

# KERR-MCGEE OIL & GAS ONSHORE LP

Location: COLORADO Slot: SLOT#21 DOLPH 1C-1HZ (661'FSL & 725'FEL, SEC.1)  
 Field: WELD COUNTY (KERR MCGEE) Well: DOLPH 1C-1HZ  
 Facility: SEC.01-T2N-R66W Wellbore: DOLPH 1C-1HZ PWB

Plot reference wellpath is DOLPH 1C-1HZ (REV-C.0) PWP  
 True vertical depths are referenced to ENSIGN 145 (13KB) (RKB)  
 Measured depths are referenced to ENSIGN 145 (13KB) (RKB)  
 ENSIGN 145 (13KB) (RKB) to Mean Sea Level: 5001 feet  
 Mean Sea Level to Mud line (At Slot: SLOT#21 DOLPH 1C-1HZ (661'FSL & 725'FEL, SEC.1)): 0 feet  
 Depths are in feet  
 Coordinates are in feet referenced to Slot  
 Grid System: NAD83 / Lambert Colorado SP, Northern Zone (501), US feet  
 North Reference: True north  
 Scale: True distance  
 Created by: precain on 31/JUL/2014

## Location Information

Facility Name	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude		
SEC.01-T2N-R66W	3215110.595	1303150.300	40°09'46.728"N	104°43'49.152"W		
Slot	Local N (ft)	Local E (ft)	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude
SLOT#21 DOLPH 1C-1HZ (661'FSL & 725'FEL, SEC.1)	-362.25	3320.47	3218433.934	1302816.895	40°09'43.146"N	104°43'06.384"W
ENSGN 145 (13KB) (RKB) to Mud line (At Slot: SLOT#21 DOLPH 1C-1HZ (661'FSL & 725'FEL, SEC.1))						5001ft
Mean Sea Level to Mud line (At Slot: SLOT#21 DOLPH 1C-1HZ (661'FSL & 725'FEL, SEC.1))						0ft
ENSGN 145 (13KB) (RKB) to Mean Sea Level						5001ft

