

Form 3160-3
(February 2005)FORM APPROVED
OMB No. 1004-0137
Expires March 31, 2007

EA 1091

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

1a. Type of work. <input checked="" type="checkbox"/> DRILL <input type="checkbox"/> REENTER		5. Lease Serial No. SL: NM0557729 BHL: NM63362
1b. Type of Well. <input checked="" type="checkbox"/> Oil Well <input type="checkbox"/> Gas Well <input type="checkbox"/> Other <input checked="" type="checkbox"/> Single Zone <input type="checkbox"/> Multiple Zone		6. If Indian, Allottee or Tribe Name
2. Name of Operator Devon Energy Production Co., LP		7. If Unit or CA Agreement, Name and No.
3a. Address 20 North Broadway OKC, OK 73102		8. Lease Name and Well No. Rigel 20 Federal Com 2H
3b. Phone No. (include area code) (405)-552-7802		9. API Well No. 30-015-39394
4. Location of Well (Report location clearly and in accordance with any State requirements *) At surface SWNW 1850' FNL & 330' FWL Lot E At proposed prod zone SENE 1850' FNL & 330' FEL Lot H		10. Field and Pool, or Exploratory Hackberry; Bone Spring, NW
11. Sec, T R M. or Blk and Survey or Area Sec 20-T19S-R31E		12. County or Parish Eddy
13. State NM		14. Distance in miles and direction from nearest town or post office* Approximately 12 miles southeast of Loco Hills, NM.
15. Distance from proposed* location to nearest property or lease line, ft (Also to nearest drg unit line, if any) 330'	16. No of acres in lease SL: 320 ac BHL: 280 ac	17. Spacing Unit dedicated to this well 160
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft SL: 1790' BHL: 360'	19. Proposed Depth TVD 8900' MD 13263'	20. BLM/BIA Bond No on file PH: 9225' CO-1104
21. Elevations (Show whether DF, KDB, RT, GL, etc.) 3413' GL	22. Approximate date work will start* 03/15/2011	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. | 4. Bond to cover the operations unless covered by an existing bond on file (see Item 20 above) |
| 2. A Drilling Plan | 5. Operator certification |
| 3. A Surface Use Plan (If the location is on National Forest System Lands, the SUPO must be filed with the appropriate Forest Service Office) | 6. Such other site specific information and/or plans as may be required by the BLM |

25. Signature 	Name (Printed/Typed) Stephanie A. Ysasaga	Date 02/15/2011
Title Sr. Staff Engineering Technician		
Approved by (Signature) 	Name (Printed/Typed) Don Peterson	Date AUG 26 2011
Title FIELD MANAGER		
Office CARLSBAD FIELD OFFICE		

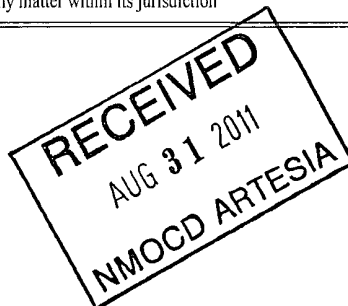
Application approval does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.
Conditions of approval, if any, are attached.

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

*(Instructions on page 2)

Capitan Controlled Water Basin

SEE ATTACHED FOR
CONDITIONS OF APPROVALApproval Subject to General Requirements
& Special Stipulations Attached

DRILLING PROGRAM

Devon Energy Production Company, LP

Rigel 20 Federal Com 2H

Surface Location: 1850' FNL & 330' FWL, Unit E, Sec 20 T19S R31E, Eddy, NM

Bottom hole Location: 1850' FNL & 330' FEL, Unit H, Sec 20 T19S R31E, Eddy, NM

1. **Geologic Name of Surface Formation**

- a. Permian

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

a. Quaternary Alluvium	100'	Fresh Water
b. Rustler	335'	Barren
c. Salado	625'	Barren
d. Tansil Dolomite	2010'	Barren
e. Yates	2150'	Oil
f. Seven Rivers	2495'	Oil
g. Capitan	2870'	Barren
h. Queen	3250'	Barren
i. Delaware	4370'	Oil
j. Lower Brushy Canyon	6330'	Oil
k. Bone Springs Lm	6545'	Oil
l. 1 st Bone Spring Ss	7815'	Oil
m. 2 nd Bone Spring Lime	8140'	Oil
n. 2 nd Bone Spring Ss	8680'	Oil
o. 2 nd Bone Spring Middle Ss	8835'	Oil
p. 2 nd Bone Spring Middle Ss Base	8925'	Oil
q. 3 rd Bone Spring Lm	9100'	Oil
r. PTD (Pilot Hole)	9225'	
s. Total Depth	TVD 8900' MD 13263'	

No other formations are expected to yield oil, gas or fresh water in measurable volumes. The surface fresh water sands will be protected by setting 13 3/8" casing at 400' and circulating cement back to surface. The fresh water sands will be protected by setting 9 5/8" casing at 3300' and circulating cement to surface. The Delaware intervals will be isolated by setting 5 1/2" casing to total depth and circulating cement above the base of the 9 5/8" casing. All casing is new and API approved.

