

Results of Directional Survey

API number:	30-025-40484		
OGRID:		Operator:	EOG RESOURCES INC
		Property:	DIAMOND 31 FEDERAL COM # 2H

surface	ULSTR:	D	31	T 24S	R 34E
				50 FNL	430 FWL

BH Loc	ULSTR:	E	06	T 25S	R 34E
16930	MD	9504.7	TVD	2386 FNL	554 FWL
				7666 FNL	

Top Perf/OH	ULSTR:	D	31	T 24S	R 34E
9690	MD	9504.7	TVD	434 FNL	444 FWL

Bot Perf/OH	ULSTR:	E	06	T 25S	R 34E
16829	MD	9504.2	TVD	2285 FNL	554 FWL
				7565 FNL	

	MD	N/S	E/W	VD
	9664	-358.55	13.56	9499.01
TOP PERFS/OH	9690	-383.90	14.31	9504.72
	9694	-387.80	14.43	9505.60
	16739	-7425.25	126.72	9503.93
BOT PERFS/OH	16829	-7515.21	124.13	9504.17
	16833	-7519.21	124.01	9504.18

NEXT TO LAST	16890	-7576.20	123.44	9504.46
LAST READING	16930	-7616.20	123.78	9504.74
TD	16930	-7616.20	123.78	9504.74

Surface Location	50 FNL	430 FW
Projected BHL	7666 FNL	554 FW
Location of		
Top Perfs/OH	434 FNL	444 FW
Bottom Perfs/OH	7565 FNL	554 FW

SUMMARY of Subsurface Locations

Surface Location	D-31-24S-34E	50 FNL	430 FW	Vert. Depth
Top Perfs/OH	D-31-24S-34E	434 FNL	444 FW	9504.72
Bottom Perfs/OH	E-06-25S-34E	7565 FNL	554 FW	9504.17
Projected TD	E-06-25S-34E	7666 FNL	554 FW	9504.74

JUL 02 2013



EOG Diamond 31 Fed Com 2H Gyro+MWD from 0ft to 16930ft MD Survey Geodetic Report (Def Survey)



Report Date: February 14, 2013 - 09:21 AM
Client: Eog Resources
Field: NM Lea County (NAD 27)
Structure / Slot: EOG Diamond 31 Fed Com 2H / EOG Diamond 31 Fed Com 2H
Well: EOG Diamond 31 Fed Com 2H
Borehole: Original Borehole
UWI / API#: Unknown / Unknown
Survey Name: EOG Diamond 31 Fed Com 2H Gyro+MWD from 0ft to 16930ft MD
Survey Date: January 07, 2013
Tort / AHD / DDI / ERD Ratio: 208.208 * / 7687.278 ft / 6.455 / 0.808
Coordinate Reference System: NAD27 New Mexico State Plane, Eastern Zone, US Feet
Location Lat / Long: N 32° 10' 51.73463", W 103° 30' 56.31134"
Location Grid N/E Y/X: N 430543.300 RUS, E 752984.400 RUS
CRS Grid Convergence Angle: 0.4355 *
Grid Scale Factor: 0.99998239

Survey / DLS Computation: Minimum Curvature / Lubinski
Vertical Section Azimuth: 179.571 * (Grid North)
Vertical Section Origin: 0.000 ft, 0.000 ft
TVD Reference Datum: RKB
TVD Reference Elevation: 3530.600 ft above
Seabed / Ground Elevation: 3500.600 ft above
Magnetic Declination: 7.467 *
Total Gravity Field Strength: 998.4735mgn (9.80665 Based)
Total Magnetic Field Strength: 48423.101 nT
Magnetic Dip Angle: 60.077 *
Declination Date: January 07, 2013
Magnetic Declination Model: BGGM 2012
North Reference: Grid North
Grid Convergence Used: 0.4355 *
Total Corr Mag North->Grid North: 7.0314 *
Local Coord Referenced To: Structure Reference Point

