

30-015-39989

Directional Drilling Company

HORIZONTAL SURVEY PROGRAM

MINIMUM CURVATURE CALCULATIONS(SPE-3362)

RECEIVED

JAN 11 2013

NMOCD ARTESIAOPERATOR: **Nadel & Gussman HEYCO**

START: START: #####

WELL: Texas Eagle #1H

FINISH: FINISH:

LOCATION: Eddy Co, NM

INFORMATION PROVIDED B DDC

JOB NO: WT-12773

HORIZONTAL COORDINATOR: Z. Barbre/D. Foster

DIP1 = 0.56 deg = 90.56 deg

0.56 deg = 90.56 deg

TARGET1 = 2,489 ft TVD

2,476 ft TVD

VS1 = 3,403 ft

4,615 ft

DECLINATION= 7.86

DIRECTION= 359.67

Targets

2476

4615

4614.9

-26.8

SVY #	Slide rotate	Tool Face	MEASURED DEPTH	INCL (DRIFT)	AZIMUTH (DIR)	VERTICAL DEPTH	VERTICAL SECTION	DLS/ 100	ACTUAL BUR	ABOVE(+) BELOW(-)	RIGHT(+) LEFT(-)	NORTH(+) SOUTH(-)	EAST(+) WEST(-)
Tie In			1600	0.75	72.10	1599.83	9.41	0.14	0.00	921.8	16.3	9.41	16.04
1	rotate		1676	0.90	50.80	1675.82	9.84	0.45	0.20	845.8	17.0	9.94	16.98
2	9'	330	1708	1.40	0.50	1707.82	10.39	3.37	1.56	813.8	17.2	10.49	17.17
3	32'	330	1740	3.30	342.40	1739.79	11.66	6.30	5.94	781.9	17.0	11.76	16.90
4	rotate		1771	3.40	337.00	1770.74	13.36	1.07	0.32	750.9	16.3	13.46	16.27
5	rotate		1803	3.40	338.70	1802.68	15.12	0.32	0.00	718.9	15.6	15.21	15.55
6	rotate		1835	3.40	336.30	1834.62	16.88	0.44	0.00	687.0	14.9	16.97	14.83
7	rotate		1867	3.30	335.60	1866.57	18.59	0.34	-0.31	655.0	14.2	18.67	14.07
8	rotate		1898	3.30	336.60	1897.52	20.23	0.19	0.00	624.0	13.5	20.31	13.34
9	rotate		1930	3.30	330.50	1929.46	21.88	1.10	0.00	592.1	12.7	21.95	12.52
10	rotate		1962	3.10	334.20	1961.41	23.46	0.90	-0.62	560.1	11.8	23.53	11.69
11	10'	HS	1994	5.80	331.20	1993.31	25.67	8.47	8.44	528.2	10.7	25.73	10.54
12	31'	HS	2025	11.30	328.20	2023.96	29.64	17.79	17.74	497.5	8.4	29.69	8.18
13	23'	HS	2057	15.20	328.70	2055.10	35.91	12.19	12.19	466.3	4.6	35.94	4.35
14	16'	HS	2089	17.90	331.40	2085.77	43.84	8.77	8.44	435.6	0.1	43.84	-0.19
15	12'	30R	2121	20.20	333.30	2116.02	53.12	7.44	7.19	405.2	-4.7	53.10	-5.02
16	12'	30R	2152	22.70	335.70	2144.87	63.39	8.55	8.06	376.3	-9.5	63.33	-9.89

