



INTEQ

FINAL DIRECTIONAL SURVEY

REVISED

CHEVRON CANADA RESOURCES LTD.
FORT LIARD

K-29
K-29 (60.5degN/123.5degW)
FORT LIARD
N.W.T. Canada

S U R V E Y L I S T I N G

by
Baker Hughes INTEQ

Your ref : CHEVRON FT. LIARD K-29
Our ref : svy9760
License :

Date printed : 6-Apr-99
Date created : 11-Feb-99
Last revised : 6-Apr-99

Field is centred on 467869.990,6704591.610,-123.00000,N
Structure is centred on 467869.990,6704591.610,-123.00000,N

Slot location is n60 28 41.045,w123 35 4.102
Slot Grid coordinates are N 6704591.610, E 467869.990
Slot local coordinates are 0.00 N 0.00 E

Projection type: mercator - UTM, Spheroid: Clarke - 1866

Reference North is True North

MICROFILMED
SER MICROFILM:

NEB/DNC

APR 13 12 39 PM '99

MAIL ROOM
SALLE DE COURIER

FILE: W10 1861
N.E.B. COPY

1861

CHEVRON CANADA RESOURCES LTD.
 FORT LIARD, K-29
 FORT LIARD, N.W.T. Canada

SURVEY LISTING Page 1
 Your ref : CHEVRON FT. LIARD K-2
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Measured Depth	Inclin. Degrees	Azimuth Degrees	True Vert Depth	R E C T A N G U L A R C O O R D I N A T E S		Dogleg Deg/ 30m	Vert Sect
0.00	0.00	0.00	0.00	0.00	N	0.00 E	0.00
221.00	0.25	1.70	221.00	0.48	N	0.01 E	-0.24
306.00	1.25	311.70	305.99	1.28	N	0.67 W	-1.25
425.00	2.00	296.70	424.94	3.08	N	3.50 W	-4.60
513.00	3.75	71.70	512.89	4.68	N	2.14 W	-4.29
538.00	4.35	51.70	537.82	5.52	N	0.62 W	-3.45
573.00	4.10	47.70	572.73	7.18	N	1.35 E	-2.66
611.00	4.50	42.70	610.62	9.19	N	3.37 E	-2.02
642.00	4.00	41.70	641.54	10.90	N	4.91 E	-1.61
676.00	3.50	30.80	675.47	12.67	N	6.23 E	-1.43
702.00	3.00	30.70	701.42	13.94	N	6.99 E	-1.46
742.00	3.25	32.00	741.36	15.80	N	8.12 E	-1.49
791.00	3.25	37.00	790.29	18.09	N	9.69 E	-1.36
913.00	4.00	49.00	912.04	23.64	N	14.99 E	0.18
960.00	3.88	41.00	958.93	25.92	N	17.26 E	0.91
1027.00	4.00	38.00	1025.77	29.47	N	20.19 E	1.51
1103.00	4.00	32.00	1101.59	33.80	N	23.23 E	1.78
1159.00	4.90	35.00	1157.42	37.42	N	25.63 E	1.91
1219.00	5.00	56.00	1217.20	40.98	N	29.27 E	3.11
1248.00	5.50	59.00	1246.08	42.40	N	31.51 E	4.25
1286.00	7.00	57.00	1283.85	44.60	N	35.01 E	6.06
1324.00	7.75	55.00	1321.54	47.33	N	39.05 E	8.04
1359.50	7.90	59.60	1356.71	49.94	N	43.12 E	10.10
1369.00	8.50	60.50	1366.11	50.62	N	44.29 E	10.74
1388.10	9.80	62.50	1384.97	52.06	N	46.96 E	12.24

