

CALIFORNIA ENERGY COMPANY
NEWBERRY

23-22 (A1)
NEWBERRY 23-22
NEWBERRY CRATER
OREGON

SURVEY LISTING

by
Baker Hughes INTEQ

Your ref : NEWBERRY CRATER 23-22 SS (A1)
Our ref : svy4942
License :

Date printed : 2-Jan-96
Date created : 15-Nov-95
Last revised : 2-Jan-96

Field is centred on n43 45 0.000,w121 10 0
Structure is centred on n43 45 0.000,w121 10 0

Slot location is n43 44 34.760,w121 17 10.646
Slot Grid coordinates are N 757683.866, E 1792210.542
Slot local coordinates are 2533.14 s 31614.60 W
Reference North is True North

CALIFORNIA ENERGY COMPANY
 NEWBERRY 23-22 (A1)
 NEWBERRY CRATER, OREGON

SURVEY LISTING Page 1
 Your ref : NEWBERRY CRATER 23-22 S8 (A1)
 Last revised : 2-Jan-96

Measured Depth	Inclin. Degrees	Azimuth Degrees	True Vert. Depth	RECTANGULAR DOGLEG COORDINATES			Vert Sect
						Dogleg Deg/100Ft	
0.00	0.00	0.00	0.00	0.00 N	0.00 E	0.00	0.00
312.00	1.75	20.00	311.95	4.48 N	1.63 E	0.56	0.42
558.00	1.50	342.00	557.86	11.07 N	1.92 E	0.44	-1.01
768.00	2.50	345.00	767.73	18.11 N	0.12 W	0.48	-4.80
888.00	2.50	322.00	887.62	22.70 N	2.40 W	0.83	-8.20
928.00	3.75	332.00	927.56	24.54 N	3.56 W	3.40	-9.78
958.00	4.00	340.00	957.49	26.39 N	4.37 W	1.98	-11.06
990.00	4.00	355.00	989.41	28.55 N	4.85 W	3.26	-12.08
1020.00	4.25	15.00	1019.34	30.67 N	4.66 W	4.84	-12.43
1051.00	4.25	27.00	1050.25	32.80 N	3.84 W	2.86	-12.20
1084.00	4.50	37.00	1083.16	34.92 N	2.50 W	2.43	-11.46
1116.00	4.50	46.00	1115.06	36.80 N	0.84 W	2.20	-10.34
1147.00	4.50	60.00	1145.96	38.25 N	1.08 E	3.53	-8.85
1179.00	4.50	81.00	1177.87	39.07 N	3.41 E	5.12	-6.82
1210.00	5.50	89.00	1208.75	39.29 N	6.10 E	3.92	-4.28
1241.00	6.50	90.00	1239.58	39.32 N	9.34 E	3.24	-1.16
1273.00	7.25	93.00	1271.35	39.21 N	13.16 E	2.60	2.57
1305.00	7.75	100.00	1303.07	38.73 N	17.31 E	3.25	6.69
