

30-015-38311

DEVON ENERGY

Tamano

Eddy County, NM

Serene Sisters 25 Federal #3H

VH - Job #32K0911840

Survey: Actual

SDI Standard Survey Report

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

K. Wharton

Notarized this date 4th of October, 2011.

Carrie Reed

Notary Signature
County of Midland
State of Texas



Scientific Drilling International, Inc.

SDI Standard Survey Report



Company:	DEVON ENERGY	Local Co-ordinate Reference:	Well Serene Sisters 25 Federal #3H
Project:	Tamano	TVD Reference:	WELL @ 0.0usft (Original Well Elev)
Site:	Eddy County, NM	MD Reference:	WELL @ 0.0usft (Original Well Elev)
Well:	Serene Sisters 25 Federal #3H	North Reference:	Grid
Wellbore:	VH - Job #32K0911840	Survey Calculation Method:	Minimum Curvature
Design:	VH - Job #32K0911840	Database:	EDM-Regulatory

Project	Tamano		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	New Mexico Eastern Zone		

Site:	Eddy County, NM				
Site Position:		Northing:	627,983.43 usft	Latitude:	32° 43' 31.099 N
From:	Lat/Long	Easting:	699,925.80 usft	Longitude:	103° 49' 32.506 W
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16"	Grid Convergence:	0.28 °

Well: Serene Sisters 25 Federal #3H, Directional (Pathfinder)						
Well Position	+N/-S	0 0 usft	Northing:	623,082 40 usft	Latitude:	32° 42' 42 721 N
	+E/-W	0 0 usft	Easting:	697,473 45 usft	Longitude:	103° 49' 32 488 W
Position Uncertainty		0 0 usft	Wellhead Elevation:	usft	Ground Level:	0.0 usft

Wellbore						VH - Job #32K0911840					
Magnetics		Model Name		Sample Date		Declination (°)		Dip Angle (°)		Field Strength (nT)	
		IGRF2010		9/2/2011		7.72		60.59		48,887	

Design	VH - Job #32K0911840				
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	5 52	

Survey Program		Date 10/23/2011		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
100 0	7,554 0	Actual (VH - Job #32K0911840)	Keeper	Keeper Gyro

Survey								
Measured Depth (usft)	Inclination (°)	Azimuth (°)	True Vertical Depth	North/South (usft)	East/West (usft)	Closure Azimuth (°)	Closure Distance (usft)	
0 0	0.00	0 00	0 0	0 0	0 0	0 00	0 0	
100 0	0.21	304.36	100 0	0.1	-0.2	304.36	0.2	
200 0	0.53	313.78	200 0	0.5	-0.6	309.62	0.8	
300 0	0.68	316.86	300 0	1.3	-1.4	312.92	1.9	
400 0	0.59	323.84	400 0	2.1	-2.1	315.58	3.0	
500 0	0.80	301.72	500 0	2.9	-3.0	314.30	4.2	
600 0	0.82	298.39	600 0	3.6	-4.2	310.70	5.5	
700 0	0.97	294.17	700 0	4.3	-5.6	307.51	7.1	
800 0	0.98	298.80	799.9	5.1	-7.1	305.38	8.7	
900 0	0.87	290.57	899.9	5.7	-8.6	303.76	10.3	
1,000 0	0.52	297.56	999.9	6.2	-9.7	302.66	11.5	
1,100 0	0.63	268.97	1,099.9	6.4	-10.7	301.07	12.4	

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Well:	Serene Sisters 25 Federal #3H	North Reference:	Grid
Wellbore:	VH - Job #32K0911840	Survey Calculation Method:	Minimum Curvature
Design:	VH - Job #32K0911840	Database:	EDM-Regulatory

Survey								
Measured Depth (usft)	Inclination (°)	Azimuth (°)	True Vertical Depth	North/South (usft)	East/West (usft)	Closure Azimuth (°)	Closure Distance (usft)	
1,200.0	0.52	294.67	1,199.9	6.6	-11.6	299.60	13.4	
1,300.0	0.44	282.02	1,299.9	6.9	-12.4	298.97	14.2	
1,400.0	0.31	318.17	1,399.9	7.1	-13.0	298.88	14.8	
1,500.0	0.27	352.35	1,499.9	7.6	-13.2	299.93	15.2	
1,600.0	0.48	32.25	1,599.9	8.2	-13.0	302.19	15.3	
1,700.0	0.57	22.93	1,699.9	9.0	-12.6	305.57	15.4	
1,800.0	0.70	30.07	1,799.9	10.0	-12.1	309.58	15.7	
1,900.0	0.70	38.11	1,899.9	11.0	-11.4	313.98	15.8	
2,000.0	0.81	16.46	1,999.9	12.1	-10.8	318.33	16.3	
2,100.0	1.16	22.08	2,099.9	13.8	-10.2	323.38	17.1	
2,200.0	1.51	34.49	2,199.8	15.8	-9.1	330.04	18.2	
2,300.0	1.49	32.70	2,299.8	18.0	-7.6	336.93	19.5	
2,400.0	0.98	32.88	2,399.8	19.8	-6.5	341.85	20.8	
2,500.0	0.69	19.21	2,499.8	21.1	-5.8	344.55	21.8	
2,600.0	0.32	22.50	2,599.8	21.9	-5.5	345.86	22.6	
2,700.0	0.30	47.65	2,699.8	22.3	-5.2	346.85	22.9	
2,800.0	0.43	44.83	2,799.8	22.8	-4.8	348.20	23.3	
2,900.0	0.37	16.51	2,899.8	23.3	-4.4	349.33	23.7	
3,000.0	0.20	355.80	2,999.8	23.8	-4.3	349.72	24.2	
3,100.0	0.24	8.70	3,099.8	24.2	-4.3	349.92	24.6	
3,200.0	0.14	350.92	3,199.8	24.5	-4.3	350.08	24.9	
3,300.0	0.15	355.28	3,299.8	24.8	-4.3	350.11	25.2	
3,400.0	0.41	305.61	3,399.8	25.1	-4.6	349.58	25.5	
3,500.0	0.51	339.54	3,499.7	25.7	-5.1	348.87	26.2	
3,600.0	0.58	3.60	3,599.7	26.7	-5.2	348.99	27.2	
3,700.0	0.54	339.58	3,699.7	27.6	-5.3	349.09	28.1	
3,800.0	0.40	355.25	3,799.7	28.4	-5.5	349.01	28.9	
3,900.0	0.32	349.95	3,899.7	29.0	-5.6	349.09	29.6	
4,000.0	0.30	339.88	3,999.7	29.5	-5.7	349.02	30.1	
4,100.0	0.48	325.44	4,099.7	30.1	-6.1	348.63	30.7	
4,200.0	0.58	340.63	4,199.7	31.0	-6.5	348.20	31.6	
4,300.0	0.59	326.33	4,299.7	31.9	-6.9	347.75	32.6	
4,400.0	0.59	324.09	4,399.7	32.7	-7.5	347.08	33.6	
4,500.0	0.62	316.29	4,499.7	33.5	-8.2	346.28	34.5	
4,600.0	0.74	313.16	4,599.7	34.4	-9.0	345.28	35.5	
4,700.0	0.89	318.14	4,699.7	35.4	-10.0	344.19	36.8	
4,800.0	0.89	302.57	4,799.7	36.4	-11.2	342.90	38.1	
4,900.0	0.89	295.26	4,899.7	37.1	-12.5	341.32	39.2	
5,000.0	1.02	285.62	4,999.7	37.7	-14.1	339.48	40.2	
5,100.0	1.20	272.29	5,099.6	38.0	-16.0	337.14	41.2	
5,200.0	1.03	272.24	5,199.6	38.0	-18.0	334.74	42.1	
5,300.0	1.20	278.08	5,299.6	38.2	-19.9	332.52	43.1	
5,400.0	1.07	278.88	5,399.6	38.5	-21.8	330.44	44.3	
5,500.0	1.27	285.88	5,499.6	39.0	-23.8	328.55	45.7	

