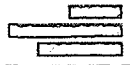




Weatherford

Drilling Services

Proposal



devon

TIGER SNAKE 33 STATE 1H

LEA COUNTY, NM

WELL FILE: **PLAN 1**

FEBRUARY 22, 2013

Weatherford International, Ltd.
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Midland, TX 79711 USA
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MAR 06 2013



Tiger Snake 33 State #1H
Lea County, New Mexico

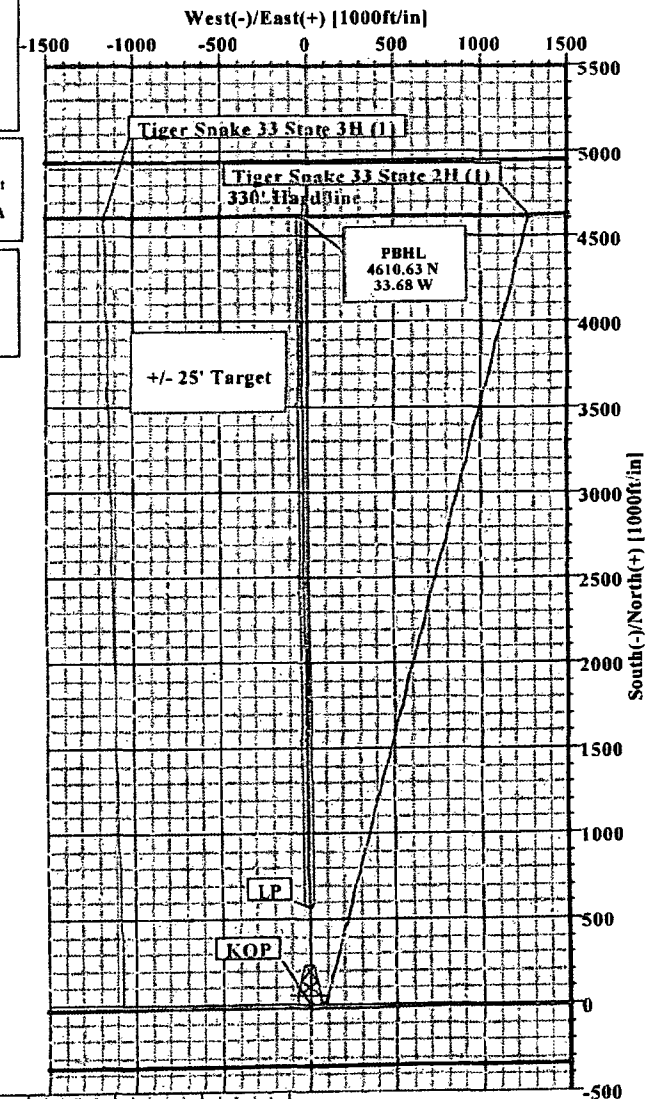
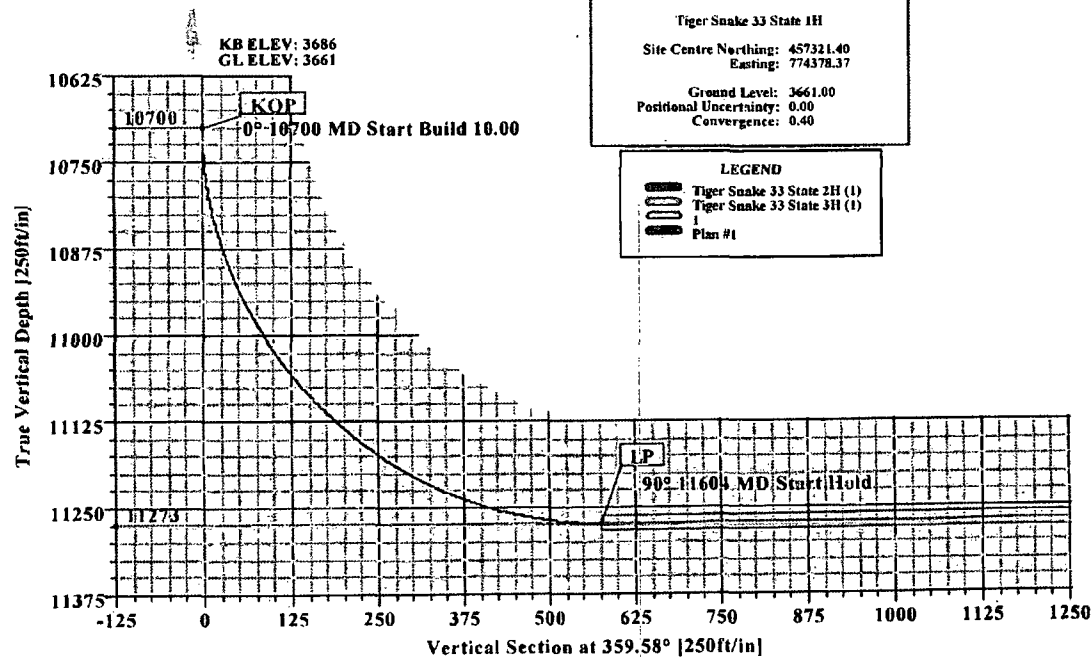
SECTION DETAILS										
Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSec	Target
1	0.00	0.00	359.58	0.00	0.00	0.00	0.00	0.00	0.00	
2	10700.05	0.00	359.58	10700.05	0.00	0.00	0.00	0.00	0.00	
3	11603.60	90.36	359.58	11273.00	576.49	-4.21	10.00	359.58	576.51	
4	15637.92	90.36	359.58	11248.00	4610.63	-33.68	0.00	0.00	4610.75	PBHL

WELL DETAILS							
Name	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
Tiger Snake 33 State 1H	0.00	0.00	457321.40	774378.37	32°15'18.000N	103°34'46.129W	N/A

TARGET DETAILS						
Name	TVD	+N/-S	+E/-W	Northing	Easting	Shape
PBHL	11248.00	4610.63	-33.68	461932.03	774344.69	Rectangle (4034x50)

SITE DETAILS	
Tiger Snake 33 State 1H	
Site Centre Northing:	457321.40
Easting:	774378.37
Ground Level:	3661.00
Positional Uncertainty:	0.00
Convergence:	0.40

LEGEND	
	Tiger Snake 33 State 2H (1)
	Tiger Snake 33 State 3H (1)
	Plan #1





Weatherford International Ltd.

