

HOBBS OCD

JUL 11 2013

OCD Hobbs

FORM APPROVED
OMB No. 1004-0137
Expires October 31, 2014RECEIVED
UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
APPLICATION FOR PERMIT TO DRILL OR REENTER

1a. Type of work: ☒ DRILL ☐ REENTER		5. Lease Serial No. S: NMNM-113964; B: NMLC-061863A	
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.		7. If Unit or CA Agreement, Name and No. C-02-0007106	
3a. Address 333 W. Sheridan Ave. Oklahoma City, OK 73102		8. Lease Name and Well No. <40025> Cotton Draw 33-4 Fed Com 1H	
3b. Phone No. (include area code) 405-228-4248		9. API Well No. 30-025-41263	
4. Location of Well (Report location clearly and in accordance with any State requirements.)* At surface 330' FNL & 1295' FWL, Unit D PP: 330' FNL & 1295' FWL At proposed prod. zone 330' FSL & 660' FWL, Unit M; Sec 4, T25S-R32E		10. Field and Pool, or Exploratory 249490 PADUCA SOUTH, DELAWARE North	
11. Sec., T. R. M. or Blk. and Survey or Area Sec 33, T24S-R32E		12. County or Parish Lea County	
13. State NM		14. Distance in miles and direction from nearest town or post office* Approximately 21 miles East of Malaga, NM	
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 NMNM-113964; 360 ac. NMLC-061863A; 1,882.6 ac	
17. Spacing Unit dedicated to this well W/2 W/2 of Sec 33, T24S-R32E & W/2 W/2 of Sec 4, T25S-R32E = 320.26 acres		18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. See attached map	
19. Proposed Depth TVD: 8,500' MD: 18,264'		20. BLM/BIA Bond No. on file CO-1104 & NMB-000801	
21. Elevations (Show whether DF, KDB, RT, GL, etc.) 3,515' GL		22. Approximate date work will start* 07/01/2013	
23. Estimated duration 45 days		24. Attachments To be pad drilled with Cotton Draw 33-4 Fed Com 2H	

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 Patti Riechers	Name (Printed/Typed) Patti Riechers	Date 04/08/2013
Title Regulatory Specialist		
Approved by (Signature) /s/George MacDonell	Name (Printed/Typed) /s/George MacDonell	Date JUL 8 2013
Title FIELD MANAGER		
Office CARLSBAD FIELD OFFICE		

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

APPROVAL FOR TWO YEARS

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

(Continued on page 2)

* (Instructions on page 2)
Carlsbad Controlled Water Basin**OK**
7/12/13Approval Subject to General Requirements
& Special Stipulations AttachedSEE ATTACHED FOR
CONDITIONS OF APPROVAL

JUL 16 2013

dm

DRILLING PROGRAM
Devon Energy Production Company, LP
Cotton Draw 33-4 Federal 1H

Surface Location: 330' FNL & 1295' FWL, Unit D, Sec 33, T24S R32E, Lea, NM
Bottom Hole Location: 330' FSL & 660' FWL, Unit M, Sec 4, T25S 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	390'	
b. Rustler	750'	
c. Salado	1,115'	
d. Top of Salt	1,144'	
e. Base of Salt	4,350'	
f. Delaware	4,567'	Oil
g. Bell Canyon	4,604'	Oil
h. Cherry Canyon	5,525'	Oil
i. Brushy Canyon	6,871'	Oil

Total Depth 18,264' MD 8,500' TVD

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

Hole Size	Hole Interval	OD Csg	Casing Interval	Weight	Collar	Grade
17-1/2"	0 - 875' 900	13-3/8"	0 - 875	48#	STC	H-40
12-1/4"	875 - 4,500 4,500 - 7,500	9-5/8"	0 - 4,500	40#	BTC	HCK-55
8-3/4"	4,500 - 7,500	5-1/2"	0 - 7,500	17#	LTC	HCP-110
8-3/4"	7,500 - 18,264	5-1/2"	7,500 - 18,264	17#	BTC	HCP-110

MAXIMUM LATERAL TVD 8,500'

Design Parameter Factors:

<u>Casing Size</u>	<u>Collapse Design Factor</u>	<u>Burst Design Factor</u>	<u>Tension Design Factor</u>
13-3/8"	1.69	3.81	7.67
9-5/8"	1.81	1.69	21.94
5-1/2"	2.13	3.03	4.28
5-1/2"	1.88	2.68	1.76

The maximum possible collapse load that the intermediate casing will experience will result from evacuated casing with the pore pressure exerting a collapse load at TD. There is no potential for the intermediate casing to be used as the injection string. All casing will be new and to API specification.

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

13-3/8" Surf **Lead:** 300 sacks 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**

500 ft Tail: 515 sacks 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" Inter **Lead:** 900 sacks (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 sacks 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 **1st Lead:** 250 sacks (50:50) Class H Cement:Poz (Fly Ash) + 10% bwoc Bentonite + 8 lb/sk Sodium Chloride + 0.125 lbs/sack Poly-E-Flake + 0.3% bwoc HR-601 + 0.3% bwoc Econolite + 77.2% Fresh Water, 11.8 ppg
Yield: 2.52 cf/sk

2nd Lead: 250 sacks (65:35) Class H Cement:Poz (Fly Ash) + 6% bwoc Bentonite + 0.125 lbs/sack Poly-E-Flake + 0.1% bwoc HR-601 + 74.1% Fresh Water, 12.5 ppg, **Yield:** 1.95 cf/sk

Tail: 2850 sacks (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 @ 4000'

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

5. Pressure Control Equipment

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

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

The pipe rams will be operated and checked each 24 hour period and each time the drill pipe is out of the hole. These tests will be logged in the daily driller's log. A 2" kill line and 3" choke line will be incorporated into the drilling spool below the ram BOP. In addition to the rams and annular preventer, additional BOP accessories include a kelly cock, floor safety valve, choke lines, and choke manifold rated at 3,000 psi WP.

Devon requests a variance to use a flexible line with flanged ends between the BOP and the choke manifold (choke line); **if an H&P rig drills this well. Otherwise no flex line is needed.** The line will be kept as straight as possible with minimal turns.

6. Proposed Mud Circulation System

<u>Depth</u>	<u>Mud Wt.</u>	<u>Visc</u>	<u>Fluid Loss</u>	<u>Type System</u>
0 - 875 900	8.4-9.0	30-34	NC	FW
875 - 4,500 4650	9.8-10.0	28-32	NC	Brine
4,500 -18,264	8.6-9.0	28-32	N12	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.

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.

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Devon requests a variance to use a flexible line with flanged ends between the BOP and the choke manifold (choke line); **if an H&P rig drills this well. Otherwise no flex line is needed.** The line will be kept as straight as possible with minimal turns.

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8. 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 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 150°. No H₂S is anticipated to be encountered.

10. Anticipated Starting Date and Duration of Operations:

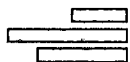
- a. Road and location construction will begin after the BLM has approved the APD. Anticipated spud date will be as soon after BLM approval and as soon as a rig will be available. Move in operations and drilling is expected to take 30 days. If production casing is run then an additional 30 days will be needed to complete well and construct surface facilities and/or lay flow lines in order to place well on production.



Weatherford®

Drilling Services

Proposal



devon

COTTON DRAW 33-4 FED 1H

LEA COUNTY, NM

WELL FILE: **PLAN 1**

MARCH 12, 2013

Weatherford International, Ltd.

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



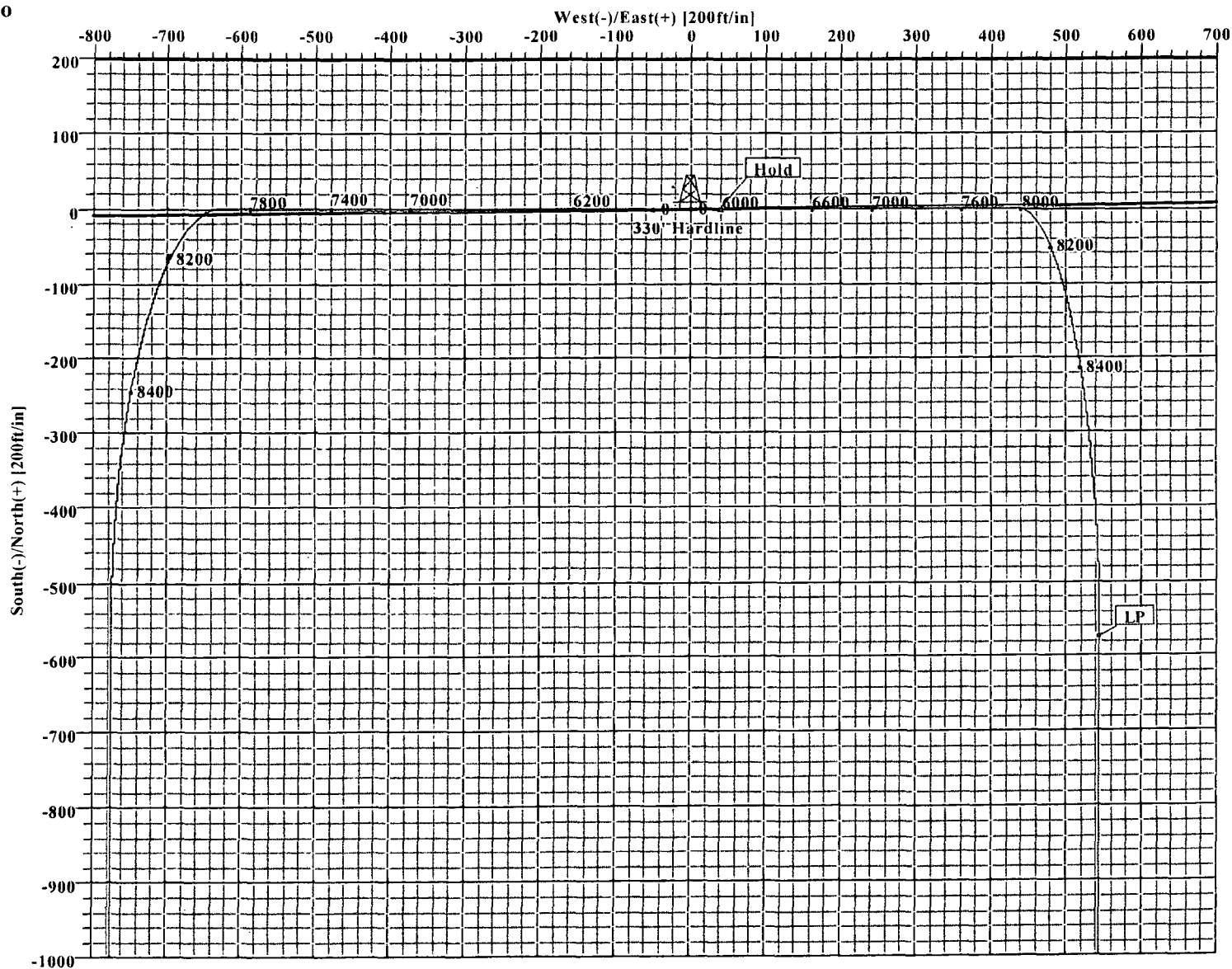
Cotton Draw 33-4 Federal Com 2H
Lea County, New Mexico

