



PHOENIX
TECHNOLOGY SERVICES

RECEIVED
MAY 12 2014
MAIL ROOM

May 7, 2014

Yates Petroleum Corp.
Attention: Regulatory Department
105 S. 4th St.
Artesia, NM 88210

Re: Yates Petroleum
Nickson BM #5H
Eddy County, NM
API #30-015- 41726
Job No. 1410302

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 2 via certified mail. A copy of the filing is attached for your records.

Name of Surveyor	Drain Hole Number	Surveyed Depths		Dates Performed		Type of Survey
		From	To	Start	End	
James Garber	5H	1,000	6,974	04/06/14	04/11/14	MWD

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

Best Regards,

Dana Robinson

Dana Robinson
Operations Administrator

Phoenix Technology Services
SURVEY DATA CERTIFICATION



PHOENIX JOB NUMBER 1410470

OPERATOR Yates Petroleum

WELL NAME Nickson BM #5H

COUNTY & STATE

Eddy, New Mexico

API WELL NUMBER 30-015-41726

PROPOSED DIRECTION 272.09

TIE-IN DATA						
MEASURED	VERTICAL			N-S	E-W	DATA
DEPTH	DEPTH	INCLIN	AZIMUTH	COORD	COORD	SOURCE
0 ft	.00 ft	0 ft	0 ft	.00 ft	.00 ft	Surface

FIRST	FIRST		
SURVEY	SURVEY		
DATE	DEPTH	INCLIN	AZIMUTH
6-Apr-14	1,000 ft	0.8	29.9

SURVEY INSTRUMENT
TYPE
Phoenix MWD

LAST	LAST		
SURVEY	SURVEY		
DATE	DEPTH	INCLIN	AZIMUTH
11-Apr-14	6,974 ft	90.3	271.1

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

PROJECTED	PROJECTED		
TD SURVEY	TD SURVEY		
DATE	DEPTH	INCLIN	AZIMUTH
11-Apr-14	7,055 ft	90.3	271.1

James Garber

PRINT YOUR NAME ABOVE

James Garber

SIGN YOUR NAME ABOVE

4/11/2014

TODAY'S DATE

MAGNETIC DECLINATION OR TOTAL GRID

TOTAL CORRECTION USED	7.72
DECLINATION OR GRID	GRID

MWD SUPERVISOR 1

Jim Garber

DIRECTIONAL DRILLER 1

Dan Waggoner

MWD SUPERVISOR 2

David Puente

DIRECTIONAL DRILLER 2

Daniel Scott

1805 Brittmore Road Houston, Texas 77043 (713)3370609 (Voice), (713)337-0599 (Fax)



PHOENIX
TECHNOLOGY SERVICES

Yates Petroleum Corp.

Eddy County, NM (NAD83 NME)

Nickson "BM"

#5H

WB1/Job #1410470

Design: Surveys (Silver Oak 11)

Standard Survey Report

12 April, 2014



PHOENIX
TECHNOLOGY SERVICES

Company:	Yates Petroleum Corp.	Local Co-ordinate Reference:	Well #5H
Project:	Eddy County, NM (NAD83 NME)	TVD Reference:	KB @ 3458.00usft (Silver Oak 11)
Site:	Nickson "BM"	MD Reference:	KB @ 3458.00usft (Silver Oak 11)
Well:	#5H	North Reference:	Grid
Wellbore:	WB1/Job #1410470	Survey Calculation Method:	Minimum Curvature
Design:	Surveys (Silver Oak 11)	Database:	Compass 5000 GCR DB

Project	Eddy 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		Nickson "BM"			
Site Position:		Northing:	627,342.30 usft	Latitude:	32° 43' 28.48044 N
From:	Map	Easting:	516,671.20 usft	Longitude:	104° 24' 48.75218 W
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "	Grid Convergence:	-0.04 °

Well		#5H				
Well Position	+N/-S	0.00 usft	Northing:	627,342.30 usft	Latitude:	32° 43' 28.48044 N
	+E/-W	0.00 usft	Easting:	516,671.20 usft	Longitude:	104° 24' 48.75218 W
Position Uncertainty	-	0.00 usft	Wellhead Elevation:	usft	Ground Level:	3,440.00 usft

Wellbore	WB1/Job #1410470				
Magnetics	Model Name	Sample Date	Declination	Dip Angle	Field Strength
			(°)	(°)	(nT)
	IGRF2010_14	3/17/2014	7.67	60.44	48,549