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WELL:		Texas Eagle #1H						FINISH:		FINISH:							
LOCATION:		Eddy Co, NM						INFORMA		INFORMATION PROVIDED B DDC							
JOB NO:		WT-12773								HORIZONTAL COORDINATOR: Z. Barbre/D. Foster							
DIP1 =		0.56		deg		= 90.56		deg		0.56		deg = 90.56		deg			
TARGET1 =		2,489		ft TVD				2,476		ft TVD							
VS1 =		3,403		ft				4,615		ft							
								DECLINATION= 7.86				DIRECTION= 359.67					
				Targets		2476		4615						4614.9		-26.8	
SVY	Slide	Tool	MEASURED	INCL	AZIMUTH	VERTICAL	VERTICAL	DLS/	ACTUAL	ABOVE(+)	RIGHT(+)	NORTH(+)	EAST(+)				
#	rotate	Face	DEPTH	(DRIFT)	(DIR)	DEPTH	SECTION	100	BUR	BELOW(-)	LEFT(-)	SOUTH(-)	WEST(-)				
17	12'	30R	2184	25.40	337.70	2174.09	75.40	8.81	8.44	346.9	-14.6	75.31	-15.04				
18	16'	30R	2216	28.60	340.30	2202.60	88.99	10.66	10.00	318.3	-19.7	88.87	-20.22				
19	16'	30R	2248	31.50	343.50	2230.30	104.25	10.35	9.06	290.4	-24.6	104.11	-25.18				
20	16'	30R	2279	34.50	345.10	2256.29	120.53	10.08	9.68	264.3	-29.0	120.36	-29.74				
21	16'	30R	2311	37.60	345.80	2282.16	138.78	9.77	9.69	238.2	-33.7	138.58	-34.47				
22	18'	30R	2342	40.50	347.30	2306.23	157.80	9.84	9.35	214.0	-38.1	157.58	-39.00				
23	18'	30R	2374	44.00	350.20	2329.92	178.92	12.52	10.94	190.1	-42.1	178.68	-43.18				
24	18'	30R	2406	48.20	353.70	2352.11	201.76	15.31	13.13	167.7	-45.2	201.50	-46.38				
25	14'	30R	2438	50.70	354.90	2372.91	225.97	8.32	7.81	146.6	-47.5	225.69	-48.79				
26	12'	30R	2469	53.50	356.10	2391.95	250.36	9.53	9.03	127.4	-49.3	250.07	-50.71				
27	18'	30R	2501	56.20	358.40	2410.37	276.50	10.28	8.44	108.7	-50.4	276.20	-51.95				
28	13'	30R	2533	58.50	359.50	2427.64	303.44	7.75	7.19	91.2	-50.7	303.14	-52.44				
29	12'	HS	2564	60.60	359.30	2443.35	330.16	6.80	6.77	75.2	-50.8	329.86	-52.72				
30	12'	HS	2596	63.50	359.10	2458.34	358.42	9.08	9.06	59.9	-51.1	358.12	-53.12				
31	16'	HS	2628	67.10	358.80	2471.71	387.49	11.28	11.25	46.3	-51.4	387.18	-53.65				
32	19'	HS	2659	70.70	359.30	2482.87	416.40	11.71	11.61	34.8	-51.7	416.10	-54.13				
33	19'	30R	2691	73.60	0.50	2492.68	446.86	9.74	9.06	24.7	-51.6	446.55	-54.18				