Comments	MD (ft)	Incl (°)	Azim Grid (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	DLS (°/100ft)	Northing (RUS)	Easting (RUS)	Latitude (N/S ° ' '')	Longitude (E/W ° ' '')
SHL	0.00	0.00	0.00	0.00	0.00	0.00	0.00	N/A	430543.30	752984.40	N 32 10 51.73	W 103 30 56.31
	119.00	0.70	237.51	119.00	0.39	-0.39	-0.61	0.59	430542.91	752983.79	N 32 10 51.73	W 103 30 56.32
	219.00	0.65	234.69	218.99	1.03	-1.05	-1.59	0.06	430542.25	752982.81	N 32 10 51.72	W 103 30 56.33
	319.00	0.46	236.83	318.99	1.58	-1.59	-2.39	0.19	430541.71	752982.01	N 32 10 51.72	W 103 30 56.34
	419.00	0.82	244.37	418.98	2.10	-2.12	-3.37	0.37	430541.18	752981.03	N 32 10 51.71	W 103 30 56.35
	519.00	0.48	266.84	518.97	2.42	-2.46	-4.43	0.42	430540.84	752979.97	N 32 10 51.71	W 103 30 56.36
	619.00	0.29	277.09	618.97	2.41	-2.45	-5.10	0.20	430540.85	752979.30	N 32 10 51.71	W 103 30 56.37
	719.00	0.34	307.35	718.97	2.19	-2.24	-5.59	0.17	430541.06	752978.81	N 32 10 51.71	W 103 30 56.38
	819.00	0.25	312.26	818.97	1.86	-1.91	-5.99	0.09	430541.39	752978.41	N 32 10 51.72	W 103 30 56.38
	919.00	0.08	319.04	918.97	1.66	-1.71	-6.20	0.17	430541.59	752978.20	N 32 10 51.72	W 103 30 56.38
	1019.00	0.04	70.42	1018.97	1.60	-1.65	-6.21	0.10	430541.65	752978.19	N 32 10 51.72	W 103 30 56.38
Final Gyro	1119.00	0.18	166.16	1118.97	1.74	-1.79	-6.14	0.19	430541.51	752978.26	N 32 10 51.72	W 103 30 56.38
	1219.00	0.19	186.79	1218.97	2.06	-2.10	-6.12	0.07	430541.20	752978.28	N 32 10 51.71	W 103 30 56.38
	1314.00	0.10	59.30	1313.97	2.17	-2.22	-6.07	0.28	430541.08	752978.33	N 32 10 51.71	W 103 30 56.38
	1408.00	0.20	332.80	1407.97	1.98	-2.03	-6.07	0.23	430541.27	752978.33	N 32 10 51.71	W 103 30 56.38
	1504.00	0.30	336.00	1503.96	1.60	-1.65	-6.25	0.11	430541.65	752978.15	N 32 10 51.72	W 103 30 56.38
	1599.00	0.30	340.80	1598.96	1.14	-1.19	-6.43	0.03	430542.11	752977.97	N 32 10 51.72	W 103 30 56.39
	1692.00	0.50	355.30	1691.96	0.51	-0.55	-6.55	0.24	430542.75	752977.85	N 32 10 51.73	W 103 30 56.39
	1787.00	0.60	6.50	1786.96	-0.40	0.35	-6.52	0.15	430543.65	752977.88	N 32 10 51.74	W 103 30 56.39
	1882.00	0.50	3.60	1881.95	-1.31	1.26	-6.44	0.11	430544.56	752977.96	N 32 10 51.75	W 103 30 56.39
	1976.00	0.30	194.80	1975.95	-1.48	1.43	-6.48	0.85	430544.73	752977.92	N 32 10 51.75	W 103 30 56.39
	2071.00	0.30	220.90	2070.95	-1.05	1.00	-6.71	0.14	430544.30	752977.69	N 32 10 51.75	W 103 30 56.39
	2166.00	0.30	260.00	2165.95	-0.83	0.77	-7.11	0.21	430544.07	752977.29	N 32 10 51.74	W 103 30 56.39
	2261.00	0.50	292.40	2260.95	-0.94	0.89	-7.74	0.31	430544.19	752976.66	N 32 10 51.74	W 103 30 56.40
	2355.00	0.40	306.90	2354.94	-1.30	1.24	-8.38	0.16	430544.54	752976.02	N 32 10 51.75	W 103 30 56.41
	2450.00	0.40	319.40	2449.94	-1.76	1.69	-8.86	0.09	430544.99	752975.54	N 32 10 51.75	W 103 30 56.41
	2544.00	0.40	309.90	2543.94	-2.22	2.15	-9.33	0.07	430545.45	752975.07	N 32 10 51.76	W 103 30 56.42
	2638.00	0.40	321.70	2637.94	-2.69	2.62	-9.78	0.09	430545.92	752974.62	N 32 10 51.76	W 103 30 56.42
