

Results of Directional Survey

DD

API number:	30-025-39955		
OGRID:		Operator:	OCCIDENTAL PERMIAN LTD
		Property:	SOUTH HOBBS G/SA UNIT # 248

surface	ULSTR:	D	09	T	19S	R	38E
				125	FNL	455	FWL

BH Loc	ULSTR:	M	04	T	19S	R	38E
5256	MD	5231.5	TVD	17	FSL	205	FWL

Top Perf/OH	ULSTR:	M	04	T	19S	R	38E
4158	MD	4133.6	TVD	9	FSL	196	FWL

Bot Perf/OH	ULSTR:	M	04	T	19S	R	38E
4518	MD	4493.6	TVD	85	FSL	200	FWL

	MD	N/S	E/W	VD
	4115	133.31	-259.14	4090.61
TOP PERFS/OH	4158	133.74	-258.65	4133.61
	4210	134.25	-258.05	4185.60
	4210	134.25	-258.05	4185.60
BOT PERFS/OH	4518	136.69	-255.38	4493.58
	5049	140.89	-250.78	5024.54

NEXT TO LAST	5143	141.27	-250.33	5118.54
LAST READING	5238	141.98	-249.91	5213.53
TD	5256	142.11	-249.83	5231.53

Surface Location	125	FN	455	FW
Projected BHL	17	FS	205	FW
Location of				
Top Perfs/OH	9	FS	196	FW
Bottom Perfs/OH	12	FS	200	FW

SUMMARY of Subsurface Locations

Surface Location	D-09-19S-38E	125	FN	455	FW	Vert. Depth
Top Perfs/OH	M-04-19S-38E	9	FS	196	FW	4133.61
Bottom Perfs/OH	M-04-19S-38E	12	FS	200	FW	4493.58
Projected TD	M-04-19S-38E	17	FS	205	FW	5231.53

OCT 01 2012

SUR: D-09-19s-38e, 125/N & 455/W
BHL: M-04-19s-38e, 17/S & 205/W
API # 30-025-39955

HOBBS OCD

SEP 14 2012

INCLINATION REPORT (One Copy Must Be Filed With Each Completion Report.)		RECEIVED
1. FIELD NAME (as per RRC Records or Wildcat) Hobbs; Grayburg/San Andres	2. LEASE NAME South Hobbs G/SA Unit	8. Well Number 248
3. OPERATOR Occidental Permian Ltd.		10. County Lea NM
4. ADDRESS 5 Greenway Plaza, Suite 110 Houston, TX 77046		
5. LOCATION (Section, Block, and Survey) 125' FNL & 455' FWL, UL D, Section 9, T-19-S, R38-E		

RECORD OF INCLINATION

*11. Measured Depth (feet)	12. Course Length (Hundreds of feet)	*13. Angle of Inclination (Degrees)	14. Displacement per Hundred Feet (Sine of Angle X100)	15. Course Displacement (feet)	16. Accumulative Displacement (feet)
488	4.88	0.75	1.31	6.39	6.39
1000	5.12	7.5	13.05	66.82	73.21
1595	5.95	13.92	24.06	143.16	216.37
1785	1.90	9.89	17.17	32.62	248.99
1848	0.63	8.75	15.21	9.58	258.57
2384	5.36	2.94	5.13	27.50	286.07
2415	0.31	2.44	4.26	1.32	287.39
2510	0.95	1.71	2.98	2.83	290.22
2604	0.94	1.87	3.26	3.06	293.28
2699	0.95	1.24	2.16	2.05	295.33
2888	1.89	0.95	1.66	3.14	298.47
2983	0.95	1.03	1.80	1.71	300.18
3171	1.88	1.44	2.51	4.72	304.90
3549	3.78	1.44	2.51	9.49	314.39

If additional space is needed, use the reverse side of this form.

17. Is any information shown on the reverse side of this form? ☐ yes ☒ no
18. Accumulative total displacement of well bore at total depth of 3549.00 feet = 314.39 feet.
- *19. Inclination measurements were made in - ☐ Tubing ☐ Casing ☐ Open hole ☒ Drill Pipe
20. Distance from surface location of well to the nearest lease line _____ feet.
21. Minimum distance to lease line as prescribed by field rules _____ feet.
22. Was the subject well at any time intentionally deviated from the vertical in any manner whatsoever? _____
- (If the answer to the above question is "yes", attach written explanation of the circumstances.)

INCLINATION DATA CERTIFICATION	OPERATOR CERTIFICATION
I declare under penalties prescribed in Sec. 91.143, Texas Natural Resources Code, that I am authorized to make this certification, that I have personal knowledge of the inclination data and facts placed on both sides of this form and that such data and facts are true, correct, and complete to the best of my knowledge. This certification covers all data as indicated by asterisks (*) by the item numbers on this form. <i>Kristin Mancha</i> Signature of Authorized Representative Kristin Mancha, Admin. Coord. Name of Person and Title (type or print) Helmerich & Payne IDC Name of Company Telephone: <u>(432) 563-5757</u> Area Code	I declare under penalties prescribed in Sec. 91.143, Texas Natural Resources Code, that I am authorized to make this certification, that I have personal knowledge of all information presented in this report, and that all data presented on both sides of this form are true, correct, and complete to the best of my knowledge. This certification covers all data and information presented herein except inclination data as indicated by asterisks (*) by the item numbers on this form. <i>Mark Stephens</i> 9/7/12 Signature of Authorized Representative Mark Stephens, Reg. Compliance Analyst Name of Person and Title (type or print) Occidental Permian Ltd. Operator Telephone: <u>(713) 366-5158</u> Area Code

Approved By: _____ Title: _____ Date: _____

* Designates items certified by company that conducted the inclination surveys

KZ

HOBBS OCD

SEP 14 2012

RECEIVED

Weatherford®

Evaluation, Drilling & Intervention
10000 West County Rd. 116
P.O. Box 61028
Midland, TX USA 79711
Tel. (432) 561-8892 Fax (432) 561-8895

Occidental Permian Ltd.
5 Greenway Plaza Suite 110
Houston Tx 77046

Date: May 1, 2012

Attention: Tom White

Re: Occidental Permian Ltd
Well: South Hobbs G/SA Unit 248
Lea County, New Mexico

SUR: D-09-19s-38e, 125/N & 455/W
BHL: M-04-19s-38e, 17/S & 205/W
API # 30-025-39955

Enclosed, please find the original survey performed on the referenced well by Precision Energy Services, Inc. (P-5 No. 676004), a Weatherford company. Other information required by your office is as follows:

<u>Name & Title Of Surveyor</u>	<u>Well Number</u>	<u>Surveyed Depths</u>	<u>Dates Performed</u>	<u>Type of Survey</u>
Seth Cash	248	1595' MD	4/22/2012	Measurement
MWD Supervisor		4281' MD	4/26/2012	While Drilling

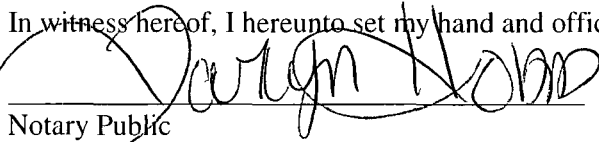
A notarized plan vs. actual is attached to the survey report. If any other information is required, please contact the undersigned at the letterhead address and phone number.

