ATS-12-635

HOBBS OCD

AUG 02 2012

RECEIVED

OCD-HOBBS

Form 3160-3
(August 2007)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

FORM APPROVED
OMB No 1004-0137
Expires July 31, 2010

5 Lease Serial No.
NMLC-058698B

6. If Indian, Allotee or Tribe Name

7 If Unit or CA Agreement, Name and No

1a. Type of work: ☑ DRILL ☐ REENTER

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

8. Lease Name and Well No
Caswell 23 Federal 1H 39381

2. Name of Operator
DEVON ENERGY PRODUCTION COMPANY, L P. 6137

9 API Well No.
30025-40708

3a. Address 20 NORTH BROADWAY, OKLAHOMA CITY, OKLAHOMA 73102-8260

3b Phone No. *(include area code)*
405.552.7848

10 Field and Pool, or Exploratory
MALJAMAR WEST; ~~PADDOCK~~ Yeso 44500

4 Location of Well *(Report location clearly and in accordance with any State requirements *)*
At surface 335 FNL & 260 FEL, Unit A
At proposed prod. zone 330 FNL & 330 FWL, Unit D PP: 380 FNL & 330 FEL

11. Sec., T. R. M. or Blk.and Survey or Area
Sec. 23-T17S-R32E

14 Distance in miles and direction from nearest town or post office*
APPROX. 2.5 MILES SE OF MALJAMAR, NM

12 County or Parish
LEA

13. State
NM

15 Distance from proposed* location to nearest property or lease line, ft (Also to nearest drig. unit line, if any)
See Attached Map

16 No. of acres in lease
640 Acres

17. Spacing Unit dedicated to this well
160 Acres

18 Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft
See Attached Map

19. Proposed Depth
10,159' MD 5,712' TVD
PH: 7,000'

20. BLM/BIA Bond No. on file
CO1104

21 Elevations (Show whether DF, KDB, RT, GL, etc.)
4069' GL

22. Approximate date work will start*

23. Estimated duration
45 DAYS

24. Attachments TO BE PAD DRILLED W/ CASWELL 23 FED 3H

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.
2. A Drilling Plan.
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).
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 BLM

25 Signature D. H. Cook

Name *(Printed/Typed)*
DAVID H. COOK

Date
04/23/2012

Title
REGULATORY SPECIALIST

Approved by *(Signature)*
/s/ Don Peterson

Name *(Printed/Typed)*
/s/ Don Peterson

Date
AUG - 1 2012

Title
for 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)

Roswell Controlled Water Basin

KZ 08/02/12

Approval Subject to General Requirements & Special Stipulations Attached

SEE ATTACHED FOR CONDITIONS OF APPROVAL

DRILLING PROGRAM

Devon Energy Production Company, LP

Caswell 23 Federal 1H

Surface Location: 335' FNL & 260' FEL, Unit A, Sec 23 T17S R32E, Lea, NM

Bottom Hole Location: 330' FNL & 330' FWL, Unit D, Sec 23 T17S R32E, Lea, NM

1. Geologic Name of Surface Formation

a. Permian

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

a.	Fresh Water	70'	
b.	Rustler	1040'	
c.	Top of Salt	1199'	
d.	Base of Salt	2211'	
e.	Yates	2360'	
f.	7 Rivers	2689'	
g.	Queen	3280'	
h.	Grayburg	3669'	Oil
i.	San Andres	4072'	Oil
j.	Glorieta	5613'	Oil
k.	Yeso Group	5680'	Oil
	Total Depth	10,159'	

No other formations are expected to yield oil, gas or fresh water in measurable volumes. The surface fresh water sands will be protected by setting 13 3/8" casing at ~~1,000'~~ and circulating cement back to surface. Fresh water sands will be protected by setting 9 5/8" casing at ~~2,500'~~ and circulating cement to surface. The Yeso Group 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: (All casing is new and API approved)

Hole Size	Hole Interval	OD Csg	Casing Interval	Weight	Collar	Grade
17 1/2"	0' – ~~1000'~~ 1095	13 3/8"	0'-1,000'	48#	STC	H-40
12 ¼"	~~1,000'–2,500'~~ 2575	9 5/8"	0'-2,500'	40#	LTC	J-55
8 ¾"	~~2,500'~~ - 5140'	5 ½"	0'-5,140'	20#	LTC	L-80
8 ¾"	5,140' – 10,159'	5 ½"	5,140' – 10,159'	20#	BTC	L-50

Maximum TVD: 5,712'

An 8-3/4" pilot hole will be drilled to 7,000 ft and plugged back to KOP with approx 800 sx of Class H, 15.6 ppg, 1.19 cf/sk cement. In addition, an openhole whipstock will be set at KOP.

Design Parameter Factors:

Casing Size	Collapse Design Factor	Burst Design Factor	Tension Design Factor
13 3/8"	1.8	4.1	7.5
9 5/8"	2.0	3.0	5.2
5 ½" 17#LTC	1.9	2.7	1.8
5 ½" 17#BTC	1.9	2.4	2.3

3. Cement Program:

a. 13 3/8" Surface — **Lead** w/ 960 sx HalCem-C + 2% bwoc Calcium Chloride - Flake + 0.25#/sx Poly-E-Flake, 14.8 ppg. **Yield** 1.35 cf/sx. **TOC** @ surface.

b. 9 5/8" Intermediate — **Lead** w/ 465 sx EconoCem - HLC +5% bwow Sodium Chloride + 0.125#/sx Poly-E-Flake, 12.5 ppg. **Yield** 2.04 cf/sx. **TOC** @ surface.
Tail w/ 220 sx HalCem C + 0.125#/sx Poly-E-Flake, 14.8 ppg. **Yield** 1.33 cf/sx.

c. 5 1/2" Production — **1st Lead** w/ 130 sx EconoCem - H + 0.125% #/sx Poly-E-Flake + 0.1% HR-601 Gal/sx + 0.5% Econolite, 11.8 ppg. **Yield** 2.52 cf/sx.

2nd Lead w/ 420 sx EconoCem - HLH + 0.125% #/sx Poly-E-Flake + 0.1% HR-601 Gal/sx, 12.5 ppg. **Yield** 1.95 cf/sx.

