

HOBBS OCD

JUN 24 2013

Form 3160-3
(March 2012)UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

FORM APPROVED
OMB No. 1004-0137
Expires October 31, 20145. Lease Serial No.
NM-114991

6. If Indian, Allottee or Tribe Name

7. If Unit or CA Agreement, Name and No.

8. Lease Name and Well No.

GREEN WAVE 17 FED 1H <39974>

9. API Well No.

30-025-41232

10. Field and Pool, or Exploratory

Bradley DELAWARE <73105>

11. Sec., T. R. M. or Blk. and Survey or Area

SECTION 17, T. 26 S., R. 34 E. <cam>

12. County or Parish
LEA13. State
NM1a. Type of work: ☒ DRILL ☐ REENTER1b. Type of Well: ☒ Oil Well ☐ Gas Well ☐ Other ☒ Single Zone ☐ Multiple Zone

2. Name of Operator DEVON ENERGY PRODUCTION COMPANY, L.P. <61377>

3a. Address 333 W. SHERIDAN
OKLAHOMA CITY, OK. 731023b. Phone No. (include area code)
(405) 552-4524

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

At surface 25 FSL & 1980 FWL

At proposed prod. zone 330 FNL & 1980 FWL

14. Distance in miles and direction from nearest town or post office*
17 MILES SOUTHWEST OF JAL, NM15. Distance from proposed*
location to nearest SHL-1650'
property or lease line, ft. BHL-330'
(Also to nearest drig. unit line, if any)16. No. of acres in lease
188017. Spacing Unit dedicated to this well
16018. Distance from proposed location*
to nearest well, drilling, completed, BHL-1255'
applied for, on this lease, ft. SHL-50'19. Proposed Depth
MD: 14,179'
TVD: 9,510'20. BLM/BIA Bond No. on file
NMB-000801 CO-110421. Elevations (Show whether DF, KDB, RT, GL, etc.)
3353.8' GL

22. Approximate date work will start*

23. Estimated duration
30 DAYS

24. Attachments

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

Barry W. Hunt

Name (Printed/Typed)
BARRY W. HUNT

Date

8/6/12

Title

PERMIT AGENT FOR DEVON ENERGY PRODUCTION COMPANY, L.P.

Approved by (Signature)

/s/ James Stovall

Name (Printed/Typed)

JUN 18 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

Approval Subject to General Requirements
& Special Stipulations AttachedCONDITIONS OF APPROVAL- 24 Hour call in for Spud,
Casing, Cement and all other 24 Hour notices to be
reported to the Office phone 575-393-6161 ext 102, 120
or 107

Leave message if no one answers

EMERGENCY ONLY PHONE 575-370-3186

SEE ATTACHED FOR
CONDITIONS OF APPROVAL

JUN 26 2013

DEVON ENERGY PRODUCTION, L. P.
DRILLING PLAN

GREEN WAVE 17 FED 1H
SHL: 25 FSL & 1980 FWL
BHL: 330 FNL & 1980 FWL
Section 17-26S-34E
LEA County, NM

The elevation of the unprepared ground is 3353.8' feet above sea level.

The geologic name of the surface formation is Quaternary - Alluvium.

A rotary rig will be utilized to drill the well.

Proposed total depth is: MD: 14178'. TVD: 9510'.

Estimated tops of important geologic markers:

Quaternary – Alluvium	Surface*
Rustler	730'
Salado/Top of Salt	1084'
Castile	3460'
Base of Salt	5100'
Delaware	5320'
Bell Canyon Sand	5360'
Cherry Canyon Sand	6412'
Brushy Canyon Sand	7882'
TVD	9510' (145 degree F)

*Water anticipated at 180 feet.

Estimated depths at which anticipated water, oil, gas or other mineral bearing formations are expected to be encountered:

Delaware	Oil (2341 psi)
Bell Canyon	Oil (2358 psi)
Cherry Canyon	Oil (2821 psi)
Brushy Canyon	Oil (3468 psi)
TVD	Oil BHP 4184 psi

Drilling Program / Surface Use Plan
Discipline-Specific Input Form

1. **Pressure Control Equipment**

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

2. **Casing and Cementing Plan Summary**

*50% salt -
no water* The surface fresh water sands will be protected by setting 13-3/8" casing at 800' and circulating cement back to surface. (The fresh water sands) will be protected by setting 9-5/8" casing at 5,200' and circulating cement to surface. The Bone Spring intervals will be isolated by setting 5-1/2" casing to total depth and circulating cement above the base of the 9-5/8" casing. All casing is new and API approved.

3. **Casing Program:**

Hole Size	Hole Interval	Casing OD	Casing Interval	Weight	Collar	Grade
17-1/2"	0 – 800	13-3/8"	0 – 800'	48#	STC	H-40
12-1/4"	800' – 5,200'	9-5/8"	0 - 5,200'	40#	LTC	HCK-55
8-3/4"	5,200' – 8,900'	5-1/2"	0 – 8,900'	17#	LTC	HCP-110
8-3/4"	8,900' – 14,179'	5-1/2"	8,900' – 14,179'	17#	BTC	HCP-110

4. **Design Factors:**

Casing Size	Collapse Design Factor	Burst Design Factor	Tension Design Factor
13-3/8"	1.53	2.34	4.15
9-5/8"	1.77	2.72	4.64
5-1/2" LTC	1.89	2.34	2.70
5-1/2" BTC	1.64	2.34	2.23

5. **Cement Program:**

13-3/8" Surface **Tail:** 850 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

TOC @ surface

9-5/8" Intermediate **Lead:** 1170 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

Drilling Program / Surface Use Plan
Discipline-Specific Input Form

TOC @ surface

Tail: 425 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 Stage

Lead: 390 sacks (65:35) Class H Cement:Poz (Fly Ash) + 6% bwoc Bentonite + 0.2% bwoc HR-601 + 74.1% Fresh Water, 12.5 ppg

Yield: 1.95 cf/sk

Tail: 1560 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

DV TOOL at 6500 ft

2nd Stage

Lead: 155 sacks Class C Cement + 3% bwoc Econolite + 0.125 lbs/sack Poly-E-Flake + 82.4% Fresh Water, 11.4 ppg

Yield: 2.87 cf/sk

Tail: 145 sacks Class C Cement + 0.125 lbs/sack Poly-E-Flake + 63.5% Fresh Water, 14.8 ppg

Yield: 1.33cf/sk

TOC @ 4700 ft

String	TOC
Surface	Surface
Intermediate	Surface
Production	4,700'

The above cement volumes are based on 25% excess. Actual cement volumes could be adjusted based on fluid caliper and caliper log data.

