

APR 11 2013

Split Estate
UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

OCD Hobbs

RECEIVED

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

APPLICATION FOR PERMIT TO DRILL OR REENTER

1a. Type of work: ☒ DRILL ☐ REENTER		5. Lease Serial No. NMLC-061842
1b. Type of Well: ☒ Oil Well ☐ Gas Well ☐ Other ☒ Single Zone ☐ Multiple Zone		6. If Indian, Allottee or Tribe Name
2. Name of Operator Devon Energy Production Company, L.P. (6137)		7. If Unit or CA Agreement, Name and No.
3a. Address 333 W. Sheridan Ave. Oklahoma City, OK 73102	3b. Phone No. (include area code) 405-552-7848	8. Lease Name and Well No. BAE 14 FED COM 8H (39816)
4. Location of Well (Report location clearly and in accordance with any State requirements.) At surface 990 FSL & 200 FEL Unit P PP: 710 FSL & 530 FEL At proposed prod. zone 710 FSL & 330 FWL Unit M		9. API Well No. 30-025-41105
14. Distance in miles and direction from nearest town or post office* Approximately 5 miles southeast of Maljamar, NM		10. Field and Pool, or Exploratory Maljamar Yeso, WEST (44500) Ka
15. Distance from proposed* 330' location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any)	16. No. of acres in lease 320 480 acres	11. Sec., T. R. M. or Blk. and Survey or Area 14-17S-32E
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. See attached map	19. Proposed Depth TVD: 6,902' MD: 11,313'	12. County or Parish Lea County
20. BLM/BIA Bond No. on file CO-1104 & NMB-000801	13. State NM	
21. Elevations (Show whether DF, KDB, RT, GL, etc.) 4,082.4' GL	22. Approximate date work will start*	23. Estimated duration 45 days

24. Attachments TO BE PAD DRILLED W/ BAE 14 FED COM 7H

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 D. Q.	Name (Printed/Typed) David H. Cook	Date 2/25/2013
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Title
Regulatory Specialist

Approved by (Signature) James A. Ames	Name (Printed/Typed) James A. Ames	Date APR - 5 2013
Title FIELD MANAGER	Office CARLSBAD FIELD OFFICE	

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

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.

APPROVAL FOR TWO YEARS

(Continued on page 2)

*(Instructions on page 2)

Ka
04/12/13

Roswell Controlled Water Basin

COPY

**SEE ATTACHED FOR
CONDITIONS OF APPROVAL**

**Approval Subject to General Requirements
& Special Stipulations Attached**

APR 15 2013

DRILLING PROGRAM

Devon Energy Production Company, LP

BAE 14 Fed Com 8H

Surface Location: 990 FSL & 200 FEL, Unit P, Sec 14 T17S R32E, Lea, NM

Bottom Hole Location: 710 FSL & 330 FWL, Unit M, Sec 14 T17S R32E, Lea, NM

1. Geologic Name of Surface Formation

a. Quaternary

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

a. Fresh Water	70'	
b. Rustler	1,030'	
c. Top of Salt	1,275'	
d. Base of Salt	2,410'	
e. Yates	2,420'	
f. Seven Rivers	2,760'	
g. Queen	3,360'	Oil
h. Grayburg	3,800'	Oil
i. San Andres	4,010'	Oil
j. Glorieta	5,660'	Oil
k. Paddock	5,760'	Oil
Total Depth	11,313' MD	6,902' TVD

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

<u>Hole</u> <u>Size</u>	<u>Hole</u> <u>Interval</u>	<u>OD Csg</u>	<u>Casing</u> <u>Interval</u>	<u>Weight</u>	<u>Collar</u>	<u>Grade</u>
17-1/2"	0 – 1,100'	13-3/8"	0 – 1,100'	48#	STC	H-40
12-1/4"	1,100' – 2,550'	9-5/8"	0 – 2,550'	36#	LTC	J-55
8-3/4"	2,550' – 6,000'	5-1/2"	0 – 6,000'	17#	LTC	HCP-110
8-3/4"	6,000' – 11,313'	5-1/2"	6,000' – 11,313'	17#	BTC	HCP-110

MAXIMUM LATERAL TVD **6,902'**

Design Parameter Factors:

<u>Casing Size</u>	<u>Collapse Design</u> <u>Factor</u>	<u>Burst Design</u> <u>Factor</u>	<u>Tension Design</u> <u>Factor</u>
13 3/8"	1.65	3.70	6.71
9 5/8"	1.55	2.71	5.03
5 1/2"	2.31	3.29	2.31
5 1/2"	3.06	3.79	6.29

Cement Program: (cement volumes Surface 100%/ Intermediate 50% Production based on at least 25% excess):

13 3/8" Surface Lead: 480 sx Class C Cement + 2% bwoc Calcium Chloride + 0.125 lbs/sack Poly-E-Flake + 4% bwoc Bentonite + 70.1% Fresh Water, 13.5 ppg, Yield: 1.75 cf/sk.

TOC @ surface

Tail: 515 sx Class C Cement + 2% bwoc Calcium Chloride + 0.125 lbs/sack Poly-E-Flake + 63.1% Fresh Water, 14.8 ppg, Yield: 1.35 cf/sk.

9-5/8" Intermediate Lead: 400 sx (65:35) Class C Cement:Poz (Fly Ash): + 5% bwow Sodium Chloride + 0.125 lbs/sack Poly-E-Flake + 6% bwoc Bentonite + 70.9% Fresh Water, 12.9 ppg, Yield: 1.85 cf/sk

TOC @ surface

Tail: 360 sx Class C Cement + 0.125 lbs/sack Poly-E-Flake + 63.5% Water, 14.8 ppg, Yield: 1.33 cf/sk

5-1/2" Production Lead: 760 sx (65:35) Class H Cement:Poz (Fly Ash) + 6% bwoc Bentonite + 0.2% bwoc HR-601 + 74.1% Fresh Water, 12.5 ppg, Yield: 1.95 cf/sk.

Tail: 1200 sx (50:50) Class H Cement:Poz (Fly Ash) + 1 lb/sk Sodium Chloride + 0.5% bwoc HALAD-344 + 0.4% bwoc CFR-3 + 0.1% bwoc HR-601 + 2% bwoc Bentonite + 58.8% Fresh Water, 14.5 ppg, Yield: 1.22 cf/sk

TOC @ 2050 ft

The above cement volumes could be revised pending the caliper measurement from the open hole logs.

4. Pressure Control Equipment

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

The BOP system used to drill the production hole will consist of a 13-5/8" Double Ram and Annular preventer. (The BOP system will be tested as per BLM Onshore Oil and Gas Order No. 2.) 3M system will be installed 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 5,000 psi WP.

If H&P Rig 416 is utilized to drill this well, a variance to Onshore Oil & Gas Order No. 2 is requested. Co-flex hose will be used between the BOPE & the choke manifold. The hose will be kept as straight as possible with minimal turns. See following specifications for Co-flex hose:

- H&P Rig 416; Serial No. 53622, 35', 3" ID, 10,000 psi W.P., -20 degrees C (-4 degrees F) to +100 degrees C (212 degrees F) operating temperature, 1.7 meters (5.6 feet) minimum operational bending radius.

If any other rig is used to drill this well, no co-flex hose will be needed.

5. Proposed Mud Circulation System

<u>Depth</u>	<u>Mud Wt.</u>	<u>Visc</u>	<u>Fluid Loss</u>	<u>Type System</u>
0 - 1,100	8.4-9.0	30-34	N/C	FW
1,100 - 2,550	9.8-10.0	28-32	N/C	Brine
2,550 - 11,313	8.6-9.0	28-32	N/C-12	FW

The necessary mud products for weight addition and fluid loss control will be on location at all times. Visual mud monitoring equipment will be in place to detect volume changes indicating loss or gain of circulating fluid volume. If abnormal pressures are encountered, electronic/mechanical mud monitoring equipment will be installed.

6. 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.

7. Logging, Coring, and Testing Program:

- a. Drill stem tests will be based on geological sample shows.
- b. If a drill stem test is anticipated; a procedure, equipment to be used and safety measures will be provided via sundry notice to the BLM.
- c. The open hole electrical logging program will be:
 - i. Total Depth to Intermediate Casing Dual Laterolog-Micro Laterolog with SP 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.

8. Potential Hazards:

- a. No abnormal pressures or temperatures are expected. There is no known presence of H₂S in this area. If H₂S is encountered the operator will comply with the provisions of Onshore Oil and Gas Order No. 6 No lost circulation is expected to occur. All personnel will be familiar with all aspects of safe operation of equipment being used to drill this well. Estimated BHP 2,300 psi and Estimated BHT 110°. No H₂S is anticipated to be encountered.

See COA

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 20 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.

DEVON ENERGY

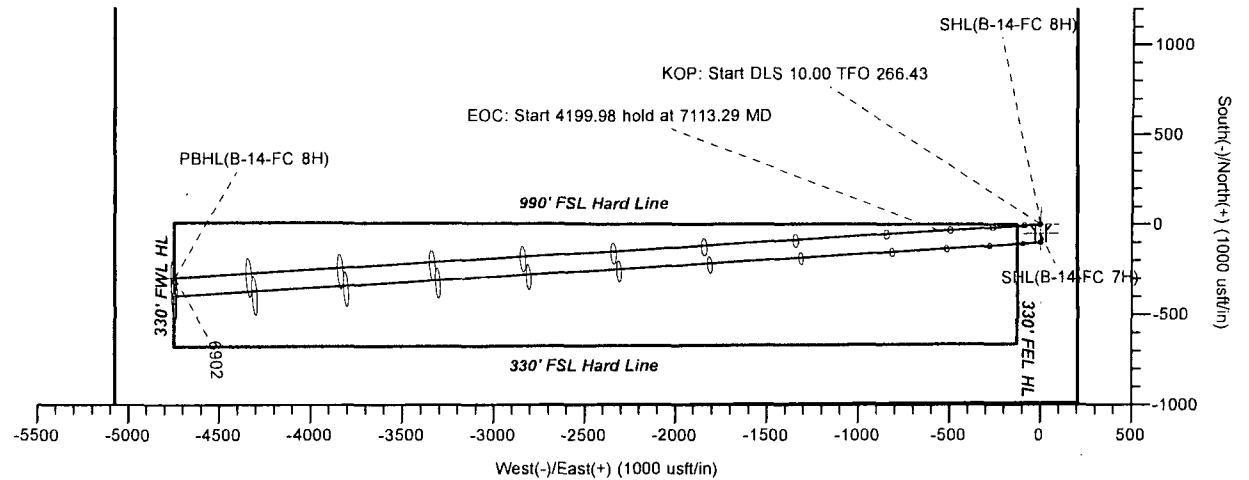
Project: Lea County, NM (NAD-83)
 Site: BAE 14 Fed Com
 Well: 8H
 Wellbore: OH
 Design: Plan #1

devon



Azimuths to Grid North
 True North: -0.33°
 Magnetic North: 7.17°

Magnetic Field
 Strength: 48793.6snT
 Dip Angle: 60.68°
 Date: 02/07/2013
 Model: IGRF2010