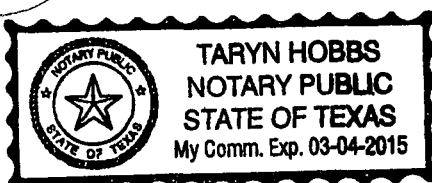


Jesus Aguilar
MWD Coordinator

On this, the 2nd day of May, 2012, before me a notary public, the undersigned officer, personally appeared Jesus Aguilar, known to me (or satisfactorily proven) to be the person whose name is subscribed to the within instrument, and acknowledged that he executed the same for the purposes therein contained.

In witness hereof, I hereunto set my hand and official seal.


Notary Public





Weatherford International Ltd.

WFT Survey Report X & Y's


Weatherford

Company: Occidental Permian Ltd.	Date: 4/26/2012	Time: 06:50 22	Page: 1
Field: Lea Co, New Mexico (Nad 27)	Co-ordinate(NE) Reference: Well. SHU 248, Grid North		
Site: SHU 248	Vertical (TVD) Reference: SITE 3626 7		
Well: SHU 248	Section (VS) Reference: Well (0.00N,0.00E,297 14Azi)		
Wellpath: 1	Survey Calculation Method: Minimum Curvature	Db: Sybase	

Survey: Wft Svy	Start Date: 4/24/2012
Company: Weatherford International Ltd.	Engineer: Keith Noack
Tool: MWD,MWD - Standard	Tied-to: User Defined

Field: Lea Co, New Mexico (Nad 27)	
Map System: US State Plane Coordinate System 1927	Map Zone: New Mexico, Eastern Zone
Geo Datum: NAD27 (Clarke 1866)	Coordinate System: Well Centre
Sys Datum: Mean Sea Level	Geomagnetic Model: IGRF2010

Site: SHU 248		
Site Position:	Northing: 613684 60 ft	Latitude: 32 40 53.873 N
From: Map	Easting: 861006.40 ft	Longitude: 103 9 36.174 W
Position Uncertainty: 0 00 ft		North Reference: Grid
Ground Level: 3601 70 ft		Grid Convergence: 0 63 deg

Well: SHU 248	Slot Name:
Well Position: +N/-S 0 00 ft	Northing: 613684 60 ft
+E/-W 0 00 ft	Easting : 861006.40 ft
Position Uncertainty: 0 00 ft	Latitude: 32 40 53.873 N
	Longitude: 103 9 36.174 W

Wellpath: 1	Drilled From: Surface
	Tie-on Depth: 0.00 ft
Current Datum: SITE	Above System Datum: Mean Sea Level
Magnetic Data: 4/1/2012	Declination: 7 33 deg
Field Strength: 48883 nT	Mag Dip Angle: 60 66 deg
Vertical Section: Depth From (TVD)	+N/-S
ft	ft
0.00	0 00
	+E/-W
	ft
	0 00
	Direction
	deg
	297 14

Survey										
MD ft	Incl deg	Azim deg	TVD ft	N/S ft	E/W ft	DLS deg/100ft	VS ft	MapN ft	MapE ft	Comment
1488.00	15.68	293.50	1475.48	46.43	-132.18	0.00	138.81	613731.03	860874.22	Tie On SDI
1539.33	14.84	293.92	1525.00	51.86	-144.55	1.66	152.29	613736.46	860861.85	9 5/8"
1542.43	14.78	293.95	1528.00	52.18	-145.27	1.66	153.08	613736.78	860861.13	RSLR
1595.00	13.92	294.44	1578.93	57.52	-157.16	1.66	166.09	613742.12	860849.24	First Wft Svy
1627.00	12.95	294.93	1610.05	60.63	-163.91	3.05	173.52	613745.23	860842.49	
1645.39	12.27	294.54	1628.00	62.31	-167.56	3.71	177.53	613746.91	860838.84	Top Salt
1658.00	11.81	294.24	1640.33	63.39	-169.96	3.71	180.16	613747.99	860836.44	
1690.00	11.26	293.69	1671.68	65.99	-175.80	1.75	186.55	613750.59	860830.60	
1721.00	10.58	293.45	1702.12	68.34	-181.19	2.20	192.41	613752.94	860825.21	
1753.00	10.38	292.86	1733.59	70.63	-186.54	0.71	198.22	613755.23	860819.86	
1785.00	9.89	292.15	1765.09	72.79	-191.74	1.58	203.83	613757.39	860814.66	
1816.00	9.18	293.40	1795.66	74.77	-196.47	2.39	208.95	613759.37	860809.93	
1848.00	8.75	293.97	1827.27	76.77	-201.04	1.37	213.93	613761.37	860805.36	
1879.00	8.05	294.73	1857.94	78.64	-205.17	2.29	218.45	613763.24	860801.23	
1911.00	7.56	295.41	1889.64	80.48	-209.10	1.56	222.79	613765.08	860797.30	
1942.00	7.54	296.42	1920.37	82.26	-212.77	0.43	226.87	613766.86	860793.63	
1974.00	7.69	296.97	1952.09	84.17	-216.56	0.52	231.11	613768.77	860789.84	
2005.00	7.76	297.63	1982.81	86.08	-220.26	0.36	235.27	613770.68	860786.14	
2037.00	7.20	297.04	2014.54	87.99	-223.96	1.77	239.44	613772.59	860782.44	
2068.00	6.79	297.03	2045.31	89.71	-227.32	1.32	243.21	613774.31	860779.08	
2100.00	6.41	295.85	2077.09	91.34	-230.61	1.26	246.89	613775.94	860775.79	
2132.00	5.96	297.52	2108.91	92.89	-233.69	1.51	250.34	613777.49	860772.71	
2163.00	5.60	299.06	2139.75	94.37	-236.44	1.26	253.46	613778.97	860769.96	
2195.00	5.43	298.71	2171.60	95.86	-239.14	0.54	256.53	613780.46	860767.26	



Weatherford International Ltd.

WFT Survey Report X & Y's


Weatherford

Company: Occidental Permian Ltd.
Field: Lea Co, New Mexico (Nad 27)
Site: SHU 248
Well: SHU 248
Wellpath: 1

Date: 4/26/2012 Time: 06:50:22 Page: 2
Co-ordinate(NE) Reference: Well: SHU 248, Grid North
Vertical (TVD) Reference: SITE 3626.7
Section (VS) Reference: Well (0 00N,0.00E,297 14Azi)
Survey Calculation Method: Minimum Curvature Db: Sybase