LEGEND

- Cotton Draw 33-4 Federal Com 2H, 1, Plan #1
- Cotton Draw 33-4 Federal 1H (1)



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Cotton Draw 33-4 Federal 1H
Lea County, New Mexico

KB ELEV: 3340
GL ELEV: 3315

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSec	Target
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2	5550.00	0.00	0.00	5550.00	0.00	0.00	0.00	0.00	0.00	
3	6051.89	15.06	270.00	6046.13	0.00	-65.57	3.00	0.00	4.80	
4	8020.05	15.06	270.00	7946.72	-0.04	-576.84	0.00	0.00	42.19	
5	8920.04	90.00	180.00	8500.00	-573.00	-725.68	10.00	-90.00	624.49	
6	18264.42	90.00	180.00	8500.00	-9917.38	-725.68	0.00	0.00	9943.89	PBHL

WELL DETAILS

Name	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
Cotton Draw 33-4 Federal 1H	0.00	0.00	429942.17	742240.58	32°10'49.150N	103°41'02.295W	N/A

TARGET DETAILS

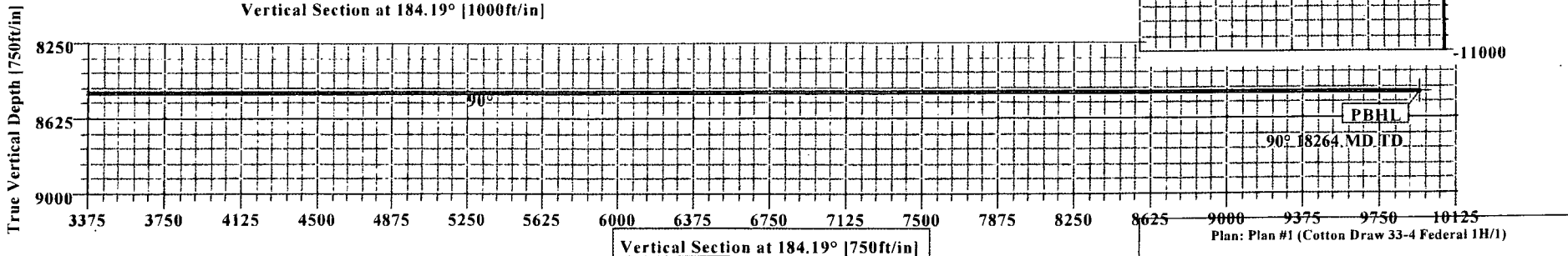
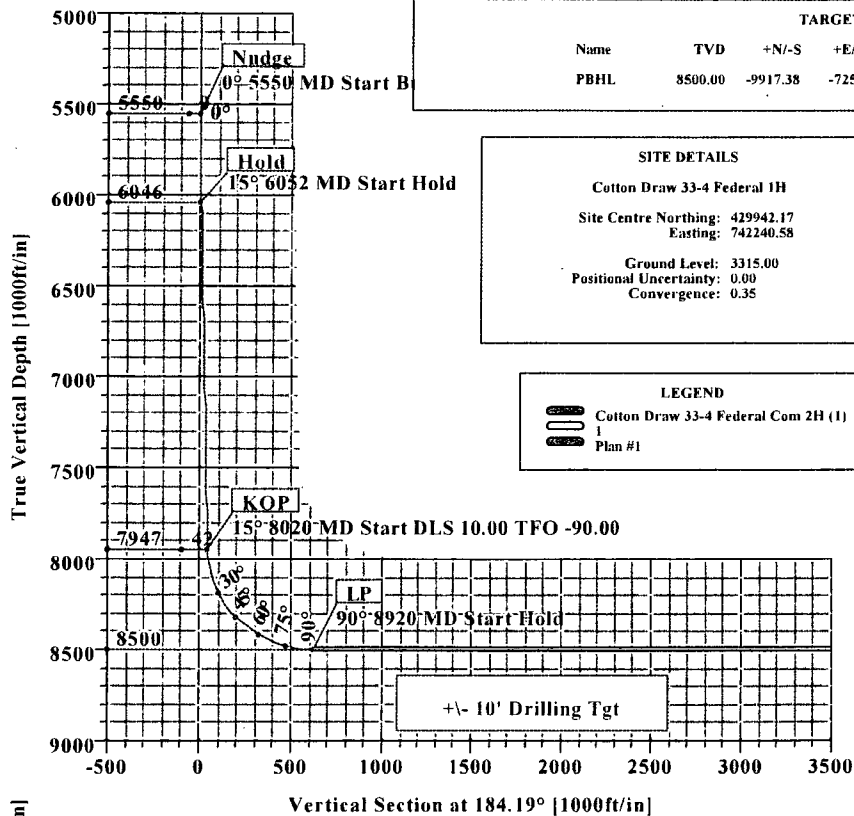
Name	TVD	+N/-S	+E/-W	Northing	Easting	Shape
PBHL	8500.00	-9917.38	-725.68	420024.79	741514.90	Point

SITE DETAILS

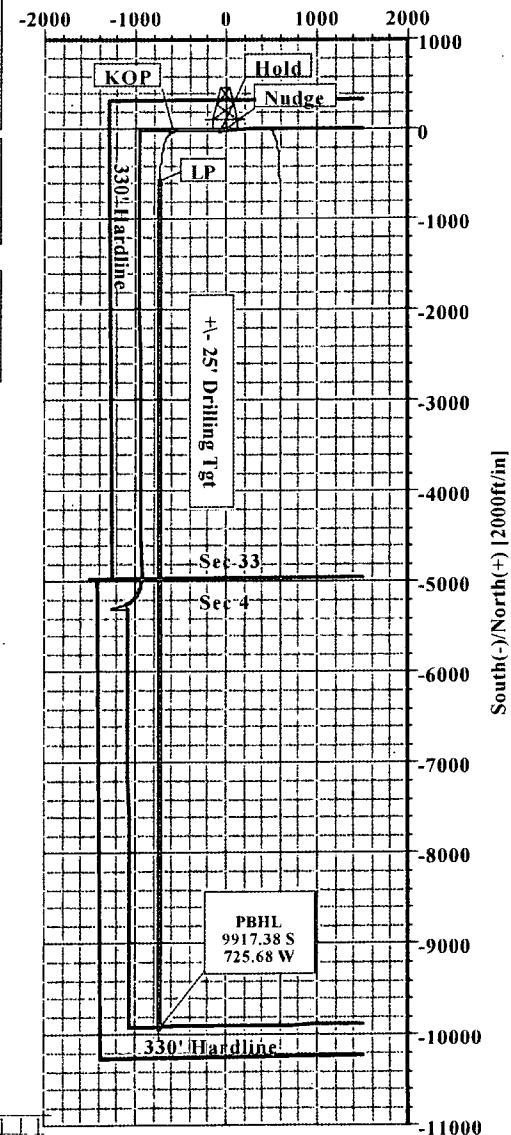
Cotton Draw 33-4 Federal 1H
Site Centre Northing: 429942.17
Easting: 742240.58
Ground Level: 3315.00
Positional Uncertainty: 0.00
Convergence: 0.35

LEGEND

Cotton Draw 33-4 Federal Com 2H (1)
 Plan #1



West(-)/East(+) [2000ft/in]



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Plan: Plan #1 (Cotton Draw 33-4 Federal 1H/1)

Created By: Russell W. Joyner

Date: 3/12/2013



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Wft Plan Report X Y's.

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Company: Devon Energy Date: 3/12/2013 Time: 06:42:53 Page: 1
Field: Lea County, New Mexico (NAD 83) Co-ordinate(NE) Reference: Well: Cotton Draw 33-4 Federal 1H
Site: Cotton Draw 33-4 Federal 1H Vertical (TVD) Reference: SITE 3340.0
Well: Cotton Draw 33-4 Federal 1H Section (VS) Reference: Well (0.00N,0.00E,184.19Azi)
Wellpath: 1 Survey Calculation Method: Minimum Curvature Db: Sybase

Plan: Plan #1 Date Composed: 3/11/2013
Principal: Yes Version: 1
Tied-to: From Surface

Site: Cotton Draw 33-4 Federal 1H

Site Position: Northing: 429942.17 ft Latitude: 32 10 49.150 N
From: Map Easting: 742240.58 ft Longitude: 103 41 2.295 W
Position Uncertainty: 0.00 ft North Reference: Grid
Ground Level: 3315.00 ft Grid Convergence: 0.35 deg

Well: Cotton Draw 33-4 Federal 1H Slot Name:
Well Position: +N/-S 0.00 ft Northing: 429942.17 ft Latitude: 32 10 49.150 N
+E/-W 0.00 ft Easting: 742240.58 ft Longitude: 103 41 2.295 W
Position Uncertainty: 0.00 ft

Wellpath: 1
Current Datum: SITE Height 3340.00 ft
Magnetic Data: 6/10/2013
Field Strength: 48404 nT
Vertical Section: Depth From (TVD) +N/-S
ft ft
0.00 0.00
Drilled From: Surface
Tie-on Depth: 0.00 ft
Above System Datum: Mean Sea Level
Declination: 7.39 deg
Mag Dip Angle: 60.08 deg
+E/-W Direction
ft deg
0.00 184.19

Plan Section Information

MD ft	Incl deg	Azim deg	TVD ft	+N/-S ft	+E/-W ft	DLS deg/100ft	Build deg/100ft	Turn deg/100ft	TFO deg	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
5550.00	0.00	0.00	5550.00	0.00	0.00	0.00	0.00	0.00	0.00	
6051.89	15.06	270.00	6046.13	0.00	-65.57	3.00	3.00	0.00	0.00	
8020.05	15.06	270.00	7946.72	-0.04	-576.84	0.00	0.00	0.00	0.00	
8920.04	90.00	180.00	8500.00	-573.00	-725.68	10.00	8.33	-10.00	-90.00	
18264.42	90.00	180.00	8500.00	-9917.38	-725.68	0.00	0.00	0.00	0.00	PBHL