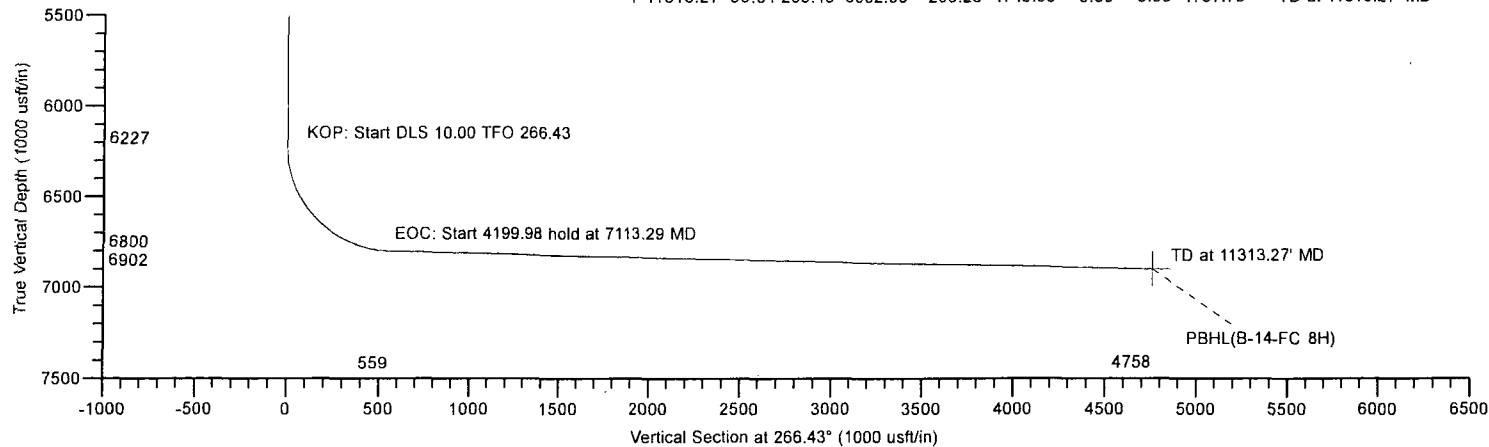


DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
SHL(B-14-FC 8H)	0.00	0.00	0.00	666227.35	726923.8632° 49' 48.098 N	103° 43' 44.915 N	103° 43' 44.915 W
PBHL(B-14-FC 8H)6902.00	-296.23	-4748.55	665931.12	722175.3132° 49' 45.433 N	103° 44' 40.585 W		

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Annotation
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2	6227.21	0.00	0.00	6227.21	0.00	0.00	0.00	0.00	0.00	KOP: Start DLS 10.00 TFO 266.43
3	7113.29	88.61	266.43	6800.00	-34.81	-557.96	10.00	266.43	559.04	EOC: Start 4199.98 hold at 7113.29 MD
4	11313.27	88.61	266.43	6902.00	-296.23	-4748.55	0.00	0.00	4757.78	TD at 11313.27' MD



LEAM DRILLING SYSTEMS LLC
 2010 East Davis, Conroe, Texas 77301
 Phone: 936/756-7577, Fax 936/756-7595

Plan: Plan #1 (8H/OH)
 BAE 14 Fed Com
 Created By: Tyler Carlson Date: 19:34, February 07 2013
 Date: _____
 Approved: _____ Date: _____

LEAM Drilling Systems LLC

Planning Report

Database: EDM 5000.1 Single User Db
 Company: DEVON ENERGY
 Project: Lea County, NM (NAD-83)
 Site: BAE 14 Fed Com
 Well: 8H
 Wellbore: OH
 Design: Plan #1

Local Co-ordinate Reference: Well 8H
 TVD Reference: GE 4082' + KB 18' @ 4100.00usft (McVay 8)
 MD Reference: GE 4082' + KB 18' @ 4100.00usft (McVay 8)
 North Reference: Grid
 Survey Calculation Method: Minimum Curvature

Project	Lea County, NM (NAD-83)		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	New Mexico Eastern Zone		

Site	BAE 14 Fed Com		
Site Position:	Map	Northing:	668,346.18 usft
From:		Easting:	726,910.45 usft
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "
		Latitude:	32° 50' 9.064 N
		Longitude:	103° 43' 44.930 W
		Grid Convergence:	0.33 °

Well	8H		
Well Position	+N/-S	-2,118.83 usft	Northing:
	+E/-W	13.41 usft	Easting:
Position Uncertainty	0.00 usft	Wellhead Elevation:	
		Latitude:	32° 49' 48.098 N
		Longitude:	103° 43' 44.915 W
		Ground Level:	4,082.00 usft

Wellbore	OH		
Magnetics	Model Name	Sample Date	Declination
	IGRF2010	02/07/13	(°)
			7.50
			Dip Angle
			(°)
			60.68
			Field Strength
			(nT)
			48,794

Design	Plan #1		
Audit Notes:			
Version:	Phase:	PLAN	Tie On Depth:
			0.00
Vertical Section:	Depth From (TVD)	+N/-S	+E/-W
	(usft)	(usft)	(usft)
	0.00	0.00	0.00
			Direction
			(°)
			266.43

Plan Sections										
Measured	Inclination	Azimuth	Vertical	+N/-S	+E/-W	Dogleg	Build	Turn	TEO	Target
Depth	(°)	(°)	Depth	(usft)	(usft)	Rate	Rate	Rate	(°)	
(usft)			(usft)			(°/100usft)	(°/100usft)	(°/100usft)		
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
6,227.21	0.00	0.00	6,227.21	0.00	0.00	0.00	0.00	0.00	0.00	
7,113.29	88.61	266.43	6,800.00	-34.81	-557.96	10.00	10.00	-10.56	266.43	
11,313.27	88.61	266.43	6,902.00	-296.23	-4,748.55	0.00	0.00	0.00	0.00	PBHL(B-14-FC 8H)

LEAM Drilling Systems LLC

Planning Report

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 North Reference: Grid
 Survey Calculation Method: Minimum Curvature

Planned Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
5,100.00	0.00	0.00	5,100.00	0.00	0.00	0.00	0.00	0.00	0.00	
5,200.00	0.00	0.00	5,200.00	0.00	0.00	0.00	0.00	0.00	0.00	
5,300.00	0.00	0.00	5,300.00	0.00	0.00	0.00	0.00	0.00	0.00	
5,400.00	0.00	0.00	5,400.00	0.00	0.00	0.00	0.00	0.00	0.00	
5,500.00	0.00	0.00	5,500.00	0.00	0.00	0.00	0.00	0.00	0.00	
5,600.00	0.00	0.00	5,600.00	0.00	0.00	0.00	0.00	0.00	0.00	
5,700.00	0.00	0.00	5,700.00	0.00	0.00	0.00	0.00	0.00	0.00	
5,800.00	0.00	0.00	5,800.00	0.00	0.00	0.00	0.00	0.00	0.00	
5,900.00	0.00	0.00	5,900.00	0.00	0.00	0.00	0.00	0.00	0.00	
6,000.00	0.00	0.00	6,000.00	0.00	0.00	0.00	0.00	0.00	0.00	
6,100.00	0.00	0.00	6,100.00	0.00	0.00	0.00	0.00	0.00	0.00	
6,200.00	0.00	0.00	6,200.00	0.00	0.00	0.00	0.00	0.00	0.00	
6,227.21	0.00	0.00	6,227.21	0.00	0.00	0.00	0.00	0.00	0.00	
KOP: Start DLS 10.00 TFO 266.43										
6,250.00	2.28	266.43	6,249.99	-0.03	-0.45	0.45	10.00	10.00	0.00	
6,300.00	7.28	266.43	6,299.80	-0.29	-4.61	4.62	10.00	10.00	0.00	
6,350.00	12.28	266.43	6,349.06	-0.82	-13.08	13.11	10.00	10.00	0.00	
6,400.00	17.28	266.43	6,397.39	-1.61	-25.81	25.86	10.00	10.00	0.00	
6,450.00	22.28	266.43	6,444.43	-2.66	-42.69	42.77	10.00	10.00	0.00	
6,500.00	27.28	266.43	6,489.81	-3.97	-63.60	63.72	10.00	10.00	0.00	
6,550.00	32.28	266.43	6,533.19	-5.51	-88.37	88.55	10.00	10.00	0.00	
6,600.00	37.28	266.43	6,574.25	-7.29	-116.83	117.06	10.00	10.00	0.00	
6,650.00	42.28	266.43	6,612.66	-9.28	-148.75	149.04	10.00	10.00	0.00	
6,700.00	47.28	266.43	6,648.14	-11.47	-183.89	184.25	10.00	10.00	0.00	
6,750.00	52.28	266.43	6,680.42	-13.85	-221.98	222.41	10.00	10.00	0.00	
6,800.00	57.28	266.43	6,709.25	-16.39	-262.74	263.25	10.00	10.00	0.00	
6,850.00	62.28	266.43	6,734.41	-19.08	-305.84	306.44	10.00	10.00	0.00	
6,900.00	67.28	266.43	6,755.70	-21.89	-350.97	351.66	10.00	10.00	0.00	
6,950.00	72.28	266.43	6,772.98	-24.82	-397.79	398.56	10.00	10.00	0.00	
7,000.00	77.28	266.43	6,786.10	-27.82	-445.92	446.79	10.00	10.00	0.00	
7,050.00	82.28	266.43	6,794.97	-30.88	-495.02	495.98	10.00	10.00	0.00	
7,100.00	87.28	266.43	6,799.52	-33.98	-544.70	545.76	10.00	10.00	0.00	
7,113.29	88.61	266.43	6,800.00	-34.81	-557.96	559.04	10.00	10.00	0.00	
EOC: Start 4199.98 hold at 7113.29 MD										
7,200.00	88.61	266.43	6,802.10	-40.20	-644.47	645.72	0.00	0.00	0.00	
7,300.00	88.61	266.43	6,804.53	-46.43	-744.25	745.69	0.00	0.00	0.00	
7,400.00	88.61	266.43	6,806.96	-52.65	-844.02	845.66	0.00	0.00	0.00	
7,500.00	88.61	266.43	6,809.39	-58.88	-943.80	945.64	0.00	0.00	0.00	
7,600.00	88.61	266.43	6,811.82	-65.10	-1,043.58	1,045.61	0.00	0.00	0.00	
7,700.00	88.61	266.43	6,814.25	-71.33	-1,143.35	1,145.58	0.00	0.00	0.00	
7,800.00	88.61	266.43	6,816.68	-77.55	-1,243.13	1,245.55	0.00	0.00	0.00	
7,900.00	88.61	266.43	6,819.11	-83.77	-1,342.91	1,345.52	0.00	0.00	0.00	
8,000.00	88.61	266.43	6,821.53	-90.00	-1,442.68	1,445.49	0.00	0.00	0.00	
8,100.00	88.61	266.43	6,823.96	-96.22	-1,542.46	1,545.46	0.00	0.00	0.00	
8,200.00	88.61	266.43	6,826.39	-102.45	-1,642.24	1,645.43	0.00	0.00	0.00	
8,300.00	88.61	266.43	6,828.82	-108.67	-1,742.01	1,745.40	0.00	0.00	0.00	
8,400.00	88.61	266.43	6,831.25	-114.90	-1,841.79	1,845.37	0.00	0.00	0.00	
8,500.00	88.61	266.43	6,833.68	-121.12	-1,941.57	1,945.34	0.00	0.00	0.00	
8,600.00	88.61	266.43	6,836.11	-127.35	-2,041.34	2,045.31	0.00	0.00	0.00	
8,700.00	88.61	266.43	6,838.53	-133.57	-2,141.12	2,145.28	0.00	0.00	0.00	
8,800.00	88.61	266.43	6,840.96	-139.79	-2,240.90	2,245.25	0.00	0.00	0.00	
8,900.00	88.61	266.43	6,843.39	-146.02	-2,340.67	2,345.22	0.00	0.00	0.00	
9,000.00	88.61	266.43	6,845.82	-152.24	-2,440.45	2,445.19	0.00	0.00	0.00	
9,100.00	88.61	266.43	6,848.25	-158.47	-2,540.23	2,545.16	0.00	0.00	0.00	