	2733.00	0.70	327.50	2732.93	-3.45	3.37	-10.30	0.32	430546.67	752974.10	N 32 10 51.77	W 103 30 56.43
	2827.00	0.90	317.00	2826.92	-4.48	4.39	-11.11	0.26	430547.69	752973.29	N 32 10 51.78	W 103 30 56.44
	2922.00	0.10	59.60	2921.92	-5.07	4.98	-11.55	0.98	430548.28	752972.85	N 32 10 51.78	W 103 30 56.45
	3015.00	0.50	103.20	3014.92	-5.01	4.93	-11.09	0.47	430548.23	752973.31	N 32 10 51.78	W 103 30 56.44
	3109.00	0.80	92.30	3108.91	-4.88	4.81	-10.03	0.34	430548.11	752974.37	N 32 10 51.78	W 103 30 56.43
	3204.00	0.40	92.30	3203.91	-4.84	4.77	-9.04	0.42	430548.07	752975.36	N 32 10 51.78	W 103 30 56.42
	3299.00	0.40	100.40	3298.90	-4.76	4.70	-8.38	0.06	430548.00	752976.02	N 32 10 51.78	W 103 30 56.41
	3392.00	0.70	105.60	3391.90	-4.54	4.48	-7.51	0.33	430547.78	752976.89	N 32 10 51.78	W 103 30 56.40
	3485.00	0.80	114.40	3484.89	-4.11	4.06	-6.37	0.18	430547.36	752978.03	N 32 10 51.78	W 103 30 56.39
	3580.00	0.60	161.70	3579.89	-3.36	3.32	-5.61	0.62	430546.62	752978.79	N 32 10 51.77	W 103 30 56.38
	3675.00	0.40	250.00	3674.88	-2.77	2.73	-5.77	0.75	430546.03	752978.63	N 32 10 51.76	W 103 30 56.38
	3769.00	0.40	265.80	3768.88	-2.64	2.59	-6.41	0.12	430545.89	752977.99	N 32 10 51.76	W 103 30 56.39
	3864.00	0.60	260.90	3863.88	-2.55	2.49	-7.23	0.22	430545.79	752977.17	N 32 10 51.76	W 103 30 56.40
	3958.00	0.80	260.20	3957.87	-2.36	2.30	-8.36	0.21	430545.60	752976.04	N 32 10 51.76	W 103 30 56.41
	4052.00	0.40	257.70	4051.86	-2.19	2.12	-9.33	0.43	430545.42	752975.07	N 32 10 51.76	W 103 30 56.42
	4147.00	0.30	173.00	4146.86	-1.88	1.80	-9.62	0.50	430545.10	752974.78	N 32 10 51.75	W 103 30 56.42
	4241.00	0.30	168.50	4240.86	-1.39	1.32	-9.54	0.03	430544.62	752974.86	N 32 10 51.75	W 103 30 56.42
	4335.00	0.30	168.60	4334.86	-0.91	0.84	-9.44	0.00	430544.14	752974.96	N 32 10 51.74	W 103 30 56.42
	4430.00	0.10	103.10	4429.86	-0.64	0.57	-9.31	0.29	430543.87	752975.09	N 32 10 51.74	W 103 30 56.42
	4524.00	1.00	72.20	4523.86	-0.87	0.81	-8.45	0.97	430544.11	752975.95	N 32 10 51.74	W 103 30 56.41
	4618.00	1.00	112.90	4617.84	-0.79	0.74	-6.92	0.74	430544.04	752977.48	N 32 10 51.74	W 103 30 56.39
	4712.00	0.90	238.40	4711.84	-0.08	0.03	-6.79	1.80	430543.33	752977.61	N 32 10 51.74	W 103 30 56.39
	4801.00	0.50	43.90	4800.83	0.00	-0.06	-7.12	1.56	430543.24	752977.28	N 32 10 51.73	W 103 30 56.39
Final Phoenix Survey	4896.00	1.20	95.00	4895.82	-0.20	0.16	-5.84	1.02	430543.46	752978.56	N 32 10 51.74	W 103 30 56.38
	4991.00	1.00	140.70	4990.81	0.54	-0.57	-4.32	0.92	430542.73	752980.08	N 32 10 51.73	W 103 30 56.36
	5181.00	0.22	156.62	5180.80	2.17	-2.19	-3.13	0.42	430541.11	752981.27	N 32 10 51.71	W 103 30 56.35
	5229.00	0.19	327.41	5228.80	2.18	-2.21	-3.13	0.85	430541.09	752981.27	N 32 10 51.71	W 103 30 56.35
	5418.00	0.25	199.09	5417.79	2.31	-2.33	-3.44	0.21	430540.97	752980.96	N 32 10 51.71	W 103 30 56.35
	5609.00	0.25	101.13	5608.79	2.78	-2.81	-3.16	0.20	430540.49	752981.24	N 32 10 51.71	W 103 30 56.35