3. **Casing Program:**

<u>Hole Size</u>	<u>Hole Interval</u>	<u>OD Csg</u>	<u>Casing Interval</u>	<u>Weight</u>	<u>Collar</u>	<u>Grade</u>
17 1/2" <i>See TOA</i>	0'-400'-470'	13 3/8"	0'-400'	48#	STC	H-40
12 1/4"	400'-3300'-3975'	9 5/8"	0'-3300'	40#	LTC	J-55
8 3/4"	3300'-8100'	5 1/2"	0'-8100'	17#	LTC	P-110HC
8 3/4"	8100'-13263'	5 1/2"	8100'-13263'	17#	BTC	P-110HC

Design Parameter Factors:

<u>Casing Size</u>	<u>Collapse Design</u>	<u>Burst Design</u>	<u>Tension Design</u>
	<u>Factor</u>	<u>Factor</u>	<u>Factor</u>
13 3/8"	4.11	9.24	16.77
9 5/8"	1.49	2.30	3.94
5 1/2" LTC	1.97	2.81	1.97
5 1/2" BTC	1.77	2.53	6.22

NOTE: THIS WELL WILL BE DRILLED WITH A PILOT HOLE (PH)

An 8-3/4" pilot hole will be drilled to 9,225 ft and plugged back to KOP with a cement plug and openhole whipstock. The pilot hole will be cemented from the pilot hole TD to the KOP. The whipstock will be set at approx 8,315 ft (KOP).

4. Cement Program: (Note: All cement volumes are calculated with 25% excesses.)

- a. 13 3/8" Conductor **Lead:** 250 sacks Class C Cement + 2% bwoc Calcium Chloride + 0.125 lbs/sack Cello Flake + 4% bwoc Bentonite + 81.4% Fresh Water, 13.5 ppg. **Yield:** 1.75 cf/sk
- Tail:** 250 sacks Class C Cement + 2% bwoc Calcium Chloride + 0.125 lbs/sack Cello Flake + 56.3% Fresh Water, 14.8 ppg. **Yield:** 1.35 cf/sk.. **TOC @ surface.**
- b. 9 5/8" Intermediate **Lead:** 750 sacks (35:65) Poz (Fly Ash):Class C Cement + 5% bwow Sodium Chloride + 0.125 lbs/sack Cello Flake + 6% bwoc Bentonite + 107.8% Fresh Water, 12.5 ppg. **Yield:** 1.96 cf/sk
- Tail:** 300 sacks Class C Cement + 5% bwow Sodium Chloride + 0.125 lbs/sack Cello Flake + 0.4% bwoc Sodium Metasilicate + 4% bwoc MPA-5 + 52.7% Water, 14.8 ppg. **Yield:** 1.34 cf/sk. **TOC @ surface.**
- c. 5 1/2" Production **1st Stage**
- Lead:** 900 sacks (35:65) Poz (Fly Ash):Class H Cement + 5% bwow Sodium Chloride + 0.3% bwoc CD-32 + 0.5% bwoc FL-25 + 2% bwoc Bentonite + 0.6% bwoc Sodium Metasilicate + 0.5% bwoc FL-52A + 102.5% Fresh Water, 12.5 ppg. **Yield:** 2.00 cf/sk
- Tail:** 1,400 sacks (50:50) Poz (Fly Ash):Class H Cement + 1% bwow Sodium Chloride + 0.2% bwoc R-3 + 0.125 lbs/sack Cello Flake + 0.5% bwoc BA-10A + 4% bwoc MPA-5 + 58.3% Fresh Water, 14.2 ppg. **Yield:** 1.28 cf/sk

DV TOOL at ~4,500 ft

2nd Stage

Lead: 250 sacks Class C Cement + 1% bwow Calcium Chloride + 0.125 lbs/sack Cello Flake + 157.8% Fresh Water, 11.4 ppg. **Yield:** 2.89 cf/sk

Tail: 150 sacks (60:40) Poz (Fly Ash):Class C Cement + 1% bwow Sodium Chloride + 0.2% bwoc R-3 + 0.125 lbs/sack Cello Flake + 0.5% bwoc BA-10A + 4% bwoc MPA-5 + 63.2% Fresh Water, 13.8 ppg. **Yield:** 1.37cf/sk. **TOC @ 2,800 ft**

8-3/4" Pilot Hole Plug

700 sacks Class H, 18.0 ppg, 0.9 cf/sk
Top of Plug 8,315 ft (KOP)
Bottom of Plug 9,225 ft (pilot hole TD)

TOC for All Strings:

Surface: 0'
Intermediate: 0'
Production: 2,800'

The above cement volumes could be revised pending the caliper measurement from the open hole logs. Actual cement volumes will be adjusted bases on fluid caliper and caliper log data.

