

Company: ConocoPhillips
Project: Lea County, New Mexico
Site: Britt B
Well: Britt B Well No. 53
Wellbore: Original Hole
Design: rev0

Local Co-ordinate Reference: Well Britt B Well No. 53
TVD Reference: RKB=3566+13 @ 3579.00usft ()
MD Reference: RKB=3566+13 @ 3579.00usft ()
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: EDM 5000.1 Database

Project: Lea County, New Mexico
Map System: US State Plane 1927 (Exact solution)
Geo Datum: NAD 1927 (NADCON CONUS)
Map Zone: New Mexico East 3001
System Datum: Mean Sea Level

Site: Britt B
Site Position: Northing: 576,203.96 usft Latitude: 32° 34' 45.597455 N
From: Map Easting: 836,841.94 usft Longitude: 103° 14' 23.368414 W
Position Uncertainty: Slot Radius: 0.00 usft Grid Convergence: 0.59 %

Well: Britt B Well No. 53; Surf Loc: 330 FNL 2340 FWL
Well Position: +N-S 0.00 usft Northing: 576,203.96 usft Latitude: 32° 34' 45.597455 N
Position Uncertainty: +E-W 0.00 usft Easting: 836,841.94 usft Longitude: 103° 14' 23.368414 W
 Wellhead Elevation: 0.00 usft Ground Level: 3,566.00 usft

Wellbore: Original Hole
Magnetics: Model Name: User Defined Sample Date: 10/9/2014 Declination (°): 7.21 Dip Angle (°): 60.48 Field Strength (nT): 48,550

Design: rev0
Audit Notes:
Version: PROTOTYPE
Phase: Phase: PROTOTYPE Tie On Depth: 0.00
Vertical Section: Depth From (TVD) (usft): 0.00 +N-S (usft): 0.00 +E-W (usft): 0.00 Direction (°): 226.88

Survey Tool/Program: Date: 10/9/2014
From (usft): To (usft): Survey (Wellbore)
 0.00 7,193.35 rev0 (Original Hole)
Tool Name: MWD
Description: MWD - Standard

HOBBS OCD
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 Grid
 Minimum Curvature
 EDM 5000.1 Ddatabase

Planned Survey

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	DLeg (°/100usft)	V. Sec (usft)	Northing (usft)	Easting (usft)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	576,203.96	836,841.94
100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	576,203.96	836,841.94
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	576,203.96	836,841.94
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	576,203.96	836,841.94
400.00	0.00	0.00	400.00	0.00	0.00	0.00	0.00	576,203.96	836,841.94
500.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	576,203.96	836,841.94
600.00	0.00	0.00	600.00	0.00	0.00	0.00	0.00	576,203.96	836,841.94
700.00	0.00	0.00	700.00	0.00	0.00	0.00	0.00	576,203.96	836,841.94
800.00	0.00	0.00	800.00	0.00	0.00	0.00	0.00	576,203.96	836,841.94
900.00	0.00	0.00	900.00	0.00	0.00	0.00	0.00	576,203.96	836,841.94
1,000.00	0.00	0.00	1,000.00	0.00	0.00	0.00	0.00	576,203.96	836,841.94
1,100.00	0.00	0.00	1,100.00	0.00	0.00	0.00	0.00	576,203.96	836,841.94
1,200.00	0.00	0.00	1,200.00	0.00	0.00	0.00	0.00	576,203.96	836,841.94
1,300.00	0.00	0.00	1,300.00	0.00	0.00	0.00	0.00	576,203.96	836,841.94
1,307.00	0.00	0.00	1,307.00	0.00	0.00	0.00	0.00	576,203.96	836,841.94
Rustler									
1,398.00	0.00	0.00	1,398.00	0.00	0.00	0.00	0.00	576,203.96	836,841.94
Salado									
1,400.00	0.00	0.00	1,400.00	0.00	0.00	0.00	0.00	576,203.96	836,841.94
1,500.00	0.00	0.00	1,500.00	0.00	0.00	0.00	0.00	576,203.96	836,841.94
1,600.00	0.00	0.00	1,600.00	0.00	0.00	0.00	0.00	576,203.96	836,841.94
1,700.00	0.00	0.00	1,700.00	0.00	0.00	0.00	0.00	576,203.96	836,841.94
1,800.00	0.00	0.00	1,800.00	0.00	0.00	0.00	0.00	576,203.96	836,841.94
1,900.00	0.00	0.00	1,900.00	0.00	0.00	0.00	0.00	576,203.96	836,841.94
2,000.00	0.00	0.00	2,000.00	0.00	0.00	0.00	0.00	576,203.96	836,841.94
KOP Begin: 27100' build									
2,100.00	2.00	226.88	2,098.98	-1.19	-1.27	2.00	0.00	576,202.76	836,840.66
2,200.00	4.00	226.88	2,199.84	-4.77	-5.09	2.00	0.00	576,199.19	836,836.84