6. Proposed Mud Circulation System:

Depth Range	Mud Weight	Viscosity	Fluid Loss	Type System
0 – 800'	8.4-8.6	28-32	NC	Fresh Water
800' – 5,200'	9.9-10.1	28-29	NC	Brine
5,200' – 17,179'	8.7-9.2	28-29	NC	Fresh Water

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

Drilling Program / Surface Use Plan
Discipline-Specific Input Form

7. **LOGGING, CORING, AND TESTING PROGRAM:** *See COA*
- Drill stem tests will be based on geological sample shows.
 - 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.
 - The open hole electrical logging program will be:
 - Total depth to intermediate casing Dual Laterolog-Micro Laterolog with SP and Gamma Ray. Compensated Neutron – Z Density log with Gamma Ray and Caliper.
 - Total Depth to Surface Compensated Neutron with Gamma Ray.
 - No coring program is planned.
 - 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.
8. **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.
9. **Potential Hazards:**
- 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. All personnel will be familiar with all aspects of safe operation of equipment being used to drill this well. Estimated BHP of 4184 psi and estimated BHT 145°. No H₂S is anticipated to be encountered.
10. **Anticipated Starting Date and Duration of Operations:**
- Road and location construction will begin after the BLM has approved the APD. Anticipated spud date will be as soon as a rig becomes available following BLM approval. 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 the well and construct surface facilities and/or lay flow lines in order to place well on production.



Project: Lea County, NM (NAD 83)
Site: Green Wave 17 Fed
Well: Green Wave 17 Fed 1H
Wellbore: Wellbore #1
Plan: Plan #1
Rig: Cactus 126

SURFACE LOCATION

US State Plane 1983
 New Mexico Eastern Zone
 Elevation: GL 3353.8' + 25'KB @ 3378.80ft (Cactus 126)
Northing **Easting** **Latitude** **Longitude**
 377948.80 801410.40 32° 2' 10.620 N 103° 29' 38.539 W

CASING DETAILS

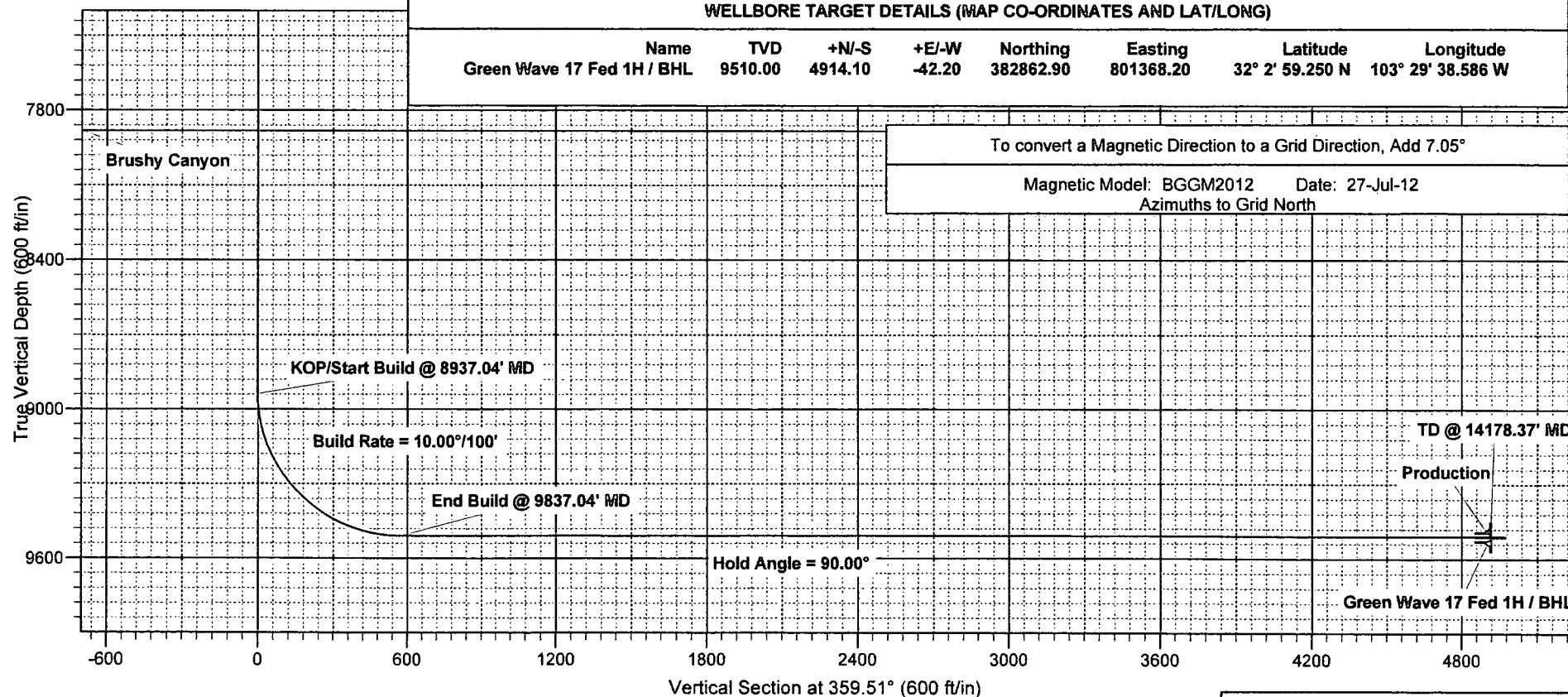
TVD	MD	Name
800.00	800.00	Surface
5200.00	5200.00	Intermediate
9510.00	14178.37	Production

SECTION DETAILS

MD	Inc	Azi	TVD	+N-S	+E-W	DLeg	TFace	VSec	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
8937.04	0.00	0.00	8937.04	0.00	0.00	0.00	0.00	0.00	KOP/Start Build
9837.04	90.00	359.51	9510.00	572.94	-4.92	10.00	359.51	572.96	End Build
14178.37	90.00	359.51	9510.00	4914.10	-42.20	0.00	0.00	4914.28	TD

WELLBORE TARGET DETAILS (MAP CO-ORDINATES AND LAT/LONG)

Name	TVD	+N-S	+E-W	Northing	Easting	Latitude	Longitude
Green Wave 17 Fed 1H / BHL	9510.00	4914.10	-42.20	382862.90	801368.20	32° 2' 59.250 N	103° 29' 38.586 W



To convert a Magnetic Direction to a Grid Direction, Add 7.05°

Magnetic Model: BGGM2012 Date: 27-Jul-12
 Azimuths to Grid North

Project: Lea County, NM (NAD 83)
Site: Green Wave 17 Fed
Well: Green Wave 17 Fed 1H
Wellbore: Wellbore #1
Plan: Plan #1
Rig: Cactus 126

