



**RYAN DIRECTIONAL SERVICES, INC.**  
A NABORS COMPANY

Ryan Directional Services, Inc.  
19510 Oil Center Blvd.  
Houston, Texas 77073  
Bus: 281.443.1414  
Fax: 281.443.1676

Wednesday, December 11, 2013


State of New Mexico  
County of Eddy

Subject: **Survey Certification Letter**

Survey Company:	<b>Ryan Directional Services, Inc.</b>	Surface:	<b>32.81511222, -104.2568856</b>
Job Number:	<b>7104</b>	A.P.I. No:	<b>30-015-41260</b>
Survey Job Type:	<b>Ryan MWD</b>	Location:	<b>Eddy, NM</b>
Customer:	<b>Oxy</b>	RKB Height:	<b>14'</b>
Well Name:	<b>YESO Viking Federal #5</b>	Distance to Bit:	<b>63'</b>
Rig Name:	<b>Savannah 415</b>		

<i>Surveyor Name</i>	<i>Surveyor Title</i>	<i>Borehole Number</i>	<i>Start Depth</i>	<i>End Depth</i>	<i>Start Date</i>	<i>End Date</i>	<i>Type of</i>	<i>TD Straight Line Projection</i>
Thad Sanches	MWD Supervisor	OH	436'	4429'	12/11/13	12/15/13	MWD	4518'

The data and calculations for this survey have been check by me and conform to the calibration standards and operational procedures set forth by Ryan Directional Services, Inc. I am authorized and qualified to review the data, calculations and this reports, and the report represents true and correct Directional Survey of this well based on the original data correct to Grid North nd obtained at the well site. Wellbore coordinates are calculated using the minimum curvature method

  
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**Thad Sanches**  
MWD Supervisor  
Ryan Directional Services, Inc.



# Occidental Oil & Gas Corp – Permian Primary – North NM/Terrell RMT

**Well: Yeso Viking Federal #5**

**API: 30-015-41260**

State: New Mexico

County: Eddy

T17S R27E, Sec 23

1670' FSL & 860' FEL

Field: Empire

TD: 4,500'

PBTD: 4,456.1'

KB: 3,550' ASL

Casing Size:

Grade/Weight:

Depth:

Cement:

8-5/8"

J-55 / 24#

415'

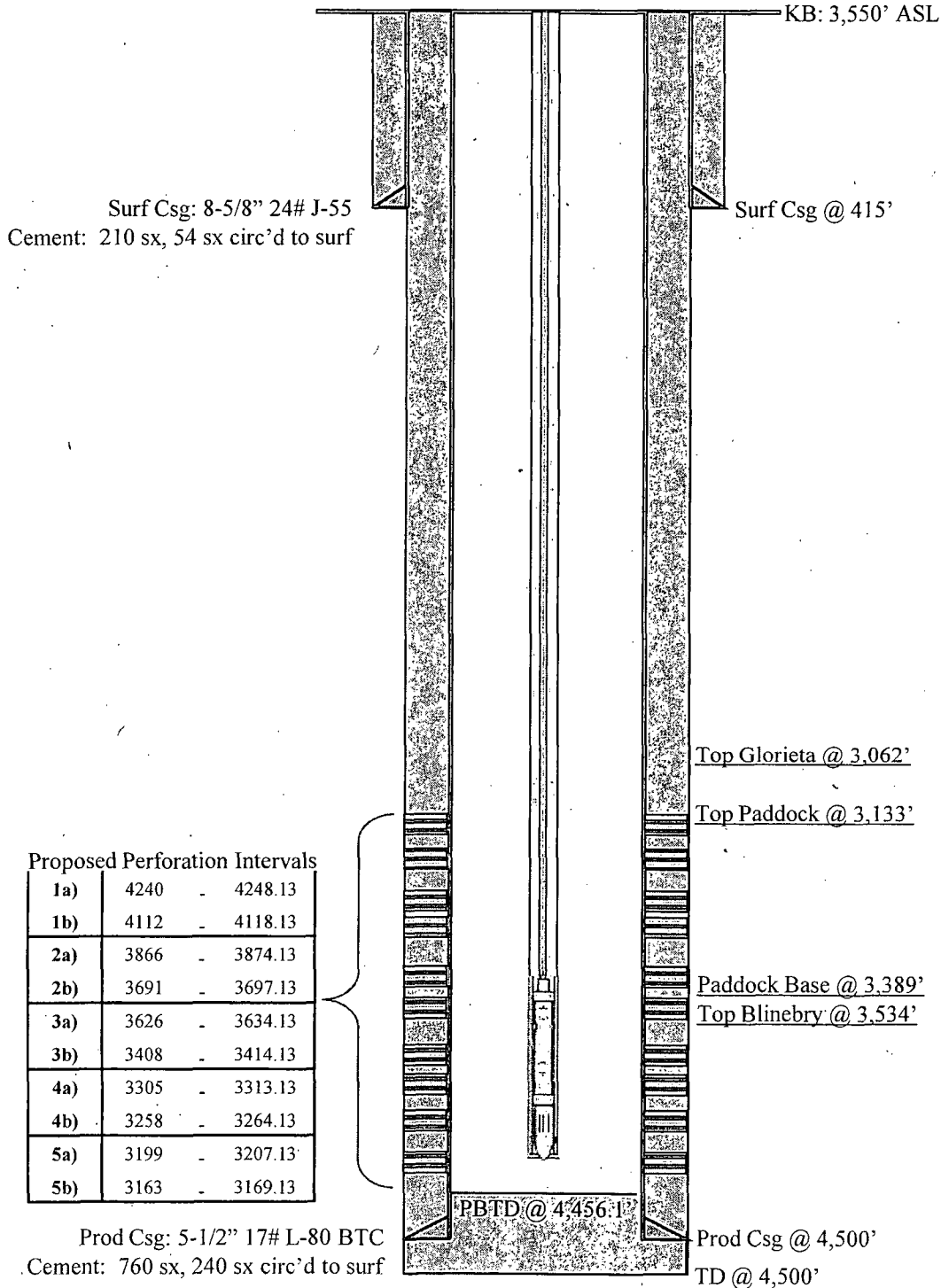
210 sx, 54 sx circ'd to surf

5-1/2"

L-80 BTC / 17#

4,500'

760 sx, 240 sx circ'd to surf



**Proposed Perforation Intervals**

1a)	4240	-	4248.13
1b)	4112	-	4118.13
2a)	3866	-	3874.13
2b)	3691	-	3697.13
3a)	3626	-	3634.13
3b)	3408	-	3414.13
4a)	3305	-	3313.13
4b)	3258	-	3264.13
5a)	3199	-	3207.13
5b)	3163	-	3169.13