

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

OCD Hobbs

FORM APPROVED
OMB NO. 1004-0135
Expires: July 31, 2010**SUNDRY NOTICES AND REPORTS ON WELLS**
*Do not use this form for proposals to drill or to re-enter an abandoned well. Use form 3160-3 (APD) for such proposals.*5. Lease Serial No.
NMNM116575

6. If Indian, Allottee or Tribe Name

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

SUBMIT IN TRIPLICATE - Other instructions on reverse side.8. Well Name and No.
REBEL 20 FED 6H ✓9. API Well No.
30-025-42995-00-X1 ✓10. Field and Pool, or Exploratory
COTTON DRAW11. County or Parish, and State
LEA COUNTY, NM

1. Type of Well

☒ Oil Well ☐ Gas Well ☐ Other2. Name of Operator
DEVON ENERGY PRODUCTION CO LP

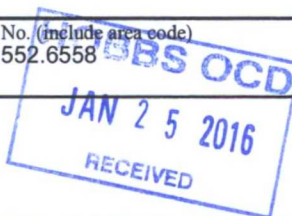
Contact: LINDA GOOD

Email: linda.good@devon.com

3a. Address
333 WEST SHERIDAN AVE
OKLAHOMA CITY, OK 731023b. Phone No. (include area code)
Ph: 405.552.6558

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)

Sec 20 T24S R32E NENW 250FNL 1980FWL ✓

**12. CHECK APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA**

TYPE OF SUBMISSION	TYPE OF ACTION			
☒ Notice of Intent	☐ Acidize	☐ Deepen	☐ Production (Start/Resume)	☐ Water Shut-Off
☐ Subsequent Report	☐ Alter Casing	☐ Fracture Treat	☐ Reclamation	☐ Well Integrity
☐ Final Abandonment Notice	☐ Casing Repair	☐ New Construction	☐ Recomplete	☒ Other
	☐ Change Plans	☐ Plug and Abandon	☐ Temporarily Abandon	Change to Original A PD
	☐ Convert to Injection	☐ Plug Back	☐ Water Disposal	

13. Describe Proposed or Completed Operation (clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recomple horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports shall be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recomple in a new interval, a Form 3160-4 shall be filed once testing has been completed. Final Abandonment Notices shall be filed only after all requirements, including reclamation, have been completed, and the operator has determined that the site is ready for final inspection.)

Devon Energy Prod. Co., L.P. respectfully requests to change the BHL from 330' FSL & 2200' FWL to 330' FSL & 1980' FWL.

Revised C-102, Drilling Plan & Directional Plan attached.

All previous COA's still apply

14. I hereby certify that the foregoing is true and correct.	
Electronic Submission #328289 verified by the BLM Well Information System For DEVON ENERGY PRODUCTION CO LP, sent to the Hobbs Committed to AFMSS for processing by DEBORAH MCKINNEY on 01/12/2016 (16DLM0279SE)	
Name (Printed/Typed) LINDA GOOD	Title REGULATORY COMPLIANCE SPECIALIST
Signature (Electronic Submission)	Date 01/12/2016

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved By <u>CHARLES NIMMER</u>	Title <u>PETROLEUM ENGINEER</u>	Date <u>01/20/2016</u>
Conditions of approval, if any, are attached. Approval of this notice 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.		
Office Hobbs 		

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.

**** BLM REVISED ** BLM REVISED ** BLM REVISED ** BLM REVISED ** BLM REVISED ****

FEB 02 2016 

Devon Energy, Rebel 20 Fed 6H

1. Geologic Formations

TVD of target	10,742'	Pilot hole depth	N/A
MD at TD:	15,345'	Deepest expected fresh water:	

Basin

Formation	Depth (TVD) from KB	Water/Mineral Bearing/ Target Zone?	Hazards*
Rustler	887	Barren	
Salado	1,157	Barren	
Base of Salt	2,732	Barren	
Delaware	4,672	Oil	
Bone Spring	8,587	Oil	
1 st Bone Spring Lime	9,622	Oil	
2 nd Bone Spring Lime	10,007	Oil	
2 nd Bone Spring	10,282	Oil	
2 nd Bone Spring L Top	10,727	Oil	
2 nd Bone Spring L Base	10,815	Oil	
3 rd Bone Spring Lime	10,842	Oil	

*H2S, water flows, loss of circulation, abnormal pressures, etc.

Devon Energy, Rebel 20 Fed 6H

2. Casing Program

Hole Size	Casing Interval		Csg. Size	Weight (lbs)	Grade	Conn .	SF Collapse	SF Burst	SF Tension
	From	To							
17.5"	0	975'	13.375"	48	H-40	STC	1.67	3.21	2.29
12.25"	0	4,300'	9.625"	40	J-55	BTC	1.15	1.56	2.45
12.25"	4,300'	4,600'	9.625"	40	HCK-55	BTC	1.60	3.60	5.72
8.75"	0	15,345'	5.5"	17	P-110	BTC	1.94	1.25	2.45
7" x 5.5" Tapered String Option									
8.75"	0	10,120'	7"	29	P-110	BTC	2.22	1.32	3.07
8.75"	10,120'	15,345'	5.5"	17	P-110	BTC	1.80	1.29	3.14

All casing strings will be tested in accordance with Onshore Oil and Gas Order #2 III.B.1.h

Must have table for contingency casing

	Y or N
Is casing new? If used, attach certification as required in Onshore Order #1	Y
Does casing meet API specifications? If no, attach casing specification sheet.	Y
Is premium or uncommon casing planned? If yes attach casing specification sheet.	N
Does the above casing design meet or exceed BLM's minimum standards? If not provide justification (loading assumptions, casing design criteria).	Y
Will the intermediate pipe be kept at a minimum 1/3 fluid filled to avoid approaching the collapse pressure rating of the casing?	Y
Is well located within Capitan Reef?	N
If yes, does production casing cement tie back a minimum of 50' above the Reef?	
Is well within the designated 4 string boundary.	
Is well located in SOPA but not in R-111-P?	N
If yes, are the first 2 strings cemented to surface and 3 rd string cement tied back 500' into previous casing?	
Is well located in R-111-P and SOPA?	N
If yes, are the first three strings cemented to surface?	
Is 2 nd string set 100' to 600' below the base of salt?	
Is well located in high Cave/Karst?	N
If yes, are there two strings cemented to surface?	
(For 2 string wells) If yes, is there a contingency casing if lost circulation occurs?	
Is well located in critical Cave/Karst?	N
If yes, are there three strings cemented to surface?	