LEAM Drilling Systems LLC

Planning Report

Database: EDM 5000.1 Single User Db
 Company: DEVON ENERGY
 Project: Lea County, NM (NAD-83)
 Site: BAE 14 Fed Com
 Well: 8H
 Wellbore: OH
 Design: Plan #1

Local Co-ordinate Reference:
 TVD Reference:
 MD Reference:
 North Reference:
 Survey Calculation Method:

Well 8H
 GE 4082' + KB 18' @ 4100.00usft (McVay 8)
 GE 4082' + KB 18' @ 4100.00usft (McVay 8)
 Grid
 Minimum Curvature

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
5,100.00	0.00	0.00	5,100.00	0.00	0.00	0.00	0.00	0.00	0.00
5,200.00	0.00	0.00	5,200.00	0.00	0.00	0.00	0.00	0.00	0.00
5,300.00	0.00	0.00	5,300.00	0.00	0.00	0.00	0.00	0.00	0.00
5,400.00	0.00	0.00	5,400.00	0.00	0.00	0.00	0.00	0.00	0.00
5,500.00	0.00	0.00	5,500.00	0.00	0.00	0.00	0.00	0.00	0.00
5,600.00	0.00	0.00	5,600.00	0.00	0.00	0.00	0.00	0.00	0.00
5,700.00	0.00	0.00	5,700.00	0.00	0.00	0.00	0.00	0.00	0.00
5,800.00	0.00	0.00	5,800.00	0.00	0.00	0.00	0.00	0.00	0.00
5,900.00	0.00	0.00	5,900.00	0.00	0.00	0.00	0.00	0.00	0.00
6,000.00	0.00	0.00	6,000.00	0.00	0.00	0.00	0.00	0.00	0.00
6,100.00	0.00	0.00	6,100.00	0.00	0.00	0.00	0.00	0.00	0.00
6,200.00	0.00	0.00	6,200.00	0.00	0.00	0.00	0.00	0.00	0.00
6,227.21	0.00	0.00	6,227.21	0.00	0.00	0.00	0.00	0.00	0.00
KOP: Start DLS 10.00 TFO 266.43									
6,250.00	2.28	266.43	6,249.99	-0.03	-0.45	0.45	10.00	10.00	0.00
6,300.00	7.28	266.43	6,299.80	-0.29	-4.61	4.62	10.00	10.00	0.00
6,350.00	12.28	266.43	6,349.06	-0.82	-13.08	13.11	10.00	10.00	0.00
6,400.00	17.28	266.43	6,397.39	-1.61	-25.81	25.86	10.00	10.00	0.00
6,450.00	22.28	266.43	6,444.43	-2.66	-42.69	42.77	10.00	10.00	0.00
6,500.00	27.28	266.43	6,489.81	-3.97	-63.60	63.72	10.00	10.00	0.00
6,550.00	32.28	266.43	6,533.19	-5.51	-88.37	88.55	10.00	10.00	0.00
6,600.00	37.28	266.43	6,574.25	-7.29	-116.83	117.06	10.00	10.00	0.00
6,650.00	42.28	266.43	6,612.66	-9.28	-148.75	149.04	10.00	10.00	0.00
6,700.00	47.28	266.43	6,648.14	-11.47	-183.89	184.25	10.00	10.00	0.00
6,750.00	52.28	266.43	6,680.42	-13.85	-221.98	222.41	10.00	10.00	0.00
6,800.00	57.28	266.43	6,709.25	-16.39	-262.74	263.25	10.00	10.00	0.00
6,850.00	62.28	266.43	6,734.41	-19.08	-305.84	306.44	10.00	10.00	0.00
6,900.00	67.28	266.43	6,755.70	-21.89	-350.97	351.66	10.00	10.00	0.00
6,950.00	72.28	266.43	6,772.98	-24.82	-397.79	398.56	10.00	10.00	0.00
7,000.00	77.28	266.43	6,786.10	-27.82	-445.92	446.79	10.00	10.00	0.00
7,050.00	82.28	266.43	6,794.97	-30.88	-495.02	495.98	10.00	10.00	0.00
7,100.00	87.28	266.43	6,799.52	-33.98	-544.70	545.76	10.00	10.00	0.00
7,113.29	88.61	266.43	6,800.00	-34.81	-557.96	559.04	10.00	10.00	0.00
EOC: Start 4199.98 hold at 7113.29 MD									
7,200.00	88.61	266.43	6,802.10	-40.20	-644.47	645.72	0.00	0.00	0.00
7,300.00	88.61	266.43	6,804.53	-46.43	-744.25	745.69	0.00	0.00	0.00
7,400.00	88.61	266.43	6,806.96	-52.65	-844.02	845.66	0.00	0.00	0.00
7,500.00	88.61	266.43	6,809.39	-58.88	-943.80	945.64	0.00	0.00	0.00
7,600.00	88.61	266.43	6,811.82	-65.10	-1,043.58	1,045.61	0.00	0.00	0.00
7,700.00	88.61	266.43	6,814.25	-71.33	-1,143.35	1,145.58	0.00	0.00	0.00
7,800.00	88.61	266.43	6,816.68	-77.55	-1,243.13	1,245.55	0.00	0.00	0.00
7,900.00	88.61	266.43	6,819.11	-83.77	-1,342.91	1,345.52	0.00	0.00	0.00
8,000.00	88.61	266.43	6,821.53	-90.00	-1,442.68	1,445.49	0.00	0.00	0.00
8,100.00	88.61	266.43	6,823.96	-96.22	-1,542.46	1,545.46	0.00	0.00	0.00
8,200.00	88.61	266.43	6,826.39	-102.45	-1,642.24	1,645.43	0.00	0.00	0.00
8,300.00	88.61	266.43	6,828.82	-108.67	-1,742.01	1,745.40	0.00	0.00	0.00
8,400.00	88.61	266.43	6,831.25	-114.90	-1,841.79	1,845.37	0.00	0.00	0.00
8,500.00	88.61	266.43	6,833.68	-121.12	-1,941.57	1,945.34	0.00	0.00	0.00
8,600.00	88.61	266.43	6,836.11	-127.35	-2,041.34	2,045.31	0.00	0.00	0.00
8,700.00	88.61	266.43	6,838.53	-133.57	-2,141.12	2,145.28	0.00	0.00	0.00
8,800.00	88.61	266.43	6,840.96	-139.79	-2,240.90	2,245.25	0.00	0.00	0.00
8,900.00	88.61	266.43	6,843.39	-146.02	-2,340.67	2,345.22	0.00	0.00	0.00
9,000.00	88.61	266.43	6,845.82	-152.24	-2,440.45	2,445.19	0.00	0.00	0.00
9,100.00	88.61	266.43	6,848.25	-158.47	-2,540.23	2,545.16	0.00	0.00	0.00

LEAM Drilling Systems LLC

Planning Report

Database: EDM 5000.1 Single User Db
 Company: DEVON ENERGY
 Project: Lea County, NM (NAD-83)
 Site: BAE 14 Fed Com
 Well: 8H
 Wellbore: OH
 Design: Plan #1

Local Co-ordinate Reference:
 TVD Reference:
 MD Reference:
 North Reference:
 Survey Calculation Method:

Well 8H
 GE 4082' + KB 18' @ 4100.00usft (McVay 8)
 GE 4082' + KB 18' @ 4100.00usft (McVay 8)
 Grid
 Minimum Curvature

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
9,200.00	88.61	266.43	6,850.68	-164.69	-2,640.00	2,645.13	0.00	0.00	0.00
9,300.00	88.61	266.43	6,853.11	-170.92	-2,739.78	2,745.10	0.00	0.00	0.00
9,400.00	88.61	266.43	6,855.53	-177.14	-2,839.55	2,845.07	0.00	0.00	0.00
9,500.00	88.61	266.43	6,857.96	-183.36	-2,939.33	2,945.05	0.00	0.00	0.00
9,600.00	88.61	266.43	6,860.39	-189.59	-3,039.11	3,045.02	0.00	0.00	0.00
9,700.00	88.61	266.43	6,862.82	-195.81	-3,138.88	3,144.99	0.00	0.00	0.00
9,800.00	88.61	266.43	6,865.25	-202.04	-3,238.66	3,244.96	0.00	0.00	0.00
9,900.00	88.61	266.43	6,867.68	-208.26	-3,338.44	3,344.93	0.00	0.00	0.00
10,000.00	88.61	266.43	6,870.11	-214.49	-3,438.21	3,444.90	0.00	0.00	0.00
10,100.00	88.61	266.43	6,872.53	-220.71	-3,537.99	3,544.87	0.00	0.00	0.00
10,200.00	88.61	266.43	6,874.96	-226.94	-3,637.77	3,644.84	0.00	0.00	0.00
10,300.00	88.61	266.43	6,877.39	-233.16	-3,737.54	3,744.81	0.00	0.00	0.00
10,400.00	88.61	266.43	6,879.82	-239.38	-3,837.32	3,844.78	0.00	0.00	0.00
10,500.00	88.61	266.43	6,882.25	-245.61	-3,937.10	3,944.75	0.00	0.00	0.00
10,600.00	88.61	266.43	6,884.68	-251.83	-4,036.87	4,044.72	0.00	0.00	0.00
10,700.00	88.61	266.43	6,887.11	-258.06	-4,136.65	4,144.69	0.00	0.00	0.00
10,800.00	88.61	266.43	6,889.53	-264.28	-4,236.43	4,244.66	0.00	0.00	0.00
10,900.00	88.61	266.43	6,891.96	-270.51	-4,336.20	4,344.63	0.00	0.00	0.00
11,000.00	88.61	266.43	6,894.39	-276.73	-4,435.98	4,444.60	0.00	0.00	0.00
11,100.00	88.61	266.43	6,896.82	-282.95	-4,535.76	4,544.57	0.00	0.00	0.00
11,200.00	88.61	266.43	6,899.25	-289.18	-4,635.53	4,644.54	0.00	0.00	0.00
11,300.00	88.61	266.43	6,901.68	-295.40	-4,735.31	4,744.51	0.00	0.00	0.00
11,313.27	88.61	266.43	6,902.00	-296.23	-4,748.55	4,757.78	0.00	0.00	0.00

TD at 11313.27' MD

Design Targets

Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
SHL(B-14-FC 8H) - plan hits target center - Point	0.00	0.00	0.00	0.00	0.00	666,227.35	726,923.86	32° 49' 48.098 N	103° 43' 44.915 W
PBHL(B-14-FC 8H) - plan hits target center - Point	0.00	0.00	6,902.00	-296.23	-4,748.55	665,931.13	722,175.31	32° 49' 45.432 N	103° 44' 40.585 W

Casing Points

Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (")	Hole Diameter (")
1,100.00	1,100.00	13 3/8"	13-3/8	17-1/2
2,550.00	2,550.00	9 5/8"	9-5/8	12-1/4

LEAM Drilling Systems LLC

Planning Report

Database: EDM 5000.1 Single User Db
Company: DEVON ENERGY
Project: Lea County, NM (NAD-83)
Site: BAE 14 Fed Com
Well: 8H
Wellbore: OH
Design: Plan #1

