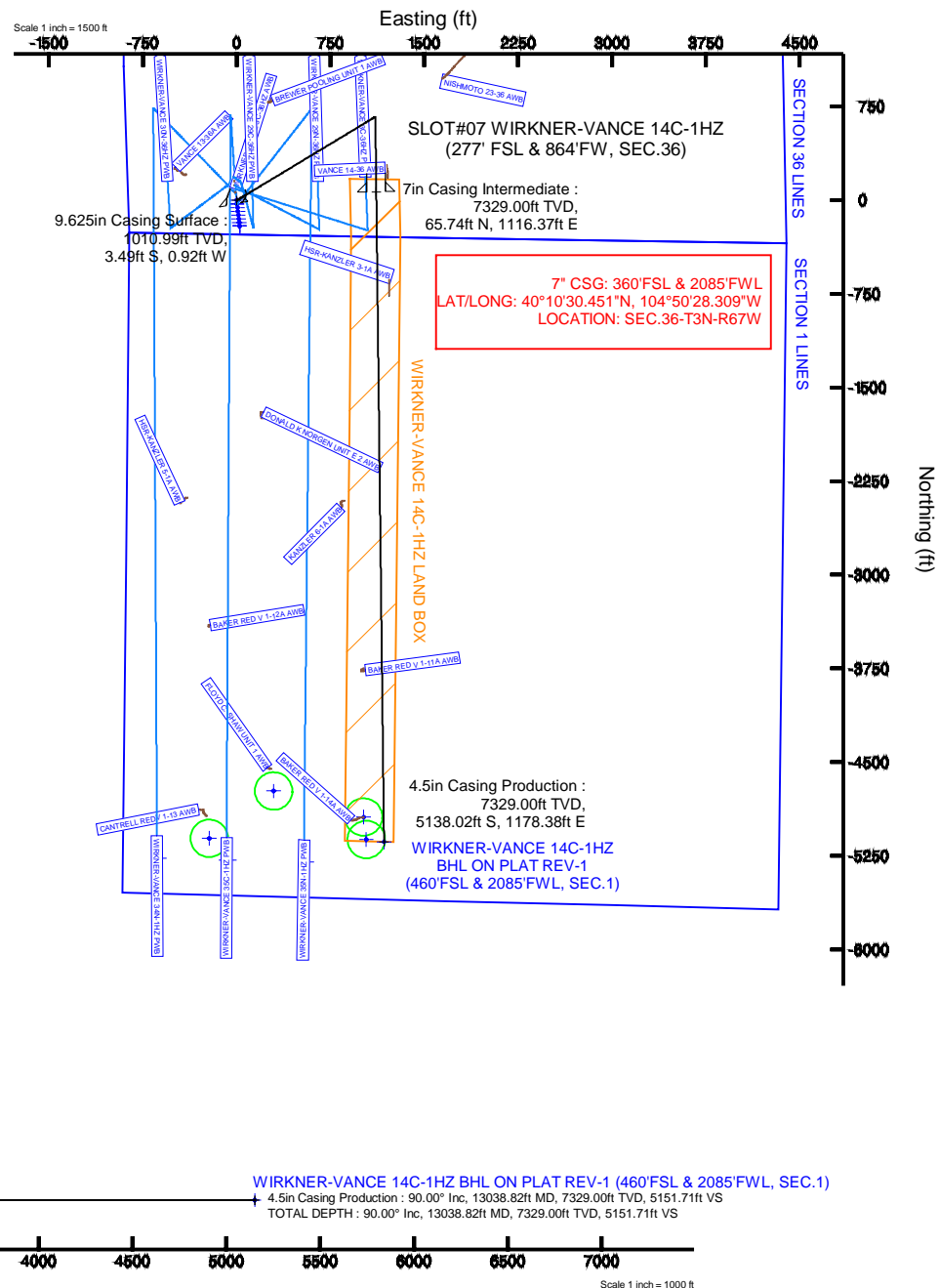


KERR-MCGEE OIL & GAS ONSHORE LP													
Location: COLORADO			Slot: SLOT#07 WIRKNER-VANCE 14C-1HZ (277' FSL & 864'FW, SEC.36)										
Field: WELD COUNTY (KERR MCGEE)			Well: WIRKNER-VANCE 14C-1HZ										
Facility: SEC.36-T3N-R67W			Wellbore: WIRKNER-VANCE 14C-1HZ PWB										
Plot reference wellpath is WIRKNER-VANCE 14C-1HZ (REV-A.0) PWP													
True vertical depths are referenced to ENSIGN 138 (RKB 13) (RKB)					Grid System: NAD83 / Lambert Colorado SP, Northern Zone (501), US feet								
Measured depths are referenced to ENSIGN 138 (RKB 13) (RKB)					North Reference: True north								
ENSIGN 138 (RKB 13) (RKB) to Mean Sea Level: 4835 feet					Scale: True distance								
Mean Sea Level to Mud line (At Slot: SLOT#07 WIRKNER-VANCE 14C-1HZ (277' FSL & 864'FW, SEC.36)): 0 feet					Depths are in feet								
Coordinates are in feet referenced to Slot					Created by: robotate1 on 24/Oct/2013								
Location Information													
Facility Name					Grid East (US ft)	Grid North (US ft)	Latitude	Longitude					
SEC.36-T3N-R67W					3182517.510	1310192.871	40°10'S8.908"N	104°50'48.300"W					
Slot		Local N (ft)	Local E (ft)		Grid East (US ft)	Grid North (US ft)	Latitude	Longitude					
SLOT#07 WIRKNER-VANCE 14C-1HZ (277' FSL & 864'FW, SEC.36)		-2945.35	435.39		3182974.570	1307250.942	40°10'29.802"N	104°50'42.691"W					
ENSIGN 138 (RKB 13) (RKB) to Mud line (At Slot: SLOT#07 WIRKNER-VANCE 14C-1HZ (277' FSL & 864'FW, SEC.36))							4835ft						
Mean Sea Level to Mud line (At Slot: SLOT#07 WIRKNER-VANCE 14C-1HZ (277' FSL & 864'FW, SEC.36))							0ft						
ENSIGN 138 (RKB 13) (RKB) to Mean Sea Level							4835ft						
Survey Program													
Start MD (ft)	End MD (ft)	Tool		Model		Log Name/Comment		Wellbore					
13.00	913.00	Generic gyro - continuous		Generic gyro - continuous (Standard)				WIRKNER-VANCE 14C-1HZ AWB					
913.00	7834.68	NavTrak		NavTrak (MAGCORR.IFR)				WIRKNER-VANCE 14C-1HZ PWB					
7834.68	13038.82	OnTrak		OnTrak (MAGCORR.IFR)				WIRKNER-VANCE 14C-1HZ PWB					
Well Profile Data													
