

Results of Directional Survey

API number:	30-025-41335	DD	
OGRID:		Operator:	APACHE CORP
		Property:	EAST BLINEBRY DRINKARD UNIT # 107

surface	ULSTR:	W (O)	01	T 21S	R 37E
				820 FSL	1650 FEL

BH Loc	ULSTR:	W (O)	01	T 21S	R 37E
7271	MD	7252.5	TVD	1262 FSL	1661 FEL

Top Perf/OH	ULSTR:	W	01	T 21S	R 37E
5916	MD	5902.8	TVD	1142 FSL	1656 FEL

Bot Perf/OH	ULSTR:	W	01	T 21S	R 37E
7008	MD	6907.2	TVD	1233 FSL	1659 FEL

	MD	N/S	E/W	VD
	5809	313.14	-5.77	5796.22
TOP PERFS/OH	5916	322.37	-6.05	5902.82
	5928	323.41	-6.08	5914.78
	6928	413.01	-9.41	6910.69
BOT PERFS/OH	7008	412.69	-9.38	6907.23
	4053	424.40	-10.45	7035.17

NEXT TO LAST	7207	436.65	-11.25	7188.67
LAST READING	7271	441.89	-11.07	7252.46
TD	7271	441.89	-11.07	7252.46

Surface Location	820	FS	1650	FE
Projected BHL	1262	FS	1661	FE
Location of				
Top Perfs/OH	1142	FS	1656	FE
Bottom Perfs/OH	1233	FS	1659	FE

SUMMARY of Subsurface Locations

Surface Location	W-01-21S-37E	820	FS	1650	FE	Vert. Depth
Top Perfs/OH	W-01-21S-37E	1142	FS	1656	FE	5902.82
Bottom Perfs/OH	W-01-21S-37E	1233	FS	1659	FE	6907.23
Projected TD	W-01-21S-37E	1262	FS	1661	FE	7252.46

FEB 18 2014



PO Box 1370
Artesia, NM 88211-1370
(575) 748-1288

October 23, 2013

Apache Corporation
303 Veterans Airpark Lane
Suite 3000
Midland, TX 79705

RE: 30-025-41335
East Blinbry Drinkard Unit #107
820' FSL & 1650' FEL
Sec. 1, T21S, R37E
Lea County, New Mexico

Dear Sir,

The attached is the Deviation Survey for the above captioned well.

Very truly yours,

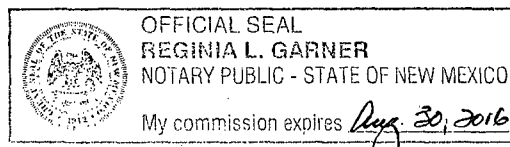
A handwritten signature in cursive script, appearing to read "Chris Graham".

Chris Graham
Drilling Superintendent

State of New Mexico }
County of Eddy }

The foregoing was acknowledged before me this 23rd day of October, 2013.

A handwritten signature in cursive script, appearing to read "Regina L. Garner".

Notary Public

October 23, 2013

East Blinebry Drinkard UNIT 107

Apache Corporation
303 Veterans Airpark Lane
Suite 3000
Midland, TX 79705

30-025-41335

RE: East Blinebry Drinkard Unit #107
820' FSL & 1650' FEL
Sec. 1, T21S, R37E
Lea County, New Mexico

Date	Depth	Deviation	Direction
10/13/2013	239	0.40	0.00
10/13/2013	482	0.30	0.00
10/13/2013	720	0.70	0.00
10/13/2013	970	0.60	0.00
10/13/2013	1251	0.20	0.00
10/13/2013	1439	0.10	0.00
10/13/2013	1555	0.30	0.00
10/15/2013	1745	0.70	258.80
10/15/2013	1870	0.60	264.50
10/15/2013	1995	1.40	325.40
10/15/2013	2121	3.10	358.30
10/15/2013	2245	5.30	2.50
10/15/2013	2371	5.30	6.10
10/15/2013	2496	5.20	6.50
10/15/2013	2621	5.30	11.30
10/15/2013	2683	5.40	13.30
10/15/2013	2746	5.10	11.20
10/15/2013	2808	4.80	5.80
10/15/2013	2870	4.60	3.60
10/16/2013	2933	4.50	0.30
10/16/2013	2995	4.50	0.80
10/16/2013	3058	4.20	358.70
10/16/2013	3121	3.90	358.10
10/16/2013	3264	4.60	355.20
10/16/2013	3308	4.00	351.60
10/16/2013	3433	3.80	348.70
10/16/2013	3558	5.10	350.20
10/16/2013	3683	4.70	352.80
10/16/2013	3746	4.50	352.70
10/16/2013	3870	4.70	356.10
10/16/2013	3996	4.60	359.50
10/16/2013	4058	4.50	357.90
10/16/2013	4121	4.50	358.10
10/16/2013	4183	4.30	356.90
10/17/2013	4246	4.50	356.80
10/17/2013	4309	4.90	355.80
10/17/2013	4371	4.90	356.30
10/17/2013	4434	4.70	354.70
10/17/2013	4496	4.80	355.30
10/17/2013	4559	4.70	356.50
10/17/2013	4621	4.50	356.40
10/17/2013	4746	4.20	0.60
10/17/2013	4871	5.00	359.50