Scientific Drilling International, Inc.

SDI Standard Survey Report



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Site:	Eddy County, NM	MD Reference:	WELL @ 0.0usft (Original Well Elev)
Well:	Serene Sisters 25 Federal #3H	North Reference:	Grid
Wellbore:	VH - Job #32K0911840	Survey Calculation Method:	Minimum Curvature
Design:	VH - Job #32K0911840	Database:	EDM-Regulatory

Survey							
Measured Depth (usft)	Inclination (°)	Azimuth (°)	True Vertical Depth	North/South (usft)	East/West (usft)	Closure Azimuth (°)	Closure Distance (usft)
5,600.0	1.15	281.87	5,599.5	39.5	-25.9	326.75	47.2
5,700.0	1.46	281.26	5,699.5	39.9	-28.1	324.85	48.8
5,800.0	1.42	278.20	5,799.5	40.4	-30.6	322.84	50.6
5,900.0	1.37	278.04	5,899.4	40.7	-33.0	320.97	52.4
6,000.0	1.44	279.37	5,999.4	41.1	-35.4	319.22	54.2
6,100.0	1.53	282.31	6,099.4	41.6	-38.0	317.59	56.3
6,200.0	1.42	281.36	6,199.4	42.1	-40.5	316.11	58.4
6,300.0	1.62	280.80	6,299.3	42.6	-43.1	314.67	60.6
6,400.0	1.43	280.53	6,399.3	43.1	-45.7	313.32	62.8
6,500.0	1.46	280.87	6,499.2	43.6	-48.2	312.12	65.0
6,600.0	1.61	278.61	6,599.2	44.0	-50.8	310.89	67.2
6,700.0	1.37	279.19	6,699.2	44.4	-53.4	309.76	69.5
6,800.0	1.51	272.89	6,799.1	44.7	-55.9	308.64	71.5
6,900.0	1.77	277.69	6,899.1	44.9	-58.7	307.42	74.0
7,000.0	1.90	279.72	6,999.1	45.4	-61.9	306.28	76.8
7,100.0	2.03	287.06	7,099.0	46.2	-65.2	305.33	80.0
7,200.0	2.14	286.87	7,198.9	47.3	-68.7	304.54	83.4
7,300.0	2.16	280.86	7,298.9	48.2	-72.3	303.67	86.9
7,400.0	1.68	266.77	7,398.8	48.5	-75.7	302.64	89.8
7,500.0	1.61	258.84	7,498.8	48.1	-78.5	301.50	92.1
7,554.0	1.23	255.92	7,552.7	47.8	-79.8	300.93	93.0



