



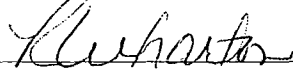
APACHE CORP

Cedar Lake
Eddy County, NM
Lee Federal #56
VH - Job #320113-KW-003

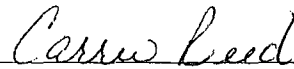
Survey: Gyro

SDI Standard Survey Report

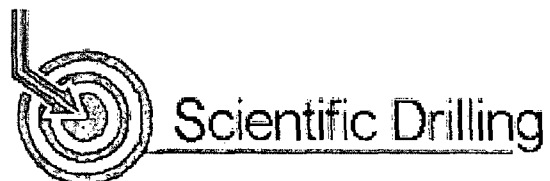
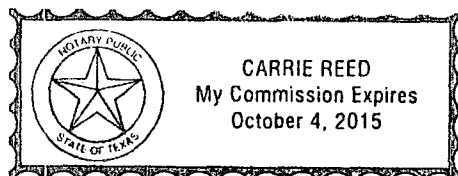
This survey is correct to the best of my knowledge and is supported by actual field data.



Notarized this date 11th of February, 2013.



Notary Signature
County of Midland
State of Texas



Scientific Drilling International, Inc.

SDI Standard Survey Report



Company:	APACHE CORP	Local Co-ordinate Reference:	Well Lee Federal #56
Project:	Cedar Lake	TVD Reference:	WELL @ 0.00usft (Original Well Elev)
Site:	Eddy County, NM	MD Reference:	WELL @ 0.00usft (Original Well Elev)
Well:	Lee Federal #56	North Reference:	Grid
Wellbore:	VH - Job #320113-KW-003	Survey Calculation Method:	Minimum Curvature
Design:	VH - Job #320113-KW-003	Database:	EDM-Regulatory

Project	Cedar Lake		
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:	672,851.67 usft
From:	Lat/Long	Easting:	633,386.21 usft
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16"
		Latitude:	32° 50' 56.400 N
		Longitude:	103° 53' 56.400 W
		Grid Convergence:	0.24 °

Well	Lee Federal #56, Directional (Unknown)		
Well Position	+N-S	0.00 usft	Northing: 667,152.47 usft
	+E-W	0.00 usft	Easting: 633,529.10 usft
Position Uncertainty	0.00 usft	Wellhead Elevation:	usft
		Latitude:	32° 50' 0.000 N
		Longitude:	103° 53' 55.000 W
		Ground Level:	0.00 usft

Wellbore	VH - Job #320113-KW-003				
Magnetics	Model Name	Sample Date	Declination	Dip Angle	Field Strength
	IGRF2010	01/02/13	(°)	(°)	(nT)
			7.59	60.65	48,818

Design	VH - Job #320113-KW-003			
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	88.50

Survey Program	Date	01/13/13		
From	To	Survey (Wellbore)	Tool Name	Description
(usft)	(usft)			
100.00	343.00	Gyro (VH - Job #320113-KW-003)	Keeper	Keeper Gyro

Survey								
Measured Depth	Inclination	Azimuth	True Vertical	North/South	East/West	Closure Azimuth	Closure Distance	
(usft)	(°)	(°)	Depth	(usft)	(usft)	(°)	(usft)	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100.00	0.13	67.89	100.00	0.04	0.11	67.89	0.11	
200.00	0.02	289.35	200.00	0.09	0.19	64.80	0.21	
300.00	0.21	177.07	300.00	-0.09	0.19	114.75	0.21	
343.00	0.79	224.54	343.00	-0.38	-0.02	182.63	0.38	

