

NM OIL CONSERVATION
ARTESIA DISTRICT

SEP 18 2014

District I
1625 N. French Dr., Hobbs, NM 88240
Phone: (575) 393-6161 Fax: (575) 393-0720
District II
511 S. First St., Artesia, NM 88210
Phone: (575) 748-1233 Fax: (575) 748-9720
District III
1000 Rio Brazos Road, Aztec, NM 87410
Phone: (505) 334-6178 Fax: (505) 334-6170
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505
Phone: (505) 476-3460 Fax: (505) 476-3462

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

RECEIVED

Form C-102
Revised August 1, 2011
Submit one copy to appropriate
District Office

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

¹ API Number 30-015-42658	² Pool Code 98056	³ Pool Name WC-015 G-04 S232628, Bone Spring
⁴ Property Code 40471	⁵ Property Name DAISY DUKE 31 STATE COM	⁶ Well Number 4H
⁷ OGRID No. 6137	⁸ Operator Name DEVON ENERGY PRODUCTION COMPANY, L.P.	⁹ Elevation 3361.6

¹⁰ Surface Location

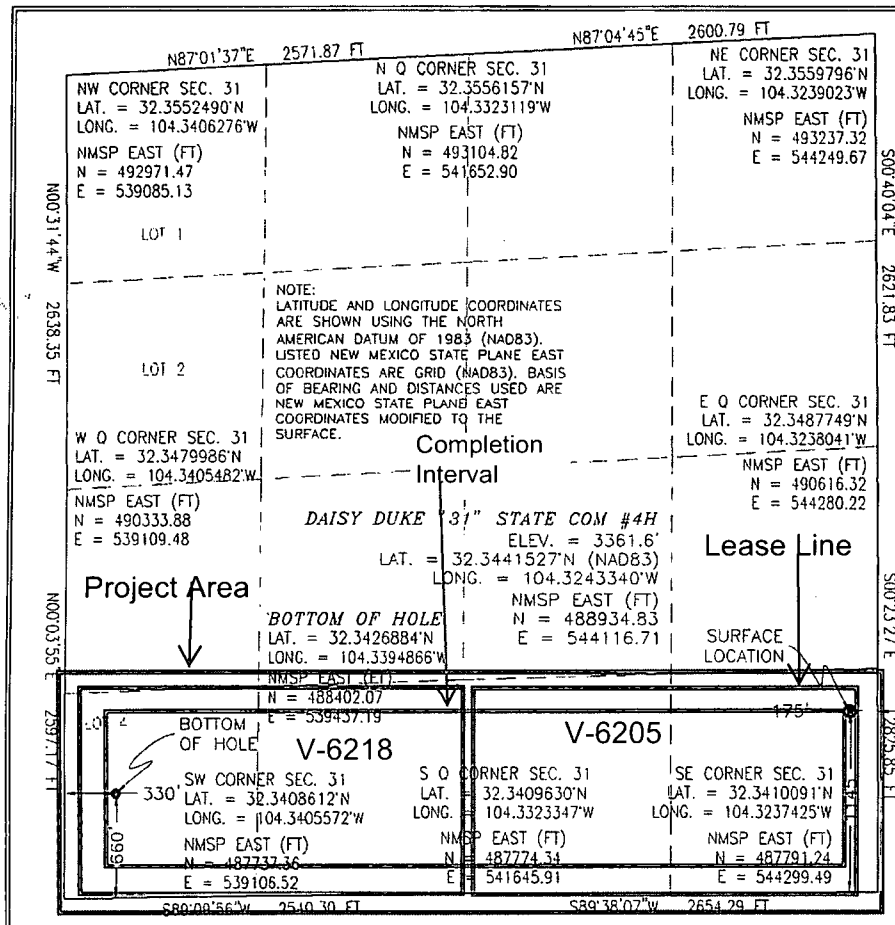
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
P	31	22 S	26 E		1145	SOUTH	175	EAST	EDDY

¹¹ Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
4	31	22 S	26 E		660	SOUTH	330	WEST	EDDY

¹² Dedicated Acres 157.74	¹³ Joint or Infill	¹⁴ Consolidation Code	¹⁵ Order No.
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No allowable will be assigned to this completion until all interests have been consolidated or a non-standard unit has been approved by the division.