Design Comment	MD (ft)	Inc (°)	Az (°)	TVD (ft)	Local N (ft)	Local E (ft)	DLS (°/100ft)	VS (ft)					
TIE-INTO GYROS	913.00	0.230	218.750	912.99	-3.19	-0.67	0.04	3.18					
BEGIN NUDGE	1200.01	0.230	218.750	1200.00	-4.09	-1.39	0.00	4.07					
END NUDGE	2010.82	16.000	58.870	2000.45	52.79	93.88	2.00	-51.67					
BEGIN DROP	5911.47	16.000	58.870	5750.00	608.64	1014.22	0.00	-596.50					
END DROP	6711.47	0.000	179.317	6539.64	666.01	1109.21	2.00	-652.74					
KOP, BUILD @ 10°/100'	6875.87	0.000	179.317	6704.04	666.01	1109.21	0.00	-652.74					
BUILD @ 6°/100'	7109.23	23.336	179.317	6931.00</									





Planned Wellpath Report

WIRKNER-VANCE 14C-1HZ (REV-A.0) PWP

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REFERENCE WELLPATH IDENTIFICATION

Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#07 WIRKNER-VANCE 14C-1HZ (277' FSL & 864'FW, SE
Area	COLORADO	Well	WIRKNER-VANCE 14C-1HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	WIRKNER-VANCE 14C-1HZ PWB
Facility	SEC.36-T3N-R67W		

REPORT SETUP INFORMATION

Projection System	NAD83 / Lambert Colorado SP, Northern Zone (501), US feet	Software System	WellArchitect® 4.0.0
North Reference	True	User	Robiale01
Scale	0.999958	Report Generated	24/Oct/2013 at 11:28
Convergence at slot	n/a	Database/Source file	WellArchitectDB/WIRKNER-VANCE_14C-1HZ_PWB.xml

WELLPATH LOCATION

	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	-2945.35	435.39	3182974.57	1307250.94	40°10'29.802"N	104°50'42.691"W
Facility Reference Pt			3182517.51	1310192.87	40°10'58.908"N	104°50'48.300"W
Field Reference Pt			3197771.84	1268891.29	40°04'09.600"N	104°47'36.000"W

WELLPATH DATUM

Calculation method	Minimum curvature	ENSIGN 138 (RKB 13') (RKB) to Facility Vertical Datum	4835.00ft
Horizontal Reference Pt	Slot	ENSIGN 138 (RKB 13') (RKB) to Mean Sea Level	4835.00ft
Vertical Reference Pt	ENSIGN 138 (RKB 13') (RKB)	ENSIGN 138 (RKB 13') (RKB) to Mud Line at Slot (SLOT#07 WIRKNER-VANCE 14C-1HZ (277' FSL & 864'FW, SEC.36))	4835.00ft
MD Reference Pt	ENSIGN 138 (RKB 13') (RKB)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	179.32°

