

30-015-39499

OCCIDENTAL PERMIAN LTD.

Artesia

Eddy County, NM

Piglet "21" State #4

VH - Job #32K0212228

Survey: Gyro

SDI Standard Survey Report

This survey is correct to the best of my knowledge and is supported by actual field data.

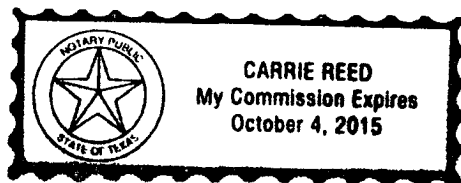
K. L. Horton

Notarized this date 15th of March, 2012.

Carrie Reed

Notary Signature
County of Midland
State of Texas

Provide survey to TD 4985 ✓



Scientific Drilling
Directional Drilling Operations

Scientific Drilling International, Inc.
SDI Standard Survey Report



Company:	OCCIDENTAL PERMIAN LTD.	Local Co-ordinate Reference:	Well Piglet "21" State #4
Project:	Artesia	TVD Reference:	WELL @ 0 0usft (Original Well Elev)
Site:	Eddy County, NM	MD Reference:	WELL @ 0 0usft (Original Well Elev)
Well:	Piglet "21" State #4	North Reference:	Grid
Wellbore:	VH - Job #32K0212228	Survey Calculation Method:	Minimum Curvature
Design:	VH - Job #32K0212228	Database:	EDM-Regulatory

Project	Artesia		
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		Eddy County, NM			
Site Position:		Northing:	660,143.61 usft	Latitude:	32° 48' 53.046 N
From:	Lat/Long	Easting:	545,587.99 usft	Longitude:	104° 11' 5 805 W
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16"	Grid Convergence:	0 08 °

Well	Piglet "21" State #4, Vertical					
Well Position	+N/-S	0 0 usft	Northing:	660,143.61 usft	Latitude:	32° 48' 53.046 N
	+E/-W	0 0 usft	Easting:	545,587.99 usft	Longitude:	104° 11' 5.805 W
Position Uncertainty		0.0 usft	Wellhead Elevation:	usft	Ground Level:	0 0 usft

Wellbore	VH - Job #32K0212228				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	2/24/2012	7.83	60.61	48,860

Design		VH - Job #32K0212228			
Audit Notes:					
Version:	1 0	Phase:	ACTUAL	Tie On Depth:	0 0
Vertical Section:	Depth From (TVD)	+N/-S	+E/-W	Direction	
	(usft)	(usft)	(usft)	(°)	
	0.0	0.0	0 0	238.55	

Survey Program		Date	3/15/2012		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
105 5	402 0	Gyro (VH - Job #32K0212228)	Keeper	Keeper Surface Readout	

Survey							
Measured Depth (usft)	Inclination (°)	Azimuth (°)	True Vertical Depth	North/South (usft)	East/West (usft)	Closure Azimuth (°)	Closure Distance (usft)
0 0	0.00	0 00	0 0	0 0	0 0	0.00	0 0
105.5	0.02	17.24	105.5	0.0	0.0	17 24	0 0
200.0	0 16	271 48	200.0	0.0	-0 1	286.82	0.1
297.2	0 77	233.16	297.2	-0 4	-0 8	245.75	0 9
340.4	1 00	235.16	340 3	-0.7	-1 3	240 73	1.5
402 0	1 03	235 88	402 0	-1 4	-2 2	238.55	2 6



Project: Artesia
 Eddy County, NM
 Well: Piglet "21" State #4
 Wellbore: VH - Job #32K0212228
 Design: VH - Job #32K0212228