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OPERATOR:			Nadel & Gussman HEYCO					START:		START: #####					
WELL:			Texas Eagle #1H					FINISH:		FINISH:					
LOCATION:			Eddy Co, NM					INFORMA INFORMATION PROVIDED B DDC							
JOB NO:			WT-12773					HORIZONTAL COORDINATOR: Z. Barbre/D. Foster							
DIP1 =			0.56		deg		= 90.56		deg		0.56 deg = 90.56 deg				
TARGET1 =			2,489		ft TVD		2,476 ft TVD								
VS1 =			3,403		ft		4,615 ft								
					DECLINATION=			7.86		DIRECTIONS: 359.67					
					Targets		2476		4615		4614.9			-26.8	
SVY		Slide	Tool	MEASURED	INCL	AZIMUTH	VERTICAL	VERTICAL	DLS/	ACTUAL	ABOVE(+)	RIGHT(+)	NORTH(+)	EAST(+)	
#		rotate	Face	DEPTH	(DRIFT)	(DIR)	DEPTH	SECTION	100	BUR	BELOW(-)	LEFT(-)	SOUTH(-)	WEST(-)	
34		14	30R	2723	76.70	1.20	2500.88	477.78	9.92	9.69	16.2	-51.0	477.48	-53.72	
35		17'	30R	2743	78.80	1.80	2505.12	497.31	10.90	10.50	11.8	-50.3	497.01	-53.21	
36		31'	HS	2815	87.10	1.20	2513.95	568.67	11.56	11.53	2.3	-48.1	568.38	-51.34	
37		32'	HS	2847	90.60	0.20	2514.59	600.65	11.37	10.94	1.3	-47.5	600.37	-50.95	
38		3'	HS	2879	90.90	359.30	2514.18	632.65	2.96	0.94	1.4	-47.4	632.36	-51.09	
39				2911	90.90	359.60	2513.67	664.64	0.94	0.00	1.6	-47.6	664.36	-51.40	
40				2943	90.90	359.10	2513.17	696.64	1.56	0.00	1.8	-47.7	696.35	-51.76	
41				2975	91.10	359.50	2512.61	728.63	1.40	0.62	2.0	-48.0	728.35	-52.15	
42		4'	HS	3006	91.70	359.30	2511.85	759.62	2.04	1.94	2.5	-48.1	759.33	-52.48	
43				3038	92.00	0.20	2510.82	791.61	2.96	0.94	3.2	-48.1	791.32	-52.62	
44				3070	91.80	358.60	2509.76	823.59	5.04	-0.63	4.0	-48.2	823.30	-52.95	
45				3102	91.60	358.60	2508.81	855.57	0.63	-0.63	4.6	-48.8	855.27	-53.73	
46				3134	91.60	359.50	2507.92	887.55	2.81	0.00	5.2	-49.2	887.26	-54.26	
47		12'	HS	3165	92.60	359.10	2506.78	918.53	3.47	3.23	6.0	-49.4	918.23	-54.64	
48				3197	92.80	358.80	2505.27	950.49	1.13	0.63	7.2	-49.8	950.19	-55.23	
49				3229	92.70	358.60	2503.74	982.45	0.70	-0.31	8.4	-50.3	982.15	-55.95	
50				3261	92.60	358.40	2502.26	1014.41	0.70	-0.31	9.6	-50.9	1014.10	-56.79	

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					Targets		2476		4615						4614.9		-26.8	
SVY		Slide	Tool	MEASURED	INCL	AZIMUTH	VERTICAL	VERTICAL	DLS/	ACTUAL	ABOVE(+)	RIGHT(+)	NORTH(+)	EAST(+)				
#		rotate	Face	DEPTH	(DRIFT)	(DIR)	DEPTH	SECTION	100	BUR	BELOW(-)	LEFT(-)	SOUTH(-)	WEST(-)				
51				3293	92.60	359.00	2500.81	1046.37	1.87	0.00	10.7	-51.5	1046.06	-57.51				
52				3324	92.70	358.40	2499.37	1077.34	1.96	0.32	11.9	-52.0	1077.02	-58.22				
53		8'	90R	3356	93.30	359.10	2497.70	1109.29	2.88	1.87	13.2	-52.5	1108.97	-58.91				
54		5'	150R	3388	92.70	358.60	2496.03	1141.24	2.44	-1.87	14.6	-53.0	1140.92	-59.56				
55				3420	92.60	358.40	2494.55	1173.20	0.70	-0.31	15.7	-53.6	1172.87	-60.39				
56		12'	140R	3452	92.10	1.00	2493.23	1205.17	8.27	-1.56	16.7	-53.6	1204.84	-60.56				
57				3483	91.80	0.70	2492.18	1236.15	1.37	-0.97	17.5	-53.0	1235.82	-60.10				
58		12'	180	3515	90.80	0.90	2491.45	1268.13	3.19	-3.13	17.9	-52.4	1267.81	-59.65				
59				3547	90.60	0.50	2491.06	1300.12	1.40	-0.63	18.0	-51.8	1299.80	-59.26				
60				3579	90.40	0.50	2490.78	1332.12	0.63	-0.62	18.0	-51.3	1331.80	-58.98				
61				3610	90.30	1.40	2490.59	1363.11	2.92	-0.32	17.8	-50.6	1362.80	-58.47				
62				3642	90.20	1.90	2490.45	1395.09	1.59	-0.31	17.7	-49.5	1394.78	-57.55				
63				3674	90.10	1.20	2490.37	1427.07	2.21	-0.31	17.4	-48.5	1426.77	-56.68				
64				3705	90.10	1.00	2490.32	1458.06	0.65	0.00	17.2	-47.7	1457.76	-56.09				
65				3737	89.70	359.80	2490.37	1490.06	3.95	-1.25	16.8	-47.3	1489.76	-55.86				
66				3769	89.70	0.50	2490.54	1522.06	2.19	0.00	16.3	-47.0	1521.76	-55.78				
67				3801	89.90	2.60	2490.65	1554.04	6.59	0.63	15.9	-46.0	1553.75	-54.91				