## Survey Program

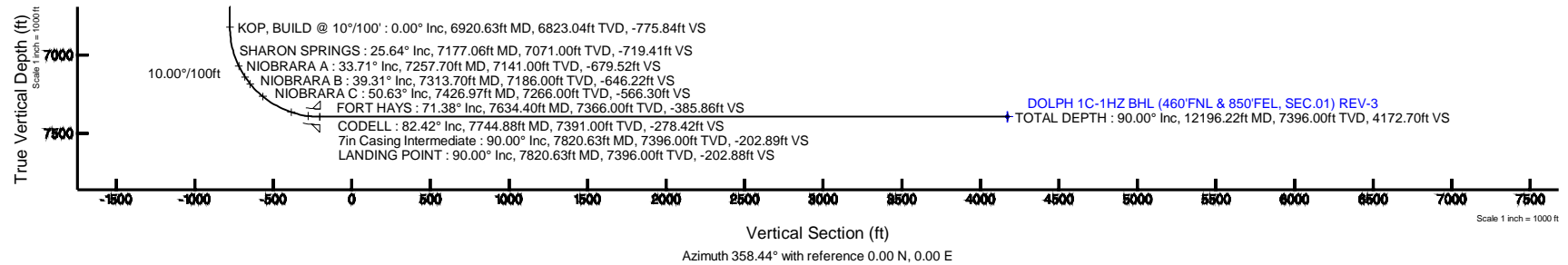
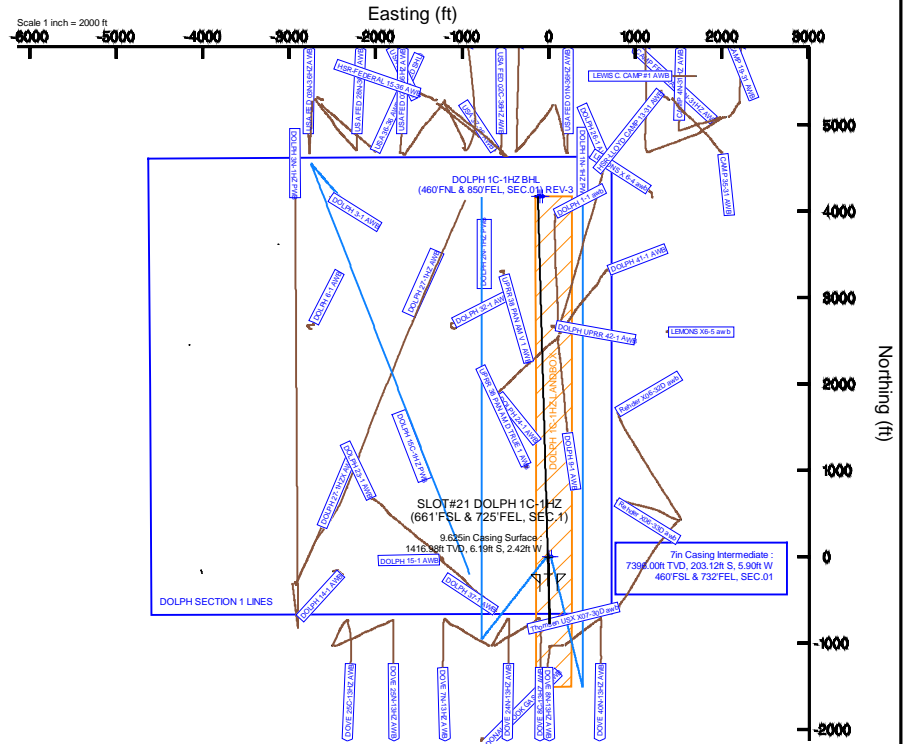
Start MD (ft)	End MD (ft)	Tool	Model	Log Name/Comment	Wellbore
13.00	1338.00	Generic gyro - continuous	Generic gyro - continuous (Standard)		DOLPH 1C-1HZ AWB
1338.00	7820.63	NavTrak	NavTrak (MAGCORR,IFR)		DOLPH 1C-1HZ PWB
7820.63	12196.22	NavTrak	NavTrak (MAGCORR,IFR)		DOLPH 1C-1HZ PWB

## Well Profile Data

Design Comment	MD (ft)	Inc (°)	Az (°)	TVD (ft)	Local N (ft)	Local E (ft)	DLS (%/100ft)	VS (ft)
TIE-INTO GYRO SURVEYS	1338.00	0.260	205.210	1337.98	-5.87	-2.27	0.12	-5.81
BEGIN NUDDGE	1665.02	0.260	205.210	1665.00	-7.21	-2.90	0.00	-7.13
END NUDDGE	2453.38	16.000	179.000	2443.00	-118.16	-1.76	2.00	-118.07
BEGIN DROP	4437.23	16.000	179.000	4350.00	-664.91	7.79	0.00	-664.87
END DROP	5237.23	0.000	358.438	5139.64	-775.87	9.72	2.00	-775.84
KOP, BUILD @ 10°/100'	6920.63	0.000	358.438	6823.04	-775.87	9.72	0.00	-775.84
LANDING POINT	7820.63	90.000	358.438	7396.00	-203.12	-5.90	10.00	-202.88
TOTAL DEPTH	12196.22	90.000	358.439	7396.00	4170.84	-125.14	0.00	4172.70

## Targets

Name	MD (ft)	TVD (ft)	Local N (ft)	Local E (ft)	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude
DOLPH SECTION 1 LINES		8996.00	0.40	30.20	3218464.13	1302817.57	40°09'43.150"N	104°43'05.995"W
DOLPH 1C-1HZ BHL (460'FNL & 850'FEL, SEC.01) REV-2		7396.00	4170.84	-100.14	3218297.04	1306986.51	40°10'24.362"N	104°43'07.674"W
DOLPH 1C-1HZ BHL (460'FNL & 850'FEL, SEC.01) REV-3	12196.22	7396.00	4170.84	-125.14	3218272.05	1306986.29	40°10'24.362"N	104°43'07.996"W
DOLPH 1C-1HZ BHL ON FLAT (460'FNL & 795'FEL, SEC.01) REV-1		7396.00	4170.84	-70.14	3218327.04	1306986.77	40°10'24.362"N	104°43'07.288"W
DOLPH 1C-1HZ LANDING		7446.00	0.00	0.00	3218433.93	1302816.90	40°09'43.146"N	104°43'06.384"W