Tail w/ 610 sx SoluCem-H + 0.25 #/sx D-AIR 5000 + 0.5% HR-601 Gal/sx, 15.0 ppg. **Yield** 2.62 cf/sx.
TOC ~ 2,000'

The above cement volumes could be revised pending the caliper measurement from the open hole logs. All cement volumes based on at least 25% excess.

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. The BOP system will be tested as per BLM Onshore Oil and Gas Order No. 2 as a **3M system** prior to drilling out the surface casing shoe.

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

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

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

Mud Program

Depth	Mud Wt.	Visc.	Fluid Loss	Type System
0 – 1,000' 1095	8.4 – 9.0	30 – 34	N/C	FW
1,000' - 2,500' 2575	9.8 – 10.0	28 – 32	N/C	Brine
2,500' - 10,087'	8.6 – 9.0	28 – 32	N/C-12	FW

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

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

5. **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.

6. 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 2700 psi and Estimated BHT 100°. No H2S is anticipated to be encountered.

7. 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.

Devon Energy Corporation

Lea County, NM (NAD 83)
Caswell 23 Federal
Caswell 23 Federal 1H

Lateral

Plan: Plan #1

Sperry Drilling Services

Proposal Report

12 April, 2012

Well Coordinates 664,902 48 N, 726,872 40 E (32° 49' 34 99" N, 103° 43' 45 61" W)
Ground Level 4,069 80 ft

Local Coordinate Origin	Centered on Well Caswell 23 Federal 1H
Viewing Datum	GL 4069 80' + KB 25' @ 4094 80ft (Cactus 126)
TVDs to System	N
North Reference	Grid
Unit System	API - US Survey Feet

Version 2003 16 Build 431

HALLIBURTON

Plan Report for Caswell 23 Federal 1H - Plan #1

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	Toolface Azimuth (°)
0 00	0.00	0 00	0 00	0 00	0 00	0.00	0 00	0 00	0 00	0 00
70 00	0 00	0 00	70 00	0.00	0 00	0 00	0 00	0 00	0 00	0 00
Water Sand										
100 00	0 00	0 00	100 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00
200 00	0 00	0 00	200 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00
300 00	0 00	0 00	300.00	0 00	0 00	0 00	0 00	0 00	0 00	0 00
400 00	0 00	0 00	400 00	0 00	0 00	0 00	0.00	0 00	0 00	0 00
500 00	0 00	0 00	500 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00
600 00	0 00	0 00	600 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00
700 00	0 00	0 00	700 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00
800 00	0 00	0 00	800 00	0 00	0 00	0 00	0 00	0 00	0 00	0.00
900 00	0 00	0 00	900 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00
954 00	0 00	0 00	954 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00
Top of Salt(Rustler)										
1,000 00	0 00	0 00	1,000 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00
1,100 00	0 00	0 00	1,100 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00
1,200 00	0 00	0 00	1,200 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00
1,300 00	0.00	0 00	1,300 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00
1,400 00	0 00	0 00	1,400 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00
1,500 00	0 00	0 00	1,500 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00
1,600 00	0 00	0 00	1,600 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00
1,700 00	0 00	0 00	1,700 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00
1,800 00	0 00	0 00	1,800 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00
1,900 00	0 00	0 00	1,900 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00
2,000 00	0 00	0 00	2,000 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00
2,100 00	0 00	0 00	2,100 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00
2,200 00	0 00	0 00	2,200 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00
2,211 00	0 00	0 00	2,211 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00
Base of Salt(Tansill)										
2,300 00	0 00	0 00	2,300 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00
2,360 00	0 00	0 00	2,360 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00
Yates										
2,400 00	0 00	0.00	2,400 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00
2,500 00	0 00	0 00	2,500 00	0 00	0 00	0.00	0 00	0 00	0 00	0.00
2,600 00	0 00	0 00	2,600 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00
2,689 00	0 00	0 00	2,689 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00
7 Rivers										
2,700 00	0 00	0 00	2,700.00	0 00	0 00	0 00	0 00	0 00	0 00	0 00
2,800 00	0 00	0 00	2,800 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00
2,900 00	0 00	0 00	2,900 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00
3,000 00	0 00	0 00	3,000 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00
3,100 00	0 00	0 00	3,100 00	0 00	0 00	0 00	0 00	0 00	0 00	0.00
3,200 00	0 00	0 00	3,200 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00
3,280 00	0 00	0 00	3,280 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00
Queen										
3,300 00	0 00	0 00	3,300 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00
3,400.00	0 00	0 00	3,400 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00
3,500 00	0 00	0 00	3,500 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00
3,600 00	0 00	0 00	3,600 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00
3,669 00	0 00	0 00	3,669 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00
Grayburg										
3,700 00	0 00	0 00	3,700 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00
3,800 00	0 00	0 00	3,800 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00
3,900 00	0 00	0 00	3,900 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00
4,000 00	0 00	0 00	4,000.00	0 00	0 00	0 00	0 00	0 00	0 00	0 00
4,072.00	0 00	0 00	4,072 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00
Sand Andres										
4,100 00	0 00	0 00	4,100 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00