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JOB NO:		WT-12773				HORIZONTAL COORDINATOR: Z. Barbre/D. Foster							
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				DECLINATION=		7.86	DIRECTIO 359.67						
				Targets	2476	4615							
							4614.9 -26.8						
SVY #	Slide rotate	Tool Face	MEASURED DEPTH	INCL (DRIFT)	AZIMUTH (DIR)	VERTICAL DEPTH	VERTICAL SECTION	DLS/ 100	ACTUAL BUR	ABOVE(+) BELOW(-)	RIGHT(+) LEFT(-)	NORTH(+) SOUTH(-)	EAST(+) WEST(-)
68			3833	89.70	3.20	2490.76	1585.99	1.98	-0.63	15.5	-44.2	1585.71	-53.30
69			3864	89.70	3.00	2490.92	1616.93	0.65	0.00	15.0	-42.3	1616.66	-51.62
70			3896	88.90	1.90	2491.32	1648.89	4.25	-2.50	14.3	-40.8	1648.63	-50.25
71			3928	88.70	1.40	2491.99	1680.86	1.68	-0.63	13.3	-39.6	1680.61	-49.33
72			3959	88.70	0.70	2492.69	1711.85	2.26	0.00	12.3	-38.9	1711.59	-48.76
73			3991	88.80	2.50	2493.39	1743.82	5.63	0.31	11.3	-37.8	1743.57	-47.87
74			4023	88.60	2.30	2494.11	1775.78	0.88	-0.63	10.3	-36.3	1775.54	-46.53
75			4055	87.80	0.50	2495.12	1807.74	6.15	-2.50	9.0	-35.3	1807.51	-45.75
76			4087	87.70	1.80	2496.37	1839.71	4.07	-0.31	7.4	-34.5	1839.48	-45.11
77			4118	89.00	2.10	2497.27	1870.67	4.30	4.19	6.2	-33.3	1870.45	-44.05
78			4150	89.30	2.50	2497.74	1902.63	1.56	0.94	5.4	-31.8	1902.42	-42.77
79			4182	89.90	1.20	2497.97	1934.61	4.47	1.88	4.9	-30.6	1934.40	-41.73
80			4214	90.00	2.50	2497.99	1966.58	4.07	0.31	4.5	-29.4	1966.38	-40.70
81			4245	89.90	2.10	2498.02	1997.55	1.33	-0.32	4.2	-28.0	1997.36	-39.46
82			4277	89.70	2.30	2498.13	2029.52	0.88	-0.63	3.8	-26.5	2029.33	-38.23
83	12'	30L	4309	90.40	1.80	2498.10	2061.49	2.69	2.19	3.5	-25.2	2061.31	-37.08
84			4341	90.60	1.80	2497.82	2093.47	0.63	0.62	3.5	-24.0	2093.29	-36.08