WFT Plan Report - X & Y's

**Weatherford**

Company: Devon Energy
Field: Lea County, New Mexico (NAD 83)
Site: Tiger Snake 33 State 1H
Well: Tiger Snake 33 State 1H
Wellpath: 1

Date: 2/22/2013
Co-ordinate(NE) Reference: Well: Tiger Snake 33 State 1H, Grid Nort
Vertical (TVD) Reference: SITE 3686.0
Section (VS) Reference: Well (0.00N,0.00E,359.58Azi)
Survey Calculation Method: Minimum Curvature
Db: Sybase

Time: 10:43:32
Page: 1

Plan: Plan #1
Principal: Yes
Date Composed: 2/22/2013
Version: 1
Tied-to: From Surface

Site: Tiger Snake 33 State 1H

Site Position: Northing: 457321.40 ft Latitude: 32 15 18.000 N
From: Map Easting: 774378.37 ft Longitude: 103 34 46.129 W
Position Uncertainty: 0.00 ft North Reference: Grid
Ground Level: 3661.00 ft Grid Convergence: 0.40 deg

Well: Tiger Snake 33 State 1H Slot Name:
Well Position: +N/-S 0.00 ft Northing: 457321.40 ft Latitude: 32 15 18.000 N
+E/-W 0.00 ft Easting: 774378.37 ft Longitude: 103 34 46.129 W
Position Uncertainty: 0.00 ft

Wellpath: 1
Current Datum: SITE Height 3686.00 ft
Magnetic Data: 7/1/2013
Field Strength: 48455 nT
Vertical Section: Depth From (TVD) +N/-S
ft ft
0.00 0.00 0.00 359.58

Drilled From: Surface
Tie-on Depth: 0.00 ft
Above System Datum: Mean Sea Level
Declination: 7.34 deg
Mag Dip Angle: 60.16 deg
+E/-W Direction
ft deg

Plan Section Information

MD ft	Incl deg	Azim deg	TVD ft	+N/-S ft	+E/-W ft	DLS deg/100ft	Build deg/100ft	Turn deg/100ft	TFO deg	Target
0.00	0.00	359.58	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
10700.05	0.00	359.58	10700.05	0.00	0.00	0.00	0.00	0.00	0.00	
11603.60	90.36	359.58	11273.00	576.49	-4.21	10.00	10.00	0.00	359.58	
15637.92	90.36	359.58	11248.00	4610.63	-33.68	0.00	0.00	0.00	0.00	PBHL

Survey

MD ft	Incl deg	Azim deg	TVD ft	N/S ft	E/W ft	VS ft	DLS deg/100ft	MapN ft	MapE ft	Comment
10700.05	0.00	359.58	10700.05	0.00	0.00	0.00	0.00	457321.40	774378.37	KOP
10750.00	5.00	359.58	10749.94	2.18	-0.02	2.18	10.00	457323.58	774378.35	
10800.00	10.00	359.58	10799.49	8.70	-0.06	8.70	10.00	457330.10	774378.31	
10850.00	15.00	359.58	10848.29	19.51	-0.14	19.51	10.00	457340.91	774378.23	
10900.00	20.00	359.58	10895.97	34.54	-0.25	34.54	10.00	457355.94	774378.12	
10950.00	25.00	359.58	10942.15	53.66	-0.39	53.66	10.00	457375.06	774377.98	
11000.00	30.00	359.58	10986.49	76.73	-0.56	76.74	10.00	457398.13	774377.81	
11050.00	35.00	359.58	11028.64	103.59	-0.76	103.59	10.00	457424.99	774377.61	
11100.00	40.00	359.58	11068.30	134.01	-0.98	134.01	10.00	457455.41	774377.39	
11150.00	45.00	359.58	11105.16	167.78	-1.23	167.78	10.00	457489.18	774377.14	
11200.00	50.00	359.58	11138.93	204.62	-1.49	204.63	10.00	457526.02	774376.88	
11250.00	55.00	359.58	11169.36	244.28	-1.78	244.28	10.00	457565.68	774376.59	
11300.00	60.00	359.58	11196.22	286.43	-2.09	286.44	10.00	457607.83	774376.28	
11350.00	65.00	359.58	11219.30	330.76	-2.42	330.77	10.00	457652.16	774375.95	
11400.00	70.00	359.58	11238.44	376.94	-2.75	376.95	10.00	457698.34	774375.62	
11450.00	75.00	359.58	11253.47	424.61	-3.10	424.62	10.00	457746.01	774375.27	
11500.00	80.00	359.58	11264.29	473.40	-3.48	473.42	10.00	457794.80	774374.91	
11550.00	85.00	359.58	11270.82	522.96	-3.82	522.97	10.00	457844.36	774374.55	
11603.60	90.36	359.58	11273.00	576.49	-4.21	576.51	10.00	457897.89	774374.16	LP
11700.00	90.36	359.58	11272.40	672.89	-4.92	672.91	0.00	457994.29	774373.45	
11800.00	90.36	359.58	11271.78	772.88	-5.65	772.90	0.00	458094.28	774372.72	
11900.00	90.36	359.58	11271.16	872.88	-6.38	872.90	0.00	458194.28	774371.99	
12000.00	90.36	359.58	11270.54	972.87	-7.11	972.90	0.00	458294.27	774371.26	



Weatherford International Ltd.