Devon Energy, Rebel 20 Fed 6H

3. Cementing Program

Casing	# Sks	Wt. lb/gal	H ₂ O gal/sk	Yld ft ³ /sack	500# Comp. Strength (hours)	Slurry Description
13-3/8" Surface	1040	14.8	6.32	1.33	6	Tail: Class C Cement + 0.125 lbs/sack Poly-E-Flake
9-5/8" Inter.	960	12.9	9.81	1.85	14	Lead: (65:35) Class C Cement: Poz (Fly Ash): 6% BWOC Bentonite + 5% BWOW Sodium Chloride + 0.125 lbs/sack Poly-E-Flake
	430	14.8	6.32	1.33	6	Tail: Class C Cement + 0.125 lbs/sack Poly-E-Flake
7 x 5-1/2" Combo Prod.	370	10.4	16.9	3.17	16	Lead: Tuned Light [®] + 0.125 lb/sk Pol-E-Flake
	1360	14.5	5.31	1.2	25	Tail: (50:50) Class H Cement: Poz (Fly Ash) + 0.5% bwoc HALAD-344 + 0.4% bwoc CFR-3 + 0.2% BWOC HR-601 + 2% bwoc Bentonite
5-1/2" Prod Two Stage	770	11.9	12.89	2.31	n/a	1 st Stage Lead: (50:50) Class H Cement: Poz (Fly Ash) + 10% BWOC Bentonite + 1 lb/sk of Kol-Seal + 0.3% BWOC HR-601 + 0.5lb/sk D-Air 5000
	1360	14.5	5.31	1.2	25	1 st Stage Tail: (50:50) Class H Cement: Poz (Fly Ash) + 0.5% bwoc HALAD-344 + 0.4% bwoc CFR-3 + 0.2% BWOC HR-601 + 2% bwoc Bentonite
	DV Tool = 4650ft					
	50	11	14.81	2.55	22	2 nd Stage Lead: Tuned Light [®] Cement + 0.125 lb/sk Pol-E-Flake
	30	14.8	6.32	1.33	6	2 nd Stage Tail: Class C Cement + 0.125 lbs/sack Poly-E-Flake
5-1/2" Prod Single Stage	560	11.9	12.89	2.31	n/a	1 st Lead: (50:50) Class H Cement: Poz (Fly Ash) + 10% BWOC Bentonite + 1 lb/sk of Kol-Seal + 0.3% BWOC HR-601 + 0.5lb/sk D-Air 5000
	330	12.5	10.86	1.96	30	2 nd Lead: (65:35) Class H Cement: Poz (Fly Ash) + 6% BWOC Bentonite + 0.25% BWOC HR-601 + 0.125 lbs/sack Poly-E-Flake
	1360	14.5	5.31	1.2	25	Tail: (50:50) Class H Cement: Poz (Fly Ash) + 0.5% bwoc HALAD-344 + 0.4% bwoc CFR-3 + 0.2% BWOC HR-601 + 2% bwoc Bentonite

If a DV tool is run, DV tool depth(s) will be adjusted based on hole conditions and cement volumes will be adjusted proportionally. DV tool will be set a minimum of 50 feet below previous casing and a minimum of 200 feet above current shoe. Lab reports with the 500 psi compressive strength time for the cement will be onsite for review.

Casing String	TOC	% Excess
13-3/8" Surface	0'	100%
9-5/8" Intermediate	0'	75%
7 x 5-1/2" Production Casing	4100'	25%
5-1/2" Production Casing Two Stage	1 st Stage = 4650ft / 2 nd Stage = 4100'	25%

Devon Energy, Rebel 20 Fed 6H

5-1/2" Production Casing Single Stage	4100'	25%
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4. Pressure Control Equipment

N	A variance is requested for the use of a diverter on the surface casing. See attached for schematic.
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BOP installed and tested before drilling which hole?	Size?	Min. Required WP	Type	✓	Tested to:
12-1/4"	13-5/8"	3M	Annular	x	50% of working pressure
			Blind Ram		3M
			Pipe Ram		
			Double Ram	x	
			Other*		
8-3/4"	13-5/8"	3M	Annular	x	50% testing pressure
			Blind Ram		3M
			Pipe Ram		
			Double Ram	x	
			Other*		

*Specify if additional ram is utilized.

BOP/BOPE will be tested by an independent service company to 250 psi low and the high pressure indicated above per Onshore Order 2 requirements. The System may be upgraded to a higher pressure but still tested to the working pressure listed in the table above. If the system is upgraded all the components installed will be functional and tested.

Pipe rams will be operationally checked each 24 hour period. Blind rams will be operationally checked on each trip out of the hole. These checks will be noted on the daily tour sheets. Other accessories to the BOP equipment will include a Kelly cock and floor safety valve (inside BOP) and choke lines and choke manifold. See attached schematics.