1406.00	9.50	110.00	1402.93	34.70 N	31.85 E	2.28	21.78
1535.00	10.00	114.00	1530.07	26.50 N	52.08 E	0.65	43.45
1627.00	9.50	116.00	1620.74	19.92 N	66.20 E	0.66	58.79
1747.00	10.00	114.00	1739.01	11.34 N	84.62 E	0.50	78.80
1847.00	9.50	117.00	1837.56	4.07 N	99.91 E	0.71	95.45
1942.00	9.75	120.00	1931.23	3.52 S	113.86 E	0.59	110.89
2035.00	9.25	121.00	2022.95	11.30 S	127.09 E	0.57	125.68
2160.00	9.50	122.00	2146.28	21.94 S	144.44 E	0.24	145.20
2288.00	8.50	124.00	2272.71	32.83 S	161.25 E	0.82	164.25
2414.00	8.50	119.00	2397.32	42.55 S	177.11 E	0.59	182.09
2539.00	7.75	119.00	2521.07	51.12 S	192.56 E	0.60	199.23
2632.00	7.50	120.00	2613.25	57.19 S	203.30 E	0.30	211.18
2689.00	8.25	120.00	2669.71	61.10 S	210.07 E	1.32	218.72
2720.00	7.75	119.00	2700.41	63.22 S	213.82 E	1.67	222.90
2752.00	8.00	112.00	2732.10	65.10 S	217.77 E	3.10	227.20
2851.00	8.25	104.00	2830.11	69.40 S	231.05 E	1.17	241.14
2914.00	8.50	98.00	2892.44	71.14 S	240.05 E	1.44	250.28
2977.00	9.00	104.00	2954.71	72.98 S	249.44 E	1.65	259.83
3039.00	9.25	104.00	3015.93	75.36 S	258.98 E	0.40	269.66
3133.00	10.00	102.00	3108.60	78.89 S	274.30 E	0.87	285.37
3228.00	9.25	104.00	3202.27	82.45 S	289.77 E	0.86	301.24
3323.00	9.25	108.00	3296.03	86.66 S	304.44 E	0.68	316.50
3448.00	8.75	111.00	3419.49	93.17 S	322.87 E	0.55	335.99
3573.00	8.75	111.00	3543.04	99.98 S	340.63 E	0.00	354.90
3698.00	8.75	113.00	3666.58	107.10 S	358.25 E	0.24	373.77
3699.00	8.75	113.00	3667.57	107.16 S	358.39 E	0.00	373.92
3824.00	8.50	111.00	3791.16	114.19 S	375.77 E	0.31	392.52
3950.00	8.25	108.00	3915.82	120.32 S	393.06 E	0.40	410.81
4076.00	7.75	115.00	4040.59	126.70 S	409.36 E	0.87	428.20
4173.00	8.00	115.00	4136.68	132.32 S	421.40 E	0.26	441.29
4267.00	8.25	117.00	4229.73	138.15 S	433.34 E	0.40	454.33
4361.00	8.25	117.00	4322.76	144.27 S	445.36 E	0.00	467.52