WFT Plan Report - X & Y's

**Weatherford**

Company: Devon Energy
Field: Lea County, New Mexico (NAD 83)
Site: Tiger Snake 33 State 1H
Well: Tiger Snake 33 State 1H
Wellpath: 1

Date: 2/22/2013 Time: 10:43:32 Page: 2
Co-ordinate(NE) Reference: Well: Tiger Snake 33 State 1H, Grid Nort
Vertical (TVD) Reference: SITE 3686.0
Section (VS) Reference: Well (0.00N,0.00E,359.58Azi)
Survey Calculation Method: Minimum Curvature Db: Sybase

Survey

MD ft	Incl deg	Azin deg	TVD ft	N/S ft	E/W ft	VS ft	DLS deg/100ft	MapN ft	MapE ft	Comment
12100.00	90.36	359.58	11269.92	1072.87	-7.84	1072.90	0.00	458394.27	774370.53	
12200.00	90.36	359.58	11269.30	1172.87	-8.57	1172.90	0.00	458494.27	774369.80	
12300.00	90.36	359.58	11268.68	1272.86	-9.30	1272.89	0.00	458594.26	774369.07	
12400.00	90.36	359.58	11268.06	1372.86	-10.03	1372.89	0.00	458694.26	774368.34	
12500.00	90.36	359.58	11267.44	1472.85	-10.76	1472.89	0.00	458794.25	774367.61	
12600.00	90.36	359.58	11266.82	1572.85	-11.49	1572.89	0.00	458894.25	774366.88	
12700.00	90.36	359.58	11266.20	1672.84	-12.22	1672.89	0.00	458994.24	774366.15	
12800.00	90.36	359.58	11265.58	1772.84	-12.95	1772.88	0.00	459094.24	774365.42	
12900.00	90.36	359.58	11264.96	1872.83	-13.68	1872.88	0.00	459194.23	774364.69	
13000.00	90.36	359.58	11264.34	1972.83	-14.41	1972.88	0.00	459294.23	774363.96	
13100.00	90.36	359.58	11263.73	2072.82	-15.14	2072.88	0.00	459394.22	774363.23	
13200.00	90.36	359.58	11263.11	2172.82	-15.87	2172.88	0.00	459494.22	774362.50	
13300.00	90.36	359.58	11262.49	2272.81	-16.60	2272.88	0.00	459594.21	774361.77	
13400.00	90.36	359.58	11261.87	2372.81	-17.33	2372.87	0.00	459694.21	774361.04	
13500.00	90.36	359.58	11261.25	2472.81	-18.06	2472.87	0.00	459794.21	774360.31	
13600.00	90.36	359.58	11260.63	2572.80	-18.79	2572.87	0.00	459894.20	774359.58	
13700.00	90.36	359.58	11260.01	2672.80	-19.52	2672.87	0.00	459994.20	774358.85	
13800.00	90.36	359.58	11259.39	2772.79	-20.25	2772.87	0.00	460094.19	774358.12	
13900.00	90.36	359.58	11258.77	2872.79	-20.99	2872.86	0.00	460194.19	774357.38	
14000.00	90.36	359.58	11258.15	2972.78	-21.72	2972.86	0.00	460294.18	774356.65	
14100.00	90.36	359.58	11257.53	3072.78	-22.45	3072.86	0.00	460394.18	774355.92	
14200.00	90.36	359.58	11256.91	3172.77	-23.18	3172.86	0.00	460494.17	774355.19	
14300.00	90.36	359.58	11256.29	3272.77	-23.91	3272.86	0.00	460594.17	774354.46	
14400.00	90.36	359.58	11255.67	3372.76	-24.64	3372.85	0.00	460694.16	774353.73	
14500.00	90.36	359.58	11255.05	3472.76	-25.37	3472.85	0.00	460794.16	774353.00	
14600.00	90.36	359.58	11254.43	3572.75	-26.10	3572.85	0.00	460894.15	774352.27	
14700.00	90.36	359.58	11253.81	3672.75	-26.83	3672.85	0.00	460994.15	774351.54	
14800.00	90.36	359.58	11253.19	3772.75	-27.56	3772.85	0.00	461094.15	774350.81	
14900.00	90.36	359.58	11252.57	3872.74	-28.29	3872.84	0.00	461194.14	774350.08	
15000.00	90.36	359.58	11251.95	3972.74	-29.02	3972.84	0.00	461294.14	774349.35	
15100.00	90.36	359.58	11251.33	4072.73	-29.75	4072.84	0.00	461394.13	774348.62	
15200.00	90.36	359.58	11250.71	4172.73	-30.48	4172.84	0.00	461494.13	774347.89	
15300.00	90.36	359.58	11250.09	4272.72	-31.21	4272.84	0.00	461594.12	774347.16	
15400.00	90.36	359.58	11249.47	4372.72	-31.94	4372.83	0.00	461694.12	774346.43	
15500.00	90.36	359.58	11248.85	4472.71	-32.67	4472.83	0.00	461794.11	774345.70	
15600.00	90.36	359.58	11248.23	4572.71	-33.40	4572.83	0.00	461894.11	774344.97	
15637.92	90.36	359.58	11248.00	4610.63	-33.68	4610.75	0.00	461932.03	774344.69	PBHL

Targets

Name	Description Dip.	TVD Dir.	+N/-S ft	+E/-W ft	Map Northing ft	Map Easting ft	Latitude Deg Min Sec	Longitude Deg Min Sec
PBHL		11248.00	4610.63	-33.68	461932.03	774344.69	32 16 3.625 N	103 34 46.144 W
-Rectangle (4034x50)								

Casing Points

MD	TVD	Diameter	Hole Size	Name



Weatherford International Ltd.