Survey

MD ft	Incl deg	Azim deg	TVD ft	N/S ft	E/W ft	VS ft	DLS deg/100ft	MapN ft	MapE ft	Comment
5500.00	0.00	0.00	5500.00	0.00	0.00	0.00	0.00	429942.17	742240.58	
5550.00	0.00	0.00	5550.00	0.00	0.00	0.00	0.00	429942.17	742240.58	Nudge
5600.00	1.50	270.00	5599.99	0.00	-0.65	0.05	3.00	429942.17	742239.93	
5700.00	4.50	270.00	5699.85	0.00	-5.89	0.43	3.00	429942.17	742234.69	
5800.00	7.50	270.00	5799.29	0.00	-16.34	1.20	3.00	429942.17	742224.24	
5900.00	10.50	270.00	5898.04	0.00	-31.98	2.34	3.00	429942.17	742208.60	
6000.00	13.50	270.00	5995.85	0.00	-52.77	3.86	3.00	429942.17	742187.81	
6051.89	15.06	270.00	6046.13	0.00	-65.57	4.80	3.00	429942.17	742175.01	Hold
6100.00	15.06	270.00	6092.59	-0.01	-78.06	5.71	0.00	429942.16	742162.52	
6200.00	15.06	270.00	6189.16	-0.01	-104.04	7.61	0.00	429942.16	742136.54	
6300.00	15.06	270.00	6285.73	-0.01	-130.02	9.51	0.00	429942.16	742110.56	
6400.00	15.06	270.00	6382.29	-0.01	-156.00	11.41	0.00	429942.16	742084.58	
6500.00	15.06	270.00	6478.86	-0.01	-181.97	13.31	0.00	429942.16	742058.61	
6600.00	15.06	270.00	6575.43	-0.02	-207.95	15.21	0.00	429942.15	742032.63	
6700.00	15.06	270.00	6671.99	-0.02	-233.93	17.11	0.00	429942.15	742006.65	
6800.00	15.06	270.00	6768.56	-0.02	-259.91	19.01	0.00	429942.15	741980.67	
6900.00	15.06	270.00	6865.13	-0.02	-285.88	20.91	0.00	429942.15	741954.70	
7000.00	15.06	270.00	6961.69	-0.02	-311.86	22.81	0.00	429942.15	741928.72	
7100.00	15.06	270.00	7058.26	-0.03	-337.84	24.71	0.00	429942.14	741902.74	
7200.00	15.06	270.00	7154.83	-0.03	-363.82	26.61	0.00	429942.14	741876.76	
7300.00	15.06	270.00	7251.39	-0.03	-389.79	28.51	0.00	429942.14	741850.79	



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Wft Plan Report X Y's.

**Weatherford**

Company: Devon Energy
Field: Lea County, New Mexico (NAD 83)
Site: Cotton Draw 33-4 Federal 1H
Well: Cotton Draw 33-4 Federal 1H
Wellpath: 1

Date: 3/12/2013 Time: 06:42:53 Page: 2
Co-ordinate(NE) Reference: Well: Cotton Draw 33-4 Federal 1H
Vertical (TVD) Reference: SITE 3340.0
Section (VS) Reference: Well (0.00N,0.00E,184.19Azi)
Survey Calculation Method: Minimum Curvature Db: Sybase

Survey

MD ft	Incl deg	Azim deg	TVD ft	N/S ft	E/W ft	VS ft	DLS deg/100ft	MapN ft	MapE ft	Comments
7400.00	15.06	270.00	7347.96	-0.03	-415.77	30.41	0.00	429942.14	741824.81	
7500.00	15.06	270.00	7444.53	-0.03	-441.75	32.31	0.00	429942.14	741798.83	
7600.00	15.06	270.00	7541.10	-0.04	-467.73	34.21	0.00	429942.13	741772.85	
7700.00	15.06	270.00	7637.66	-0.04	-493.70	36.11	0.00	429942.13	741746.88	
7800.00	15.06	270.00	7734.23	-0.04	-519.68	38.01	0.00	429942.13	741720.90	
7900.00	15.06	270.00	7830.80	-0.04	-545.66	39.91	0.00	429942.13	741694.92	
8000.00	15.06	270.00	7927.36	-0.04	-571.64	41.81	0.00	429942.13	741668.94	
8020.05	15.06	270.00	7946.72	-0.04	-576.84	42.19	0.00	429942.13	741663.74	KOP
8100.00	17.00	241.60	8023.68	-5.61	-597.55	49.26	10.00	429936.56	741643.03	
8200.00	23.30	218.65	8117.65	-28.07	-622.83	73.51	10.00	429914.10	741617.75	
8300.00	31.50	206.04	8206.43	-67.09	-646.71	114.16	10.00	429875.08	741593.87	
8400.00	40.45	198.39	8287.32	-121.48	-668.47	170.00	10.00	429820.69	741572.11	
8500.00	49.74	193.17	8357.86	-189.59	-687.44	239.31	10.00	429752.58	741553.14	
8600.00	59.22	189.22	8415.91	-269.35	-703.06	320.00	10.00	429672.82	741537.52	
8700.00	68.79	185.99	8459.70	-358.33	-714.84	409.60	10.00	429583.84	741525.74	
8800.00	78.41	183.16	8487.90	-453.84	-722.43	505.41	10.00	429488.33	741518.15	
8900.00	88.07	180.52	8499.66	-552.97	-725.59	604.50	10.00	429389.20	741514.99	
8920.04	90.00	180.00	8500.00	-573.00	-725.68	624.49	10.00	429369.17	741514.90	LP
9000.00	90.00	180.00	8500.00	-652.96	-725.68	704.24	0.00	429289.21	741514.90	
9100.00	90.00	180.00	8500.00	-752.96	-725.68	803.97	0.00	429189.21	741514.90	
9200.00	90.00	180.00	8500.00	-852.96	-725.68	903.70	0.00	429089.21	741514.90	
9300.00	90.00	180.00	8500.00	-952.96	-725.68	1003.44	0.00	428989.21	741514.90	
9400.00	90.00	180.00	8500.00	-1052.96	-725.68	1103.17	0.00	428889.21	741514.90	
9500.00	90.00	180.00	8500.00	-1152.96	-725.68	1202.90	0.00	428789.21	741514.90	
9600.00	90.00	180.00	8500.00	-1252.96	-725.68	1302.64	0.00	428689.21	741514.90	
9700.00	90.00	180.00	8500.00	-1352.96	-725.68	1402.37	0.00	428589.21	741514.90	
9800.00	90.00	180.00	8500.00	-1452.96	-725.68	1502.10	0.00	428489.21	741514.90	
9900.00	90.00	180.00	8500.00	-1552.96	-725.68	1601.83	0.00	428389.21	741514.90	
10000.00	90.00	180.00	8500.00	-1652.96	-725.68	1701.57	0.00	428289.21	741514.90	
10100.00	90.00	180.00	8500.00	-1752.96	-725.68	1801.30	0.00	428189.21	741514.90	
10200.00	90.00	180.00	8500.00	-1852.96	-725.68	1901.03	0.00	428089.21	741514.90	
10300.00	90.00	180.00	8500.00	-1952.96	-725.68	2000.76	0.00	427989.21	741514.90	
10400.00	90.00	180.00	8500.00	-2052.96	-725.68	2100.50	0.00	427889.21	741514.90	
10500.00	90.00	180.00	8500.00	-2152.96	-725.68	2200.23	0.00	427789.21	741514.90	
10600.00	90.00	180.00	8500.00	-2252.96	-725.68	2299.96	0.00	427689.21	741514.90	
10700.00	90.00	180.00	8500.00	-2352.96	-725.68	2399.70	0.00	427589.21	741514.90	
10800.00	90.00	180.00	8500.00	-2452.96	-725.68	2499.43	0.00	427489.21	741514.90	
10900.00	90.00	180.00	8500.00	-2552.96	-725.68	2599.16	0.00	427389.21	741514.90	
11000.00	90.00	180.00	8500.00	-2652.96	-725.68	2698.89	0.00	427289.21	741514.90	
11100.00	90.00	180.00	8500.00	-2752.96	-725.68	2798.63	0.00	427189.21	741514.90	
11200.00	90.00	180.00	8500.00	-2852.96	-725.68	2898.36	0.00	427089.21	741514.90	
11300.00	90.00	180.00	8500.00	-2952.96	-725.68	2998.09	0.00	426989.21	741514.90	
11400.00	90.00	180.00	8500.00	-3052.96	-725.68	3097.82	0.00	426889.21	741514.90	
11500.00	90.00	180.00	8500.00	-3152.96	-725.68	3197.56	0.00	426789.21	741514.90	
11600.00	90.00	180.00	8500.00	-3252.96	-725.68	3297.29	0.00	426689.21	741514.90	
11700.00	90.00	180.00	8500.00	-3352.96	-725.68	3397.02	0.00	426589.21	741514.90	
11800.00	90.00	180.00	8500.00	-3452.96	-725.68	3496.76	0.00	426489.21	741514.90	
11900.00	90.00	180.00	8500.00	-3552.96	-725.68	3596.49	0.00	426389.21	741514.90	
12000.00	90.00	180.00	8500.00	-3652.96	-725.68	3696.22	0.00	426289.21	741514.90	
12100.00	90.00	180.00	8500.00	-3752.96	-725.68	3795.95	0.00	426189.21	741514.90	
12200.00	90.00	180.00	8500.00	-3852.96	-725.68	3895.69	0.00	426089.21	741514.90	
12300.00	90.00	180.00	8500.00	-3952.96	-725.68	3995.42	0.00	425989.21	741514.90	
12400.00	90.00	180.00	8500.00	-4052.96	-725.68	4095.15	0.00	425889.21	741514.90	



Weatherford

Wft Plan Report X Y's.

