

Results of Directional Survey

API number:	30-025-41578	DD
OGRID:		Operator: OCCIDENTAL PERMIAN LTD
		Property: NORTH HOBBS G/SA UNIT # 948

surface	ULSTR:	F	33	T 18S	R 38E
				2094 FNL	1963 FWL

BH Loc	ULSTR:	G	33	T 18S	R 38E
4889 MD		4592.3	TVD	2211 FNL	1856 FEL
					3424 FWL

Top Perf/OH	ULSTR:	F	33	T 18S	R 38E
4308 MD		4050.5	TVD	2194 FNL	2066 FEL
					3214 FWL
Bot Perf/OH	ULSTR:	G	33	T 18S	R 38E
4568 MD		4292.5	TVD	2202 FNL	1971 FEL
					3309 FWL

	MD	N/S	E/W	VD
	4257	-98.70	1232.50	4003.1
TOP PERFS/OH	4308	-100.30	1251.25	4050.50
	4410.1	-103.50	1288.80	4145.40
	4437	-104.20	1298.60	4170.40
BOT PERFS/OH	4568	-107.91	1346.20	4292.45
	4617	-109.30	1364.00	4338.10

NEXT TO LAST	4833	-115.50	1440.90	4539.80
LAST READING	4889	-117.30	1460.50	4592.30
TD	4889	-117.30	1460.50	4592.30

Surface Location	2094 FN	1963 FW
Projected BHL	2211 FN	3424 FW
Location of		
Top Perfs/OH	2194 FN	3214 FW
Bottom Perfs/OH	2202 FN	3309 FW

SUMMARY of Subsurface Locations

Surface Location	F-33-18S-38E	2094 FN	1963 FW	Vert. Depth
Top Perfs/OH	F-33-18S-38E	2194 FN	3214 FW	4050.50
Bottom Perfs/OH	G-33-18S-38E	2202 FN	3309 FW	4292.45
Projected TD	G-33-18S-38E	2211 FN	3424 FW	4592.30

MAY 27 2014

HOBBS OCD

MAY 22 2014

RECEIVED

OCCIDENTAL PERMIAN LTD.

Hobbs (Grayburg San Andres)
Lea County, NM (Grid North)
North Hobbs G/SA Unit #948
DH - Job #320314-MPD-276

Survey: MWD

SDI Survey Report

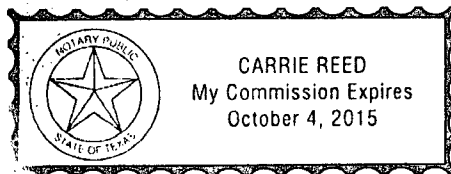
This survey is correct to the best of my knowledge and is supported by actual field data.

Hubertson

Notarized this date 3rd of April, 2014.

Carrie Reed

Notary Signature
County of Midland
State of Texas



SDI

SDI Survey Report

Company:	OCCIDENTAL PERMIAN LTD	Local Co-ordinate Reference:	Well North Hobbs G/SA Unit #948
Project:	Hobbs (Grayburg San Andres)	TVD Reference:	Mean Sea Level (System)
Site:	Lea County NM (Grid North)	MD Reference:	Mean Sea Level (System)
Well:	North Hobbs G/SA Unit #948	North Reference:	Grid
Wellbore:	DH - Job #320314-MPD-276	Survey Calculation Method:	Minimum Curvature
Design:	DH - Job #320314-MPD-276	Database:	EDM-Regulatory

Project:	Hobbs (Grayburg San Andres)		
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:	Lea County NM (Grid North)		
Site Position:		Northing:	634,606.02 usft
From:	Lat/Long	Easting:	853,884.25 usft
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16"
		Latitude:	32° 44' 21.633 N
		Longitude:	103° 10' 56.833 W
		Grid Convergence:	0.62 °

Well: North Hobbs G/SA Unit #948, Directional						
Well Position	+N/-S	0.0 usft	Northing:	622,302.46 usft	Latitude:	32° 42' 18.980 N
	+E/-W	0.0 usft	Easting:	862,410.91 usft	Longitude:	103° 9' 18.624 W
Position Uncertainty		0.0 usft	Wellhead Elevation:	0.0 usft	Ground Level:	0.0 usft

Wellbore	DH - Job #320314-MPD-276				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	3/1/2014	7.09	60.63	48,704

Design					DH - Job #320314-MPD-276							
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			90.76	

Survey Program	Date	5/5/2014		
From	To	Survey (Wellbore)	Tool Name	Description
(usft)	(usft)			
171.0	4,889.0	MWD (DH - Job #320314-MPD-276)	MWD	MWD

