



EOG Resources - Artesia

Eddy County (NAD83)

Boyd

Boyd X State Com #17H

Lateral

Plan: Plan #1

Standard Planning Report

31 July, 2018

**NM OIL CONSERVATION
ARTESIA DISTRICT**

AUG 02 2018

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Planning Report

Database: EDM 5000.14
Company: EOG Resources - Artesia
Project: Eddy County (NAD83)
Site: Boyd
Well: Boyd X State Com #17H
Wellbore: Lateral
Design: Plan #1

Local Co-ordinate Reference: Well Boyd X State Com #17H
TVD Reference: KB @ 3492.000usft (Training Rig)
MD Reference: KB @ 3492.000usft (Training Rig)
North Reference: Grid
Survey Calculation Method: Minimum Curvature

Project	Eddy County (NAD83)		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	New Mexico Eastern Zone		

Site:	Boyd		
Site Position:	Northing:	604,833.30 usft	Latitude: 32° 39' 45.475 N
From: Map	Easting:	492,327.60 usft	Longitude: 104° 29' 33.330 W
Position Uncertainty:	0.000 usft	Slot Radius: 13-3/16 "	Grid Convergence: -0.09 °

Well	Boyd X State Com #17H		
Well Position	+N/-S	-1,193.460 usft	Northing: 603,639.84 usft
	+E/-W	-2,268.310 usft	Easting: 490,059.29 usft
Position Uncertainty	0.000 usft	Wellhead Elevation:	3,523.000 usft
			Ground Level: 3,505.000 usft

Wellbore	Lateral		
Magnetics	Model Name	Sample Date	Declination
	IGRF2015	5/16/2018	(°) 7.32
			Dip Angle (°) 60.30
			Field Strength (nT) 48,001.13561063

Design	Plan #1		
Audit Notes:			
Version:	Phase:	PROTOTYPE	Tie On Depth: 0.000
Vertical Section:	Depth From (TVD)	+N/-S	+E/-W
	(usft)	(usft)	(usft)
	0.000	0.000	0.000
			Direction (°) 97.506

Plan Survey Tool Program	Date 7/26/2018		
Depth From	Depth To	Survey (Wellbore)	Tool Name
(usft)	(usft)		
1 0.000	8,314.779	Plan #1 (Lateral)	MWD
			OWSG MWD - Standard

Plan Sections										
Measured	Inclination	Azimuth	Vertical	+N/-S	+E/-W	Dogleg	Build	Turn	TFO	Target
Depth	(°)	(°)	Depth	(usft)	(usft)	Rate	Rate	Rate	(°)	
(usft)			(usft)			(°/100usft)	(°/100usft)	(°/100usft)		
0.000	0.00	0.000	0.000	0.000	0.000	0.00	0.00	0.00	0.00	
1,250.000	0.00	0.000	1,250.000	0.000	0.000	0.00	0.00	0.00	0.00	
1,784.503	0.00	0.000	1,784.503	0.000	0.000	0.00	0.00	0.00	0.00	
2,451.170	60.00	168.000	2,335.832	-311.354	66.180	9.00	9.00	0.00	168.00	
2,526.170	60.00	168.000	2,373.332	-374.887	79.685	0.00	0.00	0.00	0.00	
3,183.681	89.27	90.413	2,574.777	-710.546	543.289	12.00	4.45	-11.80	-84.36	
8,314.779	89.27	90.413	2,640.000	-747.530	5,873.840	0.00	0.00	0.00	0.00	[BSC#17H]BHL1