Comments	MD (ft)	Incl (°)	Azim Grid (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	DLS (°/100ft)	Northing (ftUS)	Easting (ftUS)	Latitude (N/S ° ' '')	Longitude (E/W ° ' '')
	5798.00	0.27	265.76	5797.79	2.90	-2.92	-3.20	0.27	430540.38	752981.20	N 32 10 51.71	W 103 30 56.35
	5988.00	0.27	13.63	5987.79	2.49	-2.52	-3.54	0.23	430540.78	752980.86	N 32 10 51.71	W 103 30 56.35
	6178.00	0.05	264.19	6177.79	2.06	-2.09	-3.52	0.15	430541.21	752980.88	N 32 10 51.71	W 103 30 56.35
	6368.00	0.03	107.19	6367.79	2.09	-2.11	-3.56	0.04	430541.19	752980.84	N 32 10 51.71	W 103 30 56.35
	6558.00	0.05	350.31	6557.79	2.02	-2.05	-3.52	0.04	430541.25	752980.88	N 32 10 51.71	W 103 30 56.35
	6747.00	0.21	34.45	6746.79	1.66	-1.68	-3.34	0.09	430541.62	752981.06	N 32 10 51.72	W 103 30 56.35
	6936.00	0.32	56.81	6935.79	1.09	-1.11	-2.70	0.08	430542.19	752981.70	N 32 10 51.72	W 103 30 56.34
	7125.00	0.45	27.54	7124.78	0.14	-0.16	-1.92	0.12	430543.14	752982.48	N 32 10 51.73	W 103 30 56.33
	7315.00	0.57	49.61	7314.78	-1.12	1.12	-0.85	0.12	430544.42	752983.55	N 32 10 51.75	W 103 30 56.32
	7505.00	0.36	68.80	7504.77	-1.94	1.94	0.42	0.14	430545.24	752984.82	N 32 10 51.75	W 103 30 56.31
	7694.00	0.52	56.60	7693.76	-2.62	2.63	1.69	0.10	430545.93	752986.09	N 32 10 51.76	W 103 30 56.29
	7883.00	0.30	120.89	7882.76	-2.83	2.85	2.83	0.25	430546.15	752987.23	N 32 10 51.76	W 103 30 56.28
	8073.00	0.46	180.52	8072.76	-1.81	1.83	3.25	0.21	430545.13	752987.65	N 32 10 51.75	W 103 30 56.27
	8263.00	0.72	153.72	8262.75	0.03	0.00	3.77	0.20	430543.30	752988.17	N 32 10 51.73	W 103 30 56.27
	8453.00	0.26	133.68	8452.74	1.41	-1.37	4.61	0.25	430541.93	752989.01	N 32 10 51.72	W 103 30 56.26
	8643.00	0.53	70.78	8642.74	1.42	-1.38	5.78	0.25	430541.92	752990.16	N 32 10 51.72	W 103 30 56.24
	8832.00	0.98	62.46	8831.72	0.40	-0.34	8.02	0.24	430542.96	752992.42	N 32 10 51.73	W 103 30 56.22
	8916.00	1.02	71.72	8915.71	-0.15	0.22	9.36	0.20	430543.52	752993.76	N 32 10 51.74	W 103 30 56.20
	8952.00	0.98	50.11	8951.70	-0.45	0.52	9.90	1.05	430543.82	752994.30	N 32 10 51.74	W 103 30 56.20
	8999.00	0.85	116.97	8998.70	-0.54	0.62	10.52	2.16	430543.92	752994.92	N 32 10 51.74	W 103 30 56.19
	9031.00	2.24	147.44	9030.68	0.10	-0.02	11.07	4.90	430543.28	752995.47	N 32 10 51.73	W 103 30 56.18
	9062.00	4.86	164.67	9061.62	1.88	-1.79	11.74	9.03	430541.51	752996.14	N 32 10 51.72	W 103 30 56.17
	9094.00	7.27	170.44	9093.44	5.19	-5.10	12.44	7.76	430538.20	752996.84	N 32 10 51.68	W 103 30 56.17
	9126.00	10.25	173.86	9125.07	10.02	-9.93	13.08	9.45	430533.37	752997.48	N 32 10 51.64	W 103 30 56.16
	9157.00	14.51	175.66	9155.34	16.65	-16.54	13.67	13.80	430526.76	752998.07	N 32 10 51.57	W 103 30 56.15
	9189.00	19.00	175.93	9185.97	25.85	-25.74	14.34	14.03	430517.56	752998.74	N 32 10 51.48	W 103 30 56.15
	9220.00	23.04	177.57	9214.90	36.95	-36.84	14.96	13.17	430506.46	752999.36	N 32 10 51.37	W 103 30 56.14
	9252.00	26.79	179.91	9243.92	50.43	-50.31	15.23	12.11	430492.99	752999.63	N 32 10 51.24	W 103 30 56.14
	9284.00	30.88	181.57	9271.95	65.85	-65.74	15.02	13.02	430477.56	752999.42	N 32 10 51.08	W 103 30 56.14
	9315.00	34.36	181.94	9298.05	82.55	-82.44	14.51	11.24	430460.86	752998.91	N 32 10 50.92	W 103 30 56.15
	9347.00	37.73	181.00	9323.92	101.36	-101.26	14.03	10.67	430442.04	752998.43	N 32 10 50.73	W 103 30 56.16
	9378.00	40.66	180.75	9347.95	120.95	-120.85	13.73	9.47	430422.45	752998.13	N 32 10 50.54	W 103 30 56.16
	9410.00	43.89	181.21	9371.62	142.46	-142.37	13.36	10.14	430400.94	752997.76	N 32 10 50.32	W 103 30 56.17
	9441.00	47.66	181.62	9393.24	164.66	-164.57	12.81	12.20	430378.73	752997.21	N 32 10 50.11	W 103 30 56.18
	9473.00	51.70	180.96	9413.94	189.04	-188.96	12.26	12.72	430354.35	752996.66	N 32 10 49.86	W 103 30 56.19
	9503.00	55.48	180.44	9431.74	213.18	-213.10	11.97	12.68	430330.21	752996.37	N 32 10 49.63	W 103 30 56.19
	9536.00	59.59	179.38	9449.45	241.02	-240.93	12.02	12.75	430302.37	752996.42	N 32 10 49.35	W 103 30 56.19
	9568.00	63.76	179.07	9464.63	269.18	-269.09	12.40	13.06	430274.21	752996.80	N 32 10 49.07	W 103 30 56.19
	9598.00	66.73	179.72	9477.19	296.42	-296.33	12.69	10.09	430246.98	752997.09	N 32 10 48.80	W 103 30 56.19