Survey

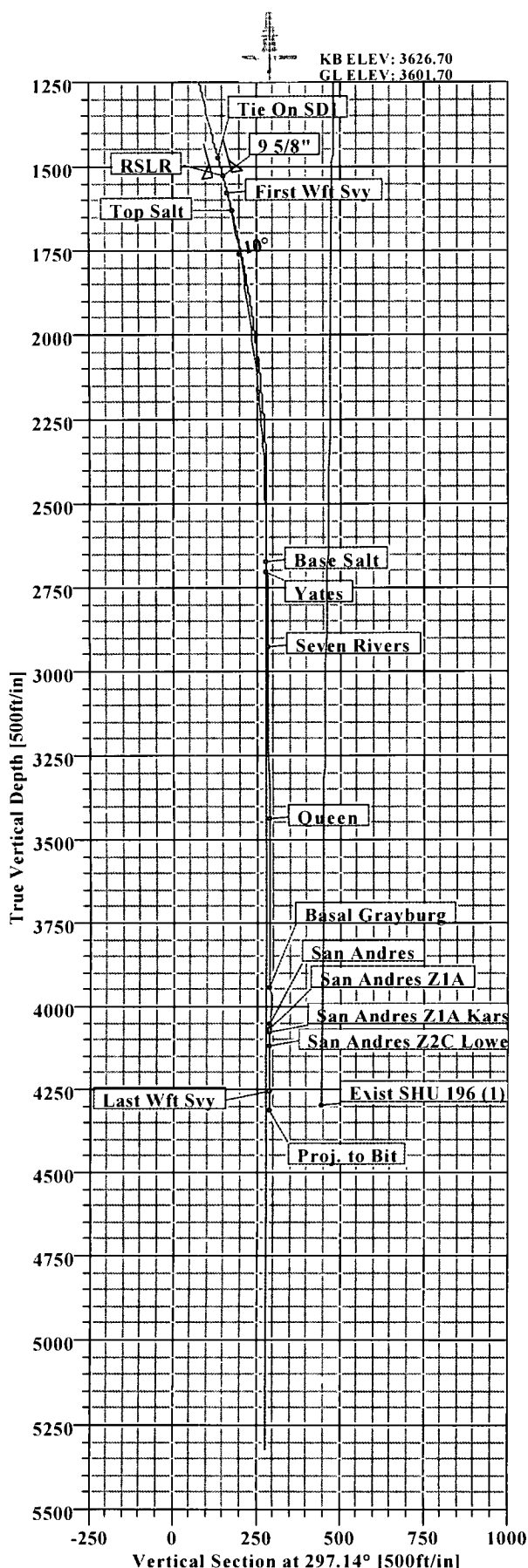
MD ft	Incl deg	Azim deg	TVD ft	N/S ft	E/W ft	DLS deg/100ft	VS ft	MapN ft	MapE ft	Comment
2226.00	5.28	297.25	2202.47	97.21	-241.69	0.65	259.43	613781.81	860764.71	
2258.00	4.99	295.12	2234.34	98.48	-244.26	1.08	262.29	613783.08	860762.14	
2289.00	4.51	291.84	2265.23	99.50	-246.61	1.78	264.85	613784.10	860759.79	
2320.00	4.09	289.18	2296.14	100.32	-248.79	1.50	267.16	613784.92	860757.61	
2352.00	3.49	290.58	2328.07	101.04	-250.78	1.90	269.26	613785.64	860755.62	
2384.00	2.94	291.89	2360.02	101.69	-252.45	1.73	271.04	613786.29	860753.95	
2415.00	2.44	293.78	2390.99	102.25	-253.79	1.64	272.49	613786.85	860752.61	
2510.00	1.71	311.73	2485.93	104.01	-256.70	1.02	275.88	613788.61	860749.70	
2604.00	1.87	326.84	2579.88	106.23	-258.59	0.53	278.57	613790.83	860747.81	
2694.15	1.27	333.84	2670.00	108.35	-259.83	0.70	280.65	613792.95	860746.57	Base Salt
2699.00	1.24	334.41	2674.85	108.45	-259.88	0.70	280.74	613793.05	860746.52	
2726.16	1.15	339.09	2702.00	108.97	-260.10	0.50	281.17	613793.57	860746.30	Yates
2793.00	0.96	354.11	2768.83	110.15	-260.40	0.50	281.98	613794.75	860746.00	
2888.00	0.95	358.71	2863.82	111.73	-260.50	0.08	282.78	613796.33	860745.90	
2951.19	1.04	8.37	2927.00	112.82	-260.43	0.30	283.22	613797.42	860745.97	Seven Rivers
2983.00	1.09	12.59	2958.80	113.40	-260.32	0.30	283.39	613798.00	860746.08	
3077.00	1.25	2.49	3052.78	115.30	-260.08	0.28	284.04	613799.90	860746.32	
3171.00	1.44	0.79	3146.76	117.50	-260.02	0.21	284.99	613802.10	860746.38	
3266.00	0.73	357.83	3241.74	119.30	-260.02	0.75	285.82	613803.90	860746.38	
3360.00	0.71	344.79	3335.73	120.46	-260.20	0.18	286.50	613805.06	860746.20	
3455.00	0.96	348.46	3430.72	121.81	-260.51	0.27	287.39	613806.41	860745.89	
3464.28	0.97	348.45	3440.00	121.96	-260.54	0.06	287.49	613806.56	860745.86	Queen
3549.00	1.02	348.39	3524.71	123.40	-260.84	0.06	288.41	613808.00	860745.56	
3644.00	1.37	351.62	3619.69	125.35	-261.18	0.38	289.60	613809.95	860745.22	
3738.00	0.93	4.69	3713.67	127.22	-261.28	0.54	290.54	613811.82	860745.12	
3832.00	0.99	12.45	3807.65	128.78	-261.04	0.15	291.04	613813.38	860745.36	
3926.00	1.29	14.10	3901.64	130.59	-260.61	0.32	291.49	613815.19	860745.79	
3968.37	1.09	19.91	3944.00	131.44	-260.35	0.55	291.64	613816.04	860746.05	Basal Grayburg
4021.00	0.87	30.65	3996.62	132.25	-259.98	0.55	291.68	613816.85	860746.42	
4074.39	0.82	39.40	4050.00	132.90	-259.53	0.26	291.58	613817.50	860746.87	San Andres
4091.39	0.81	42.38	4067.00	133.08	-259.37	0.26	291.52	613817.68	860747.03	San Andres Z1A
4104.39	0.80	44.70	4080.00	133.21	-259.24	0.26	291.47	613817.81	860747.16	San Andres Z1A
4115.00	0.80	46.63	4090.61	133.32	-259.14	0.26	291.42	613817.92	860747.26	
4144.39	0.84	48.20	4120.00	133.60	-258.83	0.15	291.27	613818.20	860747.57	San Andres Z2C
4210.00	0.93	51.21	4185.60	134.26	-258.05	0.15	290.88	613818.86	860748.35	
4281.00	1.10	42.54	4256.59	135.12	-257.14	0.32	290.47	613819.72	860749.26	Last Wft Svy
4337.00	1.10	42.54	4312.58	135.91	-256.42	0.00	290.18	613820.51	860749.98	Proj to Bit

Annotation

MD ft	TVD ft	
1488.00	1475.48	Tie On SDI
1595.00	1578.93	First Wft Svy
4281.00	4256.59	Last Wft Svy
4337.00	4312.58	Proj. to Bit

Occidental Permian Ltd.

