

5D Plan Report

NM OIL CONSERVATION
ARTESIA DISTRICT

OCT 21 2019

RECEIVED

The Apache logo is rendered in a stylized, italicized font with a double outline and a stippled texture.**5D Plan Report**

Apache Corporation

Field Name: *Apache NM (Nad 83 NMEZ)*
Site Name: *Palmillo 10 State Com Pad (333,232)*
Well Name: *Palmillo 10 State Com 333H*
File number: *13931008*
Plan: *P1:V2 (Current plan)*

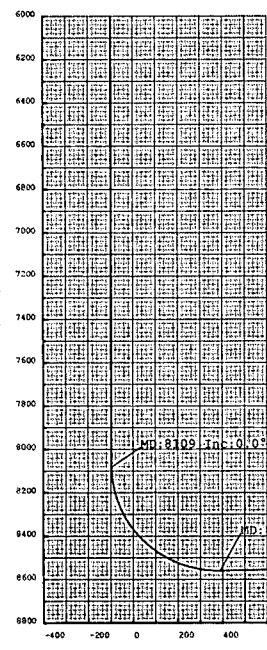
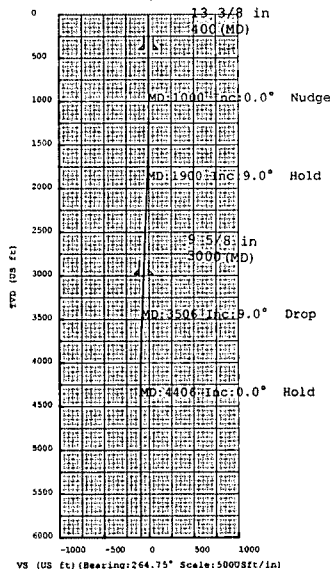
3 October 2019





Palmillo 10 State Com 333H Eddy Co, New Mexico

KB: 3516.00'
GL: 3490.00'

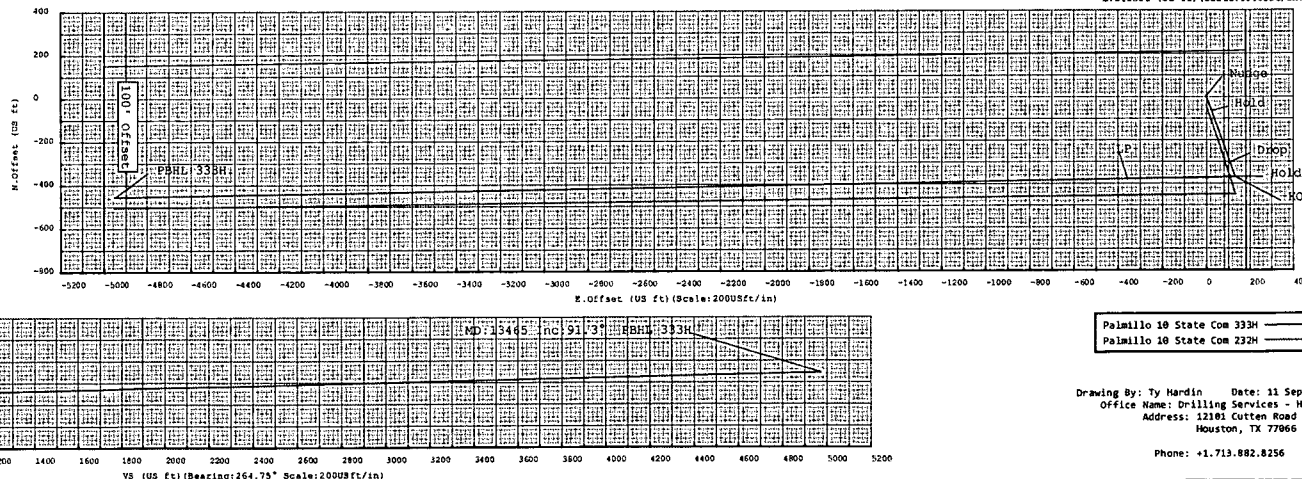
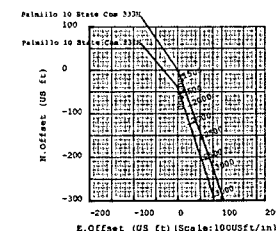
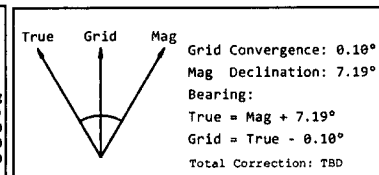


