14-427

HOBBS OCD
OCD Hobbs
JUL 18 2014
RECEIVED

Form 3160-3
(March 2012)

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.: NMNM69596

6. If Indian, Allotee or Tribe Name:

1a. Type of work: ☑ DRILL ☐ REENTER

7. If Unit or CA Agreement, Name and No.: NMNM94480X

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

8. Lease Name and Well No.: GAUCHO UNIT 21H (30863)

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

9. API Well No.: 30-025-41929

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: WC-025 G-06 S223421E; OJO CHISO WEST; BONE SPRING (97922)

4. Location of Well *(Report location clearly and in accordance with any State requirements.*)*
At surface: 200 FSL & 1450 FWL Unit N
PP: 200 FSL & 1450 FWL
At proposed prod. zone: 330 FNL & 660 FWL Unit D

11. Sec., T. R. M. or Blk. and Survey or Area: 29-22S-34E

14. Distance in miles and direction from nearest town or post office*: Approximately 19 miles SW of Eunice, 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): 200'

16. No. of acres in lease: 830.64 acres

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: 10,335' MD: 15,117'

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

21. Elevations (Show whether DF, KDB, RT, GL, etc.): 3,426.9' GL

22. Approximate date work will start*: 07/01/2014

23. Estimated duration: 25 days

24. Attachments To Be Pad Drilled w/ Gaucho Unit 20H

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: [signature] Name *(Printed/Typed)*: David H. Cook Date: 02/26/2014

Title: Regulatory Specialist

Approved by *(Signature)*: Steve Caffey Name *(Printed/Typed)*: Date: JUL 15 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)

*(Instructions on page 2)

Capitan Controlled Water Basin

KZ 07/24/14

JUL 25 2014

Approval Subject to General Requirements & Special Stipulations Attached

SEE ATTACHED FOR CONDITIONS OF APPROVAL

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 _26th__ day of __February, 2014.
Printed Name: David Cook
Signed Name: _____
Position Title: Regulatory Specialist
Address: 333 W. Sheridan, OKC OK 73102
Telephone: (405)-552-7848

DRILLING PROGRAM

HOBBS OCD

Devon Energy Production Company, L.P.

JUL 18 2014

Gaucho Unit 21H

RECEIVED

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

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

a.	Fresh Water	300'	
b.	Rustler	1640'	Barren
c.	Top Salt	1925'	Barren
d.	Base Salt/Lwr Castille	3700'	Barren
e.	Yates	3930'	Oil/Gas
f.	Delaware	5256'	Oil/Gas
g.	Cherry Canyon	6016'	Oil/Gas
h.	Lwr Brushy Canyon	8264'	Oil/Gas
i.	Bone Spring Lime	8443'	Oil/Gas
j.	1st Bone Spring SS	9497'	Oil/Gas
k.	2nd Bone Spring SS	10046'	Oil/Gas
	Total Depth	10335' TVD	15117' MD

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:**

See COA

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 - 1700' 2225'	13-3/8"	0 - 1700'	54.5	STC	J-55	1.49	3.71	5.55
12-1/4"	1700-4000' 5000'	9-5/8"	0-4000'	36	BTC	HCK-55	1.43	2.03	5.76
8-3/4"	4000-15117'	5-1/2"	0-15117'	17	BTC	HCP-110	1.74	2.38	1.87

Casing Notes:

- All casing is new and API approved

Maximum Lateral TVD: 10335'

5. **Proposed mud Circulations System:**

See COA

Depth 2225' 5000'	Mud Weight	Viscosity (cp)	Fluid Loss	Type System
0-1700'	8.4-8.6	1 - 3	N/C	FW
1700-4000'	9.8-10.0	1 - 3	N/C	Brine
4000-15117'	8.8-9.2	1 - 3	N/C	FW/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
13-3/8" Surface	970	13.5	9.07	1.72	Lead	Class C Cement + 0.125 lbs/sack Poly-E-Flake + 4% bwoc Bentonite + 70.8% Fresh Water
	560	14.8	6.32	1.33	Tail	Class C Cement + 0.125 lbs/sack Poly-E-Flake + 63.5% Fresh Water
9-5/8" Intermediate	740	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
See COA	430	14.8	6.32	1.33	Tail	Class C Cement + 0.125 lbs/sack Poly-E-Flake + 63.5% Fresh Water
5-1/2" Production Casing	600	11.9	12.89	2.26	Lead	(50:50) Class H Cement: Poz (Fly Ash) + 10% BWOC Bentonite + 1 lb/sk of Kol-Seal + 0.3% BWOC HR-601 + 0.5lb/sk D-Air 5000 + 76.4% Fresh Water
	330	12.5	10.86	1.96	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
	2010	14.5	5.31	1.2	Tail	(50:50) Class H Cement: Poz (Fly Ash) + 0.5% bwoc HALAD-344 + 0.25% bwoc CFR-3 + 0.1% bwoc HR-601 + 2% bwoc Bentonite + 58.8% Fresh Water

TOC for all Strings:

Surface @ 0'
Intermediate @ 0'
Production @ ~~3500'~~ See COA

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.
See COA
c. No logs are planned.
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 known 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: 4600 psi, and estimated BHT: 160 F degrees.

See COA

b. Hydrogen Sulfide detection equipment will be in operation after drilling out the surface casing shoe until the production string is cemented. Breathing equipment will be on location upon drilling the surface casing 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.

5D Plan Report

Devon Energy

Field Name: *Lea Co, NM Nad 83 NM*
Site Name: *Gaucho Unit 20, 21H Fed Pad*
Well Name: *Gaucho Unit 21H Fed*
Plan: *P1:V2*

07 April 2014

devon

Gaucho Unit 21H Fed
Lea Co, NM

Plan Data for Gaucho Unit 21H Fed

Plan Point Information:
DogLeg Severity Unit: °/100.00ft Position offsets from Slot centre

MD (USft)	Inc (°)	Az (°)	TVD (USft)	+N/-S (USft)	+E/-W (USft)	Northing (USft)	Easting (USft)	VSec (USft)	DLS (DLSU)
0.00	0.00	0.00	0.00	0.00	0.00	494244.94	799900.88	0.00	0.00
4100.00	0.00	0.00	4100.00	0.00	0.00	494244.94	799900.88	0.00	0.00
4600.00	10.00	253.87	4597.47	-12.09	-41.81	494232.85	799859.07	-10.54	2.00
7912.92	10.00	253.87	7860.05	-171.91	-594.45	494073.03	799306.43	-149.81	0.00
8412.92	0.00	0.00	8357.52	-184.01	-636.25	494060.93	799264.63	-160.34	2.00
9912.92	0.00	0.00	9857.52	-184.01	-636.25	494060.93	799264.63	-160.34	0.00
10662.92	90.00	357.88	10334.98	293.13	-653.92	494538.07	799246.96	317.12	12.00
15117.36	90.00	357.88	10335.00	4744.52	-818.70	498989.46	799082.18	4771.56	0.00

Plan Data for Gaucho Unit 21H Fed

Target Set Information:
Name: Gaucho Unit 21H
Position offsets from Slot centre

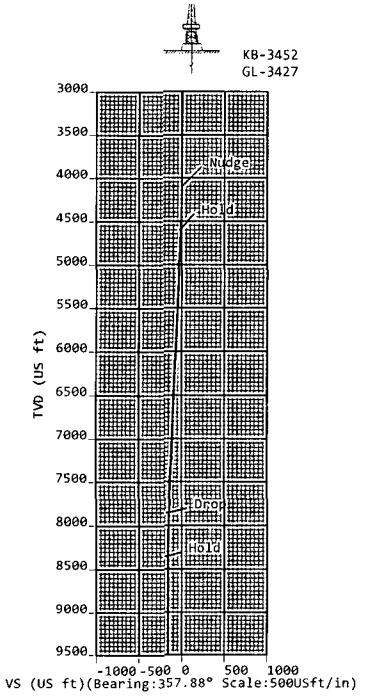
Name	TVD (USft)	+N/-S (USft)	+E/-W (USft)	Northing (USft)	Easting (USft)	Shape	Comment
S Tgt	9857.53	-186.41	-818.70	494058.53	799082.18	Cuboid	
LP Tgt 21H	10335.00	123.60	-818.70	494368.54	799082.18	Cuboid	
PBHL 21H	10335.00	4744.52	-818.70	498989.46	799082.18	Cuboid	