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Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N-S (usft)	+E-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
0.000	0.00	0.000	0.000	0.000	0.000	0.000	0.00	0.00	0.00
100.000	0.00	0.000	100.000	0.000	0.000	0.000	0.00	0.00	0.00
200.000	0.00	0.000	200.000	0.000	0.000	0.000	0.00	0.00	0.00
300.000	0.00	0.000	300.000	0.000	0.000	0.000	0.00	0.00	0.00
400.000	0.00	0.000	400.000	0.000	0.000	0.000	0.00	0.00	0.00
500.000	0.00	0.000	500.000	0.000	0.000	0.000	0.00	0.00	0.00
600.000	0.00	0.000	600.000	0.000	0.000	0.000	0.00	0.00	0.00
700.000	0.00	0.000	700.000	0.000	0.000	0.000	0.00	0.00	0.00
800.000	0.00	0.000	800.000	0.000	0.000	0.000	0.00	0.00	0.00
900.000	0.00	0.000	900.000	0.000	0.000	0.000	0.00	0.00	0.00
1,000.000	0.00	0.000	1,000.000	0.000	0.000	0.000	0.00	0.00	0.00
1,100.000	0.00	0.000	1,100.000	0.000	0.000	0.000	0.00	0.00	0.00
1,200.000	0.00	0.000	1,200.000	0.000	0.000	0.000	0.00	0.00	0.00
1,250.000	0.00	0.000	1,250.000	0.000	0.000	0.000	0.00	0.00	0.00
1,300.000	0.00	0.000	1,300.000	0.000	0.000	0.000	0.00	0.00	0.00
1,400.000	0.00	0.000	1,400.000	0.000	0.000	0.000	0.00	0.00	0.00
1,500.000	0.00	0.000	1,500.000	0.000	0.000	0.000	0.00	0.00	0.00
1,600.000	0.00	0.000	1,600.000	0.000	0.000	0.000	0.00	0.00	0.00
1,700.000	0.00	0.000	1,700.000	0.000	0.000	0.000	0.00	0.00	0.00
1,784.503	0.00	0.000	1,784.503	0.000	0.000	0.000	0.00	0.00	0.00
KOP 9°/100' BUILD RATE									
1,800.000	1.39	168.000	1,799.998	-0.184	0.039	0.083	9.00	9.00	0.00
1,850.000	5.89	168.000	1,849.884	-3.293	0.700	1.124	9.00	9.00	0.00
1,900.000	10.39	168.000	1,899.367	-10.220	2.172	3.489	9.00	9.00	0.00
1,950.000	14.89	168.000	1,948.142	-20.923	4.447	7.142	9.00	9.00	0.00
2,000.000	19.39	168.000	1,995.908	-35.337	7.511	12.062	9.00	9.00	0.00
2,050.000	23.89	168.000	2,042.371	-53.372	11.344	18.219	9.00	9.00	0.00
2,100.000	28.39	168.000	2,087.243	-74.917	15.924	25.573	9.00	9.00	0.00
2,150.000	32.89	168.000	2,130.249	-99.839	21.221	34.081	9.00	9.00	0.00
2,200.000	37.39	168.000	2,171.124	-127.985	27.204	43.689	9.00	9.00	0.00
2,250.000	41.89	168.000	2,209.815	-159.181	33.835	54.338	9.00	9.00	0.00
2,300.000	46.39	168.000	2,245.485	-193.235	41.073	65.982	9.00	9.00	0.00
2,350.000	50.89	168.000	2,278.512	-229.937	48.875	78.490	9.00	9.00	0.00
2,400.000	55.39	168.000	2,308.485	-269.060	57.190	91.848	9.00	9.00	0.00
2,451.170	60.00	168.000	2,335.832	-311.354	66.180	106.283	9.00	9.00	0.00
START 75° TANGENT									
2,500.000	60.00	168.000	2,360.247	-352.718	74.973	120.403	0.00	0.00	0.00
2,526.170	60.00	168.000	2,373.332	-374.887	79.685	127.970	0.00	0.00	0.00
END 60° TANGENT									
2,550.000	60.32	164.724	2,385.191	-394.970	84.558	135.426	12.00	1.35	-13.75
2,575.000	60.75	161.313	2,397.492	-415.782	90.915	144.447	12.00	1.69	-13.65
2,600.000	61.25	157.932	2,409.815	-436.275	98.529	154.672	12.00	2.04	-13.52
2,625.000	61.85	154.587	2,421.527	-456.391	107.378	166.072	12.00	2.37	-13.38
2,650.000	62.52	151.282	2,433.196	-476.075	117.438	178.618	12.00	2.69	-13.22
2,675.000	63.27	148.018	2,444.589	-495.275	128.683	192.274	12.00	3.00	-13.05
2,700.000	64.09	144.800	2,455.675	-513.936	141.080	207.002	12.00	3.28	-12.87
2,725.000	64.89	141.628	2,466.425	-532.009	154.596	222.763	12.00	3.57	-12.69
2,750.000	65.95	138.503	2,476.807	-549.443	169.194	239.514	12.00	3.84	-12.50
2,775.000	66.97	135.427	2,486.795	-566.191	184.834	257.207	12.00	4.09	-12.31
2,800.000	68.05	132.397	2,496.361	-582.207	201.474	275.796	12.00	4.32	-12.12
2,825.000	69.18	129.415	2,505.477	-597.446	219.086	295.229	12.00	4.54	-11.93
2,850.000	70.37	126.479	2,514.120	-611.868	237.564	315.452	12.00	4.74	-11.75
2,875.000	71.60	123.586	2,522.266	-625.432	256.916	338.410	12.00	4.93	-11.57



