ATS-12-391

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Form 3160-3
(April 2004)

FORM APPROVED
OMB No 1004-0137
Expires March 31, 2007

EA 555

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

se Serial No.
NMLC-061862

6. If Indian, Allotee or Tribe Name

1a. Type of work ☑ DRILL ☐ REENTER

7 If Unit or CA Agreement, Name and No
NM 70928X

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

8 Lease Name and Well No
Cotton Draw Unit 159H C300637

2 Name of Operator
Devon Energy Production Company, LP

9 API Well No.
30-015-40385

3a Address **20 North Broadway, Oklahoma City, Oklahoma City 73102-8260**

3b Phone No *(include area code)*
405-228-8699

10 Field and Pool, or Exploratory
~~Paduca; Delaware~~ Cotton Draw;

4 Location of Well *(Report location clearly and in accordance with any State requirements *)*

At surface **330 FSL & 660 FWL UNIT M**

At proposed prod zone **200 FNL & 660 FWL UNIT D PP: 330 FSL & 660 FWL**

11 Sec , T R M or Blk and Survey or Area
SEC 13 T25S R31E

14 Distance in miles and direction from nearest town or post office*
Approximately 23 miles southeast of Loving, NM.

12 County or Parish
Eddy County

13 State
NM

15 Distance from proposed* location to nearest property or lease line, ft (Also to nearest drig unit line, if any)	16 No of acres in lease	17 Spacing Unit dedicated to this well
200'	**1720 Acres**	**W/2 W/2 160 Acres**
18 Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft	19 Proposed Depth	20. BLM/BIA Bond No on file
See attached map.	8275' TVD 12765' MD PH 11738'	**CO-1104** & NMB000801
21 Elevations (Show whether DF, KDB, RT, GL, etc)	22. Approximate date work will start*	23 Estimated duration
3363.9 ' GL		**45 days**

24. Attachments

The following, completed in accordance with the requirements of Onshore Oil and Gas Order No 1, shall be attached to this form

1 Well plat certified by a registered surveyor
2 A Drilling Plan.
3 A Surface Use Plan (if the location is on National Forest System Lands, the SUPO shall be filed with the appropriate Forest Service Office)
4 Bond to cover the operations unless covered by an existing bond on file (see Item 20 above).
5 Operator certification
6 Such other site specific information and/or plans as may be required by the authorized officer

25 Signature	Name *(Printed/Typed)*	Date
Judy A. Barnett	**Judy A. Barnett**	**02/03/2012**

Title
Regulatory Specialist

Approved by *(Signature)*	Name *(Printed/Typed)*	Date
/s/ Don Peterson	/s/ Don Peterson	MAY 23 2012

Title	Office
FIELD MANAGER	CARLSBAD FIELD OFFICE

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

APPROVAL FOR TWO YEARS

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

(Instructions on page 2)

CARLSBAD CONTROLLED WATER BASIN

SEE ATTACHED FOR
CONDITIONS OF APPROVAL

APPROVAL SUBJECT TO
GENERAL REQUIREMENTS
AND SPECIAL STIPULATIONS
ATTACHED

Certification

I hereby certify that I, or persons under my direct supervision, have inspected the proposed drill site and access road proposed herein; that I am familiar with the conditions that presently exist; that I have full knowledge of State and Federal laws applicable to this operation; that the statements made in this APD package are, to the best of my knowledge, true and correct; and that the work associated with the operations proposed herein will be performed in conformity with this APD package and the terms and conditions under which it is approved. I also certify that I, or Devon Energy Production Company, L.P. am responsible for the operations conducted under this application. These statements are subject to the provisions of 18 U.S.C. 1001 for the filing of false statements.

I hereby also certify that I, or Devon Energy Production Company, L.P. have made a good faith effort to provide the surface owner with a copy of the Surface Use Plan of Operations and any Conditions of Approval that are attached to the APD.

Executed this _3 rd Day of February, 2012.
Printed Name: Judy A. Barnett
Signed Name: 
Position Title: Regulatory Specialist
Address: 20 North Broadway, OKC OK 73102
Telephone: (405)-228-8699
Field Representative (if not above signatory):
Address (if different from above):
Telephone (if different from above):

District I
1625 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand Avenue, Artesia, NM 88210
District III
1000 Rio Brazos Rd., Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy, Minerals & Natural Resources Department
OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-102
Revised October 15,2009
Submit one copy to appropriate District Office

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

[1] API Number	[2] Pool Code	[3] Pool Name
30-015-40385	96757	COTTON DRAW; ~~Paduca;Delaware~~ Delaware, South

[4] Property Code	[5] Property Name	[6] Well Number
300637	COTTON DRAW UNIT	159 H

[7] OGRID No.	[8] Operator Name	[9] Elevation
6137	DEVON ENERGY PRODUCTION COMPANY, L.P.	3363.9

[10] Surface Location

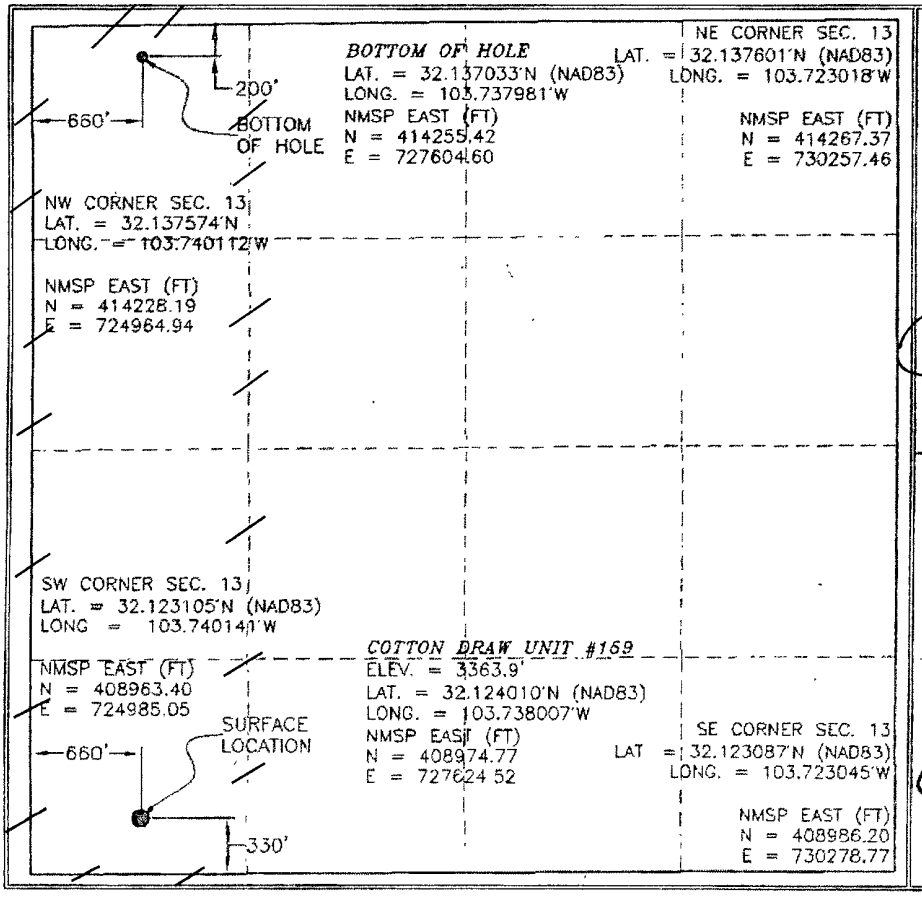
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
M	13	25 S	31 E		330	SOUTH	660	WEST	EDDY

[11] Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
D	13	25 S	31 E		200	NORTH	660	WEST	EDDY

[12] Dedicated Acres	[13] Joint or Infill	[14] Consolidation Code	[15] Order No.
160			

No allowable will be assigned to this completion until all interests have been consolidated or a non-standard unit has been approved by the division.



[17] OPERATOR CERTIFICATION

I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.

Signature — Date: 2/2/12

Printed Name
Judy A. Barnett Regulatory Specialist

[18] SURVEYOR CERTIFICATION

I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief

DECEMBER 8, 2011

Date of Survey

FILMON F. JARAMILLO — NEW MEXICO — 12797 — REGISTERED LAND SURVEYOR

Signature and Seal of Professional Surveyor

Certificate Number FILMON F. JARAMILLO PLS 12797

SURVEY NO. 331

PP: 330 FSL & 660 FWL

DRILLING PROGRAM

Devon Energy Production Company, LP

Cotton Draw Unit 159H

Surface Location: 330' FSL & 660' FWL, Unit M, Sec 13 T25S R31E, Eddy, NM

Bottom Hole Location: 200' FNL & 660' FWL, Unit D, Sec 13 T25S R31E, Eddy, NM

1. **Geologic Name of Surface Formation**

   a. Quaternary

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

a. Quaternary	25'	
b. Rustler	648'	
c. Salado Salt	948'	
d. Base of Salt	4355'	
e. Lamar	4360'	
f. Bell Canyon	4396'	Oil
g. Cherry Canyon	5362'	Oil
h. Brushy Canyon	6747'	Oil
i. Bone Spring	8315'	Oil/Gas
j. Wolfcamp	11368'	Oil/Gas
k. Total Depth	12,765'	
Max TVD	8,275'	

An 8-3/4" Pilot Hole will be drilled to 11738' & plugged back to KOP w/~ 1,800 sx, Class H, 15.6 ppg, 1.15 cf/sx cement.

