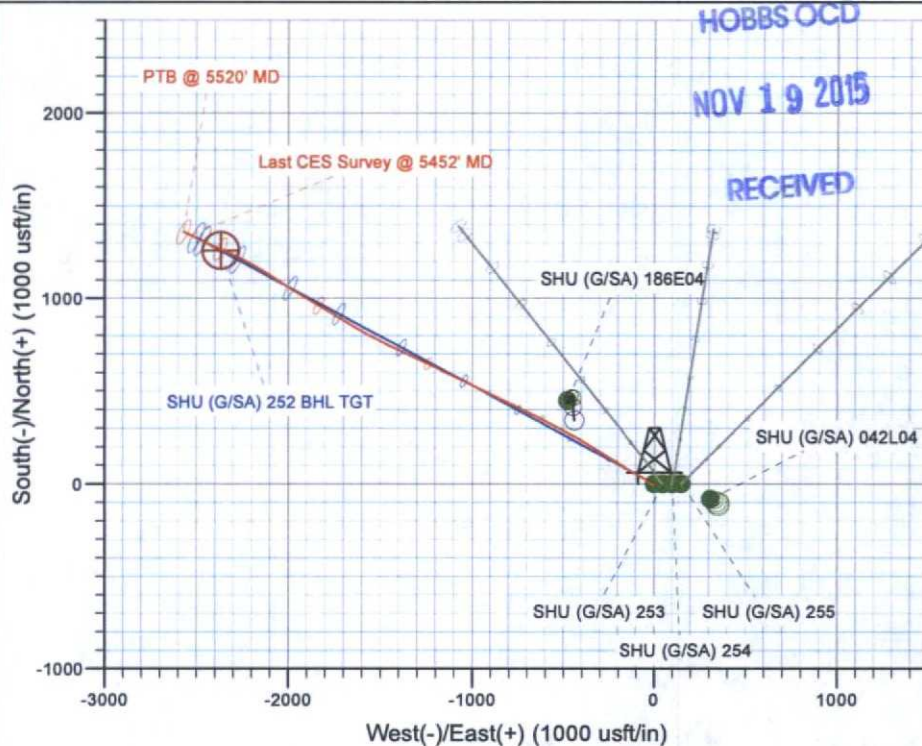
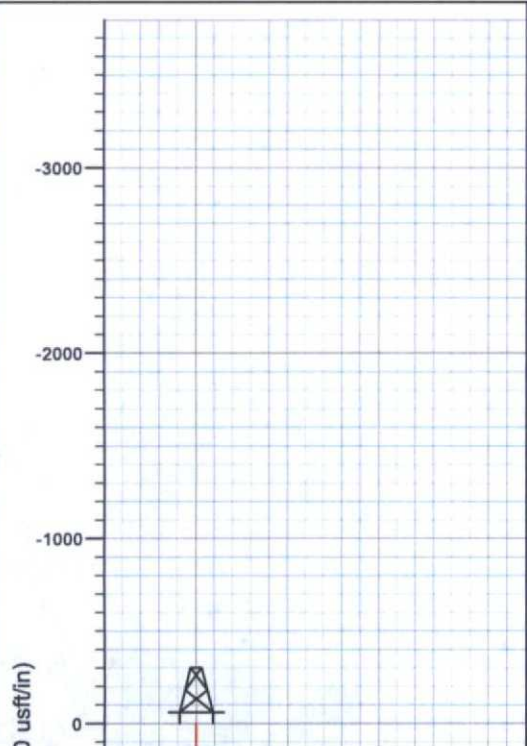


30.025-42593



Project: HOBBS, SOUTH
 Site: SOUTH HOBBS GRAYBURG-SA UNIT
 Well: SHU (G/SA) 252
 Wellbore: ST00
 Design: ORIG HOLE
 Rig: H&P 340 - KB - 16.5



Azimuths to Grid North
 True North: -0.63°
 Magnetic North: 6.32°

Magnetic Field
 Strength: 48558.1nT
 Dip Angle: 60.59°
 Date: 3/26/2015
 Model: IGRF2010