¹⁷ OPERATOR CERTIFICATION

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

Linda Good 9/18/2014
Signature Date

Linda Good
Printed Name
linda.good@dvn.com
E-mail Address

¹⁸ SURVEYOR CERTIFICATION

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

APR 18 2014
Date of Survey
[Signature]
Signature and Seal of Professional Surveyor
Certificate Number: 11100 E. JARAMILLO, PLS 12797
SURVEY NO. 2726

DRILLING PROGRAM

Devon Energy Production Company, L.P.
Daisy Duke 31 State Com 4H

1. **Geologic Name of Surface Formation: Quaternary**
2. **Estimated Tops of Geological Markers & Depths of Anticipated FW, Oil, or Gas:**

a. Quaternary	0	Barren
b. Rustler	95	Barren
c. Capitan	678	Barren
d. Capitan Base	1227	Barren
e. Lamar	1231	Oil/Gas
f. Delaware	1604	Oil/Gas
g. Cherry Canyon	2408	Oil/Gas
h. Brushy Canyon	3325	Oil/Gas
i. Bone Spring Lm	4816	Oil/Gas
j. 1st Bone Spring Ss	5730	Oil/Gas
k. 2nd Bone Spring Lime	5937	Oil/Gas
l. 2nd Bone Spring Ss	6213	Oil/Gas

Total Depths	6230	TVD	10937	MD
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3. Pressure Control Equipment:

A 3M 13-5/8" BOP system (Double Ram and Annular preventer) will be installed and tested prior to drilling out the surface casing and intermediate shoes. The BOP system used to drill the intermediate hole will be tested per BLM Onshore Oil and Gas Order 2.

The pipe rams will be operated and checked each 24 hour period and each time the drill pipe is out of the hole. These tests will be logged in the daily driller's log. A 2" kill line and 3" choke line will be incorporated into the drilling spool below the ram BOP. In addition to the rams and annular preventer, additional BOP accessories include a kelly cock, floor safety valve, choke lines, and choke manifold rated at 5,000 psi WP.

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

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.

4. **Casing Program:**

Hole Size	Hole Interval	Casing OD	Casing Interval	Weight (lb/ft)	Collar	Grade	Collapse Design Factor	Burst Design Factor	Tension Design Factor
17-1/2"	0 - 400'	13-3/8"	0 - 400'	48	STC	H-40	4.11	9.24	16.77
12-1/4"	400-1590'	9-5/8"	0-1590'	36	LTC	J-55	2.44	4.26	7.91
8-3/4"	1590-10937'	5-1/2"	0-10937'	17	BTC	P-110	2.88	3.57	4.57

Casing Notes:

- All casing is new and API approved
- The casing will never be completely evacuated of fluid

Maximum TVD: 6363'

5. **Proposed mud Circulations System:**

Depth	Mud Weight	Viscosity	Fluid Loss	Type System
0 - 400'	8.4-9.0	30-34	N/C	FW
400-1590'	10.0-10.1	28-32	N/C	Brine
1590-10937'	8.6-9.0	28-32	N/C	FW

The necessary mud products for weight addition and fluid loss control will be on location at all times. Visual mud monitoring equipment will be in place to detect volume changes indicating loss or gain of circulating fluid volume. If abnormal pressures are encountered, electronic/mechanical mud monitoring equipment will be installed.

6. Cementing Table:

String	Number of sx	Weight lbs/gal	Water Volume g/sx	Yield cf/sx	Stage; Lead/Tail	Slurry Description
13-3/8" Surface	450	14.8	6.32	1.33	Tail	Class C Cement + 63.5% Fresh Water
9-5/8" Intermediate Single Stage	290	12.9	9.81	1.85	Lead	(65:35) Class C Cement: Poz (Fly Ash): 6% BWOC Bentonite + 5% BWOW Sodium Chloride + 0.125 lbs/sack Poly-E-Flake + 70.9 % Fresh Water
	220	14.8	6.32	1.33	Tail	Class C Cement + 0.125 lbs/sack Poly-E-Flake + 63.5% Fresh Water
5-1/2" Production Casing Single Stage	580	11.0	14.81	2.55	Lead	Tuned Light Blend + 0.125 lb/sk Pol-E-Flake + 77.6% Fresh Water
	1350	14.5	5.38	1.21	Tail	(50:50) Class H Cement: Poz (Fly Ash) + 0.5% bwoc HALAD-344 + 0.25% bwoc CFR-3 + 0.2% bwoc HR-601 + 2% bwoc Bentonite + 58.8% Fresh Water
5-1/2" Production Casing 2-Stage Option	220	12.5	10.86	1.96	Lead	(65:35) Class H Cement: Poz (Fly Ash) + 6% BWOC Bentonite + 0.25% BWOC HR-601 + 0.125 lbs/sack Poly-E-Flake + 74.1 % Fresh Water
	1350	14.5	5.32	1.21	Tail	(50:50) Class H Cement: Poz (Fly Ash) + 0.5% bwoc HALAD-344 + 0.25% bwoc CFR-3 + 0.2% bwoc HR-601 + 2% bwoc Bentonite + 58.8% Fresh Water
	DV Tool @ 4500ft					
	400	11.9	12.89	2.26	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 + 76.4% Fresh Water
	120	14.8	6.32	1.33	Tail	Class C Cement + 0.125 lbs/sack Poly-E-Flake + 63.5% Fresh Water