5. **Pressure Control Equipment:**

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

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

6. **Proposed Mud Circulation System**

<u>Depth</u>	<u>Mud Wt.</u>	<u>Visc</u>	<u>Fluid Loss</u>	<u>Type System</u>
0' - 400' 470	8.4-9.0	30-34	NC	Fresh Water
400' - 3300' 3975	9.8-10.0	28-32	NC	Brine
3300' - 13263'	8.6-9.0	28-32	NC-12	Fresh Water

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

7. Auxiliary Well Control and Monitoring Equipment:

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

8. Logging, Coring, and Testing Program: *See COA*

- 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 and Gamma Ray. Compensated Neutron – Z Density log with Gamma Ray and Caliper.
 - ii. Total Depth to Surface Compensated Neutron with Gamma Ray
 - iii. No coring program is planned
 - iv. Additional testing will be initiated subsequent to setting the 5 1/2" production casing. Specific intervals will be targeted based on log evaluation, geological sample shows and drill stem tests.

9. Potential Hazards:

- a. No abnormal pressures or temperatures are expected. There is no known presence of H₂S in this area. If H₂S is encountered the operator will comply with the provisions of Onshore Oil and Gas Order No. 6 No lost circulation is expected to occur. All personnel will be familiar with all aspects of safe operation of equipment being used to drill this well. Estimated BHP 3800 psi and Estimated BHT 140°. No H₂S is anticipated to be encountered.

10. 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

RIGEL 20 FED COM #2H

EDDY COUNTY, NM

WELL FILE: PLAN 1

JANUARY 25, 2011

Weatherford International, Ltd.

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



Rigel 20 Fed Com #2H Eddy Co, NM

KB ELEV: 3438
GL ELEV: 3413

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSec	Target
1	0.00	0.00	89.68	0.00	0.00	0.00	0.00	0.00	0.00	
2	8315.04	0.00	89.68	8315.04	0.00	0.00	0.00	0.00	0.00	
3	9213.34	89.83	89.68	8888.00	3.18	571.25	10.00	89.68	571.26	
4	13262.78	89.83	89.68	8900.00	25.70	4620.61	0.00	0.00	4620.68	Pbhl

WELL DETAILS

Name	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
#2H	0.00	0.00	599759.14	675037.67	32°38'52.911N	103°53'56.217W	N/A

TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Shape
Pbhl	8900.00	25.70	4620.61	599784.84	679658.28	Point

FIELD DETAILS

Eddy Co., NM (NAD 83)

Geodetic System: US State Plane Coordinate System 1983
Ellipsoid: GRS 1980
Zone: New Mexico, Eastern Zone
Magnetic Model: IGRF2010

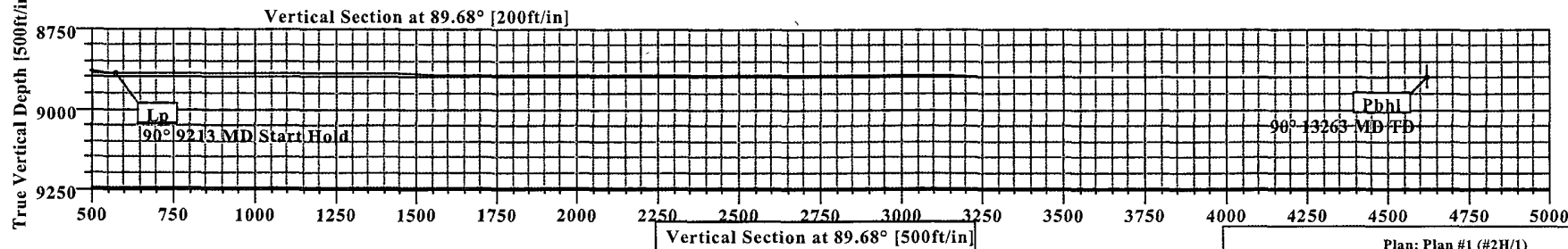
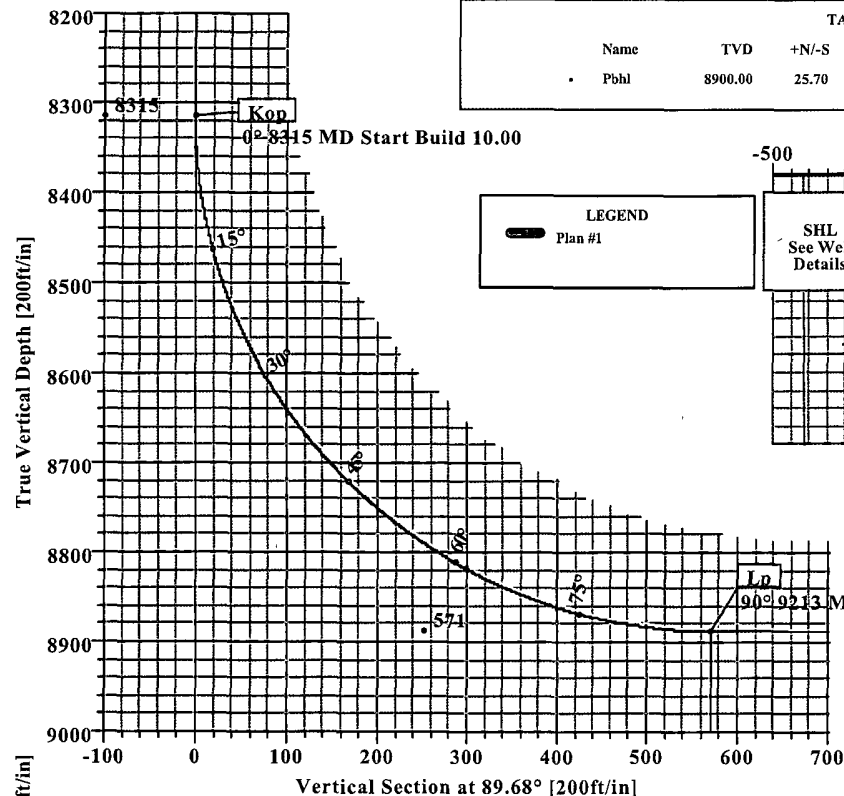
System Datum: Mean Sea Level
Local North: Grid North