Y	Formation integrity test will be performed per Onshore Order #2. On Exploratory wells or on that portion of any well approved for a 5M BOPE system or greater, a pressure integrity test of each casing shoe shall be performed. Will be tested in accordance with Onshore Oil and Gas Order #2 III.B.1.i.
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Devon Energy, Rebel 20 Fed 6H

Y	A variance is requested for the use of a flexible choke line from the BOP to Choke Manifold. See attached for specs and hydrostatic test chart.
Y	Are anchors required by manufacturer?
Y	A multibowl wellhead may be used. The BOP will be tested per Onshore Order #2 after installation on the surface casing which will cover testing requirements for a maximum of 30 days. If any seal subject to test pressure is broken the system must be tested. Devon proposes the option of using a multi-bowl wellhead assembly. This assembly will only be tested when installed on the surface casing. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the surface casing shoe shall be 3000 (3M) psi. • Wellhead will be installed by vendor's representatives. • If the welding is performed by a third party, the vendor's representative will monitor the temperature to verify that it does not exceed the maximum temperature of the seal. • Vendor representative will install the test plug for the initial BOP test. • Vendor will install a solid steel body pack-off to completely isolate the lower head after cementing intermediate casing. After installation of the pack-off, the pack-off and the lower flange will be tested to 3M, as shown on the attached schematic. Everything above the pack-off will not have been altered whatsoever from the initial nipple up. Therefore the BOP components will not be retested at that time. • If the cement does not circulate and one inch operations would have been possible with a standard wellhead, the well head will be cut and top out operations will be conducted. • Devon will pressure test all seals above and below the mandrel (but still above the casing) to full working pressure rating. • Devon will test the casing to 0.22 psi/ft or 1500 psi, whichever is greater, as per Onshore Order #2. After running the 13-3/8" surface casing, a 13-5/8" BOP/BOPE system with a minimum rating of 3M will be installed on the wellhead system and will undergo a 250 psi low pressure test followed by a 3,000 psi high pressure test. The 3,000 psi high and 250 psi low test will cover testing requirements a maximum of 30 days, as per Onshore Order #2. If the well is not complete within 30 days of this BOP test, another full BOP test will be conducted, as per Onshore Order #2. After running the 9-5/8' intermediate casing with a mandrel hanger, the 13-5/8" BOP/BOPE system with a minimum rating of 3M will already be installed on the wellhead. 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.

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

5. Mud Program

Depth		Type	Weight (ppg)	Viscosity	Water Loss
From	To				
0	975'	FW Gel	8.6-8.8	28-34	N/C
975'	4,600'	Saturated Brine	10.0-10.2	28-34	N/C
4,600'	15,345'	Cut Brine	8.5-9.3	28-34	N/C

Sufficient mud materials to maintain mud properties and meet minimum lost circulation and weight increase requirements will be kept on location at all times.

What will be used to monitor the loss or gain of fluid?	PVT/Pason/Visual Monitoring
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6. Logging and Testing Procedures

Logging, Coring and Testing.	
x	Will run GR/CNL from TD to surface (horizontal well – vertical portion of hole). Stated logs run will be in the Completion Report and submitted to the BLM.
	No Logs are planned based on well control or offset log information.
	Drill stem test? If yes, explain
	Coring? If yes, explain

Additional logs planned	Interval
Resistivity	Int. shoe to KOP
Density	Int. shoe to KOP
X CBL	Production casing
X Mud log	Intermediate shoe to TD
PEX	

7. Drilling Conditions

Condition	Specify what type and where?
BH Pressure at deepest TVD	5195 psi
Abnormal Temperature	No

Mitigation measure for abnormal conditions: Lost circulation material/sweeps/mud scavengers.

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Hydrogen Sulfide (H₂S) monitors will be installed prior to drilling out the surface shoe. If H₂S is detected in concentrations greater than 100 ppm, the operator will comply with the provisions of Onshore Oil and Gas Order #6. If Hydrogen Sulfide is encountered, measured values and formations will be provided to the BLM.

N	H ₂ S is present
Y	H ₂ S Plan attached

8. Other facets of operation

Is this a walking operation? No.

Will be pre-setting casing? No.

Attachments

☒ Directional Plan

☐ Other, describe

devon

Rebel 20 Fed 6H
Lea Co, NM



Plan Data for Rebel 20 Fed 6H

Plan Point Information:

Dogleg Severity Unit: */100.00ft Position offsets from Slot centre

MD	Inc	Az	TVD	+N/-S	+E/-W	Northing	Easting	VSec	DLS
(USft)	(°)	(°)	(USft)	(USft)	(USft)	(USft)	(USft)	(USft)	(DLSU)
0.00	0.00	0.00	0.00	0.00	0.00	440536.02	737561.89	0.00	0.00
4700.00	0.00	0.00	4700.00	0.00	0.00	440536.02	737561.89	0.00	0.00
5200.00	5.00	30.00	5199.37	18.88	10.90	440554.90	737572.79	-18.94	1.00
6000.00	5.00	30.00	5996.32	79.27	45.76	440615.29	737607.65	-79.50	0.00
7000.00	0.00	0.00	6995.05	117.03	67.57	440653.05	737629.46	-117.38	0.50
10226.10	0.00	0.00	10221.15	117.03	67.57	440653.05	737629.46	-117.38	0.00
11049.13	90.53	180.30	10742.00	-408.68	64.82	440127.34	737626.71	408.34	11.00
15345.33	90.53	180.30	10702.00	-4704.64	42.40	435831.38	737604.29	4704.35	0.00

Plan Data for Rebel 20 Fed 6H

Slot: Rebel 20 Fed 6H
Position:
Offset is from Site centre
+N/-S: 0.57USft Northing: 440536.02USft Latitude: 32°12'34.3"
+E/-W: 49.99USft Easting: 737561.89USft Longitude: -103°41'56.0"
Elevation Above VRD: 3564.00USft