DEC 14 2015

Survey Report

Company:	OXY USA PERMIAN EOR	Local Co-ordinate Reference:	Well SHU (G/SA) 252
Project:	HOBBS, SOUTH	TVD Reference:	Original KB @ 3625.3usft (H&P 340 - KB - 16.5)
Site:	SOUTH HOBBS GRAYBURG-SA UNIT	MD Reference:	Original KB @ 3625.3usft (H&P 340 - KB - 16.5)
Well:	SHU (G/SA) 252	North Reference:	Grid
Wellbore:	ST00	Survey Calculation Method:	Minimum Curvature
Design:	ORIG HOLE	Database:	USA EDM 5000 Multi Users DB

Project	HOBBS, SOUTH, North America, HOBBS, SOUTH - ALTURA HOBBS-OP		
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		Using geodetic scale factor

Site	SOUTH HOBBS GRAYBURG-SA UNIT				
Site Position:		Northing:	617,518.60 usft	Latitude:	32.692216
From:	Map	Easting:	859,408.09 usft	Longitude:	-103.165105
Position Uncertainty:	1.0 usft	Slot Radius:	600"	Grid Convergence:	0.63 °

Well	SHU (G/SA) 252					
Well Position	+N/-S	0.0 usft	Northing:	616,211.86 usft	Latitude:	32.688571
	+E/-W	0.0 usft	Easting:	861,207.19 usft	Longitude:	-103.159305
Position Uncertainty		1.0 usft	Wellhead Elevation:	3,608.8 usft	Ground Level:	3,608.8 usft

Wellbore	ST00				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	3/26/2015	6.96	60.59	48,558

Design	ORIG HOLE			
Audit Notes:				
Version:	Phase:	ACTUAL	Tie On Depth:	0.0
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.0	0.0	0.0	298.00

Survey Program	Date	8/10/2015		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
111.0	5,520.0	Survey #1 (ST00)	MWD+HDGM+AX+SAG_B0	OWSG MWD + HDGM + Axial Corr + Sag Correction

Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usf)	Build Rate (°/100u)	Formations / Comments
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	
111.0	0.50	252.40	111.0	-0.1	-0.5	0.3	0.45	0.45	
292.0	1.30	269.60	292.0	-0.4	-3.3	2.7	0.46	0.44	
442.0	2.60	290.00	441.9	0.8	-8.2	7.6	0.97	0.87	
622.0	6.40	305.60	621.3	8.0	-20.2	21.6	2.20	2.11	
802.0	8.70	297.10	799.7	20.0	-40.4	45.1	1.42	1.28	
982.0	12.00	298.80	976.8	35.3	-69.0	77.4	1.84	1.83	
1,162.0	15.00	297.90	1,151.8	55.2	-106.0	119.5	1.67	1.67	
1,342.0	19.00	300.20	1,323.9	80.8	-151.9	172.1	2.25	2.22	
1,466.0	18.60	301.30	1,441.3	101.3	-186.2	212.0	0.43	-0.32	
1,562.0	18.30	301.70	1,532.3	117.1	-212.1	242.3	0.34	-0.31	
1,742.0	25.40	302.50	1,699.3	152.8	-268.8	309.1	3.95	3.94	
1,922.0	30.80	300.80	1,858.0	197.1	-341.0	393.6	3.03	3.00	

Survey Report

Company: OXY USA PERMIAN EOR
Project: HOBBS, SOUTH
Site: SOUTH HOBBS GRAYBURG-SA UNIT
Well: SHU (G/SA) 252
Wellbore: ST00
Design: ORIG HOLE

Local Co-ordinate Reference: Well SHU (G/SA) 252
TVD Reference: Original KB @ 3625.3usft (H&P 340 - KB - 16.5)
MD Reference: Original KB @ 3625.3usft (H&P 340 - KB - 16.5)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: USA EDM 5000 Multi Users DB

Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usf)	Build Rate (°/100u)	Formations / Comments
2,102.0	34.40	299.90	2,009.6	246.1	-424.7	490.5	2.02	2.00	
2,282.0	37.00	296.50	2,155.8	295.6	-517.3	595.5	1.82	1.44	
2,462.0	42.90	297.40	2,293.8	348.0	-620.2	711.0	3.29	3.28	
2,642.0	46.30	295.50	2,421.9	404.3	-733.4	837.3	2.03	1.89	
2,822.0	51.60	295.00	2,540.1	462.1	-856.1	972.9	2.95	2.94	
3,002.0	52.70	296.20	2,650.5	523.5	-984.3	1,114.9	0.81	0.61	
3,182.0	51.70	295.90	2,760.8	586.0	-1,112.1	1,257.0	0.57	-0.56	
3,362.0	51.30	295.50	2,872.9	647.1	-1,239.0	1,397.8	0.28	-0.22	
3,542.0	49.40	293.70	2,987.8	704.8	-1,365.0	1,536.1	1.31	-1.06	
3,722.0	48.90	297.10	3,105.5	763.2	-1,488.0	1,672.1	1.46	-0.28	
3,901.0	48.60	299.80	3,223.5	827.3	-1,606.3	1,806.6	1.15	-0.17	
4,081.0	47.00	300.50	3,344.5	894.2	-1,721.6	1,939.9	0.93	-0.89	
4,261.0	46.90	300.80	3,467.3	961.3	-1,834.7	2,071.3	0.13	-0.06	
4,441.0	45.90	301.60	3,591.5	1,028.8	-1,946.2	2,201.4	0.64	-0.56	
4,620.0	47.00	302.60	3,714.8	1,097.8	-2,056.1	2,330.8	0.74	0.61	
4,800.0	43.30	300.00	3,841.7	1,164.1	-2,165.1	2,458.2	2.30	-2.06	
4,979.0	38.80	295.80	3,976.7	1,219.2	-2,268.8	2,575.6	2.95	-2.51	
5,159.0	37.60	293.80	4,118.2	1,266.0	-2,369.8	2,686.8	0.96	-0.67	
5,339.0	37.30	295.20	4,261.1	1,311.3	-2,469.4	2,796.0	0.50	-0.17	
5,452.0	38.40	295.80	4,350.3	1,341.2	-2,532.0	2,865.3	1.03	0.97	Last CES Survey @ 5452' MD
5,520.0	38.40	295.80	4,403.6	1,359.6	-2,570.0	2,907.5	0.00	0.00	PTB @ 5520' MD

Survey Report

Company: OXY USA PERMIAN EOR
 Project: HOBBS, SOUTH
 Site: SOUTH HOBBS GRAYBURG-SA UNIT
 Well: SHU (G/SA) 252
 Wellbore: ST00
 Design: ORIG HOLE

Local Co-ordinate Reference: Well SHU (G/SA) 252
 TVD Reference: Original KB @ 3625.3usft (H&P 340 - KB - 16.5)
 MD Reference: Original KB @ 3625.3usft (H&P 340 - KB - 16.5)
 North Reference: Grid
 Survey Calculation Method: Minimum Curvature
 Database: USA EDM 5000 Multi Users DB

Targets

Target Name	Dip Angle	Dip Dir.	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
- hit/miss target	(°)	(°)	(usft)	(usft)	(usft)	(usft)	(usft)		
- Shape									
SHU (G/SA) 252 BHL TC	0.00	0.00	3,995.0	1,258.7	-2,367.8	617,470.65	858,839.30	32.692102	-103.166955
- survey misses target center by 72.1usft at 5059.2usft MD (4039.4 TVD, 1240.6 N, -2313.9 E)									
- Circle (radius 100.0)									

Formations

Measured Depth	Vertical Depth	Name	Lithology	Dip	Dip Direction
(usft)	(usft)			(°)	(°)
165.3	165.3	Red Beds			
1,491.3	1,465.3	Rustler			
1,602.2	1,570.3	Top Salt			
3,042.8	2,675.3	Base Salt			
4,162.9	3,400.3	Queen			
4,606.1	3,705.3	Grayburg			
4,852.4	3,880.3	Basal Grayburg			
5,002.8	3,995.3	San Andres			

Survey Annotations

Measured Depth	Vertical Depth	Local Coordinates		Comment
(usft)	(usft)	+N/-S (usft)	+E/-W (usft)	
5,452.0	4,350.3	1,341.2	-2,532.0	Last CES Survey @ 5452' MD
5,520.0	4,403.6	1,359.6	-2,570.0	PTB @ 5520' MD

Checked By: _____ Approved By: _____ Date: _____