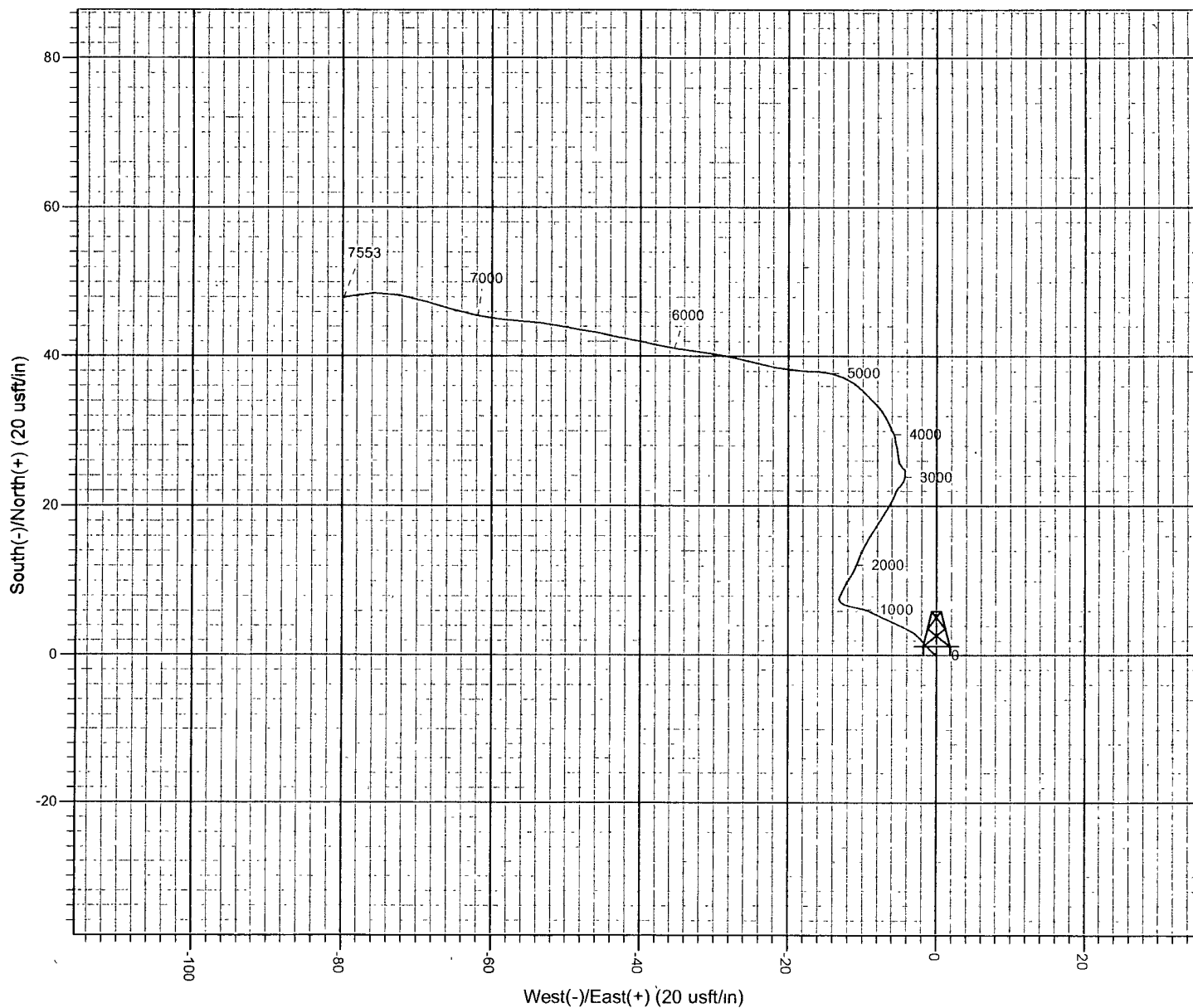
Project: Tamano
 Eddy County, NM
 Well: Serene Sisters 25 Federal #3H
 Wellbore: VH - Job #32K0911840
 Design: VH - Job #32K0911840



Azimuths to Grid North
 True North -0.27°
 Magnetic North 7.44°
 Magnetic Field
 Strength 48886 7snT
 Dip Angle 60.59°
 Date 9/2/2011
 Model IGRF2010

WELL DETAILS: Serene Sisters 25 Federal #3H
 WELL @ 0.0usft (Original Well Elev)

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.0	0.0	623082.40	697473.45	32° 42' 42.721 N	103° 49' 32.488 W	



PROJECT DETAILS: Tamano
 Geodetic System: US State Plane 1983
 Datum: North American Datum 1983
 Ellipsoid: GRS 1980
 Zone: New Mexico Eastern Zone
 System Datum: Mean Sea Level

SITE DETAILS: Eddy County, NM
 Site Centre Latitude: 32° 43' 31.099 N
 Longitude: 103° 49' 3.506 W
 Positional Uncertainty: 0.0
 Convergence: 0.28
 Local North: Grid

Pathfinder

6213 WCR 112
Midland, Texas 79706
Tel: (432)687-1647
Fax: (432)687-1544



September 19, 2011

Devon Energy
20 N. Broadway
Oklahoma City, OK

RE: Devon Energy
Serene Sisters 25 Federal #3H
API: 30-015-38311
Eddy County, NM
RIG: H&P 300
FIELD: Hackberry; Bone Spring, N.
PES FILE NO.: 700003521-WT-WT

To whom it may concern:

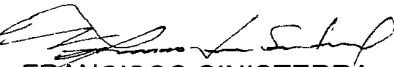
We hereby certify that the enclosed Original Field Survey Data contained in this report represents to the best of our knowledge, a true and accurate survey of the well at the time the survey was run.

DIRECTIONAL SURVEY DATA

- 1 – Original survey report
- 2 – Survey report copies

We appreciate the opportunity to work with you and we look forward to your business support. If you have any questions, I can be reached at (432) 687-1647

Sincerely,



FRANCISCO SINISTERRA
M/LWD Service Coordinator
PathFinder Energy Services

ML:sh



A Schlumberger Company

DIRECTIONAL SURVEY REPORT

DEVON ENERGY

SERENE SISTERS 25 FEDERAL #3H

EDDY COUNTY, NEW MEXICO

PREPARED BY: FRANCISCO SINISTERRA

Pathfinder

6213 WCR 112
Midland, Texas 79706
Tel (432)687-1647
Fax (432)687-1544



DIRECTIONAL SURVEY COMPANY REPORT:

1. NAME OF SURVEYING COMPANY: PATHFINDER ENERGY SERVICES
2. NAME OF PERSON(S) PERFORMING SURVEY:
A) JEFF CORBETT
3. POSITION OF SAID PERSON(S): (A-F) SURVEYORS (FIELD ENGINEERS)
4. DATE(S) ON WHICH SURVEY WAS PERFORMED: 09-04-11 TO 09-11-11
5. STATE IN WHICH SURVEY WAS PERFORMED: NEW MEXICO
6. LOCATION OF WELL: EDDY COUNTY
7. TYPE OF SURVEY(S) PERFORMED: GAMMA-RAY
8. COMPLETE IDENTIFICATION OF WELL:

DEVON ENERGY
SERENE SISTERS 25 FEDERAL #3H
EDDY COUNTY, NM
RIG: H&P 300

9. SURVEY CERTIFIED FROM: 7650 TO 12677 FEET MEASURED DEPTH.

THIS IS TO VERIFY THAT ATTACHED DOCUMENTS SHOWING THE WELL TO BE DISPLACED AT 4705.19 FEET ON A BEARING OF 5.20 DEGREES FROM THE CENTER OF THE ROTARY TABLE AT A PROJECTED BIT DEPTH OF 12722.00 FEET, ARE TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE.