Plan Data for Rebel 20 Fed 6H

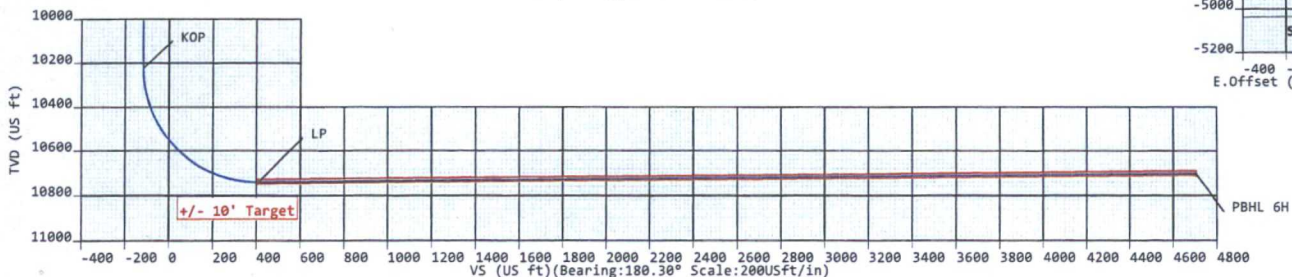
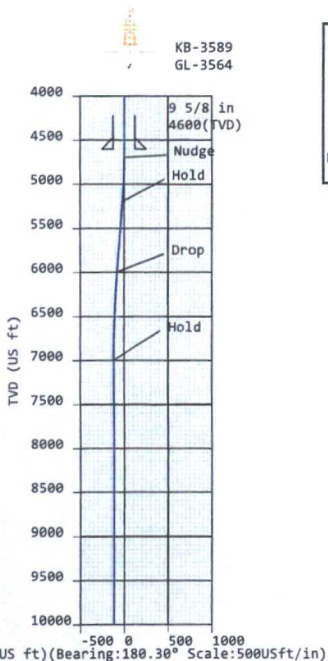
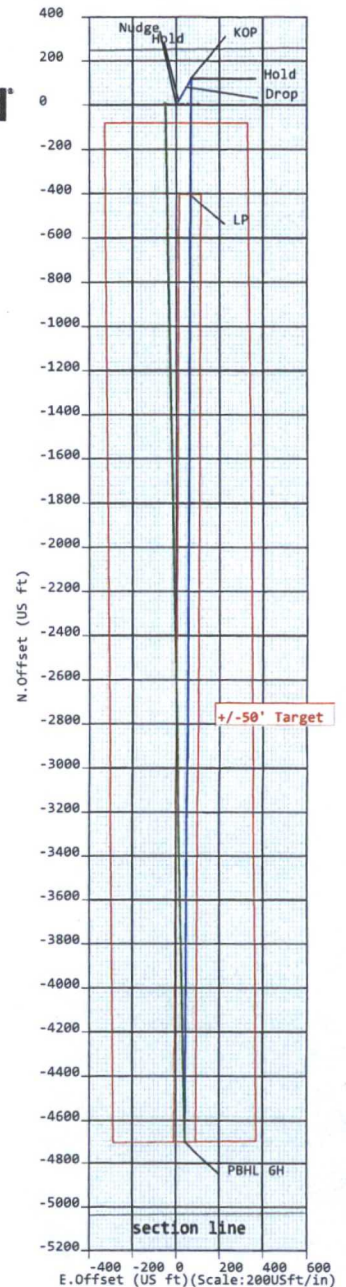
Target Set Information:
Name: Rebel 20 Fed 6H
Position offsets from Slot centre
Name TVD +N/-S +E/-W Northing Easting Shape Comment
(USft) (USft) (USft) (USft) (USft)
PBHL 6H 10702.00 -4704.07 92.39 435831.38 737604.29 Cuboid

Plan Data for Rebel 20 Fed 6H

Well: Rebel 20 Fed 6H
Type: Main-Well
File Number:
Plan Folder: P1 Plan: P1:V2
Vertical Section: Position offset of origin from Slot centre:
+N/-S: 0.00USft Azimuth: 177.69°
+E/-W: 0.00USft
Magnetic Parameters:
Model: Field Strength: Declination: Dip: Date:
BGGM 48210(nT) 7.32° 68.10° 2015-07-30



Rebel 20 Fed 6H
Rebel 20 Fed 2H



**5D Plan Report**

Devon Energy

Field Name: *Lea Co, NM Nad 83 NMEZ*
Site Name: *Rebel 20 Fed 2H, 6H Pad*
Well Name: *Rebel 20 Fed 6H*
Plan: *P1:V2*

19 August 2015





devon

Weatherford

Rebel 20 Fed 6H

Field Name: Lea Co, NM Nad 83 NMEZ	Map Units: US ft		Company Name: Devon Energy	
	Vertical Reference Datum (VRD): Mean Sea Level			
	Projected Coordinate System: NAD83 / New Mexico East (ftUS)			
	Comment:			
Site: Rebel 20 Fed 2H, 6H Pad	Units: US ft	North Reference: Grid	Convergence Angle: 0.34	
	Position:	Northing: 440535.45US ft	Latitude: 32° 12' 34.26"	
		Easting: 737511.90US ft	Longitude: -103° 41' 56.57"	
	Elevation above MSL:3564.00 US ft			
Comment:				
Slot: Rebel 20 Fed 6H	Position (Relative to Site Centre)			
	+N/-S: 0.57US ft	Northing: 440536.02US ft	Latitude: 32°12'34.27"	
	+E/-W: 49.99US ft	Easting: 737561.89US ft	Longitude: -103°41'55.99"	
	Slot TVD Reference: Ground Elevation			
Elevation above MSL: 3564.00US ft				
Comment:				
Well: Rebel 20 Fed 6H	Type:Main well	UWI:	Plan:P1:V2	
	File Number:	Comment:		
	Closure Distance:4704.83US ft	Closure Azimuth:179.48°		
	Vertical Section: Position of Origin (Relative to Slot centre)			
	+N/-S: 0.00US ft	+E/-W: 0.00US ft	Az: 180.30°	
	Magnetic Parameters:			
	Model: BGGM	Field Strength: 48210.4nT	Declination: 7.32°	Dip: 60.10°

Drill floor: Plan: P1:V2

Rig Height (Kelly Bushing): Elevation above MSL:	Inclination: 0.00°	Azimuth: 0.00°
25.00US ft	3589.00US ft	

Target set: Rebel 20 Fed 6H Comment:

Target Name:	Shape:	TVD (US ft)	N.Offset (US ft)	E.Offset (US ft)	Northings (USft)	Easting (USft)	Comment
PBHL 6H	Cuboid	10702.00	-4704.64	42.40	435831.38	737604.29	

Casing Points: (Relative to Slot centre)(TVD relative to Kelly Bushing)

MD (US ft)	Inc (°)	Az (°)	TVD (US ft)	N.Offset (US ft)	E.Offset (US ft)	Northings (US ft)	Easting (US ft)	Name
975.00	0.00	0.00	975.00	0.00	0.00	440536.02	737561.89	13 3/8 in
4600.00	0.00	0.00	4600.00	0.00	0.00	440536.02	737561.89	9 5/8 in

Wellpath created using minimum curvature.