SHU 248
Lea Co, New Mexico



SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSec	Target
1	1488.00	15.68	293.50	1475.48	46.43	-132.18	0.00	0.00	138.81	
2	2533.33	0.00	0.00	2507.82	103.11	-262.54	1.50	180.00	280.67	
3	5350.52	0.00	0.00	5325.00	103.11	-262.54	0.00	0.00	280.67	

TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Shape
None						

WELL DETAILS

Name	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
SHU 248	0.00	0.00	613684.60	861006.40	32°40'53.873N	103°09'36.174W	N/A

SITE DETAILS

SHU 248

Site Centre Northing:	613684.60
Easting:	861006.40
Ground Level:	3601.70
Positional Uncertainty:	0.00
Convergence:	0.63

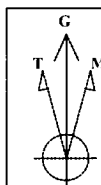
FIELD DETAILS

Lea Co, New Mexico (Nad 27)

Geodetic System:	US State Plane Coordinate System 1927
Ellipsoid:	NAD27 (Clarke 1866)
Zone:	New Mexico, Eastern Zone
Magnetic Model:	IGRF2010
System Datum:	Mean Sea Level
Local North:	Grid North

FORMATION TOP DETAILS

No.	TVDPath	MDPath	Formation
1	1528.00	1542.43	RSLR
2	1628.00	1645.39	Top Salt
3	2670.00	2694.15	Base Salt
4	2702.00	2726.16	Yates
5	2927.00	2951.19	Seven Rivers
6	3440.00	3464.28	Queen
7	3944.00	3968.37	Basal Grayburg
8	4050.00	4074.39	San Andres
9	4067.00	4091.39	San Andres Z1A
10	4080.00	4104.39	San Andres Z1A Kars
11	4120.00	4144.39	San Andres Z2C Lower



Azinuths to Grid North
True North: -0.63°
Magnetic North: 6.70°
Magnetic Field
Strength: 48883nT
Dip Angle: 60.66°
Date: 4/1/2012
Model: IGRF2010
Total Correction To Grid North 6.70°

LEGEND

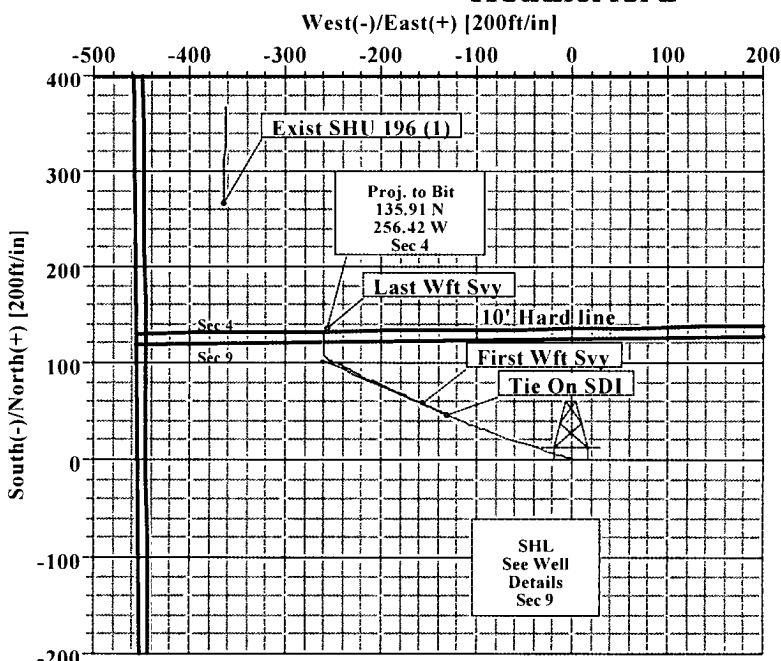
SHU 248,1,Gyro
SHU 248,1,Plan #5
Exist SHU 196 (1)
1
Wft Svy

Survey: Wft Svy (SHU 248/1)

No	MD	Inc	Az	TVD	+N/-S	+E/-W	DLeg	TFace	VSec
49	4337.00	1.10	42.54	4312.58	135.91	-256.42	0.00	0.00	290.18



Weatherford



Survey: Wft Svy (SHU 248/1)

Created By: Keith Noack

Date: 4/26/2012

HOBBS OCD

SEP 14 2012

RECEIVED

OCCIDENTAL PERMIAN LTD.

Hobbs (Grayburg San Andres)

Lea County, NM

South Hobbs G/SA Unit #248

VH - Job #32K0412465

SUR: D-09-19s-38e, 125/N & 455/W

BHL: M-04-19s-38e, 17/S & 205/W

API # 30-025-39955

Survey: Gyro

SDI Standard Survey Report

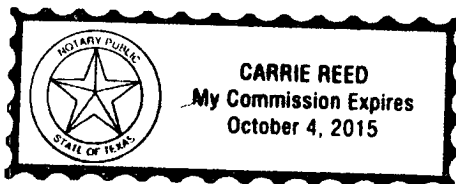
This survey is correct to the best of my knowledge and is supported by actual field data.

[Signature]

Notarized this date 14th of May, 2012.

Carrie Reed

Notary Signature
County of Midland
State of Texas



Scientific Drilling International, Inc.
SDI Standard Survey Report



Company:	OCCIDENTAL PERMIAN LTD	Local Co-ordinate Reference:	Well South Hobbs G/SA Unit #248
Project:	Hobbs (Grayburg San Andres)	TVD Reference:	WELL @ 0 00usft (Original Well Elev)
Site:	Lea County, NM	MD Reference:	WELL @ 0 00usft (Original Well Elev)
Well:	South Hobbs G/SA Unit #248	North Reference:	Grid
Wellbore:	VH - Job #32K0412465	Survey Calculation Method:	Minimum Curvature
Design:	VH - Job #32K0412465	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		
Site Position:		Northing:	613,684 60 usft
From:	Lat/Long	Easting:	861,006.44 usft
Position Uncertainty:	0 00 usft	Slot Radius:	13-3/16"
		Latitude:	32° 40' 53 873 N
		Longitude:	103° 9' 36 174 W
		Grid Convergence:	0 63 °

Well	South Hobbs G/SA Unit #248, Vertical		
Well Position	+N/-S	0 00 usft	Northing: 613,684 60 usft
	+E/-W	0.00 usft	Easting: 861,006 44 usft
Position Uncertainty	0 00 usft	Wellhead Elevation:	usft
		Latitude:	32° 40' 53 873 N
		Longitude:	103° 9' 36 174 W
		Ground Level:	0 00 usft

Wellbore	VH - Job #32K0412465				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	04/22/12	7 32	60 66	48,877

Design	VH - Job #32K0412465				
Audit Notes:					
Version:	1 0	Phase:	ACTUAL	Tie On Depth:	0 00
Vertical Section:	Depth From (TVD)	+N/-S	+E/-W	Direction	
	(usft)	(usft)	(usft)	(°)	
	0 00	0 00	0 00	289 35	

Survey Program	Date	05/11/12			
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
100 00	1,488 00	Gyro (VH - Job #32K0412465)	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 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00
100 00	0 70	333 38	100 00	0 55	-0 27	333 38	0 61
200 00	0 73	299 66	199 99	1 41	-1 10	321 97	1 79
300 00	1 07	280 11	299 98	1 89	-2 57	306 24	3 19
400 00	1 32	285 00	399 96	2 35	-4 61	297 02	5 17
500 00	1 63	285 73	499 92	3 03	-7 09	293 16	7 71
600 00	1 91	286 06	599 88	3 88	-10 06	291 09	10 78
700 00	2 65	283 32	699 80	4 87	-13 91	289 31	14 74
800 00	3 48	287 21	799 65	6 30	-19 06	288 30	20 07
900 00	4 97	286 58	899 38	8 44	-26 11	287 91	27 44
1,000 00	6 92	288 06	998 83	11 54	-35 99	287 78	37 79
1,100 00	9 32	287 73	1,097 82	15 88	-49 43	287 81	51 92

Scientific Drilling International, Inc.