October 23, 2013

Apache Corporation
303 Veterans Airpark Lane
Suite 3000
Midland, TX 79705

Date	Depth	Deviation	Direction
10/17/2013	4997	4.80	2.10
10/17/2013	5059	5.00	3.30
10/17/2013	5121	5.10	6.20
10/17/2013	5184	5.10	5.50
10/17/2013	5246	5.10	6.20
10/18/2013	5309	4.90	4.00
10/18/2013	5371	4.80	4.30
10/18/2013	5434	5.00	6.40
10/18/2013	5496	4.80	4.30
10/18/2013	5621	4.90	360.00
10/18/2013	5684	5.20	1.00
10/18/2013	5809	5.00	358.60
10/19/2013	5928	4.80	357.90
10/20/2013	6178	5.00	6.70
10/20/2013	6303	5.70	356.60
10/20/2013	6428	5.40	357.10
10/20/2013	6553	4.40	357.10
10/20/2013	6678	4.30	346.60
10/20/2013	6803	5.70	356.80
10/21/2013	6928	5.40	353.90
10/21/2013	7053	5.10	355.80
10/21/2013	7115	4.30	352.70

EOF

RE: *30-025-41335*
East Blinbry Drinkard Unit #107
820' FSL & 1650' FEL
Sec. 1, T21S, R37E
Lea County, New Mexico



PHOENIX
TECHNOLOGY SERVICES

HOBBS OCD

DEC 31 2013

RECEIVED

October 25, 2013

Apache Corporation
Attention: Drilling Department
303 Veterans Airpark Lane, Ste 3000
Midland, TX 79705

Re: Apache Corporation
EBDU #107 D (FED)
Lea County, NM
API #30-025-41335
Job No. 1311364

Dear Regulatory Department;

Phoenix Technology Services, Inc. has filed the Survey Data Certification, Surveys, and Lease Plat for the above referenced well with the State of New Mexico Oil Conservation Division – District 1 via certified mail. A copy of the filing is attached for your records.

Name of Surveyor	Drainhole Number	Surveyed Depths		Dates Performed		Type of Survey
		From	To	Start	End	
Samuel D. Wilson	107	1,809	7,207	10/15/13	10/21/13	MWD

Thank you for the opportunity to be of service. Please contact me if you have any questions or require additional information.

Best Regards,

Kelly Jo Walter

Kelly Jo Walter
Operations Administrator



PHOENIX
TECHNOLOGY SERVICES

October 25, 2013

Oil Conservation Division
State of New Mexico
1625 N. French Drive
District 1 - Hobbs
Hobbs, New Mexico 88240

Attention: Regulatory Department

Re: Apache Corporation
EBDU #107 D (FED)
Lea County, NM
API #30-025-41335
Job No. 1311364

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. (P-5 No. 664171). 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	
Samuel D. Wilson	107	1,809	7,207	10/15/13	10/21/13	MWD