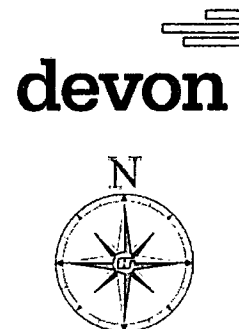
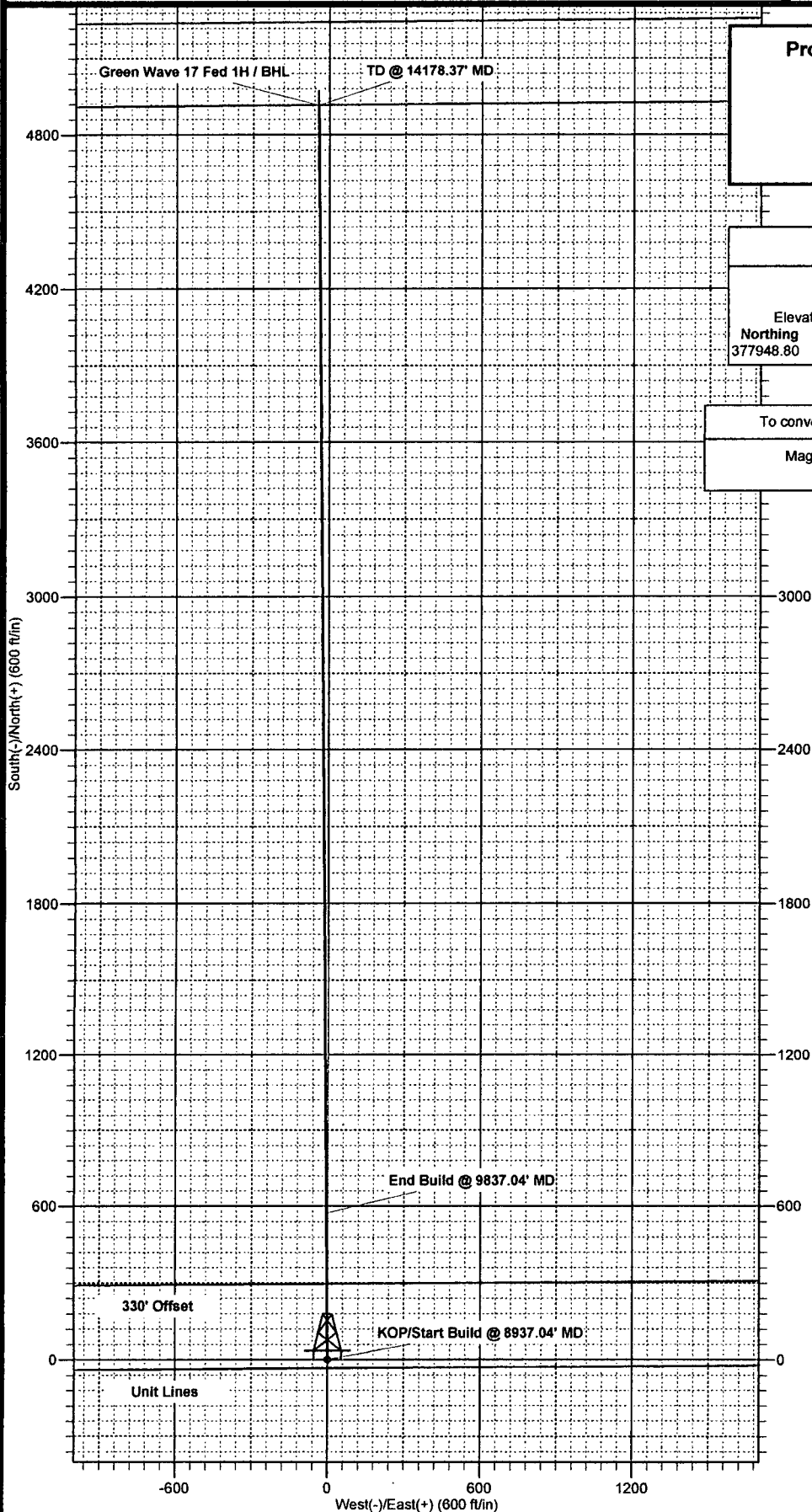
SURFACE LOCATION

US State Plane 1983
 New Mexico Eastern Zone
 Elevation: GL 3353.8' + 25'KB @ 3378.80ft (Cactus 126)

Northing	Easting	Latitude	Longitude
377948.80	801410.40	32° 2' 10.620 N	103° 29' 38.539 W

To convert a Magnetic Direction to a Grid Direction, Add 7.05°

Magnetic Model: BGGM2012 Date: 27-Jul-12
 Azimuths to Grid North



Devon Energy Corporation

Lea County, NM (NAD 83)

Green Wave 17 Fed

Green Wave 17 Fed 1H

Wellbore #1

Plan: Plan #1

Sperry Drilling Services

Proposal Report

27 July, 2012

Well Coordinates: 377,948.80 N, 801,410.40 E (32° 02' 10.62" N, 103° 29' 38.54" W)

Ground Level: 3,353.80 ft

Local Coordinate Origin:

Centered on Well Green Wave 17 Fed 1H

Viewing Datum:

GL 3353.8' + 25'KB @ 3378.80ft (Cactus 126)

TVDs to System:

N

North Reference:

Grid

Unit System:

API - US Survey Feet

Version: 2003.16 Build: 431

HALLIBURTON

HALLIBURTON

Plan Report for Green Wave 17 Fed 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
730.00	0.00	0.00	730.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rustler										
800.00	0.00	0.00	800.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Surface										
1,084.00	0.00	0.00	1,084.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Salt										
5,120.00	0.00	0.00	5,120.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Base Salt										
5,200.00	0.00	0.00	5,200.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Intermediate										
5,320.00	0.00	0.00	5,320.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Delaware										
7,882.00	0.00	0.00	7,882.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Brushy Canyon										
8,937.04	0.00	0.00	8,937.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00
KOP/Start Build @ 8937.04' MD										
8,937.05	0.00	359.51	8,937.05	0.00	0.00	0.00	0.00	0.00	0.00	359.51
Build Rate = 10.00°/100'										
9,000.00	6.30	359.51	8,999.87	3.46	-0.03	3.46	10.00	10.00	0.00	359.51
9,100.00	16.30	359.51	9,097.81	23.02	-0.20	23.02	10.00	10.00	0.00	0.00
9,200.00	26.30	359.51	9,190.87	59.29	-0.51	59.29	10.00	10.00	0.00	0.00
9,300.00	36.30	359.51	9,276.21	111.17	-0.95	111.17	10.00	10.00	0.00	0.00
9,400.00	46.30	359.51	9,351.24	177.07	-1.52	177.08	10.00	10.00	0.00	0.00
9,500.00	56.30	359.51	9,413.69	255.01	-2.19	255.02	10.00	10.00	0.00	0.00
9,600.00	66.30	359.51	9,461.66	342.61	-2.94	342.62	10.00	10.00	0.00	0.00
9,700.00	76.30	359.51	9,493.69	437.20	-3.75	437.22	10.00	10.00	0.00	0.00
9,800.00	86.30	359.51	9,508.80	535.92	-4.60	535.94	10.00	10.00	0.00	0.00
9,837.04	90.00	359.51	9,510.00	572.94	-4.92	572.96	10.00	10.00	0.00	0.00
End Build @ 9837.04' MD - Hold Angle = 90.00°										
9,900.00	90.00	359.51	9,510.00	635.89	-5.46	635.92	0.00	0.00	0.00	0.00
10,000.00	90.00	359.51	9,510.00	735.89	-6.32	735.92	0.00	0.00	0.00	0.00
10,100.00	90.00	359.51	9,510.00	835.88	-7.18	835.92	0.00	0.00	0.00	0.00
10,200.00	90.00	359.51	9,510.00	935.88	-8.04	935.92	0.00	0.00	0.00	0.00
10,300.00	90.00	359.51	9,510.00	1,035.88	-8.90	1,035.92	0.00	0.00	0.00	0.00
10,400.00	90.00	359.51	9,510.00	1,135.87	-9.75	1,135.92	0.00	0.00	0.00	0.00
10,500.00	90.00	359.51	9,510.00	1,235.87	-10.61	1,235.92	0.00	0.00	0.00	0.00
10,600.00	90.00	359.51	9,510.00	1,335.87	-11.47	1,335.92	0.00	0.00	0.00	0.00
10,700.00	90.00	359.51	9,510.00	1,435.86	-12.33	1,435.92	0.00	0.00	0.00	0.00
10,800.00	90.00	359.51	9,510.00	1,535.86	-13.19	1,535.92	0.00	0.00	0.00	0.00
10,900.00	90.00	359.51	9,510.00	1,635.86	-14.05	1,635.92	0.00	0.00	0.00	0.00
11,000.00	90.00	359.51	9,510.00	1,735.85	-14.91	1,735.92	0.00	0.00	0.00	0.00
11,100.00	90.00	359.51	9,510.00	1,835.85	-15.77	1,835.92	0.00	0.00	0.00	0.00
11,200.00	90.00	359.51	9,510.00	1,935.84	-16.62	1,935.92	0.00	0.00	0.00	0.00
11,300.00	90.00	359.51	9,510.00	2,035.84	-17.48	2,035.92	0.00	0.00	0.00	0.00
11,400.00	90.00	359.51	9,510.00	2,135.84	-18.34	2,135.92	0.00	0.00	0.00	0.00
11,500.00	90.00	359.51	9,510.00	2,235.83	-19.20	2,235.92	0.00	0.00	0.00	0.00
11,600.00	90.00	359.51	9,510.00	2,335.83	-20.06	2,335.92	0.00	0.00	0.00	0.00
11,700.00	90.00	359.51	9,510.00	2,435.83	-20.92	2,435.92	0.00	0.00	0.00	0.00
11,800.00	90.00	359.51	9,510.00	2,535.82	-21.78	2,535.92	0.00	0.00	0.00	0.00
11,900.00	90.00	359.51	9,510.00	2,635.82	-22.64	2,635.92	0.00	0.00	0.00	0.00
12,000.00	90.00	359.51	9,510.00	2,735.81	-23.49	2,735.92	0.00	0.00	0.00	0.00
12,100.00	90.00	359.51	9,510.00	2,835.81	-24.35	2,835.92	0.00	0.00	0.00	0.00
12,200.00	90.00	359.51	9,510.00	2,935.81	-25.21	2,935.92	0.00	0.00	0.00	0.00
12,300.00	90.00	359.51	9,510.00	3,035.80	-26.07	3,035.92	0.00	0.00	0.00	0.00
12,400.00	90.00	359.51	9,510.00	3,135.80	-26.93	3,135.92	0.00	0.00	0.00	0.00
12,500.00	90.00	359.51	9,510.00	3,235.80	-27.79	3,235.92	0.00	0.00	0.00	0.00

HALLIBURTON

Plan Report for Green Wave 17 Fed 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 (°)
12,600.00	90.00	359.51	9,510.00	3,335.79	-28.65	3,335.92	0.00	0.00	0.00	0.00
12,700.00	90.00	359.51	9,510.00	3,435.79	-29.50	3,435.92	0.00	0.00	0.00	0.00
12,800.00	90.00	359.51	9,510.00	3,535.79	-30.36	3,535.92	0.00	0.00	0.00	0.00
12,900.00	90.00	359.51	9,510.00	3,635.78	-31.22	3,635.92	0.00	0.00	0.00	0.00
13,000.00	90.00	359.51	9,510.00	3,735.78	-32.08	3,735.92	0.00	0.00	0.00	0.00
13,100.00	90.00	359.51	9,510.00	3,835.77	-32.94	3,835.92	0.00	0.00	0.00	0.00
13,200.00	90.00	359.51	9,510.00	3,935.77	-33.80	3,935.92	0.00	0.00	0.00	0.00
13,300.00	90.00	359.51	9,510.00	4,035.77	-34.66	4,035.92	0.00	0.00	0.00	0.00
13,400.00	90.00	359.51	9,510.00	4,135.76	-35.52	4,135.92	0.00	0.00	0.00	0.00
13,500.00	90.00	359.51	9,510.00	4,235.76	-36.37	4,235.92	0.00	0.00	0.00	0.00
13,600.00	90.00	359.51	9,510.00	4,335.76	-37.23	4,335.92	0.00	0.00	0.00	0.00
13,700.00	90.00	359.51	9,510.00	4,435.75	-38.09	4,435.92	0.00	0.00	0.00	0.00
13,800.00	90.00	359.51	9,510.00	4,535.75	-38.95	4,535.92	0.00	0.00	0.00	0.00
13,900.00	90.00	359.51	9,510.00	4,635.74	-39.81	4,635.92	0.00	0.00	0.00	0.00
14,000.00	90.00	359.51	9,510.00	4,735.74	-40.67	4,735.92	0.00	0.00	0.00	0.00
14,100.00	90.00	359.51	9,510.00	4,835.74	-41.53	4,835.92	0.00	0.00	0.00	0.00
14,178.37	90.00	359.51	9,510.00	4,914.10	-42.20	4,914.28	0.00	0.00	0.00	0.00

TD @ 14178.37' MD - Green Wave 17 Fed 1H / BHL

Plan Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates +N/-S (ft)	+E/-W (ft)	Comment
8,937.04	8,937.04	0.00	0.00	KOP/Start Build @ 8937.04' MD
8,937.05	8,937.05	0.00	0.00	Build Rate = 10.00°/100'
9,837.04	9,510.00	572.93	-4.92	End Build @ 9837.04' MD
9,837.04	9,510.00	572.94	-4.92	Hold Angle = 90.00°
14,178.37	9,510.00	4,914.10	-42.20	TD @ 14178.37' MD