SDI Standard Survey Report



Company:	OCCIDENTAL PERMIAN LTD.	Local Co-ordinate Reference:	Well South Hobbs G/SA Unit #248
Project:	Hobbs (Grayburg San Andres)	TVD Reference:	WELL @ 0 00usft (Original Well Elev)
Site:	Lea County, NM	MD Reference:	WELL @ 0 00usft (Original Well Elev)
Well:	South Hobbs G/SA Unit #248	North Reference:	Grid
Wellbore:	VH - Job #32K0412465	Survey Calculation Method:	Minimum Curvature
Design:	VH - Job #32K0412465	Database:	EDM-Regulatory

Survey							
Measured Depth (usft)	Inclination (°)	Azimuth (°)	True Vertical Depth	North/South (usft)	East/West (usft)	Closure Azimuth (°)	Closure Distance (usft)
1,200 00	12 12	287 78	1,196.07	21.55	-67 14	287 79	70 52
1,300 00	13 86	290 38	1,293 51	28 93	-88 37	288 12	92 98
1,400 00	14 36	291 61	1,390 49	37 66	-111 13	288 72	117 34
1,488 00	15 68	293 50	1,475 48	46 42	-132 18	289 35	140 09

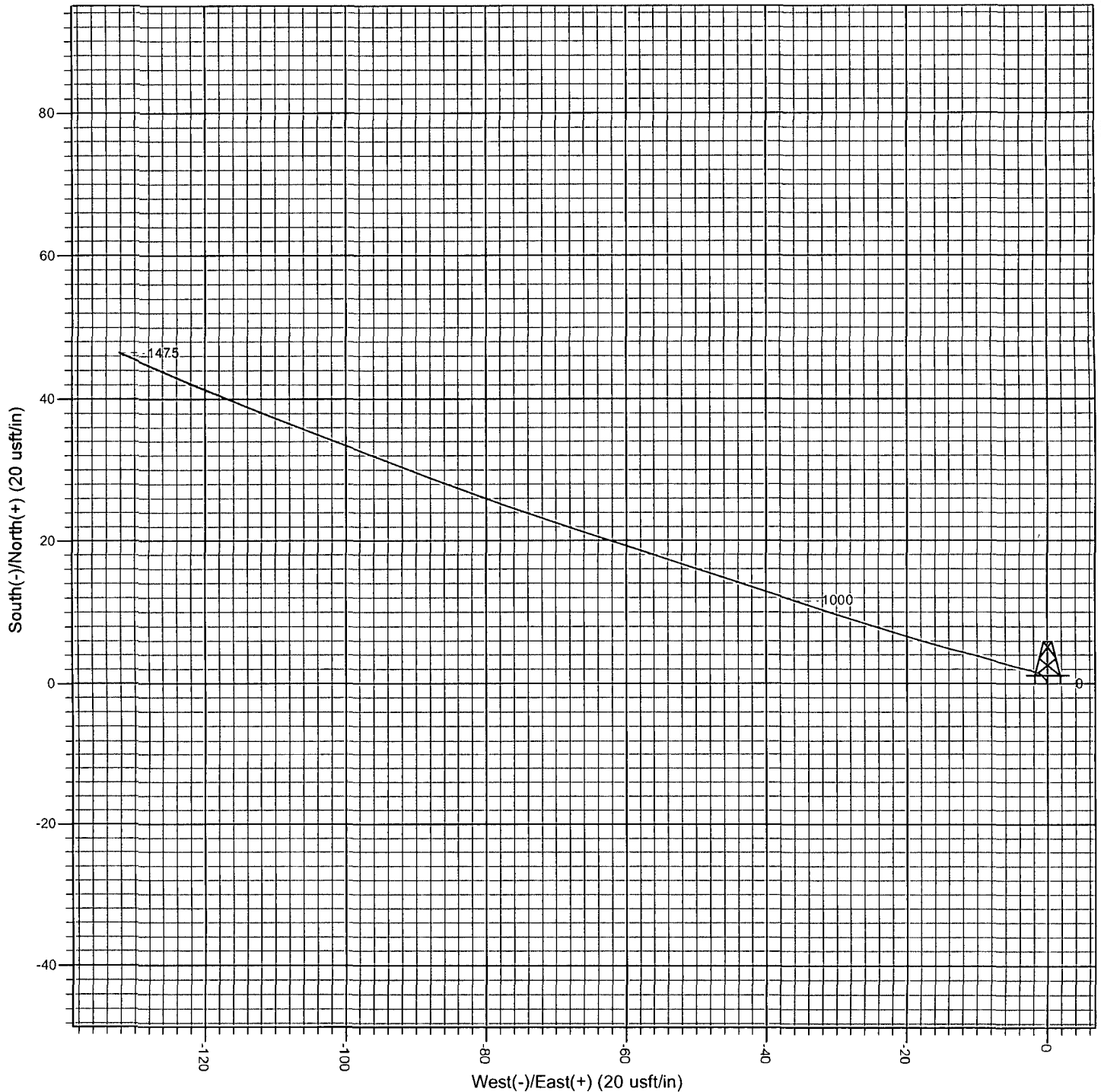


Scientific Drilling
Directional Drilling Operations

Project: Hobbs (Grayburg San Andres)
Lea County, NM
Well: South Hobbs G/SA Unit #248
Wellbore: VH - Job #32K0412465
Design: VH - Job #32K0412465

WELL DETAILS: South Hobbs G/SA Unit #248
WELL @ 0.00usft (Original Well Elev)
Ground Level: 0.00

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.00	0.00	613684.60	861006.44	32° 40' 53.873 N	103° 9' 36.174 W	



PROJECT DETAILS: Hobbs (Grayburg San Andres)	SITE DETAILS: Lea County, NM
Geodetic System: US State Plane 1927 (Exact solution)	Site Centre Latitude: 32° 40' 53.873 N
Datum: NAD 1927 (NADCON CONUS)	Longitude: 103° 9' 36.174 W
Ellipsoid: Clarke 1866	Positional Uncertainty: 0.00
Zone: New Mexico East 3001	Convergence: 0.63
System Datum: Mean Sea Level	Local North: Grid

HOBBS OCD

SEP 14 2012

RECEIVED

OXY USA PERMIAN

SUR: D-09-19s-38e, 125/N & 455/W
BHL: M-04-19s-38e, 17/S & 205/W
API # 30-025-39955

HOBBS-OPL
SOUTH HOBBS GRAYBURG-SA UT-PHA
SOUTH HOBBS /GRAYBURG SAN AND/ UNIT 248
ORIG HOLE

Deviation Summary Report

Disclaimer Although the information contained in this report is based on sound engineering practices, the copyright owner(s) does (do) not accept any responsibility whatsoever, in negligence or otherwise, for any loss or damage arising from the possession or use of the report whether in terms of correctness or otherwise. The application, therefore, by the user of this report or any part thereof, is solely at the user's own risk.

