

H₂S equipment will be rigged up at Surface. The plan should be implemented before drilling out from the surface.

1. Due to a one-time encounter on a previous well, an Intra-salt Pocket was charged with H₂S and a burnable amount of hydrocarbons.

First Potential Problem Zone:

Initial suspected problem zone	Salt Zone @ 1,333'
Potential Open Flow Capacity	1 mcf
Expected H ₂ S Concentration	11,000 ppm
100' ROE	6'
500' ROE	3'

Cimarex will have 24-hour H₂S Safety Supervisors on location while drilling the first 2,000' on this well.

2. Second Potential Problem Zone:

Initial suspected problem zone	Delaware Mountain Group @ 1,800'
Potential Open Flow Capacity	100 mcf
Expected H ₂ S Concentration	1,000 ppm
100' ROE	24'
500' ROE	11'

3. All Company and Contract personnel admitted on location must be trained by a qualified H₂S safety instructor to the following:

- A. Characteristics of H₂S
- B. Physical effects and hazards
- C. Proper use of safety equipment and life support systems.
- D. Principle and operation of H₂S detectors, warning system and briefing areas.
- E. Evacuation procedure, routes and first aid.
- F. Proper use of 30 minute pressure demand air pack.

4. H₂S Detection and Alarm Systems:

- A. H₂S detectors and audio alarm system to be located at bell nipple, end of flow line (mud pit) and on derrick floor or doghouse.

5. Windsock and/or wind streamers:

- A. Windsock at mudpit area should be high enough to be visible.
- B. Windsock at briefing area should be high enough to be visible.

6. Condition Flags and Signs:

- A. Warning sign on access road to location.
- B. Flags to be displayed on sign at entrance to location. Green flag indicates normal safe condition. Yellow flag indicates potential pressure and danger. Red flag indicates danger (H₂S present in dangerous concentration). Only emergency personnel admitted to location.

Hydrogen Sulfide Drilling Operations Plan
White City 10 Federal Com No. 4
Cimarex Energy Co. of Colorado
Unit H, Section 10
T25S-R26E, Eddy County, NM

7. Well control equipment:

- A. See exhibit "E"

8. Communication:

- A. While working under masks chalkboards will be used for communication.
- B. Hand signals will be used where chalk board is inappropriate.
- C. Two way radio will be used to communicate off location in case of emergency help is required. In most cases cellular telephones will be available at most drilling foreman's trailer or living quarters.

9. Drillstem Testing:

DSTs or Cores:

- 10. Drilling contractor supervisor will be required to be familiar with the effects H₂S has on tubular goods and other mechanical equipment.
- 11. If H₂S is encountered, mud system will be altered if necessary to maintain control of formation. A mud gas separator will be brought into service along with H₂S scavengers if necessary.

Emergency Procedures

In the event of a release of gas containing H₂S, the first responder(s) must:

- ★ Isolate the area and prevent entry by other persons into the 100 ppm ROE.
- ★ Evacuate any public places encompassed by the 100 ppm ROE.
- ★ Be equipped with H₂S monitors and air packs in order to control the release.
- ★ Use the "buddy system" to ensure no injuries occur during the response.
- ★ Take precautions to avoid personal injury during this operation.
- ★ Contact operator and/or local officials to aid in operation. See list of phone numbers attached.
- ★ Have received training in the:
 - ♦ Detection of H₂S, and
 - ♦ Measures for protection against the gas,
 - ♦ Equipment used for protection and emergency response.

Ignition of Gas Source

Should control of the well be considered lost and ignition considered, take care to protect against exposure to Sulfur Dioxide (SO₂). Intentional ignition must be coordinated with the NMOCD and local officials. Additionally, the NM State Police may become involved. NM State Police shall be the Incident Command on scene of any major release. Take care to protect downwind whenever there is an ignition of the gas.

Characteristics of H₂S and SO₂

Common Name	Chemical Formula	Specific Gravity	Threshold Limit	Hazardous Limit	Lethal Concentration
Hydrogen Sulfide	H ₂ S	1.189 Air=1	10 ppm	100 ppm/hr	600 ppm
Sulfur Dioxide	SO ₂	2.21 Air=1	2 ppm	N/A	1000 ppm

Contacting Authorities

Cimarex Energy Co. of Colorado's personnel must liaise with local and state agencies to ensure a proper response to a major release. Additionally, the OCD must be notified of the release as soon as possible but no later than 4 hours. Agencies will ask for information such as type and volume of release, wind direction, location of release, etc. Be prepared with all information available including directions to site. The following call list of essential and potential responders has been prepared for use during a release. Cimarex Energy Co. of Colorado's response must be in coordination with the State of New Mexico's "Hazardous Materials Emergency Response Plan" (HMER).

H₂S Contingency Plan Emergency Contacts
White City 10 Federal Com No. 4
 Cimarex Energy Co. of Colorado
 Unit H, Section 10
 T25S-R26E, Eddy County, NM

Company Office

Cimarex Energy Co. of Colorado	800-969-4789
Co. Office and After-Hours Menu	

Key Personnel

Name	Title	Office	Mobile
Doug Park	Drilling Manager	432-620-1934	972-333-1407
Dee Smith	Drilling Super	432-620-1933	972-882-1010
Jim Evans	Drilling Super	432-620-1929	972-465-0564
Roy Shirley	Field Super		432-634-2136

Artesia

Ambulance	911
State Police	575-746-2703
City Police	575-746-2703
Sheriff's Office	575-746-9888
Fire Department	575-746-2701
Local Emergency Planning Committee	575-746-2122
New Mexico Oil Conservation Division	575-748-1283

Carlsbad

Ambulance	911
State Police	575-885-3137
City Police	575-885-2111
Sheriff's Office	575-887-7551
Fire Department	575-887-3798
Local Emergency Planning Committee	575-887-6544
US Bureau of Land Management	575-887-6544

Santa Fe

New Mexico Emergency Response Commission (Santa Fe)	505-476-9600
New Mexico Emergency Response Commission (Santa Fe) 24 Hrs	505-827-9126
New Mexico State Emergency Operations Center	505-476-9635

National

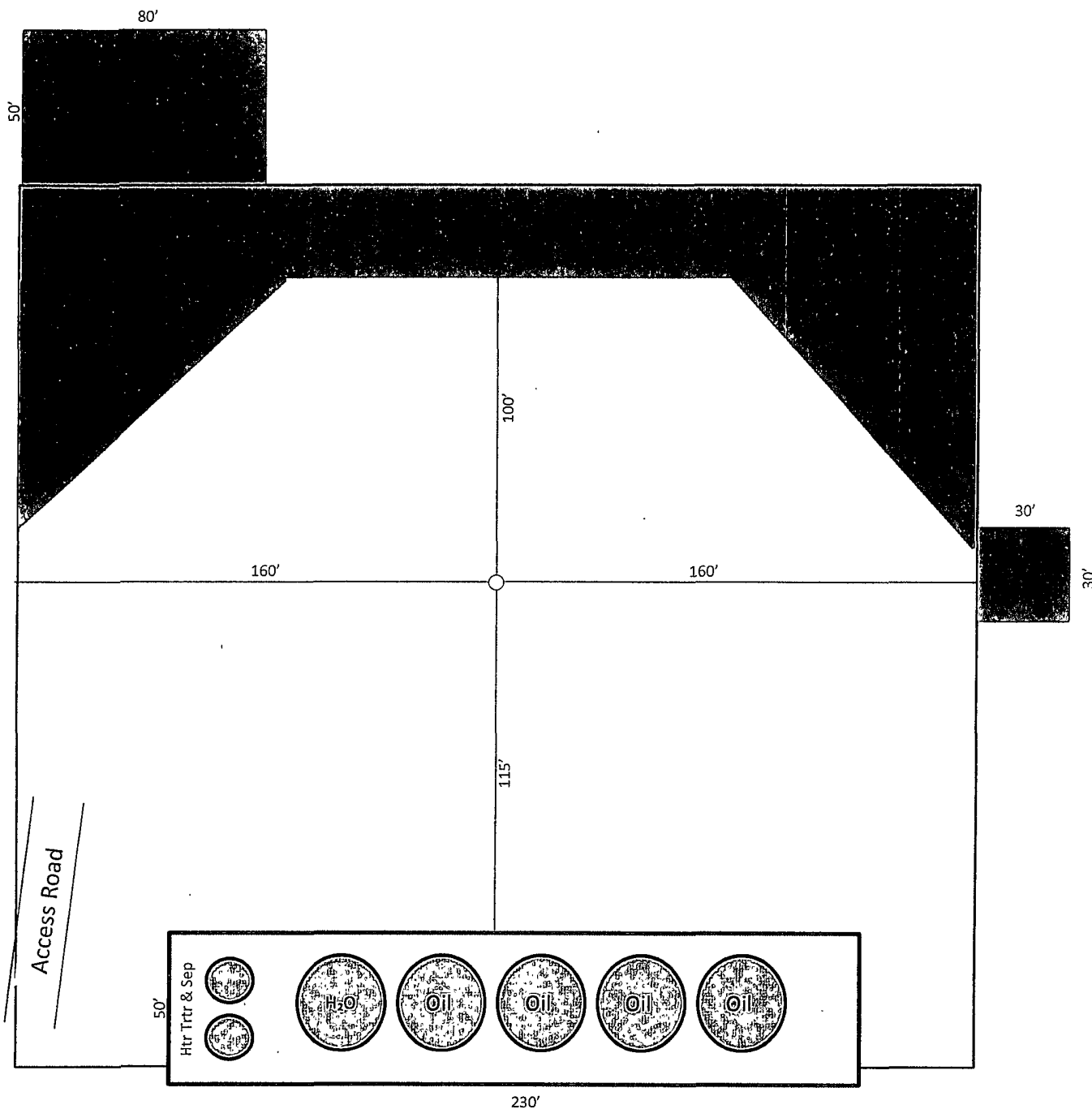
National Emergency Response Center (Washington, D.C.)	800-424-8802
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Medical