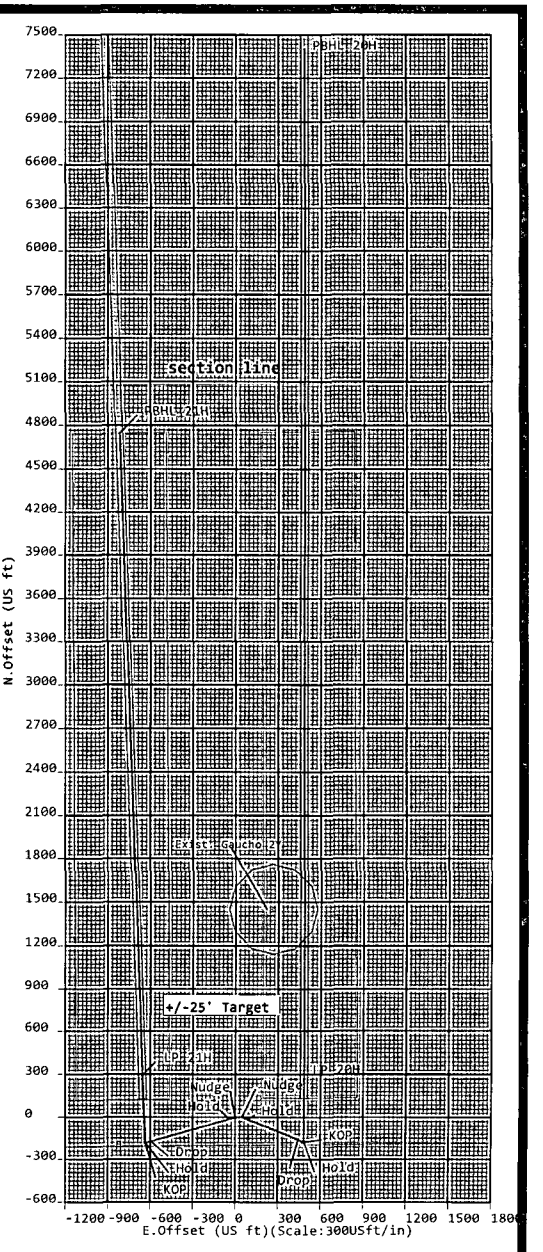
Plan Data for Gaucho Unit 21H Fed

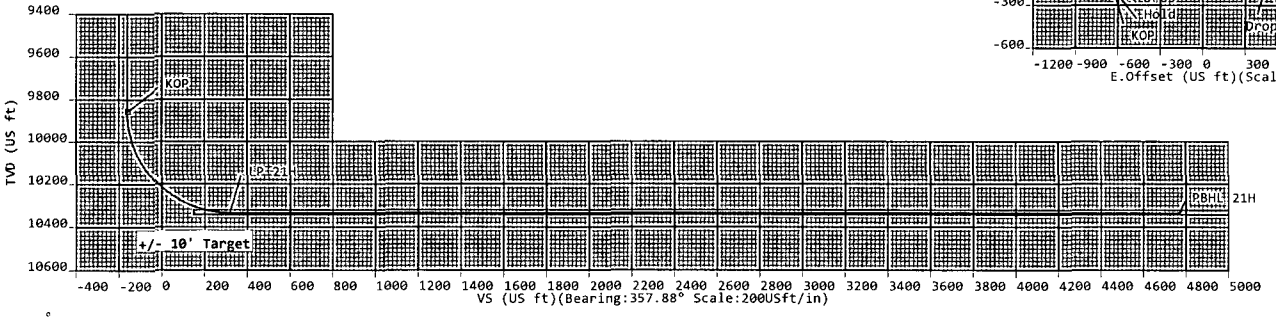
Slot: Gaucho Unit 21H Fed
Position:
Offset is from Site centre
+N/-S: -0.39USft Northing: 494244.94USft Latitude: 32°21'21.5"
+E/-W: -49.99USft Easting: 799900.88USft Longitude: -103°29'45.6"
Elevation Above VRD: 3427.00USft

Gaucho Unit 21H Fed
Exist. Gaucho 2Y
Gaucho Unit 20H Fed

Weatherford







Sign Off: Russell Joyner

Gaucho Unit 21H Fed

Field Name
Lea Co, NM Nad 83 NM

Map Units : US ft **Company Name :** Devon Energy
Vertical Reference Datum (VRD) : Mean Sea Level
Projected Coordinate System : NAD83 / New Mexico East (ftUS)
Comment :

Site Name
Gaucho Unit 20, 21H Fed Pad

Units : US ft **North Reference** : Grid **Convergence Angle :** 0.45

Position		
	Northing : 494245.33 US ft	**Latitude :** 32° 21' 21.49"
	Easting : 799950.87 US ft	**Longitude :** -103° 29' 44.97"

Elevation above Mean Sea Level:3428.00 US ft
Comment :

Slot Name
Gaucho Unit 21H Fed

Position (Offsets relative to Site Centre)

+N / -S : -0.39 US ft	**Northing :**494244.94 US ft	**Latitude :** 32°21'21.49"
+E / -W : -49.99 US ft	**Easting :**799900.88 US ft	**Longitude :** -103°29'45.55"

Slot TVD Reference : Ground Elevation
Elevation above Mean Sea Level : 3427.00 US ft
Comment :

Well Name
Gaucho Unit 21H Fed

Type : Main well **UWI :** **Plan :** P1:V2
Rig Height *Drill Floor* : 25.00 US ft **Comment :**
Relative to Mean Sea Level: 3452.00 US ft
Closure Distance : 4814.64 US ft **Closure Azimuth :** 350.21°
Vertical Section (Position of Origin Relative to Slot)
+N / -S : 0.00 US ft **+E / -W :** 0.00 US ft **Az :**357.88°
Magnetic Parameters
Model : BGGM **Field Strength :** 48407.2nT **Dec :** 7.31° **Dip :** 60.23° **Date :** 15/Jun/2014

Target Set

Name : Gaucho Unit 21H **Number of Targets :** 3

Comment :

Target Name:
S Tgt

Position (Relative to Slot centre)

+N / -S : -186.41US ft	**Northing :** 494058.53 US ft	**Latitude :** 32°21'19.71"
+E / -W : -818.70 US ft	**Easting :** 799082.18US ft	**Longitude :** -103°29'55.12"

Shape:
Cuboid

TVD (Drill Floor) : 9857.53 US ft

Orientation **Azimuth :** 0.00° **Inclination :** 0.00°
Dimensions **Length :** 20.00 US ft **Breadth :** 20.00 US ft **Height :** 20.00 US ft

5D Plan Report

Target Name:	Position (Relative to Slot centre)		
LP Tgt 21H	**+N / -S :** 123.60US ft	**Northing :** 494368.54 US ft	**Latitude :** 32°21'22.78"
	+E / -W : -818.70 US ft	**Easting :** 799082.18US ft	**Longitude :** -103°29'55.09"
Shape:	**TVD (Drill Floor) :** 10335.00 US ft		
Cuboid	**Orientation** **Azimuth :** 0.00°	**Inclination :** 0.00°	
	Dimensions **Length :** 0.00 US ft	**Breadth :** 0.00 US ft	**Height :** 0.00 US ft

Target Name:	Position (Relative to Slot centre)		
PBHL 21H	**+N / -S :** 4744.52US ft	**Northing :** 498989.46 US ft	**Latitude :** 32°22'8.50"
	+E / -W : -818.70 US ft	**Easting :** 799082.18US ft	**Longitude :** -103°29'54.67"
Shape:	**TVD (Drill Floor) :** 10335.00 US ft		
Cuboid	**Orientation** **Azimuth :** 357.88°	**Inclination :** 0.00°	
	Dimensions **Length :** 9240.00 US ft	**Breadth :** 50.00 US ft	**Height :** 20.00 US ft

Well path created using minimum curvature

Salient Points (Relative to Slot centre, TVD relative to Drill Floor)

MD (US ft)	Inc (°)	Az (°)	TVD (US ft)	N.Offset (US ft)	E.Offset (US ft)	DLS (°/100 US ft)	VS (US ft)	B.Rate (°/100 US ft)	T.Rate (°/100 US ft)	T.Face (°)	Comment
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
4100.00	0.00	0.00	4100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Nudge
4600.00	10.00	253.87	4597.47	-12.09	-41.81	2.00	-10.54	2.00	0.00	253.87	Hold
7912.92	10.00	253.87	7860.05	-171.91	-594.45	0.00	-149.81	0.00	0.00	0.00	Drop
8412.92	0.00	0.00	8357.52	-184.01	-636.25	2.00	-160.34	-2.00	0.00	180.00	Hold
9912.92	0.00	0.00	9857.52	-184.01	-636.25	0.00	-160.34	0.00	0.00	0.00	KOP
10662.92	90.00	357.88	10334.98	293.13	-653.92	12.00	317.12	12.00	0.00	357.88	LP 21H
15117.36	90.00	357.88	10335.00	4744.52	-818.70	0.00	4771.56	0.00	0.00	0.00	PBHL 21H

Interpolated Points (Relative to Slot centre, TVD relative to Drill Floor)