1 General

1.1 Customer Information

Company	OXY USA PERMIAN
Representative	
Address	

1.2 Well Information

Well	SOUTH HOBBS /GRAYBURG SAN AND/ UNIT 248	Wellbore No.	00
Well Name	SOUTH HOBBS /GRAYBURG SAN AND/ UNIT 248 ORIG HOLE	Common Name	ORIG HOLE
Project	HOBBS-OPL	Site	SOUTH HOBBS GRAYBURG-SA UT-PHA
Vertical Section Azimuth	303 13 (°)	North Reference	True
VS Origin N/S	125.00 (ft)	VS Origin E/W	455 00 (ft)
Spud Date/Time	04/21/2012	Primary Location Desc.	125' FNL X 455' FWL
Active Datum	Original KB @3,626.70ft (above Mean Sea Level)		

2 Survey Name

2.1 Survey Name: Survey #1

Survey Name	Survey #1	Company	MD TOTCO
Start Date	04/21/2012	End Date	
Tool Name	INC	Engineer	OXY

2.1.1 Tie On Point

MD (ft)	Inc (°)	Azi (°)	TVD (ft)	N/S (ft)	E/W (ft)
0	0.00	0 00	0 00	0.00	0 00

2.1.2 Survey Stations

Date	Station Type	MD (ft)	Inc (°)	Azi (°)	TVD (ft)	N/S (ft)	E/W (ft)	V. Sec (ft)	DLS (°/100ft)	Build (°/100ft)	Turn (°/100ft)	TFace (°)
04/21/2012	Tie On	0	0 00	0 00	0.00	0 00	0 00	312 71	0.00	0.00	0.00	0.00
04/21/2012	NORMAL	500	0.50	0 00	499.99	2.18	0.00	313 91	0.10	0 10	0.00	0 00
	NORMAL	1192	7.75	0.00	1,189.74	51 93	0.00	341.09	1.05	1 05	0.00	0 00
	NORMAL	1540	16.25	0.00	1,529.82	124 21	0.00	380.60	2.44	2.44	0.00	0.00

2.2 Survey Name: Survey #2

Survey Name	Survey #2	Company	SCIENTIFIC DRILLING INTERNATIONAL
Start Date	04/22/2012	End Date	
Tool Name	Gyro MWD	Engineer	OXY

2.2.1 Tie On Point

MD (ft)	Inc (°)	Azi (°)	TVD (ft)	N/S (ft)	E/W (ft)
0	0 00	0.00	0.00	0.00	0 00

2.2.2 Survey Stations

Date	Station Type	MD (ft)	Inc (°)	Azi (°)	TVD (ft)	N/S (ft)	E/W (ft)	V. Sec (ft)	DLS (°/100ft)	Build (°/100ft)	Turn (°/100ft)	TFace (°)
04/22/2012	Tie On	0	0.00	0 00	0.00	0 00	0 00	312.71	0.00	0.00	0.00	0 00
04/22/2012	NORMAL	100	0.70	333.38	100.00	0.55	-0.27	313.24	0.70	0.70	0.00	333.38
	NORMAL	200	0.73	299.66	199.99	1.41	-1.10	314.41	0.42	0.03	-33.72	-102.90
	NORMAL	300	1.07	280.11	299.98	1.89	-2.57	315.90	0.45	0.34	-19.55	-52.14
	NORMAL	400	1.32	285.00	399.96	2.35	-4.61	317.85	0.27	0.25	4.89	24.65
	NORMAL	500	1.63	285.73	499.92	3.03	-7.09	320.31	0.31	0.31	0.73	3.83
	NORMAL	600	1.91	286.06	599.88	3.88	-10.06	323.26	0.28	0.28	0.33	2.25
	NORMAL	700	2.65	283.32	699.80	4.87	-13.91	327.02	0.75	0.74	-2.74	-9.75
	NORMAL	800	3.48	287.21	799.65	6.30	-19.06	332.12	0.86	0.83	3.89	16.02
	NORMAL	900	4.97	286.58	899.38	8.44	-26.11	339.19	1.49	1.49	-0.63	-2.10
	NORMAL	1000	6.92	288.06	998.83	11.54	-35.99	349.16	1.96	1.95	1.48	5.23
	NORMAL	1100	9.32	287.73	1,097.82	15.88	-49.43	362.79	2.40	2.40	-0.33	-1.28
	NORMAL	1200	12.12	287.78	1,196.07	21.55	-67.14	380.72	2.80	2.80	0.05	0.21
	NORMAL	1300	13.86	290.38	1,293.51	28.93	-88.37	402.53	1.84	1.74	2.60	19.84
	NORMAL	1400	14.36	291.61	1,390.49	37.66	-111.13	426.36	0.58	0.50	1.23	31.55
	NORMAL	1488	15.68	293.50	1,475.48	46.42	-132.18	448.78	1.60	1.50	2.15	21.27

2.3 Survey Name: Survey #3

Survey Name	Survey #3	Company	WEATHERFORD INTERNATIONAL, INC
Start Date	04/23/2012	End Date	
Tool Name	MWD	Engineer	OXY

2.3.1 Tie On Point

MD (ft)	Inc (°)	Azi (°)	TVD (ft)	N/S (ft)	E/W (ft)
1488	15.68	293.50	1,475.48	46.42	-132.18