Flight for Life - 4000 24th St.; Lubbock, TX	806-743-9911
Aerocare - R3, Box 49F; Lubbock, TX	806-747-8923
Med Flight Air Amb - 2301 Yale Blvd S.E., #D3; Albuquerque, NM	505-842-4433
SB Air Med Service - 2505 Clark Carr Loop S.E.; Albuquerque, NM	505-842-4949

Other

Boots & Coots IWC	800-256-9688	or	281-931-8884
Cudd Pressure Control	432-699-0139	or	432-563-3356
Halliburton	575-746-2757		
B.J. Services	575-746-3569		

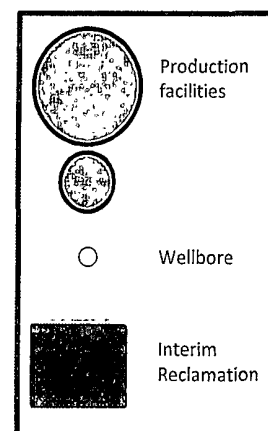


Place battery on
west side



N

Exhibit D-1
White City 10 Federal Com No. 4
Cimarex Energy Co. of Colorado
10-25S-26E
SHL 1950 FNL & 400 FEL
BHL 1900 FNL & 660 FWL
Eddy County, NM



1"=50'

Operator Certification Statement
White City 10 Federal Com No. 4
Cimarex Energy Co. of Colorado
Unit H, Section 10
T25S-R26E, Eddy County, NM

Operator's Representative

Cimarex Energy Co. of Colorado
600 N. Marienfeld St., Ste. 600
Midland, TX 79701
Office Phone: (432) 571-7800
Zeno Farris

CERTIFICATION: I hereby certify that I, or someone under my direct supervision, have inspected the drill site and access route proposed herein; that I am familiar with the conditions which currently 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 the company I represent, 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.

Executed this 4th day of March, 2011

NAME: Zeno Farris
Zeno Farris

TITLE: Manager Operations Administration

ADDRESS: 600 N. Marienfeld St., Ste. 600
Midland, TX 79701

TELEPHONE: (432) 620-1938

EMAIL: zfarris@cimarex.com

Field Representative: Same as above

DRILLING PROGRAM

Devon Energy Production Company, LP

Rigel 20 Federal Com 4H

Surface Location: 1750' FSL & 330' FWL, Unit L, Sec 20 T19S R31E, Eddy, NM

Bottom hole Location: 400' FSL & 330' FEL, Unit P, 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	95'	Fresh Water
b. Rustler	335'	Barren
c. Salado	600'	Barren
d. Tansil Dolomite	1975'	Barren
e. Yates	2115'	Oil
f. Seven Rivers	2465'	Oil
g. Capitan	2745'	Barren
h. Queen	3235'	Barren
i. Delaware	4370'	Oil
j. Lower Brushy Canyon	6190'	Oil
k. Bone Springs Lm	6490'	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	8820'	Oil
p. 2 nd Bone Spring Middle Ss Base	8910'	Oil
q. 3 rd Bone Spring Lm	9095'	Oil
r. Total Depth	TVD 8900' MD 13898'	

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"	0'-400'	13 3/8"	0'-400'	48#	STC	H-40
12 1/4"	400'-3300'	9 5/8"	0'-3300'	40#	LTC	J-55
8 3/4"	3300'-8100'	5 1/2"	0'-8100'	17#	LTC	HCP-110
8 3/4"	8100'-13898'	5 1/2"	8100'-13898'	17#	BTC	HCP-110

See
COA

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	1.89
5 1/2" BTC	1.77	2.53	5.57

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:** 1,600 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** ← See COA

TOC for All Strings:

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

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'	8.4-9.0	30-34	NC	Fresh Water
400' - 3300' ³⁵⁵⁰	9.8-10.0	28-32	NC	Brine
3300' - 13898'	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 Kelly cock will be in the drill string at all times.
- A full opening drill pipe stabbing valve having the appropriate connections will be on the rig floor at all times.
- Hydrogen Sulfide detection equipment will be in operation after drilling out the 13 3/8" casing shoe until the 5 1/2" casing is cemented. Breathing equipment will be on location upon drilling the 13 3/8" shoe until total depth is reached.

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 ½" 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.

11. Depending on rig availability, Devon may set the surface casing using an Ashton Oilfield Services rig.

- a. ~~The rig plat is attached (if applicable). This rig will be used only to set the surface casing and will leave the location once the surface casing has been run and cemented. Another rig will drill the remainder of the wellbore. The reasons for using the smaller rig to set surface are: rig availability and economics.~~
- b. ~~The BLM will be contacted 24 hours prior to commencing drilling operations. The surface casing will be run and cemented back to surface as per the approved APD. The well will be secured with a cap welded onto the surface casing. Another rig will be on location to drill the remainder of the wellbore within 60 days after the Ashton rig has left the location.~~

Devon Energy, Inc.

Eddy County

Rigel 20 Federal Com

4H

OH

Plan: Plan #1

Pathfinder X & Y Report

29 August, 2011

Pathfinder

Pathfinder X & Y Report

Company:	Devon Energy, Inc.	Local Co-ordinate Reference:	Well 4H
Project:	Eddy County	TVD Reference:	KB = 26.2 @ 3432.40usft (H&P 300)
Site:	Rigel 20 Federal Com	MD Reference:	KB = 26.2 @ 3432.40usft (H&P 300)
Well:	4H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	Plan #1	Database:	EDM 5000.1 Single User Db

Project: Eddy County	
Map System:	US State Plane 1983
Geo Datum:	North American Datum 1983
Map Zone:	New Mexico Eastern Zone
System Datum:	Mean Sea Level

Site		Rigel 20 Federal Com							
Site Position:		Northing:		598,138.050	usft	Latitude:		32° 38' 36.881 N	
From:		Easting:		675,052.990	usft	Longitude:		103° 53' 56.099 W	
Position Uncertainty:		Slot Radius:		13-3/16	"	Grid Convergence:		0.23 °	
Map		0.00 usft							

Well	4H					
Well Position	+N/-S	0.00 usft	Northing:	598,088.090 usft	Latitude:	32° 38' 36.387 N
	+E/-W	0.00 usft	Easting:	675,053.410 usft	Longitude:	103° 53' 56.097 W
Position Uncertainty		0.00 usft	Wellhead Elevation:	usft	Ground Level:	3,406.20 usft

Wellbore	OH				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF200510	8/29/2011	7.73	60.54	48,849

Design: Plan #1				
Audit Notes:				
Version:	Phase:	PROTOTYPE	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.00	0.00	0.00	105.94

Survey Tool Program		Date 8/29/2011		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
0.00	13,897.58	Plan #1 (OH)	Pathfinder	Pathfinder MWD

Pathfinder Pathfinder X & Y Report

Company:	Devon Energy, Inc.	Local Co-ordinate Reference:	Well 4H
Project:	Eddy County	TVD Reference:	KB = 26.2 @ 3432.40usft (H&P 300)
Site:	Rigel 20 Federal Com	MD Reference:	KB = 26.2 @ 3432.40usft (H&P 300)
Well:	4H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	Plan #1	Database:	EDM 5000.1 Single User Db

Planned Survey											
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	TVDSS (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)	Northing (usft)	Easting (usft)	
0.00	0.00	0.00	0.00	-3,432.40	0.00	0.00	0.00	0.00	598,088.09	675,053.41	
50.00	0.00	0.00	50.00	-3,382.40	0.00	0.00	0.00	0.00	598,088.09	675,053.41	
100.00	0.00	0.00	100.00	-3,332.40	0.00	0.00	0.00	0.00	598,088.09	675,053.41	
150.00	0.00	0.00	150.00	-3,282.40	0.00	0.00	0.00	0.00	598,088.09	675,053.41	
200.00	0.00	0.00	200.00	-3,232.40	0.00	0.00	0.00	0.00	598,088.09	675,053.41	
250.00	0.00	0.00	250.00	-3,182.40	0.00	0.00	0.00	0.00	598,088.09	675,053.41	
300.00	0.00	0.00	300.00	-3,132.40	0.00	0.00	0.00	0.00	598,088.09	675,053.41	
350.00	0.00	0.00	350.00	-3,082.40	0.00	0.00	0.00	0.00	598,088.09	675,053.41	
400.00	0.00	0.00	400.00	-3,032.40	0.00	0.00	0.00	0.00	598,088.09	675,053.41	
450.00	0.00	0.00	450.00	-2,982.40	0.00	0.00	0.00	0.00	598,088.09	675,053.41	
500.00	0.00	0.00	500.00	-2,932.40	0.00	0.00	0.00	0.00	598,088.09	675,053.41	
550.00	0.00	0.00	550.00	-2,882.40	0.00	0.00	0.00	0.00	598,088.09	675,053.41	
600.00	0.00	0.00	600.00	-2,832.40	0.00	0.00	0.00	0.00	598,088.09	675,053.41	
650.00	0.00	0.00	650.00	-2,782.40	0.00	0.00	0.00	0.00	598,088.09	675,053.41	
700.00	0.00	0.00	700.00	-2,732.40	0.00	0.00	0.00	0.00	598,088.09	675,053.41	
750.00	0.00	0.00	750.00	-2,682.40	0.00	0.00	0.00	0.00	598,088.09	675,053.41	
800.00	0.00	0.00	800.00	-2,632.40	0.00	0.00	0.00	0.00	598,088.09	675,053.41	
850.00	0.00	0.00	850.00	-2,582.40	0.00	0.00	0.00	0.00	598,088.09	675,053.41	
900.00	0.00	0.00	900.00	-2,532.40	0.00	0.00	0.00	0.00	598,088.09	675,053.41	
950.00	0.00	0.00	950.00	-2,482.40	0.00	0.00	0.00	0.00	598,088.09	675,053.41	
1,000.00	0.00	0.00	1,000.00	-2,432.40	0.00	0.00	0.00	0.00	598,088.09	675,053.41	
1,050.00	0.00	0.00	1,050.00	-2,382.40	0.00	0.00	0.00	0.00	598,088.09	675,053.41	
1,100.00	0.00	0.00	1,100.00	-2,332.40	0.00	0.00	0.00	0.00	598,088.09	675,053.41	
1,150.00	0.00	0.00	1,150.00	-2,282.40	0.00	0.00	0.00	0.00	598,088.09	675,053.41	
1,200.00	0.00	0.00	1,200.00	-2,232.40	0.00	0.00	0.00	0.00	598,088.09	675,053.41	
1,250.00	0.00	0.00	1,250.00	-2,182.40	0.00	0.00	0.00	0.00	598,088.09	675,053.41	
1,300.00	0.00	0.00	1,300.00	-2,132.40	0.00	0.00	0.00	0.00	598,088.09	675,053.41	