TOC for all Strings:

Surface @ 0'
 Intermediate I @ 0'
 Production @ 1090'

Notes:

- Cement volumes Surface 100%, Intermediate 75% and Production based on at least 25% excess
- Actual cement volumes will be adjusted based on fluid caliper and/or caliper log data
- If lost circulation is encountered while drilling the production wellbore, a DV tool will be installed a minimum of 50' below the previous casing shoe and of 200' above the current shoe. If the DV tool has to be moved, the cement volumes will be adjusted proportionately.

5D Plan Report

NM OIL CONSERVATION
ARTESIA DISTRICT

SEP 18 2014

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5D Plan Report**Devon Energy**

Field Name: *Eddy Co, NM (Nad 83 NME)*
Site Name: *Daisy Duke 31 State Com 4H*
Well Name: *Daisy Duke 31 State Com 4H*
Plan: *P1:V1*

25 August 2014



Daisy Duke 31 State Com 4H

Field Name Eddy Co, NM (Nad 83 NME)	Map Units : US ft Vertical Reference Datum (VRD) : Mean Sea Level Projected Coordinate System : NAD83 / New Mexico East (ftUS) Comment :		Company Name : Devon Energy	
Site Name Daisy Duke 31 State Com 4H	Units : US ft Position	North Reference : Grid Northing : 488934.83 US ft Easting : 544116.71 US ft	Convergence Angle : 0.00 Latitude : 32° 20' 38.95" Longitude : -104° 19' 27.60" Elevation above Mean Sea Level: 3362.00 US ft Comment :	
Slot Name Daisy Duke 31 State Com 4H	Position (Offsets relative to Site Centre) +N / -S : 0.00 US ft Northing : 488934.83 US ft Latitude : 32°20'38.95" +E / -W : 0.00 US ft Easting : 544116.71 US ft Longitude : -104°19'27.60" Slot TVD Reference : Ground Elevation Elevation above Mean Sea Level : 3362.00 US ft Comment :			
Well Name Daisy Duke 31 State Com 4H	Type : Main well UWI : Plan : P1:V1 Rig Height <i>Kelly Bushing</i> : 26.00 US ft Comment : Relative to Mean Sea Level: 3388.00 US ft Closure Distance : 4709.75 US ft Closure Azimuth : 263.505° Vertical Section (Position of Origin Relative to Slot) +N / -S : 0.00 US ft +E / -W : 0.00 US ft Az : 267.61° Magnetic Parameters Model : BGGM Field Strength : 48236.5nT Dec : 7.70° Dip : 60.07° Date : 15/Nov/2014			

Target Set

Name : Daisy Duke 31 State **Number of Targets :** 1
Com 4H

Comment :

Target Name: PHBL 4H Shape: Cuboid	Position (Relative to Slot centre) +N / -S : -532.76US ft Northing : 488402.07 US ft Latitude : 32°20'33.68" +E / -W : -4679.52 US ft Easting : 539437.19US ft Longitude : -104°20'22.15" TV D (Kelly Bushing) : 6230.00 US ft Orientation Azimuth : 267.61° Inclination : 1.86° Dimensions Length : 8283.00 US ft Breadth : 50.00 US ft Height : 20.00 US ft
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Well path created using minimum curvature

5D Plan Report

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 (%/100 US ft)	B. Rate (%/100 US ft)	T. Rate (%/100 US 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	
5834.00	0.00	0.00	5834.00	0.00	0.00	-0.00	0.00	0.00	0.00	0.00	KOP
6334.00	60.00	220.00	6247.50	-182.88	-153.45	160.95	12.00	12.00	0.00	220.00	Build/Turn
6795.97	91.86	267.61	6364.77	-359.78	-543.62	558.15	12.00	6.90	10.30	63.68	LP
10937.68	91.86	267.61	6230.00	-532.76	-4679.52	4697.67	0.00	0.00	0.00	0.00	PBHL 4H