**Weatherford**

Company: Devon Energy
Field: Lea County, New Mexico (NAD 83)
Site: Cotton Draw 33-4 Federal 1H
Well: Cotton Draw 33-4 Federal 1H
Wellpath: 1

Date: 3/12/2013 Time: 06:42:53 Page: 3
Co-ordinate(NE) Reference: Well: Cotton Draw 33-4 Federal 1H
Vertical (TVD) Reference: SITE 3340.0
Section (VS) Reference: Well (0.00N,0.00E,184.19Azi)
Survey Calculation Method: Minimum Curvature Db: Sybase

Survey

MD ft	Incl deg	Azim deg	TVD ft	N/S ft	E/W ft	VS ft	DLS deg/100ft	MapN ft	MapE ft	Comments
12500.00	90.00	180.00	8500.00	-4152.96	-725.68	4194.88	0.00	425789.21	741514.90	
12600.00	90.00	180.00	8500.00	-4252.96	-725.68	4294.62	0.00	425689.21	741514.90	
12700.00	90.00	180.00	8500.00	-4352.96	-725.68	4394.35	0.00	425589.21	741514.90	
12800.00	90.00	180.00	8500.00	-4452.96	-725.68	4494.08	0.00	425489.21	741514.90	
12900.00	90.00	180.00	8500.00	-4552.96	-725.68	4593.82	0.00	425389.21	741514.90	
13000.00	90.00	180.00	8500.00	-4652.96	-725.68	4693.55	0.00	425289.21	741514.90	
13100.00	90.00	180.00	8500.00	-4752.96	-725.68	4793.28	0.00	425189.21	741514.90	
13200.00	90.00	180.00	8500.00	-4852.96	-725.68	4893.01	0.00	425089.21	741514.90	
13300.00	90.00	180.00	8500.00	-4952.96	-725.68	4992.75	0.00	424989.21	741514.90	
13400.00	90.00	180.00	8500.00	-5052.96	-725.68	5092.48	0.00	424889.21	741514.90	
13500.00	90.00	180.00	8500.00	-5152.96	-725.68	5192.21	0.00	424789.21	741514.90	
13600.00	90.00	180.00	8500.00	-5252.96	-725.68	5291.94	0.00	424689.21	741514.90	
13700.00	90.00	180.00	8500.00	-5352.96	-725.68	5391.68	0.00	424589.21	741514.90	
13800.00	90.00	180.00	8500.00	-5452.96	-725.68	5491.41	0.00	424489.21	741514.90	
13900.00	90.00	180.00	8500.00	-5552.96	-725.68	5591.14	0.00	424389.21	741514.90	
14000.00	90.00	180.00	8500.00	-5652.96	-725.68	5690.88	0.00	424289.21	741514.90	
14100.00	90.00	180.00	8500.00	-5752.96	-725.68	5790.61	0.00	424189.21	741514.90	
14200.00	90.00	180.00	8500.00	-5852.96	-725.68	5890.34	0.00	424089.21	741514.90	
14300.00	90.00	180.00	8500.00	-5952.96	-725.68	5990.07	0.00	423989.21	741514.90	
14400.00	90.00	180.00	8500.00	-6052.96	-725.68	6089.81	0.00	423889.21	741514.90	
14500.00	90.00	180.00	8500.00	-6152.96	-725.68	6189.54	0.00	423789.21	741514.90	
14600.00	90.00	180.00	8500.00	-6252.96	-725.68	6289.27	0.00	423689.21	741514.90	
14700.00	90.00	180.00	8500.00	-6352.96	-725.68	6389.00	0.00	423589.21	741514.90	
14800.00	90.00	180.00	8500.00	-6452.96	-725.68	6488.74	0.00	423489.21	741514.90	
14900.00	90.00	180.00	8500.00	-6552.96	-725.68	6588.47	0.00	423389.21	741514.90	
15000.00	90.00	180.00	8500.00	-6652.96	-725.68	6688.20	0.00	423289.21	741514.90	
15100.00	90.00	180.00	8500.00	-6752.96	-725.68	6787.94	0.00	423189.21	741514.90	
15200.00	90.00	180.00	8500.00	-6852.96	-725.68	6887.67	0.00	423089.21	741514.90	
15300.00	90.00	180.00	8500.00	-6952.96	-725.68	6987.40	0.00	422989.21	741514.90	
15400.00	90.00	180.00	8500.00	-7052.96	-725.68	7087.13	0.00	422889.21	741514.90	
15500.00	90.00	180.00	8500.00	-7152.96	-725.68	7186.87	0.00	422789.21	741514.90	
15600.00	90.00	180.00	8500.00	-7252.96	-725.68	7286.60	0.00	422689.21	741514.90	
15700.00	90.00	180.00	8500.00	-7352.96	-725.68	7386.33	0.00	422589.21	741514.90	
15800.00	90.00	180.00	8500.00	-7452.96	-725.68	7486.06	0.00	422489.21	741514.90	
15900.00	90.00	180.00	8500.00	-7552.96	-725.68	7585.80	0.00	422389.21	741514.90	
16000.00	90.00	180.00	8500.00	-7652.96	-725.68	7685.53	0.00	422289.21	741514.90	
16100.00	90.00	180.00	8500.00	-7752.96	-725.68	7785.26	0.00	422189.21	741514.90	
16200.00	90.00	180.00	8500.00	-7852.96	-725.68	7885.00	0.00	422089.21	741514.90	
16300.00	90.00	180.00	8500.00	-7952.96	-725.68	7984.73	0.00	421989.21	741514.90	
16400.00	90.00	180.00	8500.00	-8052.96	-725.68	8084.46	0.00	421889.21	741514.90	
16500.00	90.00	180.00	8500.00	-8152.96	-725.68	8184.19	0.00	421789.21	741514.90	
16600.00	90.00	180.00	8500.00	-8252.96	-725.68	8283.93	0.00	421689.21	741514.90	
16700.00	90.00	180.00	8500.00	-8352.96	-725.68	8383.66	0.00	421589.21	741514.90	
16800.00	90.00	180.00	8500.00	-8452.96	-725.68	8483.39	0.00	421489.21	741514.90	
16900.00	90.00	180.00	8500.00	-8552.96	-725.68	8583.12	0.00	421389.21	741514.90	
17000.00	90.00	180.00	8500.00	-8652.96	-725.68	8682.86	0.00	421289.21	741514.90	
17100.00	90.00	180.00	8500.00	-8752.96	-725.68	8782.59	0.00	421189.21	741514.90	
17200.00	90.00	180.00	8500.00	-8852.96	-725.68	8882.32	0.00	421089.21	741514.90	
17300.00	90.00	180.00	8500.00	-8952.96	-725.68	8982.06	0.00	420989.21	741514.90	
17400.00	90.00	180.00	8500.00	-9052.96	-725.68	9081.79	0.00	420889.21	741514.90	
17500.00	90.00	180.00	8500.00	-9152.96	-725.68	9181.52	0.00	420789.21	741514.90	
17600.00	90.00	180.00	8500.00	-9252.96	-725.68	9281.25	0.00	420689.21	741514.90	



Weatherford

Wft Plan Report X Y's.

**Weatherford**

Company: Devon Energy
Field: Lea County, New Mexico (NAD 83)
Site: Cotton Draw 33-4 Federal 1H
Well: Cotton Draw 33-4 Federal 1H
Wellpath: 1

Date: 3/12/2013 Time: 06:42:53 Page: 4
Co-ordinate(NE) Reference: Well: Cotton Draw 33-4 Federal 1H
Vertical (TVD) Reference: SITE 3340.0
Section (VS) Reference: Well (0.00N,0.00E,184.19Azi)
Survey Calculation Method: Minimum Curvature Db: Sybase

Survey

MD ft	Incl deg	Azim deg	TVD ft	N/S ft	E/W ft	VS ft	DLS deg/100ft	MapN ft	MapE ft	Comment
17700.00	90.00	180.00	8500.00	-9352.96	-725.68	9380.99	0.00	420589.21	741514.90	
17800.00	90.00	180.00	8500.00	-9452.96	-725.68	9480.72	0.00	420489.21	741514.90	
17900.00	90.00	180.00	8500.00	-9552.96	-725.68	9580.45	0.00	420389.21	741514.90	
18000.00	90.00	180.00	8500.00	-9652.96	-725.68	9680.18	0.00	420289.21	741514.90	
18100.00	90.00	180.00	8500.00	-9752.96	-725.68	9779.92	0.00	420189.21	741514.90	
18200.00	90.00	180.00	8500.00	-9852.96	-725.68	9879.65	0.00	420089.21	741514.90	
18264.42	90.00	180.00	8500.00	-9917.38	-725.68	9943.89	0.00	420024.79	741514.90	PBHL

Targets

Name	Description Dip.	Dir.	TVD ft	+N/-S ft	+E/-W ft	Map Northing ft	Map Easting ft	<---- Latitude ---->			<---- Longitude ---->		
PBHL			8500.00	-9917.38	-725.68	420024.79	741514.90	32	9	11.056 N	103	41	11.432 W
-Rectangle (9344x50)													

Casing Points

MD	TVD	Diameter	Hole Size	Name

Annotation

MD ft	TVD ft	
5550.00	5550.00	Nudge
6051.89	6046.13	Hold
8020.05	7946.73	KOP
8920.04	8500.00	LP
18264.42	0.00	PBHL



Weatherford Anticollision Report

**Weatherford**

Company: Devon Energy Date: 3/12/2013 Time: 06:42:23 Page: 1
Field: Lea County, New Mexico (NAD 83)
Reference Site: Cotton Draw 33-4 Federal 1H Co-ordinate(NE) Reference: Well: Cotton Draw 33-4 Federal 1H
Reference Well: Cotton Draw 33-4 Federal 1H Vertical (TVD) Reference: SITE 3340.0
Reference Wellpath: Db: Sybase

NO GLOBAL SCAN: Using user defined selection & scan criteria
Interpolation Method MD + Stations Interval: 100.00 ft
Depth Range: 0.00 to 18264.42 ft
Maximum Radius 40000.00 ft

Reference: Plan: Plan #1
Error Model: ISCWSA Ellipse
Scan Method: Closest Approach 3D
Error Surface: Ellipse

Plan: Plan #1

Date Composed: 3/11/2013

Principal: Yes

Version: 1
Tied-to: From Surface

Summary

Site	Offset Wellpath	Reference MD	Offset MD	Ctr-Ctr Edge Distance	Separation Factor	Warning
Well	Wellpath	ft	ft	ft		
Cotton Draw 33-4 Federal 1H	Cotton Draw 33-4 Federal 1H V0 Plan: Plan #1 V1	5550.00	5550.00	49.86 25.17	2.02	