No other formations are expected to yield oil, gas or fresh water in measurable volumes. The surface fresh water sands will be protected by setting 17 ½"casing at ~~700~~ 750' and circulating cement back to surface. Fresh water sands will be protected by setting 9 5/8" casing at 4350' and circulating cement to surface. The Delaware intervals will be isolated by setting 5 ½" casing to total depth and circulating cement above the base of the 9 5/8" casing.

Casing Program:

Hole Size	Hole Interval	OD Csg	Casing Interval	Weight	Collar	Grade
17 ½"	0 - ~~700~~ 750'	13 3/8""	0'-~~700~~' 750'	48#	STC	H-40
12 ¼"	700-4350'	9 5/8"	0'-4350'	40#	LTC	J-55
8 ¾"	4350-7500'	5 ½"	0-7500'	17#	LTC	HCP110
8 ¾"	7500-12765'	5 ½"	7500-12,765'	17#	BTC	HCP110

See COA

Design Parameter Factors:

Casing Size	Collapse Design Factor	Burst Design Factor	Tension Design Factor
13 3/8"	1.93	4.35	8.15
9 5/8" 40#	1.14	1.75	2.95
5 ½" 17#	1.60	2.00	1.50
5 ½" 17#	1.80	2.20	5.20

Cement Program: (volumes based on at least 25% excess):

13 3/8"

Lead. 600 sx Cl C + 2% bwoc Calcium Chloride + 0 125#/sx CF + 4% bwoc Bentonite + 81 4% FW, 13 5 ppg, 1.75 cf/sx. **Tail**: 250 sx Cl C + 2% bwoc Calcium Chloride + 0.125#/sx CFe + 56.3% FW, 14.8 ppg, 1.35 cf/sx. **TOC @ surface**

9 5/8" Intermediate

Lead 1200 sxs (35:35) Poz (Fly Ash) Cl C + 5% bwow Sodium Chloride + 0 125#/sx CF + 6% bwoc Bentonite + 107.8% FW, 12.5 ppg, 2.05 cf/sx. **Tail w/** 300 sx (60.40)Poz C C + 5% bwow Sodium Chloride + 0 125#/sx CF + 0.4% bwoc Sodium Metasilicate + 4% bwoc MPA-5 + 52 7% Water, 13.8 ppg, 1 38 cf/sx. **TOC @ surface**

5 ½" Production

1st Stage

Lead: 600 sx (35:65) Poz (Fly Ash) Cl H + 5% bwow Sodium Chloride + 0.3% bwoc CD-32 + 0 5% bwoc FL-25 + 2% bwoc Bentonite + 0.6% bwoc Sodium Metasilicate + 0.5% bwoc FL-52A + 102 5% FW, 12 5 ppg, 2.00 cf/sx **Tail**· 1600 sx (50.50) Poz (Fly Ash) Cl H + 1% bwow Sodium Chloride + 0.2% bwoc R-3 + 0 125#/sx CF + 0.5% bwoc BA-10A + 4% bwoc MPA-5 + 58.3% Fresh Water, 14 2 ppg, 1 28 cf/sx. **DV TOOL @ 6,000'**

2nd Stage

Lead: 600 sx Cl C + 1% bwow Calcium Chloride + 0 125#/sx CF + 157 8% FW, 11 4,ppg, 2.88 cf/sx **Tail**. 150 sx (60·40) Poz (Fly Ash) Cl C + 1% bwow Sodium Chloride + 0 2% bwoc R-3 + 0.125#/sx CF + 0 5% bwoc BA-10A + 4% bwoc MPA-5 + 63.2% Fresh Water, 13 8 ppg, 1.38 cf/sx **TOC @ 3,850'**

TOC for All Strings·

Surface·	0'
Intermediate	0'
Production·	3850' (approx 500' above 9-5/8" shoe)

ACTUAL CEMENT VOLUMES WILL BE ADJUSTED BASED ON FLUID CALIPER AND CALIPER LOG DATA

All casing is new and API approved.

Pressure Control Equipment BOP DESIGN: 5 Double

The BOP system used to drill the 12-1/4" and 8-3/4" hole will consist of a 13-5/8" ~~3~~M Triple Ram and Annular preventer. The BOP system will be tested as per BLM Onshore Oil and Gas Order No. 2 as a ~~3~~M 5M system prior to drilling out the surface and intermediate casing shoes. See COA

The pipe rams will be operated and checked as per Onshore Order No 2. 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~~ 5000 psi WP.

Devon requests a variance to use a flexible line with flanged ends between the BOP and the choke manifold (choke line). The line will be kept as straight as possible with minimal turns.

Proposed Mud Circulation System

Depth	Mud Wt.	Visc	Fluid Loss	Type System
0' – ~~700'~~ 750'	8.4-9.0	30-34	NC	FW
~~700'~~ – 4350'	9.8-10.0	28-32	NC	Brine
4350'–12,765'	8.6-9.0	28-32	NC	FW

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

3. 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 20" casing shoe until the 5 1/2" casing is cemented. Breathing equipment will be on location upon drilling the 20" shoe until total depth is reached.

4. **Logging, Coring, and Testing Program:** See COA
   a. Drill stem tests will be based on geological sample shows.
   b. If a drill stem test is anticipated; a procedure, equipment to be used and safety measures will be provided via sundry notice to the BLM.

c. The open hole electrical logging program will be:
   i. Total Depth to Intermediate Casing — Dual Laterolog-Micro Laterolog with SP and Gamma Ray. Compensated Neutron – Z Density log with Gamma Ray and Caliper.
   ii. Total Depth to Surface — Compensated Neutron with Gamma Ray
   iii. No coring program is planned
   iv. Additional testing will be initiated subsequent to setting the 5 ½" production casing. Specific intervals will be targeted based on log evaluation, geological sample shows and drill stem tests.

5. 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 ~~3850~~ 5047 @ 11,738 per operator psi and Estimated BHT 145°. No H2S is anticipated to be encountered.

6. Anticipated Starting Date and Duration of Operations:

a. Road and location construction will begin after the BLM has approved the APD. Anticipated spud date will be as soon after BLM approval and as soon as a rig will be available. Move in operations and drilling is expected to take 32 days. If production casing is run then an additional 30 days will be needed to complete well and construct surface facilities and/or lay flow lines in order to place well on production.

WWT 3/21/12

Weatherford

Drilling Services

Proposal

devon

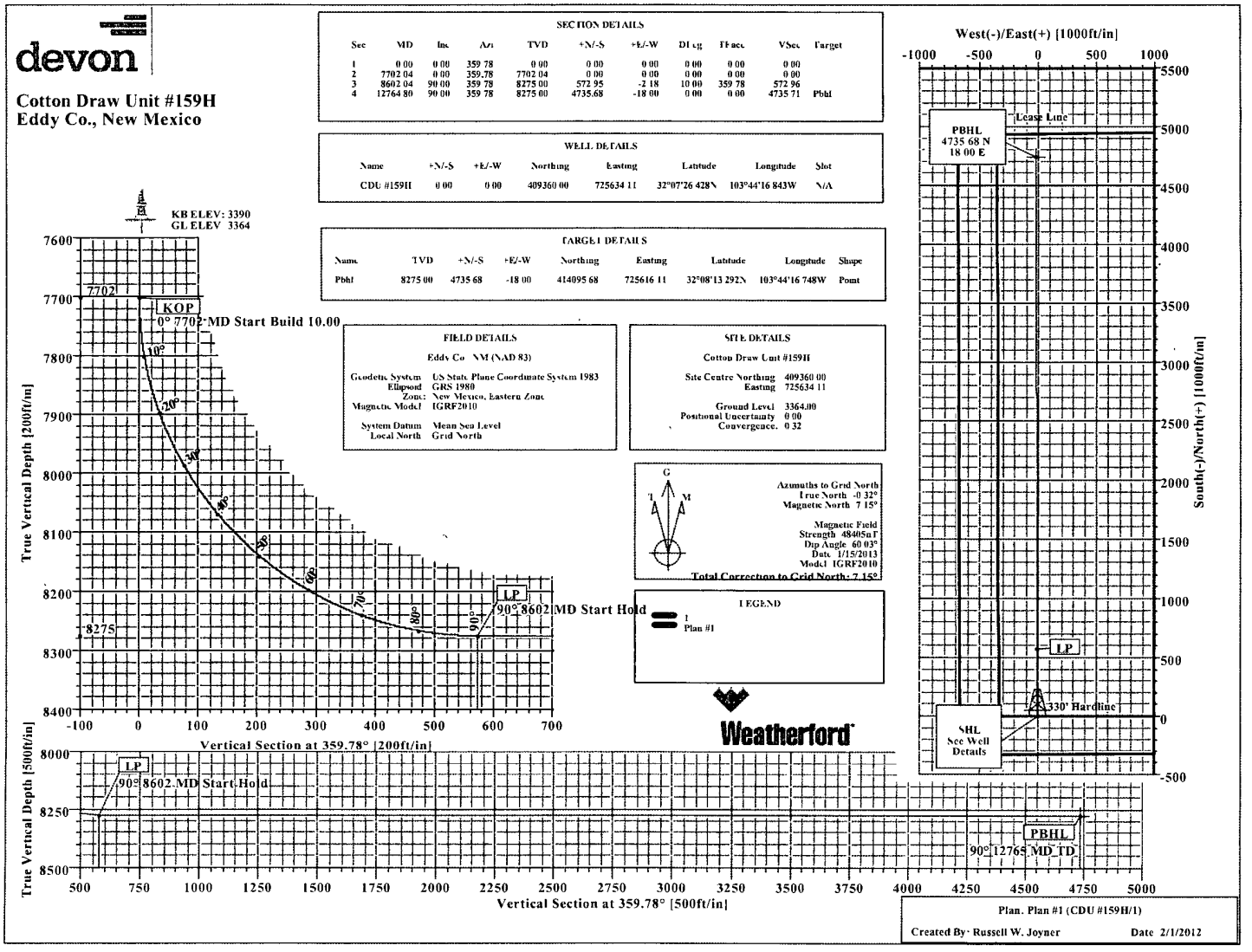
COTTON DRAW UNIT 159H

EDDY COUNTY, NM

WELL FILE: **PLAN 1**

FEBRUARY 1, 2012

Weatherford International, Ltd.
P.O. Box 61028
Midland, TX 79711 USA
+1.432.561.8892 Main
+1 432.561.8895 Fax
www.weatherford com