Pathfinder

Pathfinder X & Y Report

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Planned Survey										
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	TVDSS (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)	Northing (usft)	Easting (usft)
1,350.00	0.00	0.00	1,350.00	-2,082.40	0.00	0.00	0.00	0.00	598,088.09	675,053.41
1,400.00	0.00	0.00	1,400.00	-2,032.40	0.00	0.00	0.00	0.00	598,088.09	675,053.41
1,450.00	0.00	0.00	1,450.00	-1,982.40	0.00	0.00	0.00	0.00	598,088.09	675,053.41
1,500.00	0.00	0.00	1,500.00	-1,932.40	0.00	0.00	0.00	0.00	598,088.09	675,053.41
1,550.00	0.00	0.00	1,550.00	-1,882.40	0.00	0.00	0.00	0.00	598,088.09	675,053.41
1,600.00	0.00	0.00	1,600.00	-1,832.40	0.00	0.00	0.00	0.00	598,088.09	675,053.41
1,650.00	0.00	0.00	1,650.00	-1,782.40	0.00	0.00	0.00	0.00	598,088.09	675,053.41
1,700.00	0.00	0.00	1,700.00	-1,732.40	0.00	0.00	0.00	0.00	598,088.09	675,053.41
1,750.00	0.00	0.00	1,750.00	-1,682.40	0.00	0.00	0.00	0.00	598,088.09	675,053.41
1,800.00	0.00	0.00	1,800.00	-1,632.40	0.00	0.00	0.00	0.00	598,088.09	675,053.41
1,850.00	0.00	0.00	1,850.00	-1,582.40	0.00	0.00	0.00	0.00	598,088.09	675,053.41
1,900.00	0.00	0.00	1,900.00	-1,532.40	0.00	0.00	0.00	0.00	598,088.09	675,053.41
1,950.00	0.00	0.00	1,950.00	-1,482.40	0.00	0.00	0.00	0.00	598,088.09	675,053.41
2,000.00	0.00	0.00	2,000.00	-1,432.40	0.00	0.00	0.00	0.00	598,088.09	675,053.41
2,050.00	0.00	0.00	2,050.00	-1,382.40	0.00	0.00	0.00	0.00	598,088.09	675,053.41
2,100.00	0.00	0.00	2,100.00	-1,332.40	0.00	0.00	0.00	0.00	598,088.09	675,053.41
2,150.00	0.00	0.00	2,150.00	-1,282.40	0.00	0.00	0.00	0.00	598,088.09	675,053.41
2,200.00	0.00	0.00	2,200.00	-1,232.40	0.00	0.00	0.00	0.00	598,088.09	675,053.41
2,250.00	0.00	0.00	2,250.00	-1,182.40	0.00	0.00	0.00	0.00	598,088.09	675,053.41
2,300.00	0.00	0.00	2,300.00	-1,132.40	0.00	0.00	0.00	0.00	598,088.09	675,053.41
2,350.00	0.00	0.00	2,350.00	-1,082.40	0.00	0.00	0.00	0.00	598,088.09	675,053.41
2,400.00	0.00	0.00	2,400.00	-1,032.40	0.00	0.00	0.00	0.00	598,088.09	675,053.41
2,450.00	0.00	0.00	2,450.00	-982.40	0.00	0.00	0.00	0.00	598,088.09	675,053.41
2,500.00	0.00	0.00	2,500.00	-932.40	0.00	0.00	0.00	0.00	598,088.09	675,053.41
2,550.00	0.00	0.00	2,550.00	-882.40	0.00	0.00	0.00	0.00	598,088.09	675,053.41
2,600.00	0.00	0.00	2,600.00	-832.40	0.00	0.00	0.00	0.00	598,088.09	675,053.41
2,650.00	0.00	0.00	2,650.00	-782.40	0.00	0.00	0.00	0.00	598,088.09	675,053.41

Pathfinder Pathfinder X & Y Report

Company:	Devon Energy, Inc.	Local Co-ordinate Reference:	Well 4H
Project:	Eddy County	TVD Reference:	KB = 26.2 @ 3432.40usft (H&P 300)
Site:	Rigel 20 Federal Com	MD Reference:	KB = 26.2 @ 3432.40usft (H&P 300)
Well:	4H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	Plan #1	Database:	EDM 5000.1 Single User Db

Planned Survey:	
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MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	TVDSS (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)	Northing (usft)	Easting (usft)
2,700.00	0.00	0.00	2,700.00	-732.40	0.00	0.00	0.00	0.00	598,088.09	675,053.41
2,750.00	0.00	0.00	2,750.00	-682.40	0.00	0.00	0.00	0.00	598,088.09	675,053.41
2,800.00	0.00	0.00	2,800.00	-632.40	0.00	0.00	0.00	0.00	598,088.09	675,053.41
2,850.00	0.00	0.00	2,850.00	-582.40	0.00	0.00	0.00	0.00	598,088.09	675,053.41
2,900.00	0.00	0.00	2,900.00	-532.40	0.00	0.00	0.00	0.00	598,088.09	675,053.41
2,950.00	0.00	0.00	2,950.00	-482.40	0.00	0.00	0.00	0.00	598,088.09	675,053.41
3,000.00	0.00	0.00	3,000.00	-432.40	0.00	0.00	0.00	0.00	598,088.09	675,053.41
3,050.00	0.00	0.00	3,050.00	-382.40	0.00	0.00	0.00	0.00	598,088.09	675,053.41
3,100.00	0.00	0.00	3,100.00	-332.40	0.00	0.00	0.00	0.00	598,088.09	675,053.41
3,150.00	0.00	0.00	3,150.00	-282.40	0.00	0.00	0.00	0.00	598,088.09	675,053.41
3,200.00	0.00	0.00	3,200.00	-232.40	0.00	0.00	0.00	0.00	598,088.09	675,053.41
3,250.00	0.00	0.00	3,250.00	-182.40	0.00	0.00	0.00	0.00	598,088.09	675,053.41
3,300.00	0.00	0.00	3,300.00	-132.40	0.00	0.00	0.00	0.00	598,088.09	675,053.41
3,350.00	0.00	0.00	3,350.00	-82.40	0.00	0.00	0.00	0.00	598,088.09	675,053.41
3,400.00	0.00	0.00	3,400.00	-32.40	0.00	0.00	0.00	0.00	598,088.09	675,053.41
3,450.00	0.00	0.00	3,450.00	17.60	0.00	0.00	0.00	0.00	598,088.09	675,053.41
3,500.00	0.00	0.00	3,500.00	67.60	0.00	0.00	0.00	0.00	598,088.09	675,053.41
3,550.00	0.00	0.00	3,550.00	117.60	0.00	0.00	0.00	0.00	598,088.09	675,053.41
3,600.00	0.00	0.00	3,600.00	167.60	0.00	0.00	0.00	0.00	598,088.09	675,053.41
3,650.00	0.00	0.00	3,650.00	217.60	0.00	0.00	0.00	0.00	598,088.09	675,053.41
3,700.00	0.00	0.00	3,700.00	267.60	0.00	0.00	0.00	0.00	598,088.09	675,053.41
3,750.00	0.00	0.00	3,750.00	317.60	0.00	0.00	0.00	0.00	598,088.09	675,053.41
3,800.00	0.00	0.00	3,800.00	367.60	0.00	0.00	0.00	0.00	598,088.09	675,053.41
3,850.00	0.00	0.00	3,850.00	417.60	0.00	0.00	0.00	0.00	598,088.09	675,053.41
3,900.00	0.00	0.00	3,900.00	467.60	0.00	0.00	0.00	0.00	598,088.09	675,053.41
3,950.00	0.00	0.00	3,950.00	517.60	0.00	0.00	0.00	0.00	598,088.09	675,053.41
4,000.00	0.00	0.00	4,000.00	567.60	0.00	0.00	0.00	0.00	598,088.09	675,053.41

Pathfinder

Pathfinder X & Y Report

Company:	Devon Energy, Inc.	Local Co-ordinate Reference:	Well 4H
Project:	Eddy County	TVD Reference:	KB = 26.2 @ 3432.40usft (H&P 300)
Site:	Rigel 20 Federal Com	MD Reference:	KB = 26.2 @ 3432.40usft (H&P 300)
Well:	4H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	Plan #1	Database:	EDM 5000.1 Single User Db