Design	Surveys (Silver Oak 11)				
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	272.09	

Survey Program	Date	4/12/2014		
From	To	Survey (Wellbore)	Tool Name	Description
(usft)	(usft)			
600.00	1,000.00	Gyro Survey (WB1/Job #1410470)	CB-GYRO-MS	Camera based gyro multishot
1,056.00	7,055.00	Phoenix MWD Survey (WB1/Job #141047)	MWD	MWD - Standard

Survey									
Measured Depth	Inclination	Azimuth	Vertical Depth	+N/-S	+E/-W	Vertical Section	Dogleg Rate	Build Rate	Turn Rate
(usft)	(°)	(°)	(usft)	(usft)	(usft)	(usft)	(°/100usft)	(°/100usft)	(°/100usft)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
600.00	0.27	304.52	600.00	0.80	-1.16	1.19	0.05	0.05	0.00
700.00	0.20	290.25	700.00	1.00	-1.52	1.56	0.09	-0.07	-14.27
800.00	0.19	83.29	800.00	1.07	-1.52	1.56	0.38	-0.01	153.04
900.00	0.60	43.76	899.99	1.47	-0.99	1.05	0.47	0.41	-39.53
1,000.00	0.79	29.88	999.99	2.45	-0.29	0.38	0.25	0.19	-13.88
First Phoenix MWD Survey									
1,056.00	0.80	54.20	1,055.98	3.01	0.22	-0.11	0.60	0.02	43.43
1,150.00	0.80	55.20	1,149.97	3.77	1.29	-1.15	0.01	0.00	1.06
1,243.00	0.80	81.20	1,242.96	4.24	2.47	-2.31	0.39	0.00	27.96

Company:	Yates Petroleum Corp.	Local Co-ordinate Reference:	Well #5H
Project:	Eddy County, NM (NAD83 NME)	TVD Reference:	KB @ 3458.00usft (Silver Oak 11)
Site:	Nickson "BM"	MD Reference:	KB @ 3458.00usft (Silver Oak 11)
Well:	#5H	North Reference:	Grid
Wellbore:	WB1/Job #1410470	Survey Calculation Method:	Minimum Curvature
Design:	Surveys (Silver Oak 11)	Database:	Compass 5000 GCR DB