devon
Cotton Draw Unit #159H
Eddy Co., New Mexico
SECTION DETAILS
Sec MD Inc Azi TVD +N/-S +E/-W DLeg TFace VSec Target
1 0.00 0.00 359.78 0.00 0.00 0.00 0.00 0.00 0.00
2 7702.04 0.00 359.78 7702.04 0.00 0.00 0.00 0.00 0.00
3 8602.04 90.00 359.78 8275.00 572.95 -2.18 10.00 359.78 572.96
4 12764.80 90.00 359.78 8275.00 4735.68 -18.00 0.00 0.00 4735.71 PBhl
WELL DETAILS
Name +N/-S +E/-W Northing Easting Latitude Longitude Slot
CDU #159H 0.00 0.00 409360.00 725634.11 32°07'26.428N 103°44'16.843W N/A
TARGET DETAILS
Name TVD +N/-S +E/-W Northing Easting Latitude Longitude Shape
PBhl 8275.00 4735.68 -18.00 414095.68 725616.11 32°08'13.292N 103°44'16.748W Point
FIELD DETAILS
Eddy Co NM (NAD 83)
Geodetic System: US State Plane Coordinate System 1983
Ellipsoid: GRS 1980
Zone: New Mexico, Eastern Zone
Magnetic Model: IGRF2010
System Datum: Mean Sea Level
Local North: Grid North
SITE DETAILS
Cotton Draw Unit #159H
Site Centre Northing: 409360.00
Easting: 725634.11
Ground Level: 3364.00
Positional Uncertainty: 0.00
Convergence: 0.32
Azimuths to Grid North
True North: -0.32°
Magnetic North: 7.15°
Magnetic Field
Strength: 48405nT
Dip Angle: 60.03°
Date: 1/15/2013
Model: IGRF2010
Total Correction to Grid North: 7.15°
LEGEND
1
Plan #1
KB ELEV: 3390
GL ELEV: 3364
KOP
0° 7702' MD Start Build 10.00
LP
90° 8602' MD Start Hold
True Vertical Depth [200ft/in]
Vertical Section at 359.78° [200ft/in]
LP
90° 8602' MD Start Hold
PBHL
90° 12765' MD TD
True Vertical Depth [500ft/in]
Vertical Section at 359.78° [500ft/in]
West(-)/East(+) [1000ft/in]
PBHL
4735.68 N
18.00 E
Lease Line
LP
330' Hardline
SHL
See Well
Details
South(-)/North(+) [1000ft/in]
Weatherford
Plan: Plan #1 (CDU #159H/1)
Created By: Russell W. Joyner
Date: 2/1/2012

Weatherford International Ltd.

WFT Plan Report - X & Y's

Company:	Devon Energy	**Date:**	2/1/2012	**Time:**	11 58 08 **Page:** 1
Field:	Eddy Co , NM (NAD 83)	**Co-ordinate(NE) Reference:**	Well CDU #159H, Grid North		
Site:	Cotton Draw Unit #159H	**Vertical (TVD) Reference:**	SITE 3390 0		
Well:	CDU #159H	**Section (VS) Reference:**	Well (0 00N,0 00E,359 78Azi)		
Wellpath:	1	**Survey Calculation Method:**	Minimum Curvature	**Db:**	Sybase

Plan:	Plan #1	**Date Composed:**	2/1/2012
		Version:	1
Principal:	Yes	**Tied-to:**	From Surface

Field:	Eddy Co , NM (NAD 83)		
Map System:	US State Plane Coordinate System 1983	**Map Zone:**	New Mexico, Eastern Zone
Geo Datum:	GRS 1980	**Coordinate System:**	Well Centre
Sys Datum:	Mean Sea Level	**Geomagnetic Model:**	IGRF2010

Site:	Cotton Draw Unit #159H				
Site Position:		**Northing:**	409360 00 ft	**Latitude:**	32 7 26.428 N
From:	Map	**Easting:**	725634 11 ft	**Longitude:**	103 44 16 843 W
Position Uncertainty:	0 00 ft			**North Reference:**	Grid
Ground Level:	3364.00 ft			**Grid Convergence:**	0.32 deg

Well:	CDU #159H				**Slot Name:**	
Well Position:	**+N/-S**	0 00 ft	**Northing:**	409360.00 ft	**Latitude:**	32 7 26.428 N
	+E/-W	0 00 ft	**Easting :**	725634 11 ft	**Longitude:**	103 44 16 843 W
Position Uncertainty:		0 00 ft				

Wellpath:	1	**Drilled From:**	Surface	
		Tie-on Depth:	0 00 ft	
Current Datum:	SITE	**Height** 3390 00 ft	**Above System Datum:**	Mean Sea Level
Magnetic Data:	1/15/2013		**Declination:**	7 46 deg
Field Strength:	48405 nT		**Mag Dip Angle:**	60 03 deg

Vertical Section:	**Depth From (TVD)** ft	**+N/-S** ft	**+E/-W** ft	**Direction** deg
	0 00	0 00	0 00	359 78

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	359 78	0 00	0 00	0 00	0 00	0 00	0 00	0 00	
7702.04	0.00	359 78	7702 04	0 00	0 00	0.00	0 00	0 00	0 00	
8602 04	90.00	359 78	8275 00	572 95	-2 18	10 00	10.00	0 00	359 78	
12764 80	90 00	359 78	8275 00	4735 68	-18 00	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
7700 00	0 00	359.78	7700 00	0 00	0 00	0.00	0 00	409360 00	725634 11	
7702 04	0 00	359 78	7702 04	0 00	0 00	0 00	0.00	409360.00	725634 11	KOP
7800 00	9 80	359 78	7799 52	8 35	-0 03	8 35	10 00	409368 35	725634 08	
7900 00	19 80	359 78	7896 09	33 86	-0 13	33.86	10 00	409393 86	725633 98	
8000 00	29 80	359.78	7986 75	75 74	-0 29	75 74	10 00	409435 74	725633 82	
8100 00	39 80	359 78	8068 77	132 74	-0 50	132 74	10 00	409492.74	725633 61	
8200 00	49 80	359 78	8139.64	203 10	-0 77	203.11	10 00	409563 10	725633 34	
8300 00	59 80	359 78	8197 21	284 71	-1 08	284 71	10 00	409644.71	725633 03	
8400 00	69 80	359.78	8239 74	375 07	-1 43	375 08	10 00	409735 07	725632 68	
8500.00	79 80	359 78	8265 94	471 45	-1 79	471 45	10 00	409831 45	725632 32	
8600 00	89 80	359 78	8275 00	570 91	-2.17	570 92	10 00	409930 91	725631 94	
8602 04	90 00	359 78	8275 00	572 95	-2 18	572 96	10 00	409932 95	725631 93	LP
8700 00	90 00	359 78	8275 00	670 91	-2 55	670.92	0 00	410030 91	725631 56	
8800 00	90.00	359 78	8275.00	770 91	-2 93	770 92	0 00	410130 91	725631 18	
8900.00	90 00	359 78	8275 00	870.91	-3 31	870 92	0 00	410230 91	725630 80	
9000 00	90 00	359 78	8275.00	970 91	-3 69	970 92	0 00	410330.91	725630.42	
9100 00	90 00	359 78	8275 00	1070 91	-4 07	1070.92	0 00	410430.91	725630 04	

Weatherford International Ltd.