FRANCISCO SINISTERRA
M/LWD SERVICE COORDINATOR

PathFinder Energy Services, Inc.

BHL Report

Page 01/01
Tie-in Date: 09/03/2011
Date Completed: 09/11/2011

DEVON ENERGY CORPORATION
SERENE SISTERS 25 FED #3H
EDDY COUNTY, NM
Rig:H&P 300
PathFinder Office Supervisor: FRANCISCO SINISTERRA
PathFinder Field Engineers:JEFF CORBETT
LINDSEY KEITH
SAUL CARRILLO

Survey Horiz. Reference:WELLHEAD
Ref Coordinates: LAT:32.42.42.6130 N LON:103.49.32.4565 W
GRID Reference:NAD83 new mexico east Transverse Mercator
Ref GRID Coord: X: 697476.1900 Y: 623071.5000
North Aligned To:GRID NORTH
Total Magnetic Correction: 7.44° EAST TO GRID
Vertical Section Plane: 5.52
Survey Vert. Reference: 26.00' Kelly Bushing To Ground
Altitude:3667.10' Ground To MSL

Measured Depth	12722.00	(feet)
Inclination	92.68	(deg)
Azimuth	357.95	(deg)
True Vertical Depth	8188.88	(feet)
Vertical Section	4705.12	(feet)
Survey X cord	697903.01	(feet)
Survey Y cord	627757.29	(feet)
Survey Lat	32.72471059 N	(deg)
Survey Lon	103.82422151 W	(deg)
Rectangular Corr. N/S	4685.79 N	(feet)
Rectangular Corr. E/W	426.82 E	(feet)
Closure Distance	4705.19	(feet)
Direction of Closure	5.20	(deg)
Dogleg Severity	0.00	(deg/100ft)

PathFinder Energy Services, Inc.

Survey Report

DEVON ENERGY CORPORATION

SERENE SISTERS 25 FED #3H

EDDY COUNTY, NM

Rig:H&P 300

PathFinder Office Supervisor: FRANCISCO SINISTERRA

PathFinder Field Engineers: JEFF CORBETT

LINDSEY KEITH

SAUL CARRILLO

Survey Calculations by RX5 V6.03E using Minimum Curvature

Survey Horiz. Reference:WELLHEAD

Ref Coordinates: LAT:32.42.42.6130 N LON:103.49.32.4565 W

GRID Reference:NAD83 new mexico east Transverse Mercator

Ref GRID Coord: X: 697476.1900 Y: 623071.5000

North Aligned To:GRID NORTH

Total Magnetic Correction: 7.44°EAST TO GRID

Vertical Section Plane: 5.52

Survey Vert. Reference: 26.00' Kelly Bushing To Ground

Altitude:3667.10' Ground To MSL

Measured Depth (ft)	Incl (deg)	Drift Dir. (deg)	TVD (ft)	Course Length (ft)	Vertical Section (ft)	TOTAL Rectangular Offsets (ft) (ft)		Closure Dist Dir (ft) (deg)		DLS (dg/100ft)
TIE-IN TO SCIENTIFIC DRILLING GYRO SURVEY @ 7554' MD.										
7554.00	1.23	255.92	7552.75	0.00	39.98	47.88 N	79.81 W	93.07@	300.96	0.00
THE FOLLOWING ARE PATHFINDER MWD SURVEYS.										
7650.00	9.58	26.78	7648.33	96.00	47.10	54.78 N	77.20 W	94.66@	305.36	10.86
7681.00	14.25	26.51	7678.66	31.00	53.07	60.50 N	74.34 W	95.84@	309.14	15.07
7711.00	18.03	24.84	7707.47	30.00	60.90	68.02 N	70.74 W	98.13@	313.88	12.69
7776.00	19.96	24.93	7768.93	65.00	80.86	87.21 N	61.83 W	106.91@	324.66	2.97
7805.00	20.22	24.84	7796.16	29.00	90.26	96.25 N	57.64 W	112.19@	329.08	0.90
7839.00	20.49	24.58	7828.04	34.00	101.43	106.99 N	52.70 W	119.27@	333.78	0.84
7870.00	22.16	25.98	7856.92	31.00	112.03	117.18 N	47.88 W	126.59@	337.78	5.63
7900.00	24.09	28.27	7884.50	30.00	122.98	127.66 N	42.50 W	134.55@	341.59	7.10
7934.00	27.08	30.91	7915.17	34.00	136.38	140.42 N	35.24 W	144.77@	345.91	9.41
7965.00	29.63	32.70	7942.45	31.00	149.57	152.92 N	27.47 W	155.37@	349.82	8.67
7994.00	32.36	33.58	7967.30	29.00	162.80	165.42 N	19.30 W	166.54@	353.34	9.54
8028.00	35.96	33.49	7995.43	34.00	179.65	181.33 N	8.76 W	181.54@	357.23	10.59
8059.00	39.04	32.33	8020.03	31.00	196.41	197.18 N	1.49 E	197.18@	0.43	10.19
8089.00	42.12	31.64	8042.81	30.00	213.88	213.73 N	11.82 E	214.06@	3.17	10.38
8120.00	45.90	31.82	8065.10	31.00	233.20	232.04 N	23.15 E	233.20@	5.70	12.20
8152.00	48.98	32.65	8086.74	32.00	254.24	251.98 N	35.72 E	254.50@	8.07	9.81
8183.00	50.56	33.14	8106.76	31.00	275.26	271.85 N	48.57 E	276.15@	10.13	5.24
8217.00	53.46	33.50	8127.69	34.00	298.96	294.24 N	63.29 E	300.97@	12.14	8.57
8248.00	57.51	33.50	8145.25	31.00	321.51	315.53 N	77.39 E	324.88@	13.78	13.06
8278.00	60.76	33.61	8160.64	30.00	344.24	336.99 N	91.62 E	349.22@	15.21	10.84
8311.00	64.10	33.85	8175.91	33.00	370.01	361.31 N	107.86 E	377.07@	16.62	10.14
8343.00	68.68	33.93	8188.72	32.00	395.81	385.65 N	124.21 E	405.15@	17.85	14.32
8372.00	72.46	33.61	8198.37	29.00	419.89	408.38 N	139.41 E	431.52@	18.85	13.08

PathFinder Energy Services, Inc.

