

Results of Directional Survey

API number:	30-025-41481		
OGRID:		Operator:	CHEVRON U S A INC
		Property:	BELL LAKE 18 23 34 # 1

surface	ULSTR:	E	18	T	23S	R	34E
				2290	FNL	330	FWL

BH Loc	ULSTR:	E	18	T	23S	R	34E
5040	MD	5037.3	TVD	2211	FNL	395	FWL

Top Perf/OH	ULSTR:			T		R	

Bot Perf/OH	ULSTR:			T		R	

	MD	N/S	E/W	VD
TOP PERFS/OH				
BOT PERFS/OH				

NEXT TO LAST	4966	80.59	62.09	4963.38
LAST READING	5040	79.05	65.36	5037.29
TD	5040	79.05	65.36	5037.29

Surface Location	2290	FN	330	FW
Projected BHL	2211	FN	395	FW
Location of				
Top Perfs/OH				
Bottom Perfs/OH				

SUMMARY of Subsurface Locations

Surface Location	E-18-23S-34E	2290	FN	330	FW	Vert. Depth
Top Perfs/OH						
Bottom Perfs/OH						
Projected TD	E-18-23S-34E	2211	FN	395	FW	5037.29

APR 15 2014



PHOENIX
TECHNOLOGY SERVICES

30-025-41481

January 16, 2014

Oil Conservation Division
State of New Mexico
1625 N. French Drive
Hobbs, New Mexico 88240

HOBBS OCD

JAN 21 2014

Dear District 1 - Hobbs

RECEIVED

Re: Chevron North America Exploration
Bell Lake 18-23-34 #1H
Lea County, NM
API #30-025-41481
Job No. 1311443

Enclosed please find the Survey Data Certification, and the original Plat and one copy of the Survey Report performed on the above referenced Well by Phoenix Technology Services, Inc. Other information required by your office is as follows:

Name & Title of Surveyor	Drainhole Number	Surveyed Depths		Dates Performed		Type of Survey
		From	To	Start	End	
Zak Dawson	1H	1,203	4,966	1/03/14	1/06/14	MWD

A certified plat on which the bottom hole location is oriented both to the surface location and to the lease lines (or unit lines in case of pooling) is attached to the survey report. If any other information is required, please contact the undersigned at the letterhead address and phone number.

Best Regards,

Dolly Bush

Dolly Bush
Operations Administrator

Certified mail receipt number: 7012 3050 0001 3227 2870

JAN 21 2014

Phoenix Technology Services SURVEY DATA CERTIFICATION

RECEIVED



PHOENIX JOB NUMBER

1311443

OPERATOR

Chevron

WELL NAME

Bell Lake 18-23-34 #1H

COUNTY & STATE

Lea County, NM

API WELL NUMBER

30-025-41481

PROPOSED DIRECTION

89.57

TIE-IN DATA						
MEASURED DEPTH	VERTICAL DEPTH	INCLIN	AZIMUTH	N-S COORD	E-W COORD	DATA SOURCE
1,087 ft	1086.97	0.64	29.18	-1.81	-2.03	Surface

FIRST SURVEY DATE	FIRST SURVEY DEPTH	INCLIN	AZIMUTH
3-Jan-14	1,203 ft	1.10	22.20

SURVEY INSTRUMENT
TYPE

Phoenix MWD

LAST SURVEY DATE	LAST SURVEY DEPTH	INCLIN	AZIMUTH
6-Jan-14	4,966 ft	2.8	115.3

TO THE BEST OF MY KNOWLEDGE I
CERTIFY THIS SURVEY DATA TO BE
TRUE AND CORRECT.

