

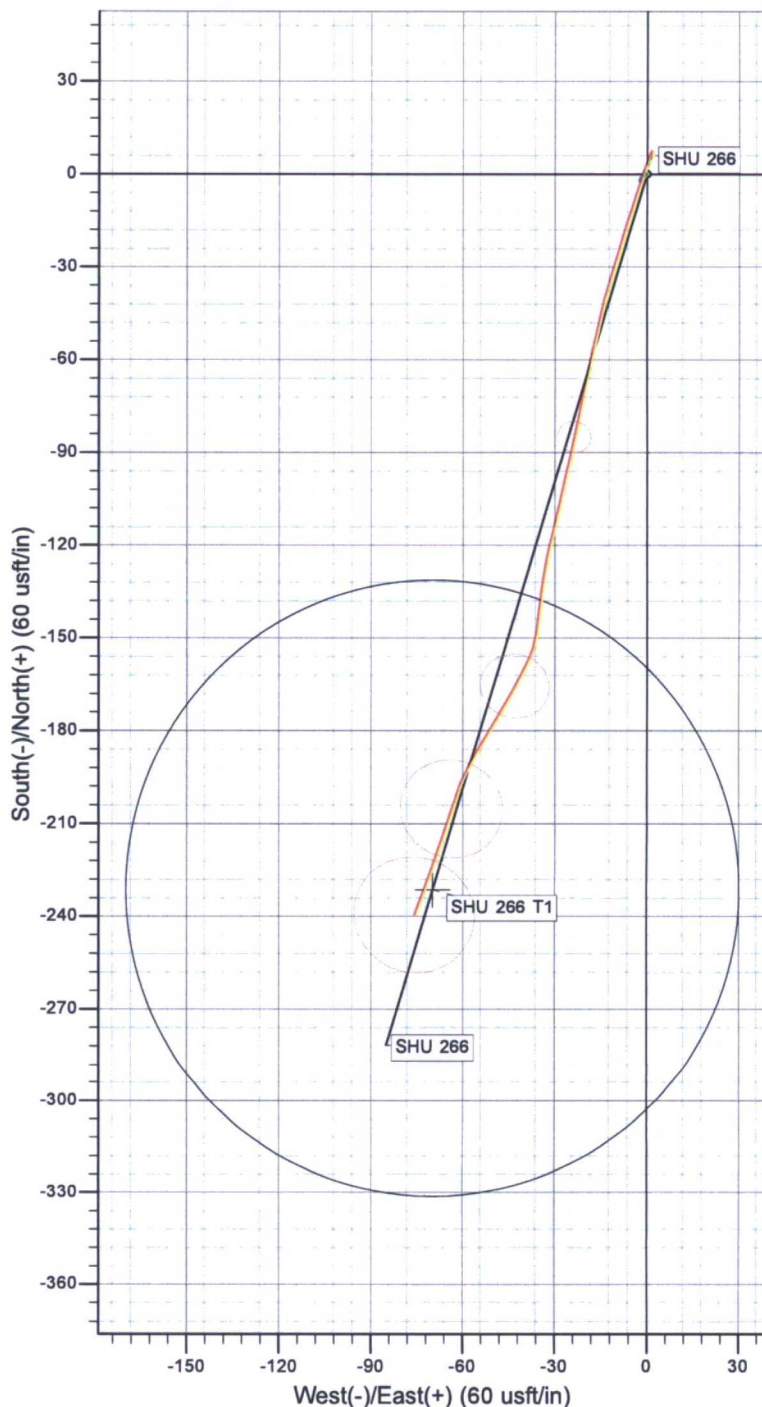
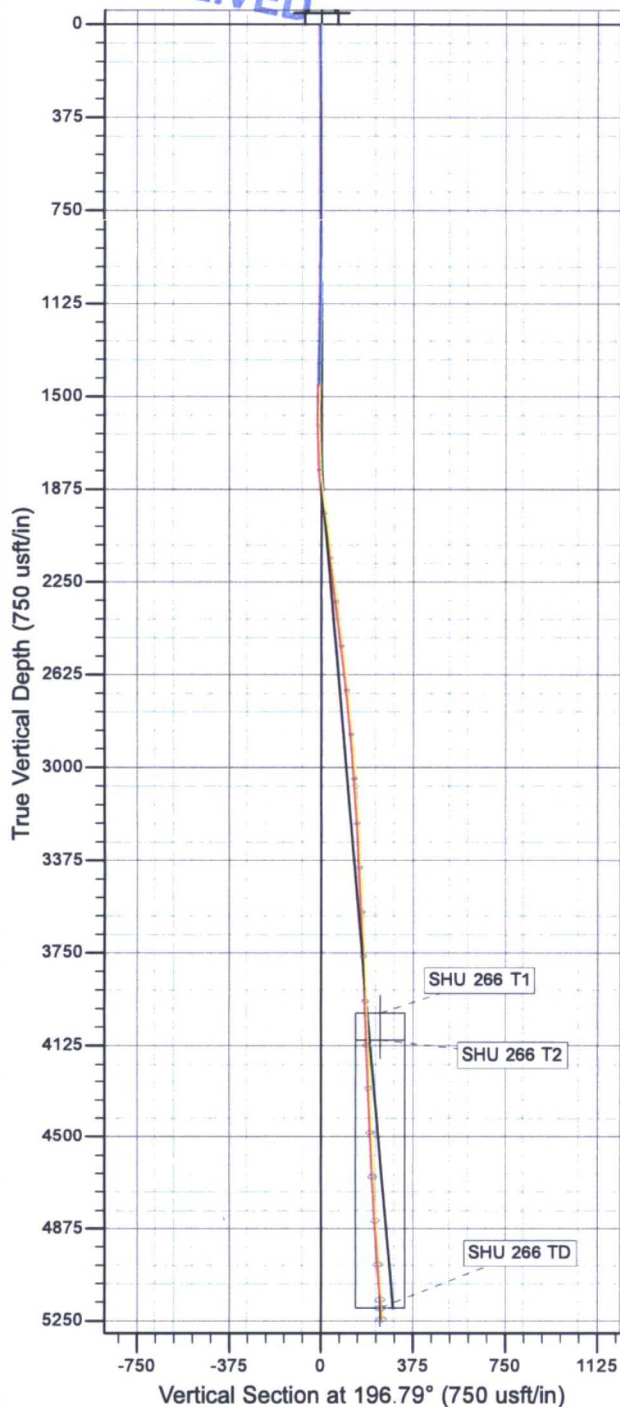
HOBBS OCD
OXY Permian
 DEC 21 2016
RECEIVED