MD (US ft)	Inc (°)	Az (°)	TVD (US ft)	N.Offset (US ft)	E.Offset (US ft)	VS (US ft)	DLS (°/100 US ft)	Northing (US ft)	Easting (US ft)	Comment
4100.00	0.00	0.00	4100.00	0.00	0.00	0.00	0.00	494244.94	799900.88	Nudge
4200.00	2.00	253.87	4199.98	-0.48	-1.68	-0.42	2.00	494244.46	799899.20	
4300.00	4.00	253.87	4299.84	-1.94	-6.70	-1.69	2.00	494243:00	799894.18	
4400.00	6.00	253.87	4399.45	-4.36	-15.08	-3.80	2.00	494240.58	799885.80	
4500.00	8.00	253.87	4498.70	-7.75	-26.78	-6.75	2.00	494237.19	799874.10	
4600.00	10.00	253.87	4597.47	-12.09	-41.81	-10.54	2.00	494232.85	799859.07	Hold
4700.00	10.00	253.87	4695.95	-16.92	-58.49	-14.74	0.00	494228.02	799842.39	
4800.00	10.00	253.87	4794.43	-21.74	-75.17	-18.94	0.00	494223.20	799825.71	
4900.00	10.00	253.87	4892.91	-26.56	-91.85	-23.15	0.00	494218.38	799809.03	
5000.00	10.00	253.87	4991.39	-31.39	-108.53	-27.35	0.00	494213.55	799792.35	
5100.00	10.00	253.87	5089.87	-36.21	-125.22	-31.56	0.00	494208.73	799775.66	
5200.00	10.00	253.87	5188.35	-41.04	-141.90	-35.76	0.00	494203.90	799758.98	
5300.00	10.00	253.87	5286.83	-45.86	-158.58	-39.96	0.00	494199.08	799742.30	
5400.00	10.00	253.87	5385.31	-50.69	-175.26	-44.17	0.00	494194.25	799725.62	
5500.00	10.00	253.87	5483.79	-55.51	-191.94	-48.37	0.00	494189.43	799708.94	
5600.00	10.00	253.87	5582.27	-60.33	-208.62	-52.58	0.00	494184.61	799692.26	
5700.00	10.00	253.87	5680.75	-65.16	-225.30	-56.78	0.00	494179.78	799675.58	
5800.00	10.00	253.87	5779.23	-69.98	-241.98	-60.98	0.00	494174.96	799658.90	
5900.00	10.00	253.87	5877.72	-74.81	-258.67	-65.19	0.00	494170.13	799642.21	
6000.00	10.00	253.87	5976.20	-79.63	-275.35	-69.39	0.00	494165.31	799625.53	
6100.00	10.00	253.87	6074.68	-84.46	-292.03	-73.59	0.00	494160.48	799608.85	

5D Plan Report

Interpolated Points (Relative to Slot centre, TVD relative to Drill Floor)										
MD (US ft)	Inc (°)	Az (°)	TVD (US ft)	N.Offset (US ft)	E.Offset (US ft)	VS (US ft)	DLS (°/100 US ft)	Northing (US ft)	Easting (US ft)	Comment
6200.00	10.00	253.87	6173.16	-89.28	-308.71	-77.80	0.00	494155.66	799592.17	
6300.00	10.00	253.87	6271.64	-94.10	-325.39	-82.00	0.00	494150.84	799575.49	
6400.00	10.00	253.87	6370.12	-98.93	-342.07	-86.21	0.00	494146.01	799558.81	
6500.00	10.00	253.87	6468.60	-103.75	-358.75	-90.41	0.00	494141.19	799542.13	
6600.00	10.00	253.87	6567.08	-108.58	-375.43	-94.61	0.00	494136.36	799525.45	
6700.00	10.00	253.87	6665.56	-113.40	-392.12	-98.82	0.00	494131.54	799508.76	
6800.00	10.00	253.87	6764.04	-118.22	-408.80	-103.02	0.00	494126.72	799492.08	
6900.00	10.00	253.87	6862.52	-123.05	-425.48	-107.23	0.00	494121.89	799475.40	
7000.00	10.00	253.87	6961.00	-127.87	-442.16	-111.43	0.00	494117.07	799458.72	
7100.00	10.00	253.87	7059.48	-132.70	-458.84	-115.63	0.00	494112.24	799442.04	
7200.00	10.00	253.87	7157.97	-137.52	-475.52	-119.84	0.00	494107.42	799425.36	
7300.00	10.00	253.87	7256.45	-142.35	-492.20	-124.04	0.00	494102.59	799408.68	
7400.00	10.00	253.87	7354.93	-147.17	-508.88	-128.24	0.00	494097.77	799392.00	
7500.00	10.00	253.87	7453.41	-151.99	-525.56	-132.45	0.00	494092.95	799375.32	
7600.00	10.00	253.87	7551.89	-156.82	-542.25	-136.65	0.00	494088.12	799358.63	
7700.00	10.00	253.87	7650.37	-161.64	-558.93	-140.86	0.00	494083.30	799341.95	
7800.00	10.00	253.87	7748.85	-166.47	-575.61	-145.06	0.00	494078.47	799325.27	
7900.00	10.00	253.87	7847.33	-171.29	-592.29	-149.26	0.00	494073.65	799308.59	
7912.92	10.00	253.87	7860.05	-171.91	-594.45	-149.81	0.00	494073.03	799306.43	Drop
8000.00	8.26	253.87	7946.03	-175.75	-607.72	-153.15	2.00	494069.19	799293.16	
8100.00	6.26	253.87	8045.22	-179.26	-619.85	-156.21	2.00	494065.68	799281.03	
8200.00	4.26	253.87	8144.80	-181.81	-628.66	-158.43	2.00	494063.13	799272.22	
8300.00	2.26	253.87	8244.63	-183.39	-634.12	-159.81	2.00	494061.55	799266.76	
8400.00	0.26	253.87	8344.60	-184.00	-636.23	-160.34	2.00	494060.94	799264.65	
8412.92	0.00	0.00	8357.52	-184.01	-636.25	-160.34	2.00	494060.93	799264.63	Hold
8500.00	0.00	0.00	8444.60	-184.01	-636.25	-160.34	0.00	494060.93	799264.63	
8600.00	0.00	0.00	8544.60	-184.01	-636.25	-160.34	0.00	494060.93	799264.63	
8700.00	0.00	0.00	8644.60	-184.01	-636.25	-160.34	0.00	494060.93	799264.63	
8800.00	0.00	0.00	8744.60	-184.01	-636.25	-160.34	0.00	494060.93	799264.63	
8900.00	0.00	0.00	8844.60	-184.01	-636.25	-160.34	0.00	494060.93	799264.63	
9000.00	0.00	0.00	8944.60	-184.01	-636.25	-160.34	0.00	494060.93	799264.63	
9100.00	0.00	0.00	9044.60	-184.01	-636.25	-160.34	0.00	494060.93	799264.63	
9200.00	0.00	0.00	9144.60	-184.01	-636.25	-160.34	0.00	494060.93	799264.63	
9300.00	0.00	0.00	9244.60	-184.01	-636.25	-160.34	0.00	494060.93	799264.63	
9400.00	0.00	0.00	9344.60	-184.01	-636.25	-160.34	0.00	494060.93	799264.63	
9500.00	0.00	0.00	9444.60	-184.01	-636.25	-160.34	0.00	494060.93	799264.63	
9600.00	0.00	0.00	9544.60	-184.01	-636.25	-160.34	0.00	494060.93	799264.63	
9700.00	0.00	0.00	9644.60	-184.01	-636.25	-160.34	0.00	494060.93	799264.63	
9800.00	0.00	0.00	9744.60	-184.01	-636.25	-160.34	0.00	494060.93	799264.63	
9900.00	0.00	0.00	9844.60	-184.01	-636.25	-160.34	0.00	494060.93	799264.63	
9912.92	0.00	0.00	9857.52	-184.01	-636.25	-160.34	0.00	494060.93	799264.63	KOP
10000.00	10.45	357.88	9944.12	-176.09	-636.55	-152.42	12.00	494068.85	799264.33	
10100.00	22.45	357.88	10039.85	-147.85	-637.59	-124.16	12.00	494097.09	799263.29	
10200.00	34.45	357.88	10127.61	-100.33	-639.35	-76.61	12.00	494144.61	799261.53	
10300.00	46.45	357.88	10203.57	-35.61	-641.75	-11.85	12.00	494209.33	799259.13	
10400.00	58.45	357.88	10264.41	43.47	-644.68	67.29	12.00	494288.41	799256.20	
10500.00	70.45	357.88	10307.46	133.46	-648.01	157.34	12.00	494378.40	799252.87	
10600.00	82.45	357.88	10330.85	230.44	-651.60	254.38	12.00	494475.38	799249.28	
10662.92	90.00	357.88	10334.98	293.13	-653.92	317.12	12.00	494538.07	799246.96	LP 21H
10700.00	90.00	357.88	10334.99	330.19	-655.29	354.20	0.00	494575.13	799245.59	
10800.00	90.00	357.88	10334.99	430.12	-658.99	454.20	0.00	494675.06	799241.89	
10900.00	90.00	357.88	10334.99	530.05	-662.69	554.20	0.00	494774.99	799238.19	
11000.00	90.00	357.88	10334.99	629.98	-666.39	654.20	0.00	494874.92	799234.49	
11100.00	90.00	357.88	10334.99	729.91	-670.09	754.20	0.00	494974.85	799230.79	
11200.00	90.00	357.88	10334.99	829.84	-673.79	854.20	0.00	495074.78	799227.09	
11300.00	90.00	357.88	10334.99	929.78	-677.48	954.20	0.00	495174.72	799223.40	
11400.00	90.00	357.88	10334.99	1029.71	-681.18	1054.20	0.00	495274.65	799219.70	
11500.00	90.00	357.88	10334.99	1129.64	-684.88	1154.20	0.00	495374.58	799216.00	
11600.00	90.00	357.88	10334.99	1229.57	-688.58	1254.20	0.00	495474.51	799212.30	