	9632.00	70.61	179.35	9489.56	328.08	-327.99	12.95	11.46	430215.31	752997.35	N 32 10 48.49	W 103 30 56.19
	9664.00	75.02	178.38	9499.01	358.64	-358.55	13.56	14.08	430184.76	752997.96	N 32 10 48.19	W 103 30 56.19
	9694.00	79.60	178.19	9505.60	387.89	-387.80	14.43	15.28	430155.51	752998.83	N 32 10 47.90	W 103 30 56.18
	9727.00	84.94	178.37	9510.04	420.57	-420.47	15.41	16.19	430122.84	752999.81	N 32 10 47.57	W 103 30 56.17
	9759.00	88.97	179.56	9511.74	452.52	-452.41	15.99	13.13	430090.90	753000.39	N 32 10 47.26	W 103 30 56.17
	9790.00	90.45	178.82	9511.89	483.52	-483.41	16.43	5.34	430059.90	753000.83	N 32 10 46.95	W 103 30 56.16
	9813.00	91.17	179.09	9511.57	506.51	-506.40	16.85	3.34	430036.91	753001.25	N 32 10 46.72	W 103 30 56.16
	9908.00	89.76	180.29	9510.80	601.51	-601.39	17.36	1.95	429991.92	753001.76	N 32 10 45.78	W 103 30 56.16
	10003.00	89.55	182.25	9511.37	696.46	-696.36	15.26	2.07	429846.95	752999.66	N 32 10 44.84	W 103 30 56.20
	10098.00	90.28	180.84	9511.51	791.40	-791.33	12.70	1.67	429751.99	752997.10	N 32 10 43.90	W 103 30 56.23
	10192.00	90.55	180.30	9510.83	885.38	-885.32	11.76	0.64	429658.00	752996.16	N 32 10 42.97	W 103 30 56.25
	10287.00	90.48	179.70	9509.98	980.38	-980.31	11.76	0.64	429563.00	752996.16	N 32 10 42.03	W 103 30 56.26
	10382.00	90.41	180.18	9509.24	1075.37	-1075.31	11.86	0.51	429468.01	752996.28	N 32 10 41.09	W 103 30 56.27
	10477.00	90.03	180.88	9508.87	1170.36	-1170.31	10.98	0.84	429373.02	752995.38	N 32 10 40.15	W 103 30 56.29
	10572.00	89.79	180.09	9509.02	1265.34	-1265.30	10.18	0.87	429278.02	752994.58	N 32 10 39.21	W 103 30 56.30
	10667.00	88.97	180.18	9510.05	1360.33	-1360.30	9.95	0.87	429183.03	752994.35	N 32 10 38.27	W 103 30 56.32
	10761.00	90.72	179.73	9510.30	1454.33	-1454.29	10.03	1.92	429089.04	752994.43	N 32 10 37.34	W 103 30 56.32
	10856.00	90.27	178.74	9509.48	1549.32	-1549.28	11.30	1.14	428994.05	752995.69	N 32 10 36.40	W 103 30 56.32
	10951.00	90.48	179.00	9508.86	1644.31	-1644.26	13.17	0.35	428899.08	752997.57	N 32 10 35.46	W 103 30 56.30
	11045.00	91.07	180.07	9507.59	1738.30	-1738.24	13.93	1.30	428805.09	752998.33	N 32 10 34.53	W 103 30 56.30
	11140.00	90.55	181.65	9506.25	1833.26	-1833.22	12.51	1.75	428710.12	752996.91	N 32 10 33.59	W 103 30 56.33
	11235.00	89.83	182.08	9505.93	1928.18	-1928.17	9.41	0.88	428615.17	752993.81	N 32 10 32.65	W 103 30 56.37
	11330.00	89.79	182.71	9506.25	2023.07	-2023.08	5.44	0.66	428520.26	752989.84	N 32 10 31.72	W 103 30 56.43
	11425.00	89.73	181.53	9506.65	2117.97	-2118.02	1.93	1.24	428425.32	752986.33	N 32 10 30.78	W 103 30 56.48
	11520.00	90.00	180.45	9506.87	2212.94	-2213.00	0.29	1.17	428330.34	752984.69	N 32 10 29.84	W 103 30 56.50
	11614.00	89.86	179.71	9506.98	2306.94	-2307.00	0.16	0.80	428236.35	752984.56	N 32 10 28.91	W 103 30 56.51
	11709.00	89.97	179.08	9507.13	2401.94	-2401.99	1.16	0.67	428141.35	752985.56	N 32 10 27.97	W 103 30 56.51
	11804.00	90.58	178.58	9506.67	2496.93	-2496.97	3.10	0.83	428046.38	752987.50	N 32 10 27.03	W 103 30 56.50
	11899.00	90.62	178.07	9505.67	2591.90	-2591.93	5.88	0.54	427951.42	752990.28	N 32 10 26.09	W 103 30 56.47
	11994.00	90.52	178.03	9504.73	2686.86	-2686.87	9.11	0.11	427856.49	752993.51	N 32 10 25.15	W 103 30 56.44
	12089.00	89.93	177.75	9504.36	2781.82	-2781.80	12.61	0.69	427761.55	752997.01	N 32 10 24.21	W 103 30 56.41
	12183.00	89.48	177.17	9504.84	2875.75	-2875.71	16.77	0.78	427667.65	753001.17	N 32 10 23.28	W 103 30 56.37
	12278.00	89.79	177.63	9505.45	2970.68	-2970.61	21.08	0.58	427572.75	753005.48	N 32 10 22.34	W 103 30 56.33
	12372.00	89.90	177.83	9505.70	3064.63	-3064.53	24.81	0.24	427478.83	753009.20	N 32 10 21.41	W 103 30 56.29
	12467.00	90.10	178.22	9505.70	3159.60	-3159.48	28.08	0.46	427383.89	753012.48	N 32 10 20.47	W 103 30 56.26
	12562.00	89.72	177.62	9505.85	3254.56	-3254.41	31.53	0.75	427288.95	753015.93	N 32 10 19.53	W 103 30 56.23
	12657.00	89.76	178.69	9506.28	3349.53	-3349.36	34.59	1.13	427194.01	753018.99	N 32 10 18.59	W 103 30 56.21
	12752.00	89.69	178.73	9506.74	3444.51	-3444.34	36.72	0.08	427099.03	753021.12	N 32 10 17.65	W 103 30 56.19
	12847.00	89.83	17									