Vertical Section Information

Angle Type	Target	Azimuth (°)	Origin Type	Origin +N/-S (ft)	+E/-W (ft)	Start TVD (ft)
TD	No Target (Freehand)	359.51	Slot	0.00	0.00	0.00

Survey tool program

From (ft)	To (ft)	Survey/Plan	Survey Tool
0.00	14,178.37	Plan #1	MWD

Casing Details

Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (")	Hole Diameter (")
800.00	800.00	Surface	13-3/8	17-1/2
5,200.00	5,200.00	Intermediate	9-5/8	12-1/4
14,178.37	9,510.00	Production	5-1/2	8-3/4

HALLIBURTON

Plan Report for Green Wave 17 Fed 1H - Plan #1

Formation Details

Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
730.00	730.00	Rustler		0.00	359.51
1,084.00	1,084.00	Salt		0.00	359.51
5,120.00	5,120.00	Base Salt		0.00	359.51
5,320.00	5,320.00	Delaware		0.00	359.51
7,882.00	7,882.00	Brushy Canyon		0.00	359.51

Targets associated with this wellbore

Target Name	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Shape
Green Wave 17 Fed 1H / BHL	9,510.00	4,914.10	-42.20	Point

North Reference Sheet for Green Wave 17 Fed - Green Wave 17 Fed 1H - Wellbore**#1**

All data is in US Feet unless otherwise stated. Directions and Coordinates are relative to Grid North Reference.

Vertical Depths are relative to GL 3353.8' + 25'KB @ 3378.80ft (Cactus 126). Northing and Easting are relative to Green Wave 17 Fed 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: 0.99998655

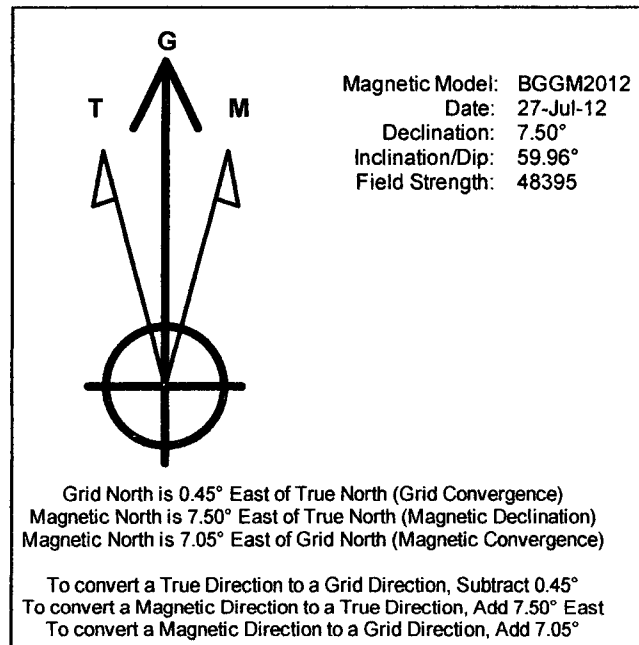
Grid Coordinates of Well: 377,948.80 ft N, 801,410.40 ft E

Geographical Coordinates of Well: 32° 02' 10.62" N, 103° 29' 38.54" W

Grid Convergence at Surface is: 0.45°

Based upon Minimum Curvature type calculations, at a Measured Depth of 14,178.37ft
the Bottom Hole Displacement is 4,914.28ft in the Direction of 359.51° (Grid).

Magnetic Convergence at surface is: -7.05° (27 July 2012, , BGGM2012)



Standard Survey

Company: Devon Energy Corporation
Project: Lea County
Site: Green Wave 17 Fed
Well: Green Wave 17 Fed 1H
Wellbore: Wellbore #1
Design/Survey: Plan #1
North Reference Grid

MD ft	Inc °	Azi (Grid) °	TVDSS ft	TVD ft	N/S ft	E/W ft
0.00	0.00	0.00	-3378.80	0.00	0.00	0.00
100.00	0.00	0.00	-3278.80	100.00	0.00	0.00
200.00	0.00	0.00	-3178.80	200.00	0.00	0.00
300.00	0.00	0.00	-3078.80	300.00	0.00	0.00
400.00	0.00	0.00	-2978.80	400.00	0.00	0.00
500.00	0.00	0.00	-2878.80	500.00	0.00	0.00
600.00	0.00	0.00	-2778.80	600.00	0.00	0.00
700.00	0.00	0.00	-2678.80	700.00	0.00	0.00
800.00	0.00	0.00	-2578.80	800.00	0.00	0.00
900.00	0.00	0.00	-2478.80	900.00	0.00	0.00
1000.00	0.00	0.00	-2378.80	1000.00	0.00	0.00
1100.00	0.00	0.00	-2278.80	1100.00	0.00	0.00
1200.00	0.00	0.00	-2178.80	1200.00	0.00	0.00
1300.00	0.00	0.00	-2078.80	1300.00	0.00	0.00
1400.00	0.00	0.00	-1978.80	1400.00	0.00	0.00
1500.00	0.00	0.00	-1878.80	1500.00	0.00	0.00
1600.00	0.00	0.00	-1778.80	1600.00	0.00	0.00
1700.00	0.00	0.00	-1678.80	1700.00	0.00	0.00
1800.00	0.00	0.00	-1578.80	1800.00	0.00	0.00
1900.00	0.00	0.00	-1478.80	1900.00	0.00	0.00
2000.00	0.00	0.00	-1378.80	2000.00	0.00	0.00
2100.00	0.00	0.00	-1278.80	2100.00	0.00	0.00
2200.00	0.00	0.00	-1178.80	2200.00	0.00	0.00
2300.00	0.00	0.00	-1078.80	2300.00	0.00	0.00
2400.00	0.00	0.00	-978.80	2400.00	0.00	0.00
2500.00	0.00	0.00	-878.81	2500.00	0.00	0.00
2599.99	0.00	0.00	-778.81	2599.99	0.00	0.00
2699.99	0.00	0.00	-678.81	2699.99	0.00	0.00
2799.99	0.00	0.00	-578.81	2799.99	0.00	0.00
2899.99	0.00	0.00	-478.81	2899.99	0.00	0.00
2999.99	0.00	0.00	-378.81	2999.99	0.00	0.00
3099.99	0.00	0.00	-278.81	3099.99	0.00	0.00
3199.99	0.00	0.00	-178.81	3199.99	0.00	0.00
3299.99	0.00	0.00	-78.81	3299.99	0.00	0.00
3399.99	0.00	0.00	21.19	3399.99	0.00	0.00
3499.99	0.00	0.00	121.19	3499.99	0.00	0.00
3599.99	0.00	0.00	221.19	3599.99	0.00	0.00