Site: Cotton Draw 33-4 Federal Com 2H

Well: Cotton Draw 33-4 Federal Com 2H

Wellpath: 1 V0 Plan: Plan #1 V1

Inter-Site Error: 0.00 ft

Reference MD	TVD	Offset		Semi-Major Axis			Offset Location		Ctr-Ctr Edge		Separation Factor	Warning
		MD	TVD	Ref	Offset	TFO-HS	North	East	Distance	Distance		
ft	ft	ft	ft	ft	ft	deg	ft	ft	ft	ft		
0.00	0.00	0.00	0.00	0.00	0.00	89.33	0.58	49.86	49.86			No Data
100.00	100.00	100.00	100.00	0.08	0.11	89.33	0.58	49.86	49.86	49.67	253.54	
200.00	200.00	200.00	200.00	0.31	0.34	89.33	0.58	49.86	49.86	49.22	77.16	
300.00	300.00	300.00	300.00	0.53	0.56	89.33	0.58	49.86	49.86	48.77	45.51	
400.00	400.00	400.00	400.00	0.76	0.79	89.33	0.58	49.86	49.86	48.32	32.27	
500.00	500.00	500.00	500.00	0.98	1.01	89.33	0.58	49.86	49.86	47.87	25.00	
600.00	600.00	600.00	600.00	1.21	1.24	89.33	0.58	49.86	49.86	47.42	20.40	
700.00	700.00	700.00	700.00	1.43	1.46	89.33	0.58	49.86	49.86	46.97	17.23	
800.00	800.00	800.00	800.00	1.66	1.69	89.33	0.58	49.86	49.86	46.52	14.91	
900.00	900.00	900.00	900.00	1.88	1.91	89.33	0.58	49.86	49.86	46.07	13.15	
1000.00	1000.00	1000.00	1000.00	2.11	2.14	89.33	0.58	49.86	49.86	45.62	11.75	
1100.00	1100.00	1100.00	1100.00	2.33	2.36	89.33	0.58	49.86	49.86	45.17	10.63	
1200.00	1200.00	1200.00	1200.00	2.56	2.58	89.33	0.58	49.86	49.86	44.72	9.70	
1300.00	1300.00	1300.00	1300.00	2.78	2.81	89.33	0.58	49.86	49.86	44.27	8.92	
1400.00	1400.00	1400.00	1400.00	3.01	3.03	89.33	0.58	49.86	49.86	43.82	8.25	
1500.00	1500.00	1500.00	1500.00	3.23	3.26	89.33	0.58	49.86	49.86	43.37	7.68	
1600.00	1600.00	1600.00	1600.00	3.46	3.48	89.33	0.58	49.86	49.86	42.92	7.19	
1700.00	1700.00	1700.00	1700.00	3.68	3.71	89.33	0.58	49.86	49.86	42.47	6.75	
1800.00	1800.00	1800.00	1800.00	3.91	3.93	89.33	0.58	49.86	49.86	42.02	6.36	
1900.00	1900.00	1900.00	1900.00	4.13	4.16	89.33	0.58	49.86	49.86	41.58	6.02	
2000.00	2000.00	2000.00	2000.00	4.35	4.38	89.33	0.58	49.86	49.86	41.13	5.71	
2100.00	2100.00	2100.00	2100.00	4.58	4.61	89.33	0.58	49.86	49.86	40.68	5.43	
2200.00	2200.00	2200.00	2200.00	4.80	4.83	89.33	0.58	49.86	49.86	40.23	5.17	
2300.00	2300.00	2300.00	2300.00	5.03	5.06	89.33	0.58	49.86	49.86	39.78	4.94	
2400.00	2400.00	2400.00	2400.00	5.25	5.28	89.33	0.58	49.86	49.86	39.33	4.73	
2500.00	2500.00	2500.00	2500.00	5.48	5.51	89.33	0.58	49.86	49.86	38.88	4.54	
2600.00	2600.00	2600.00	2600.00	5.70	5.73	89.33	0.58	49.86	49.86	38.43	4.36	
2700.00	2700.00	2700.00	2700.00	5.93	5.96	89.33	0.58	49.86	49.86	37.98	4.20	
2800.00	2800.00	2800.00	2800.00	6.15	6.18	89.33	0.58	49.86	49.86	37.53	4.04	
2900.00	2900.00	2900.00	2900.00	6.38	6.41	89.33	0.58	49.86	49.86	37.08	3.90	
3000.00	3000.00	3000.00	3000.00	6.60	6.63	89.33	0.58	49.86	49.86	36.63	3.77	
3100.00	3100.00	3100.00	3100.00	6.83	6.86	89.33	0.58	49.86	49.86	36.18	3.64	
3200.00	3200.00	3200.00	3200.00	7.05	7.08	89.33	0.58	49.86	49.86	35.73	3.53	
3300.00	3300.00	3300.00	3300.00	7.28	7.30	89.33	0.58	49.86	49.86	35.28	3.42	
3400.00	3400.00	3400.00	3400.00	7.50	7.53	89.33	0.58	49.86	49.86	34.83	3.32	
3500.00	3500.00	3500.00	3500.00	7.73	7.75	89.33	0.58	49.86	49.86	34.38	3.22	



Weatherford Anticollision Report

**Weatherford**

Company: Devon Energy Date: 3/12/2013 Time: 06:42:23 Page: 2
Field: Lea County, New Mexico (NAD 83)
Reference Site: Cotton Draw 33-4 Federal 1H Co-ordinate(NE) Reference: Well: Cotton Draw 33-4 Federal 1H
Reference Well: Cotton Draw 33-4 Federal 1H Vertical (TVD) Reference: SITE 3340.0
Reference Wellpath: Db: Sybase

Site: Cotton Draw 33-4 Federal Com 2H
Well: Cotton Draw 33-4 Federal Com 2H
Wellpath: 1 V0 Plan: Plan #1 V1

Inter-Site Error: 0.00 ft

Reference		Offset		Semi-Major Axis			Offset Location		Ctr-Ctr Edge		Separation	Warning
MD	TVD	MD	TVD	Ref	Offset	TFO-HS	North	East	Distance	Distance	Factor	
ft	ft	ft	ft	ft	ft	deg	ft	ft	ft	ft		
3600.00	3600.00	3600.00	3600.00	7.95	7.98	89.33	0.58	49.86	49.86	33.93	3.13	
3700.00	3700.00	3700.00	3700.00	8.18	8.20	89.33	0.58	49.86	49.86	33.48	3.04	
3800.00	3800.00	3800.00	3800.00	8.40	8.43	89.33	0.58	49.86	49.86	33.03	2.96	
3900.00	3900.00	3900.00	3900.00	8.63	8.65	89.33	0.58	49.86	49.86	32.58	2.89	
4000.00	4000.00	4000.00	4000.00	8.85	8.88	89.33	0.58	49.86	49.86	32.13	2.81	
4100.00	4100.00	4100.00	4100.00	9.07	9.10	89.33	0.58	49.86	49.86	31.69	2.74	
4200.00	4200.00	4200.00	4200.00	9.30	9.33	89.33	0.58	49.86	49.86	31.24	2.68	
4300.00	4300.00	4300.00	4300.00	9.52	9.55	89.33	0.58	49.86	49.86	30.79	2.61	
4400.00	4400.00	4400.00	4400.00	9.75	9.78	89.33	0.58	49.86	49.86	30.34	2.55	
4500.00	4500.00	4500.00	4500.00	9.97	10.00	89.33	0.58	49.86	49.86	29.89	2.50	
4600.00	4600.00	4600.00	4600.00	10.20	10.23	89.33	0.58	49.86	49.86	29.44	2.44	
4700.00	4700.00	4700.00	4700.00	10.42	10.45	89.33	0.58	49.86	49.86	28.99	2.39	
4800.00	4800.00	4800.00	4800.00	10.65	10.68	89.33	0.58	49.86	49.86	28.54	2.34	
4900.00	4900.00	4900.00	4900.00	10.87	10.90	89.33	0.58	49.86	49.86	28.09	2.29	
5000.00	5000.00	5000.00	5000.00	11.10	11.13	89.33	0.58	49.86	49.86	27.64	2.24	
5100.00	5100.00	5100.00	5100.00	11.32	11.35	89.33	0.58	49.86	49.86	27.19	2.20	
5200.00	5200.00	5200.00	5200.00	11.55	11.58	89.33	0.58	49.86	49.86	26.74	2.16	
5300.00	5300.00	5300.00	5300.00	11.77	11.80	89.33	0.58	49.86	49.86	26.29	2.12	
5400.00	5400.00	5400.00	5400.00	12.00	12.02	89.33	0.58	49.86	49.86	25.84	2.08	
5500.00	5500.00	5500.00	5500.00	12.22	12.25	89.33	0.58	49.86	49.86	25.39	2.04	
5550.00	5550.00	5550.00	5550.00	12.33	12.36	89.33	0.58	49.86	49.86	25.17	2.02	
5600.00	5599.99	5599.99	5599.99	12.44	12.47	179.35	0.58	49.86	50.52	25.61	2.03	
5700.00	5699.85	5696.93	5696.89	12.64	12.68	179.43	0.58	52.32	58.28	33.02	2.31	
5800.00	5799.29	5791.96	5791.64	12.84	12.87	179.56	0.58	59.50	76.22	50.67	2.98	
5900.00	5898.04	5883.69	5882.65	13.05	13.06	179.67	0.58	70.89	104.02	78.24	4.03	
6000.00	5995.85	5970.93	5968.60	13.28	13.25	179.75	0.58	85.77	141.19	115.23	5.44	
6051.89	6046.13	6017.45	6014.23	13.41	13.35	179.78	0.58	94.84	163.55	137.47	6.27	
6100.00	6092.59	6060.58	6056.53	13.53	13.45	179.80	0.58	103.25	184.87	158.61	7.04	
6200.00	6189.16	6150.22	6144.45	13.79	13.66	179.84	0.57	120.74	229.19	202.54	8.60	
6300.00	6285.73	6239.86	6232.37	14.07	13.88	179.87	0.57	138.23	273.50	246.47	10.12	
6400.00	6382.29	6329.51	6320.29	14.37	14.10	179.89	0.57	155.72	317.82	290.40	11.59	
6500.00	6478.86	6419.15	6408.21	14.67	14.33	179.90	0.57	173.20	362.14	334.32	13.02	
6600.00	6575.43	6508.80	6496.13	15.00	14.57	179.91	0.57	190.69	406.45	378.24	14.41	
6700.00	6671.99	6598.44	6584.06	15.33	14.81	179.92	0.57	208.18	450.77	422.15	15.75	
6800.00	6768.56	6688.08	6671.98	15.68	15.06	179.93	0.57	225.67	495.09	466.06	17.06	
6900.00	6865.13	6777.73	6759.90	16.03	15.31	179.94	0.57	243.16	539.40	509.97	18.32	
7000.00	6961.69	6867.37	6847.82	16.40	15.57	179.94	0.56	260.64	583.72	553.87	19.55	
7100.00	7058.26	6957.01	6935.74	16.77	15.83	179.94	0.56	278.13	628.04	597.76	20.75	
7200.00	7154.83	7046.66	7023.66	17.16	16.10	179.95	0.56	295.62	672.35	641.66	21.90	
7300.00	7251.39	7136.30	7111.59	17.55	16.37	179.95	0.56	313.11	716.67	685.55	23.03	
7400.00	7347.96	7225.95	7199.51	17.95	16.65	179.96	0.56	330.59	760.99	729.44	24.12	
7500.00	7444.53	7315.59	7287.43	18.36	16.93	179.96	0.56	348.08	805.30	773.32	25.18	
7600.00	7541.10	7405.23	7375.35	18.77	17.21	179.96	0.56	365.57	849.62	817.20	26.21	
7700.00	7637.66	7494.88	7463.27	19.19	17.50	179.96	0.56	383.06	893.94	861.08	27.21	
7800.00	7734.23	7584.52	7551.19	19.62	17.79	179.96	0.55	400.55	938.25	904.96	28.18	
7900.00	7830.80	7674.17	7639.11	20.05	18.09	179.97	0.55	418.03	982.57	948.83	29.12	
8000.00	7927.36	7763.81	7727.04	20.49	18.39	179.97	0.55	435.52	1026.89	992.70	30.04	
8020.05	7946.72	7781.78	7744.66	20.58	18.45	179.97	0.55	439.03	1035.77	1001.50	30.22	
8050.00	7975.63	7808.62	7770.99	20.67	18.54	192.39	0.55	444.26	1049.04	1014.63	30.49	
8100.00	8023.68	7853.22	7814.73	20.73	18.69	210.92	0.55	452.96	1071.11	1036.45	30.91	
8150.00	8071.14	7897.28	7857.94	20.68	18.84	225.38	0.55	461.56	1092.98	1058.06	31.30	