All data is in meters unless otherwise stated.
 Coordinates from K-29 (60.5degN/123.5degW) and TVD from rotary table (418.80 M. above mean sea level)
 Bottom hole distance is 348.88 on azimuth 94.53 degrees from wellhead.
 Vertical section is from wellhead on azimuth 122.00 degrees.
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Measured Depth	Inclin. Degrees	Azimuth Degrees	True Vert Depth	R E C T A N G U L A R C O O R D I N A T E S		Dogleg Deg/ 30m	Vert Sect
1397.70	10.50	61.80	1394.42	52.85 N	48.46 E	2.22	13.09
1407.30	11.30	62.20	1403.84	53.70 N	50.06 E	2.51	14.00
1416.90	11.90	62.60	1413.25	54.60 N	51.77 E	1.89	14.97
1436.10	12.00	62.90	1432.03	56.42 N	55.31 E	0.18	17.01
1455.30	10.90	56.70	1450.85	58.32 N	58.60 E	2.58	18.79
1484.00	9.20	50.90	1479.11	61.26 N	62.65 E	2.07	20.67
1502.00	9.00	52.60	1496.88	63.02 N	64.88 E	0.56	21.63
1512.70	8.90	55.00	1507.45	64.01 N	66.23 E	1.08	22.25
1541.40	7.30	59.70	1535.86	66.20 N	69.62 E	1.81	23.96
1570.20	6.30	56.70	1564.46	67.99 N	72.52 E	1.11	25.47
1598.90	5.60	52.20	1593.01	69.71 N	74.94 E	0.88	26.61
1627.60	5.20	60.20	1621.58	71.22 N	77.18 E	0.89	27.71
1656.40	3.90	68.20	1650.29	72.23 N	79.22 E	1.50	28.91
1665.90	3.60	67.20	1659.77	72.47 N	79.80 E	0.97	29.27
1675.50	3.70	64.60	1669.35	72.72 N	80.35 E	0.60	29.61
1685.10	3.70	66.10	1678.93	72.97 N	80.92 E	0.30	29.95
1713.80	3.40	80.70	1707.57	73.49 N	82.60 E	0.99	31.11
1733.00	4.20	74.30	1726.73	73.77 N	83.84 E	1.41	32.01
1752.20	5.10	63.40	1745.87	74.34 N	85.28 E	1.96	32.93
1780.90	4.60	50.90	1774.47	75.64 N	87.32 E	1.22	33.97
1790.40	4.70	49.40	1783.94	76.13 N	87.91 E	0.50	34.21
1819.10	4.80	59.60	1812.54	77.51 N	89.84 E	0.89	35.11
1838.30	4.50	67.60	1831.67	78.20 N	91.22 E	1.12	35.92
1857.50	4.50	69.90	1850.82	78.74 N	92.63 E	0.28	36.82
1886.20	4.40	72.30	1879.43	79.47 N	94.73 E	0.22	38.23

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Measured Depth	Inclin. Degrees	Azimuth Degrees	True Vert Depth	R E C T A N G U L A R C O O R D I N A T E S		Dogleg Deg/ 30m	Vert Sect
1915.00	4.20	73.30	1908.15	80.11 N	96.80 E	0.22	39.64
1943.80	3.70	70.90	1936.88	80.71 N	98.69 E	0.55	40.92
1953.30	3.80	70.40	1946.36	80.92 N	99.27 E	0.33	41.31
1972.50	3.80	62.80	1965.52	81.42 N	100.44 E	0.79	42.03
2001.20	3.70	56.10	1994.16	82.37 N	102.05 E	0.47	42.89
2030.00	3.40	63.60	2022.90	83.27 N	103.59 E	0.58	43.72
2049.10	3.40	59.50	2041.97	83.81 N	104.58 E	0.38	44.28
2058.70	3.50	61.70	2051.55	84.09 N	105.09 E	0.52	44.55
2077.80	3.70	75.60	2070.61	84.52 N	106.20 E	1.40	45.27
2087.40	3.90	79.30	2080.19	84.66 N	106.82 E	0.99	45.72
2116.20	3.80	90.30	2108.93	84.84 N	108.73 E	0.78	47.25
2144.50	4.50	85.70	2137.15	84.92 N	110.78 E	0.82	48.95
2173.30	5.30	72.40	2165.85	85.40 N	113.17 E	1.44	50.72
2202.00	6.60	60.60	2194.39	86.61 N	115.87 E	1.86	52.37
2221.20	5.80	60.70	2213.48	87.63 N	117.68 E	1.25	53.36
2230.70	5.60	60.70	2222.93	88.09 N	118.50 E	0.63	53.82
2259.50	4.00	52.10	2251.63	89.40 N	120.52 E	1.82	54.84
2269.00	3.00	40.20	2261.11	89.79 N	120.94 E	3.89	54.98
2288.20	2.80	25.30	2280.29	90.60 N	121.47 E	1.21	55.00
2307.30	3.20	22.90	2299.36	91.51 N	121.88 E	0.66	54.86
2316.90	3.40	27.80	2308.95	92.01 N	122.11 E	1.08	54.80
2326.40	3.90	32.00	2318.43	92.53 N	122.42 E	1.79	54.78
2335.90	4.40	34.80	2327.90	93.11 N	122.79 E	1.70	54.80
2355.10	4.90	49.20	2347.04	94.25 N	123.84 E	1.98	55.08
2374.30	5.40	59.50	2366.16	95.24 N	125.24 E	1.64	55.73