Plan Data for Palmillo 10 State Com 333H										
Plan Point Information:										
DogLeg Severity Unit: 7/100.00ft Position offsets from Slot centre										
MD	Inc	Az	TVD	+N/-S	+E/-W	Northing	Easting	+VSEC	DLS	Comments
(USft)	(°)	(°)	(USft)	(USft)	(USft)	(USft)	(USft)	(USft)	(DLSU)	
0.00	0.00	0.00	0.00	0.00	0.00	609242.60	595805.30	0.00	0.00	
1000.00	0.00	0.00	1000.00	0.00	0.00	609242.60	595805.30	0.00	0.00	Nudge
1899.69	9.00	160.64	1896.00	-66.51	23.37	609176.09	595828.67	-17.18	1.00	Hold
3505.96	9.00	160.64	3482.50	-383.49	106.63	608939.11	595911.93	-78.42	0.00	Drop
4405.65	0.00	0.00	4378.50	-370.00	130.00	608872.60	595935.30	-95.60	1.00	Hold
8109.05	0.00	0.00	8081.90	-370.00	130.00	608872.60	595935.30	-95.60	0.00	KOP
8869.86	91.30	269.04	8559.24	-378.14	-358.21	608864.46	595447.09	391.31	12.00	LP
13464.57	91.30	269.04	8455.17	-454.70	-4951.10	608787.90	590854.20	4971.94	0.00	PBHL 333H

Plan Data for Palmillo 10 State Com 333H						
Casing Point Information:						
Position offsets from Slot centre						
Name	MD	TVD	+N/-S	+E/-W	Northing	Easting
	(USft)	(USft)	(USft)	(USft)	(USft)	(USft)
13 3/8 in	400.00	400.00	0.00	0.00	609242.60	595805.30
9 5/8 in	3000.00	2982.77	-228.85	80.41	609013.75	595885.71
Formation Point Information:						
Name	TVD	Elevation	MD			
	(USft)	(USft)	(USft)			
WOLF CAMP	8741.00	-5225.00	-1.00			
TAN SILL	651.00	2865.00	651.00			
YATES	831.00	2685.00	831.00			
SEVEN RIVE RS	1206.00	2310.00	1206.04			
QUEEN	1681.00	1835.00	1682.61			
GRAYBURG	2031.00	1485.00	2036.37			
SAN ANDRES	2471.00	1045.00	2481.86			
BONE SPRING	3660.00	-144.00	3685.25			
1ST BONE SPRING SAND	6346.00	-2830.00	6373.15			
2ND BONE SPRING CARB	6481.00	-2965.00	6508.15			
2ND BONE SPRING SAND	7246.00	-3730.00	7273.15			
3RD BONE SPRING GARB	7481.00	-3965.00	7508.15			
3RD BONE SPRING SAND	8366.00	-4850.00	8413.33			
LANDING TOP	8516.00	-5000.00	8653.98			
TARGET	8531.00	-5015.00	8693.64			
LANDING BASE	8546.00	-5030.00	8745.81			



Plan Data for Palmillo 10 State Com 333H						
Target Set Information:						
Name: Palm10SC333H						
Position offsets from Slot centre						
Name	TVD	Elevation	+N/-S	+E/-W	Northing	Easting
	(USft)	(USft)	(USft)	(USft)	(USft)	(USft)
NP 8081.90	-4565.90	-370.00	130.00	608872.60	595935.30	
LTP 333H 8456.30	-4940.30	-454.20	-4901.10	608788.40	590904.20	
PBHL 333H 8455.17	-4939.17	-454.70	-4951.10	608787.90	590854.20	




Weatherford®

Palmillo 10 State Com 333H

Map Units: US ft **Company Name:** Apache Corporation
Field Name: **Vertical Reference Datum (VRD):** Mean Sea Level
Projected Coordinate System: NAD83 / New Mexico East (ftUS)
Comment:

Units: US ft **North Reference:** Grid **Convergence Angle:** 0.10
Site: **Position:** **Northing:** 609242.60 US ft **Latitude:** 32.674728065
Easting: 595805.30 US ft **Longitude:** -104.156315534
Palmillo 10 State Com Pad (333,232) **Elevation above MSL:** 3490.00 US ft
Comment: Eddy Co., New Mexico

Slot: **Position (Relative to Site Centre)**
+N/-S: 0.00 US ft **Northing:** 609242.60 US ft **Latitude:** 32.674728065
+E/-W: 0.00 US ft **Easting:** 595805.30 US ft **Longitude:** -104.156315534
Palmillo 10 State Com 333H **Slot TVD Reference:** Ground Elevation
Elevation above MSL: 3490.00 US ft
Comment:

Well: **Type:** Main well **UWI:** **Plan:** P1:V2 (Current plan)
File Number: **Comment:**
13931008
Closure Distance: 4971.94 US ft **Closure Azimuth:** 264.75°
Vertical Section: Position of Origin (Relative to Slot centre)
+N/-S: 0.00 US ft **+E/-W:** -0.00 US ft **Az:** 264.75°
Magnetic Parameters:
Model: bggm2019 **Field Strength:** **Declination:** 7.19° **Dip:** 60.40° **Date:** 25/Dec/2019
47870.9nT

Drill floor: Plan: P1:V2 (Current plan)
Rig Height (Drill Floor): 26.00 US ft **Elevation above MSL:** 3516.00 US ft **Inclination:** 0.00° **Azimuth:** 0.00°

Target set: Palm10SC333H Comment:

Target Name:	Shape:	TVD (US ft)	N. Offset (US ft)	E. Offset (US ft)	Northing (US ft)	Easting (US ft)	C. Pt. Distance (US ft)	Comment
NP	Point	8081.90	-370.00	130.00	608872.60	595935.30	0.00	
LTP 333H	Point	8456.30	-454.20	-4901.10	608788.40	590904.20	0.33	
PBHL 333H	Point	8455.17	-454.70	-4951.10	608787.90	590854.20	0.00	

Tie Point:
MD: 0.00 US ft **Inclination:** 0.00° **Azimuth:** 0.00° **TVD:** 0.00 US ft **North Offset:** 0.00 US ft **East Offset:** 0.00 US ft

5D Plan Report

Survey Tool Ranges:			
Name	Start MD(usft)	End MD(usft)	Source Survey
MWD	0.00	1000.00	
MWD	1000.00	13464.57	Default Tool

Casing Points: (Relative to Slot centre)(TVD relative to Drill Floor)								
Name	MD (US ft)	Inc (°)	Az (°)	TVD (US ft)	N.Offset (US ft)	E.Offset (US ft)	Northing (US ft)	Easting (US ft)
13 3/8 in	400.00	0.00	0.00	400.00	0.00	-0.00	609242.60	595805.30
9 5/8 in	3000.00	9.00	160.64	2982.77	-228.85	80.41	609013.75	595885.71

Wellpath created using minimum curvature.

Salient Points: (Relative to Slot centre)(TVD relative to Drill Floor)											
MD (US ft)	Inc (°)	Az (°)	TVD (US ft)	VS (US ft)	N.Offset (US ft)	E.Offset (US ft)	Northing (US ft)	Easting (US ft)	DLS (°/100US ft)	Comment	
0.00	0.00	0.00	0.00	-0.00	0.00	-0.00	609242.60	595805.30	0.00		
1000.00	0.00	0.00	1000.00	-0.00	0.00	-0.00	609242.60	595805.30	0.00	Nudge	
1899.69	9.00	160.64	1896.00	-17.18	-66.51	23.37	609176.09	595828.67	1.00	Hold	
3505.96	9.00	160.64	3482.50	-78.42	-303.49	106.63	608939.11	595911.93	0.00	Drop	
4405.65	0.00	0.00	4378.50	-95.60	-370.00	130.00	608872.60	595935.30	1.00	Hold	
8109.05	0.00	0.00	8081.90	-95.60	-370.00	130.00	608872.60	595935.30	0.00	KOP	
8869.86	91.30	269.04	8559.24	391.31	-378.14	-358.21	608864.46	595447.09	12.00	LP	
13464.57	91.30	269.04	8455.17	4971.94	-454.70	-4951.10	608787.90	590854.20	0.00	PBHL 333H	