5D Plan Report

Interpolated Points (Relative to Slot centre, TVD relative to Drill Floor)										
MD (US ft)	Inc (°)	Az (°)	TVD (US ft)	N.Offset (US ft)	E.Offset (US ft)	VS (US ft)	DLS (°/100 US ft)	Northing (US ft)	Easting (US ft)	Comment
11700.00	90.00	357.88	10334.99	1329.50	-692.28	1354.20	0.00	495574.44	799208.60	
11800.00	90.00	357.88	10334.99	1429.43	-695.98	1454.20	0.00	495674.37	799204.90	
11900.00	90.00	357.88	10334.99	1529.36	-699.68	1554.20	0.00	495774.30	799201.20	
12000.00	90.00	357.88	10334.99	1629.30	-703.38	1654.20	0.00	495874.24	799197.50	
12100.00	90.00	357.88	10334.99	1729.23	-707.08	1754.20	0.00	495974.17	799193.80	
12200.00	90.00	357.88	10334.99	1829.16	-710.78	1854.20	0.00	496074.10	799190.10	
12300.00	90.00	357.88	10334.99	1929.09	-714.48	1954.20	0.00	496174.03	799186.40	
12400.00	90.00	357.88	10334.99	2029.02	-718.18	2054.20	0.00	496273.96	799182.70	
12500.00	90.00	357.88	10334.99	2128.95	-721.88	2154.20	0.00	496373.89	799179.00	
12600.00	90.00	357.88	10334.99	2228.89	-725.58	2254.20	0.00	496473.83	799175.30	
12700.00	90.00	357.88	10334.99	2328.82	-729.27	2354.20	0.00	496573.76	799171.61	
12800.00	90.00	357.88	10334.99	2428.75	-732.97	2454.20	0.00	496673.69	799167.91	
12900.00	90.00	357.88	10334.99	2528.68	-736.67	2554.20	0.00	496773.62	799164.21	
13000.00	90.00	357.88	10334.99	2628.61	-740.37	2654.20	0.00	496873.55	799160.51	
13100.00	90.00	357.88	10334.99	2728.54	-744.07	2754.20	0.00	496973.48	799156.81	
13200.00	90.00	357.88	10334.99	2828.48	-747.77	2854.20	0.00	497073.42	799153.11	
13300.00	90.00	357.88	10334.99	2928.41	-751.47	2954.20	0.00	497173.35	799149.41	
13400.00	90.00	357.88	10334.99	3028.34	-755.17	3054.20	0.00	497273.28	799145.71	
13500.00	90.00	357.88	10334.99	3128.27	-758.87	3154.20	0.00	497373.21	799142.01	
13600.00	90.00	357.88	10334.99	3228.20	-762.57	3254.20	0.00	497473.14	799138.31	
13700.00	90.00	357.88	10335.00	3328.13	-766.27	3354.20	0.00	497573.07	799134.61	
13800.00	90.00	357.88	10335.00	3428.06	-769.97	3454.20	0.00	497673.00	799130.91	
13900.00	90.00	357.88	10335.00	3528.00	-773.67	3554.20	0.00	497772.94	799127.21	
14000.00	90.00	357.88	10335.00	3627.93	-777.37	3654.20	0.00	497872.87	799123.51	
14100.00	90.00	357.88	10335.00	3727.86	-781.06	3754.20	0.00	497972.80	799119.82	
14200.00	90.00	357.88	10335.00	3827.79	-784.76	3854.20	0.00	498072.73	799116.12	
14300.00	90.00	357.88	10335.00	3927.72	-788.46	3954.20	0.00	498172.66	799112.42	
14400.00	90.00	357.88	10335.00	4027.65	-792.16	4054.20	0.00	498272.59	799108.72	
14500.00	90.00	357.88	10335.00	4127.59	-795.86	4154.20	0.00	498372.53	799105.02	
14600.00	90.00	357.88	10335.00	4227.52	-799.56	4254.20	0.00	498472.46	799101.32	
14700.00	90.00	357.88	10335.00	4327.45	-803.26	4354.20	0.00	498572.39	799097.62	
14800.00	90.00	357.88	10335.00	4427.38	-806.96	4454.20	0.00	498672.32	799093.92	
14900.00	90.00	357.88	10335.00	4527.31	-810.66	4554.20	0.00	498772.25	799090.22	
15000.00	90.00	357.88	10335.00	4627.24	-814.36	4654.20	0.00	498872.18	799086.52	
15100.00	90.00	357.88	10335.00	4727.17	-818.06	4754.20	0.00	498972.11	799082.82	
15117.36	90.00	357.88	10335.00	4744.52	-818.70	4771.56	0.00	498989.46	799082.18	PBHL 21H

5D Anti-Collision Report

Devon Energy

Field Name: *Lea Co, NM Nad 83 NM*
Site Name: *Gaucho Unit 20, 21H Fed Pad*
Well Name: *Gaucho Unit 21H Fed*

07 April 2014

Weatherford

Gaucho Unit 21H Fed

Field Name Lea Co, NM Nad 83 NM	**Map Units :** US ft	**Company Name :** Devon Energy	
	Vertical Reference Datum (VRD) : Mean Sea Level		
	Projected Coordinate System : NAD83 / New Mexico East (ftUS)		
	Comment :		
Site Name Gaucho Unit 20, 21H Fed Pad	**Units :** US ft	**North Reference** : Grid	**Convergence Angle :** 0.45
	Position	**Northing :** 494245.33 US ft	**Latitude :** 32° 21' 21.49"
		Easting : 799950.87 US ft	**Longitude :** -103° 29' 44.97"
	Elevation above Mean Sea Level:3428.00 US ft		
	Comment :		
Slot Name Gaucho Unit 21H Fed	**Position (Offsets relative to Site Centre)**		
	+N / -S : -0.39 US ft	**Northing :**494244.94 US ft	**Latitude :** 32°21'21.49"
	+E / -W : -49.99 US ft	**Easting :**799900.88 US ft	**Longitude :** -103°29'45.55"
	Slot TVD Reference : Ground Elevation		
	Elevation above Mean Sea Level : 3427.00 US ft		
	Comment :		
Well Name Gaucho Unit 21H Fed	**Type :** Main well	**UWI :**	**Plan :** Working Plan
	Rig Height *Drill Floor* : 25.00 US ft **Relative to Mean Sea Level:** 3452.00 US ft	**Comment :**	
	Closure Distance : 4814.64 US ft	**Closure Azimuth :** 350.21°	
	Vertical Section (Position of Origin Relative to Slot)		
	+N / -S : 0.00 US ft	**+E / -W :** 0.00 US ft	**Az :**357.88°
	Magnetic Parameters		
	Model : BGGM	**Field Strength :** 48407.2nT	**Dec :** 7.31° **Dip :** 60.23° **Date :** 15/Jun/2014

Collision / Uncertainty Analysis

Primary Well	Start MD (US ft)	End MD (US ft)	Collision Risk Interval	No. of Std Deviations in Error Computation
Gaucho Unit 21H Fed (p)	0.00	15117.36	100.00	2

Secondary Well Names

Gaucho Unit 20H Fed (p)

Anti Collision Report Terminology

S.Minor, S.Major :Radii of the ellipse of uncertainty at the current location as seen in the along hole direction.
PHI :Angle between high-side vector and semi-minor axis
TVD Spread :Total TVD range of the ellipsoid of uncertainty at the current location
ES :Distance between the extremities of the primary and secondary uncertainty ellipsoids in the direction Cr-Cr
T.Face to Sec :Angle between the Hi-Side vector of the primary well at the current location and line of closest approach between the two wells

Separation factors calculated using Pedal Curve (Independent Uncertainty). Well path created using minimum curvature.

5D Anti-Collision Report

Anti Collision Proximity Summary (TVD relative to)

SF

Secondary Well Name	Pri MD (US ft)	Sec MD (US ft)	TVD (US ft)	CC (US ft)	ES (US ft)	SF	Risk
Gaucho Unit 20H Fed (p)	4100.00	4101.00	4100.00	49.99	31.07	2.64	

Secondary Well : Gaucho Unit 20H Fed (p) (TVD Relative to Drill Floor (Primary) ; All Azimuth Relative to GRID NORTH)