5D Plan Report

Tie Point:**MD:** 0.00USFt**Inclination:**
0.00°**Azimuth:** 0.00°**TVD:** 0.00USFt **North Offset:**
0.00USFt**East Offset:**
0.00USFt**Salient Points: (Relative to Slot centre)(TVD relative to Kelly Bushing)**

MD (US ft)	Inc (°)	Az (°)	TVD (US ft)	N.Offset (US ft)	E.Offset (US ft)	VS (US ft)	DLS (°/100US ft)	B.Rate (°/100US ft)	T.Rate (°/100US ft)	T.Face (°)	Comment
0.00	0.00	0.00	0.00	0.00	0.00	-0.00	0.00	0.00	0.00	0.00	
975.00	0.00	0.00	975.00	0.00	0.00	-0.00	0.00	0.00	0.00	0.00	13 3/8 in
4600.00	0.00	0.00	4600.00	0.00	0.00	-0.00	0.00	0.00	0.00	0.00	9 5/8 in
4700.00	0.00	0.00	4700.00	0.00	0.00	-0.00	0.00	0.00	0.00	0.00	Nudge
5200.00	5.00	30.00	5199.37	18.88	10.90	-18.94	1.00	1.00	0.00	30.00	Hold
6000.00	5.00	30.00	5996.32	79.27	45.76	-79.50	0.00	0.00	0.00	0.00	Drop
7000.00	0.00	0.00	6995.05	117.03	67.57	-117.38	0.50	-0.50	0.00	180.00	Hold
10226.10	0.00	0.00	10221.15	117.03	67.57	-117.38	0.00	0.00	0.00	0.00	KOP
11049.13	90.53	180.30	10742.00	-408.68	64.82	408.34	11.00	11.00	0.00	180.30	LP
15345.33	90.53	180.30	10702.00	-4704.64	42.40	4704.35	0.00	0.00	0.00	0.00	PBHL 6H

Interpolated Points: (Relative to Slot centre)(TVD relative to Kelly Bushing)

MD (US ft)	Inc (°)	Az (°)	TVD (US ft)	N.Offset (US ft)	E.Offset (US ft)	VS (US ft)	DLS (°/100US ft)	Northing (US ft)	Easting (US ft)	Comment
0.00	0.00	0.00	0.00	0.00	0.00	-0.00	0.00	440536.02	737561.89	
100.00	0.00	0.00	100.00	0.00	0.00	-0.00	0.00	440536.02	737561.89	
200.00	0.00	0.00	200.00	0.00	0.00	-0.00	0.00	440536.02	737561.89	
300.00	0.00	0.00	300.00	0.00	0.00	-0.00	0.00	440536.02	737561.89	
400.00	0.00	0.00	400.00	0.00	0.00	-0.00	0.00	440536.02	737561.89	
500.00	0.00	0.00	500.00	0.00	0.00	-0.00	0.00	440536.02	737561.89	
600.00	0.00	0.00	600.00	0.00	0.00	-0.00	0.00	440536.02	737561.89	
700.00	0.00	0.00	700.00	0.00	0.00	-0.00	0.00	440536.02	737561.89	
800.00	0.00	0.00	800.00	0.00	0.00	-0.00	0.00	440536.02	737561.89	
900.00	0.00	0.00	900.00	0.00	0.00	-0.00	0.00	440536.02	737561.89	
975.00	0.00	0.00	975.00	0.00	0.00	-0.00	0.00	440536.02	737561.89	13 3/8 in
1000.00	0.00	0.00	1000.00	0.00	0.00	-0.00	0.00	440536.02	737561.89	
1100.00	0.00	0.00	1100.00	0.00	0.00	-0.00	0.00	440536.02	737561.89	
1200.00	0.00	0.00	1200.00	0.00	0.00	-0.00	0.00	440536.02	737561.89	
1300.00	0.00	0.00	1300.00	0.00	0.00	-0.00	0.00	440536.02	737561.89	
1400.00	0.00	0.00	1400.00	0.00	0.00	-0.00	0.00	440536.02	737561.89	
1500.00	0.00	0.00	1500.00	0.00	0.00	-0.00	0.00	440536.02	737561.89	
1600.00	0.00	0.00	1600.00	0.00	0.00	-0.00	0.00	440536.02	737561.89	
1700.00	0.00	0.00	1700.00	0.00	0.00	-0.00	0.00	440536.02	737561.89	
1800.00	0.00	0.00	1800.00	0.00	0.00	-0.00	0.00	440536.02	737561.89	
1900.00	0.00	0.00	1900.00	0.00	0.00	-0.00	0.00	440536.02	737561.89	
2000.00	0.00	0.00	2000.00	0.00	0.00	-0.00	0.00	440536.02	737561.89	
2100.00	0.00	0.00	2100.00	0.00	0.00	-0.00	0.00	440536.02	737561.89	
2200.00	0.00	0.00	2200.00	0.00	0.00	-0.00	0.00	440536.02	737561.89	
2300.00	0.00	0.00	2300.00	0.00	0.00	-0.00	0.00	440536.02	737561.89	
2400.00	0.00	0.00	2400.00	0.00	0.00	-0.00	0.00	440536.02	737561.89	
2500.00	0.00	0.00	2500.00	0.00	0.00	-0.00	0.00	440536.02	737561.89	
2600.00	0.00	0.00	2600.00	0.00	0.00	-0.00	0.00	440536.02	737561.89	
2700.00	0.00	0.00	2700.00	0.00	0.00	-0.00	0.00	440536.02	737561.89	
2800.00	0.00	0.00	2800.00	0.00	0.00	-0.00	0.00	440536.02	737561.89	
2900.00	0.00	0.00	2900.00	0.00	0.00	-0.00	0.00	440536.02	737561.89	
3000.00	0.00	0.00	3000.00	0.00	0.00	-0.00	0.00	440536.02	737561.89	
3100.00	0.00	0.00	3100.00	0.00	0.00	-0.00	0.00	440536.02	737561.89	
3200.00	0.00	0.00	3200.00	0.00	0.00	-0.00	0.00	440536.02	737561.89	
3300.00	0.00	0.00	3300.00	0.00	0.00	-0.00	0.00	440536.02	737561.89	
3400.00	0.00	0.00	3400.00	0.00	0.00	-0.00	0.00	440536.02	737561.89	
3500.00	0.00	0.00	3500.00	0.00	0.00	-0.00	0.00	440536.02	737561.89	
3600.00	0.00	0.00	3600.00	0.00	0.00	-0.00	0.00	440536.02	737561.89	
3700.00	0.00	0.00	3700.00	0.00	0.00	-0.00	0.00	440536.02	737561.89	
3800.00	0.00	0.00	3800.00	0.00	0.00	-0.00	0.00	440536.02	737561.89	
3900.00	0.00	0.00	3900.00	0.00	0.00	-0.00	0.00	440536.02	737561.89	