Interpolated Points: (Relative to Slot centre)(TVD relative to Drill Floor)											
MD (US ft)	Inc (°)	Az (°)	TVD (US ft)	VS (US ft)	N.Offset (US ft)	E.Offset (US ft)	Northing (US ft)	Easting (US ft)	DLS (°/100US ft)	Comment	
0.00	0.00	0.00	0.00	-0.00	0.00	-0.00	609242.60	595805.30	0.00		
100.00	0.00	0.00	100.00	-0.00	0.00	-0.00	609242.60	595805.30	0.00		
200.00	0.00	0.00	200.00	-0.00	0.00	-0.00	609242.60	595805.30	0.00		
300.00	0.00	0.00	300.00	-0.00	0.00	-0.00	609242.60	595805.30	0.00		
400.00	0.00	0.00	400.00	-0.00	0.00	-0.00	609242.60	595805.30	0.00	13 3/8 in	
500.00	0.00	0.00	500.00	-0.00	0.00	-0.00	609242.60	595805.30	0.00		
600.00	0.00	0.00	600.00	-0.00	0.00	-0.00	609242.60	595805.30	0.00		
700.00	0.00	0.00	700.00	-0.00	0.00	-0.00	609242.60	595805.30	0.00		
800.00	0.00	0.00	800.00	-0.00	0.00	-0.00	609242.60	595805.30	0.00		
900.00	0.00	0.00	900.00	-0.00	0.00	-0.00	609242.60	595805.30	0.00		
1000.00	0.00	0.00	1000.00	-0.00	0.00	-0.00	609242.60	595805.30	0.00	Nudge	
1100.00	1.00	160.64	1099.99	-0.21	-0.82	0.29	609241.78	595805.59	1.00		
1200.00	2.00	160.64	1199.96	-0.85	-3.29	1.16	609239.31	595806.46	1.00		
1300.00	3.00	160.64	1299.86	-1.91	-7.41	2.60	609235.19	595807.90	1.00		
1400.00	4.00	160.64	1399.68	-3.40	-13.17	4.63	609229.43	595809.93	1.00		
1500.00	5.00	160.64	1499.37	-5.31	-20.57	7.23	609222.03	595812.53	1.00		
1600.00	6.00	160.64	1598.90	-7.65	-29.61	10.40	609212.99	595815.70	1.00		
1700.00	7.00	160.64	1698.26	-10.41	-40.29	14.16	609202.31	595819.46	1.00		
1800.00	8.00	160.64	1797.40	-13.59	-52.61	18.48	609189.99	595823.78	1.00		
1899.69	9.00	160.64	1896.00	-17.18	-66.51	23.37	609176.09	595828.67	1.00	Hold	
1900.00	9.00	160.64	1896.30	-17.20	-66.55	23.38	609176.05	595828.68	0.00		
2000.00	9.00	160.64	1995.07	-21.01	-81.31	28.57	609161.29	595833.87	0.00		
2100.00	9.00	160.64	2093.84	-24.82	-96.06	33.75	609146.54	595839.05	0.00		
2200.00	9.00	160.64	2192.61	-28.63	-110.81	38.93	609131.79	595844.23	0.00		
2300.00	9.00	160.64	2291.38	-32.44	-125.57	44.12	609117.03	595849.42	0.00		
2400.00	9.00	160.64	2390.15	-36.26	-140.32	49.30	609102.28	595854.60	0.00		
2500.00	9.00	160.64	2488.92	-40.07	-155.08	54.49	609087.52	595859.79	0.00		
2600.00	9.00	160.64	2587.69	-43.88	-169.83	59.67	609072.77	595864.97	0.00		
2700.00	9.00	160.64	2686.46	-47.69	-184.58	64.85	609058.02	595870.15	0.00		
2800.00	9.00	160.64	2785.23	-51.50	-199.34	70.04	609043.26	595875.34	0.00		
2900.00	9.00	160.64	2884.00	-55.32	-214.09	75.22	609028.51	595880.52	0.00		
3000.00	9.00	160.64	2982.77	-59.13	-228.85	80.41	609013.75	595885.71	0.00	9 5/8 in	
3100.00	9.00	160.64	3081.54	-62.94	-243.60	85.59	608999.00	595890.89	0.00		
3200.00	9.00	160.64	3180.31	-66.75	-258.35	90.77	608984.25	595896.07	0.00		
3300.00	9.00	160.64	3279.08	-70.56	-273.11	95.96	608969.49	595901.26	0.00		