Pri MD (US ft)	TVD (US ft)	Sec MD (US ft)	T.Face to Sec (°)	S.Major (US ft)	S.Minor (US ft)	CC (US ft)	ES (US ft)	SF	Risk
0.00	0.00	1.00	89.55	0.01	0.01	49.99	49.22	65.04	
100.00	100.00	101.00	89.55	0.12	0.12	49.99	49.00	50.28	
200.00	200.00	201.00	89.55	0.34	0.34	49.99	48.55	34.71	
300.00	300.00	301.00	89.55	0.57	0.57	49.99	48.10	26.46	
400.00	400.00	401.00	89.55	0.79	0.79	49.99	47.65	21.38	
500.00	500.00	501.00	89.55	1.02	1.02	49.99	47.20	17.93	
600.00	600.00	601.00	89.55	1.24	1.24	49.99	46.75	15.44	
700.00	700.00	701.00	89.55	1.47	1.47	49.99	46.30	13.56	
800.00	800.00	801.00	89.55	1.69	1.69	49.99	45.86	12.09	
900.00	900.00	901.00	89.55	1.92	1.92	49.99	45.41	10.90	
1000.00	1000.00	1001.00	89.55	2.14	2.14	49.99	44.96	9.93	
1100.00	1100.00	1101.00	89.55	2.37	2.37	49.99	44.51	9.12	
1200.00	1200.00	1201.00	89.55	2.59	2.59	49.99	44.06	8.42	
1300.00	1300.00	1301.00	89.55	2.82	2.82	49.99	43.61	7.83	
1400.00	1400.00	1401.00	89.55	3.04	3.04	49.99	43.16	7.32	
1500.00	1500.00	1501.00	89.55	3.26	3.26	49.99	42.71	6.86	
1600.00	1600.00	1601.00	89.55	3.49	3.49	49.99	42.26	6.47	
1700.00	1700.00	1701.00	89.55	3.71	3.71	49.99	41.81	6.11	
1800.00	1800.00	1801.00	89.55	3.94	3.94	49.99	41.36	5.79	
1900.00	1900.00	1901.00	89.55	4.16	4.16	49.99	40.91	5.51	
2000.00	2000.00	2001.00	89.55	4.39	4.39	49.99	40.46	5.25	
2100.00	2100.00	2101.00	89.55	4.61	4.61	49.99	40.01	5.01	
2200.00	2200.00	2201.00	89.55	4.84	4.84	49.99	39.56	4.79	
2300.00	2300.00	2301.00	89.55	5.06	5.06	49.99	39.11	4.60	
2400.00	2400.00	2401.00	89.55	5.29	5.29	49.99	38.66	4.41	
2500.00	2500.00	2501.00	89.55	5.51	5.51	49.99	38.21	4.24	
2600.00	2600.00	2601.00	89.55	5.74	5.74	49.99	37.76	4.09	
2700.00	2700.00	2701.00	89.55	5.96	5.96	49.99	37.32	3.94	
2800.00	2800.00	2801.00	89.55	6.19	6.19	49.99	36.87	3.81	
2900.00	2900.00	2901.00	89.55	6.41	6.41	49.99	36.42	3.68	
3000.00	3000.00	3001.00	89.55	6.64	6.64	49.99	35.97	3.56	
3100.00	3100.00	3101.00	89.55	6.86	6.86	49.99	35.52	3.45	
3200.00	3200.00	3201.00	89.55	7.09	7.09	49.99	35.07	3.35	
3300.00	3300.00	3301.00	89.55	7.31	7.31	49.99	34.62	3.25	
3400.00	3400.00	3401.00	89.55	7.54	7.54	49.99	34.17	3.16	
3500.00	3500.00	3501.00	89.55	7.76	7.76	49.99	33.72	3.07	
3600.00	3600.00	3601.00	89.55	7.98	7.98	49.99	33.27	2.99	
3700.00	3700.00	3701.00	89.55	8.21	8.21	49.99	32.82	2.91	
3800.00	3800.00	3801.00	89.55	8.43	8.43	49.99	32.37	2.84	
3900.00	3900.00	3901.00	89.55	8.66	8.66	49.99	31.92	2.77	
4000.00	4000.00	4001.00	89.55	8.88	8.88	49.99	31.52	2.71	
4100.00	4100.00	4101.00	89.55	9.11	9.11	49.99	31.07	2.64	
4200.00	4199.98	4200.98	195.17	9.33	9.33	51.67	32.35	2.67	
4300.00	4299.84	4300.84	193.81	9.56	9.56	56.74	37.03	2.88	
4400.00	4399.45	4400.45	192.02	9.78	9.78	65.24	45.10	3.24	
4500.00	4498.70	4499.70	190.18	10.00	10.00	77.20	56.64	3.75	
4600.00	4597.47	4598.47	188.51	10.23	10.23	92.64	71.65	4.41	
4700.00	4695.95	4696.95	187.17	10.45	10.45	109.85	88.44	5.13	
4800.00	4794.43	4795.43	186.20	10.67	10.67	127.10	105.27	5.82	
4900.00	4892.91	4893.91	185.45	10.89	10.89	144.38	122.13	6.49	
5000.00	4991.39	4992.39	184.87	11.11	11.11	161.68	139.00	7.13	
5100.00	5089.87	5090.87	184.40	11.33	11.33	178.99	155.89	7.75	

5D Anti-Collision Report

Secondary Well : Gaucho Unit 20H Fed (p) (TVD Relative to Drill Floor (Primary) ; All Azimuth Relative to GRID NORTH)									
Pri MD (US ft)	TVD (US ft)	Sec MD (US ft)	T.Face to Sec (°)	S.Major (US ft)	S.Minor (US ft)	CC (US ft)	ES (US ft)	SF	Risk
5200.00	5188.35	5189.35	184.01	11.55	11.55	196.31	172.79	8.35	
5300.00	5281.48	5282.49	183.90	11.73	11.73	214.78	190.92	9.00	
5400.00	5373.16	5374.28	184.23	11.91	11.88	235.85	211.63	9.74	
5500.00	5463.49	5464.88	184.87	12.08	12.02	259.51	234.96	10.57	
5600.00	5552.23	5554.16	185.71	12.26	12.14	285.77	260.91	11.50	
5700.00	5639.16	5641.96	186.69	12.43	12.26	314.60	289.46	12.52	
5800.00	5727.44	5731.52	187.76	12.62	12.41	345.84	320.35	13.57	
5900.00	5820.62	5826.13	188.75	12.83	12.59	377.66	351.78	14.59	
6000.00	5913.80	5920.75	189.58	13.05	12.77	409.57	383.28	15.58	
6100.00	6006.97	6015.36	190.30	13.27	12.96	441.55	414.85	16.54	
6200.00	6100.15	6109.98	190.92	13.50	13.14	473.58	446.47	17.47	
6300.00	6193.33	6204.59	191.46	13.74	13.33	505.65	478.12	18.37	
6400.00	6286.51	6299.21	191.93	13.98	13.52	537.76	509.81	19.24	
6500.00	6379.69	6393.82	192.36	14.22	13.71	569.90	541.53	20.09	
6600.00	6472.86	6488.44	192.73	14.48	13.90	602.06	573.27	20.91	
6700.00	6566.04	6583.06	193.07	14.73	14.09	634.25	605.03	21.70	
6800.00	6659.22	6677.67	193.38	15.00	14.29	666.45	636.80	22.47	
6900.00	6752.40	6772.29	193.66	15.26	14.49	698.67	668.58	23.22	
7000.00	6845.58	6866.90	193.91	15.53	14.68	730.90	700.38	23.95	
7100.00	6938.75	6961.52	194.14	15.81	14.88	763.15	732.18	24.64	
7200.00	7031.93	7056.13	194.36	16.09	15.08	795.40	763.97	25.31	
7300.00	7125.11	7150.75	194.55	16.37	15.29	827.66	795.78	25.96	
7400.00	7218.29	7245.37	194.73	16.66	15.49	859.93	827.59	26.58	
7500.00	7311.46	7339.98	194.90	16.95	15.70	892.21	859.40	27.19	
7600.00	7404.64	7434.60	195.06	17.24	15.91	924.50	891.22	27.78	
7700.00	7497.82	7529.21	195.21	17.53	16.11	956.79	923.04	28.35	
7800.00	7591.00	7623.83	195.34	17.83	16.32	989.08	954.87	28.91	
7900.00	7684.18	7718.44	195.47	18.13	16.53	1021.38	986.70	29.45	
8000.00	7777.74	7813.45	195.46	18.44	16.74	1052.48	1017.34	29.95	
8100.00	7879.31	7916.58	195.50	18.76	16.99	1080.35	1044.73	30.33	
8200.00	8028.24	8067.02	195.63	19.17	17.40	1102.04	1065.71	30.34	
8300.00	8181.78	8221.17	195.70	19.53	17.76	1115.59	1078.64	30.19	
8400.00	8337.85	8377.35	195.73	19.85	18.07	1120.83	1083.28	29.85	
8500.00	8444.60	8484.10	89.60	20.05	18.29	1120.89	1082.92	29.52	
8600.00	8544.60	8584.10	89.60	20.25	18.50	1120.89	1082.50	29.20	
8700.00	8644.60	8684.10	89.60	20.45	18.72	1120.89	1082.08	28.88	
8800.00	8744.60	8784.10	89.60	20.65	18.94	1120.89	1081.66	28.57	
8900.00	8844.60	8884.10	89.60	20.85	19.15	1120.89	1081.24	28.27	
9000.00	8944.60	8984.10	89.60	21.06	19.37	1120.89	1080.82	27.97	
9100.00	9044.60	9084.10	89.60	21.26	19.59	1120.89	1080.40	27.68	
9200.00	9144.60	9184.10	89.60	21.46	19.81	1120.89	1079.97	27.39	
9300.00	9244.60	9284.10	89.60	21.67	20.02	1120.89	1079.55	27.11	
9400.00	9344.60	9384.10	89.60	21.87	20.24	1120.89	1079.13	26.84	
9500.00	9444.60	9484.10	89.60	22.07	20.46	1120.89	1078.70	26.57	
9600.00	9544.60	9584.10	89.60	22.28	20.68	1120.89	1078.28	26.30	
9700.00	9644.60	9684.10	89.60	22.48	20.90	1120.89	1077.85	26.04	
9800.00	9744.60	9784.10	89.60	22.69	21.11	1120.89	1077.43	25.79	
9900.00	9844.60	9884.10	89.60	22.90	21.33	1120.89	1077.00	25.54	
10000.00	9942.70	9982.68	91.68	22.85	21.44	1121.18	1076.92	25.33	
10100.00	10036.97	10081.07	91.57	22.49	21.45	1122.23	1077.68	25.19	
10200.00	10123.66	10179.53	91.39	22.15	20.82	1123.98	1079.20	25.10	
10300.00	10199.13	10278.13	91.15	22.13	19.60	1126.37	1081.38	25.03	
10400.00	10260.14	10376.91	90.85	22.25	18.20	1129.30	1083.97	24.92	
10500.00	10304.02	10475.94	90.52	22.49	16.94	1132.62	1086.86	24.75	
10600.00	10328.76	10575.26	90.17	22.80	16.18	1136.21	1089.86	24.51	
10700.00	10334.00	10674.95	89.95	23.25	16.15	1139.90	1092.69	24.14	
10800.00	10334.00	10774.89	89.95	23.81	16.31	1143.60	1095.29	23.67	
10900.00	10334.00	10874.82	89.95	24.47	16.51	1147.30	1097.72	23.14	