SITE DETAILS

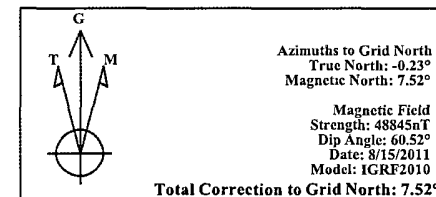
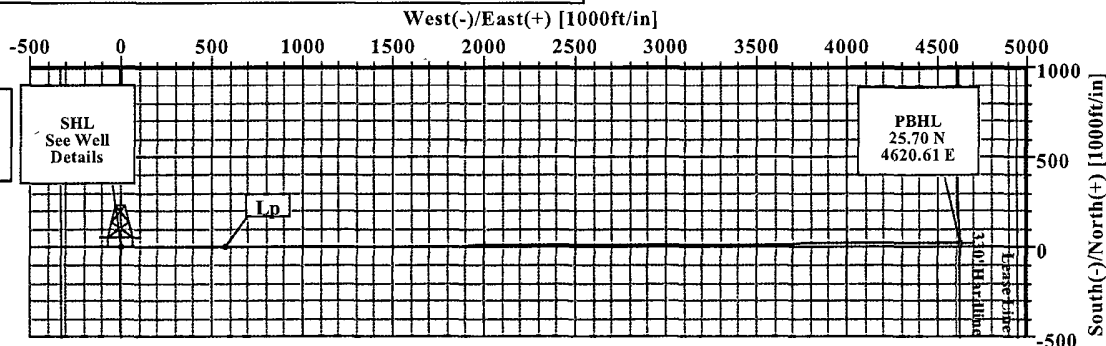
Rigel 20 Fed Com #2H

Site Centre Northing: 599759.14
Easting: 675037.67

Ground Level: 3413.00
Positional Uncertainty: 0.00
Convergence: 0.23



LEGEND
Plan #1



Plan: Plan #1 (#2H/1)

Created By: Russell W. Joyner

Date: 1/26/2011



Weatherford International Ltd.

WFT Plan Report - X & Y's



Company: Devon Energy	Date: 1/26/2011	Time: 08:05:19	Page: 1
Field: Eddy Co., NM (NAD 83)	Co-ordinate(NE) Reference: Well: #2H, Grid North		
Site: Rigel 20 Fed Com #2H	Vertical (TVD) Reference: SITE 3438.0		
Well: #2H	Section (VS) Reference: Well (0.00N,0.00E,89.68Azi)		
Wellpath: 1	Survey Calculation Method: Minimum Curvature	Db: Sybase	

Plan: Plan #1	Date Composed: 1/25/2011
Principal: Yes	Version: 1
	Tied-to: From Surface

Field: Eddy Co., NM (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: Rigel 20 Fed Com #2H		
Site Position:	Northing: 599759.14 ft	Latitude: 32 38 52.911 N
From: Map	Easting: 675037.67 ft	Longitude: 103 53 56.217 W
Position Uncertainty: 0.00 ft		North Reference: Grid
Ground Level: 3413.00 ft		Grid Convergence: 0.23 deg

Well: #2H	Slot Name:	
Well Position: +N/-S 0.00 ft	Northing: 599759.14 ft	Latitude: 32 38 52.911 N
+E/-W 0.00 ft	Easting: 675037.67 ft	Longitude: 103 53 56.217 W
Position Uncertainty: 0.00 ft		

Wellpath: 1	Drilled From: Surface		
Current Datum: SITE	Tie-on Depth: 0.00 ft		
Magnetic Data: 8/15/2011	Above System Datum: Mean Sea Level		
Field Strength: 48845 nT	Declination: 7.75 deg		
Vertical Section: Depth From (TVD)	Mag Dip Angle: 60.52 deg		
ft	+N/-S	+E/-W	Direction
	ft	ft	deg
0.00	0.00	0.00	89.68

