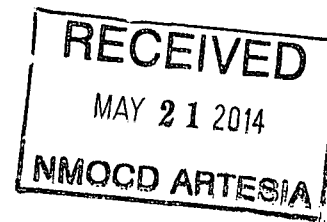


30-015-41782



Yates Petroleum Corp.

Eddy County, NM (NAD83 NME)

Abundance AVZ

#2H

WB1/Job #1410113

Survey: Phoenix MWD Survey

Phoenix Final Survey Report

05 February, 2014





Phoenix Technology Services

Phoenix Final Survey Report



Company:	Yates Petroleum Corp.	Local Co-ordinate Reference:	Well #2H
Project:	Eddy County, NM (NAD83 NME)	TVD Reference:	KB @ 3443.50usft (Silver Oak 11)
Site:	Abundance AVZ	MD Reference:	KB @ 3443.50usft (Silver Oak 11)
Well:	#2H	North Reference:	Grid
Wellbore:	WB1/Job #1410113	Survey Calculation Method:	Minimum Curvature
Design:	Surveys (Silver Oak 11)	Database:	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		Abundance AVZ			
Site Position:		Northing:	601,335.80 usft	Latitude:	32° 39' 11.03890 N
From:	Map	Easting:	505,826.20 usft	Longitude:	104° 26' 55.37618 W
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16"	Grid Convergence:	-0.06 °

Well:	#2H					
Well Position	+N/-S	0.00 usft	Northing:	601,335.80 usft	Latitude:	32° 39' 11.03890 N
	+E/-W	0.00 usft	Easting:	505,826.20 usft	Longitude:	104° 26' 55.37618 W
Position Uncertainty		0.00 usft	Wellhead Elevation:	usft	Ground Level:	3,425.00 usft

Wellbore		WB1/Job #1410113			
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010_14	01/30/14	7.70	60.37	48,514

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	358.58

Survey Program		Date: 02/04/14		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
200.00	905.00	MS Gyro Survey (WB1/Job #1410113)	CB-GYRO-MS	Camera based gyro multishot
1,122.00	7,135.00	Phoenix MWD Survey (WB1/Job #141011)	MWD	MWD - Standard

Survey	MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)
	905.00	0.67	69.66	904.85	6.52	12.66	6.20	0.00
Tie-on to Gyro	1,122.00	0.80	47.80	1,121.83	7.98	14.97	7.60	0.14
First Phoenix MWD Survey	1,309.00	0.80	37.50	1,308.81	9.89	16.74	9.47	0.08
	1,496.00	0.80	46.50	1,495.79	11.82	18.48	11.36	0.07
	1,683.00	0.70	10.50	1,682.78	13.84	19.63	13.35	0.25
	1,870.00	0.40	49.70	1,869.77	15.39	20.34	14.88	0.25
	2,057.00	0.70	37.50	2,056.76	16.72	21.53	16.18	0.17
	2,120.00	0.90	15.90	2,119.76	17.50	21.90	16.95	0.57
	2,150.00	0.70	35.60	2,149.75	17.87	22.07	17.32	1.12



Phoenix Technology Services
Phoenix Final Survey Report



Company:	Yates Petroleum Corp.	Local Co-ordinate Reference:	Well #2H
Project:	Eddy County, NM (NAD83 NME)	TVD Reference:	KB @ 3443.50usft (Silver Oak 11)
Site:	Abundance AVZ	MD Reference:	KB @ 3443.50usft (Silver Oak 11)
Well:	#2H	North Reference:	Gnd
Wellbore:	WB1/Job #1410113	Survey Calculation Method:	Minimum Curvature
Design:	Surveys (Silver Oak 11)	Database:	GCR DB