5D Anti-Collision Report

Secondary Well : Gaucho Unit 20H Fed (p) (TVD Relative to Drill Floor (Primary) ; All Azimuth Relative to GRID NORTH)									
Pri MD (US ft)	TVD (US ft)	Sec MD (US ft)	T.Face to Sec (°)	S.Major (US ft)	S.Minor (US ft)	CC (US ft)	ES (US ft)	SF	Risk
11000.00	10334.00	10974.75	89.95	25.22	16.74	1151.00	1099.79	22.48	
11100.00	10334.00	11074.68	89.95	26.14	17.00	1154.70	1101.70	21.79	
11200.00	10334.00	11174.61	89.95	27.14	17.28	1158.40	1103.37	21.05	
11300.00	10334.00	11274.54	89.95	28.15	17.59	1162.10	1105.05	20.37	
11400.00	10334.00	11374.47	89.95	29.26	17.91	1165.79	1106.42	19.64	
11500.00	10334.00	11474.41	89.95	30.52	18.26	1169.49	1107.61	18.90	
11600.00	10334.00	11574.34	89.95	31.81	18.64	1173.19	1108.75	18.20	
11700.00	10334.00	11674.27	89.95	33.13	19.07	1176.89	1109.83	17.55	
11800.00	10334.00	11774.20	89.95	34.49	19.52	1180.59	1110.82	16.92	
11900.00	10334.00	11874.13	89.95	35.88	19.97	1184.29	1111.65	16.30	
12000.00	10334.00	11974.06	89.95	37.30	20.43	1187.99	1112.42	15.72	
12100.00	10334.00	12074.00	89.95	38.75	20.85	1191.69	1113.16	15.17	
12200.00	10334.00	12173.93	89.95	40.22	21.41	1195.39	1113.85	14.66	
12300.00	10334.00	12273.86	89.95	41.71	21.85	1199.09	1114.51	14.18	
12400.00	10334.00	12373.79	89.95	43.21	22.37	1202.79	1115.16	13.73	
12500.00	10334.00	12473.72	89.95	44.81	22.87	1206.49	1115.79	13.30	
12600.00	10334.00	12573.65	89.95	46.41	23.40	1210.19	1116.48	12.92	
12700.00	10334.00	12673.59	89.95	48.03	24.00	1213.89	1116.91	12.52	
12800.00	10334.00	12773.52	89.95	49.67	24.59	1217.58	1117.29	12.14	
12900.00	10334.00	12873.45	89.95	51.32	25.13	1221.28	1117.69	11.79	
13000.00	10334.00	12973.38	89.95	52.97	25.66	1224.98	1118.08	11.46	
13100.00	10334.00	13073.31	89.95	54.64	26.30	1228.68	1118.46	11.15	
13200.00	10334.00	13173.24	89.95	56.32	26.91	1232.38	1118.78	10.85	
13300.00	10334.00	13273.17	89.95	58.00	27.51	1236.08	1119.09	10.57	
13400.00	10334.00	13373.11	89.95	59.69	28.11	1239.78	1119.37	10.30	
13500.00	10334.00	13473.04	89.95	61.39	28.71	1243.48	1119.65	10.04	
13600.00	10334.00	13572.97	89.95	63.10	29.31	1247.18	1119.91	9.80	
13700.00	10334.00	13672.90	89.95	64.81	29.92	1250.88	1120.16	9.57	
13800.00	10334.00	13772.83	89.95	66.53	30.52	1254.58	1120.40	9.35	
13900.00	10334.00	13872.76	89.95	68.26	31.14	1258.28	1120.63	9.14	
14000.00	10334.00	13972.70	89.95	69.99	31.75	1261.98	1120.85	8.94	
14100.00	10334.00	14072.63	89.95	71.72	32.38	1265.68	1121.06	8.75	
14200.00	10334.00	14172.56	89.95	73.46	33.03	1269.37	1121.26	8.57	
14300.00	10334.00	14272.49	89.95	75.20	33.69	1273.07	1121.46	8.40	
14400.00	10334.00	14372.42	89.96	76.95	34.34	1276.77	1121.65	8.23	
14500.00	10334.00	14472.35	89.96	78.70	35.01	1280.47	1121.83	8.07	
14600.00	10334.00	14572.28	89.96	80.45	35.67	1284.17	1122.01	7.92	
14700.00	10334.00	14672.22	89.96	82.21	36.34	1287.87	1122.18	7.77	
14800.00	10334.00	14772.15	89.96	83.97	37.00	1291.57	1122.34	7.63	
14900.00	10334.00	14872.08	89.96	85.73	37.67	1295.27	1122.50	7.50	
15000.00	10334.00	14972.01	89.96	87.49	38.35	1298.97	1122.65	7.37	
15100.00	10334.00	15071.94	89.96	89.26	39.02	1302.67	1122.81	7.24	
15117.36	10334.00	15089.29	89.96	89.57	39.14	1303.31	1122.83	7.22	

Weatherford Drilling Services

GeoDec v5.03

Report Date:	February 08, 2014
Job Number:	
Customer:	Devon Energy
Well Name:	Caucho Unit 21H
API Number:	
Rig Name:	
Location:	Lea County, NM
Block:	
Engineer:	RWJ

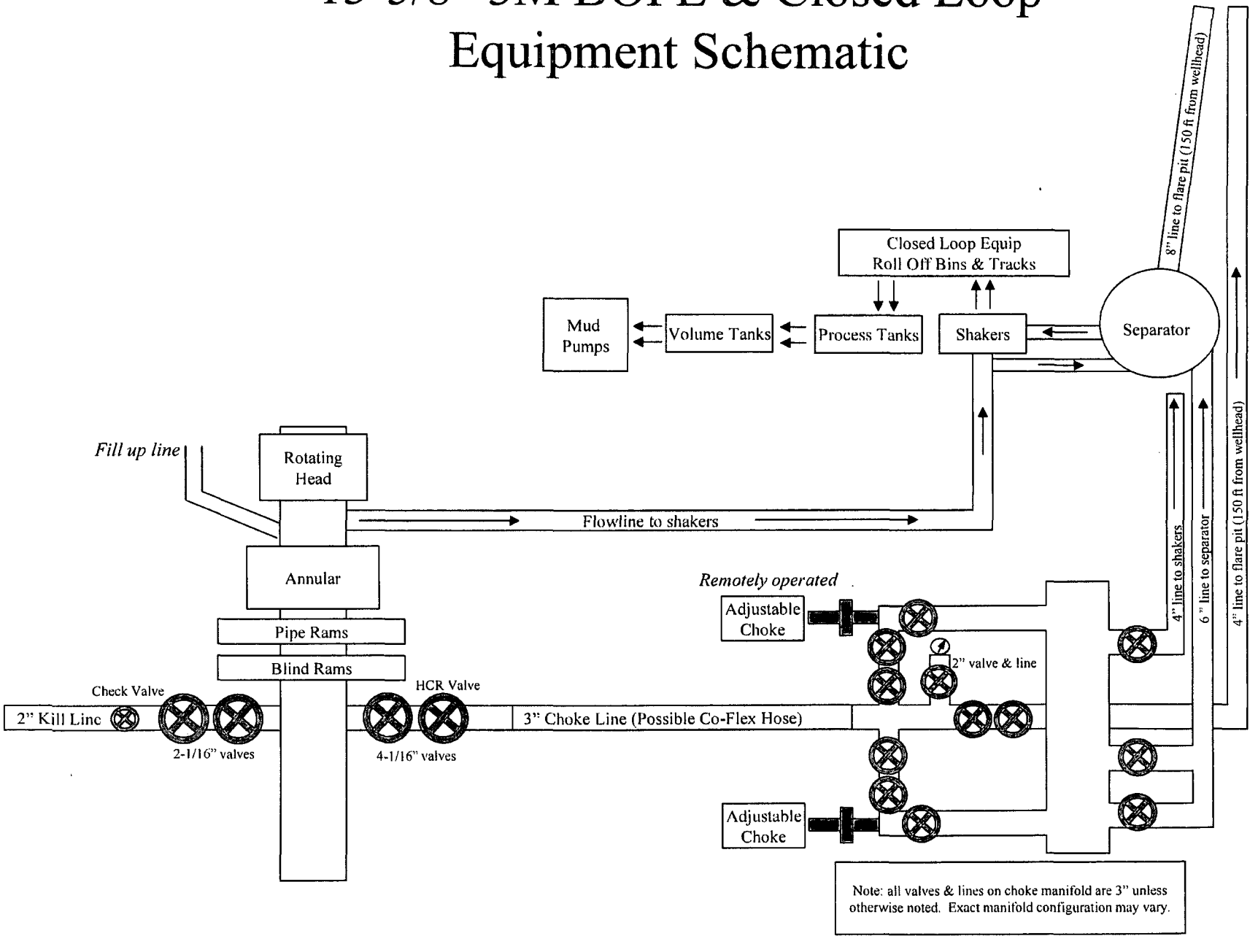
US State Plane 1983	Geodetic Latitude / Longitude
System: New Mexico Eastern Zone	System: Latitude / Longitude
Projection: Transverse Mercator/Gauss Kruger	Projection: Geodetic Latitude and Longitude
Datum: North American Datum 1983	Datum: North American Datum 1983
Ellipsoid: GRS 1980	Ellipsoid: GRS 1980
North/South 494244.940 USFT	Latitude 32.3559701 DEG
East/West 799900.880 USFT	Longitude -103.4959874 DEG
Grid Convergence: .45°	
Total Correction: +6.86°	