PROJECTED TD SURVEY DATE	PROJECTED TD SURVEY DEPTH	INCLIN	AZIMUTH
6-Jan-14	5,040 ft	2.8	115.3

Zak Dawson

PRINT YOUR NAME ABOVE

Zak Dawson

SIGN YOUR NAME ABOVE

MAGNETIC DECLINATION OR TOTAL GRID

TOTAL CORRECTION USED	6.82
DECLINATION OR GRID	GRID

1/6/2014

TODAY'S DATE

MWD SUPERVISOR 1

Derek Webster

DIRECTIONAL DRILLER 1

Craig Cannon

MWD SUPERVISOR 2

Zak Dawson

DIRECTIONAL DRILLER 2

0

1805 Brittmore Road

Houston, Texas 77043

(713)3370609 (Voice), (713)337-0599 (Fax)

HOBBS OCD

JAN 21 2014

RECEIVED



Chevron

Lea County NM (NAD27 NME)
Bell Lake 18-23-34
#1H
WB1/Job #1311443

Survey: Phoenix MWD Survey

Survey Report

16 January, 2014





Survey Report



Company:	Chevron	Local Co-ordinate Reference:	Well #1H
Project:	Lea County NM (NAD27-NME)	TVD Reference:	KB @ 3549.50usft (Ensign 153)
Site:	Bell Lake 18-23-34	MD Reference:	KB @ 3549.50usft (Ensign 153)
Well:	#1H	North Reference:	Grid
Wellbore:	WB1/Job #1311443	Survey Calculation Method:	Minimum Curvature
Design:	Surveys (Ensign 153)	Database:	GCR DB v5000

Project:	Lea County NM (NAD27-NME)		
Map System:	US State Plane 1927 (Exact solution)	System Datum:	Mean Sea Level
Geo Datum:	NAD 1927 (NADCON CONUS)		
Map Zone:	New Mexico East 3001		

Site:	Bell Lake 18-23-34		
--------------	--------------------	--	--

Site Position:		Northing:	475,806.80 usft	Latitude:	32° 18' 19.66594 N
From:	Map	Easting:	752,539.70 usft	Longitude:	103° 30' 57.47688 W
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "	Grid Convergence:	0.44 "

Well:	#1H				
--------------	-----	--	--	--	--

Well Position	+N/-S	0.00 usft	Northing:	475,806.80 usft	Latitude:	32° 18' 19.66594 N
	+E/-W	0.00 usft	Easting:	752,539.70 usft	Longitude:	103° 30' 57.47688 W
Position Uncertainty		0.00 usft	Wellhead Elevation:	usft	Ground Level:	3,525.00 usft

Wellbore:	WB1/Job #1311443				
------------------	------------------	--	--	--	--

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010_14	12/26/13	7.25	60.21	48,417

Design:	Surveys (Ensign 153)				
----------------	----------------------	--	--	--	--

Audit Notes:					
Version:	1.0	Phase:	ACTUAL	Tie On Depth:	0.00

Vertical Section:	Depth From (TVD)	+N/-S	+E/-W	Direction
	(usft)	(usft)	(usft)	(°)
	0.00	0.00	0.00	88.57



Survey Report



Company:	Chevron	Local Co-ordinate Reference:	Well #1H
Project:	Lea County NM (NAD27 NME)	TVD Reference:	KB @ 3549.50usft (Ensign 153)
Site:	Bell Lake 18-23-34	MD Reference:	KB @ 3549.50usft (Ensign 153)
Well:	#1H	North Reference:	Grid
Wellbore:	WB1/Job #1311443	Survey Calculation Method:	Minimum Curvature
Design:	Surveys (Ensign 153)	Database:	GCR DB v5000

From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
90.00	1,014.00	MS Gyro Survey (WB1/Job #1311443)	CB-GYRO-MS	Camera based gyro multishot
1,087.00	5,040.00	Phoenix MWD Survey (WB1/Job #131144)	MWD	MWD - Standard