Plan Section Information

MD ft	Incl deg	Azim deg	TVD ft	+N/-S ft	+E/-W ft	DLS deg/100ft	Build deg/100ft	Turn deg/100ft	TFO deg	Target
0.00	0.00	89.68	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
8315.04	0.00	89.68	8315.04	0.00	0.00	0.00	0.00	0.00	0.00	
9213.34	89.83	89.68	8888.00	3.18	571.25	10.00	10.00	0.00	89.68	
13262.78	89.83	89.68	8900.00	25.70	4620.61	0.00	0.00	0.00	0.00	Pbhl

Survey

MD ft	Incl deg	Azim deg	TVD ft	N/S ft	E/W ft	VS ft	DLS deg/100ft	MapN ft	MapE ft	Comment
8300.00	0.00	89.68	8300.00	0.00	0.00	0.00	0.00	599759.14	675037.67	
8315.04	0.00	89.68	8315.04	0.00	0.00	0.00	0.00	599759.14	675037.67	Kop
8400.00	8.50	89.68	8399.69	0.03	6.29	6.29	10.00	599759.17	675043.96	
8500.00	18.50	89.68	8496.80	0.16	29.60	29.60	10.00	599759.30	675067.27	
8600.00	28.50	89.68	8588.40	0.39	69.41	69.41	10.00	599759.53	675107.08	
8700.00	38.50	89.68	8671.68	0.69	124.53	124.53	10.00	599759.83	675162.20	
8800.00	48.50	89.68	8744.13	1.07	193.27	193.27	10.00	599760.21	675230.94	
8900.00	58.50	89.68	8803.55	1.52	273.55	273.55	10.00	599760.66	675311.22	
9000.00	68.50	89.68	8848.12	2.02	362.93	362.93	10.00	599761.16	675400.60	
9100.00	78.50	89.68	8876.49	2.55	458.68	458.69	10.00	599761.69	675496.35	
9200.00	88.50	89.68	8887.80	3.10	557.91	557.92	10.00	599762.24	675595.58	
9213.34	89.83	89.68	8888.00	3.18	571.25	571.26	10.00	599762.32	675608.92	Lp
9300.00	89.83	89.68	8888.25	3.66	657.91	657.92	0.00	599762.80	675695.58	
9400.00	89.83	89.68	8888.55	4.22	757.91	757.92	0.00	599763.36	675795.58	
9500.00	89.83	89.68	8888.85	4.77	857.90	857.92	0.00	599763.91	675895.57	
9600.00	89.83	89.68	8889.14	5.33	957.90	957.92	0.00	599764.47	675995.57	
9700.00	89.83	89.68	8889.44	5.88	1057.90	1057.92	0.00	599765.02	676095.57	



Weatherford International Ltd.

WFT Plan Report - X & Y's

**Weatherford**

Company: Devon Energy
Field: Eddy Co., NM (NAD 83)
Site: Rigel 20 Fed Com #2H
Well: #2H
Wellpath: 1

Date: 1/26/2011
Co-ordinate(N/E) Reference: Well: #2H, Grid North
Vertical (TVD) Reference: SITE 3438.0
Section (VS) Reference: Well (0.00N,0.00E,89.68Azi)
Survey Calculation Method: Minimum Curvature
Db: Sybase