Planned Survey											
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	TVDSS (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)	Northing (usft)	Easting (usft)	
4,050.00	0.00	0.00	4,050.00	617.60	0.00	0.00	0.00	0.00	598,088.09	675,053.41	
4,100.00	0.00	0.00	4,100.00	667.60	0.00	0.00	0.00	0.00	598,088.09	675,053.41	
4,150.00	0.00	0.00	4,150.00	717.60	0.00	0.00	0.00	0.00	598,088.09	675,053.41	
4,200.00	0.00	0.00	4,200.00	767.60	0.00	0.00	0.00	0.00	598,088.09	675,053.41	
4,250.00	0.00	0.00	4,250.00	817.60	0.00	0.00	0.00	0.00	598,088.09	675,053.41	
4,300.00	0.00	0.00	4,300.00	867.60	0.00	0.00	0.00	0.00	598,088.09	675,053.41	
4,350.00	0.00	0.00	4,350.00	917.60	0.00	0.00	0.00	0.00	598,088.09	675,053.41	
4,400.00	0.00	0.00	4,400.00	967.60	0.00	0.00	0.00	0.00	598,088.09	675,053.41	
4,450.00	0.00	0.00	4,450.00	1,017.60	0.00	0.00	0.00	0.00	598,088.09	675,053.41	
4,500.00	0.00	0.00	4,500.00	1,067.60	0.00	0.00	0.00	0.00	598,088.09	675,053.41	
4,550.00	0.00	0.00	4,550.00	1,117.60	0.00	0.00	0.00	0.00	598,088.09	675,053.41	
4,600.00	0.00	0.00	4,600.00	1,167.60	0.00	0.00	0.00	0.00	598,088.09	675,053.41	
4,650.00	0.00	0.00	4,650.00	1,217.60	0.00	0.00	0.00	0.00	598,088.09	675,053.41	
4,700.00	0.00	0.00	4,700.00	1,267.60	0.00	0.00	0.00	0.00	598,088.09	675,053.41	
4,750.00	0.00	0.00	4,750.00	1,317.60	0.00	0.00	0.00	0.00	598,088.09	675,053.41	
4,800.00	0.00	0.00	4,800.00	1,367.60	0.00	0.00	0.00	0.00	598,088.09	675,053.41	
4,850.00	0.00	0.00	4,850.00	1,417.60	0.00	0.00	0.00	0.00	598,088.09	675,053.41	
4,900.00	0.00	0.00	4,900.00	1,467.60	0.00	0.00	0.00	0.00	598,088.09	675,053.41	
4,950.00	0.00	0.00	4,950.00	1,517.60	0.00	0.00	0.00	0.00	598,088.09	675,053.41	
5,000.00	0.00	0.00	5,000.00	1,567.60	0.00	0.00	0.00	0.00	598,088.09	675,053.41	
5,050.00	0.00	0.00	5,050.00	1,617.60	0.00	0.00	0.00	0.00	598,088.09	675,053.41	
5,100.00	0.00	0.00	5,100.00	1,667.60	0.00	0.00	0.00	0.00	598,088.09	675,053.41	
5,150.00	0.00	0.00	5,150.00	1,717.60	0.00	0.00	0.00	0.00	598,088.09	675,053.41	
5,200.00	0.00	0.00	5,200.00	1,767.60	0.00	0.00	0.00	0.00	598,088.09	675,053.41	
5,250.00	0.00	0.00	5,250.00	1,817.60	0.00	0.00	0.00	0.00	598,088.09	675,053.41	
5,300.00	0.00	0.00	5,300.00	1,867.60	0.00	0.00	0.00	0.00	598,088.09	675,053.41	
5,350.00	0.00	0.00	5,350.00	1,917.60	0.00	0.00	0.00	0.00	598,088.09	675,053.41	

Pathfinder Pathfinder X & Y Report

Company:	Devon Energy, Inc.	Local Co-ordinate Reference:	Well 4H
Project:	Eddy County	TVD Reference:	KB = 26.2 @ 3432.40usft (H&P 300)
Site:	Rigel 20 Federal Com	MD Reference:	KB = 26.2 @ 3432.40usft (H&P 300)
Well:	4H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	Plan #1	Database:	EDM 5000.1 Single User Db

Planned Survey:											
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	TVDSS (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)	Northing (usft)	Easting (usft)	
5,400.00	0.00	0.00	5,400.00	1,967.60	0.00	0.00	0.00	0.00	598,088.09	675,053.41	
5,450.00	0.00	0.00	5,450.00	2,017.60	0.00	0.00	0.00	0.00	598,088.09	675,053.41	
5,500.00	0.00	0.00	5,500.00	2,067.60	0.00	0.00	0.00	0.00	598,088.09	675,053.41	
5,550.00	0.00	0.00	5,550.00	2,117.60	0.00	0.00	0.00	0.00	598,088.09	675,053.41	
5,600.00	0.00	0.00	5,600.00	2,167.60	0.00	0.00	0.00	0.00	598,088.09	675,053.41	
5,650.00	0.00	0.00	5,650.00	2,217.60	0.00	0.00	0.00	0.00	598,088.09	675,053.41	
5,700.00	0.00	0.00	5,700.00	2,267.60	0.00	0.00	0.00	0.00	598,088.09	675,053.41	
5,750.00	0.00	0.00	5,750.00	2,317.60	0.00	0.00	0.00	0.00	598,088.09	675,053.41	
5,800.00	0.00	0.00	5,800.00	2,367.60	0.00	0.00	0.00	0.00	598,088.09	675,053.41	
5,850.00	0.00	0.00	5,850.00	2,417.60	0.00	0.00	0.00	0.00	598,088.09	675,053.41	
5,900.00	0.00	0.00	5,900.00	2,467.60	0.00	0.00	0.00	0.00	598,088.09	675,053.41	
5,950.00	0.00	0.00	5,950.00	2,517.60	0.00	0.00	0.00	0.00	598,088.09	675,053.41	
6,000.00	0.00	0.00	6,000.00	2,567.60	0.00	0.00	0.00	0.00	598,088.09	675,053.41	
6,050.00	0.00	0.00	6,050.00	2,617.60	0.00	0.00	0.00	0.00	598,088.09	675,053.41	
6,100.00	0.00	0.00	6,100.00	2,667.60	0.00	0.00	0.00	0.00	598,088.09	675,053.41	
6,150.00	0.00	0.00	6,150.00	2,717.60	0.00	0.00	0.00	0.00	598,088.09	675,053.41	
6,200.00	0.00	0.00	6,200.00	2,767.60	0.00	0.00	0.00	0.00	598,088.09	675,053.41	
6,250.00	0.00	0.00	6,250.00	2,817.60	0.00	0.00	0.00	0.00	598,088.09	675,053.41	
6,300.00	0.00	0.00	6,300.00	2,867.60	0.00	0.00	0.00	0.00	598,088.09	675,053.41	
6,350.00	0.00	0.00	6,350.00	2,917.60	0.00	0.00	0.00	0.00	598,088.09	675,053.41	
6,400.00	0.00	0.00	6,400.00	2,967.60	0.00	0.00	0.00	0.00	598,088.09	675,053.41	
6,450.00	0.00	0.00	6,450.00	3,017.60	0.00	0.00	0.00	0.00	598,088.09	675,053.41	
6,500.00	0.00	0.00	6,500.00	3,067.60	0.00	0.00	0.00	0.00	598,088.09	675,053.41	
6,550.00	0.00	0.00	6,550.00	3,117.60	0.00	0.00	0.00	0.00	598,088.09	675,053.41	
6,600.00	0.00	0.00	6,600.00	3,167.60	0.00	0.00	0.00	0.00	598,088.09	675,053.41	
6,650.00	0.00	0.00	6,650.00	3,217.60	0.00	0.00	0.00	0.00	598,088.09	675,053.41	
6,700.00	0.00	0.00	6,700.00	3,267.60	0.00	0.00	0.00	0.00	598,088.09	675,053.41	

Pathfinder Pathfinder X & Y Report

Company:	Devon Energy, Inc.	Local Co-ordinate Reference:	Well 4H
Project:	Eddy County	TVD Reference:	KB = 26.2 @ 3432.40usft (H&P 300)
Site:	Rigel 20 Federal Com	MD Reference:	KB = 26.2 @ 3432.40usft (H&P 300)
Well:	4H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	Plan #1	Database:	EDM 5000.1 Single User Db