3699.99	0.00	0.00	321.19	3699.99	0.00	0.00
3799.99	0.00	0.00	421.19	3799.99	0.00	0.00
3899.99	0.00	0.00	521.19	3899.99	0.00	0.00
3999.99	0.00	0.00	621.19	3999.99	0.00	0.00
4099.99	0.00	0.00	721.19	4099.99	0.00	0.00
4199.99	0.00	0.00	821.19	4199.99	0.00	0.00
4299.99	0.00	0.00	921.19	4299.99	0.00	0.00
4399.99	0.00	0.00	1021.19	4399.99	0.00	0.00
4499.99	0.00	0.00	1121.19	4499.99	0.00	0.00
4599.99	0.00	0.00	1221.19	4599.99	0.00	0.00
4699.99	0.00	0.00	1321.19	4699.99	0.00	0.00
4799.99	0.00	0.00	1421.19	4799.99	0.00	0.00
4899.99	0.00	0.00	1521.19	4899.99	0.00	0.00
4999.99	0.00	0.00	1621.19	4999.99	0.00	0.00
5099.99	0.00	0.00	1721.19	5099.99	0.00	0.00
5199.99	0.00	0.00	1821.19	5199.99	0.00	0.00
5299.99	0.00	0.00	1921.19	5299.99	0.00	0.00
5399.99	0.00	0.00	2021.19	5399.99	0.00	0.00
5499.99	0.00	0.00	2121.19	5499.99	0.00	0.00
5599.99	0.00	0.00	2221.19	5599.99	0.00	0.00
5699.99	0.00	0.00	2321.19	5699.99	0.00	0.00
5799.99	0.00	0.00	2421.19	5799.99	0.00	0.00
5899.99	0.00	0.00	2521.19	5899.99	0.00	0.00
5999.99	0.00	0.00	2621.19	5999.99	0.00	0.00
6099.99	0.00	0.00	2721.19	6099.99	0.00	0.00
6199.99	0.00	0.00	2821.19	6199.99	0.00	0.00
6299.99	0.00	0.00	2921.19	6299.99	0.00	0.00
6399.99	0.00	0.00	3021.19	6399.99	0.00	0.00
6499.99	0.00	0.00	3121.19	6499.99	0.00	0.00
6599.99	0.00	0.00	3221.19	6599.99	0.00	0.00
6699.99	0.00	0.00	3321.19	6699.99	0.00	0.00
6799.99	0.00	0.00	3421.19	6799.99	0.00	0.00
6899.99	0.00	0.00	3521.19	6899.99	0.00	0.00
6999.99	0.00	0.00	3621.19	6999.99	0.00	0.00
7099.99	0.00	0.00	3721.19	7099.99	0.00	0.00
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7499.99	0.00	0.00	4121.18	7499.99	0.00	0.00
7599.98	0.00	0.00	4221.18	7599.98	0.00	0.00
7699.98	0.00	0.00	4321.18	7699.98	0.00	0.00
7799.98	0.00	0.00	4421.18	7799.98	0.00	0.00
7899.98	0.00	0.00	4521.18	7899.98	0.00	0.00
7999.98	0.00	0.00	4621.18	7999.98	0.00	0.00
8099.98	0.00	0.00	4721.18	8099.98	0.00	0.00
8199.98	0.00	0.00	4821.18	8199.98	0.00	0.00
8299.98	0.00	0.00	4921.18	8299.98	0.00	0.00
8399.98	0.00	0.00	5021.18	8399.98	0.00	0.00
8499.98	0.00	0.00	5121.18	8499.98	0.00	0.00
8599.98	0.00	0.00	5221.18	8599.98	0.00	0.00
8699.98	0.00	0.00	5321.18	8699.98	0.00	0.00
8799.98	0.00	0.00	5421.18	8799.98	0.00	0.00

8899.98	0.00	0.00	5521.18	8899.98	0.00	0.00
8937.04	0.00	0.00	5558.24	8937.04	0.00	0.00
8999.98	6.29	359.51	5621.06	8999.86	3.45	-0.03
9099.98	16.29	359.51	5718.99	9097.79	23.01	-0.20
9199.98	26.29	359.51	5812.05	9190.85	59.28	-0.51
9299.98	36.29	359.51	5897.39	9276.19	111.15	-0.95
9399.98	46.29	359.51	5972.43	9351.23	177.06	-1.52
9499.98	56.29	359.51	6034.88	9413.68	255.00	-2.19
9599.98	66.29	359.51	6082.85	9461.65	342.59	-2.94
9699.98	76.29	359.51	6114.88	9493.68	437.18	-3.75
9799.98	86.29	359.51	6130.00	9508.80	535.90	-4.60
9837.04	90.00	359.51	6131.20	9510.00	572.94	-4.92
9899.98	90.00	359.51	6131.20	9510.00	635.87	-5.46
9999.98	90.00	359.51	6131.20	9510.00	735.87	-6.32
10099.98	90.00	359.51	6131.20	9510.00	835.86	-7.18
10199.98	90.00	359.51	6131.20	9510.00	935.86	-8.04
10299.98	90.00	359.51	6131.20	9510.00	1035.86	-8.90
10399.98	90.00	359.51	6131.20	9510.00	1135.85	-9.75
10499.98	90.00	359.51	6131.20	9510.00	1235.85	-10.61
10599.98	90.00	359.51	6131.20	9510.00	1335.85	-11.47
10699.98	90.00	359.51	6131.20	9510.00	1435.84	-12.33
10799.98	90.00	359.51	6131.20	9510.00	1535.84	-13.19
10899.98	90.00	359.51	6131.20	9510.00	1635.83	-14.05
10999.98	90.00	359.51	6131.20	9510.00	1735.83	-14.91
11099.98	90.00	359.51	6131.20	9510.00	1835.83	-15.77
11199.98	90.00	359.51	6131.20	9510.00	1935.82	-16.62
11299.98	90.00	359.51	6131.20	9510.00	2035.82	-17.48
11399.98	90.00	359.51	6131.20	9510.00	2135.81	-18.34
11499.98	90.00	359.51	6131.20	9510.00	2235.81	-19.20
11599.98	90.00	359.51	6131.20	9510.00	2335.81	-20.06
11699.98	90.00	359.51	6131.20	9510.00	2435.80	-20.92
11799.98	90.00	359.51	6131.20	9510.00	2535.80	-21.78
11899.98	90.00	359.51	6131.20	9510.00	2635.79	-22.63
11999.98	90.00	359.51	6131.20	9510.00	2735.79	-23.49
12099.98	90.00	359.51	6131.20	9510.00	2835.79	-24.35
12199.98	90.00	359.51	6131.20	9510.00	2935.78	-25.21
12299.98	90.00	359.51	6131.20	9510.00	3035.78	-26.07
12399.98	90.00	359.51	6131.20	9510.00	3135.78	-26.93
12499.98	90.00	359.51	6131.20	9510.00	3235.77	-27.79
12599.97	90.00	359.51	6131.20	9510.00	3335.77	-28.65
12699.97	90.00	359.51	6131.20	9510.00	3435.76	-29.50
12799.97	90.00	359.51	6131.20	9510.00	3535.76	-30.36
12899.97	90.00	359.51	6131.20	9510.00	3635.76	-31.22
12999.97	90.00	359.51	6131.20	9510.00	3735.75	-32.08
13099.97	90.00	359.51	6131.20	9510.00	3835.75	-32.94
13199.97	90.00	359.51	6131.20	9510.00	3935.74	-33.80
13299.97	90.00	359.51	6131.20	9510.00	4035.74	-34.66
13399.97	90.00	359.51	6131.20	9510.00	4135.74	-35.52
13499.97	90.00	359.51	6131.20	9510.00	4235.73	-36.37
13599.97	90.00	359.51	6131.20	9510.00	4335.73	-37.23
13699.97	90.00	359.51	6131.20	9510.00	4435.72	-38.09
13799.97	90.00	359.51	6131.20	9510.00	4535.72	-38.95

