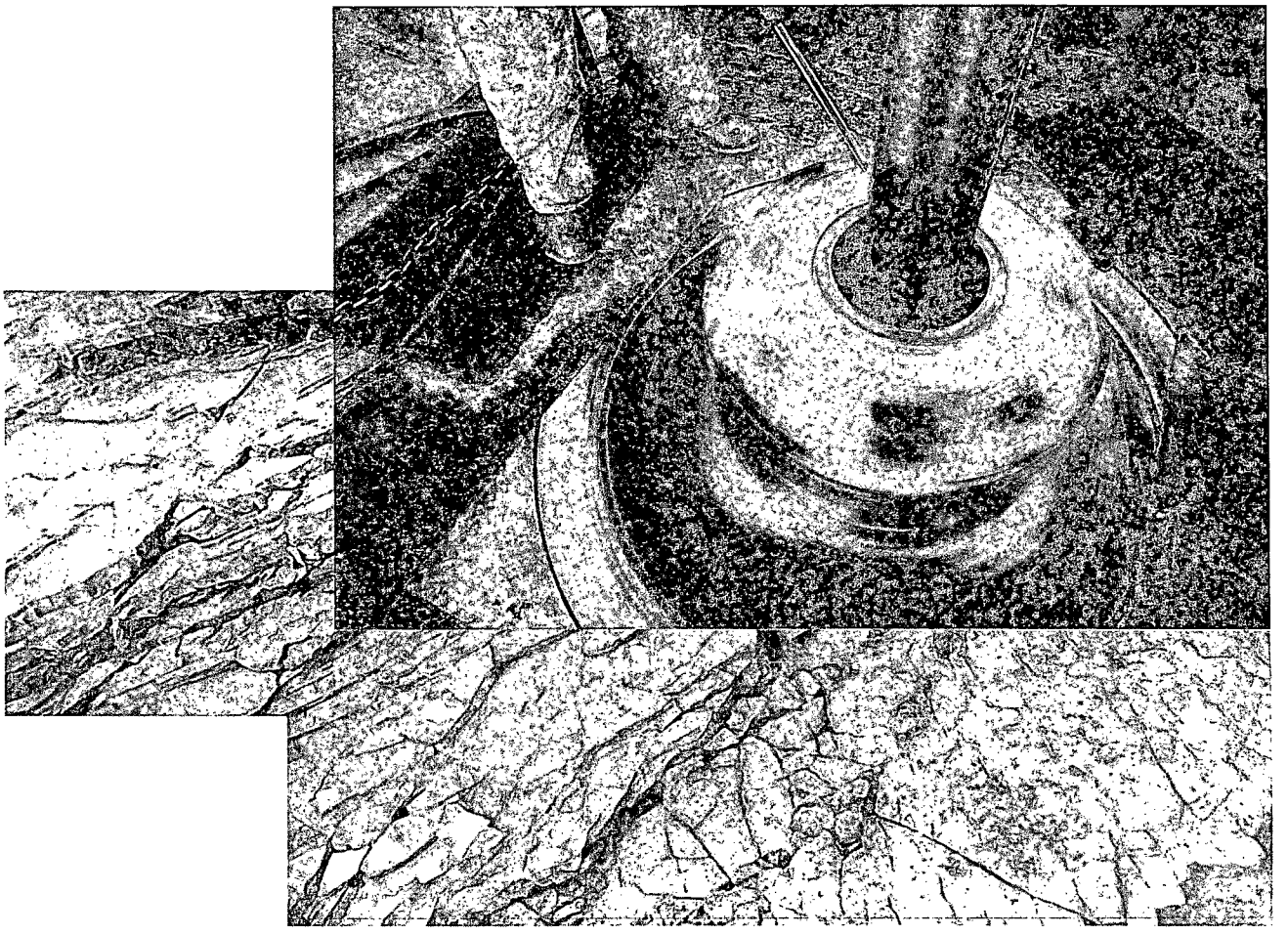
Date:	Inspector	Quality Control
25. August. 2008		ContiTech Rubber Industrial Kft. Quality Control Dept.