# Planned Wellpath Report

DOLPH 1C-1HZ (REV-C.0) PWP

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REFERENCE WELLPATH IDENTIFICATION			
Operator	<b>KERR-MCGEE OIL &amp; GAS ONSHORE LP</b>	Slot	<b>SLOT#21 DOLPH 1C-1HZ (661'FSL &amp; 725'FEL, SEC.1)</b>
Area	<b>COLORADO</b>	Well	<b>DOLPH 1C-1HZ</b>
Field	<b>WELD COUNTY (KERR MCGEE)</b>	Wellbore	<b>DOLPH 1C-1HZ PWB</b>
Facility	<b>SEC.01-T2N-R66W</b>		

REPORT SETUP INFORMATION			
Projection System	<b>NAD83 / Lambert Colorado SP, Northern Zone (501), US feet</b>	Software System	<b>WellArchitect® 4.0.0</b>
North Reference	<b>True</b>	User	<b>Precain</b>
Scale	<b>0.999958</b>	Report Generated	<b>31/Jul/2014 at 21:17</b>
Convergence at slot	<b>n/a</b>	Database/Source file	<b>WellArchitectDB/DOLPH_1C-1HZ_PWB.xml</b>

WELLPATH LOCATION						
	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	-362.25	3320.47	3218433.93	1302816.90	<b>40°09'43.146"N</b>	<b>104°43'06.384"W</b>
Facility Reference Pt			3215110.60	1303150.30	<b>40°09'46.728"N</b>	<b>104°43'49.152"W</b>
Field Reference Pt			<b>3197771.84</b>	<b>1268891.29</b>	40°04'09.600"N	104°47'36.000"W

WELLPATH DATUM			
Calculation method	<b>Minimum curvature</b>	ENSIGN 145 (13'KB) (RKB) to Facility Vertical Datum	<b>5001.00ft</b>
Horizontal Reference Pt	<b>Slot</b>	ENSIGN 145 (13'KB) (RKB) to Mean Sea Level	<b>5001.00ft</b>
Vertical Reference Pt	<b>ENSIGN 145 (13'KB) (RKB)</b>	ENSIGN 145 (13'KB) (RKB) to Mud Line at Slot (SLOT#21 DOLPH 1C-1HZ (661'FSL & 725'FEL, SEC.1))	<b>5001.00ft</b>
MD Reference Pt	<b>ENSIGN 145 (13'KB) (RKB)</b>	Section Origin	<b>N 0.00, E 0.00 ft</b>
Field Vertical Reference	<b>Mean Sea Level</b>	Section Azimuth	<b>358.44°</b>

# Planned Wellpath Report

DOLPH 1C-1HZ (REV-C.0) PWP

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REFERENCE WELLPATH IDENTIFICATION				
Operator	KERR-MCGEE OIL & GAS ONSHORE LP		Slot	SLOT#21 DOLPH 1C-1HZ (661'FSL & 725'FEL, SEC.1)
Area	COLORADO		Well	DOLPH 1C-1HZ
Field	WELD COUNTY (KERR MCGEE)		Wellbore	DOLPH 1C-1HZ PWB
Facility	SEC.01-T2N-R66W			