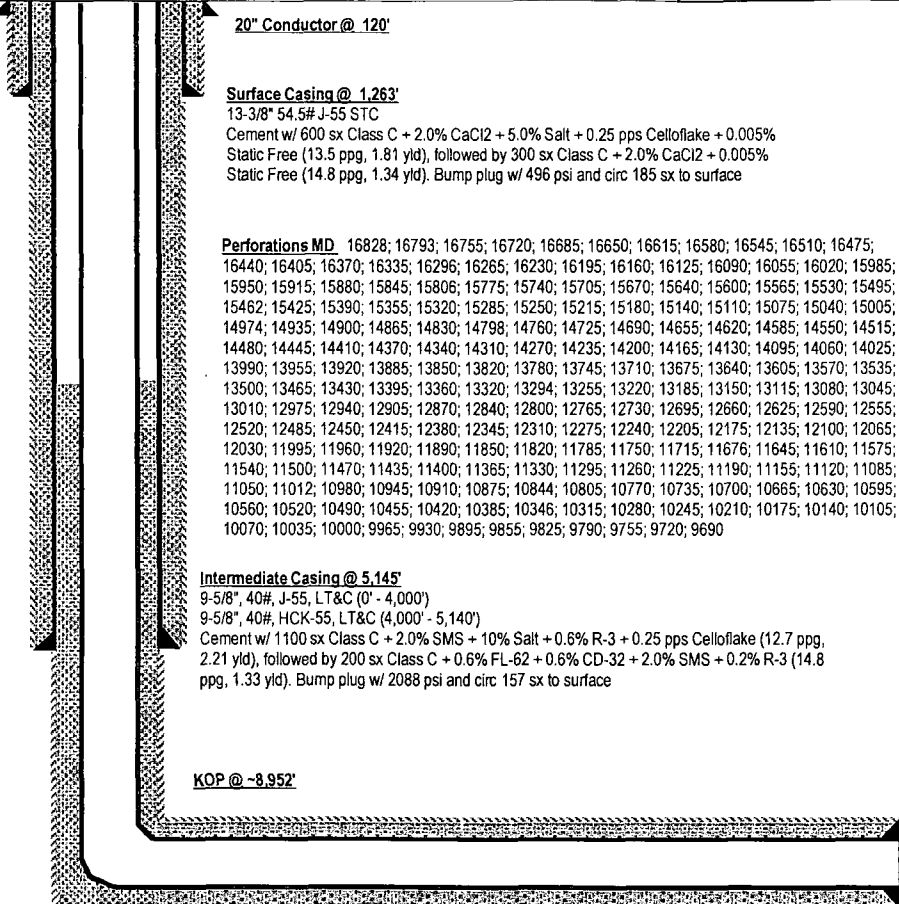
Comments	MD (ft)	Incl (°)	Azim Grid (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	DLS (°/100ft)	Northing (ftUS)	Easting (ftUS)	Latitude (N/S ° ' '')	Longitude (E/W ° ' '')
	13418.00	90.86	180.71	9500.16	4110.18	-4110.06	32.10	1.55	426433.32	753016.50	N 32 10 11.06	W 103 30 56.30
	13512.00	90.62	182.17	9498.94	4204.12	-4204.02	29.73	1.57	426339.36	753014.13	N 32 10 10.13	W 103 30 56.34
	13607.00	90.83	181.15	9497.74	4299.05	-4298.97	26.98	1.10	426244.41	753011.38	N 32 10 9.19	W 103 30 56.38
	13702.00	90.69	179.57	9496.48	4394.03	-4393.96	26.39	1.67	426149.43	753010.78	N 32 10 8.25	W 103 30 56.39
	13797.00	89.83	179.58	9496.05	4489.03	-4488.95	27.09	0.91	426054.44	753011.49	N 32 10 7.31	W 103 30 56.39
	13892.00	90.96	179.98	9495.39	4584.02	-4583.95	27.45	1.26	425959.44	753011.85	N 32 10 6.37	W 103 30 56.40
	13987.00	86.87	174.68	9497.19	4678.88	-4678.77	31.87	7.05	425864.62	753016.27	N 32 10 5.43	W 103 30 56.35
	14082.00	86.94	174.55	9502.32	4773.39	-4773.22	40.78	0.16	425770.18	753025.18	N 32 10 4.50	W 103 30 56.26
	14177.00	88.08	173.28	9506.45	4867.83	-4867.59	50.84	1.80	425675.81	753035.24	N 32 10 3.56	W 103 30 56.15
	14272.00	89.76	174.63	9508.24	4962.35	-4962.04	60.84	2.27	425581.36	753045.24	N 32 10 2.63	W 103 30 56.04
	14367.00	90.72	177.70	9507.84	5057.17	-5056.81	67.19	3.39	425486.59	753051.59	N 32 10 1.69	W 103 30 55.98
	14462.00	90.62	178.61	9506.73	5152.14	-5151.75	70.25	0.96	425391.65	753054.65	N 32 10 0.75	W 103 30 55.95
	14557.00	90.79	179.32	9505.56	5247.12	-5246.73	71.97	0.77	425296.67	753056.37	N 32 9 59.81	W 103 30 55.94
	14652.00	90.07	178.92	9504.85	5342.12	-5341.72	73.43	0.87	425201.69	753057.82	N 32 9 58.87	W 103 30 55.93
	14746.00	91.13	179.15	9503.87	5436.11	-5435.70	75.01	1.15	425107.71	753059.41	N 32 9 57.94	W 103 30 55.92
	14841.00	90.69	182.30	9502.36	5531.06	-5530.66	73.81	3.35	425012.74	753058.21	N 32 9 57.00	W 103 30 55.94
	14936.00	90.52	183.45	9501.35	5625.90	-5625.54	69.04	1.22	424917.87	753053.44	N 32 9 56.06	W 103 30 56.01
	15032.00	90.31	181.46	9500.66	5721.77	-5721.44	64.93	2.08	424821.97	753049.33	N 32 9 55.11	W 103 30 56.06
	15127.00	90.24	180.51	9500.20	5816.74	-5816.43	63.30	1.00	424726.99	753047.70	N 32 9 54.17	W 103 30 56.09
	15222.00	89.83	180.38	9500.14	5911.73	-5911.42	62.56	0.45	424631.99	753046.96	N 32 9 53.23	W 103 30 56.11
	15317.00	90.14	179.64	9500.17	6006.72	-6006.42	62.54	0.84	424537.00	753046.94	N 32 9 52.29	W 103 30 56.11
	15412.00	89.62	178.36	9500.37	6101.72	-6101.41	64.20	1.45	424442.01	753048.60	N 32 9 51.35	W 103 30 56.10
	15507.00	89.45	175.69	9501.14	6196.61	-6196.27	69.13	2.82	424347.16	753053.53	N 32 9 50.42	W 103 30 56.05
	15602.00	68.90	172.98	9502.51	6291.19	-6290.78	78.51	2.91	424252.64	753062.90	N 32 9 49.48	W 103 30 55.95
	15697.00	89.35	173.90	9503.96	6385.64	-6385.15	89.36	1.08	424158.28	753073.76	N 32 9 48.55	W 103 30 55.84
	15792.00	90.58	173.62	9504.02	6480.15	-6479.58	99.68	1.33	424063.84	753084.08	N 32 9 47.61	W 103 30 55.72
	15887.00	90.93	176.10	9502.76	6574.81	-6574.19	108.19	2.64	423969.24	753092.59	N 32 9 46.67	W 103 30 55.63
	15982.00	89.97	176.10	9502.02	6669.63	-6668.96	114.65	1.01	423874.47	753099.05	N 32 9 45.73	W 103 30 55.57
	16077.00	90.52	175.77	9501.61	6764.44	-6763.72	121.39	0.68	423779.71	753105.79	N 32 9 44.80	W 103 30 55.50
	16171.00	90.07	176.16	9501.13	6858.25	-6857.49	128.00	0.63	423685.95	753112.40	N 32 9 43.87	W 103 30 55.43
	16266.00	89.24	178.74	9501.70	6953.18	-6952.38	132.23	2.85	423591.05	753116.63	N 32 9 42.93	W 103 30 55.39
	16360.00	89.31	179.39	9502.89	7047.17	-7046.36	133.76	0.70	423497.08	753118.16	N 32 9 42.00	W 103 30 55.38
	16455.00	90.07	180.39	9503.40	7142.16	-7141.36	133.95	1.32	423402.08	753118.34	N 32 9 41.06	W 103 30 55.38
	16549.00	89.52	181.03	9503.74	7236.14	-7235.35	132.78	0.90	423308.09	753117.18	N 32 9 40.13	W 103 30 55.41
	16644.00	90.21	182.29	9503.96	7331.08	-7330.31	130.03	1.51	423213.14	753114.43	N 32 9 39.19	W 103 30 55.45
	16739.00	89.83	181.70	9503.93	7425.99	-7425.25	126.72	0.74	423118.20	753111.12	N 32 9 38.25	W 103 30 55.49
	16833.00	89.86	181.61	9504.18	7519.93	-7519.21	124.01	0.10	423024.24	753108.40	N 32 9 37.32	W 103 30 55.53
Final Survey	16890.00	89.59	179.52	9504.46	7576.91	-7576.20	123.44	3.70	422967.25	753107.84	N 32 9 36.76	W 103 30 55.55
Proj to TD	16930.00	89.59	179.52	9504.74	7616.91	-7616.20	123.78	0.00	422927.25	753108.18	N 32 9 36.36	W 103 30 55.54