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				Targets		2476		4615						4614.9		-26.8	
SVY #		Slide rotate	Tool Face	MEASURED DEPTH	INCL (DRIFT)	AZIMUTH (DIR)	VERTICAL DEPTH	VERTICAL SECTION	DLS/ 100	ACTUAL BUR	ABOVE(+) BELOW(-)	RIGHT(+) LEFT(-)	NORTH(+) SOUTH(-)	EAST(+) WEST(-)			
85				4372	90.70	1.60	2497.47	2124.45	0.72	0.32	3.5	-22.9	2124.28	-35.16			
86		6	90L	4404	91.00	359.80	2497.00	2156.44	5.70	0.94	3.7	-22.3	2156.27	-34.77			
87				4436	90.80	359.60	2496.50	2188.43	0.88	-0.63	3.9	-22.3	2188.27	-34.94			
88				4468	90.60	359.50	2496.10	2220.43	0.70	-0.63	4.0	-22.4	2220.26	-35.19			
89				4500	90.40	359.30	2495.83	2252.43	0.88	-0.62	3.9	-22.5	2252.26	-35.52			
90				4530	90.30	0.70	2495.64	2282.43	4.68	-0.33	3.8	-22.4	2282.26	-35.52			
91				4562	90.20	0.90	2495.50	2314.42	0.70	-0.31	3.6	-21.7	2314.26	-35.08			
92				4594	90.30	0.20	2495.36	2346.42	2.21	0.31	3.5	-21.3	2346.25	-34.77			
93				4626	90.10	0.20	2495.25	2378.41	0.63	-0.63	3.3	-21.0	2378.25	-34.66			
94				4657	90.20	359.00	2495.17	2409.41	3.88	0.32	3.0	-21.0	2409.25	-34.87			
95				4689	90.00	359.80	2495.11	2441.41	2.58	-0.63	2.8	-21.1	2441.25	-35.21			
96				4721	90.10	359.50	2495.09	2473.41	0.99	0.31	2.5	-21.2	2473.25	-35.40			
97				4753	90.20	359.00	2495.00	2505.41	1.59	0.31	2.3	-21.4	2505.25	-35.82			
98				4785	90.40	357.90	2494.84	2537.40	3.49	0.63	2.1	-22.1	2537.23	-36.69			
99				4816	90.30	358.40	2494.65	2568.39	1.64	-0.32	2.0	-22.9	2568.22	-37.69			
100				4848	90.40	357.70	2494.45	2600.38	2.21	0.31	1.9	-23.8	2600.20	-38.78			
101				4879	90.30	358.20	2494.26	2631.36	1.64	-0.32	1.8	-24.7	2631.18	-39.89			