Plan Report for Caswell 23 Federal 1H - Plan #1

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	Toolface Azimuth (°)
4,200 00	0 00	0 00	4,200 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00
4,300 00	0 00	0 00	4,300 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00
4,400 00	0 00	0 00	4,400 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00
4,500 00	0 00	0 00	4,500 00	0.00	0 00	0 00	0 00	0 00	0 00	0 00
4,600 00	0 00	0 00	4,600 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00
4,700 00	0 00	0 00	4,700 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00
4,800 00	0 00	0 00	4,800 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00
4,900 00	0 00	0 00	4,900 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00
5,000 00	0 00	0 00	5,000.00	0 00	0 00	0 00	0 00	0 00	0 00	0 00
5,100 00	0 00	0 00	5,100 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00
5,139 13	0 00	0 00	5,139 13	0 00	0 00	0 00	0 00	0 00	0 00	0 00
KOP/Start Build @ 5139.13' MD - Build Rate = 10.00°/100'										
5,150.00	1 09	269 85	5,150 00	0 00	-0 10	0 10	10 00	10 00	0 00	269 85
5,200 00	6 09	269 85	5,199 89	-0 01	-3 23	3 23	10 00	10 00	0 00	0 00
5,250.00	11 09	269.85	5,249 31	-0 03	-10 69	10 69	10 00	10 00	0 00	0 00
5,300 00	16 09	269 85	5,297 89	-0 06	-22 44	22 44	10 00	10 00	0 00	0 00
5,350 00	21 09	269 85	5,345 27	-0 10	-38 37	38 37	10 00	10 00	0 00	0 00
5,400 00	26 09	269 85	5,391 08	-0 15	-58 37	58 37	10 00	10 00	0 00	0 00
5,450 00	31 09	269 85	5,434 97	-0 22	-82 29	82 29	10 00	10 00	0 00	0 00
5,500 00	36 09	269 85	5,476 61	-0 29	-109 94	109 94	10 00	10 00	0 00	0 00
5,550 00	41 09	269 85	5,515 68	-0 37	-141 11	141 11	10 00	10 00	0 00	0 00
5,600 00	46 09	269 85	5,551 88	-0 46	-175 57	175 57	10 00	10 00	0 00	0 00
5,650 00	51 09	269 85	5,584.95	-0 56	-213 06	213 06	10 00	10 00	0 00	0 00
5,689.58	55 05	269 85	5,608 73	-0 64	-244 69	244 69	10 00	10 00	0 00	0 00
Glorieta										
5,700 00	56 09	269 85	5,614 62	-0 66	-253 29	253 29	10 00	10 00	0 00	0 00
5,750 00	61 09	269 85	5,640 67	-0 78	-295 94	295 94	10 00	10 00	0 00	0 00
5,800 00	66 09	269 85	5,662 91	-0 89	-340 71	340 71	10 00	10 00	0 00	0 00
5,827 94	68 88	269 85	5,673 60	-0 96	-366 51	366 52	10 00	10 00	0 00	0 00
Yeso Group										
5,850 00	71 09	269 85	5,681 15	-1 02	-387 24	387 24	10 00	10 00	0 00	0.00
5,900 00	76 09	269 85	5,695 28	-1 14	-435 19	435 19	10 00	10 00	0 00	0 00
5,950 00	81 09	269 85	5,705 17	-1 27	-484 19	484 19	10 00	10 00	0 00	0 00
6,000 00	86 09	269 85	5,710 75	-1 40	-533 86	533 86	10 00	10 00	0 00	0 00
6,049 16	91 00	269 85	5,712 00	-1 53	-582 99	582 99	10 00	10 00	0 00	0 00
End Build @ 6049.16' MD - Hold Angle = 91.00°										
6,100 00	91 00	269 85	5,711 11	-1 66	-633 82	633 82	0 00	0 00	0 00	0 00
6,200 00	91 00	269 85	5,709 36	-1 92	-733 80	733 81	0 00	0 00	0 00	0 00
6,300.00	91.00	269 85	5,707 60	-2 19	-833 79	833 79	0 00	0 00	0.00	0 00
6,400 00	91 00	269 85	5,705 85	-2 45	-933 77	933 77	0 00	0 00	0 00	0 00
6,500 00	91 00	269 85	5,704 10	-2 71	-1,033 76	1,033 76	0 00	0 00	0 00	0 00
6,600 00	91 00	269 85	5,702 35	-2 97	-1,133 74	1,133 74	0 00	0 00	0 00	0 00
6,700 00	91 00	269 85	5,700 60	-3 23	-1,233 72	1,233 73	0 00	0 00	0 00	0 00
6,800 00	91 00	269 85	5,698 84	-3 50	-1,333 71	1,333 71	0 00	0 00	0 00	0 00
6,900 00	91 00	269 85	5,697 09	-3 76	-1,433 69	1,433 70	0 00	0 00	0 00	0 00
7,000 00	91 00	269 85	5,695 34	-4 02	-1,533 68	1,533 68	0 00	0 00	0 00	0 00
7,100 00	91 00	269 85	5,693 59	-4 28	-1,633 66	1,633 67	0 00	0 00	0 00	0 00
7,200 00	91 00	269 85	5,691 84	-4 54	-1,733 65	1,733 65	0 00	0 00	0 00	0 00
7,300 00	91 00	269 85	5,690 08	-4 81	-1,833 63	1,833 64	0 00	0 00	0 00	0 00
7,400 00	91 00	269 85	5,688 33	-5 07	-1,933 61	1,933 62	0 00	0 00	0 00	0 00
7,500 00	91 00	269 85	5,686 58	-5 33	-2,033 60	2,033 61	0 00	0 00	0 00	0 00
7,600 00	91 00	269 85	5,684 83	-5 59	-2,133 58	2,133 59	0 00	0 00	0 00	0 00
7,700 00	91 00	269 85	5,683 08	-5 86	-2,233 57	2,233 58	0 00	0 00	0 00	0 00
7,800 00	91 00	269 85	5,681 33	-6 12	-2,333 55	2,333 56	0 00	0 00	0 00	0 00
7,900 00	91 00	269 85	5,679 57	-6 38	-2,433 54	2,433 54	0 00	0 00	0 00	0 00
8,000 00	91 00	269 85	5,677 82	-6 64	-2,533 52	2,533 53	0 00	0 00	0 00	0 00
8,100 00	91 00	269 85	5,676 07	-6 90	-2,633 50	2,633 51	0 00	0 00	0 00	0 00
8,200 00	91 00	269 85	5,674 32	-7 17	-2,733 49	2,733 50	0 00	0 00	0.00	0 00
8,300 00	91 00	269 85	5,672 57	-7 43	-2,833 47	2,833 48	0 00	0 00	0 00	0 00