WFT Plan Report - X & Y's

Company:	Devon Energy	**Date:**	2/1/2012	**Time:**	11:58:08 **Page:** 2
Field:	Eddy Co., NM (NAD 83)	**Co-ordinate(NE) Reference:**	Well CDU #159H, Grid North		
Site:	Cotton Draw Unit #159H	**Vertical (TVD) Reference:**	SITE 3390.0		
Well:	CDU #159H	**Section (VS) Reference:**	Well (0.00N,0.00E,359.78Azi)		
Wellpath:	1	**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
9200 00	90 00	359 78	8275 00	1170 91	-4 45	1170 92	0 00	410530.91	725629 66	
9300 00	90 00	359.78	8275 00	1270 91	-4 83	1270.92	0 00	410630.91	725629.28	
9400 00	90.00	359 78	8275 00	1370 91	-5 21	1370 92	0 00	410730.91	725628 90	
9500 00	90 00	359 78	8275 00	1470 91	-5 59	1470 92	0 00	410830 91	725628 52	
9600 00	90 00	359.78	8275 00	1570.90	-5 97	1570 92	0 00	410930 90	725628 14	
9700 00	90 00	359 78	8275 00	1670 90	-6 35	1670 92	0 00	411030 90	725627 76	
9800 00	90 00	359.78	8275.00	1770 90	-6 73	1770 92	0 00	411130 90	725627.38	
9900.00	90 00	359 78	8275 00	1870 90	-7 11	1870 92	0 00	411230 90	725627 00	
10000 00	90 00	359 78	8275 00	1970 90	-7 49	1970.92	0.00	411330 90	725626 62	
10100 00	90 00	359 78	8275 00	2070 90	-7 87	2070 92	0 00	411430 90	725626 24	
10200 00	90 00	359.78	8275 00	2170 90	-8 25	2170 92	0 00	411530 90	725625 86	
10300 00	90 00	359.78	8275 00	2270.90	-8 63	2270 92	0 00	411630 90	725625 48	
10400 00	90 00	359.78	8275 00	2370 90	-9 01	2370 92	0 00	411730 90	725625 10	
10500 00	90 00	359 78	8275 00	2470 90	-9 39	2470 92	0 00	411830.90	725624 72	
10600 00	90 00	359 78	8275 00	2570 90	-9 77	2570 92	0 00	411930 90	725624 34	
10700.00	90.00	359 78	8275 00	2670 90	-10 15	2670.92	0 00	412030 90	725623 96	
10800.00	90 00	359 78	8275 00	2770 90	-10 53	2770 92	0.00	412130 90	725623.58	
10900 00	90 00	359 78	8275 00	2870.89	-10 91	2870 92	0 00	412230 89	725623 20	
11000 00	90 00	359 78	8275 00	2970 89	-11 29	2970.92	0 00	412330.89	725622.82	
11100 00	90.00	359.78	8275 00	3070 89	-11 67	3070 92	0.00	412430 89	725622 44	
11200 00	90 00	359 78	8275 00	3170 89	-12 05	3170 92	0 00	412530 89	725622 06	
11300 00	90 00	359 78	8275.00	3270 89	-12 43	3270 92	0 00	412630.89	725621 68	
11400 00	90 00	359.78	8275 00	3370 89	-12.81	3370 92	0 00	412730.89	725621 30	
11500 00	90 00	359 78	8275.00	3470 89	-13 19	3470 92	0 00	412830 89	725620 92	
11600 00	90 00	359.78	8275 00	3570 89	-13 57	3570 92	0 00	412930.89	725620 54	
11700 00	90.00	359 78	8275 00	3670 89	-13.95	3670 92	0 00	413030.89	725620 16	
11800 00	90.00	359.78	8275.00	3770 89	-14 33	3770.92	0 00	413130.89	725619 78	
11900 00	90 00	359.78	8275.00	3870 89	-14 71	3870 92	0 00	413230 89	725619 40	
12000 00	90 00	359 78	8275.00	3970 89	-15 09	3970.92	0 00	413330 89	725619 02	
12100 00	90 00	359 78	8275 00	4070 89	-15 47	4070.92	0.00	413430 89	725618 64	
12200 00	90 00	359 78	8275.00	4170 89	-15.85	4170 92	0 00	413530 89	725618 26	
12300 00	90 00	359 78	8275.00	4270 88	-16.23	4270 92	0 00	413630 88	725617 88	
12400.00	90 00	359 78	8275 00	4370 88	-16.61	4370.92	0 00	413730 88	725617.50	
12500 00	90 00	359 78	8275 00	4470 88	-16 99	4470.92	0 00	413830 88	725617.12	
12600 00	90 00	359 78	8275 00	4570 88	-17.37	4570 92	0 00	413930 88	725616 74	
12700 00	90 00	359 78	8275 00	4670 88	-17 75	4670 92	0 00	414030 88	725616 36	
12764 80	90 00	359.78	8275 00	4735 68	-18 00	4735 71	0 00	414095.68	725616 11	Pbhl

Targets

Name	Description Dip	Dir.	TVD ft	+N/-S ft	+E/-W ft	Map Northing ft	Map Easting ft	<--- Latitude ---> Deg	Min	Sec	<--- Longitude ---> Deg	Min	Sec
Pbhl			8275 00	4735 68	-18 00	414095 68	725616 11	32	8	13 292 N	103	44	16 748 W

Casing Points

MD	TVD	Diameter	Hole Size	Name

Weatherford International Ltd.

WFT Plan Report - X & Y's

Company:	Devon Energy	**Date:**	2/1/2012	**Time:**	11:58:08	**Page:**	3
Field:	Eddy Co., NM (NAD 83)	**Co-ordinate(NE) Reference:**	Well CDU #159H, Grid North				
Site:	Cotton Draw Unit #159H	**Vertical (TVD) Reference:**	SITE 3390.0				
Well:	CDU #159H	**Section (VS) Reference:**	Well (0.00N,0.00E,359.78Azi)				
Wellpath:	1	**Survey Calculation Method:**	Minimum Curvature	**Db:**	Sybase		

Annotation

MD ft	TVD ft	
7702.04	7702.04	KOP
8602.04	8275.00	LP
12764.79	8275.00	PBHL

Formations

MD	TVD	Formations	Lithology	Dip Angle	Dip Direction

Weatherford Drilling Services

GeoDec v5.03

Report Date:	February 01, 2012
Job Number:	
Customer:	Devon Energy
Well Name:	Cotton Draw Unit #159H
API Number:	
Rig Name:	
Location:	Eddy Co., 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 409360.000 USFT	Latitude 32.1240100 DEG
East/West 725634.110 USFT	Longitude -103.7380073 DEG
Grid Convergence: .32°	
Total Correction: +7.14°	

Geodetic Location WGS84	Elevation =	0.0 Meters
Latitude =	32.12401° N	32° 7 min 26.436 sec
Longitude =	103.73801° W	103° 44 min 16.826 sec

Magnetic Declination =	7.46°	[True North Offset]	
Local Gravity =	.9988 g	CheckSum =	6467
Local Field Strength =	48401 nT	Magnetic Vector X =	23976 nT
Magnetic Dip =	60.03°	Magnetic Vector Y =	3140 nT
Magnetic Model =	IGRF-2010g11	Magnetic Vector Z =	41927 nT
Spud Date =	Jan 15, 2013	Magnetic Vector H =	24181 nT

Signed:_____ Date:_____

Fluid Technology

ContiTech Beattie Corp.
Webs 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 ıded and suitable for the application regardless of whether the hose is secured or unsecured configuration. As a manufacturer of High Pressure Hose Assemblies for use in Drilling & Pr on, 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 f : but in no way does the lifting and safety equipment affect the performance of the hoses prov 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.co .com

PHOENIX

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.taurusamterg.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 AISI 4130	C7626 47357

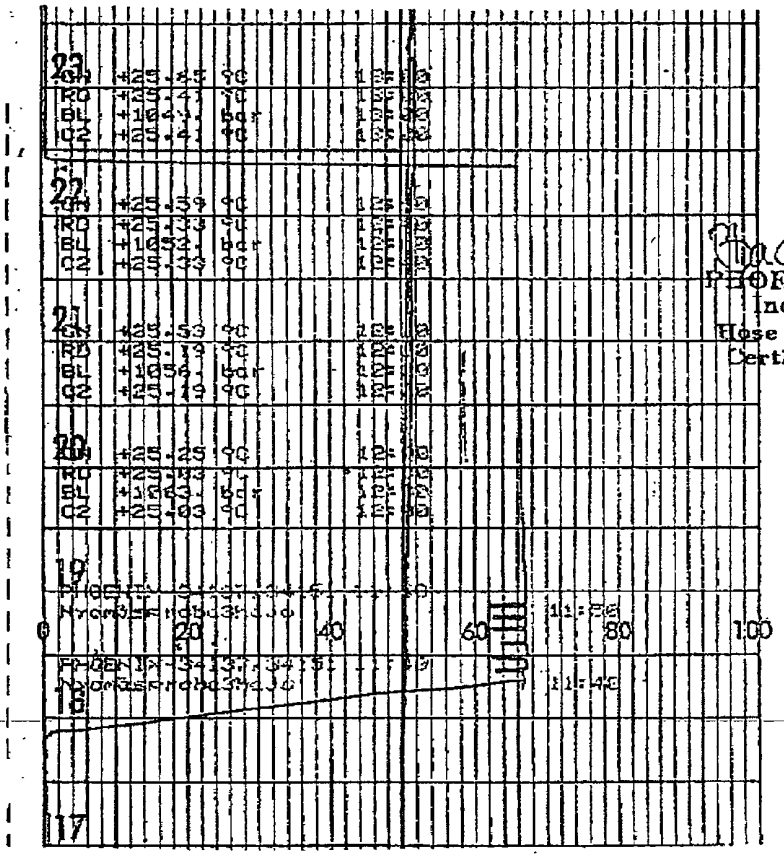
API Spec 16 C
Temperature rate:"B"

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:	Inspector	Quality Control
30. April. 2002.		PHOENIX RUBBER Industrial Ltd. Hose Inspection and Testing Department

Page: 1/1



PHOENIX RUBBER
Industrial Ltd.
Hose Inspection and
Certification Dept.