MD (usft)	Inc (")	Azi (azimuth) (")	TVDSS (usft)	TVD (usft)	N/S (usft)	EW (usft)	V. Sec (usft)	DLeg ("/100usft)	Northing (usft)	Easting (usft)
1,087.00	0.64	29.18	-2,462.53	1,086.97	-1.81	-2.03	-2.08	0.00	475,804.99	752,537.67
Tie In to MS Gyro										
1,203.00	1.10	22.20	-2,346.54	1,202.96	-0.22	-1.30	-1.30	0.41	475,806.58	752,538.40
First Phoenix MWD Survey										
1,382.00	1.30	15.30	-2,167.58	1,381.92	3.33	-0.11	-0.03	0.14	475,810.13	752,539.59
1,560.00	1.40	13.90	-1,989.63	1,559.87	7.39	0.94	1.13	0.06	475,814.19	752,540.64
1,739.00	1.60	11.90	-1,810.69	1,738.81	11.96	1.98	2.28	0.12	475,818.76	752,541.68
1,918.00	1.80	6.00	-1,631.77	1,917.73	17.20	2.79	3.22	0.15	475,824.00	752,542.49
2,097.00	2.20	4.60	-1,452.88	2,096.62	23.42	3.36	3.95	0.23	475,830.22	752,543.06
2,276.00	2.50	6.90	-1,274.03	2,275.47	30.72	4.11	4.87	0.18	475,837.52	752,543.81
2,455.00	2.90	11.50	-1,095.23	2,454.27	39.03	5.48	6.45	0.25	475,845.83	752,545.18
2,635.00	2.20	14.30	-915.41	2,634.09	46.84	7.24	8.41	0.39	475,853.64	752,546.94
2,814.00	1.80	7.70	-736.52	2,812.98	52.96	8.47	9.79	0.26	475,859.76	752,548.17
2,992.00	2.20	9.50	-558.63	2,990.87	59.10	9.40	10.88	0.23	475,865.90	752,549.10
3,172.00	0.80	2.60	-378.69	3,170.81	63.76	10.03	11.62	0.78	475,870.56	752,549.73
3,351.00	1.30	22.60	-199.72	3,349.78	66.89	10.87	12.53	0.34	475,873.69	752,550.57
3,530.00	1.80	24.90	-20.79	3,528.71	71.31	12.83	14.61	0.28	475,878.11	752,552.53
3,709.00	1.90	30.90	158.12	3,707.62	76.41	15.54	17.44	0.12	475,883.21	752,555.24
3,888.00	1.90	37.30	337.02	3,886.52	81.31	18.86	20.89	0.12	475,888.11	752,558.56
4,067.00	1.70	44.00	515.93	4,065.43	85.58	22.50	24.63	0.16	475,892.38	752,562.20
4,246.00	2.60	67.00	694.81	4,244.31	89.08	28.09	30.30	0.69	475,895.88	752,567.79
4,426.00	2.70	87.90	874.62	4,424.12	90.83	36.08	38.34	0.54	475,897.63	752,575.78



Survey Report



Company:	Chevron	Local Co-ordinate Reference:	Well #1H
Project:	Lea County NM (NAD27 NME)	TVD Reference:	KB @ 3549.50usft (Ensign 153)
Site:	Bell Lake 18-23-34	MD Reference:	KB @ 3549.50usft (Ensign 153)
Well:	#1H	North Reference:	Grid
Wellbore:	WVB1/Job #1311443	Survey Calculation Method:	Minimum Curvature
Design:	Surveys (Ensign 153)	Database:	GCR DB v5000

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVDSS (usft)	TVD (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (%/100usft)	Northing (usft)	Easting (usft)
4,605.00	3.40	111.80	1,053.37	4,602.87	89.01	45.22	47.43	0.80	475,895.81	752,584.92
4,784.00	2.90	119.90	1,232.10	4,781.60	84.79	54.08	56.18	0.37	475,891.59	752,593.78
4,966.00	2.80	115.30	1,413.88	4,963.38	80.59	62.09	64.08	0.14	475,887.39	752,601.79
Last Phoenix MWD Survey										
5,040.00	2.80	115.30	1,487.79	5,037.29	79.05	65.36	67.31	0.00	475,885.85	752,605.06
Projection to Bit										