Plan Report for Caswell 23 Federal 1H - Plan #1

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	Toolface Azimuth (°)
8,400 00	91 00	269 85	5,670 81	-7 69	-2,933 46	2,933 47	0 00	0 00	0 00	0 00
8,500 00	91.00	269 85	5,669 06	-7 95	-3,033 44	3,033 45	0 00	0 00	0 00	0 00
8,600 00	91 00	269 85	5,667 31	-8 21	-3,133.43	3,133 44	0 00	0 00	0 00	0 00
8,700 00	91 00	269 85	5,665 56	-8 48	-3,233 41	3,233 42	0 00	0 00	0 00	0 00
8,800 00	91.00	269 85	5,663 81	-8 74	-3,333 39	3,333 41	0 00	0 00	0 00	0 00
8,900 00	91 00	269 85	5,662 05	-9 00	-3,433 38	3,433 39	0 00	0 00	0 00	0 00
9,000 00	91 00	269 85	5,660 30	-9 26	-3,533 36	3,533 38	0 00	0 00	0 00	0 00
9,100 00	91 00	269 85	5,658 55	-9 52	-3,633 35	3,633 36	0 00	0 00	0 00	0 00
9,200 00	91 00	269 85	5,656 80	-9 79	-3,733 33	3,733 34	0 00	0 00	0 00	0 00
9,300 00	91 00	269 85	5,655 05	-10 05	-3,833 32	3,833 33	0 00	0 00	0 00	0 00
9,400 00	91 00	269 85	5,653 30	-10 31	-3,933 30	3,933 31	0 00	0 00	0 00	0 00
9,500 00	91 00	269 85	5,651 54	-10 57	-4,033 29	4,033 30	0 00	0 00	0 00	0 00
9,600 00	91 00	269 85	5,649 79	-10 84	-4,133 27	4,133 28	0 00	0 00	0 00	0 00
9,700 00	91 00	269 85	5,648 04	-11 10	-4,233 25	4,233 27	0 00	0 00	0 00	0 00
9,800 00	91 00	269 85	5,646 29	-11 36	-4,333 24	4,333 25	0 00	0 00	0 00	0 00
9,900 00	91.00	269 85	5,644 54	-11 62	-4,433 22	4,433 24	0 00	0 00	0 00	0 00
10,000 00	91 00	269 85	5,642 78	-11 88	-4,533 21	4,533 22	0 00	0 00	0 00	0 00
10,100 00	91 00	269 85	5,641 03	-12 15	-4,633 19	4,633 21	0 00	0 00	0 00	0 00
10,158 93	91 00	269 85	5,640 00	-12 30	-4,692 11	4,692 13	0 00	0 00	0 00	0 00

TD @ 10158.93' MD - Caswell 23 Federal 1H / BHL

Plan Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates +N/-S (ft)	Local Coordinates +E/-W (ft)	Comment
5,139 13	5,139 13	0 00	0 00	KOP/Start Build @ 5139 13' MD
5,139 13	5,139 13	0 00	0 00	Build Rate = 10 00°/100'
6,049 16	5,712 00	-1 53	-582 99	End Build @ 6049 16' MD
6,049 16	5,712 00	-1 53	-582 99	Hold Angle = 91 00°
10,158 93	5,640 00	-12 30	-4,692 11	TD @ 10158 93' MD

Vertical Section Information

	Angle Type	Target	Azimuth (°)	Origin Type	Origin +N/_S (ft)	Origin +E/-W (ft)	Start TVD (ft)
User		No Target (Freehand)	269 85	Slot	0 00	0 00	0 00
5,139 13	10,158 93	Plan #1				MWD	

Plan Report for Caswell 23 Federal 1H - Plan #1

Formation Details

Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
	5,722 21	Target Line		-1 00	269 85
70 00	70 00	Water Sand		-1 00	269 85
954 00	954 00	Top of Salt(Rustler)		-1 00	269 85
2,211 00	2,211 00	Base of Salt(Tansill)		-1 00	269 85
2,360 00	2,360 00	Yates		-1 00	269 85
2,689 00	2,689 00	7 Rivers		-1 00	269 85
3,280 00	3,280 00	Queen		-1 00	269 85
3,669 00	3,669 00	Grayburg		-1 00	269 85
4,072 00	4,072 00	Sand Andres		-1 00	269 85
5,689 58	5,613 00	Glorieta		-1 00	269 85
5,827 94	5,680 00	Yeso Group		-1 00	269 85

Targets associated with this wellbore

Target Name	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Shape
Caswell 23 Federal 1H / BHL	5,640 00	-12 30	-4,692 11	Point

North Reference Sheet for Caswell 23 Federal - Caswell 23 Federal 1H - Lateral

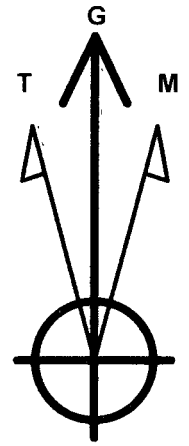
All data is in US Feet unless otherwise stated Directions and Coordinates are relative to Grid North Reference
Vertical Depths are relative to GL 4069 80' + KB 25' @ 4094 80ft (Cactus 126) Northing and Easting are relative to Caswell 23 Federal 1H
Coordinate System is US State Plane 1983, New Mexico Eastern Zone using datum North American Datum 1983, ellipsoid GRS 1980

Projection method is Transverse Mercator (Gauss-Kruger)
Central Meridian is -104 33°, Longitude Origin 0° 0' 0 000 E°, Latitude Origin 0° 0' 0 000 N°
False Easting 541,337 50ft, False Northing 0 00ft, Scale Reduction 0 99994851

Grid Coordinates of Well 664,902 48 ft N, 726,872 40 ft E
Geographical Coordinates of Well 32° 49' 34 99" N, 103° 43' 45 61" W
Grid Convergence at Surface is 0 33°

Based upon Minimum Curvature type calculations, at a Measured Depth of 10,158 93ft
the Bottom Hole Displacement is 4,692 13ft in the Direction of 269 85° (Grid)

Magnetic Convergence at surface is -7 36° (12 April 2012, , BGGM2011)



Magnetic Model	BGGM2011
Date.	12-Apr-12
Declination.	7.69°
Inclination/Dip.	60.66°
Field Strength	48879

Grid North is 0 33° East of True North (Grid Convergence)
Magnetic North is 7 69° East of True North (Magnetic Declination)
Magnetic North is 7 36° East of Grid North (Magnetic Convergence)