Geodetic Location WGS84	Elevation = 0.0 Meters	
Latitude =	32.35597° N	32° 21 min 21.493 sec
Longitude =	103.49599° W	103° 29 min 45.555 sec

Magnetic Declination =	7.31°	[True North Offset]	
Local Gravity =	.9988 g	CheckSum =	6603
Local Field Strength =	48407 nT	Magnetic Vector X =	23838 nT
Magnetic Dip =	60.23°	Magnetic Vector Y =	3057 nT
Magnetic Model =	bggm2013	Magnetic Vector Z =	42020 nT
Spud Date =	Jun 15, 2014	Magnetic Vector H =	24033 nT

Signed:_____ Date:_____

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



NOTES REGARDING BLOWOUT PREVENTERS

Devon Energy Production Company, L.P.
Gaucho Unit 21H

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.

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.

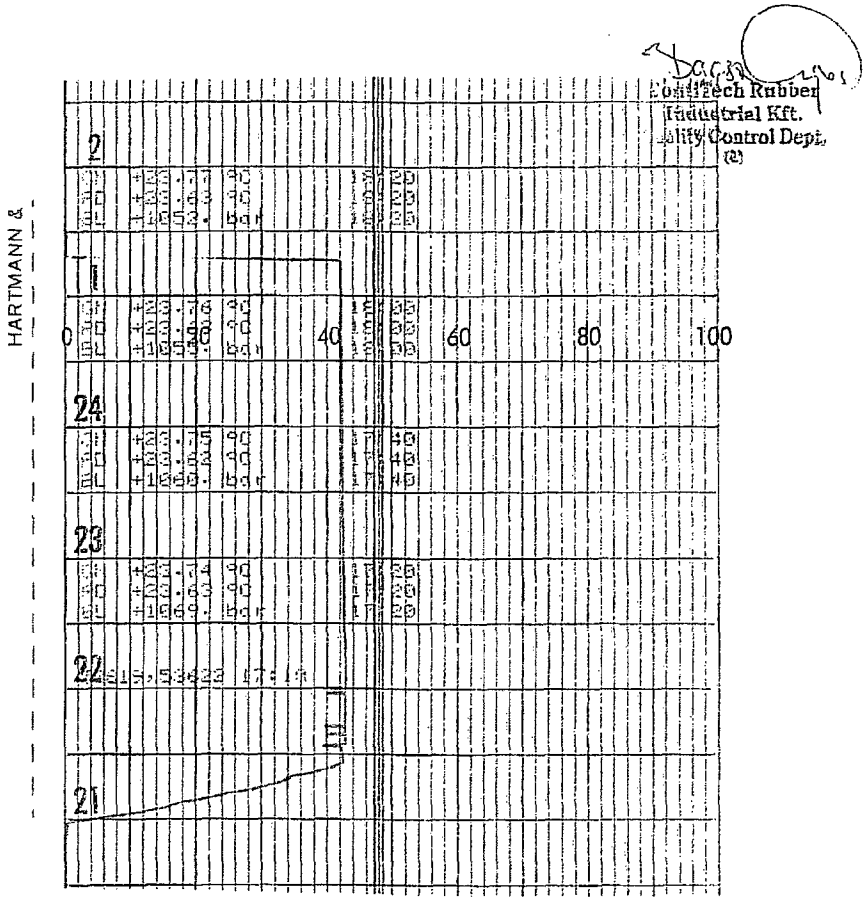
ContiTech Rubber Industrial Kft.
Budapesti út 10., Szeged H 6728
P.O.Box 152 Szeged H-6701
Hungary

Phone: +36 62 566 737
Fax: +36 62 566 738
e-mail: info@fluid.contitech.hu
Internet: www.contitech-rubber.hu

The Court of Csongrád County as Registry Court
Registry Court No: HU 06-09-002502
EU VAT No: HU11087209

Bank data
Commerzbank Zrt.
Szeged
14220108-26830003-00000000

ATTACHMENT OF QUALITY CONTROL INSPECTION AND TEST CERTIFICATE *No 1711,1713*



Contech 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.

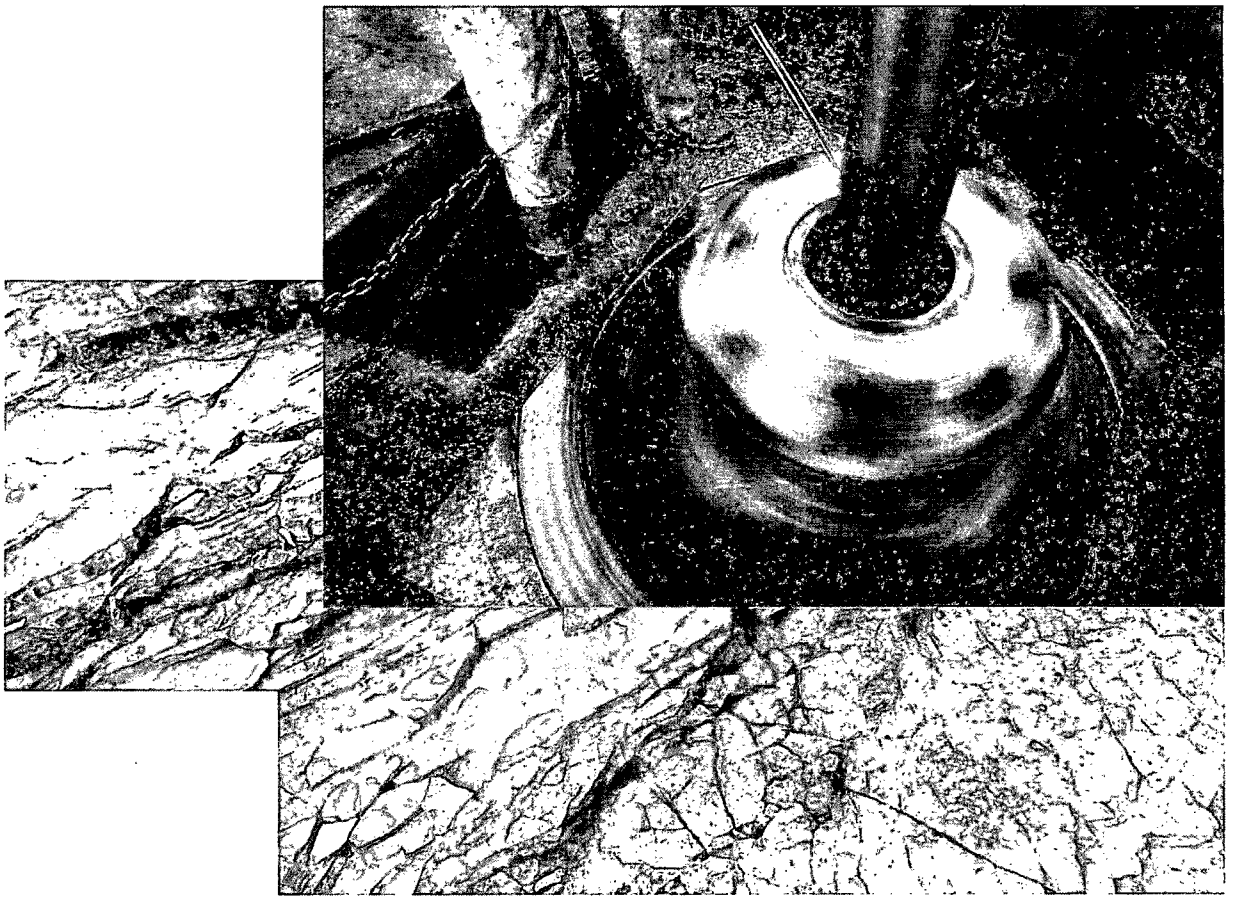
Best regards,

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
November 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.