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 (%/100 US ft)	Northing (US ft)	Easting (US ft)		Comment
5800.00	0.00	0.00	5800.00	0.00	0.00	-0.00	0.00	488934.83	544116.71		
5834.00	0.00	0.00	5834.00	0.00	0.00	-0.00	0.00	488934.83	544116.71		KOP
5900.00	7.92	220.00	5899.79	-3.49	-2.93	3.07	12.00	488931.34	544113.78		
6000.00	19.92	220.00	5996.68	-21.88	-18.36	19.26	12.00	488912.95	544098.35		
6100.00	31.92	220.00	6086.45	-55.31	-46.41	48.67	12.00	488879.52	544070.30		
6200.00	43.92	220.00	6165.20	-102.30	-85.84	90.03	12.00	488832.53	544030.87		
6300.00	55.92	220.00	6229.46	-160.81	-134.93	141.52	12.00	488774.02	543981.78		
6334.00	60.00	220.00	6247.50	-182.88	-153.45	160.95	12.00	488751.95	543963.26		Build/Turn
6400.00	63.75	227.92	6278.64	-224.68	-193.85	203.05	12.00	488710.15	543922.86		
6500.00	70.17	238.94	6317.87	-279.19	-267.70	279.11	12.00	488655.64	543849.01		
6600.00	77.21	249.08	6346.00	-321.02	-353.85	366.93	12.00	488613.81	543762.86		
6700.00	84.62	258.65	6361.82	-348.34	-448.55	462.68	12.00	488586.49	543668.16		
6795.97	91.86	267.61	6364.77	-359.78	-543.62	558.15	12.00	488575.05	543573.09		LP
6800.00	91.86	267.61	6364.64	-359.95	-547.65	562.18	0.00	488574.88	543569.06		
6900.00	91.86	267.61	6361.38	-364.13	-647.51	662.13	0.00	488570.70	543469.20		
7000.00	91.86	267.61	6358.13	-368.31	-747.37	762.07	0.00	488566.52	543369.34		
7100.00	91.86	267.61	6354.87	-372.48	-847.23	862.02	0.00	488562.35	543269.48		
7200.00	91.86	267.61	6351.62	-376.66	-947.08	961.97	0.00	488558.17	543169.63		
7300.00	91.86	267.61	6348.37	-380.84	-1046.94	1061.92	0.00	488553.99	543069.77		
7400.00	91.86	267.61	6345.11	-385.01	-1146.80	1161.86	0.00	488549.82	542969.91		
7500.00	91.86	267.61	6341.86	-389.19	-1246.66	1261.81	0.00	488545.64	542870.05		
7600.00	91.86	267.61	6338.60	-393.36	-1346.52	1361.76	0.00	488541.47	542770.19		
7700.00	91.86	267.61	6335.35	-397.54	-1446.38	1461.70	0.00	488537.29	542670.33		
7800.00	91.86	267.61	6332.10	-401.72	-1546.24	1561.65	0.00	488533.11	542570.47		
7900.00	91.86	267.61	6328.84	-405.89	-1646.10	1661.60	0.00	488528.94	542470.61		
8000.00	91.86	267.61	6325.59	-410.07	-1745.96	1761.54	0.00	488524.76	542370.75		
8100.00	91.86	267.61	6322.33	-414.25	-1845.82	1861.49	0.00	488520.58	542270.89		
8200.00	91.86	267.61	6319.08	-418.42	-1945.68	1961.44	0.00	488516.41	542171.03		
8300.00	91.86	267.61	6315.83	-422.60	-2045.54	2061.39	0.00	488512.23	542071.17		
8400.00	91.86	267.61	6312.57	-426.78	-2145.40	2161.33	0.00	488508.05	541971.31		
8500.00	91.86	267.61	6309.32	-430.95	-2245.26	2261.28	0.00	488503.88	541871.45		
8600.00	91.86	267.61	6306.07	-435.13	-2345.12	2361.23	0.00	488499.70	541771.59		
8700.00	91.86	267.61	6302.81	-439.31	-2444.98	2461.17	0.00	488495.52	541671.73		
8800.00	91.86	267.61	6299.56	-443.48	-2544.84	2561.12	0.00	488491.35	541571.87		
8900.00	91.86	267.61	6296.30	-447.66	-2644.70	2661.07	0.00	488487.17	541472.01		
9000.00	91.86	267.61	6293.05	-451.83	-2744.56	2761.01	0.00	488483.00	541372.15		
9100.00	91.86	267.61	6289.80	-456.01	-2844.42	2860.96	0.00	488478.82	541272.29		
9200.00	91.86	267.61	6286.54	-460.19	-2944.28	2960.91	0.00	488474.64	541172.43		
9300.00	91.86	267.61	6283.29	-464.36	-3044.14	3060.86	0.00	488470.47	541072.57		
9400.00	91.86	267.61	6280.03	-468.54	-3144.00	3160.80	0.00	488466.29	540972.71		
9500.00	91.86	267.61	6276.78	-472.72	-3243.86	3260.75	0.00	488462.11	540872.85		
9600.00	91.86	267.61	6273.53	-476.89	-3343.72	3360.70	0.00	488457.94	540772.99		
9700.00	91.86	267.61	6270.27	-481.07	-3443.58	3460.64	0.00	488453.76	540673.13		
9800.00	91.86	267.61	6267.02	-485.25	-3543.44	3560.59	0.00	488449.58	540573.27		
9900.00	91.86	267.61	6263.76	-489.42	-3643.30	3660.54	0.00	488445.41	540473.41		
10000.00	91.86	267.61	6260.51	-493.60	-3743.16	3760.49	0.00	488441.23	540373.55		
10100.00	91.86	267.61	6257.26	-497.78	-3843.02	3860.43	0.00	488437.05	540273.69		
10200.00	91.86	267.61	6254.00	-501.95	-3942.88	3960.38	0.00	488432.88	540173.83		
10300.00	91.86	267.61	6250.75	-506.13	-4042.74	4060.33	0.00	488428.70	540073.97		
10400.00	91.86	267.61	6247.50	-510.30	-4142.60	4160.27	0.00	488424.53	539974.11		

