

STATE OF NEW MEXICO
ENERGY, MINERALS AND NATURAL
RESOURCES DEPARTMENT
OIL CONSERVATION

CASE #: 14308

EXHIBIT F

WELL NAME AND NUMBER Crow Flat Fed. #1

LOCATION Section 30, T16S, R28E, Eddy County, NM
(New Mexico give U.S.T&R: Texas give S, BLK, SURV. and TWP)

OPERATOR Eagle Oil & Gas Co.

DRILLING CONTRACTOR MORANCO

The undersigned hereby certifies that he is an authorized representative of the drilling contractor who drilled the above-described well and that he has conducted deviation tests and obtained the following results:

Degrees and Depth	Degrees and Depth	Degrees and Depth	Degrees and Depth
<u>1/2</u> <u>140</u>	<u>3/4</u> <u>3807</u>	<u>2</u> <u>8250</u>	
<u>3/4</u> <u>280</u>	<u>1 1/4</u> <u>4125</u>	<u>1 3/4</u> <u>8647</u>	
<u>1</u> <u>425</u>	<u>1 1/4</u> <u>4392</u>	<u>1 3/4</u> <u>8950</u>	
<u>3/4</u> <u>670</u>	<u>1 1/2</u> <u>4755</u>	<u>1 1/2</u> <u>9181</u>	
<u>1</u> <u>940</u>	<u>1 1/2</u> <u>5039</u>	<u>1 3/4</u> <u>9392</u>	
<u>3/4</u> <u>1238</u>	<u>1 1/2</u> <u>5339</u>	<u>2</u> <u>9635</u>	
<u>1</u> <u>1488</u>	<u>2 1/4</u> <u>5668</u>		
<u>1/2</u> <u>2150</u>	<u>1/4</u> <u>5886</u>		
<u>1/2</u> <u>2488</u>	<u>1/4</u> <u>6245</u>		
<u>3/4</u> <u>2745</u>	<u>1/2</u> <u>6760</u>		
<u>1/2</u> <u>3060</u>	<u>3/4</u> <u>7285</u>		
<u>3/4</u> <u>3370</u>	<u>3/4</u> <u>7757</u>		

Drilling Contractor MORANCO

By

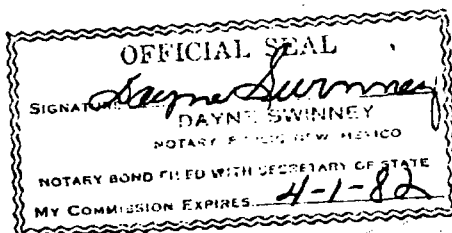
Jerry Gilbert
Jerry Gilbert, Vice President Engineering

Subscribed and sworn to before me this 4th day of September 1980

Oil Conservation Division

Case# 14308

Exhibit F



Client : Eagle O&G
Well : Crow Flat Fed. #1
Location : Eddy Co, NM
License :

Page: 1
Date : 4/8/2009
File :

UWI #:

Comment : VS = Maximum Displacement to North

Vertical Section Calculated Along Azimuth 0.00°

KB Elevation = 0.00ft

	MD ft	Inc deg	Azi deg	TVD ft	North ft	East ft	V'Sect ft	D'Leg °/100	Build °/100	Turn °/100
0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1	140.00	0.50	0.00	140.00	0.61	0.00	0.61	0.36	0.36	0.00
2	280.00	0.75	0.00	279.99	2.14	0.00	2.14	0.18	0.18	0.00
3	425.00	1.00	0.00	424.97	4.35	0.00	4.35	0.17	0.17	0.00
4	670.00	0.75	0.00	669.94	8.09	0.00	8.09	0.10	-0.10	0.00
5	940.00	1.00	0.00	939.91	12.22	0.00	12.22	0.09	0.09	0.00
6	1238.00	0.75	0.00	1237.88	16.77	0.00	16.77	0.08	-0.08	0.00
7	1488.00	1.00	0.00	1487.85	20.59	0.00	20.59	0.10	0.10	0.00
8	2150.00	0.50	0.00	2149.79	29.25	0.00	29.25	0.08	-0.08	0.00
9	2488.00	0.50	0.00	2487.78	32.20	0.00	32.20	0.00	0.00	0.00
10	2745.00	0.75	0.00	2744.76	35.00	0.00	35.00	0.10	0.10	0.00
11	3060.00	0.50	0.00	3059.74	38.44	0.00	38.44	0.08	-0.08	0.00
12	3370.00	0.75	0.00	3369.72	41.82	0.00	41.82	0.08	0.08	0.00
13	3807.00	0.75	0.00	3806.69	47.54	0.00	47.54	0.00	0.00	0.00
14	4125.00	1.25	0.00	4124.64	53.09	0.00	53.09	0.16	0.16	0.00
15	4392.00	1.25	0.00	4391.57	58.92	0.00	58.92	0.00	0.00	0.00
16	4755.00	1.50	0.00	4754.47	67.63	0.00	67.63	0.07	0.07	0.00
17	5039.00	1.50	0.00	5038.37	75.06	0.00	75.06	0.00	0.00	0.00
18	5339.00	1.50	0.00	5338.27	82.91	0.00	82.91	0.00	0.00	0.00
19	5668.00	2.25	0.00	5667.09	93.68	0.00	93.68	0.23	0.23	0.00
20	5886.00	0.25	0.00	5885.03	98.43	0.00	98.43	0.92	-0.92	0.00
21	6245.00	0.25	0.00	6244.02	100.00	0.00	100.00	0.00	0.00	0.00
22	6760.00	0.50	0.00	6759.01	103.37	0.00	103.37	0.05	0.05	0.00
23	7285.00	0.75	0.00	7283.98	109.10	0.00	109.10	0.05	0.05	0.00
24	7757.00	0.75	0.00	7755.94	115.28	0.00	115.28	0.00	0.00	0.00
25	8250.00	2.00	0.00	8248.79	127.11	0.00	127.11	0.25	0.25	0.00
26	8647.00	1.75	0.00	8645.57	140.09	0.00	140.09	0.06	-0.06	0.00
27	8950.00	1.75	0.00	8948.43	149.35	0.00	149.35	0.00	0.00	0.00
28	9181.00	1.50	0.00	9179.34	155.90	0.00	155.90	0.11	-0.11	0.00
29	9392.00	1.75	0.00	9390.26	161.88	0.00	161.88	0.12	0.12	0.00
30	9635.00	2.00	0.00	9633.13	169.83	0.00	169.83	0.10	0.10	0.00

Bottom Hole Closure 169.83ft Along Azimuth 0.00°

Oil Conservation Division

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Exhibit F

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Lucky Wolf "30" Federal Com # 2H
2,310' FSL & 100' FWL, Unit L
Sec. 30, T16S, R28E, Eddy Co., NM

Survey Report

Vertical Section Plane: 269.50°	Total Correction: 8.16° East to Grid
Calculation Method: Minimum Curvature	Survey Reference: Wellhead
North Aligned to: Grid North	Well: DONNER "30" FEDERAL #3 (PILOT)
RKB: 18 FT. KELLY BUSHINGS TO GROUND LEVEL.	FIELD: DOG CANYON; WOLFCAMP.