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DIP1 =		0.56		deg		= 90.56 deg		0.56 deg		= 90.56 deg								
TARGET1 =		2,489		ft		TVD		2,476		ft		TVD						
VS1 =		3,403		ft				4,615		ft								
								DECLINATION= 7.86				DIRECTION= 359.67						
					Targets		2476		4615						4614.9		-26.8	
SVY #		Slide rotate	Tool Face	MEASURED DEPTH	INCL (DRIFT)	AZIMUTH (DIR)	VERTICAL DEPTH	VERTICAL SECTION	DLS/ 100	ACTUAL BUR	ABOVE(+) BELOW(-)	RIGHT(+) LEFT(-)	NORTH(+) SOUTH(-)	EAST(+) WEST(-)				
102				4909	90.50	357.00	2494.05	2661.34	4.06	0.67	1.7	-25.8	2661.15	-41.14				
103				4941	90.50	356.50	2493.77	2693.30	1.56	0.00	1.7	-27.4	2693.10	-42.96				
104		10'	90R	4971	90.30	357.50	2493.56	2723.27	3.40	-0.67	1.6	-28.8	2723.05	-44.53				
105				5001	90.00	358.40	2493.48	2753.25	3.16	-1.00	1.4	-29.7	2753.04	-45.60				
106		10'	90R	5032	90.40	358.80	2493.38	2784.25	1.82	1.29	1.2	-30.3	2784.03	-46.36				
107		2'	90R	5063	90.30	359.60	2493.19	2815.24	2.60	-0.32	1.1	-30.6	2815.02	-46.79				
108				5093	90.10	359.10	2493.08	2845.24	1.80	-0.67	0.9	-30.7	2845.02	-47.13				
109				5125	89.80	357.90	2493.11	2877.24	3.87	-0.94	0.5	-31.4	2877.01	-47.97				
110				5155	89.30	358.60	2493.35	2907.23	2.87	-1.67	0.0	-32.1	2906.99	-48.88				
111		11'	70R	5187	89.60	359.60	2493.65	2939.22	3.26	0.94	-0.6	-32.5	2938.99	-49.39				
112		4'	70R	5218	89.40	359.80	2493.92	2970.22	0.91	-0.65	-1.2	-32.4	2969.99	-49.55				
113		6'	60R	5248	89.60	1.40	2494.19	3000.22	5.37	0.67	-1.7	-32.0	2999.98	-49.24				
114				5279	89.50	1.40	2494.43	3031.20	0.32	-0.32	-2.3	-31.0	3030.97	-48.48				
115				5311	89.40	1.00	2494.74	3063.19	1.29	-0.31	-2.9	-30.2	3062.96	-47.81				
116		10'	HS	5342	90.70	1.20	2494.71	3094.18	4.24	4.19	-3.2	-29.4	3093.96	-47.21				
117				5372	91.00	1.00	2494.26	3124.16	1.20	1.00	-3.0	-28.6	3123.95	-46.64				
118				5404	90.80	1.00	2493.76	3156.15	0.63	-0.63	-2.8	-27.9	3155.94	-46.08				

Directional Drilling Company

HORIZONTAL SURVEY PROGRAM

MINIMUM CURVATURE CALCULATIONS(SPE-3362)

OPERATOR:		Nadel & Gussman HEYCO						START:	START: #####									
WELL:		Texas Eagle #1H						FINISH:	FINISH:									
LOCATION:		Eddy Co, NM						INFORMATION PROVIDED B DDC										
JOB NO:		WT-12773						HORIZONTAL COORDINATOR: Z. Barbre/D. Foster										
DIP1 =		0.56		deg		= 90.56		deg		0.56		deg		= 90.56		deg		
TARGET1 =		2,489		ft TVD						2,476		ft TVD						
VS1 =		3,403		ft						4,615		ft						
								DECLINATION= 7.86				DIRECTION= 359.67						
					Targets		2476		4615						4614.9		-26.8	
SVY #		Slide rotate	Tool Face	MEASURED DEPTH	INCL (DRIFT)	AZIMUTH (DIR)	VERTICAL DEPTH	VERTICAL SECTION	DLS/ 100	ACTUAL BUR	ABOVE(+) BELOW(-)	RIGHT(+) LEFT(-)	NORTH(+) SOUTH(-)	EAST(+) WEST(-)				
119				5435	91.10	1.00	2493.25	3187.14	0.97	0.97	-2.6	-27.2	3186.93	-45.54				
120				5465	91.50	1.60	2492.57	3217.12	2.40	1.33	-2.2	-26.3	3216.91	-44.86				
121				5496	91.50	1.40	2491.75	3248.09	0.64	0.00	-1.7	-25.3	3247.89	-44.05				
122				5527	91.40	1.00	2490.97	3279.07	1.33	-0.32	-1.3	-24.5	3278.88	-43.40				
123				5557	91.30	0.90	2490.26	3309.06	0.47	-0.33	-0.8	-23.8	3308.86	-42.90				
124				5589	91.10	0.90	2489.59	3341.04	0.63	-0.63	-0.5	-23.2	3340.85	-42.40				
125				5620	91.10	0.70	2489.00	3372.03	0.65	0.00	-0.2	-22.5	3371.84	-41.96				
126				5651	91.00	0.30	2488.43	3403.02	1.33	-0.32	0.1	-22.1	3402.84	-41.69				
127				5683	91.00	360.00	2487.87	3435.01	0.94	0.00	0.3	-21.8	3434.83	-41.61				
128				5713	91.10	360.00	2487.32	3465.01	0.33	0.33	0.6	-21.7	3464.83	-41.61				
129				5744	90.80	1.00	2486.81	3496.00	3.37	-0.97	0.8	-21.2	3495.82	-41.34				
130				5776	90.80	1.00	2486.36	3527.99	0.00	0.00	0.9	-20.5	3527.81	-40.78				
131				5807	90.60	0.90	2485.98	3558.98	0.72	-0.65	1.0	-19.8	3558.81	-40.27				
132				5837	90.70	0.50	2485.64	3588.97	1.37	0.33	1.0	-19.2	3588.80	-39.90				
133				5869	90.90	0.70	2485.20	3620.97	0.88	0.63	1.2	-18.7	3620.80	-39.57				
134				5900	90.90	0.70	2484.71	3651.96	0.00	0.00	1.4	-18.2	3651.79	-39.19				
135				5930	91.00	0.50	2484.21	3681.95	0.75	0.33	1.6	-17.7	3681.79	-38.87				