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 (°/100 US ft)	Northing (US ft)	Easting (US ft)	Comment
10500.00	91.86	267.61	6244.24	-514.48	-4242.46	4260.22	0.00	488420.35	539874.25	
10600.00	91.86	267.61	6240.99	-518.66	-4342.32	4360.17	0.00	488416.17	539774.39	
10700.00	91.86	267.61	6237.73	-522.83	-4442.18	4460.11	0.00	488412.00	539674.53	
10800.00	91.86	267.61	6234.48	-527.01	-4542.04	4560.06	0.00	488407.82	539574.67	
10900.00	91.86	267.61	6231.23	-531.19	-4641.90	4660.01	0.00	488403.64	539474.81	
10937.68	91.86	267.61	6230.00	-532.76	-4679.52	4697.67	0.00	488402.07	539437.19	PBHL 4H

**Weatherford**

Weatherford Drilling Services

GeoDec4 v2.0.0.3

Report Date: August 25, 2014
Job Number: _____
Customer: Devon Energy
Well Name: Daisy Duke 31 State Com 4H
API Number: _____
Rig Name: _____
Location: Eddy Co, NM Nad83 NME
Block: _____
Engineer: RWJ

NAD83 / New Mexico East (ftUS)	NAD83 (1986)
Projected Coordinate System	Geodetic Coordinate System
Datum: North American Datum 1983 (1986)	Datum: North American Datum 1983 (1986)
Ellipsoid: GRS 1980	Ellipsoid: GRS 1980
EPSG: 2257	EPSG: 4269
North: 488934.83 US Survey Foot	Latitude: 32.344153 Degree
East: 544116.71 US Survey Foot	Longitude: -104.324334 Degree
Convergence: 0.00°	
Declination: 7.70°	
Total Correction: 7.70°	
Datum Transformation: none	

Geodetic Location WGS84

MSL Elevation = 0 m
Latitude = 32° 20' 38.95" N
Longitude = 104° 19' 27.60" W

Magnetic Declination = 7.70 deg	[True North Offset]
Local Gravity = .9988 g	Checksum = 6581
Local Field Strength = 48237 nT	Magnetic Vector X = 23849 nT
Magnetic Dip = 60.07 deg	Magnetic Vector Y = 3223 nT
Magnetic Model = bggm2014.dat	Magnetic Vector Z = 41804 nT
Run Date = November 15, 2014	Magnetic Vector H = 24065 nT

Signed: _____ Date: _____