2.3.2 Survey Stations

Date	Station Type	MD (ft)	Inc (°)	Azi (°)	TVD (ft)	N/S (ft)	E/W (ft)	V. Sec (ft)	DLS (°/100ft)	Build (°/100ft)	Turn (°/100ft)	TFace (°)
04/23/2012	Tie On	1488	15.68	293.50	1,475.48	46.42	-132.18	448.78	0.00	0.00	0.00	0 00
04/23/2012	NORMAL	1595	13.92	294.44	1,578.93	57.52	-157.16	475.76	1.66	-1.64	0.88	172.69
	NORMAL	1627	12.95	294.93	1,610.05	60.62	-163.91	483.11	3.05	-3.03	1.53	173.54
	NORMAL	1658	11.81	294.24	1,640.33	63.39	-169.96	489.68	3.71	-3.68	-2.23	-172.94
	NORMAL	1690	11.26	293.69	1,671.68	65.99	-175.80	496.00	1.75	-1.72	-1.72	-168.96
	NORMAL	1721	10.58	293.45	1,702.12	68.34	-181.19	501.79	2.20	-2.19	-0.77	-176.29
	NORMAL	1753	10.38	292.86	1,733.59	70.62	-186.54	507.53	0.71	-0.63	-1.84	-152.07
	NORMAL	1785	9.89	292.15	1,765.09	72.78	-191.74	513.06	1.58	-1.53	-2.22	-166.05
	NORMAL	1816	9.18	293.40	1,795.66	74.77	-196.47	518.11	2.39	-2.29	4.03	164.36
	NORMAL	1848	8.75	293.97	1,827.27	76.77	-201.04	523.03	1.37	-1.34	1.78	168.61
	NORMAL	1879	8.05	294.73	1,857.94	78.63	-205.17	527.50	2.29	-2.26	2.45	171.36
04/24/2012	NORMAL	1911	7.56	295.41	1,889.64	80.48	-209.10	531.81	1.56	-1.53	2.13	169.66
	NORMAL	1942	7.54	296.42	1,920.37	82.26	-212.77	535.85	0.43	-0.06	3.26	99.07
	NORMAL	1974	7.69	296.97	1,952.09	84.16	-216.56	540.06	0.52	0.47	1.72	26.19
	NORMAL	2005	7.76	297.63	1,982.81	86.07	-220.26	544.21	0.36	0.23	2.13	52.05
	NORMAL	2037	7.20	297.04	2,014.54	87.99	-223.96	548.35	1.77	-1.75	-1.84	-172.48
	NORMAL	2068	6.79	297.03	2,045.31	89.70	-227.32	552.11	1.32	-1.32	-0.03	-179.83
	NORMAL	2100	6.41	295.85	2,077.09	91.34	-230.61	555.76	1.26	-1.19	-3.69	-160.94
	NORMAL	2132	5.96	297.52	2,108.91	92.89	-233.69	559.18	1.51	-1.41	5.22	159.04
	NORMAL	2163	5.60	299.06	2,139.75	94.36	-236.44	562.29	1.26	-1.16	4.97	157.46
	NORMAL	2195	5.43	298.71	2,171.60	95.85	-239.14	565.36	0.54	-0.53	-1.09	-168.98
	NORMAL	2226	5.28	297.25	2,202.47	97.21	-241.69	568.24	0.65	-0.48	-4.71	-138.47
	NORMAL	2258	4.99	295.12	2,234.34	98.47	-244.26	571.09	1.08	-0.91	-6.66	-147.74

2.3.2 Survey Stations (Continued)

Date	Station Type	MD (ft)	Inc (°)	Azi (°)	TVD (ft)	N/S (ft)	E/W (ft)	V. Sec (ft)	DLS (°/100ft)	Build (°/100ft)	Turn (°/100ft)	TFace (°)
04/24/2012	NORMAL	2289	4.51	291.84	2,265.23	99.50	-246.61	573.62	1.78	-1.55	-10.58	-152.12
	NORMAL	2320	4.09	289.18	2,296.14	100.32	-248.79	575.88	1.50	-1.35	-8.58	-155.92
	NORMAL	2352	3.49	290.58	2,328.07	101.03	-250.78	577.94	1.90	-1.88	4.38	171.93
	NORMAL	2384	2.94	291.89	2,360.02	101.68	-252.45	579.70	1.73	-1.72	4.09	173.05
	NORMAL	2415	2.44	293.78	2,390.99	102.24	-253.79	581.13	1.64	-1.61	6.10	170.88
	NORMAL	2510	1.71	311.73	2,485.93	104.00	-256.70	584.53	1.02	-0.77	18.89	147.06
	NORMAL	2604	1.87	326.84	2,579.88	106.22	-258.59	587.32	0.53	0.17	16.07	78.93
	NORMAL	2699	1.24	334.41	2,674.85	108.44	-259.88	589.61	0.70	-0.66	7.97	165.70
	NORMAL	2793	0.96	354.11	2,768.83	110.15	-260.40	590.98	0.50	-0.30	20.96	136.09
	NORMAL	2888	0.95	358.71	2,863.82	111.72	-260.50	591.93	0.08	-0.01	4.84	99.73
	NORMAL	2983	1.09	12.59	2,958.80	113.39	-260.32	592.69	0.30	0.15	14.61	67.52
	NORMAL	3077	1.25	2.49	3,052.78	115.29	-260.08	593.52	0.28	0.17	-10.74	-57.32
	NORMAL	3171	1.44	0.79	3,146.76	117.50	-260.02	594.68	0.21	0.20	-1.81	-12.71
	NORMAL	3266	0.73	357.83	3,241.74	119.29	-260.02	595.67	0.75	-0.75	-3.12	-176.96
	NORMAL	3360	0.71	344.79	3,335.73	120.45	-260.20	596.45	0.18	-0.02	-13.87	-103.45
04/25/2012	NORMAL	3455	0.96	348.46	3,430.72	121.80	-260.51	597.45	0.27	0.26	3.86	13.91
	NORMAL	3549	1.02	348.39	3,524.71	123.39	-260.84	598.59	0.06	0.06	-0.07	-1.19
	NORMAL	3644	1.37	351.62	3,619.69	125.35	-261.18	599.94	0.38	0.37	3.40	12.51
	NORMAL	3738	0.93	4.69	3,713.67	127.22	-261.28	601.05	0.54	-0.47	13.90	155.62
	NORMAL	3832	0.99	12.45	3,807.65	128.77	-261.04	601.70	0.15	0.06	8.26	69.14
	NORMAL	3926	1.29	14.10	3,901.64	130.59	-260.61	602.33	0.32	0.32	1.76	7.07
	NORMAL	4021	0.87	30.65	3,996.62	132.25	-259.98	602.71	0.55	-0.44	17.42	151.48
	NORMAL	4115	0.80	46.63	4,090.61	133.31	-259.14	602.58	0.26	-0.07	17.00	114.62
04/26/2012	NORMAL	4210	0.93	51.21	4,185.60	134.25	-258.05	602.19	0.15	0.14	4.82	30.31

2.4 Survey Name: Survey #4/AMS

Survey Name	Survey #4/AMS	Company	WEATHERFORD INTERNATIONAL, INC.
Start Date	05/09/2012	End Date	
Tool Name	INC	Engineer	OXY