Survey							
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)
2,181.00	2.20	7.90	2,180.74	18.62	22.26	18.06	5.20
2,213.00	5.80	359.50	2,212.66	20.84	22.34	20.28	11.37
2,244.00	9.90	357.70	2,243.36	25.08	22.21	24.52	13.25
2,275.00	14.20	357.40	2,273.67	31.54	21.93	30.99	13.87
2,306.00	18.70	357.20	2,303.40	40.31	21.52	39.76	14.52
2,338.00	22.90	357.50	2,333.30	51.65	21.00	51.12	13.13
2,369.00	26.30	358.00	2,361.49	64.55	20.49	64.02	10.99
2,400.00	29.50	358.40	2,388.88	79.04	20.04	78.52	10.34
2,431.00	32.80	358.00	2,415.40	95.07	19.53	94.56	10.67
2,462.00	35.50	358.10	2,441.06	112.46	18.94	111.96	8.71
2,494.00	38.10	358.30	2,466.68	131.62	18.34	131.12	8.13
2,525.00	41.00	359.00	2,490.58	151.35	17.88	150.86	9.46
2,556.00	44.40	358.50	2,513.36	172.36	17.42	171.88	11.02
2,587.00	47.20	358.40	2,534.97	194.58	16.82	194.10	9.04
2,618.00	50.10	358.30	2,555.45	217.84	16.15	217.37	9.36
2,650.00	53.20	358.00	2,575.30	242.92	15.34	242.46	9.72
2,681.00	56.40	358.20	2,593.17	268.23	14.50	267.79	10.34
2,712.00	59.20	358.90	2,609.68	294.45	13.84	294.02	9.23
2,743.00	61.80	358.90	2,624.95	321.43	13.32	321.00	8.39
2,774.00	64.90	359.30	2,638.85	349.12	12.88	348.70	10.07
2,805.00	68.10	359.50	2,651.21	377.55	12.59	377.12	10.34
2,836.00	71.20	359.10	2,661.99	406.61	12.23	406.18	10.07
2,868.00	73.90	358.90	2,671.58	437.13	11.70	436.70	8.46
2,899.00	77.30	358.50	2,679.29	467.14	11.02	466.73	11.04
2,930.00	80.20	357.90	2,685.34	497.53	10.06	497.13	9.55
2,961.00	82.90	358.00	2,689.89	528.17	8.96	527.78	8.72
2,992.00	86.00	358.20	2,692.89	559.00	7.94	558.63	10.02
3,019.00	88.50	358.50	2,694.19	585.96	7.16	585.60	9.33
3,051.00	90.70	358.60	2,694.41	617.95	6.35	617.60	6.88
3,113.00	91.10	358.40	2,693.44	679.92	4.73	679.59	0.72
3,207.00	89.50	358.50	2,692.95	773.88	2.19	773.59	1.71
3,300.00	90.10	358.90	2,693.27	866.85	0.08	866.58	0.78
3,394.00	90.60	358.90	2,692.70	960.83	-1.72	960.58	0.53
3,487.00	90.90	359.20	2,691.48	1,053.81	-3.27	1,053.57	0.46
3,581.00	91.20	359.40	2,689.76	1,147.79	-4.41	1,147.55	0.38
3,674.00	89.80	358.60	2,688.94	1,240.77	-6.04	1,240.54	1.73
3,768.00	89.90	358.40	2,689.19	1,334.74	-8.50	1,334.54	0.24
3,861.00	90.20	358.50	2,689.11	1,427.70	-11.01	1,427.54	0.34
3,955.00	89.90	357.70	2,689.03	1,521.65	-14.13	1,521.53	0.91
4,049.00	90.00	357.70	2,689.11	1,615.57	-17.90	1,615.52	0.11
4,142.00	90.90	357.80	2,688.38	1,708.50	-21.55	1,708.51	0.97
4,236.00	89.90	358.20	2,687.72	1,802.44	-24.83	1,802.50	1.15
4,329.00	90.60	358.60	2,687.32	1,895.40	-27.43	1,895.50	0.87
4,423.00	91.40	358.50	2,685.68	1,989.35	-29.81	1,989.48	0.86



Phoenix Technology Services

Phoenix Final Survey Report



Company:	Yates Petroleum Corp.	Local Co-ordinate Reference:	Well #2H
Project:	Eddy County NM (NAD83/NME)	TVD Reference:	KB @ 3443.50usft (Silver Oak 11)
Site:	Abundance AVZ	MD Reference:	KB @ 3443.50usft (Silver Oak 11)
Well:	#2H	North Reference:	Grid
Wellbore:	WB1/Job #1410113	Survey Calculation Method:	Minimum Curvature
Design:	Surveys (Silver Oak 11)	Database:	GCR DB