OCCIDENTAL PERMIAN LTD

Project: SOUTH HOBBS UNIT
 Site: SEC. 4, T19S, R38E
 Well: SHU 266
 Wellpath: SHU 266
 Design: SHU 266



Azimuths to Grid North
 True North: -0.63°
 Magnetic North: 6.29°
 Magnetic Field
 Strength: 48384.8snT
 Dip Angle: 60.57°
 Date: 3/17/2016
 Model: IGRF2015



LEGEND

- SHU 266, SHU 266, 031716 V1 V0
- SHU 266, SHU 266, SHU 266 MultiShot Surveys
- SHU 266, SHU 266, SHU 266 MWD Surveys
- SHU 266
- SHU 266 MWD Surveys

SECTION DETAILS

No plan data is available



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OCCIDENTAL PERMIAN LTD

SOUTH HOBBS UNIT
SEC. 4, T19S, R38E
SHU 266

SHU 266

Design: SHU 266

Standard Survey Report

11 June, 2016





GEOGUIDANCE DRILLING
Survey Report



Company:	OCCIDENTAL PERMIAN LTD	Local Co-ordinate Reference:	Well SHU 266
Project:	SOUTH HOBBS UNIT	TVD Reference:	SHU 266 @ 3623.0usft (H&P 340)
Site:	SEC. 4, T19S, R38E	MD Reference:	SHU 266 @ 3623.0usft (H&P 340)
Well:	SHU 266	North Reference:	Grid
Wellbore:	SHU 266	Survey Calculation Method:	Minimum Curvature
Design:	SHU 266	Database:	EDM 5000.1 Single User Db

Project	SOUTH HOBBS UNIT		
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	SEC. 4, T19S, R38E				
Site Position:		Northing:	616,000.00 usft	Latitude:	32° 41' 16.562 N
From:	Map	Easting:	863,000.00 usft	Longitude:	103° 9' 12.552 W
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "	Grid Convergence:	0.64 °

Well	SHU 266, SUR. N 615609.58 E 861422.44					
Well Position	+N/-S	0.0 usft	Northing:	615,609.58 usft	Latitude:	32° 41' 12.872 N
	+E/-W	0.0 usft	Easting:	861,422.44 usft	Longitude:	103° 9' 31.058 W
Position Uncertainty		0.0 usft	Wellhead Elevation:	3,623.0 usft	Ground Level:	3,606.5 usft

Wellbore	SHU 266				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	3/17/2016	6.93	60.57	48,385

Design	SHU 266				
Audit Notes:					
Version:	1.0	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	196.79	

Survey Program	Date	6/11/2016			
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
134.0	1,455.0	SHU 266 MultiShot Surveys (SHU 266)	EMS+IGRF	OWSG EMS + IGRF or WMM	
1,616.0	5,255.0	SHU 266 MWD Surveys (SHU 266)	MWD+IGRF	OWSG MWD + IGRF or WMM	

Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00	
134.0	0.60	220.30	134.0	-0.5	-0.5	0.6	0.45	0.45	0.00	
194.0	0.50	229.30	194.0	-0.9	-0.9	1.2	0.22	-0.17	15.00	
255.0	0.40	224.60	255.0	-1.3	-1.2	1.6	0.17	-0.16	-7.70	
315.0	0.30	235.70	315.0	-1.5	-1.5	1.9	0.20	-0.17	18.50	
376.0	0.30	189.50	376.0	-1.8	-1.6	2.2	0.39	0.00	-75.74	
466.0	0.20	201.10	466.0	-2.1	-1.7	2.5	0.12	-0.11	12.89	
556.0	0.20	238.80	556.0	-2.4	-1.9	2.8	0.14	0.00	41.89	
646.0	0.20	358.10	646.0	-2.3	-2.1	2.8	0.38	0.00	132.56	
736.0	0.30	324.60	736.0	-1.9	-2.2	2.5	0.19	0.11	-37.22	



GEOGUIDANCE DRILLING

Survey Report



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Well:	SHU 266	North Reference:	Grid
Wellbore:	SHU 266	Survey Calculation Method:	Minimum Curvature
Design:	SHU 266	Database:	EDM 5000.1 Single User Db

Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
825.0	0.60	35.60	825.0	-1.4	-2.1	1.9	0.65	0.34	79.78
915.0	0.80	33.50	915.0	-0.5	-1.5	0.9	0.22	0.22	-2.33
1,005.0	0.80	33.60	1,005.0	0.6	-0.8	-0.3	0.00	0.00	0.11
1,095.0	0.90	25.70	1,095.0	1.7	-0.1	-1.6	0.17	0.11	-8.78
1,185.0	0.90	27.60	1,184.9	3.0	0.5	-3.0	0.03	0.00	2.11
1,275.0	0.80	22.70	1,274.9	4.2	1.1	-4.4	0.14	-0.11	-5.44
1,365.0	0.60	25.80	1,364.9	5.2	1.5	-5.4	0.23	-0.22	3.44
1,455.0	0.50	26.50	1,454.9	6.0	1.9	-6.3	0.11	-0.11	0.78
1,616.0	0.70	357.00	1,615.9	7.6	2.2	-7.9	0.22	0.12	-18.32
1,796.0	4.25	197.80	1,795.8	2.3	0.1	-2.3	2.73	1.97	-88.44
1,976.0	8.31	198.29	1,974.7	-16.4	-6.0	17.4	2.26	2.26	0.27
2,156.0	7.78	195.08	2,152.9	-40.5	-13.3	42.6	0.39	-0.29	-1.78
2,335.0	7.21	191.17	2,330.4	-63.2	-18.6	65.9	0.43	-0.32	-2.18
2,515.0	6.94	191.83	2,509.0	-84.9	-23.0	88.0	0.16	-0.15	0.37
2,695.0	6.20	193.89	2,687.8	-105.0	-27.6	108.5	0.43	-0.41	1.14
2,875.0	5.23	192.09	2,866.9	-122.5	-31.6	126.4	0.55	-0.54	-1.00
3,054.0	4.17	186.23	3,045.3	-136.9	-34.1	140.9	0.65	-0.59	-3.27
3,235.0	3.20	188.10	3,225.9	-148.4	-35.5	152.4	0.54	-0.54	1.03
3,414.0	3.11	206.63	3,404.7	-157.7	-38.4	162.1	0.57	-0.05	10.35
3,594.0	2.50	208.10	3,584.4	-165.6	-42.4	170.8	0.34	-0.34	0.82
3,774.0	2.20	211.50	3,764.3	-172.0	-46.1	177.9	0.18	-0.17	1.89
3,954.0	2.30	209.60	3,944.2	-178.1	-49.6	184.8	0.07	0.06	-1.06
4,133.0	2.24	212.92	4,123.0	-184.1	-53.3	191.7	0.08	-0.03	1.85
4,313.0	2.29	209.23	4,302.9	-190.2	-57.0	198.6	0.09	0.03	-2.05
4,493.0	2.37	201.63	4,482.7	-196.8	-60.1	205.8	0.18	0.04	-4.22
4,673.0	3.30	197.60	4,662.5	-205.2	-63.1	214.7	0.53	0.52	-2.24
4,853.0	3.40	199.40	4,842.2	-215.2	-66.4	225.2	0.08	0.06	1.00
5,033.0	3.80	199.30	5,021.8	-225.8	-70.1	236.5	0.22	0.22	-0.06
5,178.0	3.74	200.97	5,166.5	-234.8	-73.4	246.0	0.09	-0.04	1.15
Last MWD Survey									
5,211.5	3.74	200.97	5,200.0	-236.8	-74.2	248.2	0.00	0.00	0.00
Projected TD Target									
5,255.0	3.74	200.97	5,243.4	-239.5	-75.2	251.0	0.00	0.00	0.00
Official Well TD									

Design Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
5,178.0	5,166.5	-234.8	-73.4	Last MWD Survey
5,211.5	5,200.0	-236.8	-74.2	Projected TD Target
5,255.0	5,243.4	-239.5	-75.2	Official Well TD



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Checked By:	_____	Approved By:	_____	Date:	_____
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