REFERENCE WELLPATH IDENTIFICATION

Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#07 WIRKNER-VANCE 14C-1HZ (277' FSL & 864'FW, SE
Area	COLORADO	Well	WIRKNER-VANCE 14C-1HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	WIRKNER-VANCE 14C-1HZ PWB
Facility	SEC.36-T3N-R67W		

WELLPATH DATA (148 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
0.00†	0.000	164.840	0.00	0.00	0.00	0.00	40°10'29.802"N	104°50'42.691"W	0.00	
13.00	0.000	164.840	13.00	0.00	0.00	0.00	40°10'29.802"N	104°50'42.691"W	0.00	TIE-ON
113.00	0.410	164.840	113.00	0.35	-0.35	0.09	40°10'29.799"N	104°50'42.690"W	0.41	BEGIN GYRO SURVEYS
213.00	0.150	148.610	213.00	0.81	-0.80	0.26	40°10'29.794"N	104°50'42.688"W	0.27	
313.00	0.130	154.760	313.00	1.02	-1.02	0.37	40°10'29.792"N	104°50'42.686"W	0.02	
413.00	0.120	184.680	413.00	1.23	-1.22	0.41	40°10'29.790"N	104°50'42.686"W	0.07	
513.00	0.270	185.370	513.00	1.57	-1.56	0.38	40°10'29.787"N	104°50'42.686"W	0.15	
613.00	0.320	208.820	613.00	2.04	-2.04	0.22	40°10'29.782"N	104°50'42.688"W	0.13	
713.00	0.340	228.590	712.99	2.48	-2.48	-0.13	40°10'29.777"N	104°50'42.693"W	0.12	
813.00	0.230	208.640	812.99	2.85	-2.86	-0.45	40°10'29.774"N	104°50'42.697"W	0.15	
913.00	0.230	218.750	912.99	3.18	-3.19	-0.67	40°10'29.770"N	104°50'42.700"W	0.04	TIE-INTO GYROS
1013.00†	0.230	218.750	1012.99	3.49	-3.50	-0.92	40°10'29.767"N	104°50'42.703"W	0.00	
1113.00†	0.230	218.750	1112.99	3.80	-3.81	-1.18	40°10'29.764"N	104°50'42.706"W	0.00	
1200.01	0.230	218.750	1200.00	4.07	-4.09	-1.39	40°10'29.762"N	104°50'42.709"W	0.00	BEGIN NUDGE
1213.00†	0.089	119.505	1212.99	4.09	-4.11	-1.40	40°10'29.761"N	104°50'42.709"W	2.00	
1313.00†	2.045	60.785	1312.97	3.28	-3.28	0.22	40°10'29.770"N	104°50'42.688"W	2.00	
1413.00†	4.044	59.702	1412.82	0.69	-0.63	4.83	40°10'29.796"N	104°50'42.629"W	2.00	
1513.00†	6.044	59.335	1512.43	-3.69	3.84	12.40	40°10'29.840"N	104°50'42.531"W	2.00	
1613.00†	8.044	59.150	1611.67	-9.83	10.11	22.94	40°10'29.902"N	104°50'42.396"W	2.00	
1713.00†	10.044	59.039	1710.42	-17.75	18.18	36.42	40°10'29.982"N	104°50'42.222"W	2.00	
1813.00†	12.044	58.964	1808.56	-27.42	28.05	52.84	40°10'30.079"N	104°50'42.010"W	2.00	
1913.00†	14.044	58.910	1905.98	-38.83	39.69	72.17	40°10'30.194"N	104°50'41.761"W	2.00	
2010.82	16.000	58.870	2000.45	-51.67	52.79	93.88	40°10'30.324"N	104°50'41.482"W	2.00	END NUDGE
2013.00†	16.000	58.870	2002.55	-51.98	53.11	94.39	40°10'30.327"N	104°50'41.475"W	0.00	
2113.00†	16.000	58.870	2098.67	-65.94	67.36	117.99	40°10'30.468"N	104°50'41.171"W	0.00	
2213.00†	16.000	58.870	2194.80	-79.91	81.61	141.58	40°10'30.608"N	104°50'40.867"W	0.00	
2313.00†	16.000	58.870	2290.93	-93.88	95.86	165.17	40°10'30.749"N	104°50'40.563"W	0.00	
2413.00†	16.000	58.870	2387.05	-107.85	110.11	188.77	40°10'30.890"N	104°50'40.259"W	0.00	
2513.00†	16.000	58.870	2483.18	-121.81	124.35	212.36	40°10'31.031"N	104°50'39.955"W	0.00	
2613.00†	16.000	58.870	2579.30	-135.78	138.60	235.96	40°10'31.172"N	104°50'39.651"W	0.00	
2713.00†	16.000	58.870	2675.43	-149.75	152.85	259.55	40°10'31.313"N	104°50'39.347"W	0.00	
2813.00†	16.000	58.870	2771.56	-163.72	167.10	283.15	40°10'31.453"N	104°50'39.043"W	0.00	
2913.00†	16.000	58.870	2867.68	-177.69	181.35	306.74	40°10'31.594"N	104°50'38.739"W	0.00	
3013.00†	16.000	58.870	2963.81	-191.65	195.60	330.34	40°10'31.735"N	104°50'38.435"W	0.00	
3113.00†	16.000	58.870	3059.94	-205.62	209.85	353.93	40°10'31.876"N	104°50'38.131"W	0.00	
3213.00†	16.000	58.870	3156.06	-219.59	224.10	377.52	40°10'32.017"N	104°50'37.827"W	0.00	
3313.00†	16.000	58.870	3252.19	-233.56	238.35	401.12	40°10'32.157"N	104°50'37.524"W	0.00	
3413.00†	16.000	58.870	3348.31	-247.52	252.60	424.71	40°10'32.298"N	104°50'37.220"W	0.00	
3513.00†	16.000	58.870	3444.44	-261.49	266.85	448.31	40°10'32.439"N	104°50'36.916"W	0.00	
3613.00†	16.000	58.870	3540.57	-275.46	281.10	471.90	40°10'32.580"N	104°50'36.612"W	0.00	
3713.00†	16.000	58.870	3636.69	-289.43	295.35	495.50	40°10'32.721"N	104°50'36.308"W	0.00	
3813.00†	16.000	58.870	3732.82	-303.39	309.60	519.09	40°10'32.861"N	104°50'36.004"W	0.00	
3913.00†	16.000	58.870	3828.94	-317.36	323.85	542.69	40°10'33.002"N	104°50'35.700"W	0.00	
3938.02†	16.000	58.870	3853.00	-320.86	327.42	548.59	40°10'33.038"N	104°50'35.624"W	0.00	PARKMAN
4013.00†	16.000	58.870	3925.07	-331.33	338.10	566.28	40°10'33.143"N	104°50'35.396"W	0.00	