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2,900.000	72.88	120.735	2,529.892	-638.102	277.070	358.046	12.00	5.10	-11.40
2,925.000	74.20	117.923	2,536.978	-649.842	297.970	380.301	12.00	5.26	-11.25
2,950.000	75.55	115.149	2,543.503	-660.621	319.560	403.113	12.00	5.41	-11.10
2,975.000	76.93	112.408	2,549.451	-670.409	341.778	426.420	12.00	5.53	-10.96
3,000.000	78.34	109.698	2,554.805	-679.179	364.566	450.158	12.00	5.65	-10.84
3,025.000	79.78	107.016	2,559.550	-686.907	387.860	474.262	12.00	5.75	-10.73
3,050.000	81.24	104.358	2,563.673	-693.572	411.597	498.666	12.00	5.83	-10.63
3,075.000	82.72	101.721	2,567.163	-699.155	435.712	523.303	12.00	5.91	-10.55
3,100.000	84.21	99.101	2,570.010	-703.642	460.137	548.106	12.00	5.97	-10.48
3,125.000	85.71	96.495	2,572.207	-707.020	484.808	573.006	12.00	6.02	-10.42
3,150.000	87.22	93.900	2,573.747	-709.280	509.655	597.935	12.00	6.05	-10.38
3,175.000	88.74	91.311	2,574.627	-710.415	534.611	622.826	12.00	6.07	-10.36
3,183.681	89.27	90.413	2,574.777	-710.546	543.289	631.447	12.00	6.08	-10.34
[BSC#17H]EOC1 3184' MD (2575' TVD)									
3,200.000	89.27	90.413	2,574.984	-710.663	559.606	647.640	0.00	0.00	0.00
3,233.516	89.27	90.413	2,575.410	-710.905	593.119	680.897	0.00	0.00	0.00
[BSC#17H]FTP1 3234' MD (2575' TVD)									
3,300.000	89.27	90.413	2,576.255	-711.384	659.596	746.867	0.00	0.00	0.00
3,400.000	89.27	90.413	2,577.527	-712.105	759.585	846.083	0.00	0.00	0.00
3,500.000	89.27	90.413	2,578.798	-712.826	859.574	945.320	0.00	0.00	0.00
3,600.000	89.27	90.413	2,580.069	-713.547	959.564	1,044.547	0.00	0.00	0.00
3,700.000	89.27	90.413	2,581.340	-714.267	1,059.553	1,143.774	0.00	0.00	0.00
3,800.000	89.27	90.413	2,582.611	-714.988	1,159.542	1,243.000	0.00	0.00	0.00
3,900.000	89.27	90.413	2,583.882	-715.709	1,259.532	1,342.227	0.00	0.00	0.00
4,000.000	89.27	90.413	2,585.153	-716.430	1,359.521	1,441.454	0.00	0.00	0.00
4,100.000	89.27	90.413	2,586.425	-717.151	1,459.510	1,540.681	0.00	0.00	0.00
4,200.000	89.27	90.413	2,587.696	-717.871	1,559.500	1,639.908	0.00	0.00	0.00
4,300.000	89.27	90.413	2,588.967	-718.592	1,659.489	1,739.134	0.00	0.00	0.00
4,400.000	89.27	90.413	2,590.238	-719.313	1,759.478	1,838.361	0.00	0.00	0.00
4,500.000	89.27	90.413	2,591.509	-720.034	1,859.468	1,937.588	0.00	0.00	0.00
4,600.000	89.27	90.413	2,592.780	-720.754	1,959.457	2,036.815	0.00	0.00	0.00
4,700.000	89.27	90.413	2,594.051	-721.475	2,059.446	2,136.042	0.00	0.00	0.00
4,800.000	89.27	90.413	2,595.322	-722.196	2,159.435	2,235.268	0.00	0.00	0.00
4,900.000	89.27	90.413	2,596.594	-722.917	2,259.425	2,334.495	0.00	0.00	0.00
5,000.000	89.27	90.413	2,597.865	-723.638	2,359.414	2,433.722	0.00	0.00	0.00
5,100.000	89.27	90.413	2,599.136	-724.358	2,459.403	2,532.949	0.00	0.00	0.00
5,200.000	89.27	90.413	2,600.407	-725.079	2,559.393	2,632.176	0.00	0.00	0.00
5,300.000	89.27	90.413	2,601.678	-725.800	2,659.382	2,731.402	0.00	0.00	0.00
5,400.000	89.27	90.413	2,602.949	-726.521	2,759.371	2,830.629	0.00	0.00	0.00
5,500.000	89.27	90.413	2,604.220	-727.241	2,859.361	2,929.856	0.00	0.00	0.00
5,600.000	89.27	90.413	2,605.491	-727.962	2,959.350	3,029.083	0.00	0.00	0.00
5,700.000	89.27	90.413	2,606.763	-728.683	3,059.339	3,128.310	0.00	0.00	0.00
5,800.000	89.27	90.413	2,608.034	-729.404	3,159.329	3,227.536	0.00	0.00	0.00
5,900.000	89.27	90.413	2,609.305	-730.125	3,259.318	3,326.763	0.00	0.00	0.00
6,000.000	89.27	90.413	2,610.576	-730.845	3,359.307	3,425.990	0.00	0.00	0.00
6,100.000	89.27	90.413	2,611.847	-731.566	3,459.297	3,525.217	0.00	0.00	0.00
6,200.000	89.27	90.413	2,613.118	-732.287	3,559.286	3,624.443	0.00	0.00	0.00
6,300.000	89.27	90.413	2,614.389	-733.008	3,659.275	3,723.670	0.00	0.00	0.00
6,400.000	89.27	90.413	2,615.661	-733.729	3,759.265	3,822.897	0.00	0.00	0.00
6,500.000	89.27	90.413	2,616.932	-734.449	3,859.254	3,922.124	0.00	0.00	0.00
6,600.000	89.27	90.413	2,618.203	-735.170	3,959.243	4,021.351	0.00	0.00	0.00
6,700.000	89.27	90.413	2,619.474	-735.891	4,059.233	4,120.577	0.00	0.00	0.00
6,800.000	89.27	90.413	2,620.745	-736.612	4,159.222	4,219.804	0.00	0.00	0.00
6,900.000	89.27	90.413	2,622.016	-737.332	4,259.211	4,319.031	0.00	0.00	0.00