All data is in feet unless otherwise stated
 Coordinates from NEWBERRY 23-22 and TVD from rkb newberry 23-22 (6430.00 Ft above mean sea level).
 Vertical section is from wellhead on azimuth 105.00 degrees.
 Declination is 17.57 degrees, Convergence is -0.46 degrees.
 Calculation uses the minimum curvature method.
 Presented by Baker Hughes INTEQ

CALIFORNIA ENERGY COMPANY
NEWBERRY, 23-22 (A1)
NEWBERRY CRATER, OREGON

SURVEY LISTING Page 2
Your ref : NEWBERRY CRATER 23-22 SS (A1)
Last revised : 2-Jan-96

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/100Ft	Vert Sect
4541.00	10.00	123.00	4500.48	158.65 S	469.98 E	1.10	495.02
4634.00	11.25	127.00	4591.88	168.50 S	483.99 E	1.56	511.12
4678.00	12.25	123.00	4634.96	173.63 S	491.34 E	2.93	519.53
4710.00	12.75	120.00	4666.20	177.24 S	497.24 E	2.56	526.17
4742.00	13.50	117.00	4697.37	180.70 S	503.63 E	3.16	533.24
4773.00	13.50	112.00	4727.51	183.70 S	510.21 E	3.76	540.37
4804.00	13.75	107.00	4757.64	186.14 S	517.09 E	3.88	547.64
4922.00	17.00	107.00	4871.40	195.28 S	547.00 E	2.75	578.91
5017.00	18.50	102.00	4961.88	202.48 S	575.03 E	2.25	607.84
5111.00	21.00	107.00	5050.35	210.50 S	605.73 E	3.21	639.57
5205.00	22.50	103.00	5137.66	219.48 S	639.37 E	2.24	674.38
5299.00	24.25	106.00	5223.95	228.84 S	675.45 E	2.25	711.66
5393.00	27.00	104.00	5308.70	239.33 S	714.72 E	3.07	752.31
5520.00	28.00	103.00	5421.35	253.01 S	771.74 E	0.87	810.93
5646.00	28.00	103.00	5532.60	266.32 S	829.38 E	0.00	870.04
5775.00	28.00	106.00	5646.50	281.48 S	887.99 E	1.09	930.59
5927.00	27.50	106.00	5781.02	300.98 S	956.02 E	0.33	1001.35
6086.00	27.50	106.00	5922.06	321.22 S	1026.60 E	0.00	1074.76
6243.00	27.50	106.00	6061.32	341.20 S	1096.28 E	0.00	1147.24
6421.00	27.50	106.00	6219.20	363.86 S	1175.29 E	0.00	1229.42
6557.00	27.50	106.00	6339.84	381.17 S	1235.66 E	0.00	1292.21
6715.00	28.00	106.00	6479.67	401.44 S	1306.38 E	0.32	1365.76
6868.00	28.00	106.00	6614.76	421.24 S	1375.42 E	0.00	1437.58
7021.00	28.00	109.00	6749.86	442.84 S	1443.91 E	0.92	1509.32
7133.00	28.50	112.00	6848.52	461.41 S	1493.54 E	1.34	1562.07
7282.00	28.75	111.00	6979.31	487.56 S	1559.96 E	0.36	1632.99
7469.00	29.50	110.00	7142.66	519.43 S	1645.21 E	0.48	1723.59
7627.00	30.00	111.00	7279.84	546.89 S	1718.64 E	0.44	1801.62
7807.00	30.00	113.00	7435.73	580.60 S	1802.08 E	0.56	1890.94
8061.00	29.50	111.00	7656.26	627.82 S	1918.92 E	0.44	2016.02
8303.00	28.00	110.00	7868.42	668.61 S	2027.93 E	0.65	2131.88
9213.00	27.00	115.00	8675.70	828.99 S	2415.93 E	0.28	2548.17
9414.00	27.00	115.00	8854.79	867.56 S	2498.63 E	0.00	2638.04

FINAL SURVEY PROJECTED TO TD, 9414.0

All data is in feet unless otherwise stated
Coordinates from NEWBERRY 23-22 and TVD from rkb newberry 23-22 (6430.00 Ft above mean sea level).
Vertical section is from wellhead on azimuth 105.00 degrees.
Declination is 17.57 degrees, Convergence is -0.46 degrees.
Calculation uses the minimum curvature method.
Presented by Baker Hughes INTEQ

CALIFORNIA ENERGY COMPANY
 NEWBERRY, 23-22 (A1)
 NEWBERRY CRATER, OREGON

SURVEY LISTING Page 3
 Your ref : NEWBERRY CRATER 23-22 SS (A1)
 Last revised : 2-Jan-96