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 Survey Calculation Method: Minimum Curvature
 Database: EDM 5000.1 Ddatabase

Planned Survey

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	EW (usft)	D Leg (°/100usft)	V. Sec (usft)	Northing (usft)	Easting (usft)
2,276.72	5.53	226.88	2,276.29	-9.13	-9.75	2.00	13.35	576,194.83	836,832.19
Begin 5.53° tangent									
2,300.00	5.53	226.88	2,299.46	-10.66	-11.39	0.00	15.60	576,193.29	836,830.55
2,400.00	5.53	226.88	2,399.00	-17.26	-18.43	0.00	25.24	576,186.70	836,823.51
2,500.00	5.53	226.88	2,498.53	-23.85	-25.46	0.00	34.89	576,180.11	836,816.47
2,549.70	5.53	226.88	2,548.00	-27.12	-28.96	0.00	39.68	576,176.83	836,812.98
Tansill									
2,600.00	5.53	226.88	2,598.06	-30.44	-32.50	0.00	44.53	576,173.52	836,809.43
2,695.38	5.53	226.88	2,693.00	-36.73	-39.22	0.00	53.73	576,167.23	836,802.72
Yates									
2,700.00	5.53	226.88	2,697.60	-37.03	-39.54	0.00	54.18	576,166.92	836,802.40
2,800.00	5.53	226.88	2,797.13	-43.63	-46.58	0.00	63.82	576,160.33	836,795.36
2,900.00	5.53	226.88	2,896.66	-50.22	-53.62	0.00	73.46	576,153.74	836,788.32
2,954.59	5.53	226.88	2,951.00	-53.82	-57.46	0.00	78.73	576,150.14	836,784.47
Seven Rivers									
3,000.00	5.53	226.88	2,996.20	-56.81	-60.66	0.00	83.11	576,147.15	836,781.28
3,100.00	5.53	226.88	3,095.73	-63.40	-67.70	0.00	92.75	576,140.55	836,774.24
3,200.00	5.53	226.88	3,195.27	-70.00	-74.74	0.00	102.40	576,133.96	836,767.20
3,300.00	5.53	226.88	3,294.80	-76.59	-81.78	0.00	112.04	576,127.37	836,760.16
3,400.00	5.53	226.88	3,394.33	-83.18	-88.82	0.00	121.69	576,120.78	836,753.12
3,492.10	5.53	226.88	3,486.00	-89.25	-95.30	0.00	130.57	576,114.70	836,746.64
Queen									
3,500.00	5.53	226.88	3,493.87	-88.77	-95.86	0.00	131.33	576,114.18	836,746.08
3,600.00	5.53	226.88	3,593.40	-96.37	-102.90	0.00	140.97	576,107.59	836,739.04
3,603.62	5.53	226.88	3,597.00	-96.60	-103.15	0.00	141.32	576,107.35	836,738.79
Penrose									
3,700.00	5.53	226.88	3,692.94	-102.96	-109.93	0.00	150.62	576,101.00	836,732.00

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MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	D Leg (°/100usft)	V. Sec (usft)	Northing (usft)	Easting (usft)
3,773.41	5.53	226.88	3,766.00	-107.80	-115.10	0.00	157.70	576,096.16	836,726.84
Grayburg									
3,800.00	5.53	226.88	3,792.47	-109.55	-116.97	0.00	160.26	576,094.41	836,724.96
3,900.00	5.53	226.88	3,892.00	-116.14	-124.01	0.00	169.91	576,087.81	836,717.93
4,000.00	5.53	226.88	3,991.54	-122.74	-131.05	0.00	179.55	576,081.22	836,710.89
4,019.55	5.53	226.88	4,011.00	-124.02	-132.43	0.00	181.44	576,079.93	836,709.51
San Andres									
4,100.00	5.53	226.88	4,081.07	-129.33	-138.09	0.00	189.20	576,074.63	836,703.85
4,200.00	5.53	226.88	4,190.60	-135.92	-145.13	0.00	198.84	576,068.04	836,696.81
4,300.00	5.53	226.88	4,290.14	-142.51	-152.17	0.00	208.48	576,061.44	836,689.77
4,400.00	5.53	226.88	4,389.67	-149.11	-159.21	0.00	218.13	576,054.85	836,682.73
4,500.00	5.53	226.88	4,489.21	-155.70	-166.25	0.00	227.77	576,048.26	836,675.69
4,600.00	5.53	226.88	4,588.74	-162.29	-173.29	0.00	237.42	576,041.67	836,668.65
4,700.00	5.53	226.88	4,688.27	-168.88	-180.33	0.00	247.06	576,035.07	836,661.61
4,800.00	5.53	226.88	4,787.81	-175.48	-187.37	0.00	256.70	576,028.48	836,654.57
4,900.00	5.53	226.88	4,887.34	-182.07	-194.40	0.00	266.35	576,021.89	836,647.53
5,000.00	5.53	226.88	4,986.88	-188.66	-201.44	0.00	275.99	576,015.30	836,640.49
5,100.00	5.53	226.88	5,086.41	-195.25	-208.48	0.00	285.64	576,008.70	836,633.45
5,200.00	5.53	226.88	5,185.94	-201.85	-215.52	0.00	295.28	576,002.11	836,626.42
5,222.16	5.53	226.88	5,208.00	-203.31	-217.08	0.00	297.42	576,000.65	836,624.86
Glorieta									
5,300.00	5.53	226.88	5,285.48	-208.44	-222.56	0.00	304.93	575,995.52	836,619.38
5,355.78	5.53	226.88	5,341.00	-212.11	-226.49	0.00	310.31	575,991.84	836,615.45
Paddock									
5,400.00	5.53	226.88	5,385.01	-215.03	-229.60	0.00	314.57	575,988.93	836,612.34
5,500.00	5.53	226.88	5,484.54	-221.62	-236.64	0.00	324.21	575,982.33	836,605.30
5,600.00	5.53	226.88	5,584.08	-228.21	-243.68	0.00	333.86	575,975.74	836,598.26