Measured Depth (ft)	Inclination (deg)	Azimuth (deg)	TVD (ft)	Course Length (ft)	Vertical Section (ft)	Rect Co-ord North (ft)	Rect Co-ord East (ft)	Closure Distance (ft)	Closure Direction (deg)	Dog-leg Severity (dg/hft)	Temp (deg F)
THE FOLLOWING ARE SCIENTIFIC GYRO SURVEYS.											
100.00	0.59	185.01	100.00	0.00	0.05	0.51 S	0.05 W	0.52	185.29	0.00	
200.00	0.60	197.20	199.99	100.00	0.26	1.53 S	0.25 W	1.55	189.20	0.13	
300.00	0.60	186.66	299.99	100.00	0.49	2.55 S	0.46 W	2.59	190.30	0.11	
400.00	0.56	186.80	399.98	100.00	0.61	3.55 S	0.58 W	3.60	189.30	0.04	
500.00	0.59	192.75	499.98	100.00	0.79	4.54 S	0.75 W	4.60	189.42	0.07	
600.00	0.47	204.30	599.97	100.00	1.08	5.42 S	1.04 W	5.52	190.82	0.16	
700.00	0.41	203.45	699.97	100.00	1.40	6.12 S	1.35 W	6.27	192.41	0.06	
800.00	0.36	253.09	799.97	100.00	1.85	6.54 S	1.79 W	6.78	195.31	0.33	
900.00	0.34	258.53	899.96	100.00	2.44	6.69 S	2.38 W	7.10	199.59	0.04	
1000.00	0.41	273.23	999.96	100.00	3.09	6.73 S	3.03 W	7.38	204.24	0.12	
1100.00	0.37	283.67	1099.96	100.00	3.76	6.63 S	3.70 W	7.59	209.16	0.08	
1200.00	0.46	283.26	1199.96	100.00	4.46	6.46 S	4.40 W	7.82	214.27	0.09	
1300.00	0.47	286.27	1299.95	100.00	5.24	6.26 S	5.19 W	8.13	219.67	0.03	
1400.00	0.54	285.18	1399.95	100.00	6.09	6.02 S	6.04 W	8.52	225.09	0.07	
1500.00	0.49	282.10	1499.95	100.00	6.96	5.80 S	6.91 W	9.02	229.97	0.06	
1600.00	0.50	281.20	1599.94	100.00	7.81	5.63 S	7.76 W	9.58	234.02	0.01	
1700.00	0.45	273.38	1699.94	100.00	8.62	5.52 S	8.58 W	10.20	237.22	0.08	
1800.00	0.54	296.50	1799.94	100.00	9.44	5.29 S	9.39 W	10.78	240.61	0.22	
1900.00	0.72	294.83	1899.93	100.00	10.42	4.81 S	10.38 W	11.44	245.12	0.18	
2000.00	0.75	298.38	1999.92	100.00	11.56	4.24 S	11.53 W	12.28	249.81	0.05	
2100.00	0.69	293.60	2099.91	100.00	12.69	3.69 S	12.66 W	13.18	253.75	0.09	
2200.00	0.73	300.30	2199.91	100.00	13.78	3.13 S	13.76 W	14.11	257.20	0.09	
2300.00	0.69	303.66	2299.90	100.00	14.83	2.47 S	14.81 W	15.01	260.53	0.06	
2400.00	0.66	302.76	2399.89	100.00	15.81	1.82 S	15.79 W	15.90	263.41	0.03	
2500.00	0.65	304.53	2499.88	100.00	16.76	1.19 S	16.75 W	16.79	265.93	0.02	
2600.00	0.52	313.19	2599.88	100.00	17.55	0.56 S	17.54 W	17.55	268.17	0.16	
2700.00	0.44	306.20	2699.88	100.00	18.18	0.02 S	18.18 W	18.18	269.93	0.10	
2800.00	0.38	296.60	2799.87	100.00	18.79	0.35 N	18.79 W	18.79	271.08	0.09	
2900.00	0.34	292.81	2899.87	100.00	19.35	0.62 N	19.36 W	19.37	271.82	0.05	
3000.00	0.42	263.64	2999.87	100.00	19.99	0.69 N	20.00 W	20.01	271.98	0.21	
3100.00	0.38	260.79	3099.87	100.00	20.68	0.60 N	20.69 W	20.70	271.65	0.05	
3200.00	0.39	255.24	3199.86	100.00	21.34	0.46 N	21.35 W	21.35	271.23	0.04	
3300.00	0.40	254.62	3299.86	100.00	22.01	0.28 N	22.01 W	22.01	270.72	0.01	
3400.00	0.43	253.41	3399.86	100.00	22.71	0.08 N	22.71 W	22.71	270.20	0.03	
3500.00	0.47	263.08	3499.86	100.00	23.48	0.08 S	23.48 W	23.48	269.81	0.09	
3600.00	0.45	258.65	3599.85	100.00	24.27	0.20 S	24.27 W	24.27	269.52	0.04	
3700.00	0.44	265.33	3699.85	100.00	25.04	0.31 S	25.04 W	25.04	269.28	0.05	