To convert a True Direction to a Grid Direction, Subtract 0 33°
To convert a Magnetic Direction to a True Direction, Add 7.69° East
To convert a Magnetic Direction to a Grid Direction, Add 7 36°

Devon Energy Corporation

HALLIBURTON | Sperry Drilling

Project: Lea County, NM (NAD 83)
Site: Caswell 23 Federal
Well: Caswell 23 Federal 1H
Wellbore: Lateral
Plan: Plan #1
Rig: Cactus 126

SURFACE LOCATION

US State Plane 1983
New Mexico Eastern Zone
Elevation GL 4069 80' + KB 25' @ 4094.80ft (Cactus 126)

Northing	Easting	Latitude	Longitude
664902 48	726872.40	32° 49' 34.992 N	103° 43' 45 607 W

SECTION DETAILS

MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSec	Annotation
5139.13	0.00	0.00	5139.13	0.00	0.00	0 00	0.00	0 00	KOP/Start Build
6049 16	91.00	269.85	5712.00	-1.53	-582.99	10.00	269.85	582.99	End Build
10158.93	91.00	269.85	5640 00	-12.30	-4692.11	0 00	0.00	4692.13	TD

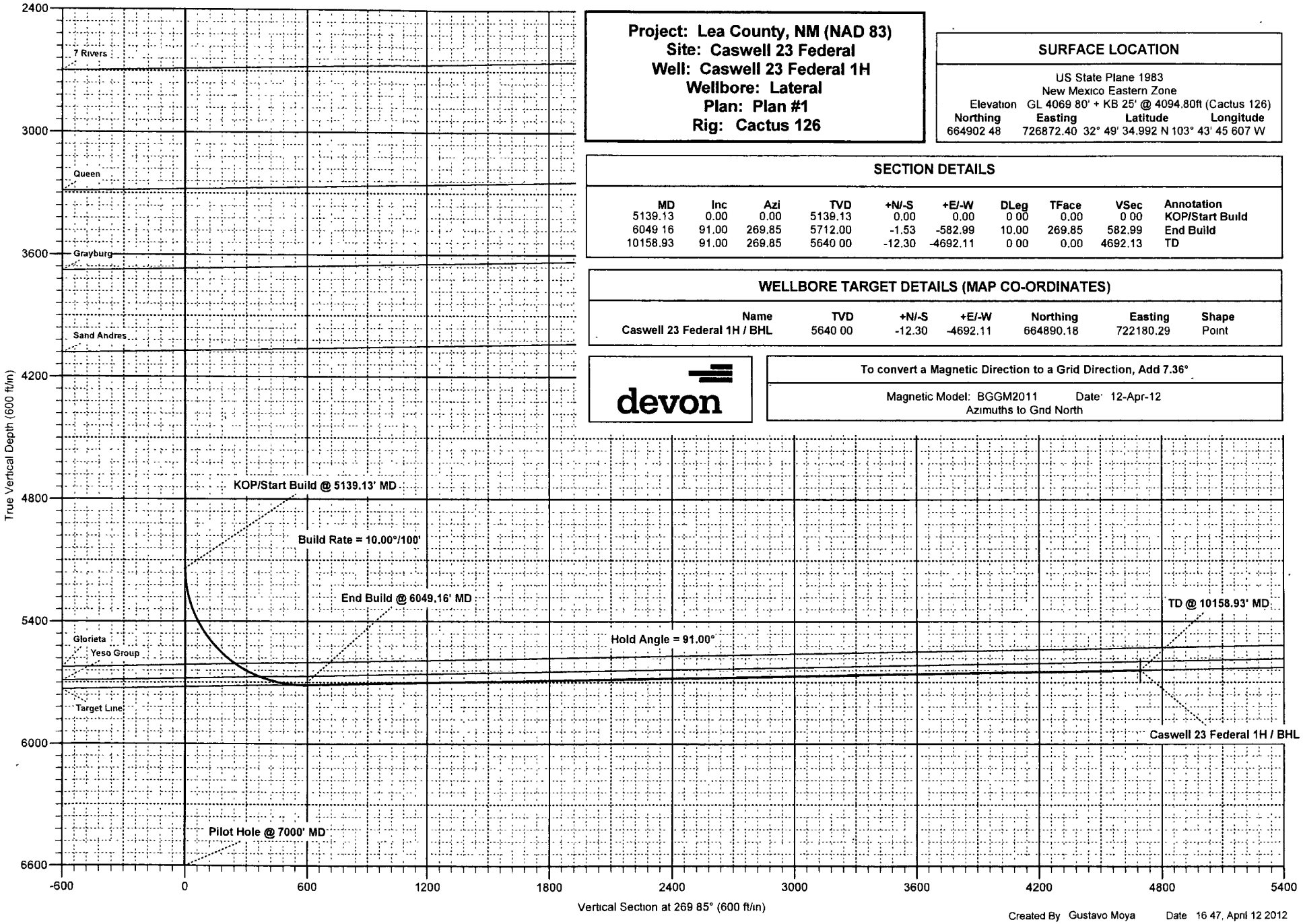
WELLBORE TARGET DETAILS (MAP CO-ORDINATES)

Name	TVD	+N/-S	+E/-W	Northing	Easting	Shape
Caswell 23 Federal 1H / BHL	5640 00	-12.30	-4692.11	664890.18	722180.29	Point