Local Co-ordinate Reference: Well 8H
TVD Reference: GE 4082' + KB 18' @ 4100.00usft (McVay 8)
MD Reference: GE 4082' + KB 18' @ 4100.00usft (McVay 8)
North Reference: Grid
Survey Calculation Method: Minimum Curvature

Plan Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
6,227.21	6,227.21	0.00	0.00	KOP: Start DLS 10.00 TFO 266.43
7,113.29	6,800.00	-34.81	-557.96	EOC: Start 4199.98 hold at 7113.29 MD
11,313.27	6,902.00	-296.23	-4,748.55	TD at 11313.27' MD

LEAM Drilling Systems LLC

Anticollision Report

Company:	DEVON ENERGY	Local Co-ordinate Reference:	Well 8H
Project:	Lea County, NM (NAD-83)	TVD Reference:	GE 4082' + KB 18' @ 4100.00usft (McVay 8)
Reference Site:	BAE 14 Fed Com	MD Reference:	GE 4082' + KB 18' @ 4100.00usft (McVay 8)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	8H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.1 Single User Db
Reference Design:	Plan #1	Offset TVD Reference:	Reference Datum

Reference	Plan #1
Filter type:	NO GLOBAL FILTER: Using user defined selection & filtering criteria
Interpolation Method:	MD + Stations Interval 50.00usft
Depth Range:	0.00 to 11,313.27usft
Results Limited by:	Maximum center-center distance of 10,000.00 usft
Warning Levels Evaluated at:	2.00 Sigma
Error Model:	ISCWSA
Scan Method:	Closest Approach 3D
Error Surface:	Elliptical Conic
Casing Method:	Not applied

Survey Tool Program	Date	02/07/13
From (usft)	To (usft)	Survey (Wellbore)
0.00	11,313.27	Plan #1 (OH)
		Tool Name
		LEAM MWD
		Description
		MWD - Standard

Summary						
Site Name	Reference Measured Depth (usft)	Offset Measured Depth (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Separation Factor	Warning
Offset Well - Wellbore - Design						
BAE 14 Fed Com						
7H - OH - Plan #1	1,182.99	1,183.99	50.02	44.97	9.895 CC	
7H - OH - Plan #1	1,200.00	1,200.00	50.03	44.90	9.754 ES	
7H - OH - Plan #1	5,550.00	5,550.83	100.57	76.36	4.155 SF	

Offset Design	BAE 14 Fed Com - 7H - OH - Plan #1										Offset Site Error:	0.00 usft	
Survey Program:	0-LEAM MWD										Offset Well Error:	0.00 usft	
Reference	Offset	Semi Major Axis		Distance		Minimum Separation		Separation Factor		Warning			
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
0.00	0.00	1.00	0.00	0.00	0.00	179.60	-50.02	0.35	50.02				
50.00	50.00	51.00	50.00	0.04	0.05	179.60	-50.02	0.35	50.02	49.94	0.08	602.947	
100.00	100.00	101.00	100.00	0.09	0.09	179.60	-50.02	0.35	50.02	49.83	0.19	268.130	
150.00	150.00	151.00	150.00	0.20	0.21	179.60	-50.02	0.35	50.02	49.61	0.41	121.611	
200.00	200.00	201.00	200.00	0.32	0.32	179.60	-50.02	0.35	50.02	49.39	0.64	78.639	
250.00	250.00	251.00	250.00	0.43	0.43	179.60	-50.02	0.35	50.02	49.16	0.86	58.107	
300.00	300.00	301.00	300.00	0.54	0.54	179.60	-50.02	0.35	50.02	48.94	1.09	46.076	
350.00	350.00	351.00	350.00	0.65	0.66	179.60	-50.02	0.35	50.02	48.71	1.31	38.173	
400.00	400.00	401.00	400.00	0.77	0.77	179.60	-50.02	0.35	50.02	48.49	1.54	32.584	
450.00	450.00	451.00	450.00	0.88	0.88	179.60	-50.02	0.35	50.02	48.26	1.76	28.422	
500.00	500.00	501.00	500.00	0.99	0.99	179.60	-50.02	0.35	50.02	48.04	1.98	25.204	
550.00	550.00	551.00	550.00	1.10	1.11	179.60	-50.02	0.35	50.02	47.81	2.21	22.640	
600.00	600.00	601.00	600.00	1.22	1.22	179.60	-50.02	0.35	50.02	47.59	2.43	20.549	
650.00	650.00	651.00	650.00	1.33	1.33	179.60	-50.02	0.35	50.02	47.36	2.66	18.812	
700.00	700.00	701.00	700.00	1.44	1.44	179.60	-50.02	0.35	50.02	47.14	2.88	17.346	
750.00	750.00	751.00	750.00	1.55	1.56	179.60	-50.02	0.35	50.02	46.91	3.11	16.092	
800.00	800.00	801.00	800.00	1.67	1.67	179.60	-50.02	0.35	50.02	46.69	3.33	15.007	
850.00	850.00	851.00	850.00	1.78	1.78	179.60	-50.02	0.35	50.02	46.46	3.56	14.059	
900.00	900.00	901.00	900.00	1.89	1.89	179.60	-50.02	0.35	50.02	46.24	3.78	13.223	
950.00	950.00	951.00	950.00	2.00	2.00	179.60	-50.02	0.35	50.02	46.01	4.01	12.482	
1,000.00	1,000.00	1,001.00	1,000.00	2.12	2.12	179.60	-50.02	0.35	50.02	45.79	4.23	11.819	
1,050.00	1,050.00	1,051.00	1,050.00	2.23	2.23	179.60	-50.02	0.35	50.02	45.56	4.46	11.223	
1,100.00	1,100.00	1,101.00	1,100.00	2.34	2.34	179.60	-50.02	0.35	50.02	45.34	4.68	10.684	
1,150.00	1,150.00	1,151.00	1,150.00	2.45	2.45	179.60	-50.02	0.35	50.02	45.11	4.91	10.195	

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

LEAM Drilling Systems LLC

Anticollision Report

Company: DEVON ENERGY
 Project: Lea County, NM (NAD-83)
 Reference Site: BAE 14 Fed Com
 Site Error: 0.00 usft
 Reference Well: 8H
 Well Error: 0.00 usft
 Reference Wellbore: OH
 Reference Design: Plan #1

Local Co-ordinate Reference: Well 8H
 TVD Reference: GE 4082' + KB 18' @ 4100.00usft (McVay 8)
 MD Reference: GE 4082' + KB 18' @ 4100.00usft (McVay 8)
 North Reference: Grid
 Survey Calculation Method: Minimum Curvature
 Output errors are at: 2.00 sigma
 Database: EDM 5000.1 Single User Db
 Offset TVD Reference: Reference Datum

Offset Design BAE 14 Fed Com - 7H - OH - Plan #1													Offset Site Error:	0.00 usft
Survey Program: 0-LEAM MWD													Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
1,182.99	1,182.99	1,183.99	1,182.99	2.53	2.53	179.60	-50.02	0.35	50.02	44.97	5.05	9.895 CC		
1,200.00	1,200.00	1,200.00	1,199.00	2.56	2.56	179.60	-50.02	0.35	50.03	44.90	5.13	9.754 ES		
1,250.00	1,250.00	1,249.90	1,248.90	2.68	2.66	179.57	-50.56	0.38	50.58	45.24	5.34	9.473		
1,300.00	1,300.00	1,298.78	1,297.75	2.79	2.76	179.47	-52.14	0.48	52.20	46.65	5.55	9.410		
1,350.00	1,350.00	1,348.24	1,347.14	2.90	2.85	179.33	-54.63	0.64	54.71	48.96	5.75	9.522		
1,400.00	1,400.00	1,398.17	1,397.01	3.01	2.93	179.20	-57.23	0.80	57.32	51.37	5.94	9.642		
1,450.00	1,450.00	1,448.10	1,446.87	3.13	3.02	179.08	-59.84	0.96	59.93	53.78	6.15	9.746		
1,500.00	1,500.00	1,498.03	1,496.73	3.24	3.11	178.97	-62.44	1.12	62.54	56.19	6.35	9.844		
1,550.00	1,550.00	1,547.96	1,546.60	3.35	3.21	178.87	-65.05	1.29	65.15	58.59	6.56	9.930		
1,600.00	1,600.00	1,597.90	1,596.46	3.46	3.31	178.77	-67.65	1.45	67.76	60.99	6.77	10.011		
1,650.00	1,650.00	1,647.83	1,646.32	3.58	3.40	178.69	-70.26	1.61	70.37	63.39	6.98	10.082		
1,700.00	1,700.00	1,697.76	1,696.19	3.69	3.50	178.60	-72.87	1.78	72.99	65.79	7.19	10.149		
1,750.00	1,750.00	1,747.69	1,746.05	3.80	3.61	178.53	-75.47	1.94	75.60	68.19	7.41	10.208		
1,800.00	1,800.00	1,797.62	1,795.91	3.91	3.71	178.46	-78.08	2.10	78.21	70.59	7.62	10.263		
1,850.00	1,850.00	1,847.55	1,845.78	4.03	3.81	178.39	-80.68	2.26	80.82	72.99	7.84	10.313		
1,900.00	1,900.00	1,897.49	1,895.64	4.14	3.92	178.33	-83.29	2.43	83.44	75.38	8.05	10.360		
1,950.00	1,950.00	1,947.42	1,945.50	4.25	4.02	178.27	-85.89	2.59	86.05	77.78	8.27	10.402		
2,000.00	2,000.00	1,997.35	1,995.37	4.36	4.13	178.22	-88.50	2.75	88.66	80.17	8.49	10.442		
2,050.00	2,050.00	2,047.28	2,045.23	4.48	4.24	178.17	-91.10	2.91	91.27	82.56	8.71	10.477		
2,100.00	2,100.00	2,097.21	2,095.09	4.59	4.35	178.12	-93.71	3.08	93.89	84.95	8.93	10.511		
2,150.00	2,150.00	2,147.14	2,144.96	4.70	4.45	178.07	-96.31	3.24	96.50	87.35	9.15	10.542		
2,200.00	2,200.00	2,198.91	2,196.67	4.81	4.57	178.04	-98.82	3.38	98.73	89.36	9.38	10.527		
2,250.00	2,250.00	2,251.16	2,248.91	4.92	4.68	178.02	-99.79	3.45	99.85	90.25	9.60	10.399		
2,300.00	2,300.00	2,302.25	2,300.00	5.04	4.78	178.02	-99.92	3.46	99.98	90.16	9.82	10.181		
2,350.00	2,350.00	2,352.25	2,350.00	5.15	4.89	178.02	-99.92	3.46	99.98	89.95	10.04	9.961		
2,400.00	2,400.00	2,402.25	2,400.00	5.26	4.99	178.02	-99.92	3.46	99.98	89.73	10.25	9.750		
2,450.00	2,450.00	2,452.25	2,450.00	5.37	5.10	178.02	-99.92	3.46	99.98	89.51	10.47	9.548		
2,500.00	2,500.00	2,502.25	2,500.00	5.49	5.20	178.02	-99.92	3.46	99.98	89.29	10.69	9.353		
2,550.00	2,550.00	2,552.25	2,550.00	5.60	5.31	178.02	-99.92	3.46	99.98	89.08	10.91	9.166		
2,600.00	2,600.00	2,602.25	2,600.00	5.71	5.42	178.02	-99.92	3.46	99.98	88.86	11.13	8.986		
2,650.00	2,650.00	2,652.25	2,650.00	5.82	5.52	178.02	-99.92	3.46	99.98	88.64	11.34	8.813		
2,700.00	2,700.00	2,702.25	2,700.00	5.94	5.63	178.02	-99.92	3.46	99.98	88.42	11.56	8.647		
2,750.00	2,750.00	2,752.25	2,750.00	6.05	5.73	178.02	-99.92	3.46	99.98	88.20	11.78	8.486		
2,800.00	2,800.00	2,802.25	2,800.00	6.16	5.84	178.02	-99.92	3.46	99.98	87.98	12.00	8.331		
2,850.00	2,850.00	2,852.25	2,850.00	6.27	5.95	178.02	-99.92	3.46	99.98	87.76	12.22	8.181		
2,900.00	2,900.00	2,902.25	2,900.00	6.39	6.06	178.02	-99.92	3.46	99.98	87.54	12.44	8.037		
2,950.00	2,950.00	2,952.25	2,950.00	6.50	6.16	178.02	-99.92	3.46	99.98	87.32	12.66	7.897		
3,000.00	3,000.00	3,002.25	3,000.00	6.61	6.27	178.02	-99.92	3.46	99.98	87.10	12.88	7.762		
3,050.00	3,050.00	3,052.25	3,050.00	6.72	6.38	178.02	-99.92	3.46	99.98	86.88	13.10	7.632		
3,100.00	3,100.00	3,102.25	3,100.00	6.84	6.49	178.02	-99.92	3.46	99.98	86.66	13.32	7.505		
3,150.00	3,150.00	3,152.25	3,150.00	6.95	6.59	178.02	-99.92	3.46	99.98	86.44	13.54	7.383		
3,200.00	3,200.00	3,202.25	3,200.00	7.06	6.70	178.02	-99.92	3.46	99.98	86.22	13.76	7.265		
3,250.00	3,250.00	3,252.25	3,250.00	7.17	6.81	178.02	-99.92	3.46	99.98	86.00	13.98	7.150		
3,300.00	3,300.00	3,302.25	3,300.00	7.28	6.92	178.02	-99.92	3.46	99.98	85.78	14.20	7.039		
3,350.00	3,350.00	3,352.25	3,350.00	7.40	7.03	178.02	-99.92	3.46	99.98	85.56	14.43	6.931		
3,400.00	3,400.00	3,402.25	3,400.00	7.51	7.14	178.02	-99.92	3.46	99.98	85.34	14.65	6.827		
3,450.00	3,450.00	3,452.25	3,450.00	7.62	7.25	178.02	-99.92	3.46	99.98	85.12	14.87	6.725		
3,500.00	3,500.00	3,502.25	3,500.00	7.73	7.36	178.02	-99.92	3.46	99.98	84.89	15.09	6.626		
3,550.00	3,550.00	3,552.25	3,550.00	7.85	7.46	178.02	-99.92	3.46	99.98	84.67	15.31	6.530		
3,600.00	3,600.00	3,602.25	3,600.00	7.96	7.57	178.02	-99.92	3.46	99.98	84.45	15.53	6.437		
3,650.00	3,650.00	3,652.25	3,650.00	8.07	7.68	178.02	-99.92	3.46	99.98	84.23	15.75	6.347		
3,700.00	3,700.00	3,702.25	3,700.00	8.18	7.79	178.02	-99.92	3.46	99.98	84.01	15.98	6.259		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