Survey Report

DEVON ENERGY CORPORATION
SERENE SISTERS 25 FED #3H
EDDY COUNTY, NM
RIG:H&P 300

Page 02/03

Measured Depth (ft)	Incl (deg)	Drift Dir. (deg)	TVD (ft)	Course Length (ft)	Vertical Section (ft)	TOTAL Rectangular Offsets (ft) (ft)		Closure Dist Dir (ft) (deg)		DLS (dg/100ft)
8406.00	76.15	33.70	8207.56	34.00	448.75	435.62 N	157.54 E	463.23@	19.88	10.86
8437.00	79.40	34.02	8214.13	31.00	475.41	460.77 N	174.42 E	492.68@	20.73	10.53
8467.00	82.39	34.10	8218.87	30.00	501.43	485.31 N	191.01 E	521.55@	21.48	9.97
8582.00	88.72	28.94	8227.79	115.00	604.41	582.98 N	250.88 E	634.67@	23.28	7.09
8677.00	90.40	27.25	8228.52	95.00	692.12	666.77 N	295.62 E	729.37@	23.91	2.51
8771.00	90.22	23.28	8228.01	94.00	780.57	751.76 N	335.73 E	823.32@	24.06	4.23
8866.00	89.69	19.45	8228.08	95.00	871.95	840.22 N	370.33 E	918.21@	23.79	4.07
8960.00	90.13	15.79	8228.23	94.00	963.84	929.79 N	398.78 E	1011.70@	23.21	3.92
9055.00	90.57	11.96	8227.65	95.00	1057.81	1022.00 N	421.55 E	1105.53@	22.42	4.06
9150.00	91.80	8.34	8225.68	95.00	1152.47	1115.48 N	438.29 E	1198.49@	21.45	4.02
9244.00	90.57	3.66	8223.74	94.00	1246.41	1208.92 N	448.11 E	1289.29@	20.34	5.15
9339.00	90.75	0.52	8222.64	95.00	1341.23	1303.83 N	451.57 E	1379.82@	19.10	3.31
9433.00	91.10	359.96	8221.13	94.00	1434.81	1397.82 N	451.97 E	1469.07@	17.92	0.70
9528.00	89.87	0.38	8220.32	95.00	1529.39	1492.81 N	452.25 E	1559.82@	16.85	1.37
9622.00	90.84	0.58	8219.74	94.00	1623.03	1586.81 N	453.04 E	1650.21@	15.93	1.05
9717.00	91.28	0.34	8217.98	95.00	1717.64	1681.79 N	453.80 E	1741.94@	15.10	0.53
9811.00	91.98	0.04	8215.31	94.00	1811.20	1775.75 N	454.11 E	1832.89@	14.34	0.81
9906.00	89.78	0.50	8213.85	95.00	1905.78	1870.73 N	454.56 E	1925.16@	13.66	2.37
10001.00	90.31	0.60	8213.78	95.00	2000.42	1965.73 N	455.47 E	2017.80@	13.05	0.57
10095.00	88.55	0.18	8214.71	94.00	2094.04	2059.72 N	456.11 E	2109.61@	12.49	1.92
10190.00	88.72	0.58	8216.97	95.00	2188.63	2154.69 N	456.74 E	2202.56@	11.97	0.46
10284.00	89.16	359.82	8218.71	94.00	2282.21	2248.67 N	457.07 E	2294.65@	11.49	0.93
10379.00	89.69	0.47	8219.67	95.00	2376.78	2343.66 N	457.31 E	2387.86@	11.04	0.88
10473.00	91.10	0.19	8219.02	94.00	2470.39	2437.66 N	457.85 E	2480.28@	10.64	1.53
10568.00	92.07	0.82	8216.39	95.00	2564.99	2532.62 N	458.69 E	2573.82@	10.27	1.22
10662.00	91.19	359.79	8213.72	94.00	2658.56	2626.57 N	459.19 E	2666.41@	9.92	1.44
10757.00	92.15	0.25	8210.95	95.00	2753.09	2721.53 N	459.22 E	2760.00@	9.58	1.12
10852.00	92.15	358.76	8207.38	95.00	2847.49	2816.46 N	458.40 E	2853.52@	9.24	1.57

PathFinder Energy Services, Inc.