Planned Survey:											
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	TVDSS (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)	Northing (usft)	Easting (usft)	
6,750.00	0.00	0.00	6,750.00	3,317.60	0.00	0.00	0.00	0.00	598,088.09	675,053.41	
6,800.00	0.00	0.00	6,800.00	3,367.60	0.00	0.00	0.00	0.00	598,088.09	675,053.41	
6,850.00	0.00	0.00	6,850.00	3,417.60	0.00	0.00	0.00	0.00	598,088.09	675,053.41	
6,900.00	0.00	0.00	6,900.00	3,467.60	0.00	0.00	0.00	0.00	598,088.09	675,053.41	
6,950.00	0.00	0.00	6,950.00	3,517.60	0.00	0.00	0.00	0.00	598,088.09	675,053.41	
7,000.00	0.00	0.00	7,000.00	3,567.60	0.00	0.00	0.00	0.00	598,088.09	675,053.41	
7,050.00	0.00	0.00	7,050.00	3,617.60	0.00	0.00	0.00	0.00	598,088.09	675,053.41	
7,100.00	0.00	0.00	7,100.00	3,667.60	0.00	0.00	0.00	0.00	598,088.09	675,053.41	
7,150.00	0.00	0.00	7,150.00	3,717.60	0.00	0.00	0.00	0.00	598,088.09	675,053.41	
7,200.00	0.00	0.00	7,200.00	3,767.60	0.00	0.00	0.00	0.00	598,088.09	675,053.41	
7,250.00	0.00	0.00	7,250.00	3,817.60	0.00	0.00	0.00	0.00	598,088.09	675,053.41	
7,300.00	0.00	0.00	7,300.00	3,867.60	0.00	0.00	0.00	0.00	598,088.09	675,053.41	
7,350.00	0.00	0.00	7,350.00	3,917.60	0.00	0.00	0.00	0.00	598,088.09	675,053.41	
7,400.00	0.00	0.00	7,400.00	3,967.60	0.00	0.00	0.00	0.00	598,088.09	675,053.41	
7,450.00	0.00	0.00	7,450.00	4,017.60	0.00	0.00	0.00	0.00	598,088.09	675,053.41	
7,500.00	0.00	0.00	7,500.00	4,067.60	0.00	0.00	0.00	0.00	598,088.09	675,053.41	
7,550.00	0.00	0.00	7,550.00	4,117.60	0.00	0.00	0.00	0.00	598,088.09	675,053.41	
7,600.00	0.00	0.00	7,600.00	4,167.60	0.00	0.00	0.00	0.00	598,088.09	675,053.41	
7,650.00	0.00	0.00	7,650.00	4,217.60	0.00	0.00	0.00	0.00	598,088.09	675,053.41	
7,700.00	0.00	0.00	7,700.00	4,267.60	0.00	0.00	0.00	0.00	598,088.09	675,053.41	
7,750.00	0.00	0.00	7,750.00	4,317.60	0.00	0.00	0.00	0.00	598,088.09	675,053.41	
7,800.00	0.00	0.00	7,800.00	4,367.60	0.00	0.00	0.00	0.00	598,088.09	675,053.41	
7,850.00	0.00	0.00	7,850.00	4,417.60	0.00	0.00	0.00	0.00	598,088.09	675,053.41	
7,900.00	0.00	0.00	7,900.00	4,467.60	0.00	0.00	0.00	0.00	598,088.09	675,053.41	
7,950.00	0.00	0.00	7,950.00	4,517.60	0.00	0.00	0.00	0.00	598,088.09	675,053.41	
8,000.00	0.00	0.00	8,000.00	4,567.60	0.00	0.00	0.00	0.00	598,088.09	675,053.41	
8,050.00	0.00	0.00	8,050.00	4,617.60	0.00	0.00	0.00	0.00	598,088.09	675,053.41	

Pathfinder

Pathfinder X & Y Report

Company:	Devon Energy, Inc.	Local Co-ordinate Reference:	Well 4H
Project:	Eddy County	TVD Reference:	KB = 26.2 @ 3432.40usft (H&P 300)
Site:	Rigel 20 Federal Com	MD Reference:	KB = 26.2 @ 3432.40usft (H&P 300)
Well:	4H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	Plan #1	Database:	EDM 5000.1 Single User Db

Planned Survey											
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	TVDSS (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)	Northing (usft)	Easting (usft)	
8,100.00	0.00	0.00	8,100.00	4,667.60	0.00	0.00	0.00	0.00	598,088.09	675,053.41	
8,150.00	0.00	0.00	8,150.00	4,717.60	0.00	0.00	0.00	0.00	598,088.09	675,053.41	
8,200.00	0.00	0.00	8,200.00	4,767.60	0.00	0.00	0.00	0.00	598,088.09	675,053.41	
8,250.00	0.00	0.00	8,250.00	4,817.60	0.00	0.00	0.00	0.00	598,088.09	675,053.41	
8,300.00	0.00	0.00	8,300.00	4,867.60	0.00	0.00	0.00	0.00	598,088.09	675,053.41	
8,305.05	0.00	0.00	8,305.05	4,872.65	0.00	0.00	0.00	0.00	598,088.09	675,053.41	
8,350.00	4.50	154.16	8,349.95	4,917.55	-1.59	0.77	1.17	10.00	598,086.50	675,054.18	
8,400.00	9.50	154.16	8,399.57	4,967.17	-7.06	3.42	5.23	10.00	598,081.03	675,056.83	
8,450.00	14.50	154.16	8,448.46	5,016.06	-16.41	7.95	12.15	10.00	598,071.68	675,061.36	
8,500.00	19.50	154.16	8,496.26	5,063.86	-29.56	14.32	21.89	10.00	598,058.53	675,067.73	
8,550.00	24.50	154.16	8,542.61	5,110.21	-46.41	22.48	34.36	10.00	598,041.68	675,075.89	
8,600.00	29.50	154.16	8,587.14	5,154.74	-66.83	32.37	49.47	10.00	598,021.26	675,085.78	
8,650.00	34.50	154.16	8,629.54	5,197.14	-90.67	43.91	67.12	10.00	597,997.42	675,097.32	
8,700.00	39.50	154.16	8,669.46	5,237.06	-117.74	57.02	87.16	10.00	597,970.35	675,110.43	
8,750.00	44.50	154.16	8,706.61	5,274.21	-147.84	71.59	109.44	10.00	597,940.25	675,125.00	
8,800.00	49.50	154.16	8,740.70	5,308.30	-180.74	87.53	133.80	10.00	597,907.35	675,140.94	
8,850.00	54.50	154.16	8,771.47	5,339.07	-216.18	104.69	160.04	10.00	597,871.91	675,158.10	
8,900.00	59.50	154.16	8,798.70	5,366.30	-253.91	122.96	187.97	10.00	597,834.18	675,176.37	
8,950.00	64.50	154.16	8,822.17	5,389.77	-293.63	142.20	217.37	10.00	597,794.46	675,195.61	
9,000.00	69.50	154.16	8,841.71	5,409.31	-335.04	162.25	248.02	10.00	597,753.05	675,215.66	
9,050.00	74.50	154.16	8,857.16	5,424.76	-377.82	182.97	279.70	10.00	597,710.27	675,236.38	
9,100.00	79.50	154.16	8,868.40	5,436.00	-421.65	204.20	312.15	10.00	597,666.44	675,257.61	
9,150.00	84.50	154.16	8,875.37	5,442.97	-466.20	225.77	345.12	10.00	597,621.89	675,279.18	
9,200.00	89.50	154.16	8,877.99	5,445.59	-511.13	247.53	378.38	10.00	597,576.96	675,300.94	
9,202.45	89.74	154.16	8,878.00	5,445.60	-513.33	248.60	380.01	10.00	597,574.76	675,302.01	
9,250.00	89.73	152.26	8,878.22	5,445.82	-555.77	270.03	412.28	4.00	597,532.32	675,323.44	
9,300.00	89.73	150.26	8,878.45	5,446.05	-599.61	294.07	447.43	4.00	597,488.48	675,347.48	

Pathfinder

Pathfinder X & Y Report

Company:	Devon Energy, Inc.	Local Co-ordinate Reference:	Well 4H
Project:	Eddy County	TVD Reference:	KB = 26.2 @ 3432.40usft (H&P 300)
Site:	Rigel 20 Federal Com	MD Reference:	KB = 26.2 @ 3432.40usft (H&P 300)
Well:	4H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	Plan #1	Database:	EDM 5000.1 Single User Db

Planned Survey										
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	TVDSS (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)	Northing (usft)	Easting (usft)
9,350.00	89.72	148.26	8,878.69	5,446.29	-642.58	319.63	483.81	4.00	597,445.51	675,373.04
9,400.00	89.72	146.26	8,878.93	5,446.53	-684.64	346.67	521.36	4.00	597,403.45	675,400.08
9,450.00	89.72	144.26	8,879.18	5,446.78	-725.72	375.16	560.04	4.00	597,362.37	675,428.57
9,500.00	89.71	142.26	8,879.43	5,447.03	-765.78	405.07	599.80	4.00	597,322.31	675,458.48
9,550.00	89.71	140.26	8,879.68	5,447.28	-804.78	436.36	640.60	4.00	597,283.31	675,489.77
9,600.00	89.71	138.26	8,879.94	5,447.54	-842.66	468.99	682.38	4.00	597,245.43	675,522.40
9,650.00	89.70	136.26	8,880.20	5,447.80	-879.38	502.92	725.09	4.00	597,208.71	675,556.33
9,700.00	89.70	134.26	8,880.46	5,448.06	-914.89	538.11	768.68	4.00	597,173.20	675,591.52
9,750.00	89.70	132.26	8,880.72	5,448.32	-949.15	574.53	813.10	4.00	597,138.94	675,627.94
9,800.00	89.70	130.26	8,880.98	5,448.58	-982.12	612.11	858.30	4.00	597,105.97	675,665.52
9,850.00	89.69	128.26	8,881.25	5,448.85	-1,013.76	650.82	904.21	4.00	597,074.33	675,704.23
9,900.00	89.69	126.26	8,881.52	5,449.12	-1,044.03	690.62	950.79	4.00	597,044.06	675,744.03
9,950.00	89.69	124.26	8,881.78	5,449.38	-1,072.89	731.44	997.97	4.00	597,015.20	675,784.85
10,000.00	89.69	122.26	8,882.05	5,449.65	-1,100.31	773.25	1,045.70	4.00	596,987.78	675,826.66
10,050.00	89.69	120.26	8,882.32	5,449.92	-1,126.25	815.99	1,093.92	4.00	596,961.84	675,869.40
10,100.00	89.69	118.26	8,882.59	5,450.19	-1,150.69	859.61	1,142.57	4.00	596,937.40	675,913.02
10,150.00	89.69	116.26	8,882.85	5,450.45	-1,173.58	904.05	1,191.59	4.00	596,914.51	675,957.46
10,200.00	89.70	114.26	8,883.12	5,450.72	-1,194.92	949.27	1,240.93	4.00	596,893.17	676,002.68
10,250.00	89.70	112.26	8,883.38	5,450.98	-1,214.66	995.21	1,290.52	4.00	596,873.43	676,048.62
10,300.00	89.70	110.26	8,883.65	5,451.25	-1,232.79	1,041.80	1,340.30	4.00	596,855.30	676,095.21
10,350.00	89.70	108.26	8,883.91	5,451.51	-1,249.27	1,089.00	1,390.22	4.00	596,838.82	676,142.41
10,400.00	89.70	106.26	8,884.17	5,451.77	-1,264.11	1,136.75	1,440.20	4.00	596,823.98	676,190.16
10,450.00	89.71	104.26	8,884.42	5,452.02	-1,277.26	1,184.98	1,490.19	4.00	596,810.83	676,238.39
10,500.00	89.71	102.26	8,884.68	5,452.28	-1,288.73	1,233.64	1,540.14	4.00	596,799.36	676,287.05
10,550.00	89.72	100.26	8,884.93	5,452.53	-1,298.49	1,282.68	1,589.96	4.00	596,789.60	676,336.09
10,600.00	89.72	98.26	8,885.17	5,452.77	-1,306.53	1,332.02	1,639.62	4.00	596,781.56	676,385.43
10,650.00	89.72	96.26	8,885.42	5,453.02	-1,312.85	1,381.62	1,689.05	4.00	596,775.24	676,435.03