5D Plan Report

Interpolated Points: (Relative to Slot centre)(TVD,relative to Drill Floor)										
MD (US ft)	Inc (°)	Az (°)	TVD (US ft)	VS (US ft)	N.Offset (US ft)	E.Offset (US ft)	Northing (US ft)	Easting (US ft)	DLS (°/100US ft)	Comment
3400.00	9.00	160.64	3377.85	-74.38	-287.86	101.14	608954.74	595906.44	0.00	
3500.00	9.00	160.64	3476.62	-78.19	-302.61	106.32	608939.99	595911.62	0.00	
3505.96	9.00	160.64	3482.50	-78.42	-303.49	106.63	608939.11	595911.93	0.00	Drop
3600.00	8.06	160.64	3575.50	-81.81	-316.65	111.25	608925.95	595916.55	1.00	
3700.00	7.06	160.64	3674.63	-85.02	-329.06	115.61	608913.54	595920.91	1.00	
3800.00	6.06	160.64	3773.98	-87.80	-339.83	119.40	608902.77	595924.70	1.00	
3900.00	5.06	160.64	3873.51	-90.16	-348.96	122.61	608893.64	595927.91	1.00	
4000.00	4.06	160.64	3973.19	-92.10	-356.46	125.24	608886.14	595930.54	1.00	
4100.00	3.06	160.64	4073.00	-93.61	-362.31	127.30	608880.29	595932.60	1.00	
4200.00	2.06	160.64	4172.90	-94.70	-366.52	128.78	608876.08	595934.08	1.00	
4300.00	1.06	160.64	4272.86	-95.36	-369.08	129.68	608873.52	595934.98	1.00	
4400.00	0.06	160.64	4372.85	-95.60	-370.00	130.00	608872.60	595935.30	1.00	
4405.65	0.00	0.00	4378.50	-95.60	-370.00	130.00	608872.60	595935.30	1.00	Hold
4500.00	0.00	0.00	4472.85	-95.60	-370.00	130.00	608872.60	595935.30	0.00	
4600.00	0.00	0.00	4572.85	-95.60	-370.00	130.00	608872.60	595935.30	0.00	
4700.00	0.00	0.00	4672.85	-95.60	-370.00	130.00	608872.60	595935.30	0.00	
4800.00	0.00	0.00	4772.85	-95.60	-370.00	130.00	608872.60	595935.30	0.00	
4900.00	0.00	0.00	4872.85	-95.60	-370.00	130.00	608872.60	595935.30	0.00	
5000.00	0.00	0.00	4972.85	-95.60	-370.00	130.00	608872.60	595935.30	0.00	
5100.00	0.00	0.00	5072.85	-95.60	-370.00	130.00	608872.60	595935.30	0.00	
5200.00	0.00	0.00	5172.85	-95.60	-370.00	130.00	608872.60	595935.30	0.00	
5300.00	0.00	0.00	5272.85	-95.60	-370.00	130.00	608872.60	595935.30	0.00	
5400.00	0.00	0.00	5372.85	-95.60	-370.00	130.00	608872.60	595935.30	0.00	
5500.00	0.00	0.00	5472.85	-95.60	-370.00	130.00	608872.60	595935.30	0.00	
5600.00	0.00	0.00	5572.85	-95.60	-370.00	130.00	608872.60	595935.30	0.00	
5700.00	0.00	0.00	5672.85	-95.60	-370.00	130.00	608872.60	595935.30	0.00	
5800.00	0.00	0.00	5772.85	-95.60	-370.00	130.00	608872.60	595935.30	0.00	
5900.00	0.00	0.00	5872.85	-95.60	-370.00	130.00	608872.60	595935.30	0.00	