Weatherford Anticollision Report

**Weatherford**

Company: Devon Energy Date: 3/12/2013 Time: 06:42:23 Page: 3
Field: Lea County, New Mexico (NAD 83)
Reference Site: Cotton Draw 33-4 Federal 1H Co-ordinate(NE) Reference: Well: Cotton Draw 33-4 Federal 1H
Reference Well: Cotton Draw 33-4 Federal 1H Vertical (TVD) Reference: SITE 3340.0
Reference Wellpath: Db: Sybase

Site: Cotton Draw 33-4 Federal Com 2H
Well: Cotton Draw 33-4 Federal Com 2H
Wellpath: 1 V0 Plan: Plan #1 V1

Inter-Site Error: 0.00 ft

Reference		Offset		Semi-Major Axis			Offset Location		Ctr-Ctr Edge		Separation	Warning
MD	TVD	MD	TVD	Ref	Offset	TFO-HS	North	East	Distance	Distance	Factor	
ft	ft	ft	ft	ft	ft	deg	ft	ft	ft	ft		
8200.00	8117.65	7940.46	7900.29	20.53	18.98	236.11	0.55	469.98	1114.58	1079.38	31.66	
8250.00	8162.87	7982.43	7941.46	20.31	19.13	244.06	0.55	478.17	1135.90	1100.41	32.00	
8300.00	8206.43	8025.33	7983.53	20.04	19.25	250.03	0.17	486.54	1156.92	1121.12	32.31	
8350.00	8248.03	8072.22	8029.36	19.78	19.31	254.61	-3.45	495.66	1177.46	1141.33	32.59	
8400.00	8287.32	8121.61	8077.16	19.60	19.28	258.22	-11.39	505.16	1197.37	1160.91	32.84	
8450.00	8324.03	8174.01	8126.94	19.51	19.17	261.09	-24.36	515.06	1216.49	1179.68	33.04	
8500.00	8357.86	8229.99	8178.59	19.52	19.00	263.35	-43.27	525.34	1234.66	1197.47	33.20	
8550.00	8388.57	8290.20	8231.84	19.60	18.84	265.12	-69.24	535.93	1251.69	1214.11	33.31	
8600.00	8415.91	8355.30	8286.06	19.73	18.79	266.46	-103.56	546.71	1267.39	1229.37	33.34	
8650.00	8439.68	8425.96	8340.17	19.91	18.88	267.44	-147.63	557.48	1281.53	1243.02	33.28	
8700.00	8459.70	8502.68	8392.41	20.11	19.07	268.10	-202.77	567.87	1293.86	1254.80	33.13	
8750.00	8475.81	8585.70	8440.26	20.36	19.38	268.52	-269.85	577.38	1304.12	1264.42	32.86	
8800.00	8487.90	8674.73	8480.44	20.63	19.81	268.76	-348.80	585.38	1312.04	1271.60	32.45	
8850.00	8495.87	8768.80	8509.33	20.93	20.36	268.87	-438.03	591.12	1317.37	1276.09	31.91	
8900.00	8499.66	8866.18	8523.75	21.26	21.04	268.91	-534.17	593.99	1319.93	1277.71	31.26	
8920.04	8500.00	8905.04	8525.00	21.40	21.34	268.91	-573.00	594.24	1320.16	1277.53	30.97	
9000.00	8500.00	8985.00	8525.00	22.12	22.09	268.91	-652.96	594.24	1320.16	1276.07	29.94	
9100.00	8500.00	9085.00	8525.00	23.12	23.11	268.91	-752.96	594.24	1320.16	1274.06	28.64	
9200.00	8500.00	9185.00	8525.00	24.21	24.23	268.91	-852.96	594.24	1320.16	1271.86	27.33	
9300.00	8500.00	9285.00	8525.00	25.38	25.43	268.91	-952.96	594.24	1320.16	1269.49	26.06	
9400.00	8500.00	9385.00	8525.00	26.62	26.70	268.91	-1052.96	594.24	1320.16	1266.98	24.82	
9500.00	8500.00	9485.00	8525.00	27.93	28.02	268.91	-1152.96	594.24	1320.16	1264.34	23.65	
9600.00	8500.00	9585.00	8525.00	29.29	29.41	268.91	-1252.96	594.24	1320.16	1261.59	22.54	
9700.00	8500.00	9685.00	8525.00	30.70	30.84	268.91	-1352.96	594.24	1320.16	1258.75	21.50	
9800.00	8500.00	9785.00	8525.00	32.16	32.30	268.91	-1452.96	594.24	1320.16	1255.82	20.52	
9900.00	8500.00	9885.00	8525.00	33.64	33.81	268.91	-1552.96	594.24	1320.16	1252.83	19.61	
10000.00	8500.00	9985.00	8525.00	35.16	35.34	268.91	-1652.96	594.24	1320.16	1249.77	18.76	
10100.00	8500.00	10085.00	8525.00	36.71	36.90	268.91	-1752.96	594.24	1320.16	1246.66	17.96	
10200.00	8500.00	10185.00	8525.00	38.28	38.48	268.91	-1852.96	594.24	1320.16	1243.50	17.22	
10300.00	8500.00	10285.00	8525.00	39.88	40.09	268.91	-1952.96	594.24	1320.16	1240.30	16.53	
10400.00	8500.00	10385.00	8525.00	41.49	41.71	268.91	-2052.96	594.24	1320.16	1237.06	15.89	
10500.00	8500.00	10485.00	8525.00	43.12	43.35	268.91	-2152.96	594.24	1320.16	1233.79	15.29	
10600.00	8500.00	10585.00	8525.00	44.76	45.00	268.91	-2252.96	594.24	1320.16	1230.49	14.72	
10700.00	8500.00	10685.00	8525.00	46.42	46.67	268.91	-2352.96	594.24	1320.16	1227.17	14.20	
10800.00	8500.00	10785.00	8525.00	48.09	48.34	268.91	-2452.96	594.24	1320.16	1223.82	13.70	
10900.00	8500.00	10885.00	8525.00	49.77	50.03	268.91	-2552.96	594.24	1320.16	1220.45	13.24	
11000.00	8500.00	10985.00	8525.00	51.46	51.73	268.91	-2652.96	594.24	1320.16	1217.06	12.80	
11100.00	8500.00	11085.00	8525.00	53.16	53.43	268.91	-2752.96	594.24	1320.16	1213.65	12.40	
11200.00	8500.00	11185.00	8525.00	54.87	55.15	268.91	-2852.96	594.24	1320.16	1210.23	12.01	
11300.00	8500.00	11285.00	8525.00	56.58	56.87	268.91	-2952.96	594.24	1320.16	1206.79	11.65	
11400.00	8500.00	11385.00	8525.00	58.31	58.59	268.91	-3052.96	594.24	1320.16	1203.34	11.30	
11500.00	8500.00	11485.00	8525.00	60.03	60.32	268.91	-3152.96	594.24	1320.16	1199.88	10.98	
11600.00	8500.00	11585.00	8525.00	61.77	62.06	268.91	-3252.96	594.24	1320.16	1196.41	10.67	
11700.00	8500.00	11685.00	8525.00	63.51	63.80	268.91	-3352.96	594.24	1320.16	1192.92	10.38	
11800.00	8500.00	11785.00	8525.00	65.25	65.55	268.91	-3452.96	594.24	1320.16	1189.43	10.10	
11900.00	8500.00	11885.00	8525.00	67.00	67.30	268.91	-3552.96	594.24	1320.16	1185.93	9.84	
12000.00	8500.00	11985.00	8525.00	68.75	69.06	268.91	-3652.96	594.24	1320.16	1182.42	9.58	
12100.00	8500.00	12085.00	8525.00	70.50	70.82	268.91	-3752.96	594.24	1320.16	1178.91	9.35	
12200.00	8500.00	12185.00	8525.00	72.26	72.58	268.91	-3852.96	594.24	1320.16	1175.39	9.12	
12300.00	8500.00	12285.00	8525.00	74.03	74.34	268.91	-3952.96	594.24	1320.16	1171.86	8.90	
12400.00	8500.00	12385.00	8525.00	75.79	76.11	268.91	-4052.96	594.24	1320.16	1168.33	8.69	



Weatherford Anticollision Report

**Weatherford**

Company: Devon Energy
Field: Lea County, New Mexico (NAD 83)
Reference Site: Cotton Draw 33-4 Federal 1H
Reference Well: Cotton Draw 33-4 Federal 1H
Reference Wellpath:

Date: 3/12/2013 Time: 06:42:23 Page: 4
Co-ordinate(NE) Reference: Well: Cotton Draw 33-4 Federal 1H
Vertical (TVD) Reference: SITE 3340.0

Db: Sybase

Site: Cotton Draw 33-4 Federal Com 2H
Well: Cotton Draw 33-4 Federal Com 2H
Wellpath: 1 V0 Plan: Plan #1 V1