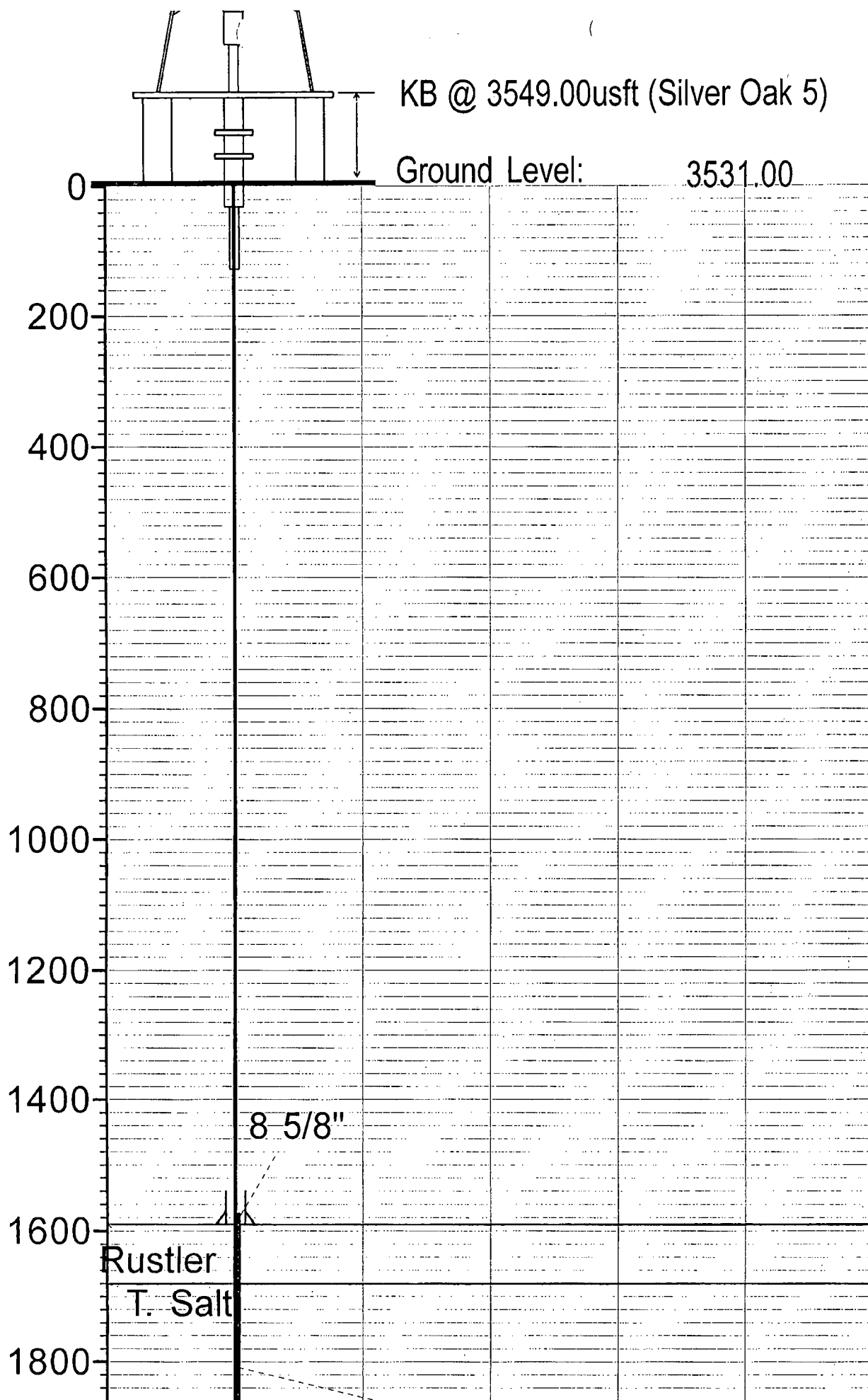
A certified plat on which the bottom hole location is oriented both to the surface location and to the lease lines (or unit lines in case of pooling) is attached to the survey report. If any other information is required, please contact the undersigned at the letterhead address and phone number.

Best Regards,

Kelly Jo Walter

Kelly Jo Walter
Operations Administrator

Certified mail receipt number: 7011 1570 0001 4364 8752



Phoenix Technology Services

Phoenix Final Survey Report



CORPORATION

Company:	Apache Corporation	Local Co-ordinate Reference:	Well #107
Project:	Lea County, NM (NAD83 NME)	TVD Reference:	KB @ 3549.00usft (Silver Oak 5)
Site:	EBDU	MD Reference:	KB @ 3549.00usft (Silver Oak 5)
Well:	#107	North Reference:	Grid
Wellbore:	WB1/Job #1311364	Survey Calculation Method:	Minimum Curvature
Design:	Surveys (Silver Oak 5)	Database:	GCR DB