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MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	D Leg (°/100usft)	V. Sec (usft)	Northing (usft)	Easting (usft)
5,678.29	5.53	226.88	5,662.00	-233.38	-249.19	0.00	341.41	575,970.58	836,592.75
Blinebry									
5,700.00	5.53	226.88	5,683.61	-234.81	-250.72	0.00	343.50	575,969.15	836,591.22
5,800.00	5.53	226.88	5,783.15	-241.40	-257.76	0.00	353.15	575,962.56	836,584.18
5,900.00	5.53	226.88	5,882.68	-247.99	-264.80	0.00	362.79	575,955.96	836,577.14
6,000.00	5.53	226.88	5,982.21	-254.58	-271.84	0.00	372.44	575,949.37	836,570.10
6,100.00	5.53	226.88	6,081.75	-261.18	-278.88	0.00	382.08	575,942.78	836,563.06
6,200.00	5.53	226.88	6,181.28	-267.77	-285.91	0.00	391.72	575,936.19	836,556.02
6,300.00	5.53	226.88	6,280.82	-274.36	-292.95	0.00	401.37	575,929.59	836,548.98
6,391.61	5.53	226.88	6,372.00	-280.40	-299.40	0.00	410.20	575,923.55	836,542.54
Tubb									
6,400.00	5.53	226.88	6,380.35	-280.95	-299.99	0.00	411.01	575,923.00	836,541.95
6,500.00	5.53	226.88	6,479.88	-287.55	-307.03	0.00	420.66	575,916.41	836,534.91
6,600.00	5.53	226.88	6,579.42	-294.14	-314.07	0.00	430.30	575,909.82	836,527.87
6,699.04	5.53	226.88	6,678.00	-300.67	-321.04	0.00	439.85	575,903.29	836,520.90
Drinkard									
6,700.00	5.53	226.88	6,678.95	-300.73	-321.11	0.00	439.95	575,903.22	836,520.83
6,800.00	5.53	226.88	6,778.49	-307.32	-328.15	0.00	449.59	575,896.63	836,513.79
6,900.00	5.53	226.88	6,878.02	-313.92	-335.19	0.00	459.23	575,890.04	836,506.75
6,992.41	5.53	226.88	6,970.00	-320.01	-341.69	0.00	468.15	575,883.95	836,500.24
Abbo									
7,000.00	5.53	226.88	6,977.55	-320.51	-342.23	0.00	468.88	575,883.45	836,499.71
7,100.00	5.53	226.88	7,077.09	-327.10	-349.27	0.00	478.52	575,876.85	836,492.67
7,193.35	5.53	226.88	7,170.00	-333.26	-355.84	0.00	487.52	575,870.70	836,486.10
PBHLJTD									

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Formations

Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
1,307.00	1,307.00	Rustler		0.00	
1,398.00	1,398.00	Salado		0.00	
2,549.70	2,548.00	Tansill		0.00	
2,695.38	2,693.00	Yates		0.00	
2,954.59	2,951.00	Seven Rivers		0.00	
3,482.10	3,486.00	Queen		0.00	
3,603.62	3,597.00	Penrose		0.00	
3,773.41	3,766.00	Grayburg		0.00	
4,019.55	4,011.00	San Andres		0.00	
5,222.16	5,208.00	Glorieta		0.00	
5,355.78	5,341.00	Paddock		0.00	
5,678.29	5,662.00	Blineby		0.00	
6,391.61	6,372.00	Tubb		0.00	
6,699.04	6,678.00	Drinkard		0.00	
6,992.41	6,970.00	Abc		0.00	

Plan Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates *N/S (usft)	*E/W (usft)	Comment
2,000.00	2,000.00	0.00	0.00	KOP Begin 2'100' build
2,276.72	2,276.29	-9.13	-9.75	Begin 5.53° tangent
7,193.35	7,170.00	-333.26	-355.84	PBHL/TD