devon

To convert a Magnetic Direction to a Grid Direction, Add 7.36°

Magnetic Model: BGGM2011 Date: 12-Apr-12
Azimuths to Grid North



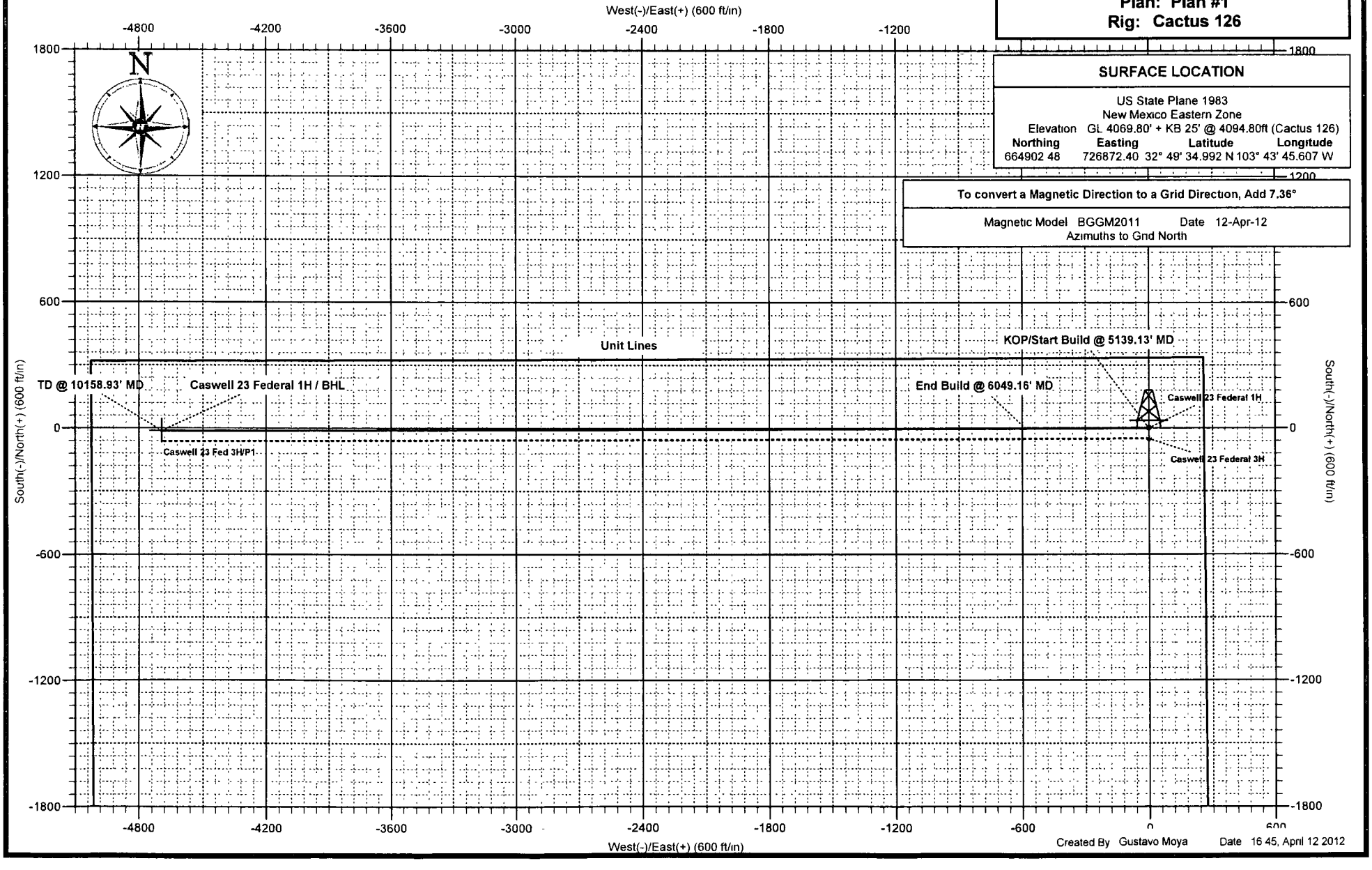
Created By Gustavo Moya Date 16 47, April 12 2012

Devon Energy Corporation

HALLIBURTON | Sperry Drilling

devon

Project: Lea County, NM (NAD 83)
Site: Caswell 23 Federal
Well: Caswell 23 Federal 1H
Wellbore: Lateral
Plan: Plan #1
Rig: Cactus 126



SURFACE LOCATION

US State Plane 1983
New Mexico Eastern Zone
Elevation GL 4069.80' + KB 25' @ 4094.80ft (Cactus 126)

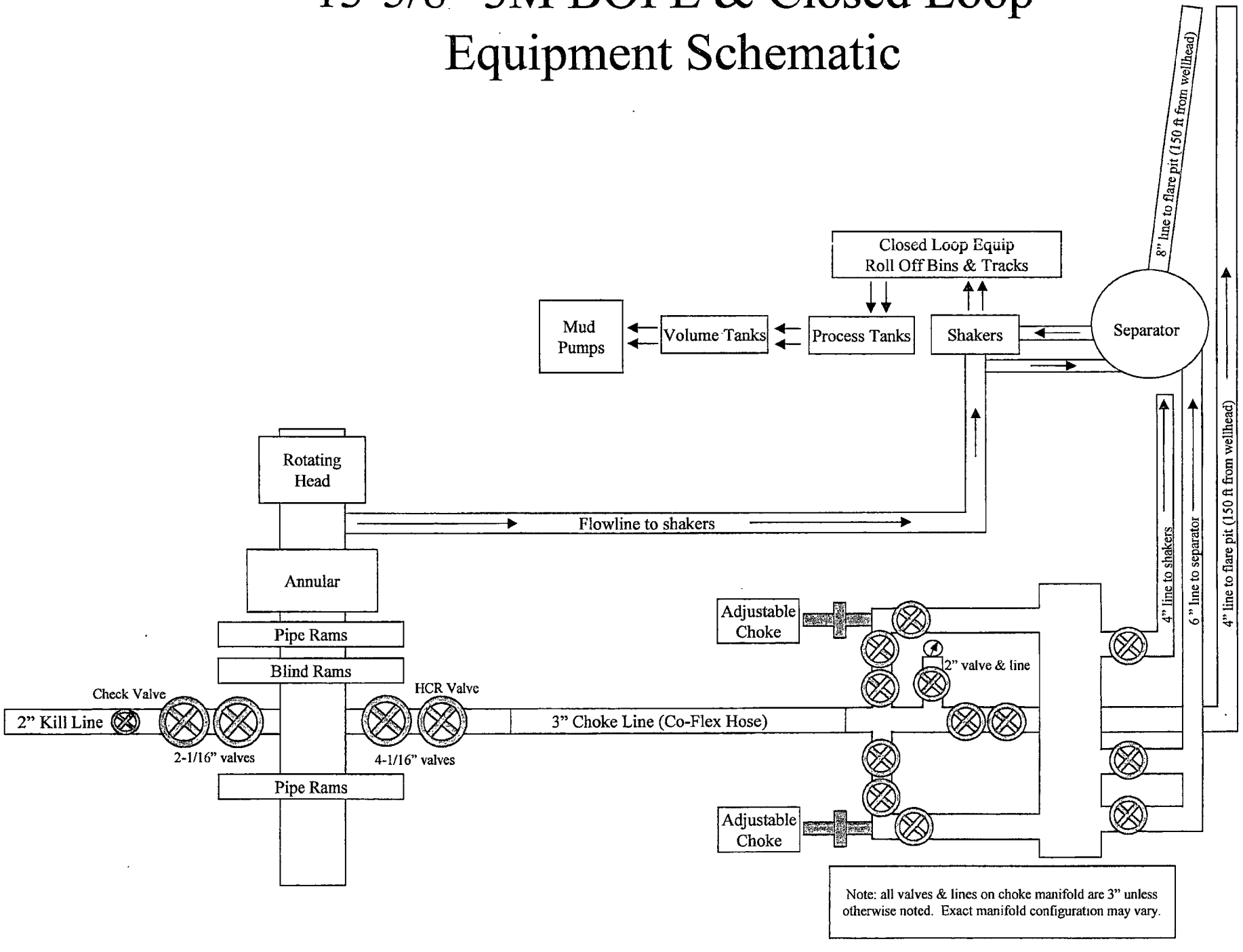
Northing	Easting	Latitude	Longitude
664902 48	726872.40	32° 49' 34.992 N	103° 43' 45.607 W