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

Site	EBDU			
Site Position:		Northing:	548,813.80 usft	Latitude: 32° 30' 14.61505 N
From:	Map	Easting:	876,234.20 usft	Longitude: 103° 14' 49.28069 W
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16"	Grid Convergence: 0.58 °

Well	#107			
Well Position	+N/-S	0.00 usft	Northing:	548,813.80 usft
	+E/-W	0.00 usft	Easting:	876,234.20 usft
Position Uncertainty	0.00 usft	Wellhead Elevation:	usft	Ground Level: 3,531.00 usft

Wellbore	WB1/Job #1311364				
Magnetics	Model Name	Sample Date	Declination	Dip Angle	Field Strength
			(°)	(°)	(nT)
	IGRF2010_14	10/11/13	7.17	60.44	48,586

Design	Surveys (Silver Oak 5)				
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	359.40	

Survey Program	Date: 10/21/13				
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
1,809.00	7,271.00	Phoenix MWD Survey (WB1/Job #131136)	MWD	MWD - Standard	

Survey	MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)
	1,575.00	0.50	257.22	1,574.98	5.43	-1.19	5.44	0.00
Tie-on	1,809.00	0.70	258.80	1,808.97	4.93	-3.59	4.96	0.09
First Phoenix MWD Survey	1,870.00	0.60	264.50	1,869.96	4.82	-4.27	4.87	0.20
	1,995.00	1.40	325.40	1,994.95	6.02	-5.79	6.08	0.98
	2,121.00	3.10	358.30	2,120.85	10.69	-6.77	10.76	1.64
	2,245.00	5.30	2.50	2,244.51	19.76	-6.61	19.83	1.79
	2,371.00	5.30	6.10	2,369.97	31.37	-5.74	31.42	0.26
	2,496.00	5.20	6.50	2,494.45	42.73	-4.49	42.78	0.09
	2,621.00	5.30	11.30	2,618.92	54.02	-2.72	54.05	0.36
	2,683.00	5.40	13.30	2,680.65	59.67	-1.48	59.68	0.34

Phoenix Technology Services

Phoenix Final Survey Report



Company:	Apache Corporation	Local Co-ordinate Reference:	Well #107
Project:	Lea County, NM (NAD83 NME)	TVD Reference:	KB @ 3549.00usft (Silver Oak 5)
Site:	EBDU	MD Reference:	KB @ 3549.00usft (Silver Oak 5)
Well:	#107	North Reference:	Grid
Wellbore:	WB1/Job #1311364	Survey Calculation Method:	Minimum Curvature
Design:	Surveys (Silver Oak 5)	Database:	GCR DB