LEAM Drilling Systems LLC

Anticollision Report

Company: DEVON ENERGY
 Project: Lea County, NM (NAD-83)
 Reference Site: BAE 14 Fed Com
 Site Error: 0.00 usft
 Reference Well: 8H
 Well Error: 0.00 usft
 Reference Wellbore: OH
 Reference Design: Plan #1

Local Co-ordinate Reference: Well 8H
 TVD Reference: GE 4082' + KB 18' @ 4100.00usft (McVay 8)
 MD Reference: GE 4082' + KB 18' @ 4100.00usft (McVay 8)
 North Reference: Grid
 Survey Calculation Method: Minimum Curvature
 Output errors are at: 2.00 sigma
 Database: EDM 5000.1 Single User Db
 Offset TVD Reference: Reference Datum

Offset Design BAE 14 Fed Com - 7H - OH - Plan #1													Offset Site Error: 0.00 usft
Survey Program: 0-LEAM MVD													Offset Well Error: 0.00 usft
Reference		Offset		Semi Major Axis		Distance		Minimum Separation		Separation Factor		Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
3,750.00	3,750.00	3,752.25	3,750.00	8.30	7.90	178.02	-99.92	3.46	99.98	83.79	16.20	6.173	
3,800.00	3,800.00	3,802.25	3,800.00	8.41	8.01	178.02	-99.92	3.46	99.98	83.56	16.42	6.089	
3,850.00	3,850.00	3,852.25	3,850.00	8.52	8.12	178.02	-99.92	3.46	99.98	83.34	16.64	6.006	
3,900.00	3,900.00	3,902.25	3,900.00	8.63	8.23	178.02	-99.92	3.46	99.98	83.12	16.86	5.929	
3,950.00	3,950.00	3,952.25	3,950.00	8.75	8.34	178.02	-99.92	3.46	99.98	82.90	17.09	5.852	
4,000.00	4,000.00	4,002.25	4,000.00	8.86	8.45	178.02	-99.92	3.46	99.98	82.68	17.31	5.777	
4,050.00	4,050.00	4,052.25	4,050.00	8.97	8.56	178.02	-99.92	3.46	99.98	82.45	17.53	5.704	
4,100.00	4,100.00	4,102.25	4,100.00	9.08	8.67	178.02	-99.92	3.46	99.98	82.23	17.75	5.632	
4,150.00	4,150.00	4,152.25	4,150.00	9.20	8.78	178.02	-99.92	3.46	99.98	82.01	17.97	5.563	
4,200.00	4,200.00	4,202.25	4,200.00	9.31	8.89	178.02	-99.92	3.46	99.98	81.79	18.20	5.495	
4,250.00	4,250.00	4,252.25	4,250.00	9.42	9.00	178.02	-99.92	3.46	99.98	81.56	18.42	5.428	
4,300.00	4,300.00	4,302.25	4,300.00	9.53	9.11	178.02	-99.92	3.46	99.98	81.34	18.64	5.363	
4,350.00	4,350.00	4,352.25	4,350.00	9.64	9.22	178.02	-99.92	3.46	99.98	81.12	18.86	5.300	
4,400.00	4,400.00	4,402.25	4,400.00	9.76	9.33	178.02	-99.92	3.46	99.98	80.90	19.09	5.238	
4,450.00	4,450.00	4,452.25	4,450.00	9.87	9.44	178.02	-99.92	3.46	99.98	80.67	19.31	5.178	
4,500.00	4,500.00	4,502.25	4,500.00	9.98	9.55	178.02	-99.92	3.46	99.98	80.45	19.53	5.119	
4,550.00	4,550.00	4,552.25	4,550.00	10.09	9.66	178.02	-99.92	3.46	99.98	80.23	19.76	5.061	
4,600.00	4,600.00	4,602.25	4,600.00	10.21	9.77	178.02	-99.92	3.46	99.98	80.00	19.98	5.005	
4,650.00	4,650.00	4,652.25	4,650.00	10.32	9.88	178.02	-99.92	3.46	99.98	79.78	20.20	4.949	
4,700.00	4,700.00	4,702.25	4,700.00	10.43	9.99	178.02	-99.92	3.46	99.98	79.56	20.42	4.895	
4,750.00	4,750.00	4,752.25	4,750.00	10.54	10.10	178.02	-99.92	3.46	99.98	79.34	20.65	4.842	
4,800.00	4,800.00	4,802.25	4,800.00	10.66	10.21	178.02	-99.92	3.46	99.98	79.11	20.87	4.791	
4,850.00	4,850.00	4,852.25	4,850.00	10.77	10.33	178.02	-99.92	3.46	99.98	78.89	21.09	4.740	
4,900.00	4,900.00	4,902.25	4,900.00	10.88	10.44	178.02	-99.92	3.46	99.98	78.67	21.32	4.690	
4,950.00	4,950.00	4,952.25	4,950.00	10.99	10.55	178.02	-99.92	3.46	99.98	78.44	21.54	4.642	
5,000.00	5,000.00	5,002.25	5,000.00	11.11	10.66	178.02	-99.92	3.46	99.98	78.22	21.76	4.594	
5,050.00	5,050.00	5,052.25	5,050.00	11.22	10.77	178.02	-99.92	3.46	99.98	78.00	21.99	4.548	
5,100.00	5,100.00	5,102.25	5,100.00	11.33	10.88	178.02	-99.92	3.46	99.98	77.77	22.21	4.502	
5,150.00	5,150.00	5,152.25	5,150.00	11.44	10.99	178.02	-99.92	3.46	99.98	77.55	22.43	4.457	
5,200.00	5,200.00	5,202.25	5,200.00	11.56	11.10	178.02	-99.92	3.46	99.98	77.33	22.66	4.413	
5,250.00	5,250.00	5,252.25	5,250.00	11.67	11.21	178.02	-99.92	3.46	99.98	77.10	22.88	4.370	
5,300.00	5,300.00	5,302.25	5,300.00	11.78	11.32	178.02	-99.92	3.46	99.98	76.88	23.10	4.328	
5,350.00	5,350.00	5,352.25	5,350.00	11.89	11.43	178.02	-99.92	3.46	99.98	76.66	23.33	4.286	
5,400.00	5,400.00	5,402.25	5,400.00	12.00	11.54	178.02	-99.92	3.46	99.98	76.43	23.55	4.246	
5,450.00	5,450.00	5,452.25	5,450.00	12.12	11.66	178.02	-99.92	3.46	99.98	76.21	23.77	4.206	
5,500.00	5,500.00	5,501.90	5,499.59	12.23	11.76	179.18	-100.05	1.43	100.06	76.07	23.99	4.171	
5,550.00	5,550.00	5,550.83	5,548.11	12.34	11.86	-177.29	-100.44	-4.76	100.57	76.36	24.20	4.155 SF	
5,600.00	5,600.00	5,598.37	5,594.58	12.45	11.97	-171.72	-101.06	-14.71	102.26	77.85	24.42	4.188	
5,650.00	5,650.00	5,643.97	5,638.23	12.57	12.07	-164.72	-101.87	-27.83	106.26	81.63	24.63	4.314	
5,700.00	5,700.00	5,687.19	5,678.51	12.68	12.17	-157.11	-102.85	-43.42	113.69	88.84	24.85	4.576	
5,750.00	5,750.00	5,727.77	5,715.17	12.79	12.28	-149.68	-103.93	-60.79	125.34	100.27	25.07	5.000	
5,800.00	5,800.00	5,765.58	5,748.13	12.90	12.39	-142.97	-105.08	-79.26	141.47	116.15	25.33	5.586	
5,850.00	5,850.00	5,800.00	5,777.02	13.02	12.51	-137.33	-106.25	-97.93	161.88	136.28	25.60	6.325	
5,900.00	5,900.00	5,832.87	5,803.51	13.13	12.64	-132.48	-107.46	-117.34	186.08	160.19	25.90	7.186	
5,950.00	5,950.00	5,862.55	5,826.44	13.24	12.77	-128.59	-108.63	-136.15	213.55	187.35	26.20	8.150	
6,000.00	6,000.00	5,889.79	5,846.59	13.35	12.91	-125.41	-109.77	-154.43	243.79	217.27	26.52	9.194	
6,050.00	6,050.00	5,914.76	5,884.29	13.47	13.05	-122.80	-110.87	-172.01	276.35	249.51	26.84	10.296	
6,100.00	6,100.00	5,937.66	5,879.83	13.58	13.19	-120.66	-111.92	-188.80	310.88	283.72	27.16	11.445	
6,150.00	6,150.00	5,950.00	5,887.92	13.69	13.27	-119.59	-112.50	-198.10	347.25	319.86	27.39	12.679	
6,200.00	6,200.00	5,977.96	5,905.50	13.80	13.47	-117.38	-113.85	-219.80	384.71	356.91	27.81	13.835	
6,227.21	6,227.21	5,987.80	5,911.43	13.86	13.55	-116.67	-114.34	-227.83	405.72	377.74	27.98	14.501	
6,250.00	6,249.99	6,000.00	5,918.59	13.91	13.64	-21.27	-114.95	-237.49	423.34	396.67	26.67	15.874	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