To convert a Magnetic Direction to a Grid Direction, Add 7.36°

Magnetic Model BGGM2011 Date 12-Apr-12
Azimuths to Grid North

Created By Gustavo Moya Date 16 45, April 12 2012

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



NOTES REGARDING BLOWOUT PREVENTERS
Devon Energy Production Company, LP
Caswell 23 Federal 1H
Surface Location: 335' FNL & 260' FEL, Unit A, Sec 23 T17S R32E, Lea, NM
Bottom Hole Location: 330' FNL & 330' FWL, Unit D, Sec 23 T17S R32E, Lea, NM

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

2. Wear ring will be properly installed in head.

3. Blowout preventer and all associated fittings will be in operable condition to withstand a minimum 3000 psi working pressure.

4. All fittings will be flanged.

5. A full bore safety valve tested to a minimum 3000 psi WP with proper thread connections will be available on the rotary rig floor at all times.

6. All choke lines will be anchored to prevent movement.

7. All BOP equipment will be equal to or larger in bore than the internal diameter of the last casing string.

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

9. Hand wheels and wrenches will be properly installed and tested for safe operation.

10. Hydraulic floor control for blowout preventer will be located as near in proximity to driller's controls as possible.

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

Midwest Hose
& Specialty, Inc.

Friday, March 30, 2012
Subject: Drilling and Production Hoses

Cactus Drilling,

As a manufacturer of high pressure hose assemblies for use in production and drilling, we offer lifting and safety equipment. The lifting and handling equipment on each assembly provides hose longevity and ensures correct handling methods if procedures are followed.

In no way does the lifting and safety equipment affect the performance of the hose assembly providing the hose assembly has been handled and installed correctly. It is recommended to use lifting and safety equipment but not mandatory. A Midwest Hose hose assembly performs as intended regardless of whether lifting and safety equipment is used.

Midwest Hose has 18 locations throughout the United States in all the major oil and gas areas.

Should you have any questions or need any additional information please do not hesitate to contact us.

Best Regards,

Harvey Sparkman
Midwest Hose & Specialty, Inc.
President and CEO

P.O Box 96558 – 3312 S I-35 Service Road Oklahoma City, OK 73143 – Ph: (405) 670-6718 Fax. (405) 670-6816