VERIFIED TRUE COPY
PHOENIX RUBBER G.T.

NOTES REGARDING BLOWOUT PREVENTERS
Devon Energy Production Company, LP
Cotton Draw Unit 159H
Surface Location: 330' FSL & 660' FWL, Unit M, Sec 13 T25S R31E, Eddy, NM
Bottom Hole Location: 200' FNL & 660' FWL, Unit D, Sec 13 T25S R31E, Eddy, NM

1. Drilling nipple will be constructed so it can be removed mechanically without the aid of a welder. The minimum internal diameter will equal BOP bore.

2. Wear ring will be properly installed in head.

3. Blowout preventer and all associated fittings will be in operable condition to withstand a minimum 3,000 psi working pressure.

4. All fittings will be flanged.

5. A full bore safety valve tested to a minimum 3,000 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.

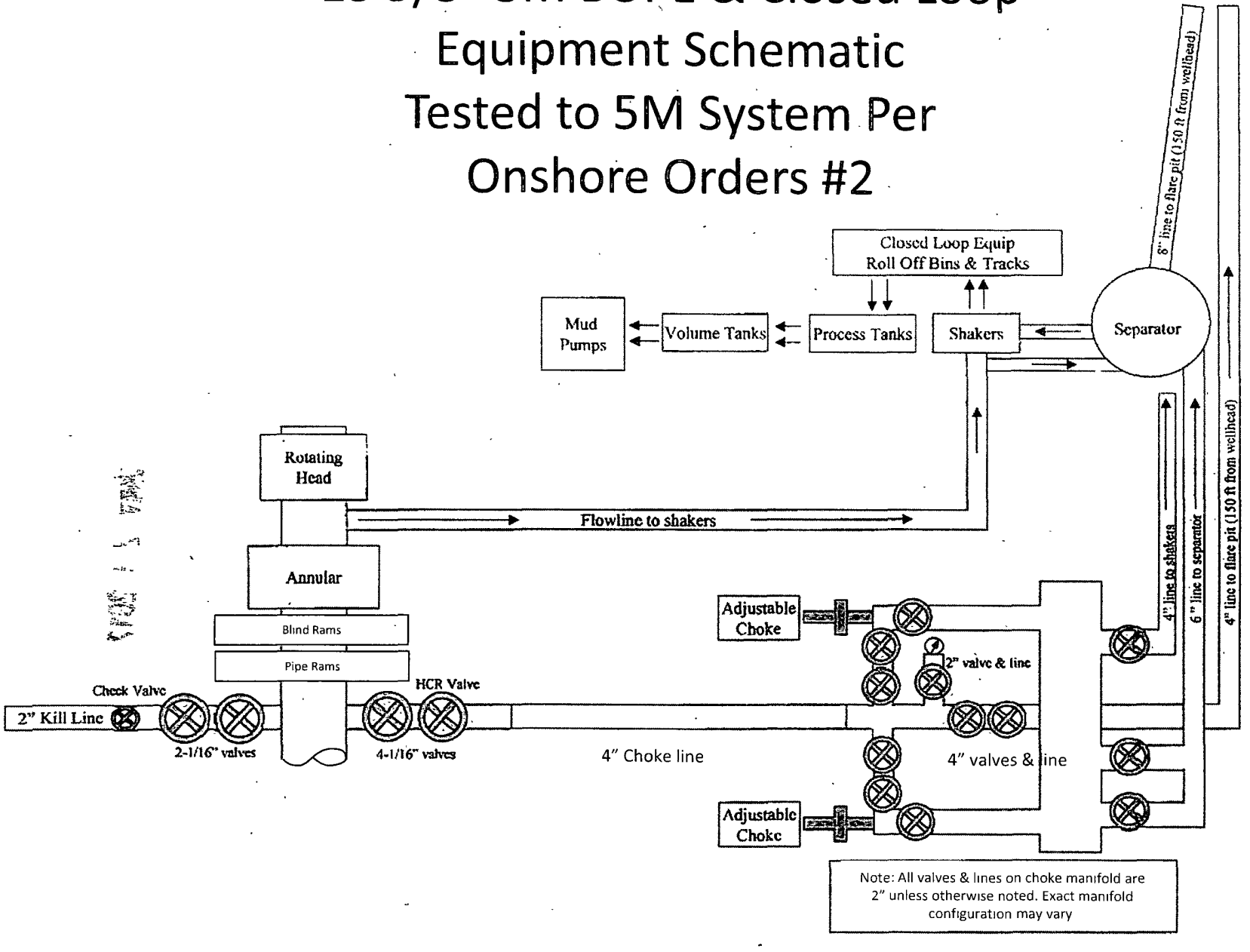
8. Will maintain a kelly cock attached to the kelly.

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.

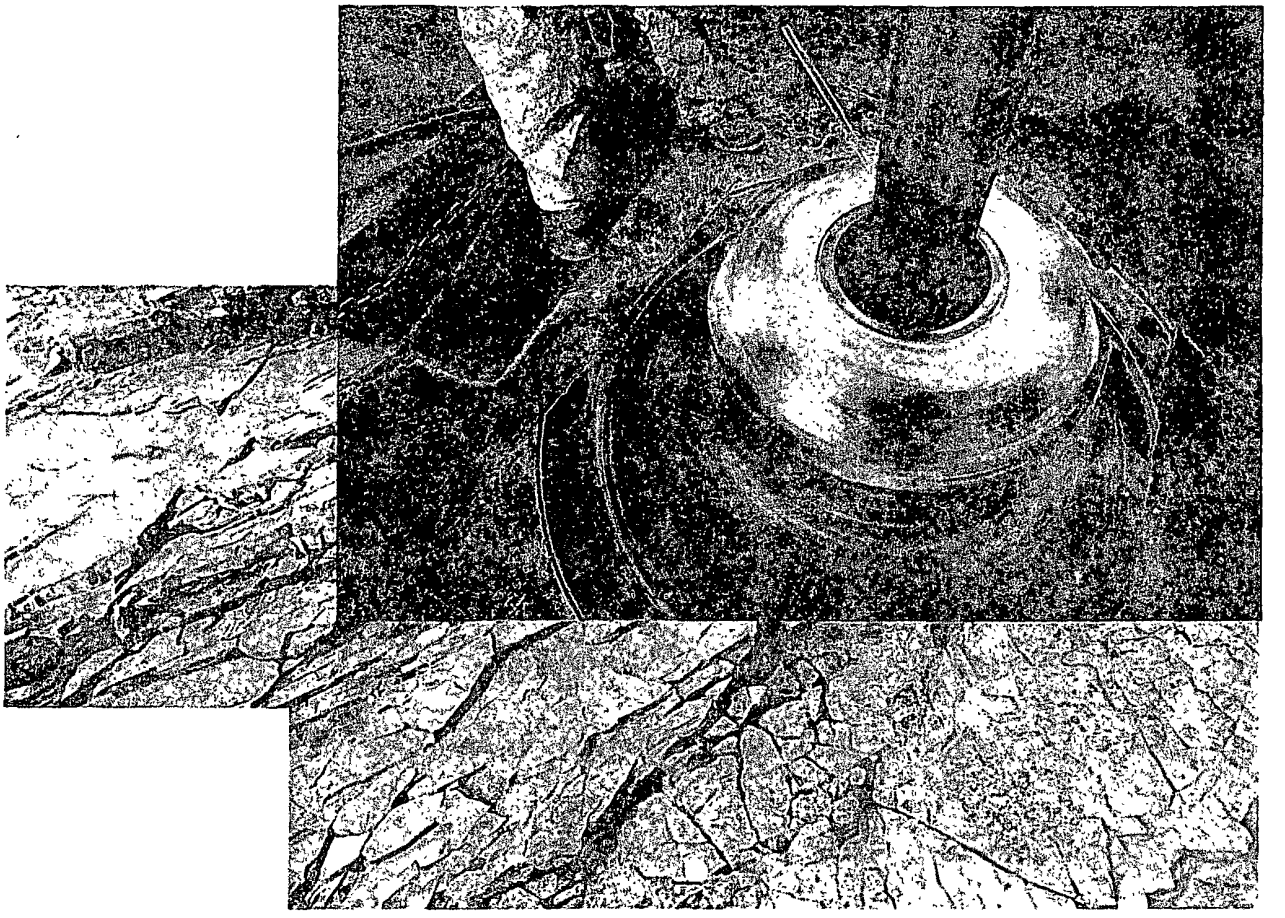
11. All BOP equipment will meet API standards and include a minimum 40 gallon accumulator having two independent means of power to initiate closing operation.

13 5/8" 5M BOPE & Closed Loop Equipment Schematic Tested to 5M System Per Onshore Orders #2



devon

Commitment Runs Deep



Design Plan
Operation and Maintenance Plan
Closure Plan

SENM - Closed Loop Systems
June 2010

I. Design Plan

Devon uses MI SWACO closed loop system (CLS). The MI SWACO CLS is designed to maintain drill solids at or below 5%. The equipment is arranged to progressively remove solids from the largest to the smallest size. Drilling fluids can thus be reused and savings is realized on mud and disposal costs. Dewatering may be required with the centrifuges to insure removal of ultra fine solids.