5D Plan Report

Interpolated Points: (Relative to Slot centre)(TVD relative to Kelly Bushing)										
MD (US ft)	Inc (°)	Az (°)	TVD (US ft)	N.Offset (US ft)	E.Offset (US ft)	VS (US ft)	DLS (°/100US ft)	Northing (US ft)	Easting (US ft)	Comment
4000.00	0.00	0.00	4000.00	0.00	0.00	-0.00	0.00	440536.02	737561.89	
4100.00	0.00	0.00	4100.00	0.00	0.00	-0.00	0.00	440536.02	737561.89	
4200.00	0.00	0.00	4200.00	0.00	0.00	-0.00	0.00	440536.02	737561.89	
4300.00	0.00	0.00	4300.00	0.00	0.00	-0.00	0.00	440536.02	737561.89	
4400.00	0.00	0.00	4400.00	0.00	0.00	-0.00	0.00	440536.02	737561.89	
4500.00	0.00	0.00	4500.00	0.00	0.00	-0.00	0.00	440536.02	737561.89	
4600.00	0.00	0.00	4600.00	0.00	0.00	-0.00	0.00	440536.02	737561.89	9 5/8 in
4700.00	0.00	0.00	4700.00	0.00	0.00	-0.00	0.00	440536.02	737561.89	Nudge
4800.00	1.00	30.00	4799.99	0.76	0.44	-0.76	1.00	440536.78	737562.33	
4900.00	2.00	30.00	4899.96	3.02	1.75	-3.03	1.00	440539.04	737563.64	
5000.00	3.00	30.00	4999.86	6.80	3.93	-6.82	1.00	440542.82	737565.82	
5100.00	4.00	30.00	5099.68	12.09	6.98	-12.12	1.00	440548.11	737568.87	
5200.00	5.00	30.00	5199.37	18.88	10.90	-18.94	1.00	440554.90	737572.79	Hold
5300.00	5.00	30.00	5298.99	26.43	15.26	-26.51	0.00	440562.45	737577.15	
5400.00	5.00	30.00	5398.60	33.98	19.62	-34.08	0.00	440570.00	737581.51	
5500.00	5.00	30.00	5498.22	41.53	23.97	-41.65	0.00	440577.55	737585.86	
5600.00	5.00	30.00	5597.84	49.07	28.33	-49.22	0.00	440585.09	737590.22	
5700.00	5.00	30.00	5697.46	56.62	32.69	-56.79	0.00	440592.64	737594.58	
5800.00	5.00	30.00	5797.08	64.17	37.05	-64.36	0.00	440600.19	737598.94	
5900.00	5.00	30.00	5896.70	71.72	41.41	-71.93	0.00	440607.74	737603.30	
6000.00	5.00	30.00	5996.32	79.27	45.76	-79.50	0.00	440615.29	737607.65	Drop
6100.00	4.50	30.00	6095.98	86.44	49.90	-86.70	0.50	440622.46	737611.79	
6200.00	4.00	30.00	6195.70	92.85	53.61	-93.13	0.50	440628.87	737615.50	
6300.00	3.50	30.00	6295.49	98.52	56.88	-98.81	0.50	440634.54	737618.77	
6400.00	3.00	30.00	6395.33	103.43	59.71	-103.74	0.50	440639.45	737621.60	
6500.00	2.50	30.00	6495.21	107.58	62.11	-107.91	0.50	440643.60	737624.00	
6600.00	2.00	30.00	6595.13	110.98	64.08	-111.32	0.50	440647.00	737625.97	
6700.00	1.50	30.00	6695.09	113.63	65.60	-113.97	0.50	440649.65	737627.49	
6800.00	1.00	30.00	6795.06	115.52	66.69	-115.86	0.50	440651.54	737628.58	
6900.00	0.50	30.00	6895.05	116.65	67.35	-117.00	0.50	440652.67	737629.24	
7000.00	0.00	0.00	6995.05	117.03	67.57	-117.38	0.50	440653.05	737629.46	Hold
7100.00	0.00	0.00	7095.05	117.03	67.57	-117.38	0.00	440653.05	737629.46	
7200.00	0.00	0.00	7195.05	117.03	67.57	-117.38	0.00	440653.05	737629.46	
7300.00	0.00	0.00	7295.05	117.03	67.57	-117.38	0.00	440653.05	737629.46	
7400.00	0.00	0.00	7395.05	117.03	67.57	-117.38	0.00	440653.05	737629.46	
7500.00	0.00	0.00	7495.05	117.03	67.57	-117.38	0.00	440653.05	737629.46	
7600.00	0.00	0.00	7595.05	117.03	67.57	-117.38	0.00	440653.05	737629.46	
7700.00	0.00	0.00	7695.05	117.03	67.57	-117.38	0.00	440653.05	737629.46	
7800.00	0.00	0.00	7795.05	117.03	67.57	-117.38	0.00	440653.05	737629.46	
7900.00	0.00	0.00	7895.05	117.03	67.57	-117.38	0.00	440653.05	737629.46	
8000.00	0.00	0.00	7995.05	117.03	67.57	-117.38	0.00	440653.05	737629.46	
8100.00	0.00	0.00	8095.05	117.03	67.57	-117.38	0.00	440653.05	737629.46	
8200.00	0.00	0.00	8195.05	117.03	67.57	-117.38	0.00	440653.05	737629.46	
8300.00	0.00	0.00	8295.05	117.03	67.57	-117.38	0.00	440653.05	737629.46	
8400.00	0.00	0.00	8395.05	117.03	67.57	-117.38	0.00	440653.05	737629.46	
8500.00	0.00	0.00	8495.05	117.03	67.57	-117.38	0.00	440653.05	737629.46	
8600.00	0.00	0.00	8595.05	117.03	67.57	-117.38	0.00	440653.05	737629.46	
8700.00	0.00	0.00	8695.05	117.03	67.57	-117.38	0.00	440653.05	737629.46	
8800.00	0.00	0.00	8795.05	117.03	67.57	-117.38	0.00	440653.05	737629.46	
8900.00	0.00	0.00	8895.05	117.03	67.57	-117.38	0.00	440653.05	737629.46	
9000.00	0.00	0.00	8995.05	117.03	67.57	-117.38	0.00	440653.05	737629.46	
9100.00	0.00	0.00	9095.05	117.03	67.57	-117.38	0.00	440653.05	737629.46	
9200.00	0.00	0.00	9195.05	117.03	67.57	-117.38	0.00	440653.05	737629.46	
9300.00	0.00	0.00	9295.05	117.03	67.57	-117.38	0.00	440653.05	737629.46	
9400.00	0.00	0.00	9395.05	117.03	67.57	-117.38	0.00	440653.05	737629.46	
9500.00	0.00	0.00	9495.05	117.03	67.57	-117.38	0.00	440653.05	737629.46	
9600.00	0.00	0.00	9595.05	117.03	67.57	-117.38	0.00	440653.05	737629.46	
9700.00	0.00	0.00	9695.05	117.03	67.57	-117.38	0.00	440653.05	737629.46	
9800.00	0.00	0.00	9795.05	117.03	67.57	-117.38	0.00	440653.05	737629.46	