Survey								
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (%/100usft)	
4,516.00	90.20	359.00	2,684.38	2,082.32	-31.84	2,082.47	1.40	
4,610.00	89.50	357.80	2,684.62	2,176.28	-34.46	2,176.47	1.48	
4,704.00	90.10	358.10	2,684.95	2,270.22	-37.82	2,270.46	0.71	
4,797.00	90.40	358.70	2,684.55	2,363.18	-40.42	2,363.46	0.72	
4,890.00	89.20	357.70	2,684.87	2,456.13	-43.34	2,456.45	1.68	
4,984.00	89.60	358.10	2,685.86	2,550.06	-46.79	2,550.44	0.60	
5,077.00	90.10	358.50	2,686.10	2,643.02	-49.55	2,643.44	0.69	
5,171.00	89.10	357.50	2,686.75	2,736.96	-52.83	2,737.43	1.50	
5,264.00	89.50	358.00	2,687.89	2,829.88	-56.48	2,830.41	0.69	
5,358.00	89.80	358.10	2,688.47	2,923.82	-59.68	2,924.41	0.34	
5,452.00	90.60	359.00	2,688.14	3,017.79	-62.05	3,018.40	1.28	
5,545.00	90.20	358.00	2,687.49	3,110.76	-64.49	3,111.40	1.16	
5,639.00	90.50	357.80	2,686.91	3,204.69	-67.93	3,205.39	0.38	
5,732.00	90.80	357.90	2,685.86	3,297.62	-71.42	3,298.38	0.34	
5,826.00	91.40	358.70	2,684.05	3,391.56	-74.21	3,392.36	1.06	
5,919.00	89.90	357.60	2,683.00	3,484.50	-77.21	3,485.35	2.00	
6,013.00	90.00	358.00	2,683.08	3,578.43	-80.82	3,579.34	0.44	
6,106.00	90.40	358.30	2,682.76	3,671.38	-83.82	3,672.33	0.54	
6,200.00	90.80	358.50	2,681.77	3,765.34	-86.45	3,766.33	0.48	
6,293.00	89.10	357.60	2,681.85	3,858.28	-89.61	3,859.32	2.07	
6,386.00	89.50	357.80	2,682.99	3,951.20	-93.34	3,952.30	0.48	
6,480.00	90.50	358.60	2,682.99	4,045.15	-96.30	4,046.30	1.36	
6,574.00	89.90	357.70	2,682.66	4,139.10	-99.33	4,140.29	1.15	
6,667.00	90.20	357.60	2,682.58	4,232.02	-103.14	4,233.28	0.34	
6,761.00	90.60	357.60	2,681.92	4,325.94	-107.08	4,327.26	0.43	
6,855.00	91.30	357.80	2,680.37	4,419.85	-110.85	4,421.24	0.77	
6,948.00	90.00	357.40	2,679.31	4,512.76	-114.75	4,514.22	1.46	
7,041.00	90.30	357.70	2,679.07	4,605.67	-118.72	4,607.20	0.46	
7,135.00	91.20	358.10	2,677.84	4,699.60	-122.17	4,701.19	1.05	
7,229.00	89.50	358.50	2,677.26	4,793.55	-124.95	4,795.18	1.86	
7,324.00	89.60	358.50	2,678.01	4,888.52	-127.44	4,890.18	0.11	
7,410.00	90.00	358.50	2,678.31	4,974.49	-129.69	4,976.18	0.47	
Last Phoenix MWD Survey								
7,473.00	90.00	358.50	2,678.31	5,037.47	-131.34	5,039.17	0.00	
Projection to TD								



Phoenix Technology Services

Phoenix Final Survey Report



Company:	Yates Petroleum Corp.	Local Co-ordinate Reference:	Well #2H
Project:	Eddy County, NM (NAD83 NME)	TVD Reference:	KB @ 3443.50usft (Silver Oak 11)
Site:	Abundance AVZ	MD Reference:	KB @ 3443.50usft (Silver Oak 11)
Well:	#2H	North Reference:	Grid
Wellbore:	WB1/Job #1410113	Survey Calculation Method:	Minimum Curvature
Design:	Surveys (Silver Oak 11)	Database:	GCR/DB

Survey Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N-S (usft)	+E-W (usft)	
905.00	904.85	6.52	12.66	Tie-on to Gyro
1,122.00	1,121.83	7.98	14.97	First Phoenix MWD Survey
7,410.00	2,678.31	4,974.49	-129.69	Last Phoenix MWD Survey
7,473.00	2,678.31	5,037.47	-131.34	Projection to TD

Checked By: _____ Approved By: _____ Date: _____



Project: Eddy County, NM (NAD83 NME)
Site: Abundance AVZ
Well: #2H
Wellbore: WB1/Job #1410113
Design: Plan #2 01-30-14
Rig: Silver Oak 11