WFT Plan Report - X & Y's



Weatherford

Company: Devon Energy	Date: 2/22/2013	Time: 10:43:32	Page: 3
Field: Lea County, New Mexico (NAD 83)	Co-ordinate(NE) Reference:	Well: Tiger Snake 33 State 1H, Grid Nort	
Site: Tiger Snake 33 State 1H	Vertical (TVD) Reference:	SITE 3686.0	
Well: Tiger Snake 33 State 1H	Section (VS) Reference:	Well (0.00N,0.00E,359.58Azi)	
Wellpath: 1	Survey Calculation Method:	Minimum Curvature	Db: Sybase

Annotation

MD ft	TVD ft	
10700.05	10700.05	KOP
11603.60	11273.00	LP
15637.92	11248.00	PBHL

Formations

MD	TVD	Formations	Lithology	Dip Angle	Dip Direction

Field: Lea County, New Mexico (NAD 83)

Map System: US State Plane Coordinate System 1983
Geo Datum: GRS 1980
Sys Datum: Mean Sea Level

Map Zone: New Mexico, Eastern Zone
Coordinate System: Well Centre
Geomagnetic Model: IGRF2010



Weatherford Anticollision Report

**Weatherford**

Company: Devon Energy Date: 2/22/2013 Time: 10:24:19 Page: 1
Field: Lea County, New Mexico (NAD 83)
Reference Site: Tiger Snake 33 State 1H Co-ordinate(NE) Reference: Well: Tiger Snake 33 State 1H, Grid Nort
Reference Well: Tiger Snake 33 State 1H Vertical (TVD) Reference: - SITE 3686.0
Reference Wellpath: Db: Sybase

NO GLOBAL SCAN: Using user defined selection & scan criteria
Interpolation Method: MD + Stations Interval: 100.00 ft
Depth Range: 0.00 to 15637.92 ft
Maximum Radius: 0000.00 ft
Reference: Plan: Plan #1
Error Model: ISCWSA Ellipse
Scan Method: Closest Approach 3D
Error Surface: Ellipse

Plan: Plan #1 Date Composed: 2/22/2013
Principal: Yes Version: 1
Tied-to: From Surface

Summary

Site	Offset Wellpath	Wellpath	Reference MD ft	Offset MD ft	Ctr-Ctr Edge Distance ft	Separation Distance ft	Factor	Warning
Tiger Snake 33 State	Tiger Snake 33 State 1 V0	Plan: Plan #1 V1	5600.00	5599.00	50.00	25.11	2.01	

Site: Tiger Snake 33 State 2H
Well: Tiger Snake 33 State 2H
Wellpath: 1 V0 Plan: Plan #1 V1
Inter-Site Error: 0.00 ft

Reference MD ft	TVD ft	Offset MD ft	TVD ft	Semi-Major Axis Ref ft	Offset ft	TFO-HS deg	Offset Location North ft	East ft	Ctr-Ctr Edge Distance ft	Separation Distance ft	Factor	Warning
0.00	0.00	1.00	-1.00	0.00	0.00	89.70	0.26	50.00	50.00	50.00	59321.75	
100.00	100.00	99.00	99.00	0.08	0.08	89.70	0.26	50.00	50.00	49.83	298.10	
200.00	200.00	199.00	199.00	0.31	0.31	89.70	0.26	50.00	50.00	49.38	81.19	
300.00	300.00	299.00	299.00	0.53	0.53	89.70	0.26	50.00	50.00	48.94	46.93	
400.00	400.00	399.00	399.00	0.76	0.76	89.70	0.26	50.00	50.00	48.49	33.01	
500.00	500.00	499.00	499.00	0.98	0.98	89.70	0.26	50.00	50.00	48.04	25.45	
600.00	600.00	599.00	599.00	1.21	1.21	89.70	0.26	50.00	50.00	47.59	20.71	
700.00	700.00	699.00	699.00	1.43	1.43	89.70	0.26	50.00	50.00	47.14	17.46	
800.00	800.00	799.00	799.00	1.66	1.66	89.70	0.26	50.00	50.00	46.69	15.09	
900.00	900.00	899.00	899.00	1.88	1.88	89.70	0.26	50.00	50.00	46.24	13.29	
1000.00	1000.00	999.00	999.00	2.11	2.10	89.70	0.26	50.00	50.00	45.79	11.87	
1100.00	1100.00	1099.00	1099.00	2.33	2.33	89.70	0.26	50.00	50.00	45.34	10.73	
1200.00	1200.00	1199.00	1199.00	2.56	2.55	89.70	0.26	50.00	50.00	44.89	9.78	
1300.00	1300.00	1299.00	1299.00	2.78	2.78	89.70	0.26	50.00	50.00	44.44	8.99	
1400.00	1400.00	1399.00	1399.00	3.01	3.00	89.70	0.26	50.00	50.00	43.99	8.32	
1500.00	1500.00	1499.00	1499.00	3.23	3.23	89.70	0.26	50.00	50.00	43.54	7.74	
1600.00	1600.00	1599.00	1599.00	3.46	3.45	89.70	0.26	50.00	50.00	43.09	7.24	
1700.00	1700.00	1699.00	1699.00	3.68	3.68	89.70	0.26	50.00	50.00	42.64	6.79	
1800.00	1800.00	1799.00	1799.00	3.91	3.90	89.70	0.26	50.00	50.00	42.19	6.40	
1900.00	1900.00	1899.00	1899.00	4.13	4.13	89.70	0.26	50.00	50.00	41.74	6.05	
2000.00	2000.00	1999.00	1999.00	4.35	4.35	89.70	0.26	50.00	50.00	41.29	5.74	
2100.00	2100.00	2099.00	2099.00	4.58	4.58	89.70	0.26	50.00	50.00	40.84	5.46	
2200.00	2200.00	2199.00	2199.00	4.80	4.80	89.70	0.26	50.00	50.00	40.39	5.20	
2300.00	2300.00	2299.00	2299.00	5.03	5.03	89.70	0.26	50.00	50.00	39.94	4.97	
2400.00	2400.00	2399.00	2399.00	5.25	5.25	89.70	0.26	50.00	50.00	39.50	4.76	
2500.00	2500.00	2499.00	2499.00	5.48	5.48	89.70	0.26	50.00	50.00	39.05	4.56	
2600.00	2600.00	2599.00	2599.00	5.70	5.70	89.70	0.26	50.00	50.00	38.60	4.38	
2700.00	2700.00	2699.00	2699.00	5.93	5.93	89.70	0.26	50.00	50.00	38.15	4.22	
2800.00	2800.00	2799.00	2799.00	6.15	6.15	89.70	0.26	50.00	50.00	37.70	4.06	
2900.00	2900.00	2899.00	2899.00	6.38	6.38	89.70	0.26	50.00	50.00	37.25	3.92	
3000.00	3000.00	2999.00	2999.00	6.60	6.60	89.70	0.26	50.00	50.00	36.80	3.79	
3100.00	3100.00	3099.00	3099.00	6.83	6.83	89.70	0.26	50.00	50.00	36.35	3.66	
3200.00	3200.00	3199.00	3199.00	7.05	7.05	89.70	0.26	50.00	50.00	35.90	3.55	
3300.00	3300.00	3299.00	3299.00	7.28	7.27	89.70	0.26	50.00	50.00	35.45	3.44	
3400.00	3400.00	3399.00	3399.00	7.50	7.50	89.70	0.26	50.00	50.00	35.00	3.33	
3500.00	3500.00	3499.00	3499.00	7.73	7.72	89.70	0.26	50.00	50.00	34.55	3.24	