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7,000.000	89.27	90.413	2,623.287	-738.053	4,359.200	4,418.258	0.00	0.00	0.00
7,100.000	89.27	90.413	2,624.558	-738.774	4,459.190	4,517.485	0.00	0.00	0.00
7,200.000	89.27	90.413	2,625.830	-739.495	4,559.179	4,616.711	0.00	0.00	0.00
7,300.000	89.27	90.413	2,627.101	-740.216	4,659.168	4,715.938	0.00	0.00	0.00
7,400.000	89.27	90.413	2,628.372	-740.936	4,759.158	4,815.165	0.00	0.00	0.00
7,500.000	89.27	90.413	2,629.643	-741.657	4,859.147	4,914.392	0.00	0.00	0.00
7,600.000	89.27	90.413	2,630.914	-742.378	4,959.136	5,013.619	0.00	0.00	0.00
7,700.000	89.27	90.413	2,632.185	-743.099	5,059.126	5,112.845	0.00	0.00	0.00
7,800.000	89.27	90.413	2,633.456	-743.820	5,159.115	5,212.072	0.00	0.00	0.00
7,900.000	89.27	90.413	2,634.727	-744.540	5,259.104	5,311.299	0.00	0.00	0.00
8,000.000	89.27	90.413	2,635.998	-745.261	5,359.094	5,410.526	0.00	0.00	0.00
8,100.000	89.27	90.413	2,637.270	-745.982	5,459.083	5,509.752	0.00	0.00	0.00
8,200.000	89.27	90.413	2,638.541	-746.703	5,559.072	5,608.979	0.00	0.00	0.00
8,300.000	89.27	90.413	2,639.812	-747.423	5,659.062	5,708.206	0.00	0.00	0.00
8,314.779	89.27	90.413	2,640.000	-747.530	5,673.840	5,722.872	0.00	0.00	0.00

[BSC#17H]BHL1 8318' MD (2640' TVD)

Design Targets

Target Name

- hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
[BSC#17H]FTP	0.00	0.000	2,575.000	-715.690	593.090	602,924.15	490,652.38	32° 39' 28.558 N	104° 28' 52.893 W
- plan misses target center by 4.803usft at 3233.516usft MD (2575.411 TVD, -710.805 N, 593.119 E)									
- Point									
[BSC#17H]BHL1	0.00	0.000	2,640.000	-747.530	5,673.840	602,892.31	495,733.13	32° 39' 28.317 N	104° 28' 53.460 W
- plan hits target center									
- Point									

Plan Annotations

Measured Depth (usft)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Comment
1,784.503	1,784.503	0.000	0.000	KOP 9°/100' BUILD RATE
2,451.170	2,335.832	-311.354	68.180	START 75' TANGENT
2,528.170	2,373.332	-374.887	78.685	END 60° TANGENT
3,183.681	2,574.777	-710.546	543.289	[BSC#17H]EOC1 3184' MD (2575' TVD)
3,233.516	2,575.410	-710.805	593.119	[BSC#17H]FTP1 3234' MD (2575' TVD)
8,314.779	2,640.000	-747.530	5,673.840	[BSC#17H]BHL1 8315' MD (2640' TVD)