Survey Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
1,087.00	1,086.97			Tie in to MS Gyro
1,203.00	1,202.96	-0.22	-1.30	First Phoenix MWD Survey
4,966.00	4,963.38	80.59	62.09	Last Phoenix MWD Survey
5,040.00	5,037.29	79.05	65.36	Projection to Bit



Directional Survey

Well Name BELL LAKE 18 23 34 001H		Lease Bell Lake		Field Name BELL LAKE		Business Unit Mid-Continent	
Ground Elevation (ft) 3,525.00	Original RKB (ft) 3,550.00	Current RKB Elevation 3,550.00, 12/20/2013		Mud Line Elevation (ft)		Water Depth (ft)	

Wellbore Name Original Hole		Parent Wellbore Original Hole		Kick Off Depth (ftKB)		Vertical Section Direction (°)	
UTM Northing (Y) (ft)		UTM Easting (X) (ft)		UTM Grid Zone		89.57	
Date		Definitive?		Description		Planned?	
		Y		MWD		N	
MD Tie In (ftKB)		TVD Tie In (ftKB)		Inclination Tie In (°)		Azimuth Tie In (°)	
						NSTie In (ft)	
						EWTie In (ft)	

Survey Data													
MD (ftKB)	Incl (°)	Azm (°)	TVD (ftKB)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Method	Survey Company	Build (°/100ft)	Depart (ft)	Turn (°/100ft)	Unuse d data
290	0.43	227.38	290.00	-0.74	-0.80	-0.81	0.15	Gyro MS	Multi-Shot	0.15	1.09	78.41	N
320	0.67	235.74	320.00	-0.91	-1.03	-1.04	0.84	Gyro MS	Multi-Shot	0.80	1.37	27.87	N
409	0.80	281.51	408.99	-1.08	-2.07	-2.08	0.66	Gyro MS	Multi-Shot	0.15	2.33	51.43	N
499	0.73	257.93	498.98	-1.08	-3.24	-3.25	0.36	Gyro MS	Multi-Shot	-0.08	3.42	-26.20	N
588	0.44	240.15	587.98	-1.36	-4.09	-4.10	0.38	Gyro MS	Multi-Shot	-0.33	4.32	-19.98	N
678	0.15	143.41	677.98	-1.63	-4.32	-4.34	0.53	Gyro MS	Multi-Shot	-0.32	4.62	-	N
767	0.22	116.90	766.98	-1.80	-4.10	-4.12	0.12	Gyro MS	Multi-Shot	0.08	4.48	-29.79	N
856	0.38	120.37	855.97	-2.03	-3.70	-3.71	0.18	Gyro MS	Multi-Shot	0.18	4.22	3.90	N
946	0.14	123.81	945.97	-2.24	-3.35	-3.36	0.27	Gyro MS	Multi-Shot	-0.27	4.03	3.82	N
1,035	0.23	165.87	1,034.97	-2.47	-3.21	-3.23	0.18	Gyro MS	Multi-Shot	0.10	4.05	47.26	N
1,125	0.10	145.88	1,124.97	-2.71	-3.12	-3.14	0.16	Gyro MS	Multi-Shot	-0.14	4.14	-22.21	N
1,214	0.22	71.64	1,213.97	-2.72	-2.92	-2.94	0.24	Gyro MS	Multi-Shot	0.13	3.99	-83.42	N
1,287	0.64	29.18	1,286.97	-2.32	-2.59	-2.60	0.69	Gyro MS	Multi-Shot	0.58	3.48	-58.16	N
1,403	1.10	22.20	1,402.96	-0.73	-1.85	-1.86	0.41	Magn MWD	Multi-Shot	0.40	1.99	-6.02	N
1,582	1.30	15.30	1,581.92	2.82	-0.67	-0.64	0.14	Magn MWD	Multi-Shot	0.11	2.90	-3.85	N
1,760	1.40	13.90	1,759.87	6.88	0.39	0.44	0.06	Magn MWD	Multi-Shot	0.06	6.89	-0.79	N
1,939	1.60	11.90	1,938.81	11.45	1.43	1.52	0.12	Magn MWD	Multi-Shot	0.11	11.54	-1.12	N
2,118	1.80	6.00	2,117.73	16.69	2.24	2.36	0.15	Magn MWD	Multi-Shot	0.11	16.84	-3.30	N
2,297	2.20	4.60	2,296.62	22.91	2.81	2.98	0.23	Magn MWD	Multi-Shot	0.22	23.08	-0.78	N
2,476	2.50	6.90	2,475.47	30.21	3.55	3.78	0.18	Magn MWD	Multi-Shot	0.17	30.42	1.28	N
2,655	2.90	11.50	2,654.27	38.52	4.93	5.21	0.25	Magn MWD	Multi-Shot	0.22	38.84	2.57	N
2,835	2.20	14.30	2,834.09	46.33	6.69	7.03	0.39	Magn MWD	Multi-Shot	-0.39	46.81	1.56	N
3,014	1.80	7.70	3,012.98	52.45	7.91	8.31	0.26	Magn MWD	Multi-Shot	-0.22	53.04	-3.69	N
3,192	2.20	9.50	3,190.87	58.59	8.85	9.29	0.23	Magn MWD	Multi-Shot	0.22	59.25	1.01	N
3,372	0.80	2.60	3,370.81	63.25	9.48	9.95	0.78	Magn MWD	Multi-Shot	-0.78	63.96	-3.83	N
3,551	1.30	22.60	3,549.78	66.37	10.31	10.81	0.34	Magn MWD	Multi-Shot	0.28	67.17	11.17	N
3,730	1.80	24.90	3,728.71	70.80	12.28	12.81	0.28	Magn MWD	Multi-Shot	0.28	71.86	1.28	N
3,909	1.90	30.90	3,907.62	75.89	14.99	15.56	0.12	Magn MWD	Multi-Shot	0.06	77.36	3.35	N
4,088	1.90	37.30	4,086.52	80.80	18.31	18.91	0.12	Magn MWD	Multi-Shot	0.00	82.85	3.58	N
4,267	1.70	44.00	4,265.43	85.07	21.95	22.59	0.16	Magn MWD	Multi-Shot	-0.11	87.86	3.74	N
4,446	2.60	67.00	4,444.30	88.57	27.53	28.20	0.69	Magn MWD	Multi-Shot	0.50	92.75	12.85	N