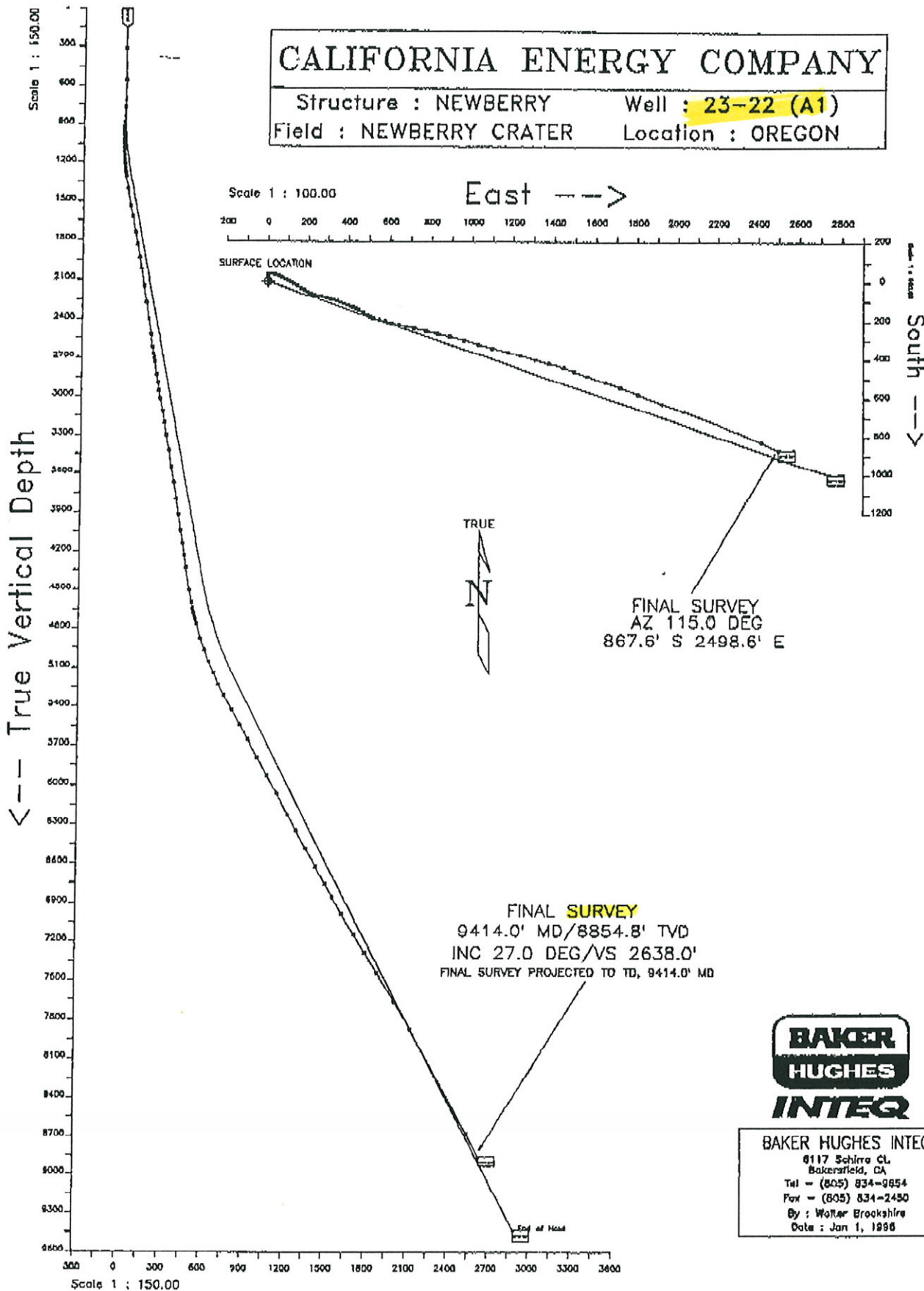
Comments in wellpath

MD	TVD	Rectangular Coords.	Comment
9414.00	8854.79	867.56 S 2498.63 E	FINAL SURVEY PROJECTED TO TD, 9414.0' MD

All data is in feet unless otherwise stated
 Coordinates from NEWBERRY 23-22 and TVD from rkb newberry 23-22 (6430.00 Ft above mean sea level).
 Bottom hole distance is 2644.96 on azimuth 109.15 degrees from wellhead.
 Vertical section is from wellhead on azimuth 105.00 degrees.
 Declination is 17.57 degrees, Convergence is -0.46 degrees.
 Calculation uses the minimum curvature method.
 Presented by Baker Hughes INTEQ

CALIFORNIA ENERGY COMPANY

Structure : NEWBERRY Well : **23-22 (A1)**
 Field : NEWBERRY CRATER Location : OREGON



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 By : Walter Brookshire
 Date : Jan 1, 1998