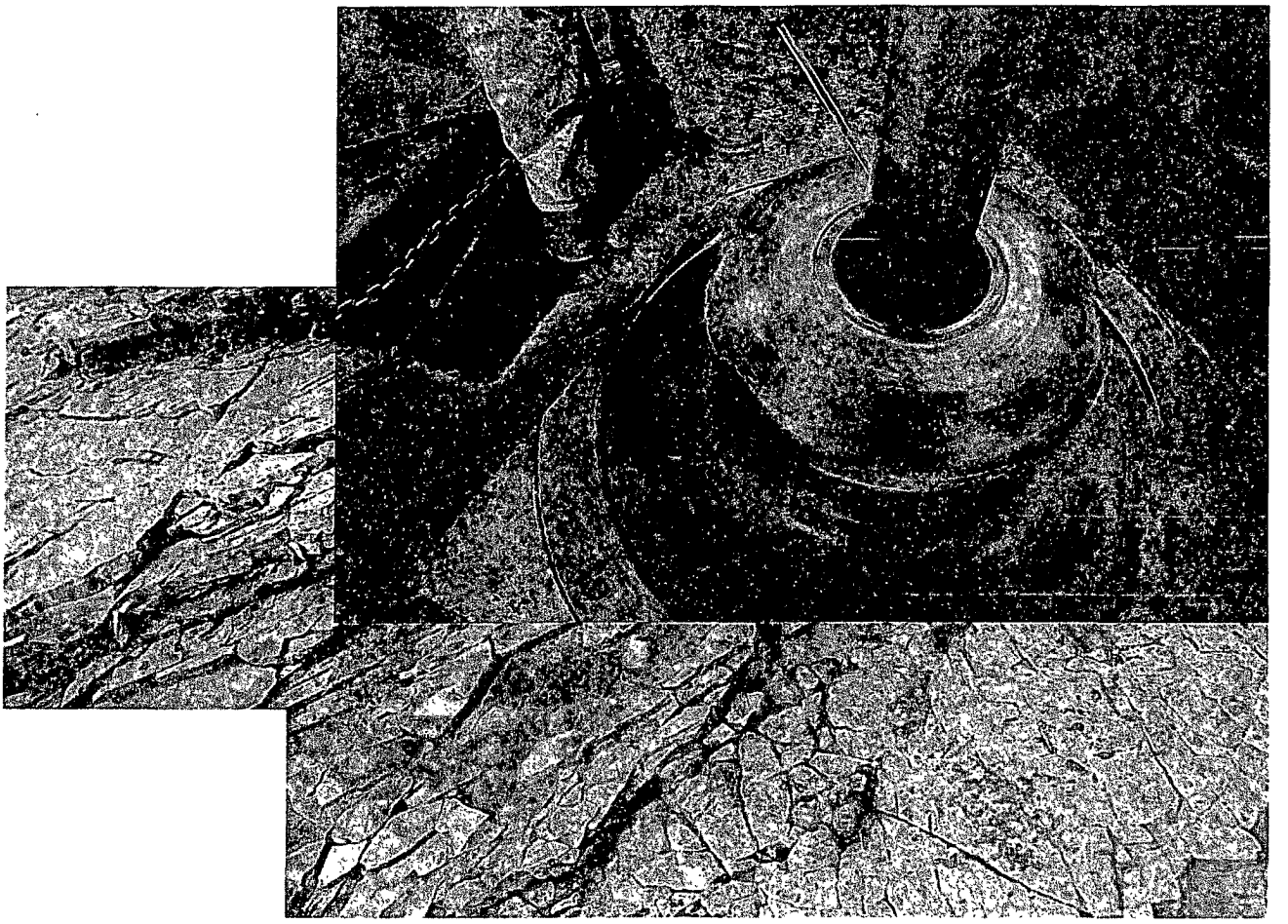
M I D W E S T

HOSE AND SPECIALTY INC.

INTERNAL HYDROSTATIC TEST REPORT		
Customer: CACTUS		P.O. Number: ASSET#M10745 SO#71884
HOSE SPECIFICATIONS		
Type: CHOKE & KILL		Length: 35'
I.D. 4" *INCHES*	O.D. 8" *INCHES*	
WORKING PRESSURE 10,000 *PSI*	TEST PRESSURE 15,000 *PSI*	BURST PRESSURE *PSI*
COUPLINGS		
Type of End Fitting E4.0X64WB		
Type of Coupling: 4 1/16 10K FLANGE		
PROCEDURE		
Hose assembly pressure tested with water at ambient temperature.		
TIME HELD AT TEST PRESSURE 1 *MIN.*	ACTUAL BURST PRESSURE: 0 *PSI*	
COMMENTS: S/N#71884 ASSET#M10745		
Date: 3/1/2011	Tested By: BOBBY FINK	Approved: MENDI JACKSON

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.

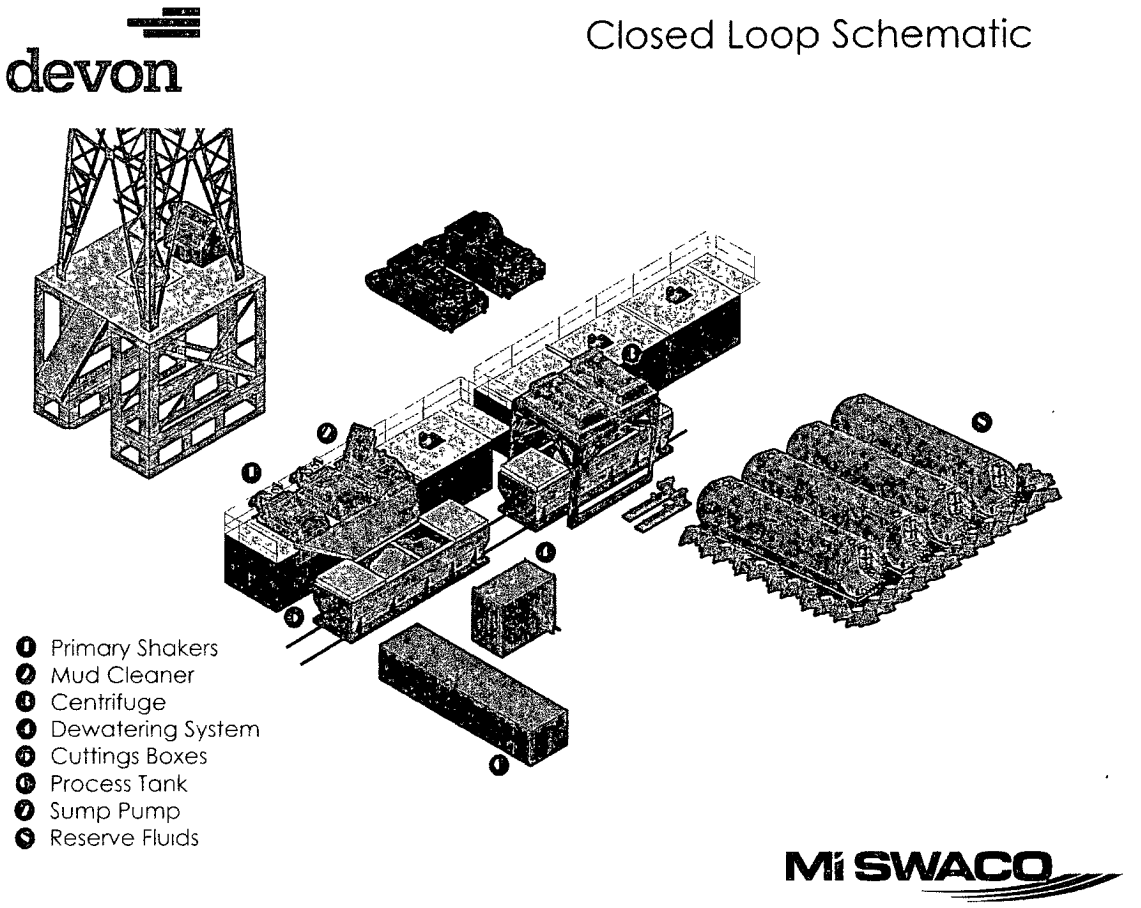
Prior to installing a closed-loop system on site, the topsoil, if present, will be stripped and stockpiled for use as the final cover or fill at the time of closure.

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
2 Well Pad