5D Plan Report

Interpolated Points: (Relative to Slot centre)(TVD relative to Kelly Bushing)										
MD (US ft)	Inc (°)	Az (°)	TVD (US ft)	N.Offset (US ft)	E.Offset (US ft)	VS (US ft)	DLS (%/100US ft)	Northing (US ft)	Easting (US ft)	Comment
9900.00	0.00	0.00	9895.05	117.03	67.57	-117.38	0.00	440653.05	737629.46	
10000.00	0.00	0.00	9995.05	117.03	67.57	-117.38	0.00	440653.05	737629.46	
10100.00	0.00	0.00	10095.05	117.03	67.57	-117.38	0.00	440653.05	737629.46	
10200.00	0.00	0.00	10195.05	117.03	67.57	-117.38	0.00	440653.05	737629.46	
10226.10	0.00	0.00	10221.15	117.03	67.57	-117.38	0.00	440653.05	737629.46	KOP
10300.00	8.13	180.30	10294.80	111.79	67.54	-112.15	11.00	440647.81	737629.43	
10400.00	19.13	180.30	10391.84	88.27	67.42	-88.62	11.00	440624.29	737629.31	
10500.00	30.13	180.30	10482.60	46.66	67.20	-47.01	11.00	440582.68	737629.09	
10600.00	41.13	180.30	10563.76	-11.51	66.90	11.16	11.00	440524.51	737628.79	
10700.00	52.13	180.30	10632.32	-84.09	66.52	83.74	11.00	440451.93	737628.41	
10800.00	63.13	180.30	10685.78	-168.42	66.08	168.07	11.00	440367.60	737627.97	
10900.00	74.13	180.30	10722.17	-261.40	65.59	261.05	11.00	440274.62	737627.48	
11000.00	85.13	180.30	10740.14	-359.61	65.08	359.26	11.00	440176.41	737626.97	
11049.13	90.53	180.30	10742.00	-408.68	64.82	408.34	11.00	440127.34	737626.71	LP
11100.00	90.53	180.30	10741.52	-459.55	64.56	459.21	0.00	440076.47	737626.45	
11200.00	90.53	180.30	10740.59	-559.55	64.04	559.20	0.00	439976.47	737625.93	
11300.00	90.53	180.30	10739.66	-659.54	63.51	659.20	0.00	439876.48	737625.40	
11400.00	90.53	180.30	10738.73	-759.54	62.99	759.20	0.00	439776.48	737624.88	
11500.00	90.53	180.30	10737.80	-859.53	62.47	859.19	0.00	439676.49	737624.36	
11600.00	90.53	180.30	10736.87	-959.52	61.95	959.19	0.00	439576.50	737623.84	
11700.00	90.53	180.30	10735.94	-1059.52	61.43	1059.18	0.00	439476.50	737623.32	
11800.00	90.53	180.30	10735.01	-1159.51	60.90	1159.18	0.00	439376.51	737622.79	
11900.00	90.53	180.30	10734.08	-1259.51	60.38	1259.17	0.00	439276.51	737622.27	
12000.00	90.53	180.30	10733.15	-1359.50	59.86	1359.17	0.00	439176.52	737621.75	
12100.00	90.53	180.30	10732.21	-1459.50	59.34	1459.17	0.00	439076.52	737621.23	
12200.00	90.53	180.30	10731.28	-1559.49	58.82	1559.16	0.00	438976.53	737620.71	
12300.00	90.53	180.30	10730.35	-1659.48	58.29	1659.16	0.00	438876.54	737620.18	
12400.00	90.53	180.30	10729.42	-1759.48	57.77	1759.15	0.00	438776.54	737619.66	
12500.00	90.53	180.30	10728.49	-1859.47	57.25	1859.15	0.00	438676.55	737619.14	
12600.00	90.53	180.30	10727.56	-1959.47	56.73	1959.14	0.00	438576.55	737618.62	
12700.00	90.53	180.30	10726.63	-2059.46	56.21	2059.14	0.00	438476.56	737618.10	
12800.00	90.53	180.30	10725.70	-2159.46	55.68	2159.13	0.00	438376.56	737617.57	
12900.00	90.53	180.30	10724.77	-2259.45	55.16	2259.13	0.00	438276.57	737617.05	
13000.00	90.53	180.30	10723.84	-2359.44	54.64	2359.13	0.00	438176.58	737616.53	
13100.00	90.53	180.30	10722.90	-2459.44	54.12	2459.12	0.00	438076.58	737616.01	
13200.00	90.53	180.30	10721.97	-2559.43	53.60	2559.12	0.00	437976.59	737615.49	