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Measured Depth	Inclin. Degrees	Azimuth Degrees	True Vert Depth	R E C T A N G U L A R C O O R D I N A T E S		Dogleg Deg/ 30m	Vert Sect
2384.00	5.70	62.20	2375.82	95.70 N	126.05 E	1.23	56.19
2393.70	5.50	64.20	2385.47	96.13 N	126.90 E	0.86	56.68
2403.30	5.50	68.80	2395.03	96.49 N	127.74 E	1.38	57.20
2413.10	5.30	69.40	2404.79	96.82 N	128.60 E	0.64	57.75
2422.70	5.20	69.50	2414.34	97.13 N	129.43 E	0.31	58.29
2432.40	5.30	68.10	2424.00	97.45 N	130.25 E	0.50	58.82
2442.00	5.20	66.50	2433.56	97.79 N	131.06 E	0.55	59.33
2461.40	4.70	60.00	2452.89	98.54 N	132.56 E	1.16	60.20
2471.00	4.50	62.30	2462.46	98.91 N	133.23 E	0.85	60.57
2484.00	4.40	62.60	2475.42	99.38 N	134.13 E	0.24	61.09
2510.00	4.60	71.00	2501.34	100.17 N	136.00 E	0.79	62.25
2519.60	5.70	91.90	2510.90	100.28 N	136.84 E	6.74	62.90
2529.30	7.20	103.30	2520.54	100.13 N	137.91 E	6.08	63.90
2539.00	9.40	107.90	2530.14	99.74 N	139.26 E	7.10	65.24
2548.60	11.00	112.50	2539.59	99.15 N	140.85 E	5.61	66.90
2558.30	13.50	115.90	2549.07	98.30 N	142.72 E	8.04	68.94
2569.70	15.00	120.40	2560.12	96.98 N	145.19 E	4.90	71.74
2579.30	16.10	122.50	2569.36	95.63 N	147.39 E	3.86	74.31
2588.80	18.20	126.60	2578.44	94.04 N	149.69 E	7.65	77.11
2598.40	20.30	129.00	2587.50	92.10 N	152.19 E	7.01	80.26
2608.00	22.60	128.80	2596.44	89.89 N	154.92 E	7.19	83.74
2617.50	25.30	129.00	2605.12	87.47 N	157.92 E	8.53	87.57
2626.90	27.80	128.60	2613.53	84.84 N	161.20 E	8.00	91.74
2636.40	29.80	126.40	2621.85	82.06 N	164.83 E	7.15	96.30
2646.00	31.90	123.90	2630.10	79.23 N	168.85 E	7.69	101.21