Survey Type: Non-Def Survey

Survey Error Model: ISCWSA Rev 0 *** 3-D 95.000% Confidence 2.7955 sigma
Survey Program:

Description	MD From (ft)	MD To (ft)	EOU Freq (ft)	Hole Size (in)	Casing Diameter (in)	Survey Tool Type	Borehole / Survey
	0.000	30.000	Act Stns	30.000	30.000	SLB_NSG+MSHOT-Depth Only	Original Borehole / EOG Diamond 31 Fed Com 2H Gyro+MWD from 0ft to 16930ft
	30.000	1219.000	Act Stns	30.000	30.000	SLB_NSG+MSHOT	Original Borehole / EOG Diamond 31 Fed Com 2H
	1219.000	16890.000	Act Stns	30.000	30.000	SLB_MWD-STD	Original Borehole / EOG Diamond 31 Fed Com 2H
	16890.000	16930.000	Act Stns	30.000	30.000	SLB_BLIND+TREND	Original Borehole / EOG Diamond 31 Fed Com 2H

CURRENT WELL SKETCH

DEPTH (ft)	MARKERS (KB)	LITHOLOGY	API: 30-025-40484 AFE: 104502 SPUD: 1/3/13 @ 10:00 hrs 2/3/13 @ 13:00 hrs FRR: 1/16/13 @ 00:00 hrs 2/16/13 @ 18:00 hrs RIG: Felderhoff 25/Cactus #123	Diamond 31 Fed Com #2H Red Hills(Bone Spring) Field Lea County, New Mexico	SURF: 50' FNL, 430' FWL LOC: Sec. 31 SURVEY: T-24-S, R-34-E GL: 3500.6' KB: 3530.6' ZERO:	HOLE SIZE	MW (ppg)	MUD	BHST (°F)	LOT (ppg)	EVALUATION	
2,000'	Rustler - 1190' Top Salt - 1440'		<u>20" Conductor @ 120'</u>				17-1/2"	8.6	FW	86	N/A	
3,000'	<u>Surface Casing @ 1,263'</u> 13-3/8" 54.5# J-55 STC Cement w/ 600 sx Class C + 2.0% CaCl2 + 5.0% Salt + 0.25 pps Celloflake + 0.005% Static Free (13.5 ppg, 1.81 yld), followed by 300 sx Class C + 2.0% CaCl2 + 0.005% Static Free (14.8 ppg, 1.34 yld). Bump plug w/ 496 psi and circ 185 sx to surface			10.0								
5,000'	Base Salt - 4990' Lamar - 5250' Bell Canyon - 5280'		<u>Perforations MD</u> 16828; 16793; 16755; 16720; 16685; 16650; 16615; 16580; 16545; 16510; 16475; 16440; 16405; 16370; 16335; 16296; 16265; 16230; 16195; 16160; 16125; 16090; 16055; 16020; 15985; 15950; 15915; 15880; 15845; 15806; 15775; 15740; 15705; 15670; 15640; 15600; 15565; 15530; 15495; 15462; 15425; 15390; 15355; 15320; 15285; 15250; 15215; 15180; 15140; 15110; 15075; 15040; 15005; 14974; 14935; 14900; 14865; 14830; 14798; 14760; 14725; 14690; 14655; 14620; 14585; 14550; 14515; 14480; 14445; 14410; 14370; 14340; 14310; 14270; 14235; 14200; 14165; 14130; 14095; 14060; 14025; 13990; 13955; 13920; 13885; 13850; 13820; 13780; 13745; 13710; 13675; 13640; 13605; 13570; 13535; 13500; 13465; 13430; 13395; 13360; 13320; 13294; 13255; 13220; 13185; 13150; 13115; 13080; 13045; 13010; 12975; 12940; 12905; 12870; 12840; 12800; 12765; 12730; 12695; 12660; 12625; 12590; 12555; 12520; 12485; 12450; 12415; 12380; 12345; 12310; 12275; 12240; 12205; 12175; 12135; 12100; 12065; 12030; 11995; 11960; 11920; 11890; 11850; 11820; 11785; 11750; 11715; 11676; 11645; 11610; 11575; 11540; 11500; 11470; 11435; 11400; 11365; 11330; 11295; 11260; 11225; 11190; 11155; 11120; 11085; 11050; 11012; 10980; 10945; 10910; 10875; 10844; 10805; 10770; 10735; 10700; 10665; 10630; 10595; 10560; 10520; 10490; 10455; 10420; 10385; 10346; 10315; 10280; 10245; 10210; 10175; 10140; 10105; 10070; 10035; 10000; 9965; 9930; 9895; 9855; 9825; 9790; 9755; 9720; 9690				12-1/4"	Brine		NA		
6,000'	Cherry Canyon - 6280'		<u>Intermediate Casing @ 5,145'</u> 9-5/8", 40#, J-55, LT&C (0' - 4,000') 9-5/8", 40#, HCK-55, LT&C (4,000' - 5,140') Cement w/ 1100 sx Class C + 2.0% SMS + 10% Salt + 0.6% R-3 + 0.25 pps Celloflake (12.7 ppg, 2.21 yld), followed by 200 sx Class C + 0.6% FL-62 + 0.6% CD-32 + 2.0% SMS + 0.2% R-3 (14.8 ppg, 1.33 yld). Bump plug w/ 2088 psi and circ 157 sx to surface				10.2			117		
7,000'			<u>KOP @ -8.952'</u>				8-3/4" to EOC	8.4			N/A	
8,000'	Brushy Canyon - 7800'		<u>Production Casing @ 16,901' MD, 9,504' TVD</u> 5-1/2" 17# HCP-110 LTC Cement w/ 350 sx 60:40:10 Class C + 15.0 pps BA-90 + 4.0% MPA-5 + 3.0% SMS + 5.0% A-10 + 1.0% BA-10A + 0.80% ASA=301 + 3.10% R-21 + 8 pps LCM-1 (10.8 ppg, 3.67 yld), followed by 400 sx 50:50:10 Class H + 8.0% FL-52 + 0.3% ASA-301 + 5.0% SMS + 2.0% Salt + 0.35% R-21 + 3.0 pps LCM-1 + 0.25 pps Celloflake (11.8 ppg, 2.38 yld), followed by 1775 sx 50:50:2 Class H + 0.65% FL-52 + 0.50% CD-32 + 0.40% SMS + 2.0% Salt + 0.5% R-21 (14.2 ppg, 1.26 yld). Bump plug and overdisplace w/ 10 bbls				8-1/2" from EOC end of lateral	WBW				
9,000'	Top Leonard 9080' Bone Spring Lime - 9230'							9.3			140	
10,000'	Massive Carbonate 9600'											
11,000'												