Contitech Rubber
Industrial Kft.
Quality Control Dept.

devon

Commitment Runs Deep



Design Plan
Operation and Maintenance Plan
Closure Plan

SENM - Closed Loop Systems
March 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.

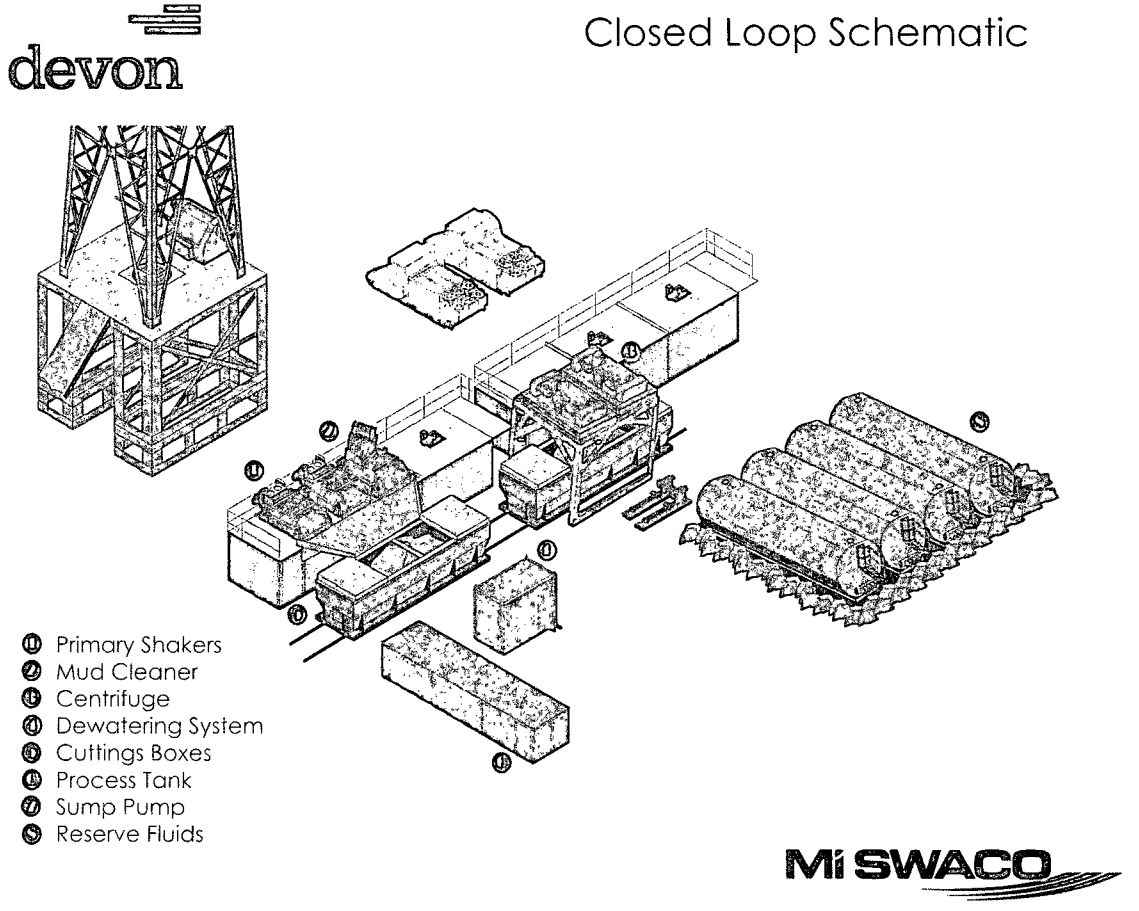
Prior to installing a closed-loop system on site, the topsoil, if present, will be stripped and stockpiled for use as the final cover or fill at the time of closure.

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