REFERENCE WELLPATH IDENTIFICATION

Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#07 WIRKNER-VANCE 14C-1HZ (277' FSL & 864'FW, SE
Area	COLORADO	Well	WIRKNER-VANCE 14C-1HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	WIRKNER-VANCE 14C-1HZ PWB
Facility	SEC.36-T3N-R67W		

WELLPATH DATA (148 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
4113.00†	16.000	58.870	4021.20	-345.30	352.35	589.88	40°10'33.284"N	104°50'35.092"W	0.00	
4213.00†	16.000	58.870	4117.32	-359.27	366.60	613.47	40°10'33.425"N	104°50'34.788"W	0.00	
4313.00†	16.000	58.870	4213.45	-373.23	380.85	637.06	40°10'33.566"N	104°50'34.484"W	0.00	
4337.50†	16.000	58.870	4237.00	-376.65	384.35	642.84	40°10'33.600"N	104°50'34.409"W	0.00	SUSSEX
4413.00†	16.000	58.870	4309.58	-387.20	395.10	660.66	40°10'33.706"N	104°50'34.180"W	0.00	
4513.00†	16.000	58.870	4405.70	-401.17	409.35	684.25	40°10'33.847"N	104°50'33.876"W	0.00	
4613.00†	16.000	58.870	4501.83	-415.14	423.60	707.85	40°10'33.988"N	104°50'33.572"W	0.00	
4713.00†	16.000	58.870	4597.95	-429.10	437.85	731.44	40°10'34.129"N	104°50'33.268"W	0.00	
4813.00†	16.000	58.870	4694.08	-443.07	452.10	755.04	40°10'34.270"N	104°50'32.964"W	0.00	
4913.00†	16.000	58.870	4790.21	-457.04	466.35	778.63	40°10'34.410"N	104°50'32.660"W	0.00	
5013.00†	16.000	58.870	4886.33	-471.01	480.60	802.23	40°10'34.551"N	104°50'32.356"W	0.00	
5113.00†	16.000	58.870	4982.46	-484.97	494.85	825.82	40°10'34.692"N	104°50'32.052"W	0.00	
5213.00†	16.000	58.870	5078.58	-498.94	509.10	849.41	40°10'34.833"N	104°50'31.748"W	0.00	
5313.00†	16.000	58.870	5174.71	-512.91	523.35	873.01	40°10'34.974"N	104°50'31.444"W	0.00	
5413.00†	16.000	58.870	5270.84	-526.88	537.60	896.60	40°10'35.114"N	104°50'31.140"W	0.00	
5513.00†	16.000	58.870	5366.96	-540.85	551.85	920.20	40°10'35.255"N	104°50'30.836"W	0.00	
5613.00†	16.000	58.870	5463.09	-554.81	566.10	943.79	40°10'35.396"N	104°50'30.532"W	0.00	
5713.00†	16.000	58.870	5559.22	-568.78	580.35	967.39	40°10'35.537"N	104°50'30.228"W	0.00	
5813.00†	16.000	58.870	5655.34	-582.75	594.60	990.98	40°10'35.678"N	104°50'29.924"W	0.00	
5911.47	16.000	58.870	5750.00	-596.50	608.64	1014.22	40°10'35.816"N	104°50'29.625"W	0.00	BEGIN DROP
5913.00†	15.969	58.870	5751.47	-596.72	608.85	1014.58	40°10'35.818"N	104°50'29.620"W	2.00	
6013.00†	13.969	58.870	5848.07	-609.80	622.21	1036.68	40°10'35.950"N	104°50'29.335"W	2.00	