Inter-Site Error: 0.00 ft

Reference MD ft	TVD ft	Offset MD ft	TVD ft	Semi-Major Axis Ref ft	Offset ft	TFO-HS deg	Offset Location		Ctr-Ctr Distance ft	Edge Distance ft	Separation Factor	Warning
							North ft	East ft				
12500.00	8500.00	12485.00	8525.00	77.56	77.88	268.91	-4152.96	594.24	1320.16	1164.79	8.50	
12600.00	8500.00	12585.00	8525.00	79.33	79.65	268.91	-4252.96	594.24	1320.16	1161.24	8.31	
12700.00	8500.00	12685.00	8525.00	81.10	81.43	268.91	-4352.96	594.24	1320.16	1157.69	8.13	
12800.00	8500.00	12785.00	8525.00	82.88	83.21	268.91	-4452.96	594.24	1320.16	1154.14	7.95	
12900.00	8500.00	12885.00	8525.00	84.66	84.99	268.91	-4552.96	594.24	1320.16	1150.58	7.79	
13000.00	8500.00	12985.00	8525.00	86.43	86.77	268.91	-4652.96	594.24	1320.16	1147.02	7.62	
13100.00	8500.00	13085.00	8525.00	88.22	88.55	268.91	-4752.96	594.24	1320.16	1143.46	7.47	
13200.00	8500.00	13185.00	8525.00	90.00	90.33	268.91	-4852.96	594.24	1320.16	1139.89	7.32	
13300.00	8500.00	13285.00	8525.00	91.78	92.12	268.91	-4952.96	594.24	1320.16	1136.32	7.18	
13400.00	8500.00	13385.00	8525.00	93.57	93.91	268.91	-5052.96	594.24	1320.16	1132.74	7.04	
13500.00	8500.00	13485.00	8525.00	95.36	95.70	268.91	-5152.96	594.24	1320.16	1129.16	6.91	
13600.00	8500.00	13585.00	8525.00	97.15	97.49	268.91	-5252.96	594.24	1320.16	1125.58	6.78	
13700.00	8500.00	13685.00	8525.00	98.94	99.28	268.91	-5352.96	594.24	1320.16	1122.00	6.66	
13800.00	8500.00	13785.00	8525.00	100.73	101.07	268.91	-5452.96	594.24	1320.16	1118.42	6.54	
13900.00	8500.00	13885.00	8525.00	102.52	102.87	268.91	-5552.96	594.24	1320.16	1114.83	6.43	
14000.00	8500.00	13985.00	8525.00	104.32	104.66	268.91	-5652.96	594.24	1320.16	1111.24	6.32	
14100.00	8500.00	14085.00	8525.00	106.11	106.46	268.91	-5752.96	594.24	1320.16	1107.65	6.21	
14200.00	8500.00	14185.00	8525.00	107.91	108.26	268.91	-5852.96	594.24	1320.16	1104.05	6.11	
14300.00	8500.00	14285.00	8525.00	109.71	110.06	268.91	-5952.96	594.24	1320.16	1100.46	6.01	
14400.00	8500.00	14385.00	8525.00	111.50	111.85	268.91	-6052.96	594.24	1320.16	1096.86	5.91	
14500.00	8500.00	14485.00	8525.00	113.30	113.65	268.91	-6152.96	594.24	1320.16	1093.26	5.82	
14600.00	8500.00	14585.00	8525.00	115.10	115.46	268.91	-6252.96	594.24	1320.16	1089.66	5.73	
14700.00	8500.00	14685.00	8525.00	116.90	117.26	268.91	-6352.96	594.24	1320.16	1086.06	5.64	
14800.00	8500.00	14785.00	8525.00	118.70	119.06	268.91	-6452.96	594.24	1320.16	1082.45	5.55	
14900.00	8500.00	14885.00	8525.00	120.51	120.86	268.91	-6552.96	594.24	1320.16	1078.85	5.47	
15000.00	8500.00	14985.00	8525.00	122.31	122.67	268.91	-6652.96	594.24	1320.16	1075.24	5.39	
15100.00	8500.00	15085.00	8525.00	124.11	124.47	268.91	-6752.96	594.24	1320.16	1071.64	5.31	
15200.00	8500.00	15185.00	8525.00	125.92	126.28	268.91	-6852.96	594.24	1320.16	1068.03	5.24	
15300.00	8500.00	15285.00	8525.00	127.72	128.08	268.91	-6952.96	594.24	1320.16	1064.42	5.16	
15400.00	8500.00	15385.00	8525.00	129.53	129.89	268.91	-7052.96	594.24	1320.16	1060.80	5.09	
15500.00	8500.00	15485.00	8525.00	131.33	131.69	268.91	-7152.96	594.24	1320.16	1057.19	5.02	
15600.00	8500.00	15585.00	8525.00	133.14	133.50	268.91	-7252.96	594.24	1320.16	1053.58	4.95	
15700.00	8500.00	15685.00	8525.00	134.95	135.31	268.91	-7352.96	594.24	1320.16	1049.96	4.89	
15800.00	8500.00	15785.00	8525.00	136.75	137.12	268.91	-7452.96	594.24	1320.16	1046.35	4.82	
15900.00	8500.00	15885.00	8525.00	138.56	138.92	268.91	-7552.96	594.24	1320.16	1042.73	4.76	
16000.00	8500.00	15985.00	8525.00	140.37	140.73	268.91	-7652.96	594.24	1320.16	1039.12	4.70	
16100.00	8500.00	16085.00	8525.00	142.18	142.54	268.91	-7752.96	594.24	1320.16	1035.50	4.64	
16200.00	8500.00	16185.00	8525.00	143.99	144.35	268.91	-7852.96	594.24	1320.16	1031.88	4.58	
16300.00	8500.00	16285.00	8525.00	145.80	146.16	268.91	-7952.96	594.24	1320.16	1028.26	4.52	
16400.00	8500.00	16385.00	8525.00	147.61	147.97	268.91	-8052.96	594.24	1320.16	1024.64	4.47	
16500.00	8500.00	16485.00	8525.00	149.42	149.78	268.91	-8152.96	594.24	1320.16	1021.02	4.41	
16600.00	8500.00	16585.00	8525.00	151.23	151.60	268.91	-8252.96	594.24	1320.16	1017.40	4.36	
16700.00	8500.00	16685.00	8525.00	153.04	153.41	268.91	-8352.96	594.24	1320.16	1013.77	4.31	
16800.00	8500.00	16785.00	8525.00	154.85	155.22	268.91	-8452.96	594.24	1320.16	1010.15	4.26	
16900.00	8500.00	16885.00	8525.00	156.66	157.03	268.91	-8552.96	594.24	1320.16	1006.53	4.21	
17000.00	8500.00	16985.00	8525.00	158.47	158.84	268.91	-8652.96	594.24	1320.16	1002.90	4.16	
17100.00	8500.00	17085.00	8525.00	160.29	160.66	268.91	-8752.96	594.24	1320.16	999.28	4.11	
17200.00	8500.00	17185.00	8525.00	162.10	162.47	268.91	-8852.96	594.24	1320.16	995.65	4.07	
17300.00	8500.00	17285.00	8525.00	163.91	164.28	268.91	-8952.96	594.24	1320.16	992.03	4.02	
17400.00	8500.00	17385.00	8525.00	165.73	166.10	268.91	-9052.96	594.24	1320.16	988.40	3.98	
17500.00	8500.00	17485.00	8525.00	167.54	167.91	268.91	-9152.96	594.24	1320.16	984.77	3.94	



Weatherford Anticollision Report

**Weatherford**

Company: Devon Energy
Field: Lea County, New Mexico (NAD 83)
Reference Site: Cotton Draw 33-4 Federal 1H
Reference Well: Cotton Draw 33-4 Federal 1H
Reference Wellpath:

Date: 3/12/2013 **Time:** 06:42:23 **Page:** 5
Co-ordinate(NE) Reference: Well: Cotton Draw 33-4 Federal 1H
Vertical (TVD) Reference: SITE 3340.0

Db: Sybase

Site: Cotton Draw 33-4 Federal Com 2H
Well: Cotton Draw 33-4 Federal Com 2H
Wellpath: 1 V0 Plan: Plan #1 V1

Inter-Site Error: 0.00 ft

Reference		Offset		Semi-Major Axis			Offset Location		Ctr-Ctr Edge		Separation	Warning
MD	TVD	MD	TVD	Ref	Offset	TFO-HS	North	East	Distance	Distance	Factor	
ft	ft	ft	ft	ft	ft	deg	ft	ft	ft	ft		
17600.00	8500.00	17585.00	8525.00	169.35	169.73	268.91	-9252.96	594.24	1320.16	981.15	3.89	
17700.00	8500.00	17685.00	8525.00	171.17	171.54	268.91	-9352.96	594.24	1320.16	977.52	3.85	
17800.00	8500.00	17785.00	8525.00	172.98	173.35	268.91	-9452.96	594.24	1320.16	973.89	3.81	
17900.00	8500.00	17885.00	8525.00	174.80	175.17	268.91	-9552.96	594.24	1320.16	970.26	3.77	
18000.00	8500.00	17985.00	8525.00	176.61	176.98	268.91	-9652.96	594.24	1320.16	966.63	3.73	
18100.00	8500.00	18085.00	8525.00	178.43	178.80	268.91	-9752.96	594.24	1320.16	963.00	3.70	
18200.00	8500.00	18185.00	8525.00	180.24	180.62	268.91	-9852.96	594.24	1320.16	959.37	3.66	
18264.42	8500.00	18230.73	8525.00	181.41	181.45	268.91	-9898.69	594.24	1320.29	957.50	3.64	

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

GeoDec v5.03

Report Date: March 12, 2013
Job Number: _____
Customer: Devon Energy
Well Name: Cotton Draw 33-4 Fed 1H
API Number: _____
Rig Name: _____
Location: Lea County, NM
Block: _____
Engineer: RWJ

US State Plane 1983	Geodetic Latitude / Longitude
System: New Mexico Eastern Zone	System: Latitude / Longitude
Projection: Transverse Mercator/Gauss Kruger	Projection: Geodetic Latitude and Longitude
Datum: North American Datum 1983	Datum: North American Datum 1983
Ellipsoid: GRS 1980	Ellipsoid: GRS 1980
North/South 429942.170 USFT	Latitude 32.1803219 DEG
East/West 742240.580 USFT	Longitude -103.6839659 DEG
Grid Convergence: 35°	
Total Correction: +7.15°	