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)
1,337.00	0.60	75.80	1,336.96	4.46	3.59	-3.43	0.22	-0.21	-5.74
1,430.00	0.60	82.10	1,429.95	4.65	4.55	-4.37	0.07	0.00	6.77
1,524.00	0.60	82.30	1,523.95	4.78	5.52	-5.34	0.00	0.00	0.21
1,617.00	0.50	67.20	1,616.94	5.00	6.38	-6.19	0.19	-0.11	-16.24
1,711.00	0.60	75.50	1,710.94	5.29	7.23	-7.03	0.14	0.11	8.83
1,805.00	0.60	91.00	1,804.93	5.40	8.20	-8.00	0.17	0.00	16.49
1,898.00	0.80	79.10	1,897.93	5.51	9.33	-9.12	0.26	0.22	-12.80
1,992.00	0.90	75.80	1,991.92	5.82	10.69	-10.47	0.12	0.11	-3.51
2,038.00	0.90	78.10	2,037.91	5.98	11.39	-11.16	0.08	0.00	5.00
2,054.00	1.10	73.10	2,053.91	6.05	11.66	-11.43	1.36	1.25	-31.25
2,085.00	0.90	74.30	2,084.90	6.21	12.18	-11.94	0.65	-0.65	3.87
2,116.00	0.60	315.90	2,115.90	6.39	12.30	-12.06	4.19	-0.97	-381.94
2,148.00	5.60	271.10	2,147.85	6.54	10.62	-10.38	16.22	15.63	-140.00
2,179.00	11.60	269.50	2,178.48	6.54	5.99	-5.75	19.37	19.35	-5.16
2,210.00	16.80	269.60	2,208.53	6.48	-1.61	1.85	16.77	16.77	0.32
2,241.00	20.80	269.90	2,237.87	6.44	-11.60	11.83	12.91	12.90	0.97
2,272.00	24.20	269.80	2,266.50	6.41	-23.46	23.68	10.97	10.97	-0.32
2,304.00	28.30	270.10	2,295.20	6.40	-37.61	37.82	12.82	12.81	0.94
2,335.00	32.30	270.90	2,321.96	6.54	-53.25	53.45	12.97	12.90	2.58
2,366.00	36.20	271.30	2,347.58	6.88	-70.69	70.89	12.60	12.58	1.29
2,397.00	39.50	271.70	2,372.05	7.38	-89.70	89.91	10.67	10.65	1.29
2,429.00	43.10	271.60	2,396.09	7.99	-110.81	111.03	11.25	11.25	-0.31
2,461.00	45.60	271.70	2,418.97	8.63	-133.17	133.39	7.82	7.81	0.31
2,492.00	47.70	271.70	2,440.25	9.30	-155.70	155.94	6.77	6.77	0.00
2,522.00	50.20	272.00	2,459.95	10.03	-178.31	178.56	8.37	8.33	1.00
2,523.03	50.33	271.99	2,460.60	10.06	-179.10	179.35	12.60	12.58	-1.02
330' Cross Point 1									
2,553.00	54.10	271.70	2,478.96	10.82	-202.77	203.03	12.60	12.58	-0.97
2,584.00	57.10	272.30	2,496.48	11.72	-228.33	228.61	9.81	9.68	1.94
2,615.00	59.90	272.50	2,512.67	12.82	-254.74	255.03	9.05	9.03	0.65
2,647.00	62.20	272.30	2,528.16	14.00	-282.71	283.03	7.21	7.19	-0.63
2,678.00	65.50	272.90	2,541.82	15.26	-310.51	310.86	10.79	10.65	1.94
2,709.00	68.50	272.60	2,553.93	16.63	-339.01	339.39	9.72	9.68	-0.97
2,740.00	72.40	271.70	2,564.30	17.72	-368.19	368.59	12.87	12.58	-2.90
2,771.00	76.00	271.10	2,572.74	18.45	-398.01	398.41	11.76	11.61	-1.94
2,802.00	79.40	271.10	2,579.35	19.03	-428.28	428.69	10.97	10.97	0.00
2,833.00	82.10	271.40	2,584.33	19.70	-458.87	459.28	8.76	8.71	0.97
2,864.00	85.40	271.40	2,587.70	20.45	-489.67	490.09	10.65	10.65	0.00
2,888.00	88.40	271.50	2,589.00	21.06	-513.63	514.05	12.51	12.50	0.42
2,919.00	91.30	271.60	2,589.08	21.89	-544.61	545.05	9.36	9.35	0.32
2,951.00	91.30	271.40	2,588.36	22.73	-576.59	577.04	0.62	0.00	-0.63
3,044.00	90.70	272.10	2,586.73	25.57	-669.54	670.02	0.99	-0.65	0.75
3,138.00	90.40	273.00	2,585.83	29.75	-763.44	764.01	1.01	-0.32	0.96

Company:	Yates Petroleum Corp.	Local Co-ordinate Reference:	Well #5H
Project:	Eddy County NM (NAD83 NME)	TVD Reference:	KB @ 3458.00usft (Silver Oak 11)
Site:	Nickson "BM"	MD Reference:	KB @ 3458.00usft (Silver Oak 11)
Well:	#5H	North Reference:	Grid
Wellbore:	WB1/Job #1410470	Survey Calculation Method:	Minimum Curvature
Design:	Surveys (Silver Oak 11)	Database:	Compass 5000 GCR/DB