6113.00†	11.969	58.870	5945.51	-621.18	633.81	1055.89	40°10'36.065"N	104°50'29.088"W	2.00	
6213.00†	9.969	58.870	6043.68	-630.82	643.65	1072.18	40°10'36.162"N	104°50'28.878"W	2.00	
6313.00†	7.969	58.870	6142.45	-638.72	651.70	1085.53	40°10'36.242"N	104°50'28.706"W	2.00	
6413.00†	5.969	58.870	6241.71	-644.87	657.98	1095.91	40°10'36.304"N	104°50'28.572"W	2.00	
6513.00†	3.969	58.870	6341.33	-649.26	662.46	1103.33	40°10'36.348"N	104°50'28.477"W	2.00	
6613.00†	1.969	58.870	6441.19	-651.88	665.13	1107.76	40°10'36.375"N	104°50'28.420"W	2.00	
6711.47	0.000	179.317	6539.64	-652.74	666.01	1109.21	40°10'36.383"N	104°50'28.401"W	2.00	END DROP
6713.00†	0.000	179.317	6541.17	-652.74	666.01	1109.21	40°10'36.383"N	104°50'28.401"W	0.00	
6813.00†	0.000	179.317	6641.17	-652.74	666.01	1109.21	40°10'36.383"N	104°50'28.401"W	0.00	
6875.87	0.000	179.317	6704.04	-652.74	666.01	1109.21	40°10'36.383"N	104°50'28.401"W	0.00	KOP, BUILD @ 10°/100'
6913.00†	3.713	179.317	6741.14	-651.54	664.81	1109.23	40°10'36.371"N	104°50'28.401"W	10.00	
7013.00†	13.713	179.317	6839.86	-636.41	649.68	1109.41	40°10'36.222"N	104°50'28.399"W	10.00	
7109.23	23.336	179.317	6931.00	-605.87	619.14	1109.77	40°10'35.920"N	104°50'28.394"W	10.00	BUILD @ 6°/100'
7113.00†	23.562	179.317	6934.46	-604.37	617.64	1109.79	40°10'35.905"N	104°50'28.394"W	6.00	
7164.40†	26.646	179.317	6981.00	-582.56	595.84	1110.05	40°10'35.690"N	104°50'28.390"W	6.00	SHARON SPRINGS
7213.00†	29.562	179.317	7023.86	-559.67	572.95	1110.32	40°10'35.464"N	104°50'28.387"W	6.00	
7256.26	32.158	179.317	7061.00	-537.48	550.76	1110.58	40°10'35.244"N	104°50'28.383"W	6.00	BUILD @ 10°/100'; NIOBRARA A
7304.87†	37.018	179.317	7101.00	-509.90	523.18	1110.91	40°10'34.972"N	104°50'28.379"W	10.00	NIOBRARA B
7313.00†	37.832	179.317	7107.46	-504.96	518.24	1110.97	40°10'34.923"N	104°50'28.379"W	10.00	
7387.26†	45.258	179.317	7163.00	-455.74	469.03	1111.56	40°10'34.437"N	104°50'28.371"W	10.00	NIOBRARA C
7413.00†	47.832	179.317	7180.70	-437.06	450.34	1111.78	40°10'34.252"N	104°50'28.368"W	10.00	
7513.00†	57.832	179.317	7241.04	-357.47	370.76	1112.73	40°10'33.466"N	104°50'28.356"W	10.00	
7613.00†	67.832	179.317	7286.64	-268.62	281.92	1113.79	40°10'32.588"N	104°50'28.342"W	10.00	

Planned Wellpath Report

WIRKNER-VANCE 14C-1HZ (REV-A.0) PWP

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REFERENCE WELLPATH IDENTIFICATION

Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#07 WIRKNER-VANCE 14C-1HZ (277' FSL & 864'FW, SE
Area	COLORADO	Well	WIRKNER-VANCE 14C-1HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	WIRKNER-VANCE 14C-1HZ PWB
Facility	SEC.36-T3N-R67W		

WELLPATH DATA (148 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
7648.46†	71.378	179.317	7299.00	-235.39	248.69	1114.19	40°10'32.259"N	104°50'28.337"W	10.00	FORT HAYS
7713.00†	77.832	179.317	7316.12	-173.20	186.50	1114.93	40°10'31.645"N	104°50'28.328"W	10.00	
7745.05†	81.036	179.317	7322.00	-141.70	155.00	1115.30	40°10'31.333"N	104°50'28.323"W	10.00	CODELL
7813.00†	87.832	179.317	7328.59	-74.10	87.42	1116.11	40°10'30.666"N	104°50'28.313"W	10.00	
7834.68	90.000	179.317	7329.00	-52.43	65.74	1116.37	40°10'30.451"N	104°50'28.309"W	10.00	LANDING POINT
7913.00†	90.000	179.317	7329.00	25.89	-12.57	1117.30	40°10'29.678"N	104°50'28.297"W	0.00	
8013.00†	90.000	179.317	7329.00	125.89	-112.57	1118.49	40°10'28.689"N	104°50'28.282"W	0.00	
8113.00†	90.000	179.317	7329.00	225.89	-212.56	1119.68	40°10'27.701"N	104°50'28.267"W	0.00	
8213.00†	90.000	179.317	7329.00	325.89	-312.55	1120.88	40°10'26.713"N	104°50'28.251"W	0.00	
8313.00†	90.000	179.317	7329.00	425.89	-412.54	1122.07	40°10'25.725"N	104°50'28.236"W	0.00	
8413.00†	90.000	179.317	7329.00	525.89	-512.54	1123.26	40°10'24.737"N	104°50'28.221"W	0.00	
8513.00†	90.000	179.317	7329.00	625.89	-612.53	1124.45	40°10'23.749"N	104°50'28.206"W	0.00	
8613.00†	90.000	179.317	7329.00	725.89	-712.52	1125.64	40°10'22.761"N	104°50'28.190"W	0.00	
8713.00†	90.000	179.317	7329.00	825.89	-812.52	1126.84	40°10'21.772"N	104°50'28.175"W	0.00	
8813.00†	90.000	179.317	7329.00	925.89	-912.51	1128.03	40°10'20.784"N	104°50'28.160"W	0.00	
8913.00†	90.000	179.317	7329.00	1025.89	-1012.50	1129.22	40°10'19.796"N	104°50'28.144"W	0.00	
9013.00†	90.000	179.317	7329.00	1125.89	-1112.49	1130.41	40°10'18.808"N	104°50'28.129"W	0.00	
9113.00†	90.000	179.317	7329.00	1225.89	-1212.49	1131.60	40°10'17.820"N	104°50'28.114"W	0.00	
9213.00†	90.000	179.317	7329.00	1325.89	-1312.48	1132.80	40°10'16.832"N	104°50'28.098"W	0.00	
9313.00†	90.000	179.317	7329.00	1425.89	-1412.47	1133.99	40°10'15.844"N	104°50'28.083"W	0.00	
9413.00†	90.000	179.317	7329.00	1525.89	-1512.47	1135.18	40°10'14.856"N	104°50'28.068"W	0.00	
9513.00†	90.000	179.317	7329.00	1625.89	-1612.46	1136.37	40°10'13.867"N	104°50'28.053"W	0.00	
9613.00†	90.000	179.317	7329.00	1725.89	-1712.45	1137.56	40°10'12.879"N	104°50'28.037"W	0.00	
9713.00†	90.000	179.317	7329.00	1825.89	-1812.44	1138.75	40°10'11.891"N	104°50'28.022"W	0.00	
9813.00†	90.000	179.317	7329.00	1925.89	-1912.44	1139.95	40°10'10.903"N	104°50'28.007"W	0.00	
9913.00†	90.000	179.317	7329.00	2025.89	-2012.43	1141.14	40°10'09.915"N	104°50'27.991"W	0.00	
10013.00†	90.000	179.317	7329.00	2125.89	-2112.42	1142.33	40°10'08.927"N	104°50'27.976"W	0.00	
10113.00†	90.000	179.317	7329.00	2225.89	-2212.42	1143.52	40°10'07.939"N	104°50'27.961"W	0.00	
10213.00†	90.000	179.317	7329.00	2325.89	-2312.41	1144.71	40°10'06.950"N	104°50'27.946"W	0.00	
10313.00†	90.000	179.317	7329.00	2425.89	-2412.40	1145.90	40°10'05.962"N	104°50'27.930"W	0.00	
10413.00†	90.000	179.317	7329.00	2525.89	-2512.39	1147.10	40°10'04.974"N	104°50'27.915"W	0.00	
10513.00†	90.000	179.317	7329.00	2625.89	-2612.39	1148.29	40°10'03.986"N	104°50'27.900"W	0.00	
10613.00†	90.000	179.317	7329.00	2725.89	-2712.38	1149.48	40°10'02.998"N	104°50'27.884"W	0.00	
10713.00†	90.000	179.317	7329.00	2825.89	-2812.37	1150.67	40°10'02.010"N	104°50'27.869"W	0.00	
10813.00†	90.000	179.317	7329.00	2925.89	-2912.37	1151.86	40°10'01.022"N	104°50'27.854"W	0.00	
10913.00†	90.000	179.317	7329.00	3025.89	-3012.36	1153.05	40°10'00.034"N	104°50'27.839"W	0.00	
11013.00†	90.000	179.317	7329.00	3125.89	-3112.35	1154.24	40°09'59.045"N	104°50'27.823"W	0.00	
11113.00†	90.000	179.317	7329.00	3225.89	-3212.34	1155.44	40°09'58.057"N	104°50'27.808"W	0.00	
11213.00†	90.000	179.317	7329.00	3325.89	-3312.34	1156.63	40°09'57.069"N	104°50'27.793"W	0.00	
11313.00†	90.000	179.317	7329.00	3425.89	-3412.33	1157.82	40°09'56.081"N	104°50'27.777"W	0.00	
11413.00†	90.000	179.317	7329.00	3525.89	-3512.32	1159.01	40°09'55.093"N	104°50'27.762"W	0.00	
11513.00†	90.000	179.317	7329.00	3625.89	-3612.32	1160.20	40°09'54.105"N	104°50'27.747"W	0.00	
11613.00†	90.000	179.317	7329.00	3725.89	-3712.31	1161.39	40°09'53.117"N	104°50'27.732"W	0.00	
11713.00†	90.000	179.317	7329.00	3825.89	-3812.30	1162.58	40°09'52.128"N	104°50'27.716"W	0.00	
11813.00†	90.000	179.317	7329.00	3925.89	-3912.30	1163.78	40°09'51.140"N	104°50'27.701"W	0.00	