The drilling location is constructed to allow storm water to flow to a central sump normally the cellar. This insures no contamination leaves the drilling pad in the event of a spill. Storm water is reused in the mud system or stored in a reserve fluid tank farm until it can be reused. All lubricants, oils, or chemicals are removed immediately from the ground to prevent the contamination of storm water. An oil trap is normally installed on the sump if an oil spill occurs during a storm.

A tank farm is utilized to store drilling fluids including fresh water and brine fluids. The tank farm is constructed on a 20 ml plastic lined, bermed pad to prevent the contamination of the drilling site during a spill. Fluids from other sites may be stored in these tanks for processing by the solids control equipment and reused in the mud system. At the end of the well the fluids are transported from the tank farm to an adjoining well or to the next well for the rig.

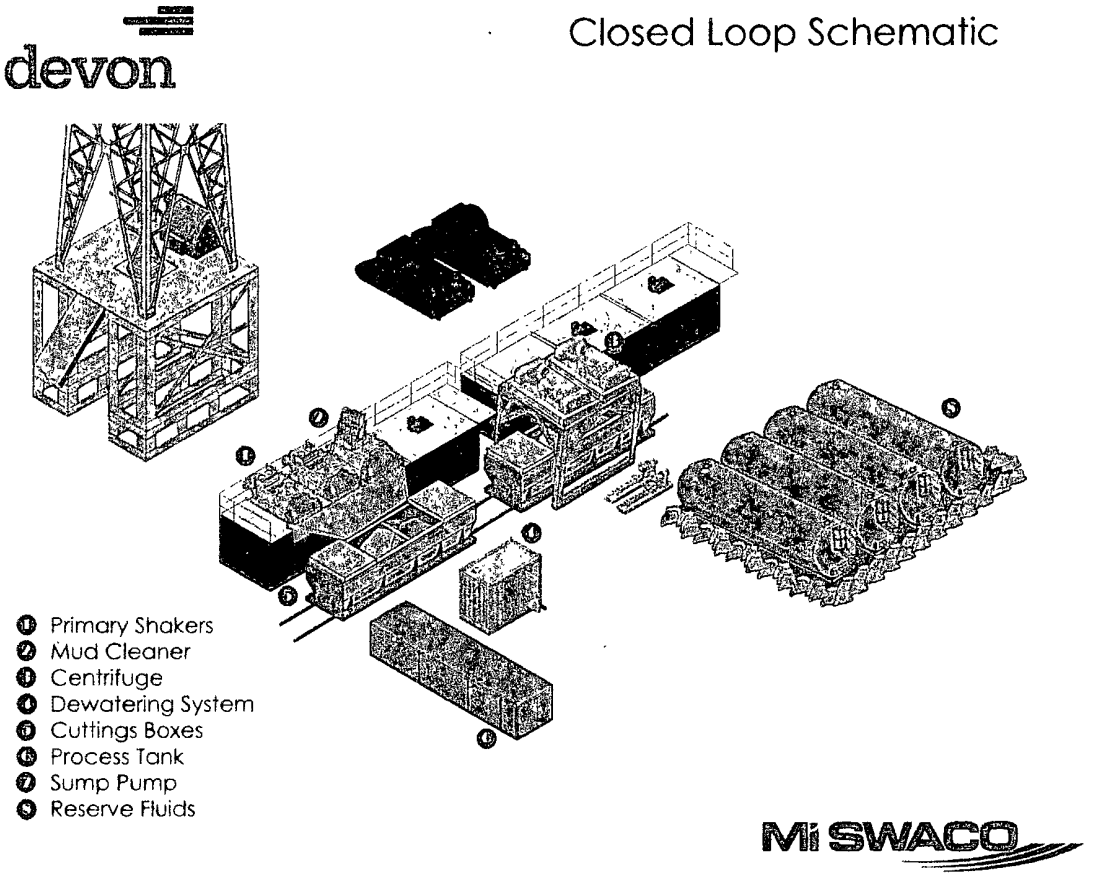
Prior to installing a closed-loop system on site, the topsoil, if present, will be stripped and stockpiled for use as the final cover or fill at the time of closure.

Signs will be posted on the fence surrounding the closed-loop system unless the closed-loop system is located on a site where there is an existing well, that is operated by Devon.

II. Operations and Maintenance Plan

Primary Shakers: The primary shakers make the first removal of drill solids from the drilling mud as it leaves the well bore. The shakers are sized to handle maximum drilling rate at optimal screen size. The shakers normally remove solids down to 74 microns.

Mud Cleaner: The Mud Cleaner cleans the fluid after it leaves the shakers. A set of hydrocyclones are sized to handle 1.25 to 1.5 times the maximum circulating rate. This ensures all the fluid is being processed to an average cut point of 25 microns. The wet discharged is dewatered on a shaker equipped with ultra fine mesh screens and generally cut at 40 microns.



Centrifuges: The centrifuges can be one or two in number depending on the well geometry or depth of well. The centrifuges are sized to maintain low gravity solids at 5% or below. They may or may not need a dewatering system to enhance the removal rates. The centrifuges can make a cut point of 8-10 microns depending on bowl speed, feed rate, solids loading and other factors.

The centrifuge system is designed to work on the active system and be flexible to process incoming fluids from other locations. This set-up is also dependant on well factors.

Dewatering System: The dewatering system is a chemical mixing and dosing system designed to enhance the solids removal of the centrifuge. Not commonly used in shallow wells. It may contain pH adjustment, coagulant mixing and dosing, and polymer mixing and dosing. Chemical flocculation binds ultra fine solids into a mass that is within the centrifuge operating design. The

dewatering system improves the centrifuge cut point to infinity or allows for the return of clear water or brine fluid. This ability allows for the ultimate control of low gravity solids.

Cuttings Boxes: Cuttings boxes are utilized to capture drill solids that are discarded from the solids control equipment. These boxes are set upon a rail system that allows for the removal and replacement of a full box of cuttings with an empty one. They are equipped with a cover that insures no product is spilled into the environment during the transportation phase.

Process Tank: (Optional) The process tank allows for the holding and process of fluids that are being transferred into the mud system. Additionally, during times of lost circulation the process tank may hold active fluids that are removed for additional treatment. It can further be used as a mixing tank during well control conditions.

Sump and Sump Pump: The sump is used to collect storm water and the pump is used to transfer this fluid to the active system or to the tank for to hold in reserve. It can also be used to collect fluids that may escape during spills. The location contains drainage ditches that allow the location fluids to drain to the sump.

Reserve Fluids (Tank Farm): A series of frac tanks are used to replace the reserve pit. These are steel tanks that are equipped with a manifold system and a transfer pump. These tanks can contain any number of fluids used during the drilling process. These can include fresh water, cut brine, and saturated salt fluid. The fluid can be from the active well or reclaimed fluid from other locations. A 20 ml liner and berm system is employed to ensure the fluids do not migrate to the environment during a spill.

If a leak develops, the appropriate division district office will be notified within 48 hours of the discovery and the leak will be addressed. Spill prevention is accomplished by maintaining pump packing, hoses, and pipe fittings to insure no leaks are occurring. During an upset condition the source of the spill is isolated and repaired as soon as it is discovered. Free liquid is removed by a diaphragm pump and returned to the mud system. Loose topsoil may be used to stabilize the spill and the contaminated soil is excavated and placed in the cuttings boxes. After the well is finished and the rig has moved, the entire location is scrapped and testing will be performed to determine if a release has occurred.

All trash is kept in a wire mesh enclosure and removed to an approved landfill when full. All spent motor oils are kept in separate containers and they are removed and sent to an approved recycling center. Any spilled lubricants, pipe

dope, or regulated chemicals are removed from soil and sent to landfills approved for these products.