2.4.1 Tie On Point

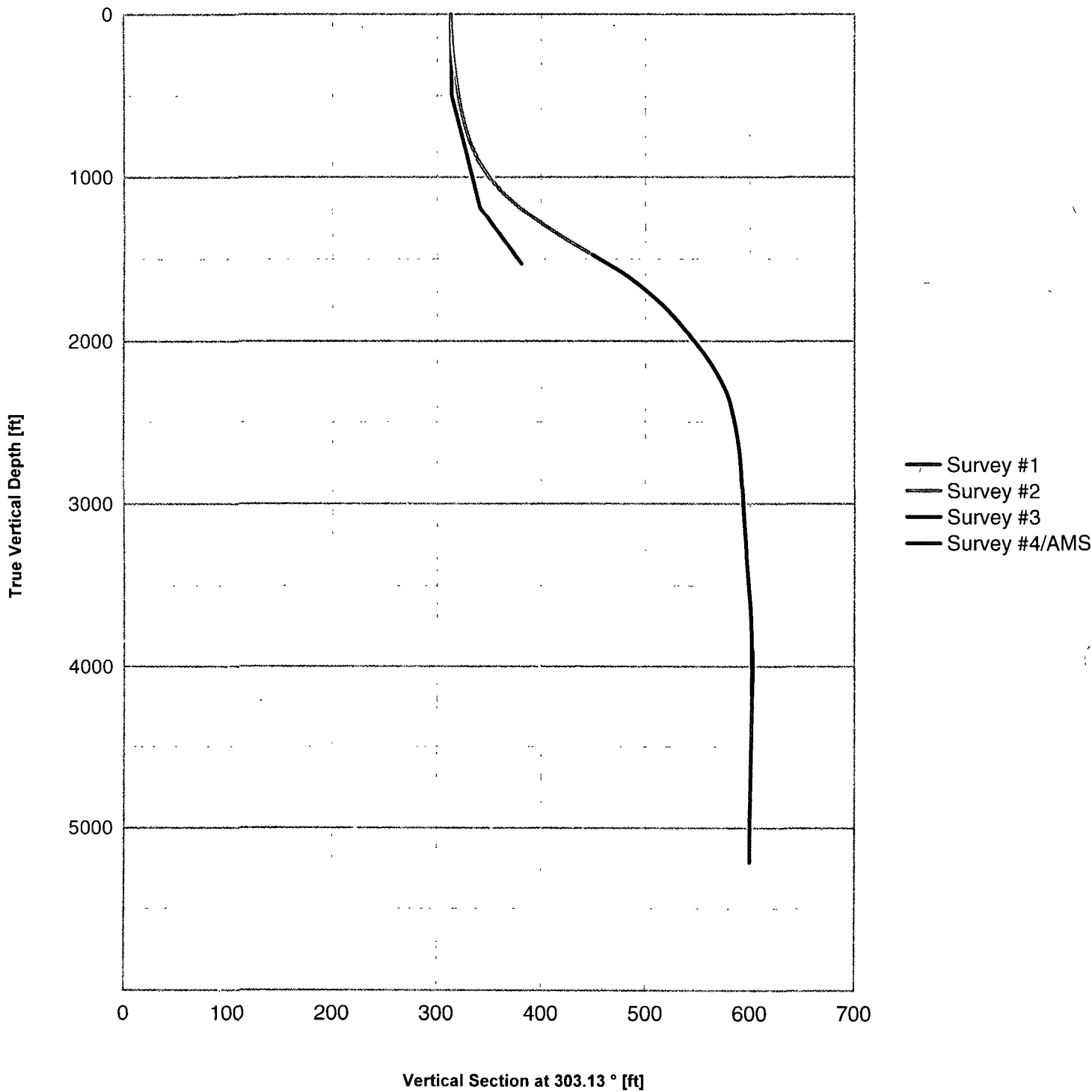
MD (ft)	Inc (°)	Azi (°)	TVD (ft)	N/S (ft)	E/W (ft)
4210	0.93	51.21	4,185.60	134.25	-258.05

2.4.2 Survey Stations

Date	Station Type	MD (ft)	Inc (°)	Azi (°)	TVD (ft)	N/S (ft)	E/W (ft)	V. Sec (ft)	DLS (°/100ft)	Build (°/100ft)	Turn (°/100ft)	TFace (°)
05/09/2012	Tie On	4210	0.93	51.21	4,185.60	134.25	-258.05	602.19	0.00	0.00	0.00	0.00
05/09/2012	NORMAL	5049	0.40	42.10	5,024.54	140.69	-250.78	599.62	0.06	-0.06	-1.09	-173.25
	NORMAL	5143	0.50	35.30	5,118.54	141.27	-250.33	599.55	0.12	0.11	-7.23	-31.53
	NORMAL	5238	0.50	25.30	5,213.53	141.98	-249.91	599.59	0.09	0.00	-10.53	-95.00

3 Charts

3.1 Vertical Section View



3.2 Plan View

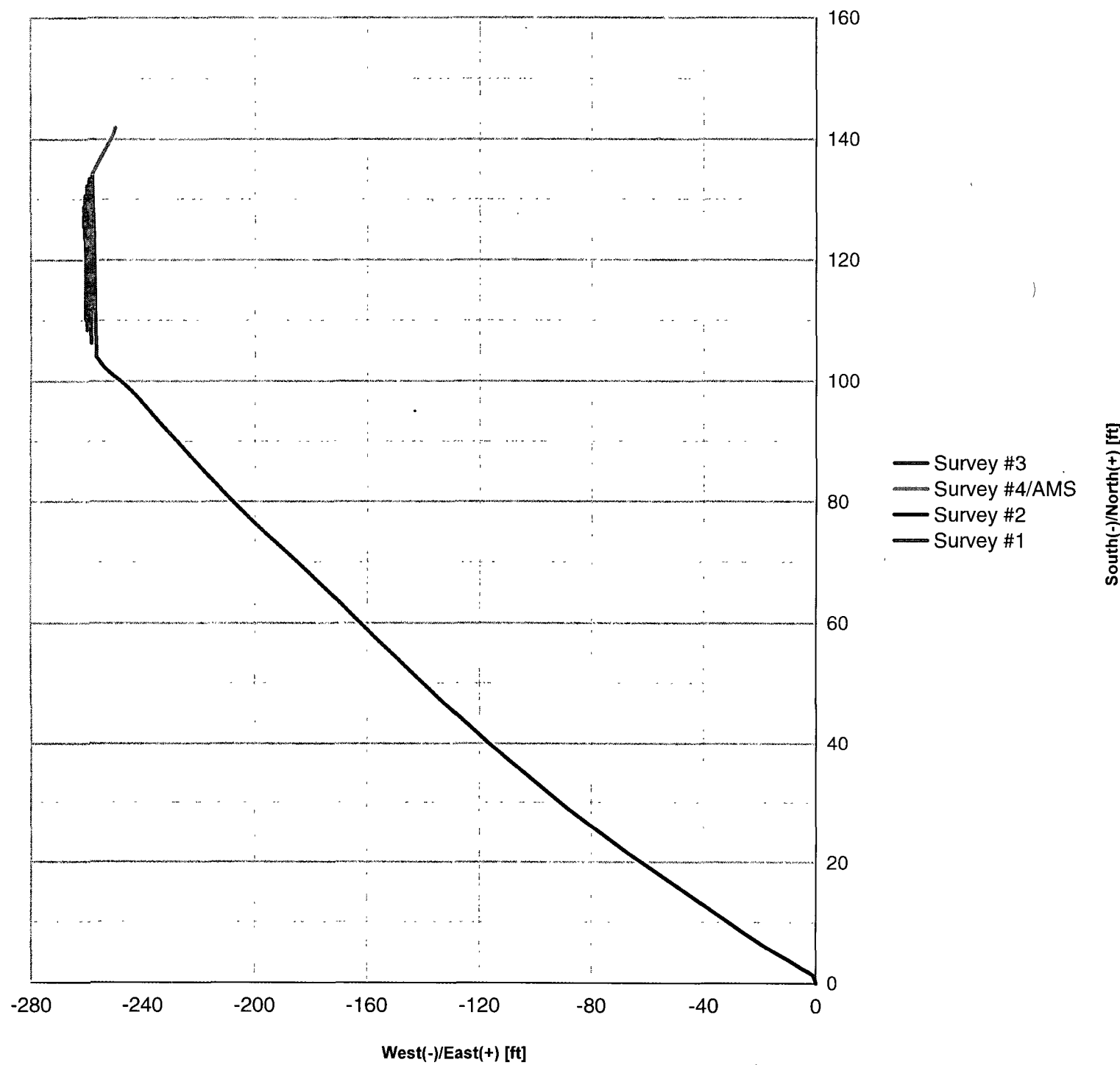


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