13899.97	90.00	359.51	6131.20	9510.00	4635.72	-39.81
13999.97	90.00	359.51	6131.20	9510.00	4735.71	-40.67
14099.97	90.00	359.51	6131.20	9510.00	4835.71	-41.53
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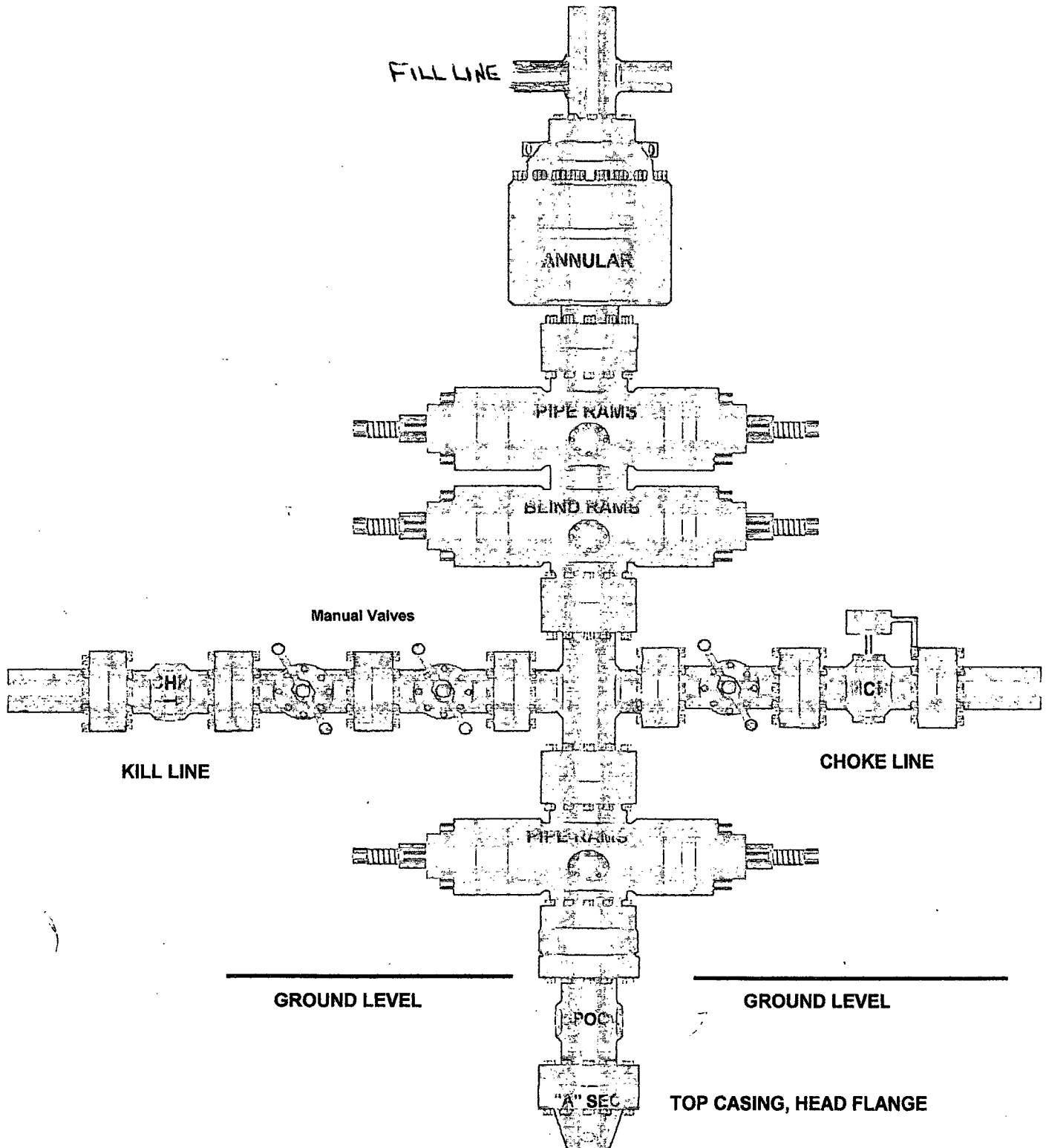
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378008.08	801409.89	10.00	59.28
378059.96	801409.45	10.00	111.16
378125.86	801408.88	10.00	177.07
378203.80	801408.21	10.00	255.00
378291.39	801407.46	10.00	342.60
378385.98	801406.65	10.00	437.20
378484.70	801405.80	10.00	535.92
378521.74	801405.48	10.00	572.96
378584.67	801404.94	0.00	635.90
378684.67	801404.08	0.00	735.90
378784.67	801403.22	0.00	835.90
378884.66	801402.36	0.00	935.90
378984.66	801401.51	0.00	1035.89
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379184.65	801399.79	0.00	1235.89
379284.65	801398.93	0.00	1335.89
379384.64	801398.07	0.00	1435.89
379484.64	801397.21	0.00	1535.89
379584.63	801396.35	0.00	1635.89
379684.63	801395.49	0.00	1735.89
379784.63	801394.64	0.00	1835.89
379884.62	801393.78	0.00	1935.89
379984.62	801392.92	0.00	2035.89
380084.61	801392.06	0.00	2135.89
380184.61	801391.20	0.00	2235.89
380284.61	801390.34	0.00	2335.89
380384.60	801389.48	0.00	2435.89
380484.60	801388.62	0.00	2535.89
380584.60	801387.77	0.00	2635.89
380684.59	801386.91	0.00	2735.89
380784.59	801386.05	0.00	2835.89
380884.58	801385.19	0.00	2935.89
380984.58	801384.33	0.00	3035.89
381084.58	801383.47	0.00	3135.89
381184.57	801382.61	0.00	3235.89
381284.57	801381.75	0.00	3335.89
381384.56	801380.90	0.00	3435.89
381484.56	801380.04	0.00	3535.89
381584.56	801379.18	0.00	3635.89
381684.55	801378.32	0.00	3735.89
381784.55	801377.46	0.00	3835.89
381884.54	801376.60	0.00	3935.89
381984.54	801375.74	0.00	4035.89
382084.54	801374.88	0.00	4135.89
382184.53	801374.03	0.00	4235.89
382284.53	801373.17	0.00	4335.89
382384.53	801372.31	0.00	4435.89
382484.52	801371.45	0.00	4535.89