Directional Drilling Company

HORIZONTAL SURVEY PROGRAM

MINIMUM CURVATURE CALCULATIONS(SPE-3362)

OPERATOR: Nadel & Gussman HEYCO				START: START: #####									
WELL: Texas Eagle #1H				FINISH: FINISH:									
LOCATION: Eddy Co, NM				INFORMA INFORMATION PROVIDED B DDC									
JOB NO: WT-12773				HORIZONTAL COORDINATOR: Z. Barbre/D. Foster									
DIP1 = 0.56 deg = 90.56 deg				0.56 deg = 90.56 deg									
TARGET1 = 2,489 ft TVD				2,476 ft TVD									
VS1 = 3,403 ft				4,615 ft									
				DECLINATION= 7.86		DIRECTIO 359.67							
				Targets	2476	4615		4614.9	-26.8				
SVY #	Slide rotate	Tool Face	MEASURED DEPTH	INCL (DRIFT)	AZIMUTH (DIR)	VERTICAL DEPTH	VERTICAL SECTION	DLS/ 100	ACTUAL BUR	ABOVE(+) BELOW(-)	RIGHT(+) LEFT(-)	NORTH(+) SOUTH(-)	EAST(+) WEST(-)
136			5961	91.00	0.20	2483.67	3712.94	0.97	0.00	1.8	-17.3	3712.78	-38.68
137			5991	90.80	359.80	2483.20	3742.94	1.49	-0.67	2.0	-17.1	3742.78	-38.68
138			6022	90.20	0.90	2482.93	3773.93	4.04	-1.94	1.9	-16.8	3773.77	-38.49
139			6054	90.30	1.40	2482.79	3805.92	1.59	0.31	1.8	-15.9	3805.77	-37.85
140			6084	90.30	1.00	2482.63	3835.91	1.33	0.00	1.6	-15.1	3835.76	-37.22
141			6115	90.00	0.90	2482.55	3866.90	1.02	-0.97	1.4	-14.4	3866.76	-36.71
142			6147	90.40	0.70	2482.44	3898.90	1.40	1.25	1.2	-13.8	3898.75	-36.26
143			6176	90.10	0.20	2482.31	3927.89	2.01	-1.03	1.1	-13.4	3927.75	-36.03
144			6207	89.60	0.30	2482.39	3958.89	1.64	-1.61	0.7	-13.1	3958.75	-35.90
145			6238	89.60	0.70	2482.61	3989.89	1.29	0.00	0.2	-12.6	3989.75	-35.63
146			6270	89.20	1.00	2482.94	4021.88	1.56	-1.25	-0.5	-12.0	4021.74	-35.15
147			6302	90.30	0.90	2483.08	4053.87	3.45	3.44	-0.9	-11.3	4053.74	-34.62
148			6334	90.10	0.90	2482.97	4085.86	0.63	-0.63	-1.1	-10.6	4085.73	-34.12
149			6366	90.80	1.00	2482.72	4117.85	2.21	2.19	-1.2	-9.9	4117.73	-33.59
150			6398	90.80	0.90	2482.27	4149.84	0.31	0.00	-1.1	-9.2	4149.72	-33.06
151			6430	91.00	0.70	2481.77	4181.83	0.88	0.63	-0.9	-8.5	4181.71	-32.61
152			6462	90.50	0.30	2481.35	4213.83	2.00	-1.56	-0.8	-8.1	4213.71	-32.33