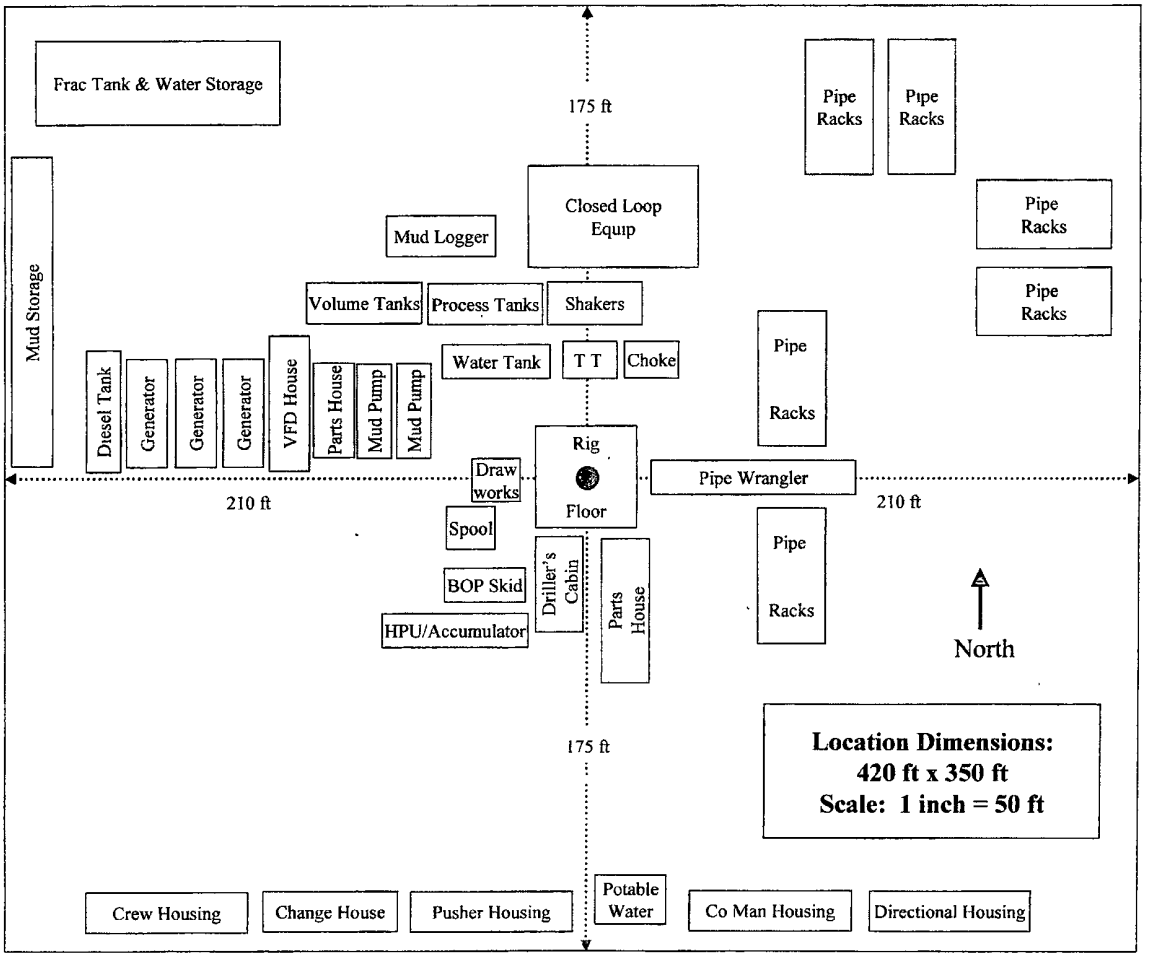
These operations are monitored by Mi Swaco service technicians. Daily logs are maintained to ensure optimal equipment operation and maintenance. Screen and chemical use is logged to maintain inventory control. Fluid properties are monitored and recorded and drilling mud volumes are accounted for in the mud storage farm. This data is kept for end of well review to insure performance goals are met. Lessons learned are logged and used to help with continuous improvement.

A MI SWACO field supervisor manages from 3-5 wells. They are responsible for training personnel, supervising installations, and inspecting sites for compliance of MI SWACO safety and operational policy.

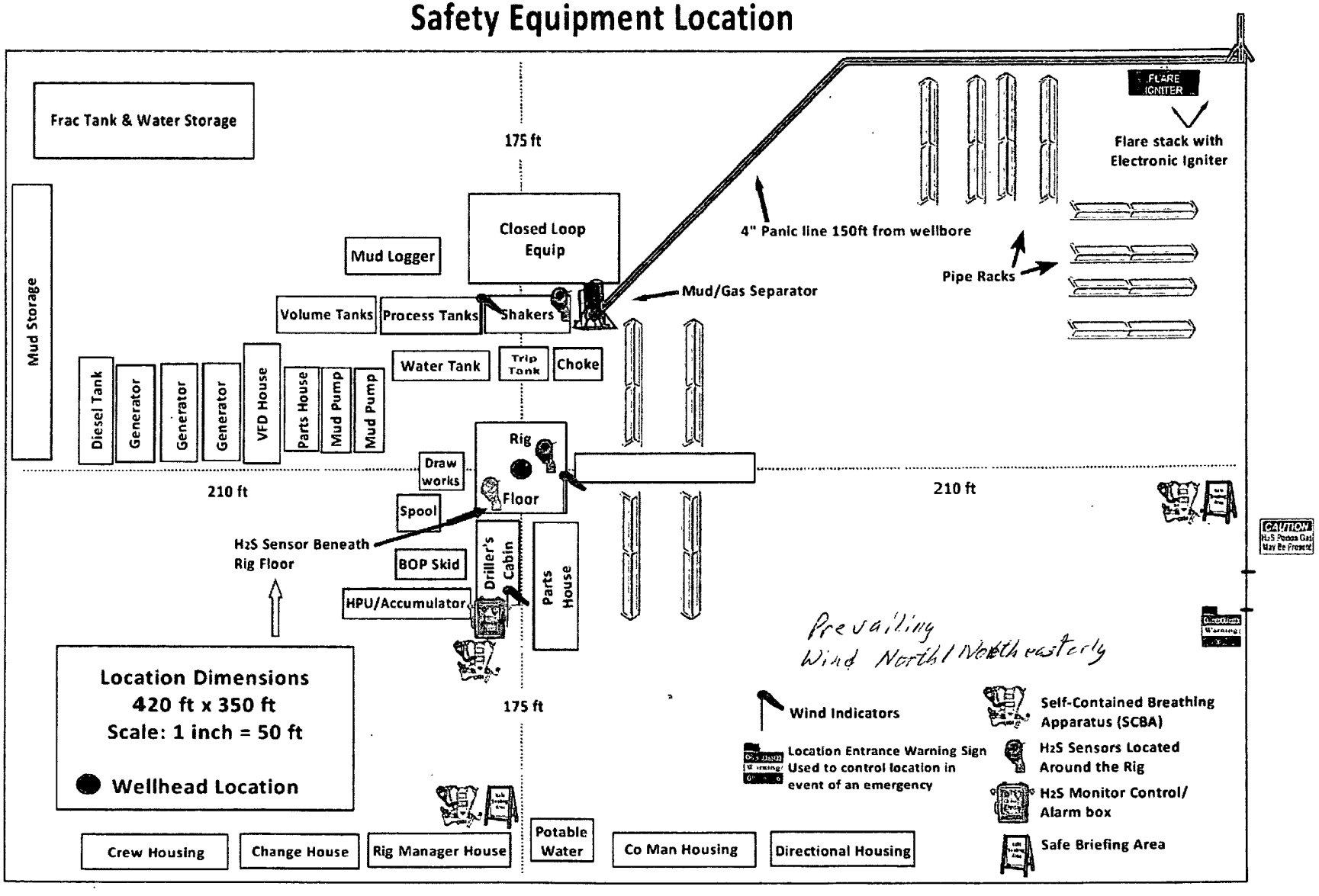
III. Closure Plan

A maximum 340' X 340' caliche pad is built per well. All of the trucks and steel tanks fit on this pad. All fluid cuttings go to the steel tanks to be hauled by various trucking companies to an agency approved disposal.

H&P Flex Rig Location Layout



Devon Energy - Well Pad
Rig Location Layout
Safety Equipment Location



devon

Devon Energy Corporation
20 North Broadway
Oklahoma City, Oklahoma 73102-8260

Hydrogen Sulfide (H_2S) Contingency Plan

For

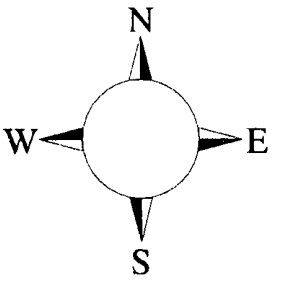
Cotton Draw Unit 159

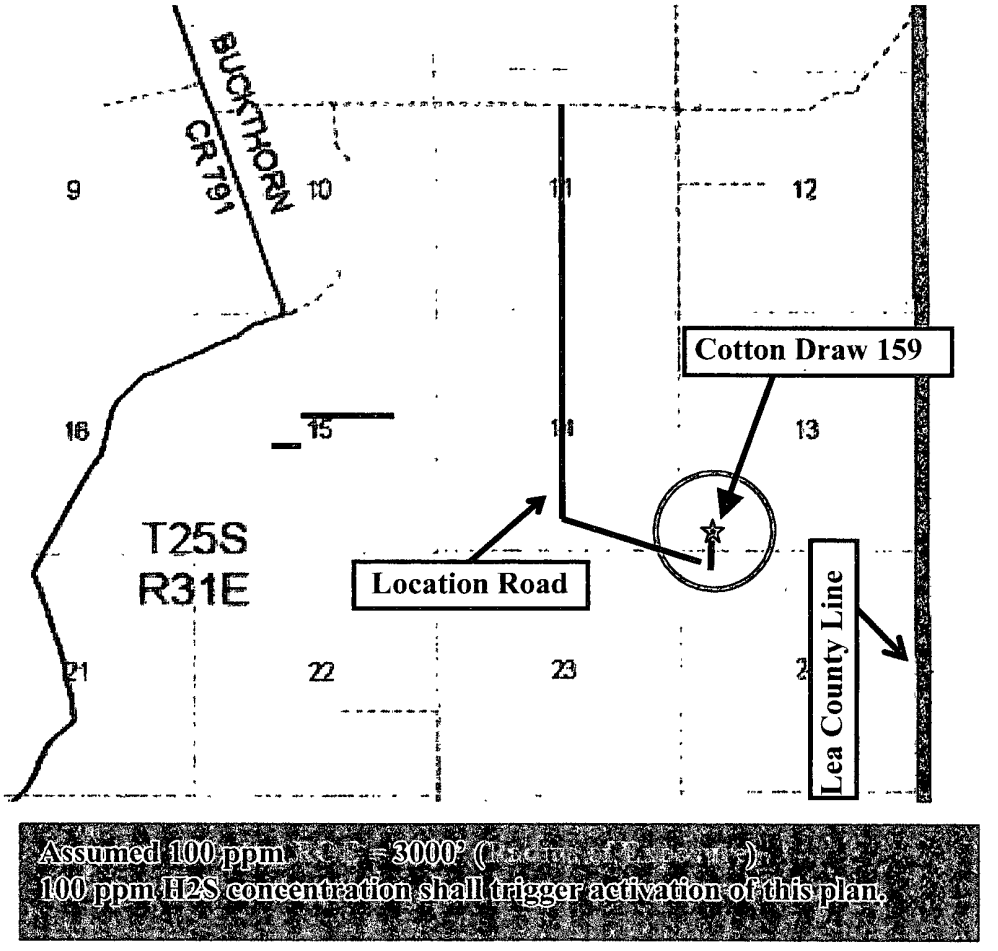
Sec-13, T-25S R-31E
330'FSL & 660' FWL,
LAT. = 32.123105,N (NAD83)
LONG = 103.724964'W

Eddy County NM

Cotton Draw Unit 159

This is an open drilling site. H_2S monitoring equipment and emergency response equipment will be used within 500' of zones known to contain H_2S, including warning signs, wind indicators and H_2S monitor.