Survey	MD	Inc	Azi (azimuth)	TVD	N/S	E/W	Closure Azimuth	Closure Distance
	(usft)	(°)	(°)	(usft)	(usft)	(usft)	(°)	(usft)
	0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.0
	171.0	0.70	330.06	171.0	0.9	-0.5	330.06	1.0
	294.0	0.62	331.47	294.0	2.1	-1.2	330.44	2.5
	491.0	1.41	82.38	491.0	3.4	0.7	11.30	3.5
	672.0	3.34	88.01	671.8	3.9	8.2	64.58	9.0
	852.0	5.36	96.27	851.3	3.1	21.8	81.78	22.0
	1,032.0	7.39	100.31	1,030.2	0.2	41.5	89.79	41.5
	1,213.0	10.29	104.18	1,209.0	-5.9	68.6	94.91	68.9
	1,393.0	13.28	100.93	1,385.2	-13.8	104.5	97.50	105.4
	1,573.0	14.33	96.80	1,560.0	-20.3	146.9	97.87	148.3
	1,613.8	14.27	96.67	1,599.5	-21.5	157.0	97.80	158.4
	1,739.0	14.07	96.27	1,720.9	-24.9	187.4	97.58	189.1

SDI

SDI Survey Report

Company:	OCCIDENTAL PERMIAN LTD	Local Co-ordinate Reference:	Well: North Hobbs G/SA Unit #948
Project:	Hobbs (Grayburg San Andres)	TVD Reference:	Mean Sea Level (System)
Site:	Lea County, NM (Grid: North)	MD Reference:	Mean Sea Level (System)
Well:	North Hobbs G/SA Unit #948	North Reference:	Grid
Wellbore:	DH - Job #320314-MPD-276	Survey Calculation Method:	Minimum Curvature
Design:	DH - Job #320314-MPD-276	Database:	EDM-Regulatory

Survey								
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	Closure Azimuth (°)	Closure Distance (usft)	
1,919.0	17.59	92.40	1,894.1	-28.5	236.4	96.87	238.1	
2,099.0	19.79	92.49	2,064.6	-30.9	294.0	96.01	295.6	
2,279.0	22.42	93.02	2,232.5	-34.1	358.7	95.43	360.3	
2,460.0	24.53	93.72	2,398.5	-38.3	430.7	95.09	432.4	
2,640.0	27.08	91.00	2,560.5	-41.5	508.9	94.66	510.6	
2,820.0	29.11	91.44	2,719.3	-43.3	593.7	94.17	595.3	
3,001.0	30.34	94.78	2,876.5	-48.2	683.3	94.04	685.0	
3,181.0	29.19	96.01	3,032.7	-56.6	772.2	94.19	774.3	
3,361.0	29.28	95.22	3,189.8	-65.2	859.7	94.34	862.2	
3,542.0	27.79	96.18	3,348.8	-73.8	945.7	94.46	948.6	
3,598.9	26.45	95.71	3,399.5	-76.4	971.6	94.50	974.6	
3,722.0	23.57	94.51	3,511.0	-81.1	1,023.4	94.53	1,026.6	
3,902.0	23.13	94.95	3,676.3	-87.0	1,094.5	94.54	1,097.9	
3,927.3	23.18	94.92	3,699.5	-87.8	1,104.4	94.55	1,107.9	
4,076.0	23.50	94.75	3,836.1	-92.8	1,163.1	94.56	1,166.8	
4,128.7	23.00	94.82	3,884.5	-94.5	1,183.8	94.57	1,187.6	
4,242.3	21.91	94.98	3,989.5	-98.3	1,227.1	94.58	1,231.0	
4,257.0	21.77	95.00	4,003.1	-98.7	1,232.5	94.58	1,236.4	
4,410.1	21.52	94.60	4,145.4	-103.5	1,288.8	94.59	1,292.9	
4,437.0	21.48	94.53	4,170.4	-104.2	1,298.6	94.59	1,302.8	
4,617.0	21.28	94.25	4,338.1	-109.3	1,364.0	94.58	1,368.4	
4,798.0	20.66	94.95	4,507.1	-114.5	1,428.6	94.58	1,433.2	
4,820.3	20.61	95.01	4,527.9	-115.1	1,436.4	94.58	1,441.0	
4,833.0	20.58	95.04	4,539.8	-115.5	1,440.9	94.58	1,445.5	
Last MWD Survey								
4,889.0	20.58	95.04	4,592.3	-117.3	1,460.5	94.59	1,465.2	
Projection to Bit								

Survey Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
4,833.0	4,539.8	-115.5	1,440.9	Last MWD Survey
4,889.0	4,592.3	-117.3	1,460.5	Projection to Bit