Page: 2

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
9800.00	89.83	89.68	8889.73	6.44	1157.90	1157.92	0.00	599765.58	676195.57	
9900.00	89.83	89.68	8890.03	7.00	1257.90	1257.91	0.00	599766.14	676295.57	
10000.00	89.83	89.68	8890.33	7.55	1357.89	1357.91	0.00	599766.69	676395.56	
10100.00	89.83	89.68	8890.62	8.11	1457.89	1457.91	0.00	599767.25	676495.56	
10200.00	89.83	89.68	8890.92	8.67	1557.89	1557.91	0.00	599767.81	676595.56	
10300.00	89.83	89.68	8891.22	9.22	1657.89	1657.91	0.00	599768.36	676695.56	
10400.00	89.83	89.68	8891.51	9.78	1757.89	1757.91	0.00	599768.92	676795.56	
10500.00	89.83	89.68	8891.81	10.33	1857.88	1857.91	0.00	599769.47	676895.55	
10600.00	89.83	89.68	8892.11	10.89	1957.88	1957.91	0.00	599770.03	676995.55	
10700.00	89.83	89.68	8892.40	11.45	2057.88	2057.91	0.00	599770.59	677095.55	
10800.00	89.83	89.68	8892.70	12.00	2157.88	2157.91	0.00	599771.14	677195.55	
10900.00	89.83	89.68	8893.00	12.56	2257.88	2257.91	0.00	599771.70	677295.55	
11000.00	89.83	89.68	8893.29	13.11	2357.87	2357.91	0.00	599772.25	677395.54	
11100.00	89.83	89.68	8893.59	13.67	2457.87	2457.91	0.00	599772.81	677495.54	
11200.00	89.83	89.68	8893.88	14.23	2557.87	2557.91	0.00	599773.37	677595.54	
11300.00	89.83	89.68	8894.18	14.78	2657.87	2657.91	0.00	599773.92	677695.54	
11400.00	89.83	89.68	8894.48	15.34	2757.87	2757.91	0.00	599774.48	677795.54	
11500.00	89.83	89.68	8894.77	15.90	2857.86	2857.91	0.00	599775.04	677895.53	
11600.00	89.83	89.68	8895.07	16.45	2957.86	2957.91	0.00	599775.59	677995.53	
11700.00	89.83	89.68	8895.37	17.01	3057.86	3057.91	0.00	599776.15	678095.53	
11800.00	89.83	89.68	8895.66	17.56	3157.86	3157.91	0.00	599776.70	678195.53	
11900.00	89.83	89.68	8895.96	18.12	3257.86	3257.91	0.00	599777.26	678295.53	
12000.00	89.83	89.68	8896.26	18.68	3357.85	3357.91	0.00	599777.82	678395.52	
12100.00	89.83	89.68	8896.55	19.23	3457.85	3457.91	0.00	599778.37	678495.52	
12200.00	89.83	89.68	8896.85	19.79	3557.85	3557.90	0.00	599778.93	678595.52	
12300.00	89.83	89.68	8897.15	20.35	3657.85	3657.90	0.00	599779.49	678695.52	
12400.00	89.83	89.68	8897.44	20.90	3757.85	3757.90	0.00	599780.04	678795.52	
12500.00	89.83	89.68	8897.74	21.46	3857.84	3857.90	0.00	599780.60	678895.51	
12600.00	89.83	89.68	8898.04	22.01	3957.84	3957.90	0.00	599781.15	678995.51	
12700.00	89.83	89.68	8898.33	22.57	4057.84	4057.90	0.00	599781.71	679095.51	
12800.00	89.83	89.68	8898.63	23.13	4157.84	4157.90	0.00	599782.27	679195.51	
12900.00	89.83	89.68	8898.92	23.68	4257.84	4257.90	0.00	599782.82	679295.51	
13000.00	89.83	89.68	8899.22	24.24	4357.83	4357.90	0.00	599783.38	679395.50	
13100.00	89.83	89.68	8899.52	24.79	4457.83	4457.90	0.00	599783.93	679495.50	
13200.00	89.83	89.68	8899.81	25.35	4557.83	4557.90	0.00	599784.49	679595.50	
13262.78	89.83	89.68	8900.00	25.70	4620.61	4620.68	0.00	599784.84	679658.28	Pbhl

Targets

Name	Description Dip.	Dir.	TVD ft	+N/-S ft	+E/-W ft	Map Northing ft	Map Easting ft	<--- Latitude ---> Deg Min Sec			<--- Longitude ---> Deg Min Sec		
Pbhl			8900.00	25.70	4620.61	599784.84	679658.28	32	38	52.975 N	103	53	2.173 W

Casing Points

MD	TVD	Diameter	Hole Size	Name



Weatherford International Ltd.
WFT Plan Report - X & Y's



Company: Devon Energy
Field: Eddy Co., NM (NAD 83)
Site: Rigel 20 Fed Com #2H
Well: #2H
Wellpath: 1

Date: 1/26/2011
Co-ordinate(NE) Reference: Well: #2H, Grid North
Vertical (TVD) Reference: SITE 3438.0
Section (VS) Reference: Well (0.00N,0.00E,89.68Azi)
Survey Calculation Method: Minimum Curvature
Db: Sybase

Page: 3

Annotation

MD ft	TVD ft	
8315.04	8315.04	Kop
9213.34	8888.00	Lp
13262.78	8900.00	Pbhl

Formations

MD	TVD	Formations	Lithology	Dip Angle	Dip Direction

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

GeoDec v5.03

Report Date: January 25, 2011
Job Number: _____
Customer: Devon Energy
Well Name: Rigel 20 Fed Com #2H
API Number: _____
Rig Name: _____
Location: Eddy Co., NM (NAD 83)
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 599759.140 USFT	Latitude 32.6480340 DEG
East/West 675037.670 USFT	Longitude -103.8989446 DEG
Grid Convergence: .23°	
Total Correction: +7.52°	