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)
3,231.00	90.70	271.90	2,584.94	33.73	-856.35	857.01	1.23	0.32	-1.18
3,326.00	90.50	271.80	2,583.94	36.80	-951.29	952.00	0.24	-0.21	-0.11
3,419.00	90.30	272.00	2,583.29	39.88	-1,044.24	1,045.00	0.30	-0.22	0.22
3,513.00	90.80	272.10	2,582.39	43.24	-1,138.17	1,138.99	0.54	0.53	0.11
3,606.00	90.90	272.20	2,581.01	46.73	-1,231.10	1,231.98	0.15	0.11	0.11
3,700.00	90.80	272.30	2,579.62	50.42	-1,325.01	1,325.97	0.15	-0.11	0.11
3,793.00	90.90	272.20	2,578.24	54.07	-1,417.93	1,418.96	0.15	0.11	-0.11
3,887.00	91.10	272.50	2,576.60	57.92	-1,511.84	1,512.95	0.38	0.21	0.32
3,980.00	90.90	272.30	2,574.97	61.82	-1,604.74	1,605.93	0.30	-0.22	-0.22
4,074.00	91.10	272.10	2,573.33	65.43	-1,698.66	1,699.92	0.30	0.21	-0.21
4,167.00	91.20	272.00	2,571.47	68.75	-1,791.58	1,792.90	0.15	0.11	-0.11
4,261.00	91.30	272.10	2,569.42	72.11	-1,885.50	1,886.87	0.15	0.11	0.11
4,355.00	91.10	271.90	2,567.45	75.39	-1,979.42	1,980.85	0.30	-0.21	-0.21
4,448.00	91.10	272.20	2,565.66	78.72	-2,072.34	2,073.84	0.32	0.00	0.32
4,542.00	91.00	272.40	2,563.94	82.49	-2,166.25	2,167.82	0.24	-0.11	0.21
4,635.00	90.90	272.20	2,562.40	86.22	-2,259.16	2,260.81	0.24	-0.11	-0.22
4,729.00	90.80	271.90	2,561.00	89.59	-2,353.09	2,354.80	0.34	-0.11	-0.32
4,823.00	90.40	271.70	2,560.02	92.54	-2,447.04	2,448.79	0.48	-0.43	-0.21
4,916.00	89.80	271.20	2,559.86	94.89	-2,540.01	2,541.78	0.84	-0.65	-0.54
5,010.00	90.50	271.70	2,559.61	97.27	-2,633.98	2,635.78	0.92	0.74	0.53
5,104.00	90.70	271.50	2,558.63	99.89	-2,727.94	2,729.77	0.30	0.21	-0.21
5,197.00	90.10	271.20	2,557.98	102.09	-2,820.91	2,822.76	0.72	-0.65	-0.32
5,290.00	90.80	271.20	2,557.25	104.03	-2,913.89	2,915.74	0.75	0.75	0.00
5,384.00	91.70	271.70	2,555.20	106.41	-3,007.83	3,009.71	1.10	0.96	0.53
5,477.00	91.60	271.90	2,552.52	109.33	-3,100.75	3,102.67	0.24	-0.11	0.22
5,571.00	91.20	271.30	2,550.22	111.96	-3,194.68	3,196.64	0.77	-0.43	-0.64
5,664.00	90.90	273.00	2,548.52	115.44	-3,287.60	3,289.62	1.86	-0.32	1.83
5,758.00	91.00	273.10	2,546.96	120.44	-3,381.45	3,383.60	0.15	0.11	0.11
5,851.00	91.20	272.80	2,545.17	125.23	-3,474.31	3,476.57	0.39	0.22	-0.32
5,945.00	91.00	272.40	2,543.37	129.49	-3,568.20	3,570.55	0.48	-0.21	-0.43
6,038.00	90.60	271.90	2,542.07	132.98	-3,661.12	3,663.54	0.69	-0.43	-0.54
6,132.00	91.60	272.50	2,540.27	136.59	-3,755.03	3,757.52	1.24	1.06	0.64
6,225.00	91.30	272.60	2,537.91	140.73	-3,847.91	3,850.48	0.34	-0.32	0.11
6,319.00	91.00	271.70	2,536.03	144.25	-3,941.83	3,944.46	1.01	-0.32	-0.96
6,413.00	91.00	271.50	2,534.39	146.88	-4,035.77	4,038.45	0.21	0.00	-0.21
6,506.00	91.50	271.20	2,532.36	149.07	-4,128.73	4,131.42	0.63	0.54	-0.32
6,600.00	91.50	270.90	2,529.90	150.79	-4,222.68	4,225.37	0.32	0.00	-0.32
6,693.00	91.60	270.70	2,527.38	152.09	-4,315.64	4,318.31	0.24	0.11	-0.22
6,787.00	90.90	271.90	2,525.33	154.22	-4,409.59	4,412.28	1.48	-0.74	1.28
6,881.00	90.60	271.70	2,524.10	157.17	-4,503.53	4,506.27	0.38	-0.32	-0.21
6,961.95	90.34	271.18	2,523.44	159.20	-4,584.45	4,587.21	0.72	-0.32	-0.65
330' Cross Point 2									
6,974.00	90.30	271.10	2,523.37	159.44	-4,596.50	4,599.26	0.72	-0.32	-0.65
Last Phoenix MWD Survey									