Weatherford Anticollision Report

**Weatherford**

Company: Devon Energy
Field: Lea County, New Mexico (NAD 83)
Reference Site: Tiger Snake 33 State 1H
Reference Well: Tiger Snake 33 State 1H
Reference Wellpath:

Date: 2/22/2013 Time: 10:24:19 Page: 2
Co-ordinate(NE) Reference: Well: Tiger Snake 33 State 1H, Grid North
Vertical (TVD) Reference: SITE 3686.0

Db: Sybase

Site: Tiger Snake 33 State 2H
Well: Tiger Snake 33 State 2H
Wellpath: 1 VO Plan: Plan #1 V1

Inter-Site Error: 0.00 ft

Reference		Offset		Semi-Major Axis			Offset Location		Ctr-Ctr Edge		Separation		Warning
MD ft	TVD ft	MD ft	TVD ft	Ref ft	Offset ft	TFO-HS deg	North ft	East ft	Distance ft	Distance ft	Factor		
3600.00	3600.00	3599.00	3599.00	7.95	7.95	89.70	0.26	50.00	50.00	34.10	3.14		
3700.00	3700.00	3699.00	3699.00	8.18	8.17	89.70	0.26	50.00	50.00	33.65	3.06		
3800.00	3800.00	3799.00	3799.00	8.40	8.40	89.70	0.26	50.00	50.00	33.20	2.98		
3900.00	3900.00	3899.00	3899.00	8.63	8.62	89.70	0.26	50.00	50.00	32.75	2.90		
4000.00	4000.00	3999.00	3999.00	8.85	8.85	89.70	0.26	50.00	50.00	32.30	2.83		
4100.00	4100.00	4099.00	4099.00	9.07	9.07	89.70	0.26	50.00	50.00	31.85	2.76		
4200.00	4200.00	4199.00	4199.00	9.30	9.30	89.70	0.26	50.00	50.00	31.40	2.69		
4300.00	4300.00	4299.00	4299.00	9.52	9.52	89.70	0.26	50.00	50.00	30.95	2.63		
4400.00	4400.00	4399.00	4399.00	9.75	9.75	89.70	0.26	50.00	50.00	30.50	2.56		
4500.00	4500.00	4499.00	4499.00	9.97	9.97	89.70	0.26	50.00	50.00	30.05	2.51		
4600.00	4600.00	4599.00	4599.00	10.20	10.20	89.70	0.26	50.00	50.00	29.61	2.45		
4700.00	4700.00	4699.00	4699.00	10.42	10.42	89.70	0.26	50.00	50.00	29.16	2.40		
4800.00	4800.00	4799.00	4799.00	10.65	10.65	89.70	0.26	50.00	50.00	28.71	2.35		
4900.00	4900.00	4899.00	4899.00	10.87	10.87	89.70	0.26	50.00	50.00	28.26	2.30		
5000.00	5000.00	4999.00	4999.00	11.10	11.10	89.70	0.26	50.00	50.00	27.81	2.25		
5100.00	5100.00	5099.00	5099.00	11.32	11.32	89.70	0.26	50.00	50.00	27.36	2.21		
5200.00	5200.00	5199.00	5199.00	11.55	11.55	89.70	0.26	50.00	50.00	26.91	2.17		
5300.00	5300.00	5299.00	5299.00	11.77	11.77	89.70	0.26	50.00	50.00	26.46	2.12		
5400.00	5400.00	5399.00	5399.00	12.00	11.99	89.70	0.26	50.00	50.00	26.01	2.08		
5500.00	5500.00	5499.00	5499.00	12.22	12.22	89.70	0.26	50.00	50.00	25.56	2.05		
5600.00	5600.00	5599.00	5599.00	12.45	12.44	89.70	0.26	50.00	50.00	25.11	2.01		
5700.00	5700.00	5696.54	5696.50	12.67	12.65	88.80	1.09	52.29	52.36	27.05	2.07		
5800.00	5800.00	5794.35	5794.03	12.90	12.86	86.54	3.57	59.10	59.41	33.70	2.31		
5900.00	5900.00	5893.97	5893.28	13.12	13.07	84.45	6.54	67.26	67.81	41.67	2.59		
6000.00	6000.00	5993.59	5992.52	13.35	13.28	82.81	9.51	75.41	76.29	49.71	2.87		
6100.00	6100.00	6093.80	6092.35	13.57	13.50	81.51	12.46	83.53	84.72	57.71	3.14		
6200.00	6200.00	6195.89	6194.21	13.80	13.69	80.66	14.79	89.93	91.27	63.83	3.33		
6300.00	6300.00	6296.27	6296.50	14.02	13.88	80.20	16.20	93.78	95.21	67.34	3.42		
6400.00	6400.00	6400.78	6399.00	14.24	14.07	80.06	16.66	95.06	96.51	68.23	3.41		
6500.00	6500.00	6500.78	6499.00	14.47	14.26	80.06	16.66	95.06	96.51	67.80	3.36		
6600.00	6600.00	6600.78	6599.00	14.69	14.49	80.06	16.66	95.06	96.51	67.35	3.31		
6700.00	6700.00	6700.78	6699.00	14.92	14.71	80.06	16.66	95.06	96.51	66.90	3.26		
6800.00	6800.00	6800.78	6799.00	15.14	14.94	80.06	16.66	95.06	96.51	66.46	3.21		
6900.00	6900.00	6900.78	6899.00	15.37	15.16	80.06	16.66	95.06	96.51	66.01	3.16		
7000.00	7000.00	7000.78	6999.00	15.59	15.39	80.06	16.66	95.06	96.51	65.56	3.12		
7100.00	7100.00	7100.78	7099.00	15.82	15.61	80.06	16.66	95.06	96.51	65.11	3.07		
7200.00	7200.00	7200.78	7199.00	16.04	15.83	80.06	16.66	95.06	96.51	64.66	3.03		
7300.00	7300.00	7300.78	7299.00	16.27	16.06	80.06	16.66	95.06	96.51	64.21	2.99		
7400.00	7400.00	7400.78	7399.00	16.49	16.28	80.06	16.66	95.06	96.51	63.76	2.95		
7500.00	7500.00	7500.78	7499.00	16.72	16.51	80.06	16.66	95.06	96.51	63.31	2.91		
7600.00	7600.00	7600.78	7599.00	16.94	16.73	80.06	16.66	95.06	96.51	62.86	2.87		
7700.00	7700.00	7700.78	7699.00	17.17	16.96	80.06	16.66	95.06	96.51	62.41	2.83		
7800.00	7800.00	7800.78	7799.00	17.39	17.18	80.06	16.66	95.06	96.51	61.96	2.79		
7900.00	7900.00	7900.78	7899.00	17.62	17.40	80.06	16.66	95.06	96.51	61.51	2.76		
8000.00	8000.00	8000.78	7999.00	17.84	17.63	80.06	16.66	95.06	96.51	61.06	2.72		
8100.00	8100.00	8100.78	8099.00	18.07	17.85	80.06	16.66	95.06	96.51	60.61	2.69		
8200.00	8200.00	8200.78	8199.00	18.29	18.08	80.06	16.66	95.06	96.51	60.17	2.66		
8300.00	8300.00	8300.78	8299.00	18.52	18.30	80.06	16.66	95.06	96.51	59.72	2.62		
8400.00	8400.00	8400.78	8399.00	18.74	18.53	80.06	16.66	95.06	96.51	59.27	2.59		
8500.00	8500.00	8500.78	8499.00	18.96	18.75	80.06	16.66	95.06	96.51	58.82	2.56		
8600.00	8600.00	8600.78	8599.00	19.19	18.97	80.06	16.66	95.06	96.51	58.37	2.53		