LEAM Drilling Systems LLC

Anticollision Report

Company: DEVON ENERGY
 Project: Lea County, NM (NAD-83)
 Reference Site: BAE 14 Fed Com
 Site Error: 0.00 usft
 Reference Well: 8H
 Well Error: 0.00 usft
 Reference Wellbore: OH
 Reference Design: Plan #1

Local Co-ordinate Reference: Well 8H
 TVD Reference: GE 4082' + KB 18' @ 4100.00usft (McVay 8)
 MD Reference: GE 4082' + KB 18' @ 4100.00usft (McVay 8)
 North Reference: Grid
 Survey Calculation Method: Minimum Curvature
 Output errors are at: 2.00 sigma
 Database: EDM 5000.1 Single User Db
 Offset TVD Reference: Reference Datum

Offset Design BAE 14 Fed Com - 7H - OH - Plan #1													Offset Site Error: 0.00 usft
Survey Program: 0-LEAM MWD													Offset Well Error: 0.00 usft
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference	Offset	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
6,300.00	6,299.80	6,014.12	5,926.62	14.01	13.76	-18.63	-115.68	-249.08	460.81	434.17	26.64	17.299	
6,350.00	6,349.06	6,032.81	5,936.80	14.11	13.93	-18.37	-116.65	-264.72	496.69	470.25	26.44	18.785	
6,400.00	6,397.39	6,050.00	5,945.71	14.22	14.06	-14.64	-117.57	-279.39	530.82	504.76	26.06	20.368	
6,450.00	6,444.43	6,071.36	5,956.16	14.33	14.30	-13.16	-118.73	-297.98	563.08	537.57	25.51	22.072	
6,500.00	6,489.81	6,100.00	5,969.06	14.46	14.60	-11.87	-120.32	-323.50	593.52	568.71	24.80	23.928	
6,550.00	6,533.19	6,100.00	5,969.06	14.60	14.60	-11.18	-120.32	-323.50	621.86	597.98	23.88	26.045	
6,600.00	6,574.25	6,131.38	5,981.72	14.78	14.97	-10.27	-122.11	-352.16	647.81	624.95	22.86	28.338	
6,650.00	6,612.66	6,150.00	5,988.48	14.98	15.19	-9.84	-123.19	-369.47	671.79	650.11	21.68	30.987	
6,700.00	6,648.14	6,172.43	5,995.87	15.23	15.49	-9.10	-124.50	-390.61	693.52	673.13	20.39	34.015	
6,750.00	6,680.42	6,200.00	6,003.80	15.54	15.88	-8.63	-126.15	-416.96	713.05	694.03	19.02	37.496	
6,800.00	6,709.25	6,214.05	6,007.36	15.90	16.07	-8.30	-126.99	-430.53	730.09	712.55	17.54	41.627	
6,850.00	6,734.41	6,235.03	6,012.04	16.34	16.38	-8.01	-128.27	-450.93	744.84	728.79	16.05	46.407	
6,900.00	6,755.70	6,250.00	6,014.93	16.84	16.60	-7.80	-129.18	-465.59	757.23	742.68	14.55	52.027	
6,950.00	6,772.98	6,277.21	6,019.18	17.41	17.03	-7.60	-130.85	-492.41	767.08	753.89	13.19	58.155	
7,000.00	6,786.10	6,300.00	6,021.76	18.05	17.40	-7.47	-132.26	-515.01	774.54	762.56	11.98	64.678	
7,050.00	6,794.97	6,319.59	6,023.25	18.75	17.73	-7.39	-133.48	-534.51	779.51	768.49	11.02	70.719	
7,100.00	6,799.52	6,350.00	6,024.25	19.50	18.24	-7.34	-135.37	-564.84	782.14	771.62	10.52	74.370	
7,113.29	6,800.00	6,350.00	6,024.25	19.70	18.24	-7.34	-135.37	-564.84	782.27	771.86	10.42	75.108	
7,150.00	6,800.89	6,362.05	6,024.19	20.31	18.45	-7.34	-136.12	-576.86	783.18	772.49	10.69	73.253	
7,200.00	6,802.10	6,400.41	6,023.12	21.13	19.13	-7.32	-138.51	-615.13	785.71	774.52	11.19	70.187	
7,250.00	6,803.32	6,450.34	6,021.63	22.02	20.06	-7.29	-141.62	-664.94	788.39	776.59	11.80	66.811	
7,300.00	6,804.53	6,500.26	6,020.15	22.91	21.00	-7.27	-144.72	-714.75	791.07	778.66	12.41	63.764	
7,350.00	6,805.75	6,550.19	6,018.67	23.87	21.99	-7.24	-147.83	-764.56	793.75	780.70	13.05	60.836	
7,400.00	6,806.96	6,600.12	6,017.18	24.82	22.98	-7.22	-150.94	-814.37	796.42	782.73	13.69	58.182	
7,450.00	6,808.18	6,650.04	6,015.70	25.83	24.02	-7.19	-154.04	-864.17	799.10	784.75	14.36	55.665	
7,500.00	6,809.39	6,699.97	6,014.22	26.83	25.06	-7.17	-157.15	-913.98	801.78	786.76	15.02	53.372	
7,550.00	6,810.60	6,749.90	6,012.73	27.87	26.14	-7.15	-160.26	-963.79	804.46	788.75	15.71	51.211	
7,600.00	6,811.82	6,799.83	6,011.25	28.91	27.21	-7.12	-163.37	-1,013.60	807.14	790.74	16.39	49.231	
7,650.00	6,813.03	6,849.75	6,009.76	29.98	28.31	-7.10	-166.47	-1,063.41	809.81	792.72	17.10	47.369	
7,700.00	6,814.25	6,899.68	6,008.28	31.05	29.41	-7.08	-169.58	-1,113.21	812.49	794.70	17.80	45.655	
7,750.00	6,815.46	6,949.61	6,006.80	32.15	30.53	-7.05	-172.69	-1,163.02	815.17	796.66	18.51	44.044	
7,800.00	6,816.68	6,999.53	6,005.31	33.24	31.66	-7.03	-175.79	-1,212.83	817.85	798.63	19.22	42.553	
7,850.00	6,817.89	7,049.46	6,003.83	34.36	32.80	-7.01	-178.90	-1,262.64	820.53	800.59	19.94	41.150	
7,900.00	6,819.11	7,099.39	6,002.35	35.48	33.94	-6.98	-182.01	-1,312.45	823.21	802.55	20.66	39.845	
7,950.00	6,820.32	7,149.31	6,000.86	36.61	35.09	-6.96	-185.11	-1,362.26	825.89	804.50	21.39	38.616	
8,000.00	6,821.53	7,199.24	5,999.38	37.74	36.24	-6.94	-188.22	-1,412.06	828.57	806.45	22.11	37.469	
8,050.00	6,822.75	7,249.17	5,997.89	38.89	37.41	-6.92	-191.33	-1,461.87	831.25	808.40	22.85	36.385	
8,100.00	6,823.96	7,299.10	5,996.41	40.03	38.57	-6.89	-194.44	-1,511.68	833.93	810.35	23.58	35.370	
8,150.00	6,825.18	7,349.02	5,994.93	41.19	39.75	-6.87	-197.54	-1,561.49	836.61	812.29	24.31	34.409	
8,200.00	6,826.39	7,398.95	5,993.44	42.35	40.92	-6.85	-200.65	-1,611.30	839.29	814.24	25.05	33.505	
8,250.00	6,827.61	7,448.88	5,991.96	43.51	42.10	-6.83	-203.76	-1,661.10	841.97	816.18	25.79	32.648	
8,300.00	6,828.82	7,498.80	5,990.47	44.68	43.29	-6.80	-206.86	-1,710.91	844.65	818.12	26.53	31.840	
8,350.00	6,830.03	7,548.73	5,988.99	45.86	44.48	-6.78	-209.97	-1,760.72	847.33	820.06	27.27	31.072	
8,400.00	6,831.25	7,598.66	5,987.51	47.03	45.66	-6.76	-213.08	-1,810.53	850.01	822.00	28.01	30.345	
8,450.00	6,832.46	7,648.59	5,986.02	48.21	46.86	-6.74	-216.18	-1,860.34	852.69	823.93	28.76	29.653	
8,500.00	6,833.68	7,698.51	5,984.54	49.40	48.05	-6.72	-219.29	-1,910.15	855.37	825.87	29.50	28.996	
8,550.00	6,834.89	7,748.44	5,983.06	50.59	49.25	-6.70	-222.40	-1,959.95	858.05	827.81	30.25	28.370	
8,600.00	6,836.11	7,798.37	5,981.57	51.77	50.45	-6.68	-225.50	-2,009.76	860.73	829.74	30.99	27.774	
8,650.00	6,837.32	7,848.29	5,980.09	52.97	51.66	-6.66	-228.61	-2,059.57	863.41	831.68	31.74	27.205	
8,700.00	6,838.53	7,898.22	5,978.60	54.16	52.86	-6.64	-231.72	-2,109.38	866.09	833.61	32.48	26.662	
8,750.00	6,839.75	7,948.15	5,977.12	55.36	54.07	-6.61	-234.83	-2,159.19	868.78	835.54	33.23	26.143	
8,800.00	6,840.96	7,998.08	5,975.64	56.56	55.28	-6.59	-237.93	-2,209.00	871.46	837.48	33.98	25.647	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

LEAM Drilling Systems LLC

Anticollision Report

Company: DEVON ENERGY
 Project: Lea County, NM (NAD-83)
 Reference Site: BAE 14 Fed Com
 Site Error: 0.00 usft
 Reference Well: 8H
 Well Error: 0.00 usft
 Reference Wellbore: OH
 Reference Design: Plan #1

Local Co-ordinate Reference: Well 8H
 TVD Reference: GE 4082' + KB 18' @ 4100.00usft (McVay 8)
 MD Reference: GE 4082' + KB 18' @ 4100.00usft (McVay 8)
 North Reference: Grid
 Survey Calculation Method: Minimum Curvature
 Output errors are at: 2.00 sigma
 Database: EDM 5000.1 Single User Db
 Offset TVD Reference: Reference Datum