Survey Report

Company:	Yates Petroleum Corp.	Local Co-ordinate Reference:	Well #5H
Project:	Eddy County, NM (NAD83 NME)	TVD Reference:	KB @ 3458.00usft (Silver Oak 11)
Site:	Nickson "BM"	MD Reference:	KB @ 3458.00usft (Silver Oak 11)
Well:	#5H	North Reference:	Grid
Wellbore:	WB1/Job #1410470	Survey Calculation Method:	Minimum Curvature
Design:	Surveys (Silver Oak 11)	Database:	Compass 5000 GCR DB

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)
7,055.00	90.30	271.10	2,522.95	161.00	-4,677.48	4,680.24	0.00	0.00	0.00
Projection to Bit									

Design Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
1,000.00	999.99	2.45	-0.29	First Phoenix MWD Survey
2,523.03	2,460.60	10.06	-179.10	330' Cross Point 1
6,961.95	2,523.44	159.20	-4,584.45	330' Cross Point 2
6,974.00	2,523.37	159.44	-4,596.50	Last Phoenix MWD Survey
7,055.00	2,522.95	161.00	-4,677.48	Projection to Bit

Checked By: _____ Approved By: _____ Date: _____



Project: Eddy County, NM (NAD83 NME)
Site: Nickson "BM"
Well: #5H
Wellbore: WB1/Job #1410470
Design: Plan #1 03-17-14
Rig: Silver Oak 11



Azimuths to Grid North
True North: 0.04°
Magnetic North: 7.72°
Magnetic Field
Strength: 48548.7 nT
Dip Angle: 90.44°
Date: 3/17/2014
Model: IGRF2010_14

WELL DETAILS

+N/-S	+E/-W	Northing	Ground Level	3440.00	Latitude	Longitude
0.00	0.00	627342.30	Easting	516671.20	32° 43' 28.48044 N	104° 24' 48.75218 W

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSecl	Target	Annotation
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2	2114.91	0.00	0.00	2114.91	0.00	0.00	0.00	0.00	0.00	0.00	KOP, 12°/100' Build
3	2872.74	90.94	272.09	2592.31	17.70	-484.98	12.00	272.09	485.30		LP, Hold 90.94° Inc, 272.09° Azm
4	6975.75	90.94	272.09	2525.00	167.30	-4584.70	0.00	0.00	4587.75		PBHL-Nickson BM #5H
5	7075.75	90.94	272.09	2523.36	170.95	-4684.62	0.00	0.00	4687.74		TD at 7075.75' MD 100' Past Hardline

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
PBHL-Nickson BM #5H	2525.00	167.30	-4584.70	627509.80	512086.50	32° 43' 30.0839 N	104° 25' 42.42366 W	Point

- plan hits target center

Map System: US State Plane 1983
Datum: North American Datum 1983
Ellipsoid: GRS 1980
Zone Name: New Mexico Eastern Zone

Local Origin: Well #5H, Grid North

Latitude: 32° 43' 28.48044 N
Longitude: 104° 24' 48.75218 W

Grid East: 516671.20
Grid North: 627342.30
Scale Factor: 1.000

Geomagnetic Model: IGRF2010_14
Sample Date: 17-Mar-14
Magnetic Declination: 7.67°
Dip Angle from Horizontal: 90.44°
Magnetic Field Strength: 48549

To convert a Magnetic Direction to a Grid Direction, Add 7.72°
To convert a Magnetic Direction to a True Direction, Add 7.67° East
To convert a True Direction to a Grid Direction, Add 0.04°

FORMATION TOP DETAILS

TVDPath	MDPath	Formation	DipAngle	DipDir
125.00	125.00	Queen	-0.94	272.09
480.00	480.00	Grayburg	-0.94	272.09
820.00	820.00	San Andres	-0.94	272.09
2188.90	2188.90	Glorieta	-0.94	272.09
2338.08	2338.08	Yeso	-0.94	272.09
2592.30	2592.30	Yeso Target	-0.94	272.09

LEGEND

— #5H, WB1/Job #1410470, Surveys (Silver Oak 11) V0
— #2, WB1, Inc Surveys V0
— #1, WB1, Inc Surveys V0
— #1, WB1, Inc Surveys V0
— Plan #1 03-17-14