PHOENIX
TECHNOLOGY SERVICES



Azimuths to Grid North
True North: 0.06°
Magnetic North: 7.76°
Magnetic Field
Strength: 48514.5 nT
Dip Angle: 60.37°
Date: 01/30/2014
Model: IGRF2010_14

WELL DETAILS									
	+N/-S	+E/-W	Northing	Ground Level	3425.00	Latitude	Longitude		
	0.00	0.00	601335.80	Easting	505826.20	32° 39' 11.03890 N	104° 26' 55.37618 W		

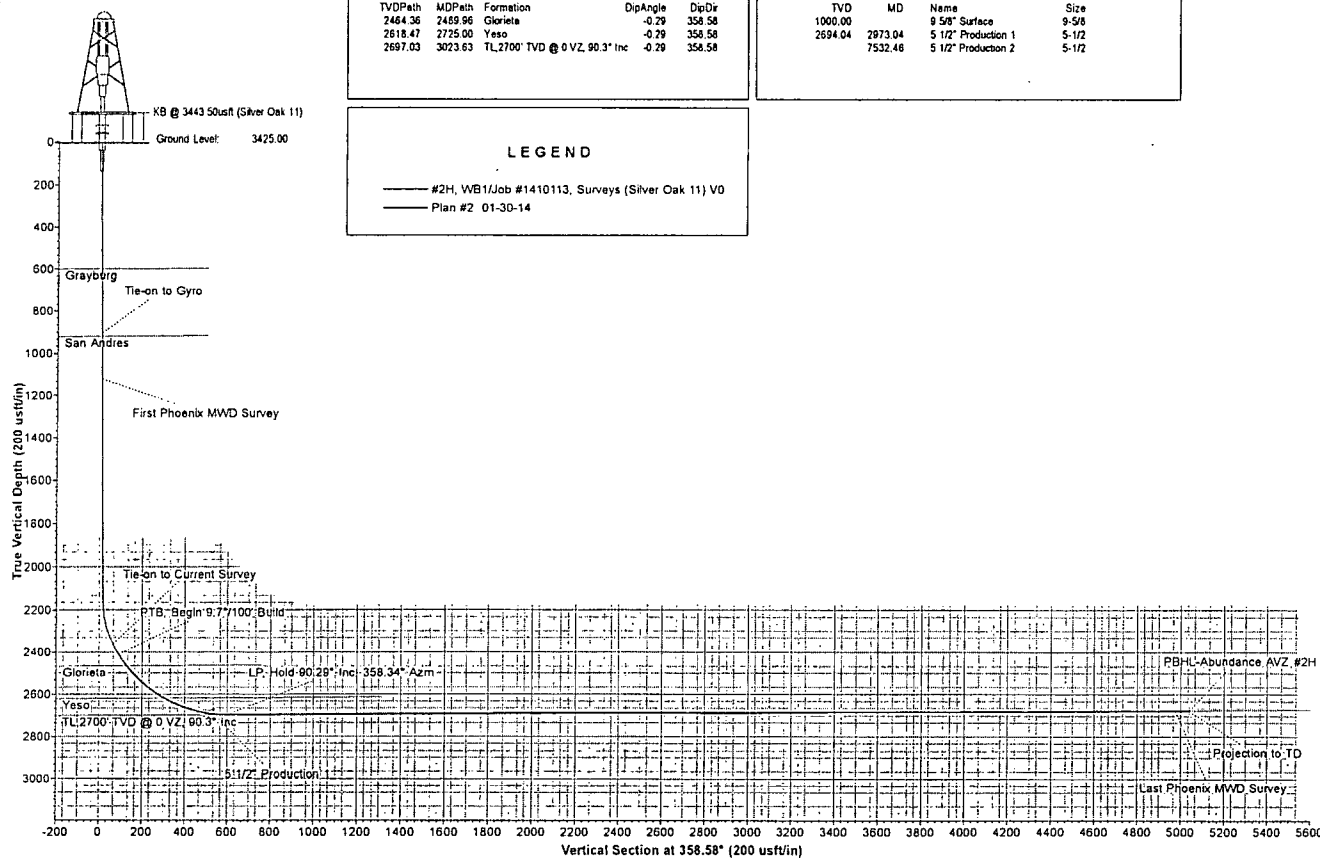
SECTION DETAILS									
Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSec
1	2359.00	26.30	358.00	2361.49	64.55	20.49	0.00	0.00	64.02
2	2424.00	30.90	358.00	2409.76	90.85	19.58	8.36	0.00	90.34
3	3036.22	90.29	358.34	2697.10	600.39	3.78	9.70	0.40	600.11
4	7475.45	90.29	358.34	2675.00	5037.70	-124.80	0.00	0.00	5039.25