Survey Report

DEVON ENERGY CORPORATION
SERENE SISTERS 25 FED #3H
EDDY COUNTY, NM
RIG:H&P 300

Page 03/03

Measured Depth (ft)	Incl (deg)	Drift Dir. (deg)	TVD (ft)	Course Length (ft)	Vertical Section (ft)	TOTAL Rectangular Offsets (ft) (ft)		Closure Dist Dir (ft) (deg)		DLS (dg/100ft)
10947.00	89.87	358.65	8205.71	95.00	2941.80	2911.41 N	456.25 E	2946.95@	8.91	2.40
11041.00	90.22	359.07	8205.64	94.00	3035.17	3005.39 N	454.38 E	3039.55@	8.60	0.58
11136.00	90.57	358.75	8204.98	95.00	3129.53	3100.37 N	452.58 E	3133.23@	8.31	0.50
11230.00	91.28	359.06	8203.46	94.00	3222.89	3194.34 N	450.78 E	3225.99@	8.03	0.82
11325.00	90.22	359.20	8202.22	95.00	3317.29	3289.32 N	449.34 E	3319.87@	7.78	1.12
11419.00	89.34	358.69	8202.58	94.00	3410.67	3383.31 N	447.61 E	3412.79@	7.54	1.08
11514.00	89.60	359.03	8203.46	95.00	3505.03	3478.28 N	445.72 E	3506.73@	7.30	0.45
11608.00	90.66	359.14	8203.25	94.00	3598.43	3572.27 N	444.22 E	3599.78@	7.09	1.13
11703.00	91.36	359.28	8201.57	95.00	3692.84	3667.25 N	442.91 E	3693.89@	6.89	0.75
11797.00	89.43	0.18	8200.92	94.00	3786.36	3761.24 N	442.46 E	3787.17@	6.71	2.27
11892.00	89.87	0.34	8201.50	95.00	3880.95	3856.23 N	442.89 E	3881.58@	6.55	0.49
11987.00	90.04	359.59	8201.58	95.00	3975.51	3951.23 N	442.84 E	3975.97@	6.39	0.81
12081.00	90.04	359.74	8201.51	94.00	4069.02	4045.23 N	442.29 E	4069.34@	6.24	0.16
12175.00	90.84	359.40	8200.79	94.00	4162.51	4139.22 N	441.58 E	4162.71@	6.09	0.93
12252.00	90.13	359.71	8200.14	77.00	4239.09	4216.22 N	440.98 E	4239.22@	5.97	1.01
12346.00	90.48	359.09	8199.64	94.00	4332.55	4310.21 N	440.00 E	4332.61@	5.83	0.76
12441.00	90.92	358.04	8198.48	95.00	4426.84	4405.17 N	437.62 E	4426.86@	5.67	1.20
12535.00	91.80	357.25	8196.25	94.00	4519.93	4499.07 N	433.76 E	4519.93@	5.51	1.26
12629.00	92.15	358.21	8193.01	94.00	4613.00	4592.93 N	430.04 E	4613.02@	5.35	1.09
12677.00	92.68	357.95	8190.99	48.00	4660.56	4640.87 N	428.43 E	4660.60@	5.27	1.23
STRAIGHT LINE PROJECTION TO THE BIT @ 12722' MD.										
12722.00	92.68	357.95	8188.88	45.00	4705.12	4685.79 N	426.82 E	4705.19@	5.20	0.00



A Schlumberger Company

TIE-IN SURVEY INFORMATION SHEET

CLIENT INFORMATION

CLIENT:	DEVON ENERGY		
LEASE / WELL No.:	SERENE SISTERS 25 FED	#3H	
WELL LOCATION:	EDDY COUNTY		
COUNTY / STATE / COUNTRY:	EDDY	NM	USA
RIG:	H&P 300		
API WELL No:	30-015-38311		
JOB No:	700003521-WT-WT		
P.O. / AFE No.			
DIRECTIONAL COMPANY:	PATHFINDER		

WELL SITE INFORMATION

TOTAL MAGNETIC CORRECTION (TMC):			
On Wall Plat:	7.43	LWD Calculated:	7.44
		Agreed Upon:	7.44
X =	697476.190000	Feet	Y = 623071.500000
			Feet
SITE LATITUDE:	32° 42' 42.6130" N	SITE LONGITUDE:	103° 49' 32.4565" W
GRID SYSTEM:	TRUE ☐ UTM ☒ LAMBERT ☐	ZONE:	NEW MEXICO EAST
PROPOSED DRIFT DIRECTION:	5.52		
KELLY BUSHING ELEVATION:	26		
ALTITUDE:	3667.1	Feet	WATER DEPTH:
			Feet

TIE-IN SURVEY

MEASURED DEPTH:	7554		
DRIFT ANGLE:	1.23		
DRIFT DIRECTION:	255.92		
TRUE VERTICAL DEPTH:	7552.75		
VERTICAL SECTION:	39.98		
RECTANGULAR COORDINATE (N / S) :	47.88		
RECTANGULAR COORDINATE (E / W) :	-79.81		
CLOSURE DISTANCE / DIRECTION:	93.08	300.96	
SURVEY CALCULATION METHOD:	AA ☐	MC ☒	RC ☐ BT ☐
SOURCE OF TIE-IN DATA (COMPANY) :	SCIENTIFIC DRILLING		
COPY OF TIE-IN SURVEY REPORT	☒ YES		☐ NO