Pathfinder

Pathfinder X & Y Report

Company: Devon Energy, Inc.		Local Co-ordinate Reference:				Well 4H	
Project: Eddy County		TVD Reference:				KB = 26.2 @ 3432.40usft (H&P 300)	
Site: Rigel 20 Federal Com		MD Reference:				KB = 26.2 @ 3432.40usft (H&P 300)	
Well: 4H		North Reference:				Grid	
Wellbore: OH		Survey Calculation Method:				Minimum Curvature	
Design: Plan #1		Database:				EDM 5000.1 Single User Db	

Planned Survey										
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	TVDSS (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)	Northing (usft)	Easting (usft)
10,700.00	89.73	94.26	8,885.66	5,453.26	-1,317.43	1,431.41	1,738.18	4.00	596,770.66	676,484.82
10,750.00	89.73	92.26	8,885.89	5,453.49	-1,320.27	1,481.32	1,786.95	4.00	596,767.82	676,534.73
10,800.00	89.74	90.26	8,886.12	5,453.72	-1,321.37	1,531.31	1,835.32	4.00	596,766.72	676,584.72
10,806.20	89.74	90.01	8,886.15	5,453.75	-1,321.38	1,537.51	1,841.28	4.00	596,766.71	676,590.92
10,850.00	89.74	90.01	8,886.35	5,453.95	-1,321.39	1,581.31	1,883.40	0.00	596,766.70	676,634.72
10,900.00	89.74	90.01	8,886.57	5,454.17	-1,321.40	1,631.31	1,931.48	0.00	596,766.69	676,684.72
10,950.00	89.74	90.01	8,886.80	5,454.40	-1,321.41	1,681.31	1,979.56	0.00	596,766.68	676,734.72
11,000.00	89.74	90.01	8,887.03	5,454.63	-1,321.41	1,731.31	2,027.64	0.00	596,766.68	676,784.72
11,050.00	89.74	90.01	8,887.26	5,454.86	-1,321.42	1,781.31	2,075.72	0.00	596,766.67	676,834.72
11,100.00	89.74	90.01	8,887.48	5,455.08	-1,321.43	1,831.31	2,123.80	0.00	596,766.66	676,884.72
11,150.00	89.74	90.01	8,887.71	5,455.31	-1,321.44	1,881.31	2,171.88	0.00	596,766.65	676,934.72
11,200.00	89.74	90.01	8,887.94	5,455.54	-1,321.45	1,931.30	2,219.95	0.00	596,766.64	676,984.71
11,250.00	89.74	90.01	8,888.16	5,455.76	-1,321.45	1,981.30	2,268.03	0.00	596,766.64	677,034.71
11,300.00	89.74	90.01	8,888.39	5,455.99	-1,321.46	2,031.30	2,316.11	0.00	596,766.63	677,084.71
11,350.00	89.74	90.01	8,888.62	5,456.22	-1,321.47	2,081.30	2,364.19	0.00	596,766.62	677,134.71
11,400.00	89.74	90.01	8,888.84	5,456.44	-1,321.48	2,131.30	2,412.27	0.00	596,766.61	677,184.71
11,450.00	89.74	90.01	8,889.07	5,456.67	-1,321.49	2,181.30	2,460.35	0.00	596,766.60	677,234.71
11,500.00	89.74	90.01	8,889.30	5,456.90	-1,321.49	2,231.30	2,508.43	0.00	596,766.60	677,284.71
11,550.00	89.74	90.01	8,889.52	5,457.12	-1,321.50	2,281.30	2,556.51	0.00	596,766.59	677,334.71
11,600.00	89.74	90.01	8,889.75	5,457.35	-1,321.51	2,331.30	2,604.59	0.00	596,766.58	677,384.71
11,650.00	89.74	90.01	8,889.98	5,457.58	-1,321.52	2,381.30	2,652.67	0.00	596,766.57	677,434.71
11,700.00	89.74	90.01	8,890.20	5,457.80	-1,321.53	2,431.30	2,700.75	0.00	596,766.56	677,484.71
11,750.00	89.74	90.01	8,890.43	5,458.03	-1,321.53	2,481.30	2,748.83	0.00	596,766.56	677,534.71
11,800.00	89.74	90.01	8,890.66	5,458.26	-1,321.54	2,531.30	2,796.91	0.00	596,766.55	677,584.71
11,850.00	89.74	90.01	8,890.89	5,458.49	-1,321.55	2,581.30	2,844.98	0.00	596,766.54	677,634.71
11,900.00	89.74	90.01	8,891.11	5,458.71	-1,321.56	2,631.30	2,893.06	0.00	596,766.53	677,684.71
11,950.00	89.74	90.01	8,891.34	5,458.94	-1,321.57	2,681.30	2,941.14	0.00	596,766.52	677,734.71

Pathfinder

Pathfinder X & Y Report

Company:	Devon Energy, Inc.	Local Co-ordinate Reference:	Well 4H
Project:	Eddy County	TVD Reference:	KB = 26.2 @ 3432.40usft (H&P 300)
Site:	Rigel 20 Federal Com	MD Reference:	KB = 26.2 @ 3432.40usft (H&P 300)
Well:	4H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	Plan #1	Database:	EDM 5000.1 Single User Db

Planned Survey										
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	TVDSS (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)	Northing (usft)	Easting (usft)
12,000.00	89.74	90.01	8,891.57	5,459.17	-1,321.57	2,731.30	2,989.22	0.00	596,766.52	677,784.71
12,050.00	89.74	90.01	8,891.79	5,459.39	-1,321.58	2,781.30	3,037.30	0.00	596,766.51	677,834.71
12,100.00	89.74	90.01	8,892.02	5,459.62	-1,321.59	2,831.30	3,085.38	0.00	596,766.50	677,884.71
12,150.00	89.74	90.01	8,892.25	5,459.85	-1,321.60	2,881.29	3,133.46	0.00	596,766.49	677,934.70
12,200.00	89.74	90.01	8,892.47	5,460.07	-1,321.61	2,931.29	3,181.54	0.00	596,766.48	677,984.70
12,250.00	89.74	90.01	8,892.70	5,460.30	-1,321.61	2,981.29	3,229.62	0.00	596,766.48	678,034.70
12,300.00	89.74	90.01	8,892.93	5,460.53	-1,321.62	3,031.29	3,277.70	0.00	596,766.47	678,084.70
12,350.00	89.74	90.01	8,893.15	5,460.75	-1,321.63	3,081.29	3,325.78	0.00	596,766.46	678,134.70
12,400.00	89.74	90.01	8,893.38	5,460.98	-1,321.64	3,131.29	3,373.86	0.00	596,766.45	678,184.70
12,450.00	89.74	90.01	8,893.61	5,461.21	-1,321.65	3,181.29	3,421.94	0.00	596,766.44	678,234.70
12,500.00	89.74	90.01	8,893.84	5,461.44	-1,321.65	3,231.29	3,470.01	0.00	596,766.44	678,284.70
12,550.00	89.74	90.01	8,894.06	5,461.66	-1,321.66	3,281.29	3,518.09	0.00	596,766.43	678,334.70
12,600.00	89.74	90.01	8,894.29	5,461.89	-1,321.67	3,331.29	3,566.17	0.00	596,766.42	678,384.70
12,650.00	89.74	90.01	8,894.52	5,462.12	-1,321.68	3,381.29	3,614.25	0.00	596,766.41	678,434.70
12,700.00	89.74	90.01	8,894.74	5,462.34	-1,321.69	3,431.29	3,662.33	0.00	596,766.40	678,484.70
12,750.00	89.74	90.01	8,894.97	5,462.57	-1,321.70	3,481.29	3,710.41	0.00	596,766.39	678,534.70
12,800.00	89.74	90.01	8,895.20	5,462.80	-1,321.70	3,531.29	3,758.49	0.00	596,766.39	678,584.70
12,850.00	89.74	90.01	8,895.42	5,463.02	-1,321.71	3,581.29	3,806.57	0.00	596,766.38	678,634.70
12,900.00	89.74	90.01	8,895.65	5,463.25	-1,321.72	3,631.29	3,854.65	0.00	596,766.37	678,684.70
12,950.00	89.74	90.01	8,895.88	5,463.48	-1,321.73	3,681.29	3,902.73	0.00	596,766.36	678,734.70
13,000.00	89.74	90.01	8,896.10	5,463.70	-1,321.74	3,731.29	3,950.81	0.00	596,766.35	678,784.70
13,050.00	89.74	90.01	8,896.33	5,463.93	-1,321.74	3,781.29	3,998.89	0.00	596,766.35	678,834.70
13,100.00	89.74	90.01	8,896.56	5,464.16	-1,321.75	3,831.29	4,046.96	0.00	596,766.34	678,884.70
13,150.00	89.74	90.01	8,896.78	5,464.38	-1,321.76	3,881.28	4,095.04	0.00	596,766.33	678,934.69
13,200.00	89.74	90.01	8,897.01	5,464.61	-1,321.77	3,931.28	4,143.12	0.00	596,766.32	678,984.69
13,250.00	89.74	90.01	8,897.24	5,464.84	-1,321.78	3,981.28	4,191.20	0.00	596,766.31	679,034.69
13,300.00	89.74	90.01	8,897.47	5,465.07	-1,321.78	4,031.28	4,239.28	0.00	596,766.31	679,084.69