Directional Drilling Company

HORIZONTAL SURVEY PROGRAM

MINIMUM CURVATURE CALCULATIONS(SPE-3362)

OPERATOR:		Nadel & Gussman HEYCO						START		START: #####							
WELL:		Texas Eagle #1H						FINISH:		FINISH:							
LOCATION:		Eddy Co, NM						INFORMA		INFORMATION PROVIDED B DDC							
JOB NO:		WT-12773								HORIZONTAL COORDINATOR: Z. Barbre/D. Foster							
DIP1 =		0.56		deg		= 90.56 deg				0.56 deg = 90.56 deg							
TARGET1 =		2,489		ft		TVD				2,476 ft		TVD					
VS1 =		3,403		ft						4,615 ft							
								DECLINATION= 7.86				DIRECTION: 359.67					
				Targets		2476		4615						4614.9		-26.8	
SVY	Slide	Tool	MEASURED	INCL	AZIMUTH	VERTICAL	VERTICAL	DLS/	ACTUAL	ABOVE(+)	RIGHT(+)	NORTH(+)	EAST(+)				
#	rotate	Face	DEPTH	(DRIFT)	(DIR)	DEPTH	SECTION	100	BUR	BELOW(-)	LEFT(-)	SOUTH(-)	WEST(-)				
153			6494	90.80	0.50	2480.99	4245.82	1.13	0.94	-0.7	-7.7	4245.71	-32.11				
154			6526	91.70	1.20	2480.29	4277.81	3.56	2.81	-0.3	-7.0	4277.69	-31.64				
155			6557	91.60	1.40	2479.40	4308.78	0.72	-0.32	0.2	-6.1	4308.67	-30.93				
156			6589	92.20	1.40	2478.34	4340.75	1.88	1.88	1.0	-5.2	4340.65	-30.15				
157			6621	91.70	1.00	2477.25	4372.72	2.00	-1.56	1.8	-4.3	4372.62	-29.48				
158			6652	91.40	1.00	2476.41	4403.70	0.97	-0.97	2.3	-3.6	4403.61	-28.94				
159			6684	91.30	0.70	2475.66	4435.68	0.99	-0.31	2.7	-2.9	4435.59	-28.47				
160			6715	91.30	0.50	2474.95	4466.67	0.64	0.00	3.1	-2.4	4466.58	-28.14				
161			6747	90.70	0.20	2474.40	4498.66	2.10	-1.87	3.4	-2.0	4498.58	-27.95				
162			6779	90.80	0.50	2473.98	4530.66	0.99	0.31	3.5	-1.7	4530.57	-27.75				
163			6811	91.00	0.50	2473.47	4562.65	0.63	0.63	3.7	-1.2	4562.57	-27.47				
TD			6861	91.00	0.50	2472.60	4612.64	0.00	0.00	4.1	-0.5	4612.56	-27.04				