Weatherford Anticollision Report

**Weatherford**

Company: Devon Energy
Field: Lea County, New Mexico (NAD 83)
Reference Site: Tiger Snake 33 State 1H
Reference Well: Tiger Snake 33 State 1H
Reference Wellpath:

Date: 2/22/2013

Time: 10:24:19

Page: 3

Co-ordinate(NE) Reference: Well: Tiger Snake 33 State 1H, Grid Nort
Vertical (TVD) Reference: SITE 3686.0

Db: Sybase

Site: Tiger Snake 33 State 2H
Well: Tiger Snake 33 State 2H
Wellpath: 1 V0 Plan: Plan #1 V1

Inter-Site Error: 0.00 ft

Reference		Offset		Semi-Major Axis			Offset Location		Ctr-Ctr Edge		Separation	Warning
MD	TVD	MD	TVD	Ref	Offset	TFO-HS	North	East	Distance	Distance	Factor	
ft	ft	ft	ft	ft	ft	deg	ft	ft	ft	ft		
8700.00	8700.00	8700.78	8699.00	19.41	19.20	80.08	16.66	95.06	96.51	57.92	2.50	
8800.00	8800.00	8800.78	8799.00	19.64	19.42	80.06	16.66	95.06	96.51	57.47	2.47	
8900.00	8900.00	8900.78	8899.00	19.86	19.65	80.06	16.66	95.06	96.51	57.02	2.44	
9000.00	9000.00	9000.78	8999.00	20.09	19.87	80.06	16.66	95.06	96.51	56.57	2.42	
9100.00	9100.00	9100.78	9099.00	20.31	20.10	80.06	16.66	95.06	96.51	56.12	2.39	
9200.00	9200.00	9200.78	9199.00	20.54	20.32	80.06	16.66	95.06	96.51	55.67	2.36	
9300.00	9300.00	9300.78	9299.00	20.76	20.55	80.06	16.66	95.06	96.51	55.22	2.34	
9400.00	9400.00	9400.78	9399.00	20.99	20.77	80.06	16.66	95.06	96.51	54.77	2.31	
9500.00	9500.00	9500.78	9499.00	21.21	20.99	80.06	16.66	95.06	96.51	54.32	2.29	
9600.00	9600.00	9600.78	9599.00	21.44	21.22	80.06	16.66	95.06	96.51	53.87	2.26	
9700.00	9700.00	9700.78	9699.00	21.66	21.44	80.06	16.66	95.06	96.51	53.43	2.24	
9800.00	9800.00	9800.78	9799.00	21.89	21.67	80.06	16.66	95.06	96.51	52.98	2.22	
9900.00	9900.00	9900.78	9899.00	22.11	21.89	80.06	16.66	95.06	96.51	52.53	2.19	
10000.00	10000.00	10000.78	9999.00	22.34	22.12	80.06	16.66	95.06	96.51	52.08	2.17	
10100.00	10100.00	10100.78	10099.00	22.56	22.34	80.06	16.66	95.06	96.51	51.63	2.15	
10200.00	10200.00	10200.78	10199.00	22.79	22.57	80.06	16.66	95.06	96.51	51.18	2.13	
10300.00	10300.00	10300.78	10299.00	23.01	22.79	80.06	16.66	95.06	96.51	50.73	2.11	
10400.00	10400.00	10400.78	10399.00	23.24	23.02	80.06	16.66	95.06	96.51	50.28	2.09	
10500.00	10500.00	10500.78	10499.00	23.46	23.24	80.06	16.66	95.06	96.51	49.83	2.07	
10600.00	10600.00	10600.78	10599.00	23.68	23.46	80.06	16.66	95.06	96.51	49.38	2.05	
10700.05	10700.05	10700.37	10698.60	23.91	23.69	80.04	16.70	95.07	96.52	48.95	2.03	
10750.00	10749.94	10747.05	10745.19	24.02	23.78	80.26	19.05	95.67	97.24	49.46	2.04	
10800.00	10799.49	10793.71	10791.43	24.13	23.88	80.30	25.07	97.22	98.91	50.94	2.06	
10850.00	10848.29	10840.31	10836.94	24.24	23.98	80.55	34.69	99.70	101.52	53.39	2.11	
10900.00	10895.97	10886.84	10881.43	24.34	24.08	80.98	47.84	103.09	105.07	56.77	2.18	