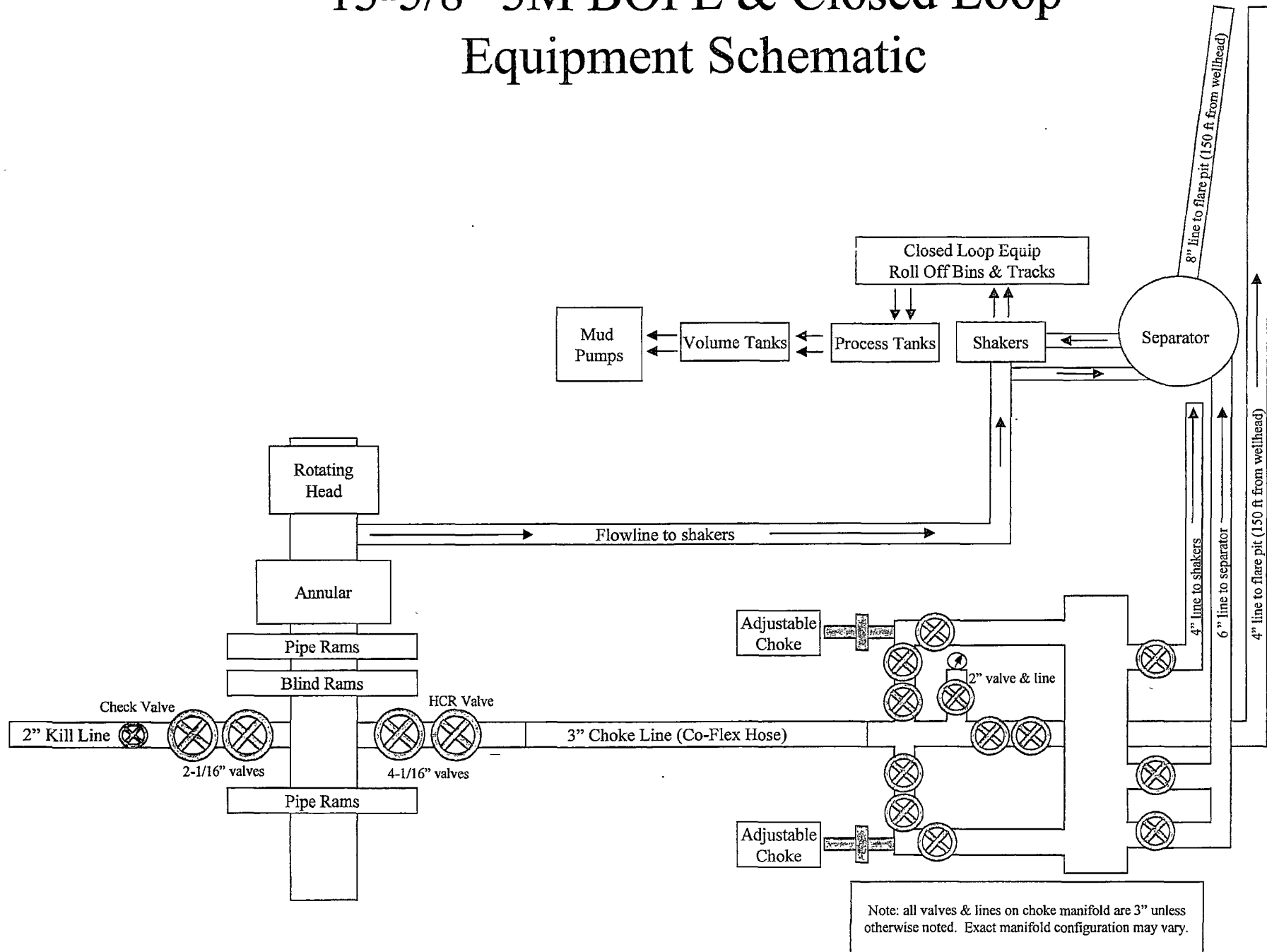
Geodetic Location WGS84	Elevation =	0.0 Meters
Latitude =	32.64803° N	32° 38 min 52.923 sec
Longitude =	103.89894° W	103° 53 min 56.201 sec

Magnetic Declination =	7.75°	[True North Offset]
Local Gravity =	.9988 g	Checksum = 6570
Local Field Strength =	48841 nT	Magnetic Vector X = 23817 nT
Magnetic Dip =	60.52°	Magnetic Vector Y = 3241 nT
Magnetic Model =	IGRF-2010g11	Magnetic Vector Z = 42517 nT
Spud Date =	Aug 15, 2011	Magnetic Vector H = 24036 nT

Signed: _____

Date: _____

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



Attachment to Exhibit #1
NOTES REGARDING BLOWOUT PREVENTERS
Devon Energy Production Company, LP

Rigel 20 Federal Com 2H

Surface Location: 1850' FNL & 330' FWL, Unit E, Sec 20 T19S R31E, Eddy, NM
Bottom hole Location: 1850' FNL & 330' FEL, Unit H, Sec 20 T19S R31E, Eddy, NM