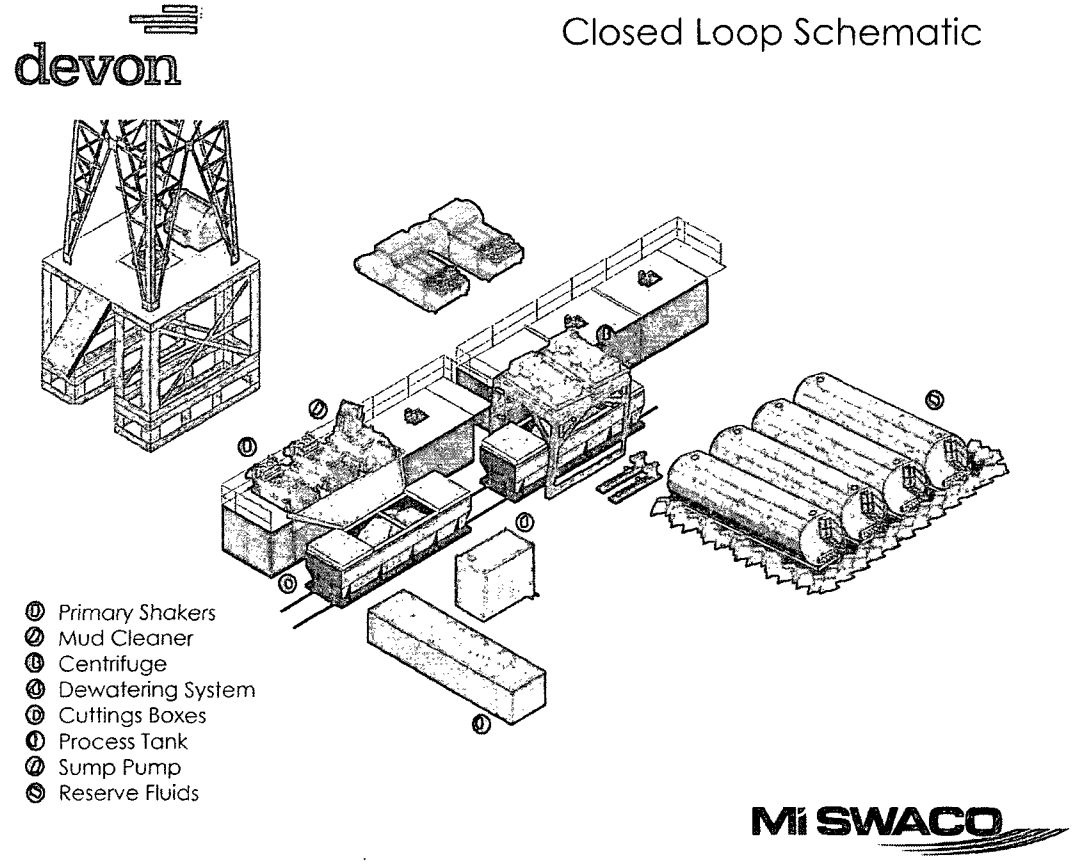
Prior to installing a closed-loop system on site, the topsoil, if present, will be stripped and stockpiled for use as the final cover or fill at the time of closure.

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.

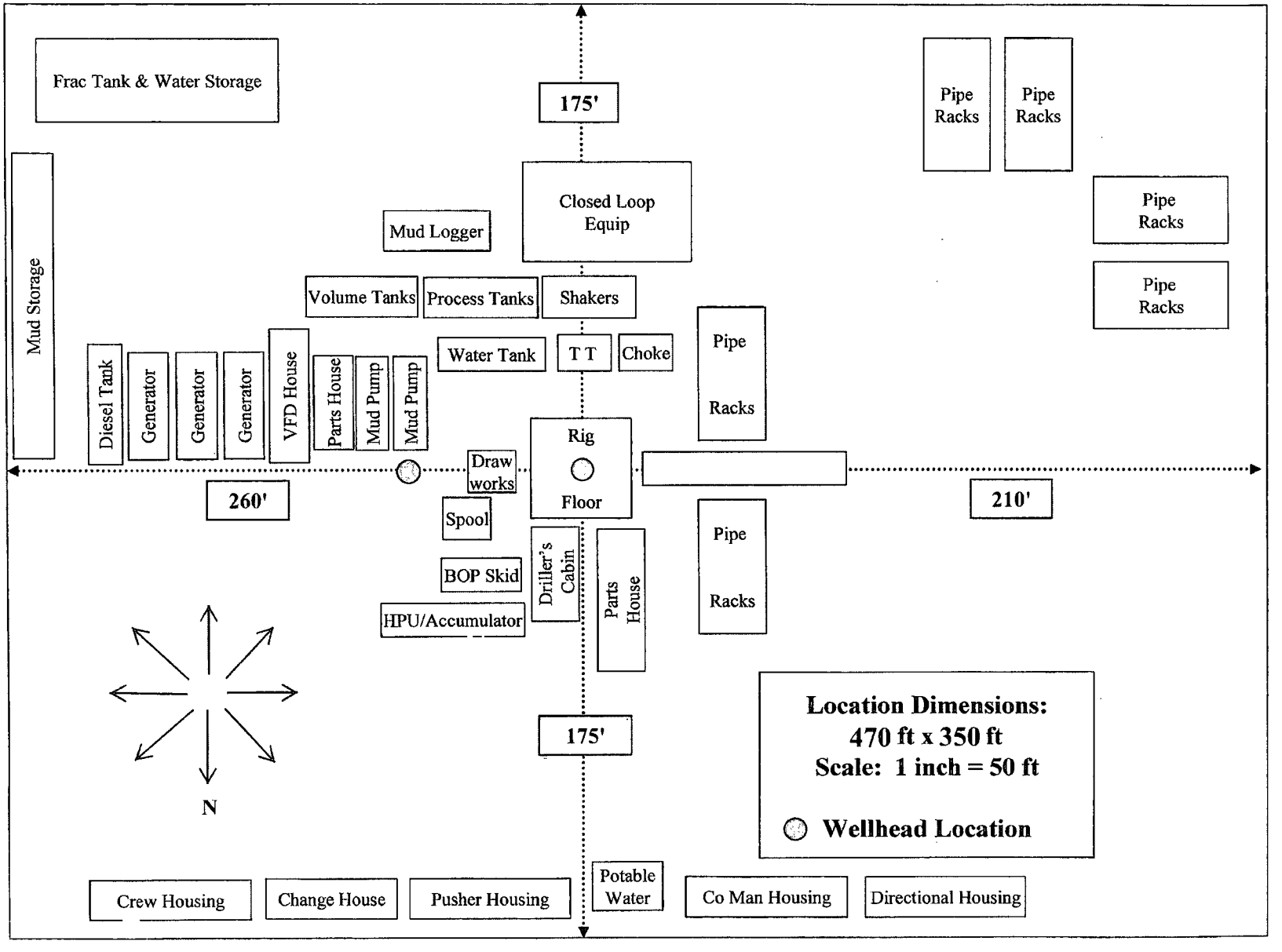
These operations are monitored by Mi Swaco service technicians. Daily logs are maintained to ensure optimal equipment operation and maintenance. Screen and chemical use is logged to maintain inventory control. Fluid properties are monitored and recorded and drilling mud volumes are accounted for in the 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
2 Well Pad



DISTRICT I --- CHECKLIST FOR INTENTS TO DRILL APD is for N ✓ P ___ E ___ A ___ D ___

WELL TYPE: O ✓, G ___, I ___, S ___, OTHER ___

Operator Devon Energy Prod Co LP OGRID # 6137

Well Name & # Gaucho 18 Fed 21H Surface Type (F) (S) (P)

Location: UL A, Sect 29, Twnship 22 s, RNG 34 e, Sub-surface Type (F) (S) (P)

1: BHL @: UL D, Sect 29, Twnship 22 s, RNG 34 e, H ✓ DD ___

2: BHL@: UL ___, Sect ___, Twnship ___ s, RNG ___ e, H ___ DD ___

A. Date C101 rec'd 7/18/14 C101 reviewed 7/22/14

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

OGRID ✓, BONDING ✓, PROP CODE ✓, WELL # ✓, SIGNATURE ✓

2. Inactive Well list as of : 7/22/14 # wells 1905 # Inactive wells 4

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

No letter required ✓; Sent Letter to Operator ___, to Santa Fe ___

3. Additional Bonding as of: 7/22/14

a. District Denial because operator needs addition bonding:

No Letter required ✓; Sent Letter to Operator ___, To Santa Fe ___

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

No Letter required ✓; Sent Letter to Operator ___, To Santa Fe ✓

C102 YES ✓, NO ___, Signature ✓ MATCHING TO C101 ✓ OP. NAME ✓ LOCATION

Pool WC-025 G-06 S223421L; BS, Code 97922

a. Dedicated acreage 160, What Units ML ED

b. SUR. Location Standard ✓: Non-Standard Location ___

c. Well shares acres: Yes ___, No ✓, # of wells ___ plus this well # ___

1. 2nd. Operator in same acreage, Yes ___, No ✓ WELL(S) SHARING:

WELL(S) BY 2nd OPER: Agreement Letter ___, Disagreement letter ___

2. Intent to Directional Drill Yes ✓, No ___

Dedicated acreage 160, What Units ML ED

Bottomhole Location Standard ✓, Non-Standard Bottomhole ___

3. Downhole Commingle: Yes ___, No ✓

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

Pool #3 ___, Code ___, Acres ___

Pool #4 ___, Code ___, Acres ___

4. POTASH Area Yes ___, No ___,

C. Blowout Preventer Yes ✓, No ___,

D. H2S Yes ✓, No ___,

E. C144 Pit Registration Yes ___, No ___, CLOSED-LOOP STATEMENT ___

F. Does APD require Santa Fe Approval:

1. Non-Standard Location: Yes ___, No ✓, NSL # ___

2. Non-Standard Proration: Yes ___, No ✓, NSP # ___

3. Simultaneous Dedication: Yes ___, No ✓, SD # ___

Number of wells ___ Plus # ___

4. Injection order Yes ___, No ✓; PMX # ___ or WFX # ___

5. SWD order Yes ___, NO ✓; SWD # ___

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

7. OCD Approval Date 7/23/14 API #30-0 25-41979

8. Reviewers dm