10950.00	10842.15	10833.28	10824.59	24.45	24.19	81.55	64.41	107.35	109.54	61.08	2.26	
11000.00	10986.49	10979.64	10968.16	24.55	24.29	82.21	84.27	112.46	114.91	66.29	2.36	
11050.00	11028.64	11025.92	11005.86	24.67	24.41	82.92	107.28	118.39	121.18	72.35	2.48	
11100.00	11068.30	11072.12	11043.46	24.79	24.53	83.64	133.27	125.08	128.29	79.25	2.62	
11150.00	11105.16	11118.27	11078.73	24.92	24.65	84.34	162.06	132.49	136.23	86.93	2.76	
11200.00	11138.93	11164.37	11111.48	25.07	24.79	84.99	193.49	140.58	144.95	95.35	2.92	
11250.00	11169.38	11210.46	11141.47	25.23	24.95	85.57	227.34	149.30	154.39	104.45	3.09	
11300.00	11196.22	11256.55	11168.58	25.41	25.12	86.08	263.43	158.59	164.49	114.17	3.27	
11350.00	11219.30	11302.69	11192.62	25.62	25.31	86.51	301.55	168.40	175.19	124.44	3.45	
11400.00	11238.44	11348.92	11213.47	25.85	25.52	86.86	341.50	178.69	186.42	135.19	3.64	
11450.00	11253.47	11395.29	11230.96	26.10	25.75	87.12	383.07	189.39	198.09	146.35	3.83	
11500.00	11264.29	11441.84	11244.97	26.38	26.00	87.31	426.05	200.45	210.14	157.83	4.02	
11550.00	11270.82	11488.63	11255.39	26.68	26.28	87.43	470.21	211.82	222.47	169.56	4.20	
11600.00	11273.01	11535.72	11262.07	27.00	26.57	87.50	515.34	223.44	235.00	181.46	4.39	
11603.60	11273.00	11539.12	11262.41	27.02	26.59	87.50	518.62	224.28	235.91	182.32	4.40	
11700.00	11272.40	11631.40	11264.72	27.71	27.24	88.39	607.91	247.27	260.51	205.57	4.74	
11800.00	11271.78	11728.06	11263.91	28.52	28.00	88.48	701.51	271.37	286.15	229.64	5.06	
11900.00	11271.16	11824.72	11263.10	29.42	28.84	88.56	795.11	295.47	311.78	253.53	5.35	
12000.00	11270.54	11921.38	11262.29	30.40	29.77	88.63	888.71	319.56	337.42	277.25	5.61	
12100.00	11269.92	12018.03	11261.48	31.46	30.76	88.69	982.31	343.66	363.05	300.83	5.83	
12200.00	11269.30	12114.69	11260.67	32.59	31.83	88.74	1075.92	367.76	388.69	324.27	6.03	
12300.00	11268.68	12211.35	11259.86	33.78	32.96	88.79	1169.52	391.86	414.33	347.59	6.21	
12400.00	11268.06	12308.01	11259.05	35.03	34.14	88.83	1263.12	415.95	439.96	370.80	6.36	
12500.00	11267.44	12404.66	11258.24	36.32	35.37	88.86	1356.72	440.05	465.60	393.92	6.50	
12600.00	11266.82	12501.32	11257.43	37.66	36.64	88.89	1450.32	464.15	491.24	416.94	6.61	
12700.00	11266.20	12597.98	11256.62	39.04	37.96	88.92	1543.92	488.25	516.87	439.89	6.71	



Weatherford Anticollision Report

**Weatherford**

Company: Devon Energy
Field: Lea County, New Mexico (NAD 83)
Reference Site: Tiger Snake 33 State 1H
Reference Well: Tiger Snake 33 State 1H
Reference Wellpath:

Date: 2/22/2013 Time: 10:24:19 Page: 4
Co-ordinate(NE) Reference: Well: Tiger Snake 33 State 1H, Grid Nort
Vertical (TVD) Reference: SITE 3686.0

Db: Sybase

Site: Tiger Snake 33 State 2H
Well: Tiger Snake 33 State 2H
Wellpath: 1 V0 Plan: Plan #1 V1