13300.00	90.53	180.30	10721.04	-2659.43	53.07	2659.11	0.00	437876.59	737614.96	
13400.00	90.53	180.30	10720.11	-2759.42	52.55	2759.11	0.00	437776.60	737614.44	
13500.00	90.53	180.30	10719.18	-2859.42	52.03	2859.10	0.00	437676.60	737613.92	
13600.00	90.53	180.30	10718.25	-2959.41	51.51	2959.10	0.00	437576.61	737613.40	
13700.00	90.53	180.30	10717.32	-3059.40	50.99	3059.10	0.00	437476.62	737612.88	
13800.00	90.53	180.30	10716.39	-3159.40	50.47	3159.09	0.00	437376.62	737612.36	
13900.00	90.53	180.30	10715.46	-3259.39	49.94	3259.09	0.00	437276.63	737611.83	
14000.00	90.53	180.30	10714.53	-3359.39	49.42	3359.08	0.00	437176.63	737611.31	
14100.00	90.53	180.30	10713.59	-3459.38	48.90	3459.08	0.00	437076.64	737610.79	
14200.00	90.53	180.30	10712.66	-3559.38	48.38	3559.07	0.00	436976.64	737610.27	
14300.00	90.53	180.30	10711.73	-3659.37	47.86	3659.07	0.00	436876.65	737609.75	
14400.00	90.53	180.30	10710.80	-3759.36	47.33	3759.07	0.00	436776.66	737609.22	
14500.00	90.53	180.30	10709.87	-3859.36	46.81	3859.06	0.00	436676.66	737608.70	
14600.00	90.53	180.30	10708.94	-3959.35	46.29	3959.06	0.00	436576.67	737608.18	
14700.00	90.53	180.30	10708.01	-4059.35	45.77	4059.05	0.00	436476.67	737607.66	
14800.00	90.53	180.30	10707.08	-4159.34	45.25	4159.05	0.00	436376.68	737607.14	
14900.00	90.53	180.30	10706.15	-4259.34	44.72	4259.04	0.00	436276.68	737606.61	
15000.00	90.53	180.30	10705.22	-4359.33	44.20	4359.04	0.00	436176.69	737606.09	
15100.00	90.53	180.30	10704.28	-4459.33	43.68	4459.04	0.00	436076.69	737605.57	
15200.00	90.53	180.30	10703.35	-4559.32	43.16	4559.03	0.00	435976.70	737605.05	
15300.00	90.53	180.30	10702.42	-4659.31	42.64	4659.03	0.00	435876.71	737604.53	
15345.33	90.53	180.30	10702.00	-4704.64	42.40	4704.35	0.00	435831.38	737604.29	PBHL 6H

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

GeoDec4 v2.1.0.0

Report Date: May 28, 2015

Job Number: _____

Customer: Devon Energy

Well Name: Rebel 20 Fed 6H

API Number: _____

Rig Name: _____

Location: Lea Co, NM Nad83 NME

Block: _____

Engineer: RWJ

NAD83 / New Mexico East (ftUS)

Projected Coordinate System

Datum: North American Datum 1983 (1986)

Ellipsoid: GRS 1980

EPSG: 2257

North: 440536.02 US Survey Foot

East: 737561.89 US Survey Foot

Convergence: 0.34°

Declination: 7.32°

Total Correction: 6.98°

Datum Transformation: none

NAD83 (1986)

Geodetic Coordinate System

Datum: North American Datum 1983 (1986)

Ellipsoid: GRS 1980

EPSG: 4269

Latitude: 32.209518 Degree

Longitude: -103.698886 Degree

Geodetic Location WGS84

MSL Elevation = 0 m

Latitude = 32° 12' 34.27" N

Longitude = 103° 41' 55.99" W

Magnetic Declination = 7.32 deg

[True North Offset]

Local Gravity = .9988 g

Checksum = 6532

Local Field Strength = 48210 nT

Magnetic Vector X = 23836 nT

Magnetic Dip = 60.10 deg

Magnetic Vector Y = 3064 nT

Magnetic Model = bggm2015.dat

Magnetic Vector Z = 41794 nT

Run Date = July 30, 2015

Magnetic Vector H = 24032 nT

Signed: _____

Date: _____

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