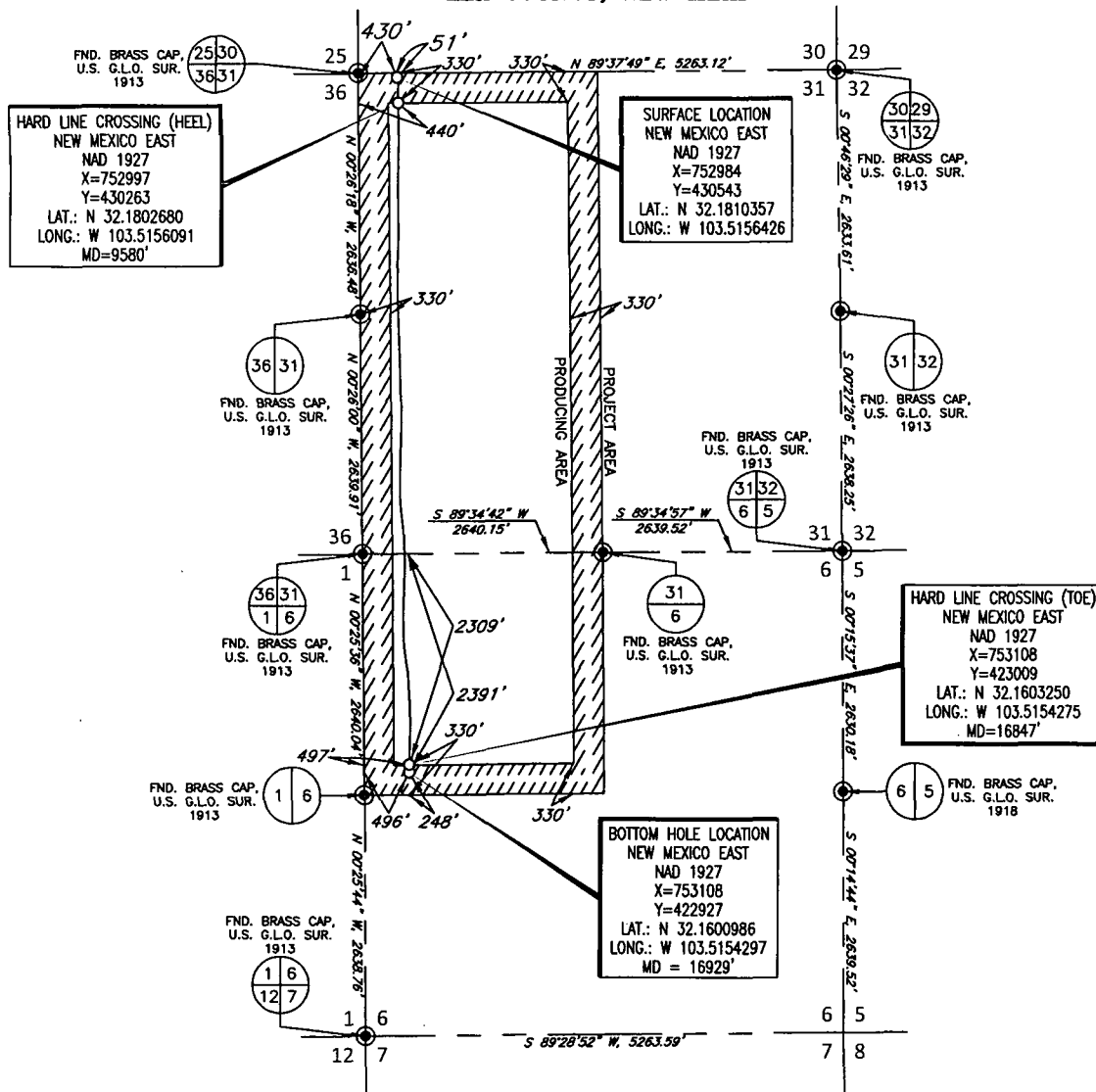
Comp Eng: D. Owusu
Date: 6/11/2013

Comp Eng:	D. Owusu
Date:	6/11/2013

SCALE 1" = 2000'
0' 1000' 2000'



SECTION 31, TOWNSHIP 24 SOUTH, RANGE 34 EAST, N.M.P.M.
LEA COUNTY, NEW MEXICO



LEASE NAME & WELL NO.: DIAMOND 31 FED COM #2H
SECTION 31 TWP 24-S RGE 34-E SURVEY N.M.P.M.
COUNTY LEA STATE NM ELEVATION 3501'
DESCRIPTION 51' FNL & 430' FWL

ALL BEARINGS, DISTANCES, AND COORDINATE VALUES CONTAINED HEREON ARE GRID BASED UPON THE NEW MEXICO STATE PLANE COORDINATE SYSTEM, EAST ZONE OF THE NORTH AMERICAN DATUM 1927, U.S. SURVEY FEET

THIS EASEMENT/SERVITUDE LOCATION SHOWN HEREON HAS BEEN SURVEYED ON THE GROUND UNDER MY SUPERVISION AND PREPARED ACCORDING TO THE EVIDENCE FOUND AT THE TIME OF SURVEY, AND DATA PROVIDED BY EOG RESOURCES, INC. THIS CERTIFICATION IS MADE AND LIMITED TO THOSE PERSONS OR ENTITIES SHOWN ON THE FACE OF THIS PLAT AND IS NON-TRANSFERABLE. THIS SURVEY IS CERTIFIED FOR THIS TRANSACTION ONLY.

ORIGINAL DOCUMENT SIZE: 8.5" X 11"

INTERNAL
PRE-COMPLETION
PLAT

DIAMOND 31 FED COM #2H PRE-COMPLETION	REVISION:	
	INT	DATE
DATE: FEBRUARY 22, 2013		
FILE: C_DIAMOND31FEDCOM_2H		
DRAWN BY: S.V.		
SHEET: - 1 OF 1		

Michael Blake Brown, P.S. No. 18329
FEBRUARY 22, 2013

TOPOGRAPHIC

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