Pathfinder Pathfinder X & Y Report

Company:	Devon Energy, Inc.	Local Co-ordinate Reference:	Well 4H
Project:	Eddy County	TVD Reference:	KB = 26.2 @ 3432.40usft (H&P 300)
Site:	Rigel 20 Federal Com	MD Reference:	KB = 26.2 @ 3432.40usft (H&P 300)
Well:	4H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	Plan #1	Database:	EDM 5000.1 Single User Db

Planned Survey										
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	TVDSS (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)	Northing (usft)	Easting (usft)
13,350.00	89.74	90.01	8,897.69	5,465.29	-1,321.79	4,081.28	4,287.36	0.00	596,766.30	679,134.69
13,400.00	89.74	90.01	8,897.92	5,465.52	-1,321.80	4,131.28	4,335.44	0.00	596,766.29	679,184.69
13,450.00	89.74	90.01	8,898.15	5,465.75	-1,321.81	4,181.28	4,383.52	0.00	596,766.28	679,234.69
13,500.00	89.74	90.01	8,898.37	5,465.97	-1,321.82	4,231.28	4,431.60	0.00	596,766.27	679,284.69
13,550.00	89.74	90.01	8,898.60	5,466.20	-1,321.82	4,281.28	4,479.68	0.00	596,766.27	679,334.69
13,600.00	89.74	90.01	8,898.83	5,466.43	-1,321.83	4,331.28	4,527.76	0.00	596,766.26	679,384.69
13,650.00	89.74	90.01	8,899.05	5,466.65	-1,321.84	4,381.28	4,575.84	0.00	596,766.25	679,434.69
13,700.00	89.74	90.01	8,899.28	5,466.88	-1,321.85	4,431.28	4,623.92	0.00	596,766.24	679,484.69
13,750.00	89.74	90.01	8,899.51	5,467.11	-1,321.86	4,481.28	4,671.99	0.00	596,766.23	679,534.69
13,800.00	89.74	90.01	8,899.73	5,467.33	-1,321.86	4,531.28	4,720.07	0.00	596,766.23	679,584.69
13,850.00	89.74	90.01	8,899.96	5,467.56	-1,321.87	4,581.28	4,768.15	0.00	596,766.22	679,634.69
13,898.37	89.74	90.01	8,900.18	5,467.78	-1,321.88	4,629.65	4,814.67	0.00	596,766.21	679,683.06

Checked By: _____	Approved By: _____	Date: _____
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Project: Eddy County
Site: Rigel 20 Federal Com
Well: 4H
Wellbore: OH
Plan: Plan #1 (4H/OH)

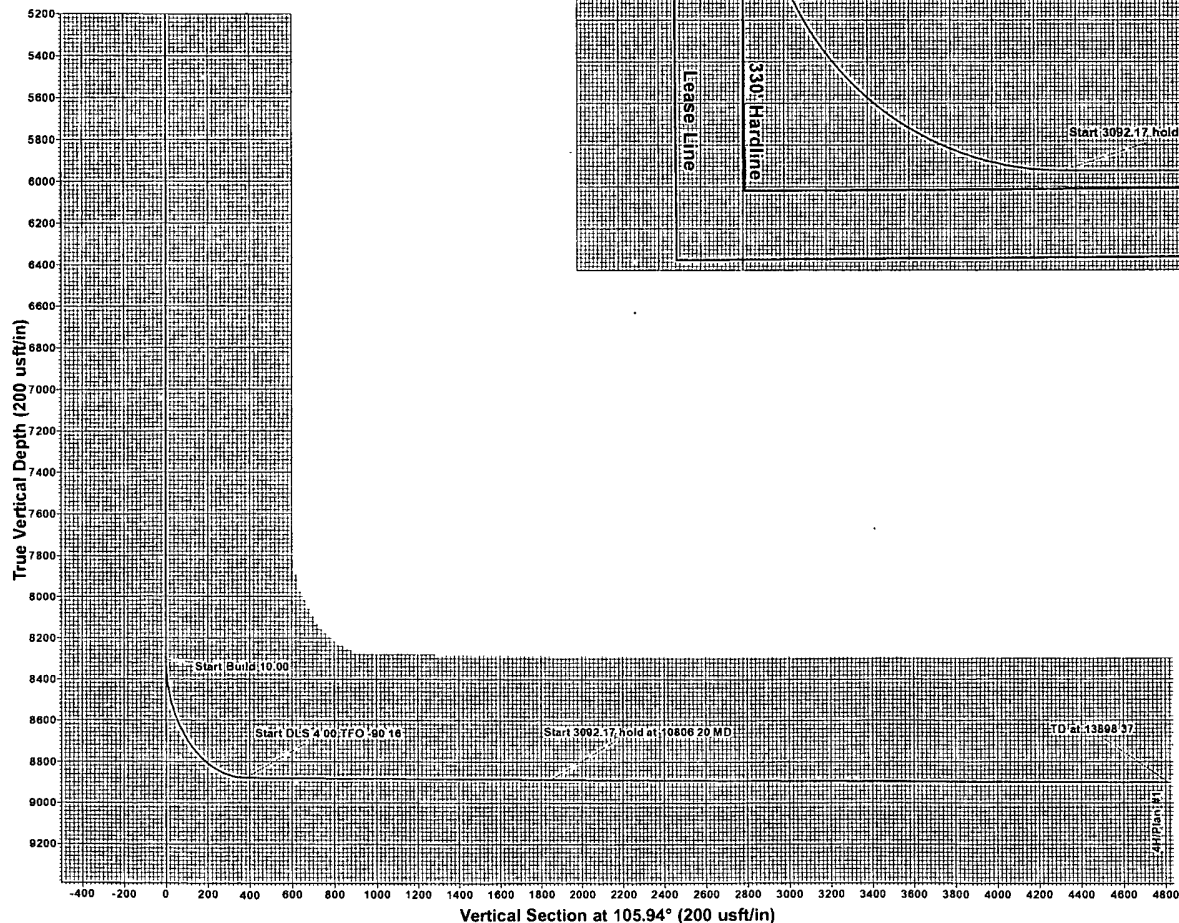


Azimuths to Grid North
True North: -0.23°
Magnetic North: 7.50°

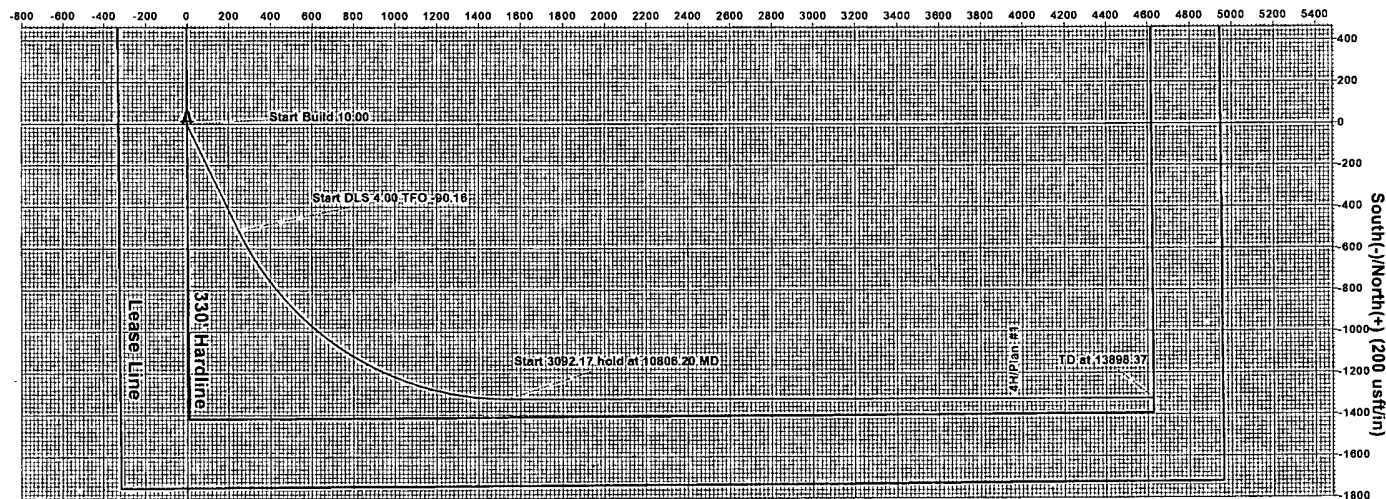
Magnetic Field
Strength: 48849.4snT
Dip Angle: 60.54°
Date: 8/29/2011
Model: IGRF200510