Escape

Crews shall escape upwind of escaping gas in the event of an emergency release of gas. Escape can be facilitated South then West, then North on lease road.. Crews should then block entrance to the location from the lease road so as not to allow anyone traversing into a hazardous area. The blockade should be at a safe distance outside of the ROE. Evacuation should continue, if necessary, to primitive road and onto CR791. There are no homes or buildings in or near the ROE.

Assumed 100 ppm ROE = 3000'

100 ppm H_2S concentration shall trigger activation of this plan.

Emergency Procedures

In the event of a release of gas containing H_2S, the first responder(s) must

- **Isolate the area and prevent entry by other persons into the 100 ppm ROE.**
- **Evacuate any public places encompassed by the 100 ppm ROE.**
- **Be equipped with H_2S monitors and air packs in order to control the release.**
- **Use the "buddy system" to ensure no injuries occur during the response**
- **Take precautions to avoid personal injury during this operation.**
- **Contact operator and/or local officials to aid in operation. See list of phone numbers attached.**
- **Have received training in the**
  - **Detection of H_2S, and**
  - **Measures for protection against the gas,**
  - **Equipment used for protection and emergency response.**

Ignition of Gas Source

Should control of the well be considered lost and ignition considered, take care to protect against exposure to Sulfur Dioxide (SO_2). Intentional ignition must be coordinated with the NMOCD and local officials. Additionally the NM State Police may become involved. NM State Police shall be the Incident Command on scene of any major release. Take care to protect downwind whenever there is an ignition of the gas

Characteristics of H_2S and SO_2

Common Name	Chemical Formula	Specific Gravity	Threshold Limit	Hazardous Limit	Lethal Concentration
Hydrogen Sulfide	H_2S	1.189 Air = 1	10 ppm	100 ppm/hr	600 ppm
Sulfur Dioxide	SO_2	2.21 Air = 1	2 ppm	N/A	1000 ppm

Contacting Authorities

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

Devon Energy Corp. Company Call List

Artesia (575)	Cellular	Office	Home
Foreman – Robert Bell	748-7448	748-0178	746-2991
Asst. Foreman –Tommy Polly	748-5290	748-0165	748-2846
Don Mayberry	748-5235	748-0164	746-4945
Montral Walker	390-5182	748-0193	936-414-6246
Engineer – Marcos Ortiz	(405) 317-0666	(405) 552-8152	(405) 381-4350

Agency Call List

Lea County (575)

Hobbs

State Police	392-5588
City Police	397-9265
Sheriff's Office	393-2515
Ambulance	911
Fire Department	397-9308
LEPC (Local Emergency Planning Committee)	393-2870
NMOCD	393-6161
US Bureau of Land Management	393-3612

Eddy County (575)

Carlsbad

State Police	885-3137
City Police	885-2111
Sheriff's Office	887-7551
Ambulance	911
Fire Department	885-2111
LEPC (Local Emergency Planning Committee)	887-3798
US Bureau of Land Management	887-6544
New Mexico Emergency Response Commission (Santa Fe)	(505)476-9600
24 HR	(505) 827-9126
National Emergency Response Center (Washington, DC)	(800) 424-8802

Emergency Services

Boots & Coots IWC	1-800-256-9688 or (281) 931-8884
Cudd Pressure Control	(915) 699-0139 or (915) 563-3356
Halliburton	(575) 746-2757
B. J. Services	(575) 746-3569

Give GPS position:

Flight For Life - Lubbock, TX	(806) 743-9911
Aerocare - Lubbock, TX	(806) 747-8923
Med Flight Air Amb - Albuquerque, NM	(575) 842-4433
Lifeguard Air Med Svc. Albuquerque, NM	(575) 272-3115

Prepared in conjunction with
Wade Rohloff

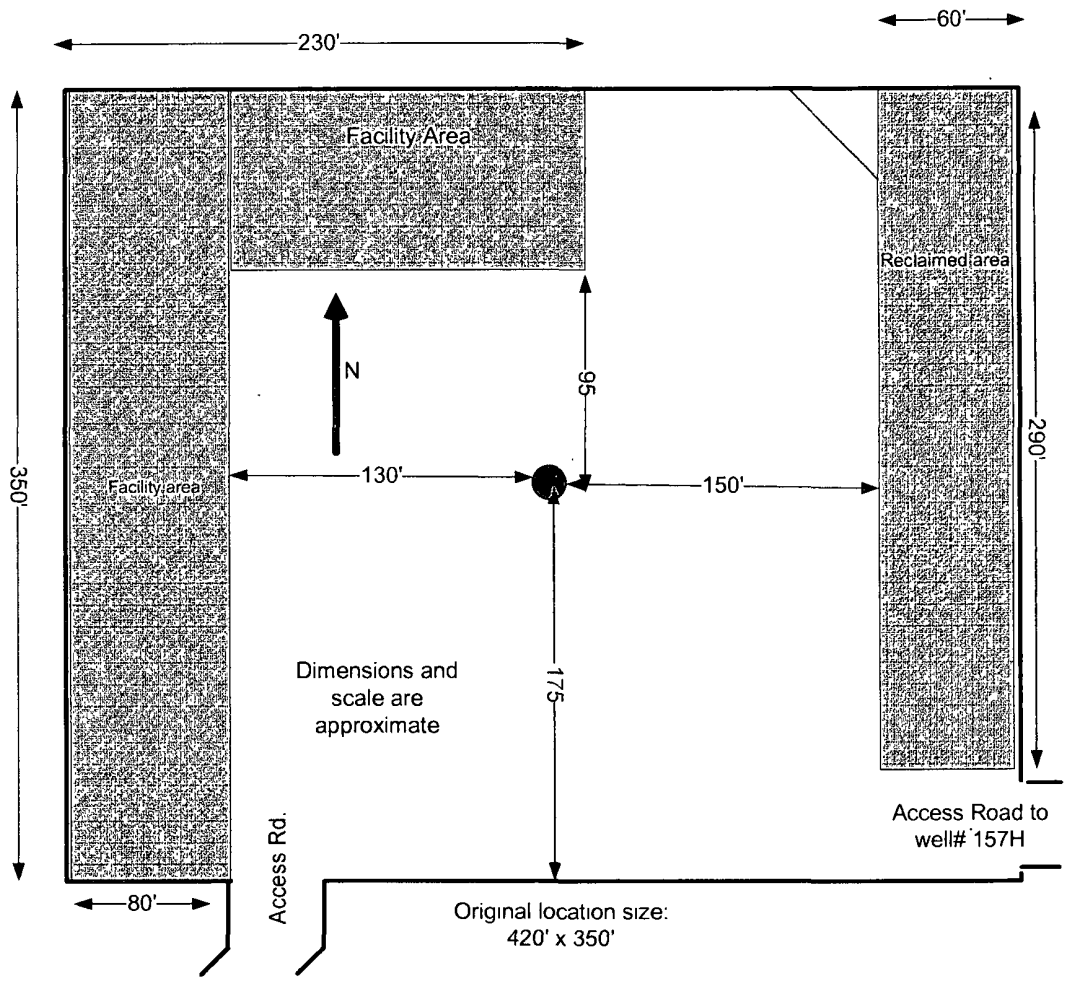
devon

Proposed Interim Site Configuration

Devon Energy Production Co.
Cotton Draw Unit 159H
330 ' FSL & 660' ' FWL
Sec. 13 T25S R31E
Eddy County,
NM

Proposed
Reclamation Area

1" : 60'



PECOS DISTRICT
CONDITIONS OF APPROVAL

OPERATOR'S NAME:	Devon Energy Prod Co LP
LEASE NO.:	LC-061862
WELL NAME & NO.:	Cotton Draw Unit #159H
SURFACE HOLE FOOTAGE:	330' FSL & 660' FWL
BOTTOM HOLE FOOTAGE	200' FNL & 600' FWL
LOCATION:	Section 13, T.25 S., R.31 E., NMPM
COUNTY:	Eddy County, New Mexico

TABLE OF CONTENTS

Standard Conditions of Approval (COA) apply to this APD. If any deviations to these standards exist or special COAs are required, the section with the deviation or requirement will be checked below.