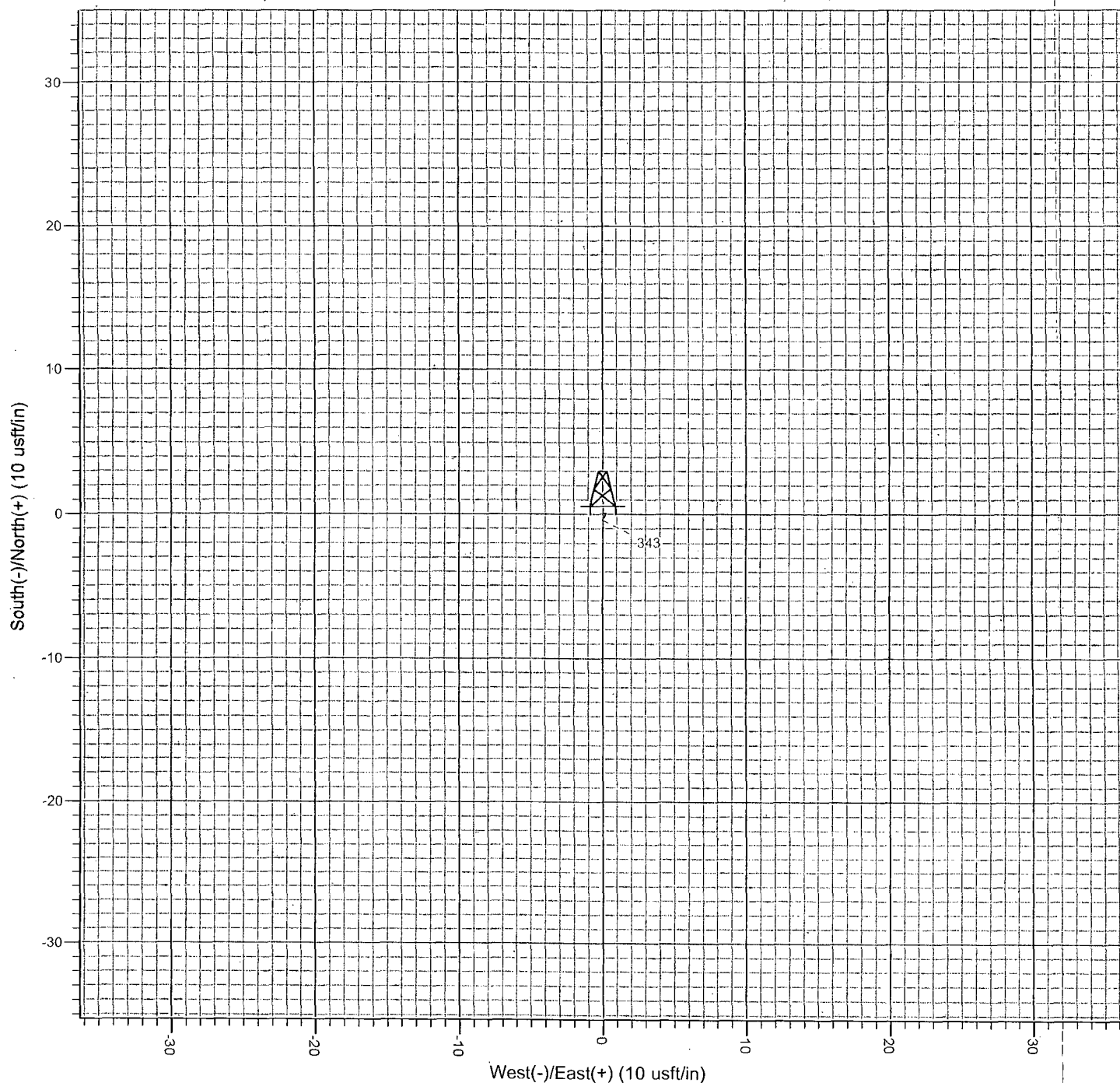


Scientific Drilling

Project: Cedar Lake
Eddy County, NM
Well: Lee Federal #56
Wellbore: VH - Job #320113-KW-003
Design: VH - Job #320113-KW-003

WELL DETAILS: Lee Federal #56
WELL @ 0.00usft (Original Well Elev)

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.00	0.00	667152.47	633529.10	32° 50' 0.000 N	103° 53' 55.000 W	

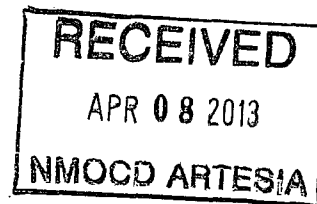


PROJECT DETAILS: Cedar Lake	SITE DETAILS: Eddy County, NM
Geodetic System: US State Plane 1927 (Exact solution)	Site Centre Latitude: 32° 50' 56.400 N
Datum: NAD 1927 (NADCON CONUS)	Longitude: 103° 53' 56.400 W
Ellipsoid: Clarke 1866	Positional Uncertainty: 0.00
Zone: New Mexico East 3001	Convergence: 0.24
System Datum: Mean Sea Level	Local North: Grid

OPERATOR Apache
WELL/LEASE Lee Federal 56D API# 30-015-40730
COUNTY Eddy 2300' FSL & 450' FWL, UL: L 17-17S-31E

STATE OF NEW MEXICO
DEVIATION REPORT

105	0.75
381	1.00
608	3.00
1078	3.00
1553	2.90
2122	7.30
2598	6.30
3074	3.70
3547	7.90
3655	9.00
3750	6.70
3845	4.30
3940	4.70
4036	4.60
4687	4.00
4782	5.80
4877	5.60
4972	5.50
5067	5.60
5731	6.20
5826	7.10
5920	7.10
6015	6.90
6110	6.80
6334	6.10



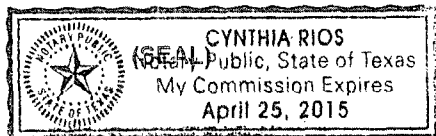
SIGNED BY: Ron Scandolari

RON SCANDOLARI, VP CONTRACT DRILLING

STATE OF TEXAS

COUNTY OF MIDLAND

ON THIS 23rd DAY OF January, 2013, BEFORE ME, C RIOS, A NOTARY PUBLIC, PERSONALLY APPEARED RON SCANDOLARI, WHO ACKNOWLEDGED AND EXECUTED THIS DOCUMENT. WITNESS MY HAND AND OFFICIAL SEAL.



Cynthia Rios
NOTARY PUBLIC