3800.00	0.47	270.55	3799.85	100.00	25.83	0.34 S	25.83 W	25.83	269.24	0.05	
3900.00	0.47	271.12	3899.84	100.00	26.65	0.33 S	26.65 W	26.65	269.29	0.01	
4000.00	0.51	289.08	3999.84	100.00	27.48	0.18 S	27.48 W	27.48	269.63	0.16	
4100.00	0.59	289.09	4099.84	100.00	28.38	0.14 N	28.39 W	28.39	270.28	0.08	
4200.00	0.62	288.06	4199.83	100.00	29.38	0.47 N	29.39 W	29.39	270.93	0.03	
4300.00	0.57	295.72	4299.82	100.00	30.34	0.86 N	30.35 W	30.36	271.62	0.09	
4400.00	0.63	290.72	4399.82	100.00	31.30	1.27 N	31.31 W	31.34	272.32	0.08	
4500.00	0.58	297.81	4499.81	100.00	32.26	1.70 N	32.27 W	32.32	273.01	0.09	
4600.00	0.50	296.50	4599.81	100.00	33.09	2.13 N	33.11 W	33.18	273.68	0.08	
4700.00	0.50	302.51	4699.81	100.00	33.85	2.56 N	33.87 W	33.97	274.32	0.05	
4800.00	0.46	299.09	4799.80	100.00	34.56	2.99 N	34.59 W	34.72	274.94	0.05	
4900.00	0.61	285.10	4899.80	100.00	35.42	3.32 N	35.45 W	35.61	275.55	0.20	
5000.00	0.61	281.67	4999.79	100.00	36.46	3.57 N	36.49 W	36.66	275.59	0.04	
5100.00	0.46	273.10	5099.79	100.00	37.38	3.70 N	37.41 W	37.59	275.65	0.17	
5200.00	0.58	271.02	5199.78	100.00	38.28	3.73 N	38.32 W	38.50	275.56	0.12	
5300.00	0.52	256.20	5299.78	100.00	39.23	3.63 N	39.27 W	39.43	275.28	0.15	
5400.00	0.27	222.25	5399.78	100.00	39.83	3.35 N	39.86 W	40.00	274.80	0.33	
5500.00	0.27	235.78	5499.78	100.00	40.19	3.04 N	40.22 W	40.33	274.32	0.06	
5600.00	0.35	197.84	5599.77	100.00	40.48	2.62 N	40.51 W	40.59	273.70	0.21	
5700.00	0.59	176.67	5699.77	100.00	40.55	1.81 N	40.57 W	40.61	272.56	0.29	
5800.00	0.67	173.76	5799.76	100.00	40.47	0.72 N	40.48 W	40.48	271.02	0.09	
TIED INTO SCIENTIFIC GYRO SURVEY @ 5874'MD.											
5874.00	0.61	190.38	5873.76		40.50	0.10 S	40.50 W	40.50	269.86		
THE FOLLOWING ARE PATHFINDER MWD SURVEYS.											
6057.00	0.44	169.89	6056.75	183.00	40.57	1.75 S	40.55 W	40.59	267.53	0.14	101.02
6079.00	0.53	164.62	6078.75	22.00	40.53	1.93 S	40.51 W	40.56	267.27	0.46	101.02
6111.00	0.53	155.64	6110.75	32.00	40.43	2.21 S	40.41 W	40.47	266.87	0.26	101.02
6143.00	1.32	270.72	6142.75	32.00	40.74	2.34 S	40.72 W	40.78	266.71	5.05	101.02
6175.00	6.77	282.86	6174.66	32.00	42.94	1.91 S	42.93 W	42.97	267.45	17.15	104.64
6207.00	13.19	282.84	6206.16	32.00	48.33	0.68 S	48.33 W	48.34	269.19	20.06	104.64
6239.00	19.70	282.00	6236.83	32.00	57.16	1.25 N	57.18 W	57.19	271.26	20.36	101.02
6271.00	26.82	280.94	6266.21	32.00	69.52	3.75 N	69.55 W	69.66	273.08	22.29	101.02
6302.00	33.59	279.17	6292.99	31.00	84.85	6.44 N	84.91 W	85.15	274.34	22.03	101.02

Survey Report

Vertical Section Plane: 269.50°	Total Correction: 8.16° East to Grid
Calculation Method: Minimum Curvature	Survey Reference: Wellhead
North Aligned to: Grid North	Well: DONNER "30" FEDERAL #3 (PILOT)
RKB: 18 FT. KELLY BUSHINGS TO GROUND LEVEL.	FIELD: DOG CANYON; WOLFCAMP.

Measured	Inclination	Azimuth	TVD	Course	Vertical	Rect Co-ord	Rect Co-ord	Closure	Closure	Dog-leg	Temp
Depth	(deg)	(deg)	(ft)	Length	Section	North	East	Distance	Direction	Severity	(deg F)
(ft)				(ft)	(ft)	(ft)	(ft)	(ft)	(deg)	(dg/hft)	