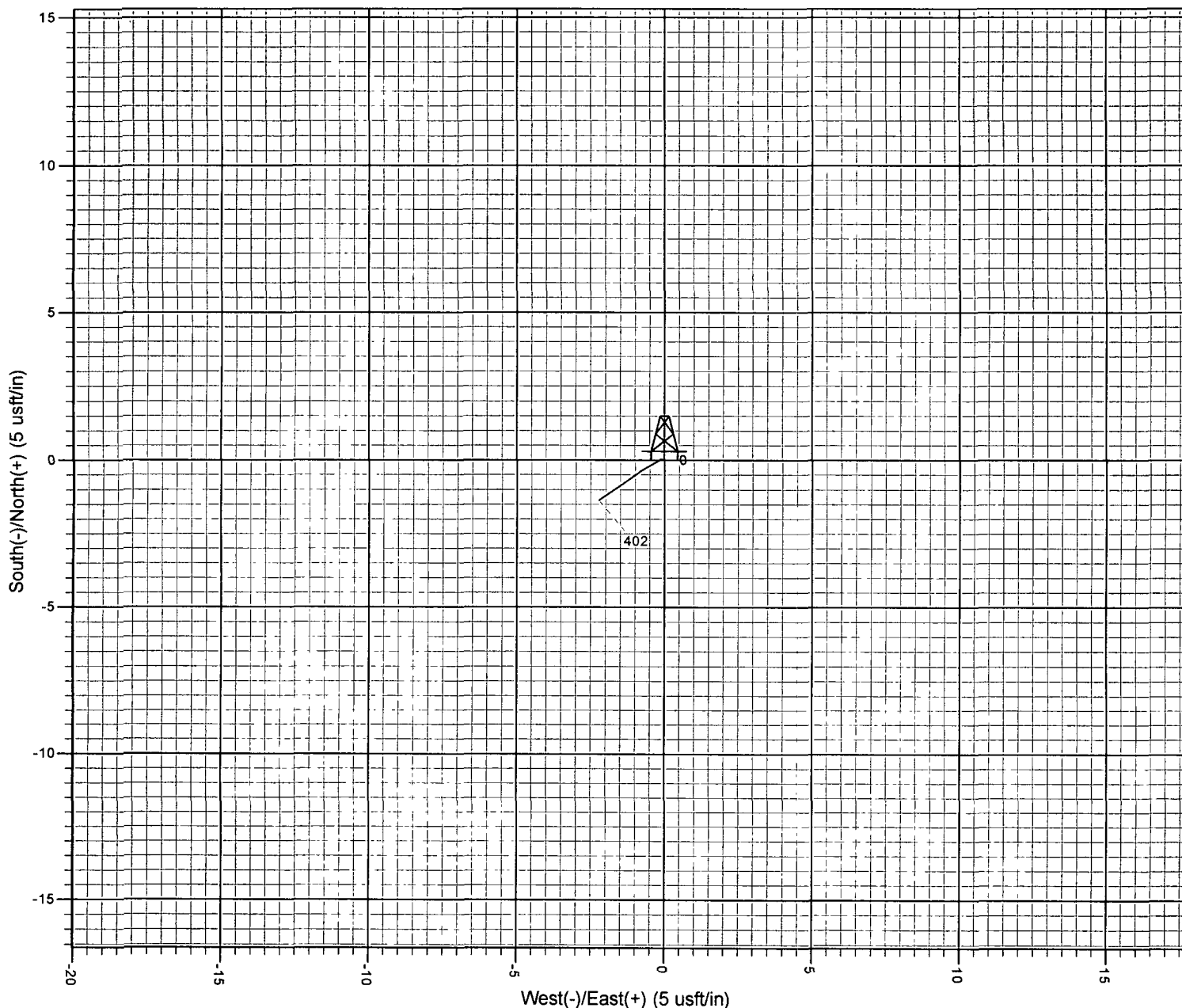


Azimuths to Grid North
 True North: -0 08°
 Magnetic North: 7.75°

Magnetic Field
 Strength 48859.7snT
 Dip Angle: 60 61°
 Date: 2/24/2012
 Model IGRF2010

WELL DETAILS: Piglet "21" State #4
 WELL @ 0.0usft (Original Well Elev)
 Ground Level: 0.0

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.0	0 0	660143.61	545587.99	32° 48' 53.046 N	104° 11' 5.805 W	



PROJECT DETAILS: Artesia
 Geodetic System: US State Plane 1927 (Exact solution)
 Datum: NAD 1927 (NADCON CONUS)
 Ellipsoid: Clarke 1866
 Zone: New Mexico East 3001
 System Datum: Mean Sea Level

SITE DETAILS: Eddy County, NM
 Site Centre Latitude: 32° 48' 53.046 N
 Longitude: 104° 11' 5.805 W
 Positional Uncertainty: 0.0
 Convergence: 0.08
 Local North: Grid