6000.00	0.00	0.00	5972.85	-95.60	-370.00	130.00	608872.60	595935.30	0.00	
6100.00	0.00	0.00	6072.85	-95.60	-370.00	130.00	608872.60	595935.30	0.00	
6200.00	0.00	0.00	6172.85	-95.60	-370.00	130.00	608872.60	595935.30	0.00	
6300.00	0.00	0.00	6272.85	-95.60	-370.00	130.00	608872.60	595935.30	0.00	
6400.00	0.00	0.00	6372.85	-95.60	-370.00	130.00	608872.60	595935.30	0.00	
6500.00	0.00	0.00	6472.85	-95.60	-370.00	130.00	608872.60	595935.30	0.00	
6600.00	0.00	0.00	6572.85	-95.60	-370.00	130.00	608872.60	595935.30	0.00	
6700.00	0.00	0.00	6672.85	-95.60	-370.00	130.00	608872.60	595935.30	0.00	
6800.00	0.00	0.00	6772.85	-95.60	-370.00	130.00	608872.60	595935.30	0.00	
6900.00	0.00	0.00	6872.85	-95.60	-370.00	130.00	608872.60	595935.30	0.00	
7000.00	0.00	0.00	6972.85	-95.60	-370.00	130.00	608872.60	595935.30	0.00	
7100.00	0.00	0.00	7072.85	-95.60	-370.00	130.00	608872.60	595935.30	0.00	
7200.00	0.00	0.00	7172.85	-95.60	-370.00	130.00	608872.60	595935.30	0.00	
7300.00	0.00	0.00	7272.85	-95.60	-370.00	130.00	608872.60	595935.30	0.00	
7400.00	0.00	0.00	7372.85	-95.60	-370.00	130.00	608872.60	595935.30	0.00	
7500.00	0.00	0.00	7472.85	-95.60	-370.00	130.00	608872.60	595935.30	0.00	
7600.00	0.00	0.00	7572.85	-95.60	-370.00	130.00	608872.60	595935.30	0.00	
7700.00	0.00	0.00	7672.85	-95.60	-370.00	130.00	608872.60	595935.30	0.00	
7800.00	0.00	0.00	7772.85	-95.60	-370.00	130.00	608872.60	595935.30	0.00	
7900.00	0.00	0.00	7872.85	-95.60	-370.00	130.00	608872.60	595935.30	0.00	
8000.00	0.00	0.00	7972.85	-95.60	-370.00	130.00	608872.60	595935.30	0.00	
8100.00	0.00	0.00	8072.85	-95.60	-370.00	130.00	608872.60	595935.30	0.00	
8109.05	0.00	0.00	8081.90	-95.60	-370.00	130.00	608872.60	595935.30	0.00	KOP
8200.00	10.91	269.04	8172.30	-86.99	-370.14	121.36	608872.46	595926.66	12.00	
8300.00	22.91	269.04	8267.80	-58.03	-370.63	92.33	608871.97	595897.63	12.00	
8400.00	34.91	269.04	8355.18	-9.90	-371.43	44.07	608871.17	595849.37	12.00	
8500.00	46.91	269.04	8430.61	55.29	-372.52	-21.29	608870.08	595784.01	12.00	
8600.00	58.91	269.04	8490.80	134.69	-373.85	-100.91	608868.75	595704.39	12.00	
8700.00	70.91	269.04	8533.12	224.84	-375.36	-191.30	608867.24	595614.00	12.00	
8800.00	82.91	269.04	8555.72	321.79	-376.98	-288.51	608865.62	595516.79	12.00	
8869.86	91.30	269.04	8559.24	391.31	-378.14	-358.21	608864.46	595447.09	12.00	LP