Inter-Site Error: 0.00 ft

Reference		Offset		Semi-Major Axis		Offset Location		Ctr-Ctr. Edge		Separation		Warning
MD	TVD	MD	TVD	Ref	Offset	TFO-HS	North	East	Distance	Distance	Factor	
ft	ft	ft	ft	ft	ft	deg	ft	ft	ft	ft		
12800.00	11265.58	12694.64	11255.81	40.45	39.31	88.95	1637.53	512.34	542.51	462.76	6.80	
12900.00	11264.96	12791.29	11255.00	41.90	40.69	88.97	1731.13	536.44	568.15	485.57	6.88	
13000.00	11264.34	12887.95	11254.19	43.37	42.10	88.99	1824.73	560.54	593.79	508.32	6.95	
13100.00	11263.73	12984.61	11253.38	44.88	43.54	89.01	1918.33	584.64	619.43	531.02	7.01	
13200.00	11263.11	13081.27	11252.57	46.40	45.00	89.03	2011.93	608.73	645.06	553.67	7.06	
13300.00	11262.49	13177.92	11251.76	47.94	46.48	89.05	2105.54	632.83	670.70	576.28	7.10	
13400.00	11261.87	13274.58	11250.95	49.51	47.98	89.06	2199.14	656.93	696.34	598.86	7.14	
13500.00	11261.25	13371.24	11250.14	51.09	49.50	89.08	2292.74	681.03	721.98	621.39	7.18	
13600.00	11260.63	13467.90	11249.32	52.69	51.03	89.09	2386.34	705.12	747.62	643.90	7.21	
13700.00	11260.01	13564.55	11248.51	54.30	52.58	89.10	2479.94	729.22	773.25	666.38	7.23	
13800.00	11259.39	13661.21	11247.70	55.93	54.15	89.11	2573.55	753.32	798.89	688.82	7.26	
13900.00	11258.77	13757.87	11246.89	57.57	55.72	89.12	2667.15	777.42	824.53	711.25	7.28	
14000.00	11258.15	13854.53	11246.08	59.22	57.31	89.13	2760.75	801.51	850.17	733.65	7.30	
14100.00	11257.53	13951.18	11245.27	60.88	58.90	89.14	2854.35	825.61	875.81	756.04	7.31	
14200.00	11256.91	14047.84	11244.46	62.54	60.51	89.15	2947.95	849.71	901.44	778.40	7.33	
14300.00	11256.29	14144.50	11243.65	64.22	62.12	89.16	3041.56	873.81	927.08	800.75	7.34	
14400.00	11255.67	14241.16	11242.84	65.91	63.75	89.17	3135.16	897.90	952.72	823.08	7.35	
14500.00	11255.05	14337.81	11242.03	67.60	65.38	89.18	3228.76	922.00	978.36	845.39	7.36	
14600.00	11254.43	14434.47	11241.22	69.30	67.01	89.18	3322.36	946.10	1004.00	867.69	7.37	
14700.00	11253.81	14531.13	11240.41	71.01	68.66	89.19	3415.96	970.20	1029.64	889.98	7.37	
14800.00	11253.19	14627.79	11239.60	72.72	70.31	89.20	3509.56	994.29	1055.27	912.26	7.38	
14900.00	11252.57	14724.44	11238.79	74.43	71.96	89.20	3603.17	1018.39	1080.91	934.52	7.38	
15000.00	11251.95	14821.10	11237.98	76.16	73.62	89.21	3696.77	1042.49	1106.55	956.78	7.39	
15100.00	11251.33	14917.76	11237.17	77.89	75.29	89.22	3790.37	1066.59	1132.19	979.02	7.39	
15200.00	11250.71	15014.42	11236.36	79.62	76.96	89.22	3883.97	1090.68	1157.83	1001.26	7.40	
15300.00	11250.09	15111.07	11235.55	81.35	78.63	89.23	3977.57	1114.78	1183.47	1023.49	7.40	
15400.00	11249.47	15207.73	11234.74	83.09	80.31	89.23	4071.18	1138.88	1209.10	1045.71	7.40	
15500.00	11248.85	15304.39	11233.93	84.84	81.99	89.24	4164.78	1162.97	1234.74	1067.92	7.40	
15600.00	11248.23	15401.04	11233.12	86.58	83.68	89.24	4258.38	1187.07	1260.38	1090.13	7.40	
15637.92	11248.00	15437.70	11232.81	87.25	84.32	89.24	4293.88	1196.21	1270.10	1098.55	7.40	

**Weatherford****Weatherford Drilling Services**

GeoDec v5.03

Report Date: February 22, 2013
Job Number: _____
Customer: Devon Energy
Well Name: Tiger Snake 33 State 1H
API Number: _____
Rig Name: _____
Location: Lea County, NM
Block: _____
Engineer: RWJ

US State Plane 1983	Geodetic Latitude / Longitude
System: New Mexico Eastern Zone	System: Latitude / Longitude
Projection: Transverse Mercator/Gauss Kruger	Projection: Geodetic Latitude and Longitude
Datum: North American Datum 1983	Datum: North American Datum 1983
Ellipsoid: GRS 1980	Ellipsoid: GRS 1980
North/South 457321.40 USFT	Latitude 32.2545960 DEG
East/West 774378.37 USFT	Longitude -103.5842613 DEG
Grid Convergence: .40°	
Total Correction: +7.05°	

Geodetic Location WGS84	Elevation =	0.0 Meters
Latitude =	32.25460° N	32° 15 min 16.546 sec
Longitude =	103.58426° W	103° 35 min 3.341 sec

Magnetic Declination =	7.45°	[True North Offset]
Local Gravity =	.9988 g	Checksum = 6495
Local Field Strength =	48425 nT	Magnetic Vector X = 23922 nT
Magnetic Dip =	60.12°	Magnetic Vector Y = 3129 nT
Magnetic Model =	bggm2012	Magnetic Vector Z = 41987 nT
Spud Date =	Jul 01, 2013	Magnetic Vector H = 24126 nT

Signed: _____

Date: _____