Directional Survey

Well Name BELL LAKE 18 23 34 001H		Lease Bell Lake		Field Name BELL LAKE		Business Unit Mid-Continent	
Ground Elevation (ft) 3,525.00	Original RKB (ft) 3,550.00	Current RKB Elevation 3,550.00, 12/20/2013				Mud Line Elevation (ft)	Water Depth (ft)

Survey Data

MD (ftKB)	Incl (°)	Azm (°)	TVD (ftKB)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Method	Survey Company	Build (°/100ft)	Depart (ft)	Turn (°/100ft)	Unuse d data
4,626	2.70	87.90	4,624.12	90.32	35.53	36.20	0.54	Magn MWD	Multi-Shot	0.06	97.06	11.61	N
4,805	3.40	111.80	4,802.87	88.50	44.67	45.33	0.80	Magn MWD	Multi-Shot	0.39	99.14	13.35	N
4,984	2.90	119.90	4,981.60	84.27	53.52	54.15	0.37	Magn MWD	Multi-Shot	-0.28	99.83	4.53	N
5,166	2.80	115.30	5,163.37	80.08	61.53	62.13	0.14	Magn MWD	Multi-Shot	-0.05	100.99	-2.53	N
5,240	2.80	115.30	5,237.29	78.53	64.80	65.39	0.00	Magn MWD	Multi-Shot	0.00	101.82	0.00	N