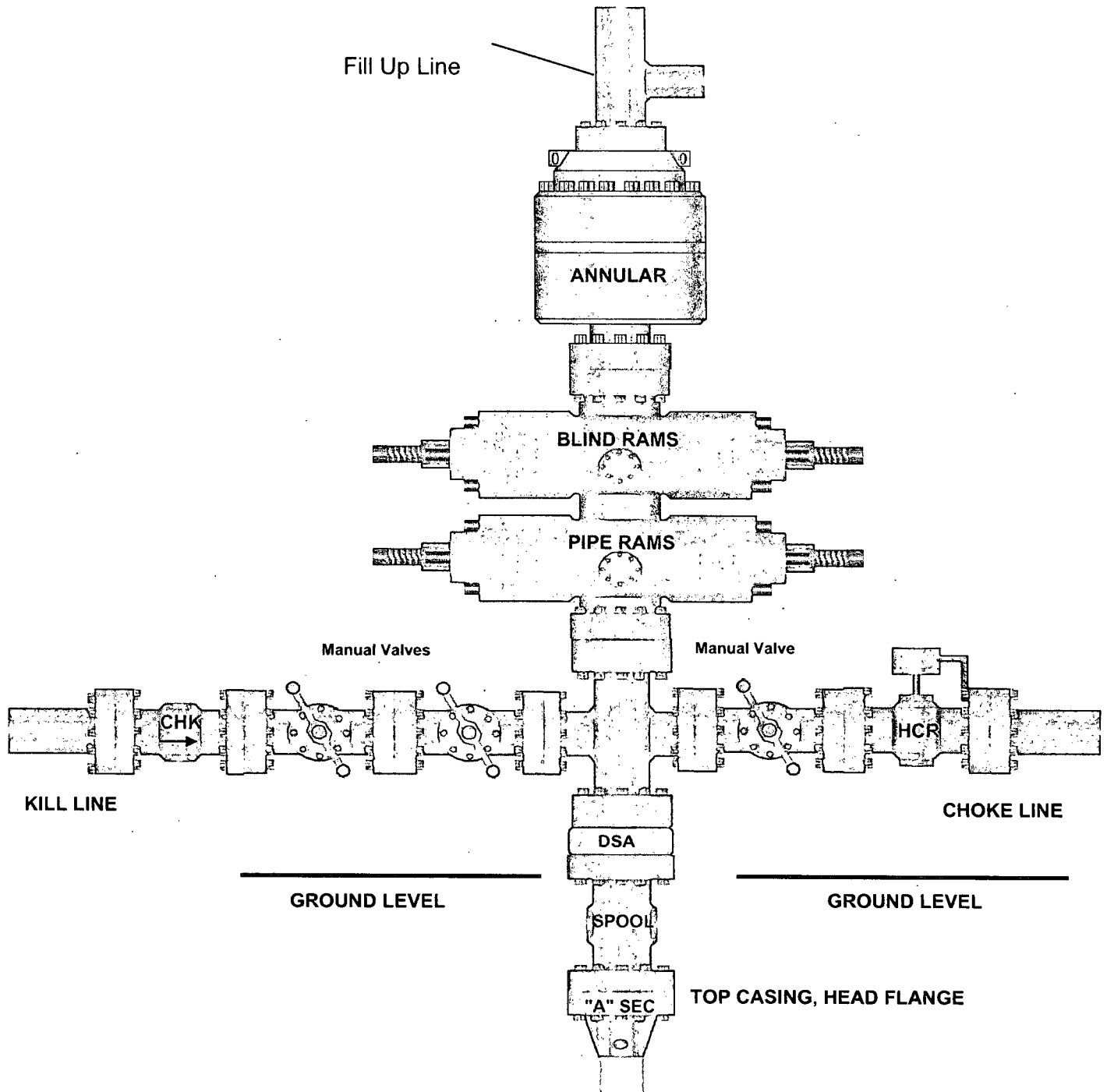
Geodetic Location WGS84	Elevation =	0.0 Meters
Latitude =	32.18032° N	32° 10 min 49.159 sec
Longitude =	103.68397° W	103° 41 min 2.277 sec

Magnetic Declination =	7.50°	[True North Offset]
Local Gravity =	.9988 g	Checksum = 6522
Local Field Strength =	48375 nT	Magnetic Vector X = 23957 nT
Magnetic Dip =	60.03°	Magnetic Vector Y = 3153 nT
Magnetic Model =	bggm2012	Magnetic Vector Z = 41908 nT
Spud Date =	Jun 10, 2013	Magnetic Vector H = 24164 nT

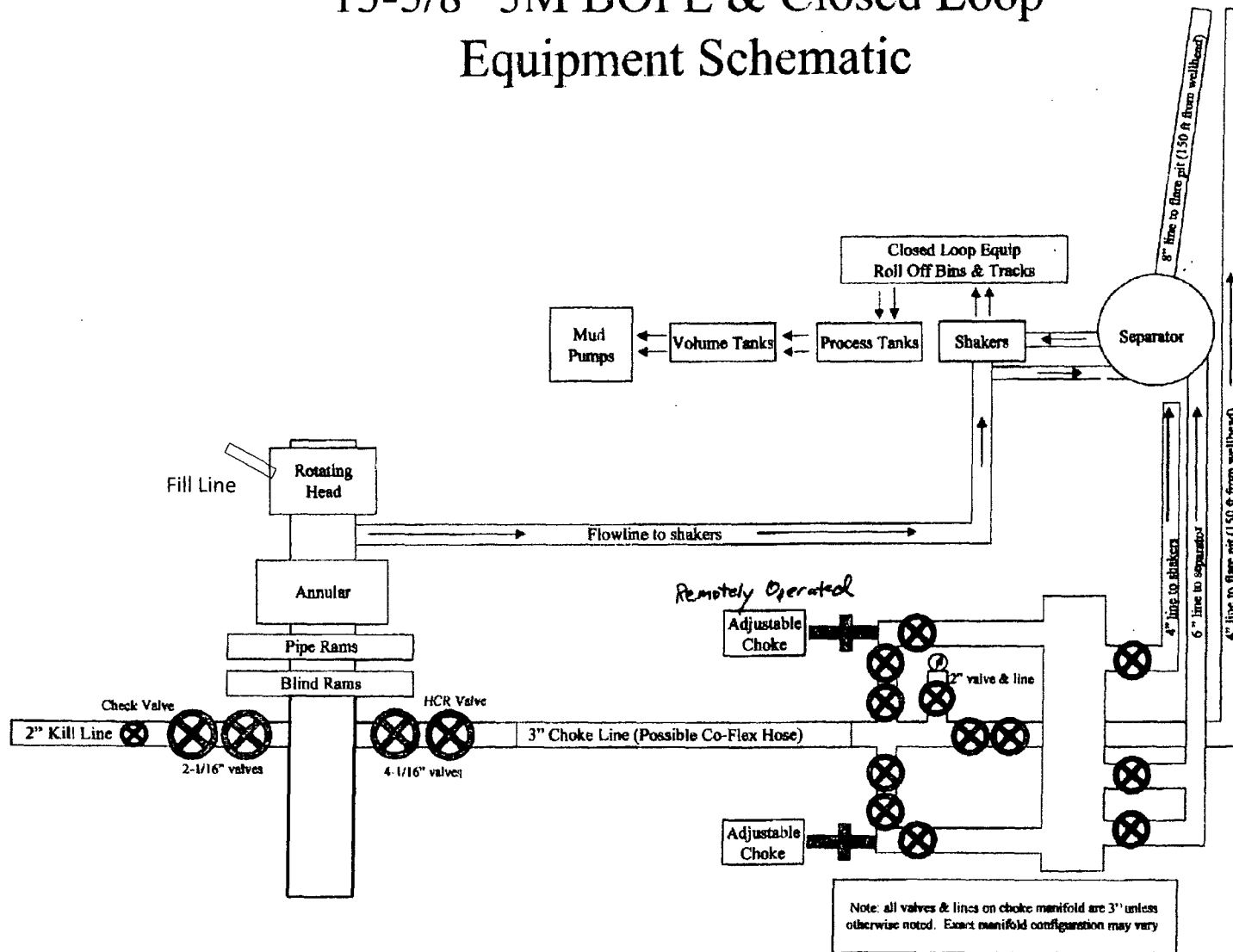
Signed: _____

Date: _____

13-5/8" x 3,000 psi BOP Stack



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



NOTES REGARDING BLOWOUT PREVENTERS

Cotton Draw 33-4 Fed 1H

Surface Location: 330' FNL & 1295' FWL, Unit D, Sec 33, T24S R32E, Lea, NM
Bottom Hole Location: 330' FSL & 660' FWL, Unit M, Sec 4, T25S 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.



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 DOCUMENT

**PHOENIX RUBBER
INDUSTRIAL LTD.**

H-6728 Szeged, Budapesti út 10. Hungary • H-6701 Szeged, P. O. Box 152
Phone: (3662) 566-737 • Fax: (3662) 566-738

SALES & MARKETING: H-1092 Budapest, Ráday u. 42-44. Hungary • H-1440 Budapest, P. O. Box 26
Phone: (361) 456-4200 • Fax: (361) 217-2972, 456-4273 • www.lauruserg.hu

QUALITY CONTROL INSPECTION AND TEST CERTIFICATE				CERT. N°: 555	
PURCHASER: Phoenix Beattie Co.				P.O. N°: 1519FA-871	
PHOENIX RUBBER order N°: 170466		HOSE TYPE: 3" ID Choke and Kill Hose			
HOSE SERIAL N°: 34137		NOMINAL / ACTUAL LENGTH: 11,43 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 = 16 MPa					
COUPLINGS					
Type	Serial N°	Quality	Heat N°		
3" coupling with 4 1/16" Flange end	714 715	AISI 4130	C7626		
		AISI 4130	47357		
API Spec 16 C Temperature rate: "B"					
All metal parts are flawless					
WE CERTIFY THAT THE ABOVE HOSE HAS BEEN MANUFACTURED IN ACCORDANCE WITH THE TERMS OF THE ORDER AND PRESSURE TESTED AS ABOVE WITH SATISFACTORY RESULT.					
Date: 30. April. 2002.	Inspector	Quality Control	PHOENIX RUBBER Industrial Ltd. Hose Inspection and Testing Department Phoenix Rubber		

H&P 214

Page: 1/1

23	RD	+220	40	11:58
23	BL	+160	40	11:58
23	Q2	+220	40	11:58
22	RD	+220	40	11:58
22	BL	+160	40	11:58
22	Q2	+220	40	11:58
21	RD	+220	40	11:58
21	BL	+160	40	11:58
21	Q2	+220	40	11:58
20	RD	+220	40	11:58
20	BL	+160	40	11:58
20	Q2	+220	40	11:58
19	RD	+220	40	11:58
19	BL	+160	40	11:58
19	Q2	+220	40	11:58
18	RD	+220	40	11:58
18	BL	+160	40	11:58
18	Q2	+220	40	11:58
17	RD	+220	40	11:58
17	BL	+160	40	11:58
17	Q2	+220	40	11:58

[Signature]
PHOENIX RUBBER
 Industrial Ltd.
 Hose Inspection and
 Certification Dept.

VERIFIED TRUE COPY
 PHOENIX RUBBER CO.