DESIGN TARGET DETAILS									
Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape	
PBHL-Abundance AVZ #2H	2675.00	5037.70	-124.80	606373.50	505701.40	32° 40' 0.88741 N	104° 26' 56.90024 W	Point	

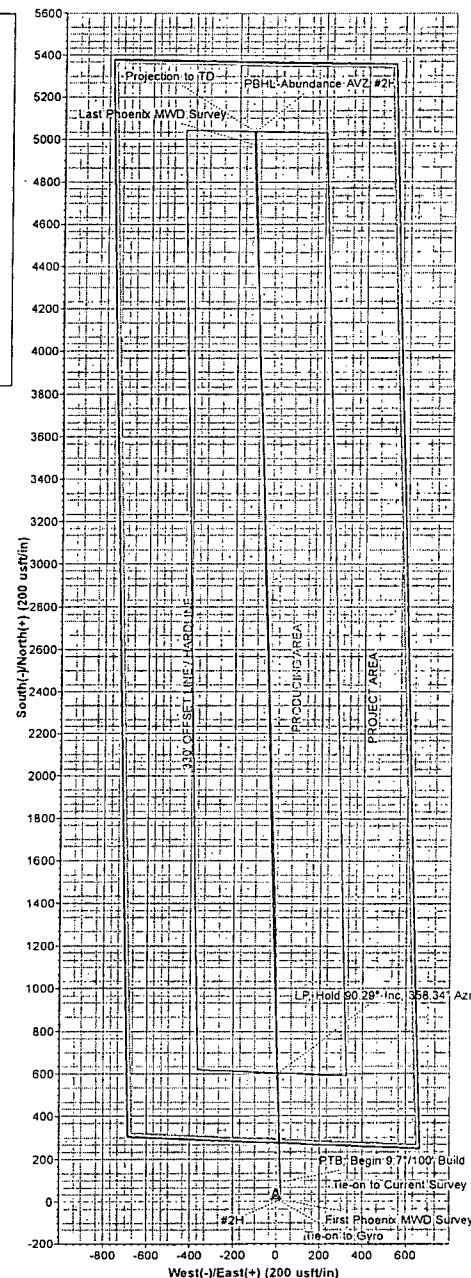
FORMATION TOP DETAILS				
TVDPath	MDPath	Formation	DipAngle	DipDir
2464.36	2469.96	Glorieta	-0.29	358.58
2618.47	2725.00	Yeso	-0.29	358.58
2697.03	3023.63	TL2700° TVD @ 0 VZ, 90.3° Inc	-0.29	358.58

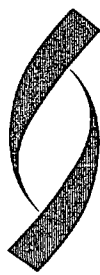
CASING DETAILS				
TVD	MD	Name	Size	
1000.00	9.5/8	9 5/8" Surface	5-1/2	
2694.04	2973.04	5 1/2" Production 1	5-1/2	
7532.46	5 1/2" Production 2	5-1/2		

LEGEND	
—	#2H, WB1/Job #1410113, Surveys (Silver Oak 11) VO
—	Plan #2 01-30-14



Map System: US State Plane 1983
Datum: North American Datum 1983
Ellipsoid: GRS 1980
Zone Name: New Mexico Eastern Zone
Local Origin: Well #2H, Grid North
Latitude: 32° 39' 11.03890 N
Longitude: 104° 26' 55.37618 W
Grid East: 505826.20
Grid North: 601335.80
Scale Factor: 1.000
Geomagnetic Model: IGRF2010_14
Sample Date: 30-Jan-14
Magnetic Declination: 7.70°
Dip Angle from Horizontal: 60.37°
Magnetic Field Strength: 48514
To convert a Magnetic Direction to a Grid Direction, Add 7.76°
To convert a Magnetic Direction to a True Direction, Add 7.70° East
To convert a True Direction to a Grid Direction, Add 0.06°





PHOENIX
TECHNOLOGY SERVICES

RECEIVED

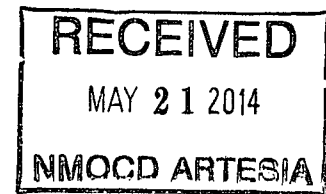
MAR 03 2014

YPLA
MAIL ROOM

February 26, 2014

Yates Petroleum Corp.
Attn: Regulatory Department
105 South 4th Street
Artesia, NM 88210

Re: Yates Petroleum Corp.
Abundance AV2 #2H
Eddy County, NM
API #30-015-41782
Job No. 1410113



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.