REFERENCE WELLPATH IDENTIFICATION

Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#07 WIRKNER-VANCE 14C-1HZ (277' FSL & 864'FW, SE
Area	COLORADO	Well	WIRKNER-VANCE 14C-1HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	WIRKNER-VANCE 14C-1HZ PWB
Facility	SEC.36-T3N-R67W		

WELLPATH DATA (148 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
11913.00†	90.000	179.317	7329.00	4025.89	-4012.29	1164.97	40°09'50.152"N	104°50'27.686"W	0.00	
12013.00†	90.000	179.317	7329.00	4125.89	-4112.28	1166.16	40°09'49.164"N	104°50'27.670"W	0.00	
12113.00†	90.000	179.317	7329.00	4225.89	-4212.27	1167.35	40°09'48.176"N	104°50'27.655"W	0.00	
12213.00†	90.000	179.317	7329.00	4325.89	-4312.27	1168.54	40°09'47.188"N	104°50'27.640"W	0.00	
12313.00†	90.000	179.317	7329.00	4425.89	-4412.26	1169.73	40°09'46.200"N	104°50'27.625"W	0.00	
12413.00†	90.000	179.317	7329.00	4525.89	-4512.25	1170.92	40°09'45.212"N	104°50'27.609"W	0.00	
12513.00†	90.000	179.317	7329.00	4625.89	-4612.25	1172.12	40°09'44.223"N	104°50'27.594"W	0.00	
12613.00†	90.000	179.317	7329.00	4725.89	-4712.24	1173.31	40°09'43.235"N	104°50'27.579"W	0.00	
12713.00†	90.000	179.317	7329.00	4825.89	-4812.23	1174.50	40°09'42.247"N	104°50'27.563"W	0.00	
12813.00†	90.000	179.317	7329.00	4925.89	-4912.22	1175.69	40°09'41.259"N	104°50'27.548"W	0.00	
12913.00†	90.000	179.318	7329.00	5025.89	-5012.22	1176.88	40°09'40.271"N	104°50'27.533"W	0.00	
13013.00†	90.000	179.318	7329.00	5125.89	-5112.21	1178.07	40°09'39.283"N	104°50'27.518"W	0.00	
13038.82	90.000	179.318	7329.00 ¹	5151.71	-5138.02	1178.38	40°09'39.028"N	104°50'27.514"W	0.00	TOTAL DEPTH