Offset Design BAE 14 Fed Com - 7H - OH - Plan #1													Offset Site Error: 0.00 usft
Survey Program: 0-LEAM/MWD													Offset Well Error: 0.00 usft
Reference	Offset	Semi Major Axis		Distance		Minimum Separation		Separation Factor		Warning			
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Tooface (")	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
8,850.00	6,842.18	8,048.00	5,974.15	57.76	56.49	-6.57	-241.04	-2,258.80	874.14	839.41	34.73	25.171	
8,900.00	6,843.39	8,097.93	5,972.67	58.96	57.70	-6.55	-244.15	-2,308.61	876.82	841.34	35.48	24.716	
8,950.00	6,844.61	8,147.86	5,971.18	60.17	58.91	-6.53	-247.25	-2,358.42	879.50	843.28	36.23	24.278	
9,000.00	6,845.82	8,197.78	5,969.70	61.38	60.13	-6.51	-250.36	-2,408.23	882.18	845.21	36.97	23.859	
9,050.00	6,847.03	8,247.71	5,968.22	62.58	61.34	-6.49	-253.47	-2,458.04	884.87	847.14	37.72	23.456	
9,100.00	6,848.25	8,297.64	5,966.73	63.79	62.56	-6.47	-256.57	-2,507.84	887.55	849.07	38.47	23.069	
9,150.00	6,849.46	8,347.57	5,965.25	65.01	63.78	-6.45	-259.68	-2,557.65	890.23	851.01	39.22	22.696	
9,200.00	6,850.68	8,397.49	5,963.77	66.22	65.00	-6.44	-262.79	-2,607.46	892.91	852.94	39.97	22.338	
9,250.00	6,851.89	8,447.42	5,962.28	67.43	66.22	-6.42	-265.90	-2,657.27	895.60	854.87	40.72	21.992	
9,300.00	6,853.11	8,497.35	5,960.80	68.65	67.44	-6.40	-269.00	-2,707.08	898.28	856.80	41.47	21.659	
9,350.00	6,854.32	8,547.27	5,959.31	69.86	68.66	-6.38	-272.11	-2,756.89	900.96	858.74	42.22	21.338	
9,400.00	6,855.53	8,597.20	5,957.83	71.08	69.88	-6.36	-275.22	-2,806.69	903.64	860.67	42.97	21.028	
9,450.00	6,856.75	8,647.13	5,956.35	72.30	71.11	-6.34	-278.32	-2,856.50	906.33	862.60	43.72	20.728	
9,500.00	6,857.96	8,697.05	5,954.86	73.52	72.33	-6.32	-281.43	-2,906.31	909.01	864.53	44.47	20.439	
9,550.00	6,859.18	8,746.98	5,953.38	74.74	73.55	-6.30	-284.54	-2,956.12	911.69	866.47	45.22	20.159	
9,600.00	6,860.39	8,796.91	5,951.90	75.96	74.78	-6.28	-287.64	-3,005.93	914.37	868.40	45.98	19.888	
9,650.00	6,861.61	8,846.84	5,950.41	77.18	76.01	-6.26	-290.75	-3,055.74	917.06	870.33	46.73	19.627	
9,700.00	6,862.82	8,896.76	5,948.93	78.41	77.23	-6.25	-293.86	-3,105.54	919.74	872.27	47.48	19.373	
9,750.00	6,864.03	8,946.69	5,947.44	79.63	78.46	-6.23	-296.96	-3,155.35	922.42	874.20	48.23	19.127	
9,800.00	6,865.25	8,996.62	5,945.96	80.85	79.69	-6.21	-300.07	-3,205.16	925.11	876.13	48.98	18.889	
9,850.00	6,866.46	9,046.54	5,944.48	82.08	80.92	-6.19	-303.18	-3,254.97	927.79	878.07	49.73	18.658	
9,900.00	6,867.68	9,096.47	5,942.99	83.30	82.15	-6.17	-306.29	-3,304.78	930.47	880.00	50.48	18.434	
9,950.00	6,868.89	9,146.40	5,941.51	84.53	83.38	-6.16	-309.39	-3,354.58	933.16	881.93	51.23	18.217	
10,000.00	6,870.11	9,196.33	5,940.02	85.76	84.61	-6.14	-312.50	-3,404.39	935.84	883.87	51.97	18.006	
10,050.00	6,871.32	9,246.25	5,938.54	86.98	85.84	-6.12	-315.61	-3,454.20	938.53	885.80	52.72	17.801	
10,100.00	6,872.53	9,296.18	5,937.06	88.21	87.07	-6.10	-318.71	-3,504.01	941.21	887.74	53.47	17.601	
10,150.00	6,873.75	9,346.11	5,935.57	89.44	88.30	-6.09	-321.82	-3,553.82	943.89	889.67	54.22	17.408	
10,200.00	6,874.96	9,396.03	5,934.09	90.67	89.53	-6.07	-324.93	-3,603.63	946.58	891.61	54.97	17.219	
10,250.00	6,876.18	9,445.96	5,932.61	91.90	90.76	-6.05	-328.03	-3,653.43	949.26	893.54	55.72	17.036	
10,300.00	6,877.39	9,495.89	5,931.12	93.13	91.99	-6.03	-331.14	-3,703.24	951.95	895.48	56.47	16.858	
10,350.00	6,878.61	9,545.82	5,929.64	94.36	93.23	-6.02	-334.25	-3,753.05	954.63	897.41	57.22	16.684	
10,400.00	6,879.82	9,595.74	5,928.15	95.59	94.46	-6.00	-337.36	-3,802.86	957.32	899.35	57.97	16.515	
10,450.00	6,881.03	9,645.67	5,926.67	96.82	95.69	-5.98	-340.46	-3,852.67	960.00	901.28	58.72	16.350	
10,500.00	6,882.25	9,695.60	5,925.19	98.05	96.93	-5.97	-343.57	-3,902.47	962.69	903.22	59.46	16.189	
10,550.00	6,883.46	9,745.52	5,923.70	99.29	98.16	-5.95	-346.68	-3,952.28	965.37	905.16	60.21	16.033	
10,600.00	6,884.68	9,795.45	5,922.22	100.52	99.40	-5.93	-349.78	-4,002.09	968.05	907.09	60.96	15.880	
10,650.00	6,885.89	9,845.38	5,920.74	101.75	100.63	-5.92	-352.89	-4,051.90	970.74	909.03	61.71	15.731	
10,700.00	6,887.11	9,895.30	5,919.25	102.98	101.87	-5.90	-356.00	-4,101.71	973.42	910.97	62.46	15.586	
10,750.00	6,888.32	9,945.23	5,917.77	104.22	103.10	-5.88	-359.10	-4,151.52	976.11	912.91	63.20	15.444	
10,800.00	6,889.53	9,995.16	5,916.28	105.45	104.34	-5.87	-362.21	-4,201.32	978.79	914.84	63.95	15.305	
10,850.00	6,890.75	10,045.09	5,914.80	106.69	105.57	-5.85	-365.32	-4,251.13	981.48	916.78	64.70	15.170	
10,900.00	6,891.96	10,095.01	5,913.32	107.92	106.81	-5.84	-368.42	-4,300.94	984.17	918.72	65.45	15.038	
10,950.00	6,893.18	10,144.94	5,911.83	109.16	108.04	-5.82	-371.53	-4,350.75	986.85	920.66	66.19	14.909	
11,000.00	6,894.39	10,194.87	5,910.35	110.39	109.28	-5.80	-374.64	-4,400.56	989.54	922.60	66.94	14.782	
11,050.00	6,895.61	10,244.79	5,908.86	111.63	110.52	-5.79	-377.75	-4,450.37	992.22	924.54	67.69	14.659	
11,100.00	6,896.82	10,294.72	5,907.38	112.86	111.75	-5.77	-380.85	-4,500.17	994.91	926.47	68.43	14.538	
11,150.00	6,898.03	10,344.65	5,905.90	114.10	112.99	-5.76	-383.96	-4,549.98	997.59	928.41	69.18	14.420	
11,200.00	6,899.25	10,394.58	5,904.41	115.33	114.23	-5.74	-387.07	-4,599.79	1,000.28	930.35	69.93	14.305	
11,250.00	6,900.46	10,444.50	5,902.93	116.57	115.46	-5.73	-390.17	-4,649.60	1,002.96	932.29	70.67	14.192	
11,300.00	6,901.68	10,494.43	5,901.45	117.81	116.70	-5.71	-393.28	-4,699.41	1,005.65	934.23	71.42	14.081	
11,313.27	6,902.00	10,507.68	5,901.05	118.13	117.03	-5.71	-394.11	-4,712.63	1,006.36	934.75	71.62	14.052	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