5D Plan Report

Interpolated Points: (Relative to Slot centre)(TVD relative to Drill Floor)										
MD (US ft)	Inc (°)	Az (°)	TVD (US ft)	VS (US ft)	N.Offset (US ft)	E.Offset (US ft)	Northing (US ft)	Easting (US ft)	DLS (°/100US ft)	Comment
8900.00	91.30	269.04	8558.56	421.35	-378.64	-388.34	608863.96	595416.96	0.00	
9000.00	91.30	269.04	8556.29	521.05	-380.31	-488.30	608862.29	595317.00	0.00	
9100.00	91.30	269.04	8554.03	620.74	-381.97	-588.26	608860.63	595217.04	0.00	
9200.00	91.30	269.04	8551.76	720.43	-383.64	-688.22	608858.96	595117.08	0.00	
9300.00	91.30	269.04	8549.50	820.13	-385.31	-788.18	608857.29	595017.12	0.00	
9400.00	91.30	269.04	8547.23	919.82	-386.97	-888.14	608855.63	594917.16	0.00	
9500.00	91.30	269.04	8544.97	1019.52	-388.64	-988.10	608853.96	594817.20	0.00	
9600.00	91.30	269.04	8542.70	1119.21	-390.30	-1088.06	608852.30	594717.24	0.00	
9700.00	91.30	269.04	8540.44	1218.90	-391.97	-1188.02	608850.63	594617.28	0.00	
9800.00	91.30	269.04	8538.17	1318.60	-393.64	-1287.98	608848.96	594517.32	0.00	
9900.00	91.30	269.04	8535.91	1418.29	-395.30	-1387.94	608847.30	594417.36	0.00	
10000.00	91.30	269.04	8533.64	1517.98	-396.97	-1487.90	608845.63	594317.40	0.00	
10100.00	91.30	269.04	8531.38	1617.68	-398.64	-1587.86	608843.96	594217.44	0.00	
10200.00	91.30	269.04	8529.11	1717.37	-400.30	-1687.82	608842.30	594117.48	0.00	
10300.00	91.30	269.04	8526.85	1817.06	-401.97	-1787.78	608840.63	594017.52	0.00	
10400.00	91.30	269.04	8524.58	1916.76	-403.64	-1887.74	608838.96	593917.56	0.00	
10500.00	91.30	269.04	8522.32	2016.45	-405.30	-1987.70	608837.30	593817.60	0.00	
10600.00	91.30	269.04	8520.05	2116.14	-406.97	-2087.66	608835.63	593717.64	0.00	
10700.00	91.30	269.04	8517.79	2215.84	-408.63	-2187.62	608833.97	593617.68	0.00	
10800.00	91.30	269.04	8515.52	2315.53	-410.30	-2287.59	608832.30	593517.71	0.00	
10900.00	91.30	269.04	8513.26	2415.23	-411.97	-2387.55	608830.63	593417.75	0.00	
11000.00	91.30	269.04	8510.99	2514.92	-413.63	-2487.51	608828.97	593317.79	0.00	
11100.00	91.30	269.04	8508.73	2614.61	-415.30	-2587.47	608827.30	593217.83	0.00	
11200.00	91.30	269.04	8506.46	2714.31	-416.97	-2687.43	608825.63	593117.87	0.00	
11300.00	91.30	269.04	8504.20	2814.00	-418.63	-2787.39	608823.97	593017.91	0.00	
11400.00	91.30	269.04	8501.93	2913.69	-420.30	-2887.35	608822.30	592917.95	0.00	
11500.00	91.30	269.04	8499.67	3013.39	-421.96	-2987.31	608820.64	592817.99	0.00	
11600.00	91.30	269.04	8497.40	3113.08	-423.63	-3087.27	608818.97	592718.03	0.00	
11700.00	91.30	269.04	8495.14	3212.77	-425.30	-3187.23	608817.30	592618.07	0.00	
11800.00	91.30	269.04	8492.87	3312.47	-426.96	-3287.19	608815.64	592518.11	0.00	
11900.00	91.30	269.04	8490.61	3412.16	-428.63	-3387.15	608813.97	592418.15	0.00	
12000.00	91.30	269.04	8488.34	3511.85	-430.30	-3487.11	608812.30	592318.19	0.00	
12100.00	91.30	269.04	8486.08	3611.55	-431.96	-3587.07	608810.64	592218.23	0.00	
12200.00	91.30	269.04	8483.81	3711.24	-433.63	-3687.03	608808.97	592118.27	0.00	
12300.00	91.30	269.04	8481.55	3810.94	-435.29	-3786.99	608807.31	592018.31	0.00	
12400.00	91.30	269.04	8479.28	3910.63	-436.96	-3886.95	608805.64	591918.35	0.00	
12500.00	91.30	269.04	8477.02	4010.32	-438.63	-3986.91	608803.97	591818.39	0.00	
12600.00	91.30	269.04	8474.75	4110.02	-440.29	-4086.87	608802.31	591718.43	0.00	
12700.00	91.30	269.04	8472.49	4209.71	-441.96	-4186.83	608800.64	591618.47	0.00	
12800.00	91.30	269.04	8470.22	4309.40	-443.63	-4286.79	608798.97	591518.51	0.00	
12900.00	91.30	269.04	8467.96	4409.10	-445.29	-4386.75	608797.31	591418.55	0.00	
13000.00	91.30	269.04	8465.69	4508.79	-446.96	-4486.72	608795.64	591318.58	0.00	
13100.00	91.30	269.04	8463.43	4608.48	-448.63	-4586.68	608793.97	591218.62	0.00	
13200.00	91.30	269.04	8461.16	4708.18	-450.29	-4686.64	608792.31	591118.66	0.00	
13300.00	91.30	269.04	8458.90	4807.87	-451.96	-4786.60	608790.64	591018.70	0.00	
13400.00	91.30	269.04	8456.63	4907.57	-453.62	-4886.56	608788.98	590918.74	0.00	
13464.57	91.30	269.04	8455.17	4971.94	-454.70	-4951.10	608787.90	590854.20	0.00	PBHL 333H