382584.52	801370.59	0.00	4635.89
382684.51	801369.73	0.00	4735.89
382784.51	801368.87	0.00	4835.89
382862.90	801368.20	0.00	4914.28

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

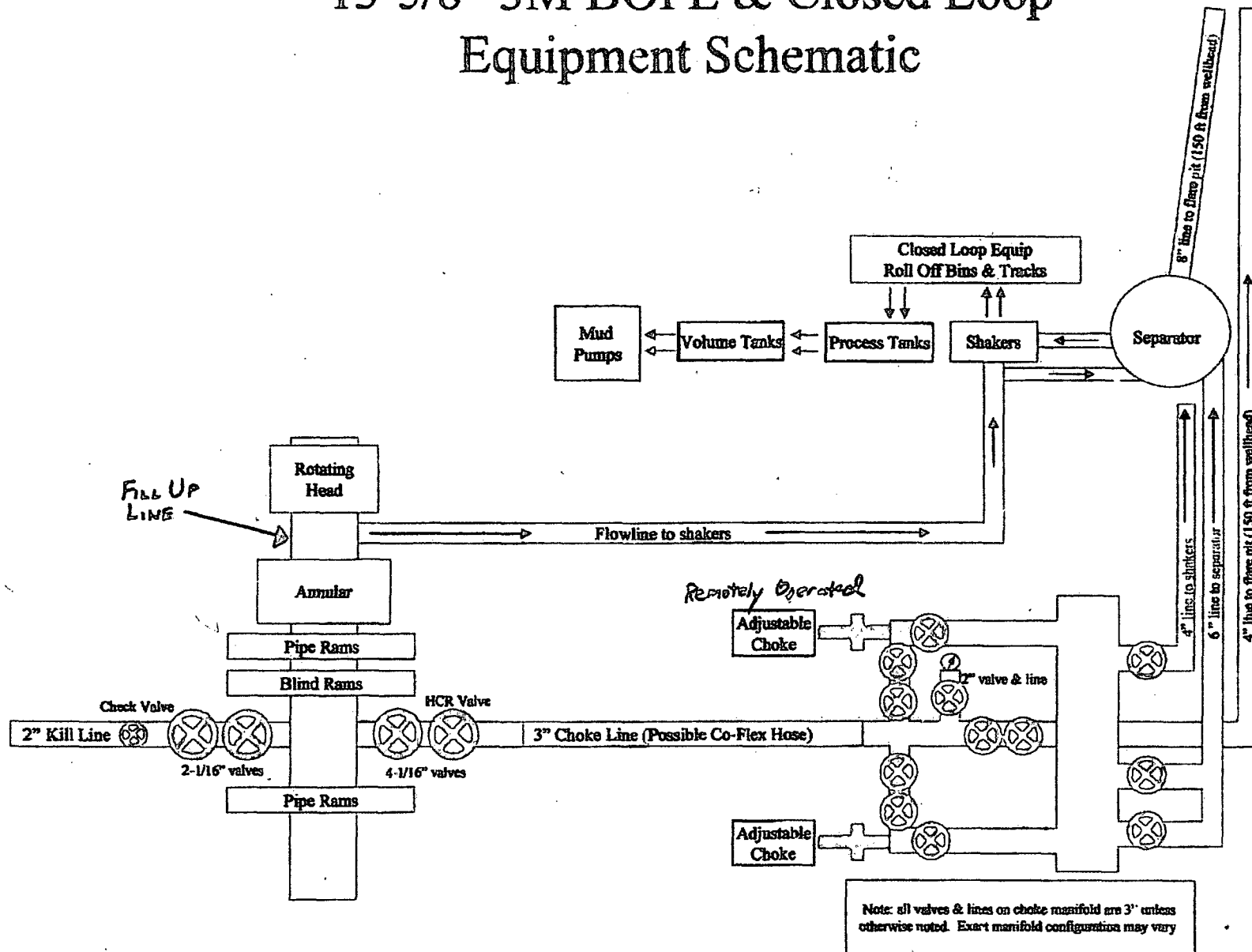


Attachment to Exhibit #1
NOTES REGARDING BLOWOUT PREVENTERS
Devon Energy Production Company, LP
Green Wave 17 Fed 1H

Surface Location: 25' FSL & 1980' FWL, Unit N, Sec 17 T26S R34E, Lea, NM
Bottom Hole Location: 330' FNL & 1980' FWL, Unit C, Sec 17 T18S R34E, 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 5000 psi working pressure.
4. All fittings will be flanged.
5. A full bore safety valve tested to a minimum 3000 psi WP with proper thread connections will be available on the rotary rig floor at all times.
6. All choke lines will be anchored to prevent movement.
7. All BOP equipment will be equal to or larger in bore than the internal diameter of the last casing string.
8. Will maintain a kelly cock attached to the kelly.
9. Hand wheels and wrenches will be properly installed and tested for safe operation.
10. Hydraulic floor control for blowout preventer will be located as near in proximity to driller's controls as possible.
11. All BOP equipment will meet API standards and include a minimum 40 gallon accumulator having two independent means of power to initiate closing operation.

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



Hydrostatic Test Certificate

Certificate Number: 4520	PBC No: 10321	Customer Name & Address
Customer Purchase Order No: RIG 300		HELMERICH & PAYNE INT'L DRILLING CO 1437 SOUTH BOULDER TULSA, OK 74119
Project:		
Test Centre Address	Accepted by ContiTech Beattie Inspection	Accepted by Client Inspection
ContiTech Beattie Corp. 11535 Brittmoore Park Drive Houston, TX 77041 USA	Signed: Josh Sims Date: 10/27/10	

We certify that the goods detailed hereon have been inspected by our Quality Management System, and to the best of our knowledge are found to conform to relevant industrial standards within the requirements of the purchase order as issued to ContiTech Beattie Corporation.

These goods were made in the United States of America.

Item	Part No.	Description	Qty	Serial Number	As-Built Length (m)	Work. Press.	Test Press.	Test Time (minutes)
1		3" ID 10K Choke & Kill Hose x 35ft OAL End A: 4.1/16" 10Kpsi API Spec 6A Type 6BX Flange End B: 4.1/16" 10Kpsi API Spec 6A Type 6BX Flange Working Pressure: 10,000psi Test Pressure: 15,000psi Serial#: 49106	1	49106		10 kpsi	15 kpsi	60