HOLE & CASING SECTIONS -

Ref Wellbore: WIRKNER-VANCE 14C-1HZ PWB

Ref Wellpath: WIRKNER-VANCE 14C-1HZ (REV-A.0) PWP

String/Diameter	Start MD [ft]	End MD [ft]	Interval [ft]	Start TVD [ft]	End TVD [ft]	Start N/S [ft]	Start E/W [ft]	End N/S [ft]	End E/W [ft]
13.5in Open Hole	13.00	913.00	900.00	13.00	912.99	0.00	0.00	-3.19	-0.67
9.625in Casing Surface	13.00	1011.00	998.00	13.00	1010.99	0.00	0.00	-3.49	-0.92
8.75in Open Hole	913.00	7834.68	6921.68	912.99	7329.00	-3.19	-0.67	65.74	1116.37
7in Casing Intermediate	13.00	7834.68	7821.68	13.00	7329.00	0.00	0.00	65.74	1116.37
6.125in Open Hole	7834.68	13038.82	5204.14	7329.00	7329.00	65.74	1116.37	-5138.02	1178.38
4.5in Casing Production	13.00	13038.82	13025.82	13.00	7329.00	0.00	0.00	-5138.02	1178.38

REFERENCE WELLPATH IDENTIFICATION

Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#07 WIRKNER-VANCE 14C-1HZ (277' FSL & 864'FW, SE
Area	COLORADO	Well	WIRKNER-VANCE 14C-1HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	WIRKNER-VANCE 14C-1HZ PWB
Facility	SEC.36-T3N-R67W		

TARGETS

Name	MD [ft]	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
BAKER RED V 1-14A		7325.00	-4939.49	1015.70	3184026.67	1302319.31	40°09'40.990"N	104°50'29.609"W	circle
1) WIRKNER-VANCE 14C-1HZ BHL ON PLAT REV-1 (460'FSL & 2085'FWL, SEC.1)	13038.82	7329.00	-5138.02	1178.38	3184190.80	1302121.99	40°09'39.028"N	104°50'27.514"W	point
WIRKNER-VANCE 14C-1HZ LAND BOX		7350.00	0.00	0.00	3182974.57	1307250.94	40°10'29.802"N	104°50'42.691"W	polygon
WIRKNER SECTION 1 LINES		7400.00	-29.55	3.34	3182978.13	1307221.42	40°10'29.510"N	104°50'42.648"W	polygon
WIRKNER SECTION 36 LINES		7400.00	-29.55	3.34	3182978.13	1307221.42	40°10'29.510"N	104°50'42.648"W	polygon

SURVEY PROGRAM -

Ref Wellbore: WIRKNER-VANCE 14C-1HZ PWB Ref Wellpath: WIRKNER-VANCE 14C-1HZ (REV-A.0) PWP

Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
13.00	913.00	Generic gyro - continuous (Standard)		WIRKNER-VANCE 14C-1HZ AWB
913.00	7834.68	NaviTrak (MAGCORR,IFR)		WIRKNER-VANCE 14C-1HZ PWB
7834.68	13038.82	OnTrak (MAGCORR,IFR)		WIRKNER-VANCE 14C-1HZ PWB

REFERENCE WELLPATH IDENTIFICATION

Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#07 WIRKNER-VANCE 14C-1HZ (277' FSL & 864'FW, SE
Area	COLORADO	Well	WIRKNER-VANCE 14C-1HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	WIRKNER-VANCE 14C-1HZ PWB
Facility	SEC.36-T3N-R67W		

WELLPATH COMMENTS

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Comment
13.00	0.000	164.840	13.00	TIE-ON
113.00	0.410	164.840	113.00	BEGIN GYRO SURVEYS
3938.02	16.000	58.870	3853.00	PARKMAN
4337.50	16.000	58.870	4237.00	SUSSEX
7164.40	26.646	179.317	6981.00	SHARON SPRINGS
7256.26	32.158	179.317	7061.00	NIOBRARA A
7304.87	37.018	179.317	7101.00	NIOBRARA B
7387.26	45.258	179.317	7163.00	NIOBRARA C
7648.46	71.378	179.317	7299.00	FORT HAYS
7745.05	81.036	179.317	7322.00	CODELL

DESIGN COMMENTS

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Comment
913.00	0.230	218.750	912.99	TIE-INTO GYROS
1200.01	0.230	218.750	1200.00	BEGIN NUDGE
2010.82	16.000	58.870	2000.45	END NUDGE
5911.47	16.000	58.870	5750.00	BEGIN DROP
6711.47	0.000	179.317	6539.64	END DROP
6875.87	0.000	179.317	6704.04	KOP, BUILD @ 10°/100'
7109.23	23.336	179.317	6931.00	BUILD @ 6°/100'
7256.26	32.158	179.317	7061.00	BUILD @ 10°/100'
7834.68	90.000	179.317	7329.00	LANDING POINT
13038.82	90.000	179.318	7329.00	TOTAL DEPTH