PATHFINDER®
A Schlumberger Company

PROJECT DETAILS, Eddy County
Geodetic System US State Plane 1983
Datum North American Datum 1983
Ellipsoid GRS 1980
Zone New Mexico Eastern Zone
System Datum Mean Sea Level
Local North Grid



West(-)/East(+) (200 usft/in)



SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Diag	TFace	VSect	Target
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2	8305.05	0.00	0.00	8305.05	0.00	0.00	0.00	0.00	0.00	
3	9202.45	89.74	154.16	8878.00	-513.33	248.60	10.00	154.16	380.01	
4	10806.20	89.74	90.01	8886.15	-1321.38	1537.51	4.00	-90.16	1841.28	PBHL(4H)
5	13898.37	89.74	90.01	8900.18	-1321.88	4629.65	0.00	0.00	4814.67	PBHL(4H)

WELL DETAILS 4H

Ground Elevation 3406.20
RKB Elevation KB = 26.2 @ 3432.40usft (H&P 300)
Rig Name H&P 300

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.00	0.00	598086.090	675053.410	32° 38' 36.387 N	103° 53' 56.097 W	

WELLBORE TARGET DETAILS (MAP CO-ORDINATES)

Name	TVD	+N/-S	+E/-W	Northing	Easting	Shape
PBHL(4H)	8900.00	-1321.88	4629.65	598766.210	679683.060	Point

Plan Plan #1 (4H/OH)

Created By Sam Biffle Date 17 07, August 29 2011
Checked: Date:

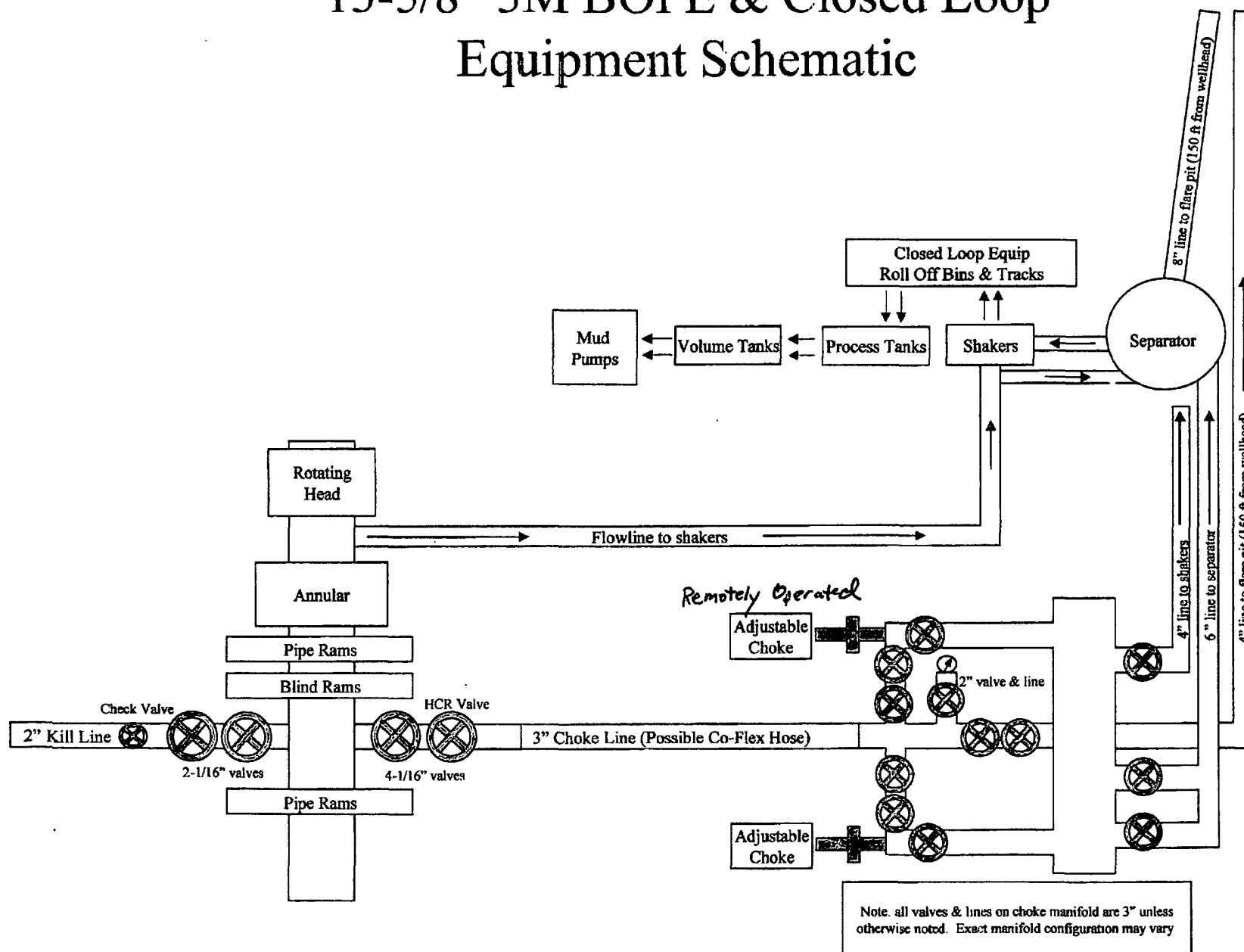
Attachment to Exhibit #1
NOTES REGARDING BLOWOUT PREVENTERS
Devon Energy Production Company, LP

Rigel 20 Federal Com 4H

Surface Location: 1750' FSL & 330' FWL, Unit L, Sec 20 T19S R31E, Eddy, NM
Bottom hole Location: 400' FSL & 330' FEL, Unit P, 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.

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



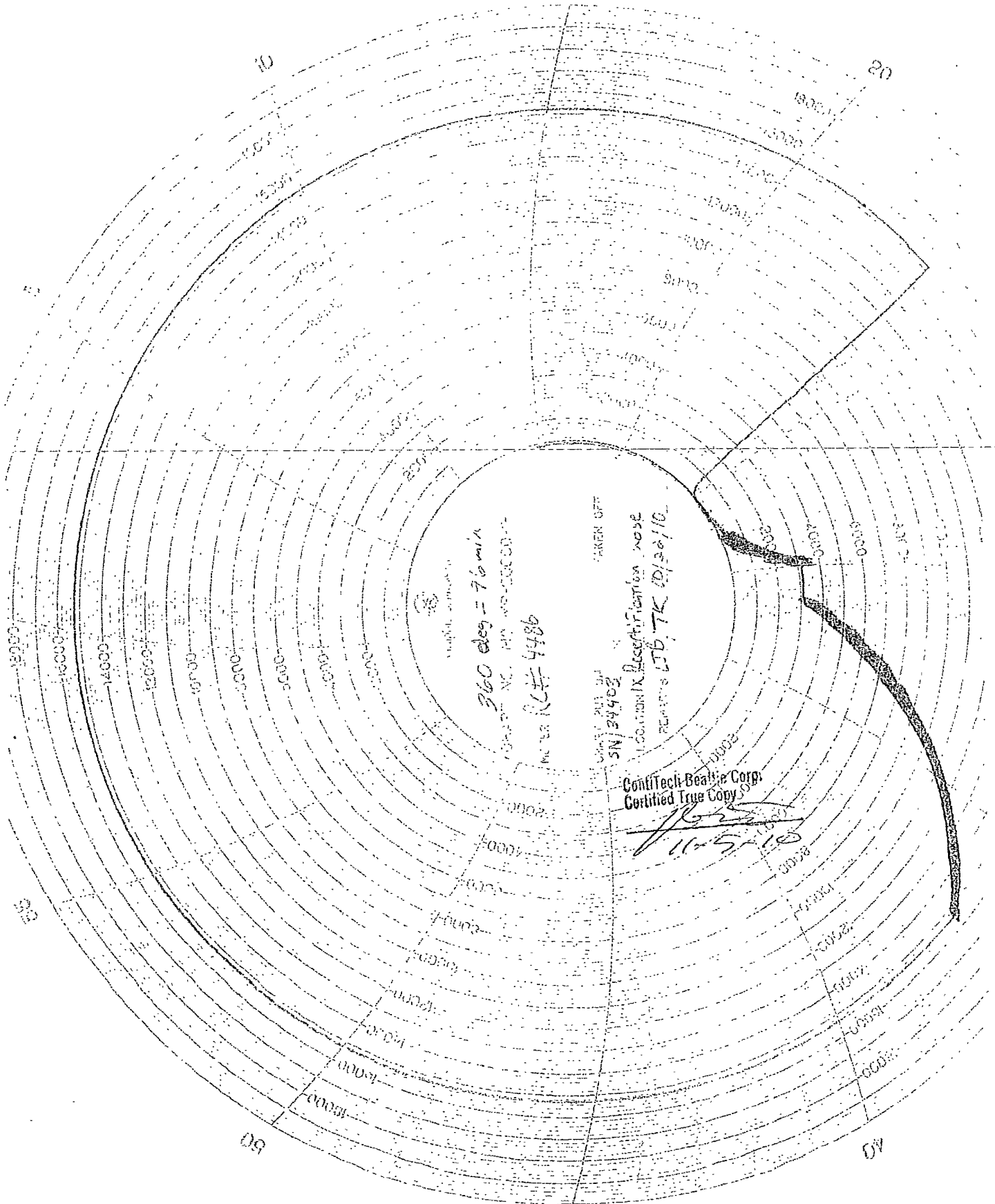
Hydrostatic Test Certificate

Certificate Number: 4520	PBC No: 10321	Customer Name & Address
Customer Purchase Order No: RIG 300		HELMERICH & PAYNE INT'L 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

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