Formation Points: (Relative to Slot centre)(TVD relative to Drill Floor)										
Name	MD (US ft)	Inc (°)	Az (°)	TVD (US ft)	TVD (MSL) (US ft)	N.Offset (US ft)	E.Offset (US ft)	Northing (US ft)	Easting (US ft)	Comment
WOLFCAMP	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
TAN SILL	651.00	0.00	0.00	651.00	-2865.00	0.00	-0.00	609242.60	595805.30	
YATES	831.00	0.00	0.00	831.00	-2685.00	0.00	-0.00	609242.60	595805.30	
SEVEN RIVE RS	1206.04	2.06	160.64	1206.00	-2310.00	-3.49	1.23	609239.11	595806.53	
QUEEN	1682.61	6.83	160.64	1681.00	-1835.00	-38.32	13.46	609204.28	595818.76	
GRAYBURG	2036.37	9.00	160.64	2031.00	-1485.00	-86.67	30.45	609155.93	595835.75	
SAN ANDRES	2481.86	9.00	160.64	2471.00	-1045.00	-152.40	53.55	609090.20	595858.85	

5D Plan Report

Formation Points: (Relative to Slot centre)(TVD relative to Drill Floor)										
Name	MD (US ft)	Inc (°)	Az (°)	TVD (US ft)	TVD (MSL) (US ft)	N. Offset (US ft)	E. Offset (US ft)	Northing (US ft)	Easting (US ft)	Comment
BONE SPRING	3685.25	7.20	160.64	3660.00	144.00	-327.33	115.01	608915.27	595920.31	
1ST BONE SPRING SAND	6373.15	0.00	0.00	6346.00	2830.00	-370.00	130.00	608872.60	595935.30	
2ND BONE SPRING CARB	6508.15	0.00	0.00	6481.00	2965.00	-370.00	130.00	608872.60	595935.30	
2ND BONESPRING SAND	7273.15	0.00	0.00	7246.00	3730.00	-370.00	130.00	608872.60	595935.30	
3RD BONE SPRING GARB	7508.15	0.00	0.00	7481.00	3965.00	-370.00	130.00	608872.60	595935.30	
3RD BONE SPRING SAND	8413.33	36.51	269.04	8366.00	4850.00	-371.56	36.29	608871.04	595841.59	
LANDING TOP	8653.98	65.39	269.04	8516.00	5000.00	-374.64	-148.60	608867.96	595656.70	
TARGET	8693.64	70.15	269.04	8531.00	5015.00	-375.26	-185.30	608867.34	595620.00	
LANDING BASE	8745.81	76.41	269.04	8546.00	5030.00	-376.09	-235.24	608866.51	595570.06	