Name of Surveyor	Drain Hole Number	Surveyed Depths		Dates Performed		Type of Survey
		From	To	Start	End	
Daniel Scott	2H	1,122	7,410	01/28/14	02/04/14	MWD

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

Best Regards,

Kelly Jo Walter

Kelly Jo Walter
Operations Administrator

Phoenix Technology Services SURVEY DATA CERTIFICATION



PHOENIX JOB NUMBER 1410113

OPERATOR Yates Petroleum Corporation

WELL NAME Abundance AVZ #2H

COUNTY & STATE

Eddy, New Mexico

API WELL NUMBER 30-015-41782

PROPOSED DIRECTION 358.58

TIE-IN DATA						
MEASURED	VERTICAL			N-S	E-W	DATA
DEPTH	DEPTH	INCLIN	AZIMUTH	COORD	COORD	SOURCE
905 ft	904.85 ft	7 ft	69.7 ft	6.52 ft	12.66 ft	GYRO

FIRST SURVEY	FIRST SURVEY		
DATE	DEPTH	INCLIN	AZIMUTH
28-Jan-14	1,122 ft	0.8	47.8

SURVEY INSTRUMENT TYPE
Phoenix MWD

LAST SURVEY	LAST SURVEY		
DATE	DEPTH	INCLIN	AZIMUTH
04-Feb-14	7,410 ft	90	358.5

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

PROJECTED TD SURVEY	PROJECTED TD SURVEY		
DATE	DEPTH	INCLIN	AZIMUTH
04-Feb-14	7,473 ft	90	358.5

Daniel Scott

PRINT YOUR NAME ABOVE

Daniel Scott

SIGN YOUR NAME ABOVE

MAGNETIC DECLINATION OR TOTAL GRID

TOTAL CORRECTION USED	7.77
DECLINATION OR GRID	GRID

02/04/14

TODAY'S DATE

MWD SUPERVISOR 1

Daniel Scott

DIRECTIONAL DRILLER 1

Brian Terrell

MWD SUPERVISOR 2

James Garber

DIRECTIONAL DRILLER 2

Dan Waggoner

1805 Brittmore Road

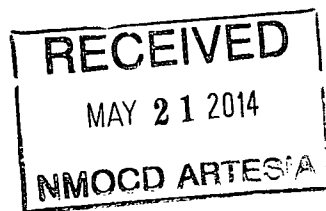
Houston, Texas 77043

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



Job Number: SVMO-140106
 Company: Yates Petroleum Corporation
 Lease/Well: Abundance AVZ 2H
 Location: Eddy County, NM
 Rig Name: Silver Oak #18
 RKB: 18.5'
 G.L. or M.S.L.: GL

State/Country: New Mexico/USA
 Declination: 7.77°
 Grid: East To Grid North
 File name: S:\2014SU~1\YATES\MO\ABUNDA~1\2H.SVY
 Date/Time: 30-Jan-14 / 12:32
 Curve Name: Surface - 905' M.D. (SRG)



WINSERVE SURVEY CALCULATIONS
 Minimum Curvature Method
 Vertical Section Plane 358.58
 Vertical Section Referenced to Wellhead
 Rectangular Coordinates Referenced to Wellhead

We hereby certify that our survey data from
 Surface MD to 905' MD is, to the best of
 our knowledge a true and accurate account of
 the well bore.
 Jared Mayers 11/30/14
 MS Energy Services Date

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	True Vertical Depth	N-S FT	E-W FT	Vertical Section FT	C L O S U R E		Dogleg Severity Deg/100
							Distance FT	Direction Deg	
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
200.00	.36	5.44	200.00	.63	.06	.62	.63	5.44	.18
400.00	1.56	64.35	399.97	2.43	2.57	2.36	3.54	46.65	.70
600.00	1.41	68.98	599.90	4.49	7.32	4.31	8.59	58.49	.10
800.00	.99	69.32	799.86	5.98	11.24	5.70	12.73	61.97	.21

Last Survey Depth Recorded									
905.00	.67	69.66	904.85	6.52	12.66	6.20	14.24	62.77	.30