WELL PLAN

KICKOFF DEPTH:	7652	TOTAL DEPTH:	12781.48
KICKOFF ANGLE:	0	MAX ANGLE:	90

PES Engineers: JEFF CORBETT
LINDSEY KEITH

**Signature of both field engineers required if applicable

Directional Driller: JORDAN WILLIAMS

DATE: 3-Sep-2011

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0.00	0.00	0.00	0.00	0.00	0.00	0.00	Invalid	0.00	0.00
100.00	0.21	304.36	100.00	0.09	0.11	-0.15	0.21	0.19	304.36
200.00	0.53	313.78	200.00	0.46	0.53	-0.64	0.32	0.83	309.55
300.00	0.68	316.86	299.99	1.14	1.28	-1.38	0.16	1.88	312.89
400.00	0.59	323.84	399.99	1.92	2.13	-2.09	0.12	2.99	315.57
500.00	0.80	301.72	499.98	2.62	2.92	-2.99	0.34	4.18	314.29
600.00	0.82	298.39	599.97	3.20	3.63	-4.22	0.05	5.56	310.69
700.00	0.97	294.17	699.96	3.75	4.31	-5.62	0.16	7.08	307.52
800.00	0.98	298.80	799.94	4.36	5.07	-7.14	0.08	8.75	305.39
900.00	0.87	290.57	899.93	4.90	5.75	-8.60	0.17	10.34	303.77
1000.00	0.52	297.56	999.92	5.26	6.23	-9.71	0.36	11.53	302.67
1100.00	0.63	268.97	1099.92	5.37	6.43	-10.66	0.31	12.45	301.07
1200.00	0.52	294.67	1199.91	5.45	6.60	-11.62	0.28	13.37	299.60
1300.00	0.44	282.02	1299.91	5.65	6.87	-12.41	0.13	14.18	298.98
1400.00	0.31	318.17	1399.91	5.87	7.15	-12.97	0.26	14.81	298.89
1500.00	0.27	352.35	1499.90	6.28	7.59	-13.18	0.18	15.21	299.93
1600.00	0.48	32.25	1599.90	6.89	8.17	-12.98	0.33	15.34	302.20
1700.00	0.57	22.93	1699.90	7.74	8.99	-12.56	0.12	15.45	305.59
1800.00	0.70	30.07	1799.89	8.78	9.98	-12.06	0.15	15.66	309.61
1900.00	0.70	38.11	1899.88	9.85	11.00	-11.38	0.10	15.82	314.03
2000.00	0.81	16.46	1999.88	11.06	12.16	-10.80	0.30	16.26	318.39
2100.00	1.16	22.08	2099.86	12.73	13.78	-10.21	0.36	17.15	323.45
2200.00	1.51	34.49	2199.83	14.85	15.80	-9.09	0.45	18.23	330.09
2300.00	1.49	32.70	2299.80	17.16	17.98	-7.64	0.05	19.54	336.98
2400.00	0.98	32.88	2399.78	19.09	19.80	-6.47	0.51	20.83	341.91
2500.00	0.69	19.21	2499.77	20.43	21.09	-5.81	0.35	21.87	344.61
2600.00	0.32	22.50	2599.76	21.29	21.92	-5.50	0.37	22.60	345.91
2700.00	0.30	47.65	2699.76	21.75	22.35	-5.20	0.14	22.95	346.90
2800.00	0.43	44.83	2799.76	22.23	22.79	-4.74	0.13	23.28	348.24
2900.00	0.37	16.51	2899.76	22.84	23.37	-4.39	0.20	23.78	349.36
3000.00	0.20	355.80	2999.75	23.33	23.85	-4.31	0.20	24.24	349.76
3100.00	0.24	8.70	3099.75	23.71	24.24	-4.29	0.07	24.61	349.96
3200.00	0.14	350.92	3199.75	24.04	24.57	-4.28	0.12	24.94	350.12
3300.00	0.15	355.28	3299.75	24.29	24.82	-4.31	0.02	25.19	350.15
3400.00	0.41	305.61	3399.75	24.60	25.16	-4.61	0.33	25.58	349.62
3500.00	0.51	339.54	3499.75	25.18	25.78	-5.06	0.28	26.28	348.90
3600.00	0.58	3.60	3599.74	26.09	26.71	-5.18	0.24	27.21	349.02
3700.00	0.54	339.58	3699.74	27.02	27.66	-5.31	0.24	28.16	349.13
3800.00	0.40	355.25	3799.74	27.78	28.45	-5.51	0.19	28.97	349.05
3900.00	0.32	349.95	3899.73	28.39	29.07	-5.58	0.09	29.60	349.13
4000.00	0.30	339.88	3999.73	28.90	29.58	-5.72	0.06	30.13	349.06
4100.00	0.48	325.44	4099.73	29.45	30.18	-6.05	0.21	30.78	348.66
4200.00	0.58	340.63	4199.73	30.24	31.01	-6.46	0.17	31.67	348.23
4300.00	0.59	326.33	4299.72	31.10	31.92	-6.91	0.15	32.66	347.78
4400.00	0.59	324.09	4399.72	31.89	32.76	-7.50	0.02	33.61	347.10
4500.00	0.62	316.29	4499.71	32.62	33.57	-8.18	0.09	34.55	346.31
4600.00	0.74	313.16	4599.70	33.38	34.40	-9.03	0.13	35.57	345.30
4700.00	0.89	318.14	4699.69	34.30	35.43	-10.02	0.16	36.82	344.21
4800.00	0.89	302.57	4799.68	35.18	36.43	-11.20	0.24	38.11	342.92
4900.00	0.89	295.26	4899.67	35.80	37.18	-12.56	0.11	39.24	341.34
5000.00	1.02	285.62	4999.65	36.22	37.75	-14.12	0.20	40.31	339.49
5100.00	1.20	272.29	5099.64	36.32	38.03	-16.02	0.31	41.27	337.16
5200.00	1.03	272.24	5199.62	36.21	38.11	-17.96	0.16	42.13	334.77
5300.00	1.20	278.08	5299.60	36.20	38.29	-19.90	0.20	43.16	332.54
5400.00	1.07	278.88	5399.58	36.30	38.59	-21.86	0.13	44.35	330.46
5500.00	1.27	285.88	5499.56	36.56	39.03	-23.85	0.24	45.74	328.57
5600.00	1.15	281.87	5599.54	36.87	39.54	-25.89	0.15	47.26	326.78
5700.00	1.46	281.26	5699.51	37.10	39.99	-28.12	0.32	48.89	324.89
5800.00	1.42	278.20	5799.48	37.29	40.42	-30.60	0.09	50.70	322.87
5900.00	1.37	278.04	5899.45	37.40	40.77	-33.02	0.05	52.46	321.00
6000.00	1.44	279.37	5999.42	37.54	41.14	-35.44	0.07	54.30	319.25
6100.00	1.53	282.31	6099.38	37.78	41.63	-37.98	0.12	56.35	317.62