Checked By: _____	Approved By: _____	Date: _____
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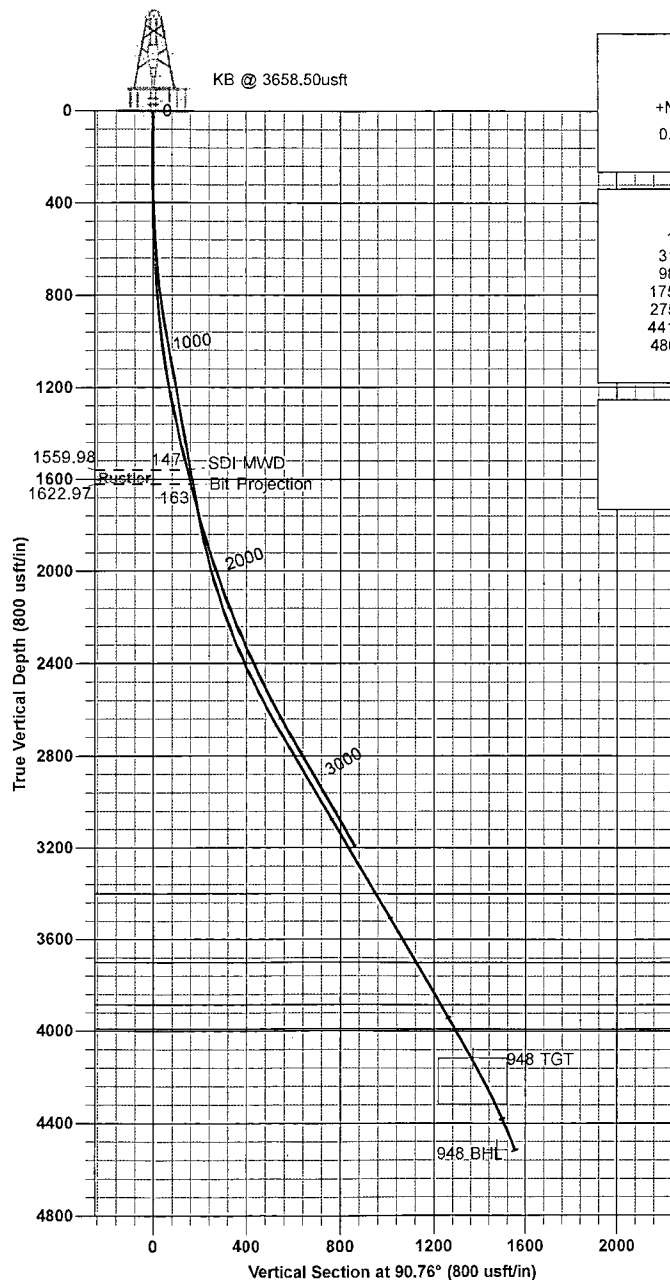
NHU 33-948
Hobbs Grayburg San Andres
Northing: 622302.45
Easting: 862410.90
Plan #8



Azimuths to Grid North
True North: -0.64°
Magnetic North: 6.50°

Magnetic Field
Strength: 48712.8snT
Dip Angle: 60.64°
Date: 10/21/2013
Model: IGRF2010

To convert a Magnetic Direction to a Grid Direction, Add 6.50°
To convert a True Direction to a Grid Direction, Subtract 0.64°



WELL DETAILS NHU 33-948						
Ground Level: 3642.00						
+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	
0.00	0.00	622302.45	862410.90	32.705	-103.155	

SECTION DETAILS								
MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	Vsect
16.50	0.00	0.00	16.50	0.00	0.00	0.00	0.00	0.00
316.50	0.00	0.00	316.50	0.00	0.00	0.00	0.00	0.00
983.17	10.00	93.97	979.79	-4.02	57.89	1.50	93.97	57.94
1751.55	10.00	93.97	1736.50	-13.26	191.00	0.00	0.00	191.16
2750.17	29.97	93.97	2670.23	-36.78	529.78	2.00	0.01	530.22
4419.71	29.97	93.97	4116.50	-94.58	1361.85	0.00	0.00	1362.98
4863.46	21.10	93.97	4516.50	-107.82	1552.48	2.00	-179.99	1553.77
								948 TGT

DESIGN TARGET DETAILS						
Name	TVD	+N/-S	+E/-W	Northing	Easting	
948 TGT	4116.50	-18.35	1368.97	622284.10	863779.87	
948 BHL	4516.50	-19.64	1475.25	622282.81	863886.15	

PROJECT DETAILS: Hobbs Grayburg San Andres

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

SITE DETAILS: North Hobbs Unit 33

Site Centre Northing: 622355.75
Easting: 862403.21

Positional Uncertainty: 0.00
Convergence: 0.64
Local North: Grid

FORMATION TOP DETAILS

TVDPath	MDPath	Formation
1599.50	1613.79	Rustler