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)
2,746.00	5.10	11.20	2,743.39	65.30	-0.26	65.30	0.57
2,808.00	4.80	5.80	2,805.16	70.59	0.54	70.58	0.89
2,871.00	4.60	3.60	2,867.94	75.73	0.97	75.72	0.43
2,933.00	4.50	0.30	2,929.75	80.64	1.13	80.63	0.45
2,996.00	4.50	0.80	2,992.56	85.59	1.18	85.57	0.06
3,058.00	4.20	358.70	3,054.38	90.29	1.16	90.27	0.55
3,121.00	3.90	358.10	3,117.22	94.74	1.04	94.72	0.48
3,246.00	4.60	355.20	3,241.87	103.98	0.48	103.97	0.59
3,308.00	4.00	351.60	3,303.70	108.60	-0.04	108.59	1.06
3,433.00	3.80	348.70	3,428.41	116.97	-1.49	116.98	0.22
3,558.00	5.10	350.20	3,553.03	126.51	-3.25	126.53	1.04
3,683.00	4.70	352.80	3,677.57	137.06	-4.84	137.11	0.37
3,746.00	4.50	352.70	3,740.37	142.08	-5.47	142.12	0.32
3,870.00	4.70	356.10	3,863.97	151.97	-6.44	152.03	0.27
3,995.00	4.60	359.50	3,988.56	162.09	-6.83	162.15	0.23
4,057.00	4.50	357.90	4,050.37	167.01	-6.94	167.07	0.26
4,120.00	4.50	358.40	4,113.17	171.95	-7.10	172.01	0.06
4,182.00	4.30	356.90	4,174.99	176.70	-7.29	176.77	0.37
4,245.00	4.50	356.80	4,237.80	181.53	-7.56	181.59	0.32
4,308.00	4.90	355.80	4,300.59	186.68	-7.90	186.75	0.65
4,370.00	4.90	356.30	4,362.36	191.96	-8.26	192.04	0.07
4,433.00	4.70	354.70	4,425.14	197.21	-8.67	197.29	0.38
4,495.00	4.80	355.30	4,486.93	202.33	-9.12	202.41	0.18
4,558.00	4.70	356.50	4,549.71	207.53	-9.49	207.62	0.22
4,620.00	4.50	356.40	4,611.51	212.50	-9.80	212.59	0.32
4,745.00	4.20	0.60	4,736.15	221.97	-10.06	222.06	0.35
4,870.00	5.00	359.50	4,860.75	231.99	-10.06	232.08	0.64
4,995.00	4.80	2.10	4,985.29	242.66	-9.92	242.75	0.24
5,058.00	5.00	3.30	5,048.06	248.04	-9.66	248.13	0.36
5,120.00	5.10	6.20	5,109.82	253.48	-9.21	253.56	0.44
5,183.00	5.10	5.50	5,172.57	259.05	-8.64	259.12	0.10
5,245.00	5.10	6.20	5,234.33	264.53	-8.08	264.60	0.10
5,308.00	4.90	4.00	5,297.09	270.00	-7.59	270.06	0.44
5,370.00	4.80	4.30	5,358.87	275.23	-7.21	275.29	0.17
5,433.00	5.00	6.40	5,421.64	280.58	-6.70	280.64	0.43
5,495.00	4.80	4.50	5,483.41	285.85	-6.20	285.90	0.42
5,621.00	4.90	0.00	5,608.96	296.49	-5.78	296.53	0.31
5,684.00	5.20	1.00	5,671.71	302.04	-5.73	302.08	0.50
5,809.00	5.00	358.60	5,796.22	313.14	-5.77	313.19	0.23
5,928.00	4.90	357.90	5,914.78	323.41	-6.08	323.45	0.10
6,053.00	5.50	5.00	6,039.26	334.71	-5.76	334.75	0.70
6,178.00	5.00	6.70	6,163.74	346.09	-4.60	346.12	0.42
6,303.00	5.70	356.60	6,288.19	357.70	-4.33	357.72	0.94
6,428.00	5.40	357.10	6,412.61	369.77	-5.00	369.80	0.24
6,553.00	4.40	357.10	6,537.15	380.43	-5.54	380.47	0.80

Phoenix Technology Services

Phoenix Final Survey Report



Company:	Apache Corporation	Local Co-ordinate Reference:	Well #107
Project:	Lea County, NM (NAD83 NME)	TVD Reference:	KB @ 3549.00usft (Silver Oak 5)
Site:	EBDU	MD Reference:	KB @ 3549.00usft (Silver Oak 5)
Well:	#107	North Reference:	Grid
Wellbore:	WB1/Job #1311364	Survey Calculation Method:	Minimum Curvature
Design:	Surveys (Silver Oak 5)	Database:	GCR DB

Survey							
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)
6,678.00	4.30	346.60	6,661.79	389.78	-6.86	389.83	0.64
6,741.00	5.40	351.60	6,724.57	395.01	-7.85	395.07	1.87
6,803.00	5.70	356.80	6,786.28	400.97	-8.44	401.03	0.94
6,928.00	5.40	353.90	6,910.69	413.01	-9.41	413.09	0.33
7,053.00	5.10	355.80	7,035.17	424.40	-10.45	424.49	0.28
7,115.00	4.30	352.70	7,096.96	429.46	-10.94	429.55	1.35
7,207.00	4.70	2.00	7,188.67	436.65	-11.25	436.74	0.90
Last Phoenix MWD Survey							
7,271.00	4.70	2.00	7,252.46	441.89	-11.07	441.98	0.00
Projection to TD							

Survey Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
1,575.00	1,574.98	5.43	-1.19	Tie-on
1,809.00	1,808.97	4.93	-3.59	First Phoenix MWD Survey
7,207.00	7,188.67	436.65	-11.25	Last Phoenix MWD Survey
7,271.00	7,252.46	441.89	-11.07	Projection to TD

Checked By: _____ Approved By: _____ Date: _____