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6200.00	1.42	281.36	6199.35	38.06	42.16	-40.51	0.11	58.46	316.14
6300.00	1.62	280.80	6299.32	38.32	42.67	-43.11	0.20	60.65	314.70
6400.00	1.43	280.53	6399.28	38.56	43.16	-45.73	0.19	62.88	313.35
6500.00	1.46	280.87	6499.25	38.79	43.63	-48.20	0.04	65.01	312.15
6600.00	1.61	278.61	6599.21	38.98	44.08	-50.85	0.16	67.30	310.92
6700.00	1.37	279.19	6699.18	39.13	44.48	-53.42	0.25	69.51	309.78
6800.00	1.51	272.89	6799.15	39.15	44.74	-55.91	0.21	71.60	308.67
6900.00	1.77	277.69	6899.11	39.15	45.01	-58.75	0.30	74.01	307.45
7000.00	1.90	279.72	6999.06	39.33	45.49	-61.92	0.14	76.83	306.31
7100.00	2.03	287.06	7099.00	39.80	46.29	-65.24	0.28	80.00	305.36
7200.00	2.14	286.87	7198.93	40.53	47.36	-68.73	0.11	83.46	304.57
7300.00	2.16	280.86	7298.86	41.07	48.25	-72.36	0.23	86.97	303.70
7400.00	1.68	266.77	7398.80	41.02	48.52	-75.67	0.67	89.89	302.67
7500.00	1.61	258.84	7498.76	40.40	48.17	-78.51	0.24	92.11	301.53
7554.00	1.23	255.92	7552.75	39.98	47.88	-79.81	0.71	93.08	300.96



A Schlumberger Company **PathFinder Energy Services, Inc.**

Magnetic & Grid Calculations

DEVON ENERGY
SERENE SISTERS 25 FED #3H
EDDY COUNTY, NEW MEXICO
Rig:HP 300

Tue Aug 30 16:44:07 2011

Coordinates

Latitude: 32.711837 N (32 deg. 42 min. 42.6130 sec.)
Longitude: 103.825682 W (-103 deg. 49 min. 32.4565 sec.)
Elevation: 3693.10 feet.
Calculation Date: Aug/30/2011

Magnetic Calculations

Model: IGRF2010
Dip Angle: 60.5895 degrees
Total Magnetic Field: 0.48860 gauss
Magnetic Declination: 7.714327 degrees
Horizontal Intensity: 0.239931 gauss
To Convert a Magnetic Dir. to a TRUE North Dir. Add 7.714327 Degr

Transverse Mercator Grid Calculations NAD83

Grid System: Transverse Mercator: new mexico east
Ellipsoid: GRS80
X: 697476.1900 feet
Y: 623071.5000 feet
True to Grid: (convergence) -0.274347 degrees
Magnetic to Grid: 7.439980 degrees
To Convert a Magnetic Dir. to a GRID dir. Add 7.439980 Degr.

PathFinder Energy Services, Inc.

Magnetic & Grid Calculations

*FIELD
CALCULATION*

DEVON ENERGY
SERENE SISTERS 25 FED #3H

Sat Sep 03 12:45:55 2011

Coordinates

Latitude: 32.711837 N (32 deg. 42 min. 42.6130 sec.)
Longitude: 103.825682 W (-103 deg. 49 min. 32.4565 sec.)
Elevation: 3693.10 feet.
Calculation Date: Sep/03/2011

Magnetic Calculations

Model: IGRF2010
Dip Angle: 60.5893 degrees
Total Magnetic Field: 0.48858 gauss
Magnetic Declination: 7.712984 degrees
Horizontal Intensity: 0.239928 gauss
To Convert a Magnetic Dir. to a TRUE North Dir. Add 7.712984 Degr

Transverse Mercator Grid Calculations NAD83

Grid System: Transverse Mercator: new mexico east
Ellipsoid: GRS80
X: 697476.1900 feet
Y: 623071.5000 feet
True to Grid: (convergence) -0.274347 degrees
Magnetic to Grid: 7.438637 degrees
To Convert a Magnetic Dir. to a GRID dir. Add 7.438637 Degr.

District I
1625 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand Avenue, Artesia, NM 88210
District III
1000 Rio Brazos Rd., Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy, Minerals & Natural Resources Department
OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-102
Revised October 15, 2009
Submit one copy to appropriate
District Office
☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

¹ API Number		² Pool Code		³ Pool Name	
⁴ Property Code		⁵ Property Name SERENE SISTERS "25" FED			⁶ Well Number 3H
⁷ GRID No. 6137		⁸ Operator Name DEVON ENERGY PRODUCTION COMPANY, L.P.			⁹ Elevation 3667.1

¹⁰ Surface Location

U/L or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
N	25	18 S	31 E		200	SOUTH	1800	WEST	EDDY

¹¹ Bottom Hole Location If Different From Surface

U/L or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
C	25	18 S	31 E		400	NORTH	2310	WEST	EDDY

¹² Dedicated Acres	¹³ Joint or Infill	¹⁴ Consolidation Code	¹⁵ Order No.
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No allowable will be assigned to this completion until all interests have been consolidated or a non-standard unit has been approved by the division.

2310' ——— NW CORNER SEC. 25 LAT. = 32°43'32.97"N LONG. = 103°49'54.03"W NMSP EAST (FT) N = 628142.55 E = 695610.97		BOTTOM OF HOLE 400' BOTTOM OF HOLE LAT. = 32°43'29.06"N LONG. = 103°49'26.93"W NMSP EAST (FT) N = 627758.25 E = 697928.74		NE CORNER SEC. 25 LAT. = 32°43'33.11"N LONG. = 103°48'51.80"W NMSP EAST (FT) N = 628181.67 E = 700927.99		¹⁷ OPERATOR CERTIFICATION I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that my organization either owns a working interest or undivided mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location that is not in conflict with any owner of such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division. Signature _____ Date _____ Printed Name _____
SERENE SISTERS "25" FED. #3H ELEV. = 3667.1' LAT. = 32°42'42.721"N (NAD83) LONG. = 103°49'32.488"W NMSP EAST (FT) N = 623071.50 E = 697476.19						
SW CORNER SEC. 25 LAT. = 32°42'40.68"N LONG. = 103°49'53.55"W NMSP EAST (FT) N = 601564.84 E = 695677.43 1800' ——— 200' SURFACE LOCATION		SE CORNER SEC. 25 LAT. = 32°42'40.84"N LONG. = 103°48'51.74"W NMSP EAST (FT) N = 622898.69 E = 700959.68		¹⁸ SURVEYOR CERTIFICATION I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief. JUL 15 2009 NEW MEXICO Surveyor Signature and Seal of Professional Surveyor Certificate Number 12197 JAMES JARAMILLO, PLS 12797 SURVEY NO. 148		