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Measured Depth	Inclin. Degrees	Azimuth Degrees	True Vert Depth	R E C T A N G U L A R C O O R D I N A T E S		Dogleg Deg/ 30m	Vert Sect
2655.60	33.90	123.20	2638.16	76.34 N	173.20 E	6.36	106.42
2665.20	36.00	122.40	2646.02	73.37 N	177.82 E	6.72	111.92
2674.80	36.80	121.10	2653.75	70.37 N	182.67 E	3.47	117.62
2684.50	37.10	120.60	2661.50	67.38 N	187.67 E	1.31	123.45
2694.20	37.40	121.80	2669.22	64.34 N	192.69 E	2.43	129.32
2703.90	36.70	122.50	2676.97	61.23 N	197.64 E	2.53	135.16
2713.50	35.90	121.40	2684.70	58.22 N	202.46 E	3.22	140.85
2723.20	35.60	120.60	2692.57	55.30 N	207.32 E	1.72	146.51
2732.90	35.70	121.30	2700.46	52.39 N	212.17 E	1.30	152.17
2742.60	36.20	122.70	2708.31	49.38 N	217.00 E	2.98	157.86
2752.20	36.60	123.40	2716.04	46.27 N	221.77 E	1.80	163.56
2761.90	36.20	121.80	2723.84	43.17 N	226.62 E	3.19	169.31
2771.60	36.50	122.70	2731.66	40.10 N	231.48 E	1.89	175.06
2781.20	36.90	122.90	2739.35	36.99 N	236.31 E	1.30	180.80
2790.90	36.30	122.20	2747.14	33.88 N	241.18 E	2.26	186.58
2800.60	36.60	122.40	2754.94	30.80 N	246.05 E	1.00	192.34
2810.20	36.60	121.80	2762.65	27.76 N	250.90 E	1.12	198.07
2819.90	36.00	121.00	2770.47	24.77 N	255.80 E	2.36	203.81
2829.60	35.10	118.90	2778.36	21.95 N	260.69 E	4.69	209.44
2839.30	35.30	119.10	2786.29	19.24 N	265.58 E	0.71	215.03
2848.90	35.60	120.30	2794.11	16.48 N	270.41 E	2.37	220.59
2858.60	36.00	119.40	2801.97	13.66 N	275.34 E	2.04	226.26
2868.30	36.30	120.30	2809.81	10.81 N	280.30 E	1.89	231.98
2877.80	35.80	120.90	2817.49	7.96 N	285.11 E	1.93	237.57
2887.30	35.80	119.50	2825.19	5.17 N	289.91 E	2.59	243.12

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Measured Depth	Inclin. Degrees	Azimuth Degrees	True Vert Depth	R E C T A N G U L A R C O O R D I N A T E S		Dogleg Deg/ 30m	Vert Sect	
2896.80	36.30	120.50	2832.87	2.37	N	294.75 E	2.44	248.71
2906.40	36.90	120.30	2840.58	0.52	S	299.69 E	1.91	254.43
2915.90	36.50	119.90	2848.20	3.37	S	304.60 E	1.47	260.10
2925.50	35.80	118.40	2855.95	6.13	S	309.55 E	3.53	265.76
2935.20	35.70	119.30	2863.82	8.86	S	314.51 E	1.66	271.42
2944.90	36.00	119.60	2871.68	11.66	S	319.46 E	1.08	277.09
2954.60	36.60	119.60	2879.50	14.49	S	324.45 E	1.86	282.83
2964.30	36.00	119.30	2887.32	17.32	S	329.45 E	1.94	288.57
2974.00	35.90	119.10	2895.17	20.10	S	334.42 E	0.48	294.26
2983.00	36.10	119.20	2902.45	22.67	S	339.04 E	0.69	299.54
3000.00	36.10	119.20	2916.19	27.56	S	347.79 E	0.00	309.54 EXTRAPOLATION TO TOTAL DE

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MD	TVD	Rectangular Coords.	Comments in wellpath =====
			Comment
3000.00	2916.19	27.56 S 347.79 E	EXTRAPOLATION TO TOTAL DEPTH

Casing positions in string 'A'							
=====							
Top MD	Top TVD	Rectangular Coords.	Bot MD	Bot TVD	Rectangular Coords.	Casing	
0.00	0.00	0.00N 0.00E	701.30	700.72	13.91N 6.97E	SURFACE	
0.00	0.00	0.00N 0.00E	2500.00	2491.37	99.89N 135.25E	INTERMEDIAT	

Targets associated with this wellpath				
=====				
Target name	Geographic Location	T.V.D.	Rectangular Coordinates	Revised
NAHANNI TARGET AREA		2475.42	83.96N 126.54E	9-Nov-98
NAHANNI TARGET	468009.780, 6704681.800, -123.0	2562.00	91.46N 139.04E	9-Nov-98