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

Continental
CONTINENTAL

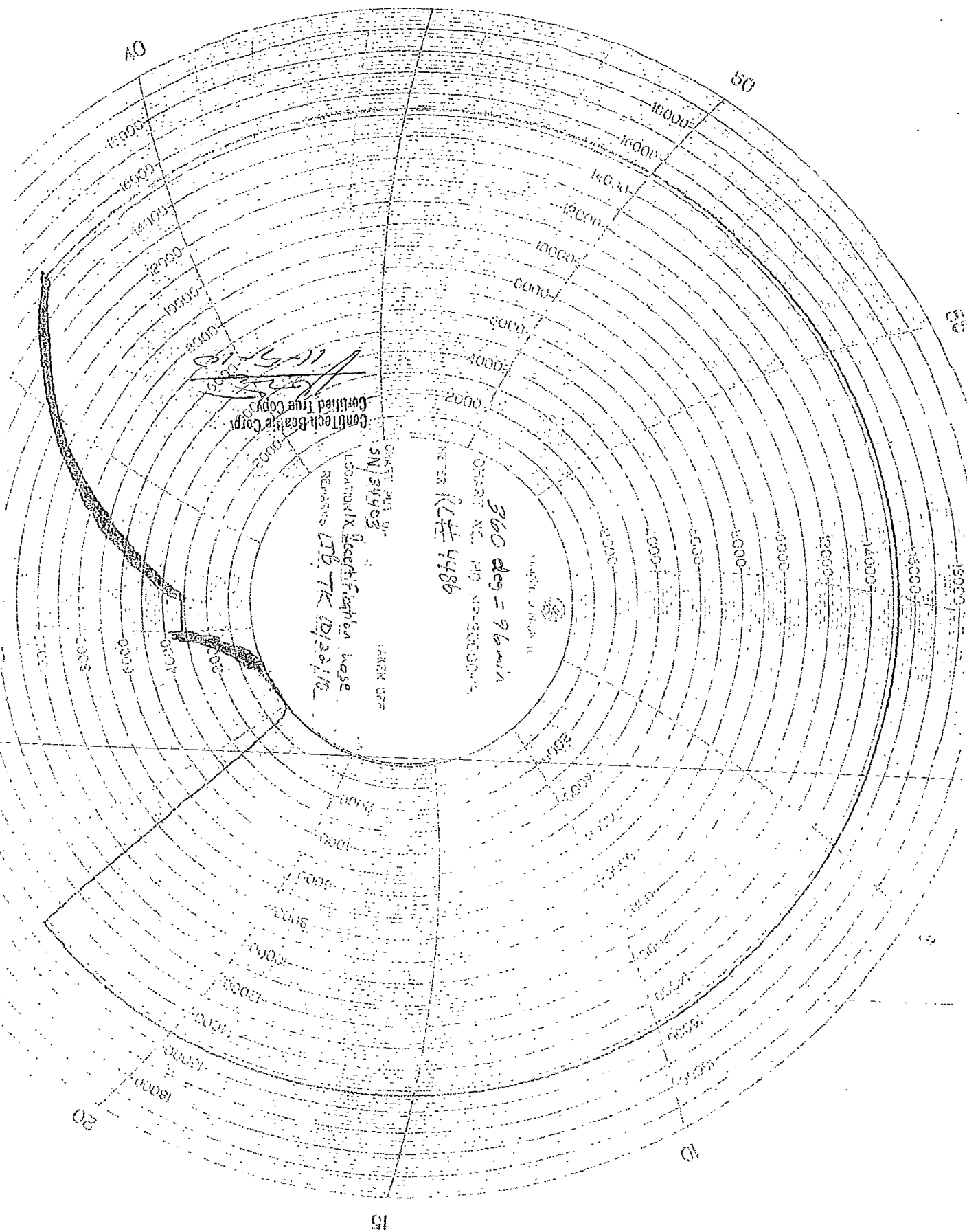
Hydrostatic Test Certificate

Certificate Number: 4520	PBC No: 10321	Customer Name & Address	
Customer Purchase Order No: RIG 300		HELMERICH & PAYNE INTL DRILLING CO 1437 SOUTH BOULDER TULSA, OK 74119	
Project:			
Test Centre Address	Accepted by ContiTech Beattie Inspection	Accepted by Client Inspection	
ContiTech Beattie Corp. 11535 Brittmoore Park Drive Houston, TX 77041 USA	Signed: Josh Sims Date: 10/27/10		

We certify that the goods detailed hereon have been inspected by our Quality Management System, and to the best of our knowledge are found to conform to relevant industrial standards within the requirements of the purchase order as issued to ContiTech Beattie Corporation.

These goods were made in the United States of America.

Item	Part No.	Description	Qty	Serial Number	As-Built Length (m)	Work Press	Test Press	Test Time (minutes)
1		3" ID 10K Choke & Kill Hose x 35ft OAL End A: 4.1/16" 10Kpsi API Spec 6A Type 6BX Flange End B: 4.1/16" 10Kpsi API Spec 6A Type 6BX Flange Working Pressure: 10,000psi Test Pressure: 15,000psi Serial#: 49106	1	49106		10 kpsi	15 kpsi	60





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

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Houston, TX 77041
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Fax: +1 (832) 327-0148
www.contitechbeattie.com