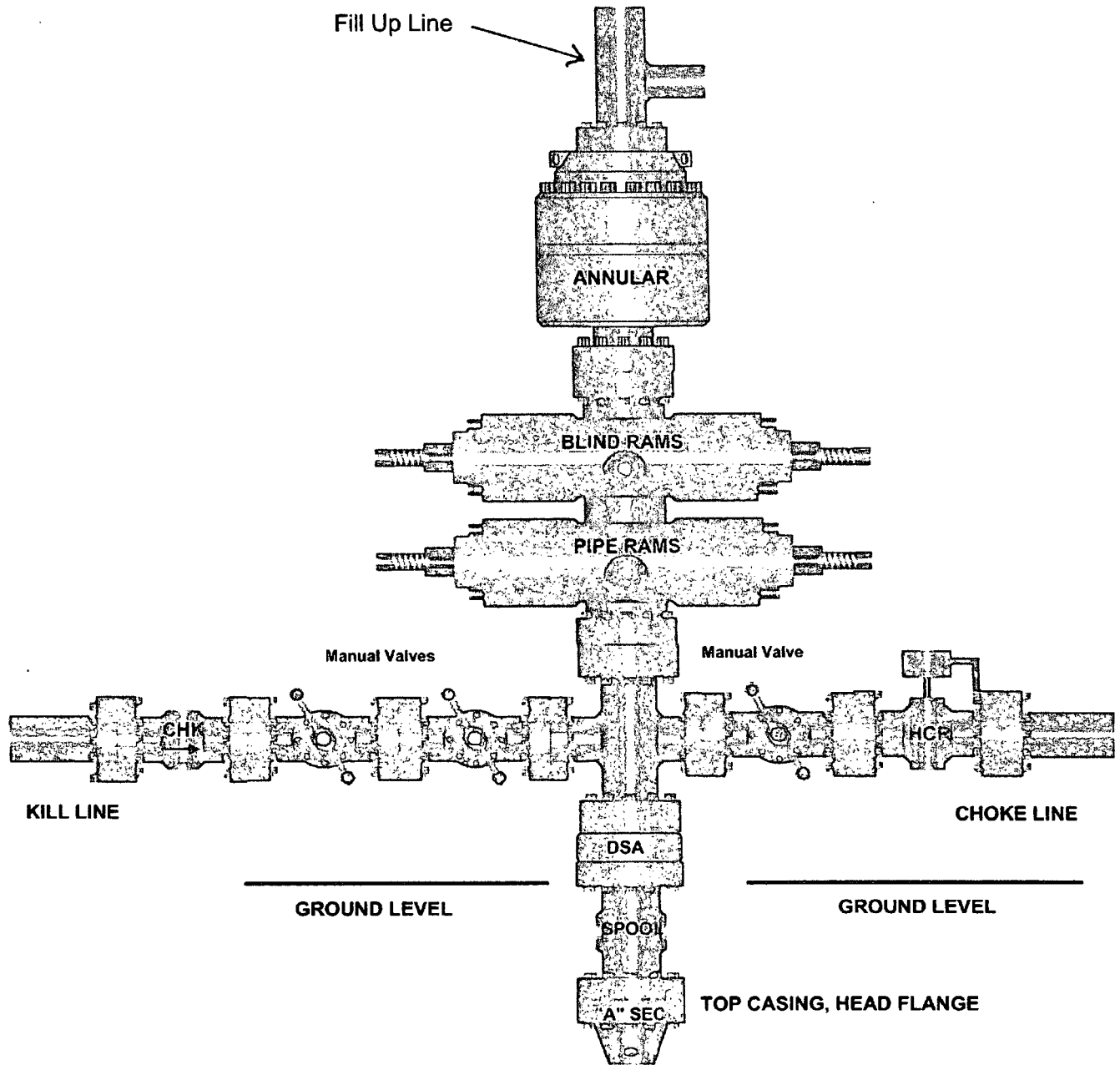
NOTES REGARDING BLOWOUT PREVENTERS

Devon Energy Production Company, LP
BAE 14 Fed Com 8H

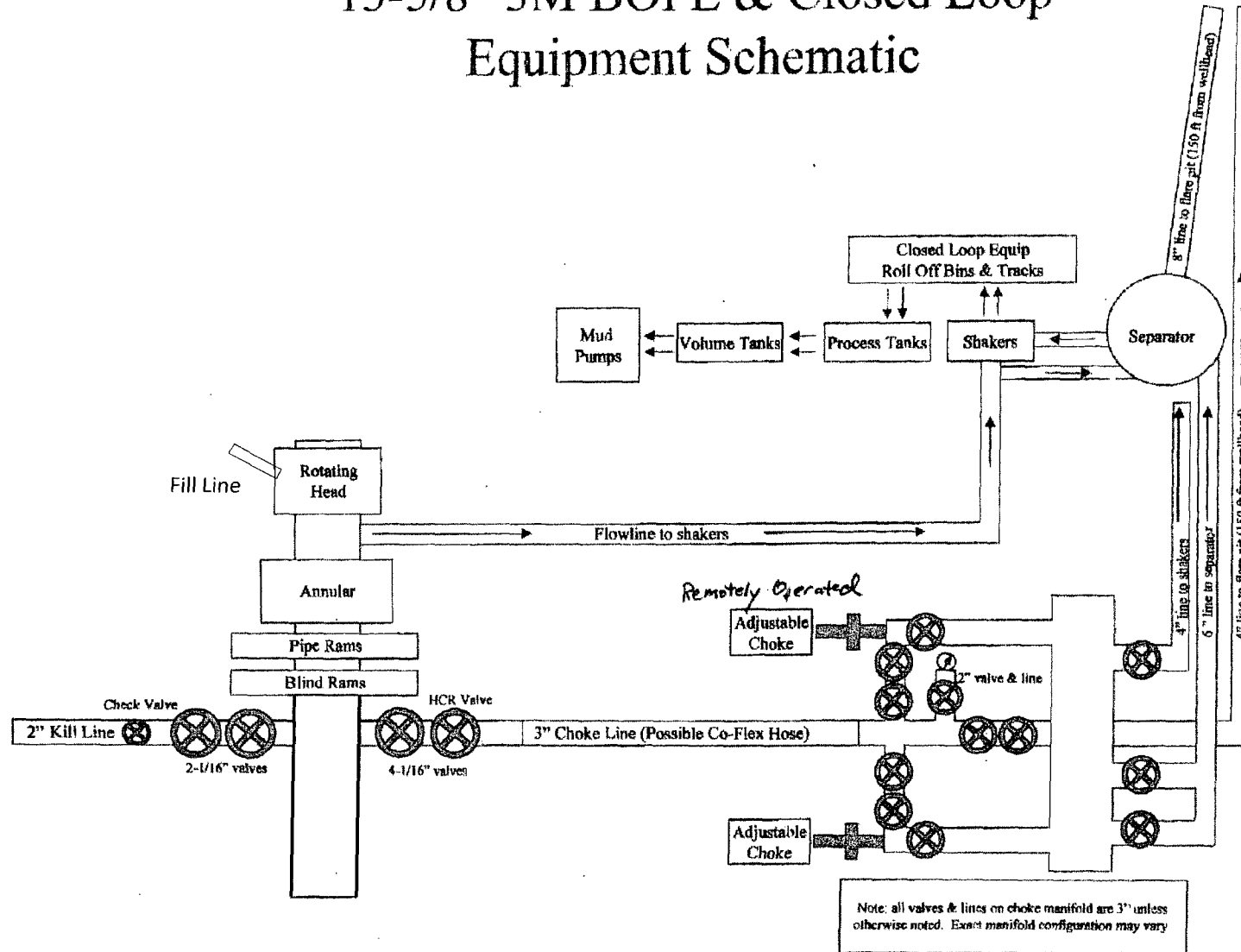
Surface Location: 990 FSL & 200 FEL, Unit P, Sec 14 T17S R32E, Lea, NM
Bottom Hole Location: 710 FSL & 330 FWL, Unit M, Sec 14 T17S R32E, Lea, NM

1. Drilling nipple will be constructed so it can be removed mechanically without the aid of a welder. The minimum internal diameter will equal BOP bore.
2. Wear ring will be properly installed in head.
3. Blowout preventer and all associated fittings will be in operable condition to withstand a minimum 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" x 3,000 psi BOP Stack



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





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.

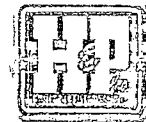
Should you have any questions or require any additional information/clarifications then please do not hesitate to contact us.

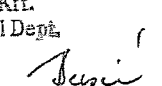
ContiTech Beattie is part of the Continental AG Corporation and can offer the full support resources associated with a global organization.

Best regards,

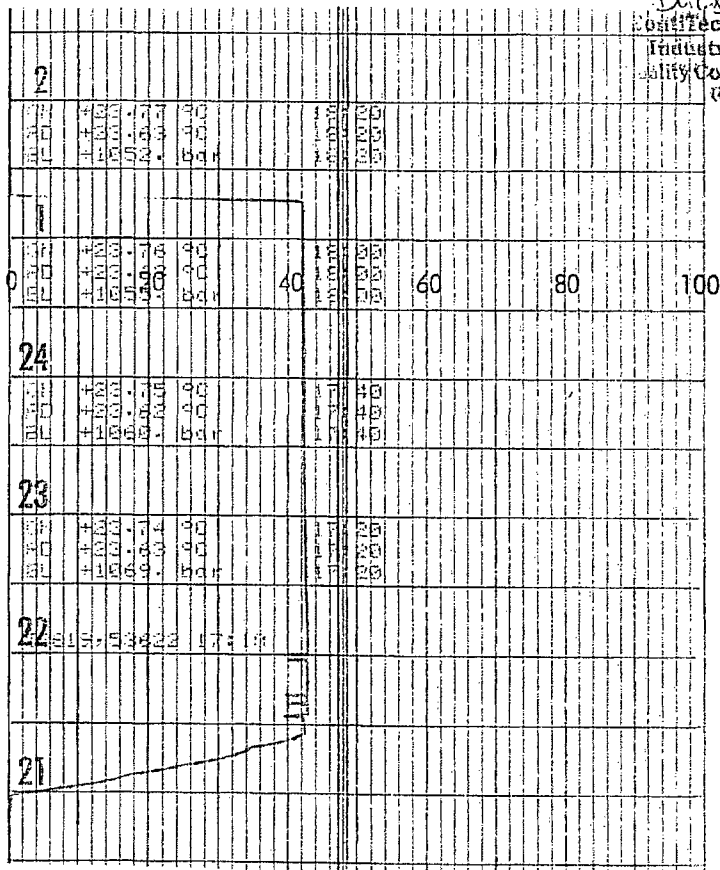
Robin Hodgson
Sales Manager
ContiTech Beattie Corp

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



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	
3" coupling with 4 1/16" Flange end		5503 2029		AISI 4130 AISI 4130	
				Heat N° N1590P 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: 25. August. 2008		Inspector		Quality Control ContiTech Rubber Industrial Kft. Quality Control Dept.  	

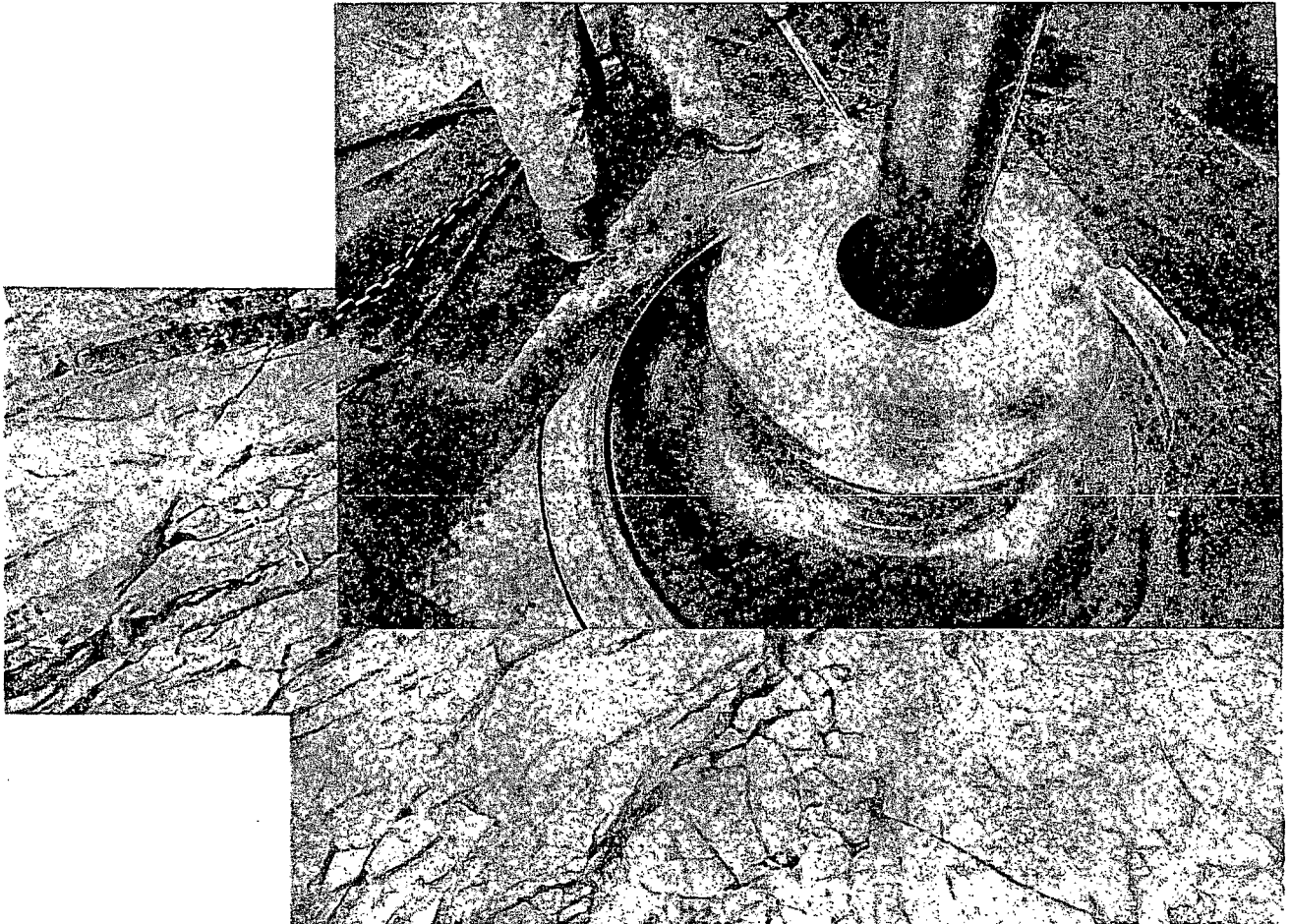
HARTMANN &



Logo
Eosiltech Rubber
Industrial Kft.
Quality Control Dept.
(2)



Commitment Runs Deep



Design Plan
Operation and Maintenance Plan
Closure Plan

SENM - Closed Loop Systems
June 2010