## WELLPATH DATA (140 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	152.220	0.00	0.00	0.00	0.00	40°09'43.146"N	104°43'06.384"W	0.00	
13.00	0.000	152.220	13.00	0.00	0.00	0.00	40°09'43.146"N	104°43'06.384"W	0.00	
113.00	0.310	152.220	113.00	-0.24	-0.24	0.13	40°09'43.144"N	104°43'06.382"W	0.31	
213.00	0.300	167.180	213.00	-0.74	-0.73	0.31	40°09'43.139"N	104°43'06.380"W	0.08	
313.00	0.370	183.870	313.00	-1.32	-1.31	0.35	40°09'43.133"N	104°43'06.380"W	0.12	
413.00	0.330	219.750	412.99	-1.86	-1.85	0.14	40°09'43.128"N	104°43'06.382"W	0.22	
513.00	0.290	202.830	512.99	-2.30	-2.31	-0.14	40°09'43.123"N	104°43'06.386"W	0.10	
613.00	0.470	221.640	612.99	-2.83	-2.85	-0.51	40°09'43.118"N	104°43'06.391"W	0.22	
713.00	0.270	241.950	712.99	-3.24	-3.27	-0.99	40°09'43.114"N	104°43'06.397"W	0.24	
813.00	0.350	224.510	812.99	-3.56	-3.60	-1.41	40°09'43.110"N	104°43'06.402"W	0.12	
913.00	0.320	182.480	912.99	-4.05	-4.09	-1.64	40°09'43.106"N	104°43'06.405"W	0.24	
1013.00	0.240	179.640	1012.98	-4.53	-4.58	-1.65	40°09'43.101"N	104°43'06.405"W	0.08	
1113.00	0.210	228.280	1112.98	-4.86	-4.91	-1.79	40°09'43.097"N	104°43'06.407"W	0.19	
1213.00	0.310	202.900	1212.98	-5.23	-5.28	-2.03	40°09'43.094"N	104°43'06.410"W	0.15	
1296.02†	0.285	201.204	1296.00	-5.62	-5.68	-2.19	40°09'43.090"N	104°43'06.412"W	0.03	FOX HILLS MARKER
1313.00	0.280	200.820	1312.98	-5.70	-5.76	-2.22	40°09'43.089"N	104°43'06.413"W	0.03	
1338.00	0.260	205.210	1337.98	-5.81	-5.87	-2.27	40°09'43.088"N	104°43'06.413"W	0.12	TIE-INTO GYRO SURVEYS
1438.00†	0.260	205.210	1437.98	-6.21	-6.28	-2.46	40°09'43.084"N	104°43'06.416"W	0.00	
1538.00†	0.260	205.210	1537.98	-6.62	-6.69	-2.65	40°09'43.080"N	104°43'06.418"W	0.00	
1638.00†	0.260	205.210	1637.98	-7.02	-7.10	-2.85	40°09'43.076"N	104°43'06.421"W	0.00	
1665.02	0.260	205.210	1665.00	-7.13	-7.21	-2.90	40°09'43.075"N	104°43'06.421"W	0.00	BEGIN NUDGE
1738.00†	1.696	182.531	1737.97	-8.36	-8.44	-3.02	40°09'43.063"N	104°43'06.423"W	2.00	
1838.00†	3.694	180.398	1837.85	-13.05	-13.14	-3.11	40°09'43.016"N	104°43'06.424"W	2.00	
1938.00†	5.693	179.762	1937.51	-21.23	-21.32	-3.11	40°09'42.935"N	104°43'06.424"W	2.00	
2038.00†	7.693	179.456	2036.82	-32.88	-32.98	-3.02	40°09'42.820"N	104°43'06.423"W	2.00	
2138.00†	9.693	179.276	2135.67	-47.99	-48.09	-2.85	40°09'42.671"N	104°43'06.421"W	2.00	
2238.00†	11.693	179.157	2233.93	-66.54	-66.64	-2.60	40°09'42.487"N	104°43'06.417"W	2.00	
2338.00†	13.692	179.072	2331.48	-88.51	-88.61	-2.26	40°09'42.270"N	104°43'06.413"W	2.00	
2438.00†	15.692	179.008	2428.20	-113.87	-113.97	-1.83	40°09'42.020"N	104°43'06.408"W	2.00	
2453.38	16.000	179.000	2443.00	-118.07	-118.16	-1.76	40°09'41.978"N	104°43'06.407"W	2.00	END NUDGE
2538.00†	16.000	179.000	2524.34	-141.40	-141.49	-1.35	40°09'41.748"N	104°43'06.401"W	0.00	
2638.00†	16.000	179.000	2620.47	-168.96	-169.05	-0.87	40°09'41.475"N	104°43'06.395"W	0.00	
2738.00†	16.000	179.000	2716.59	-196.52	-196.61	-0.39	40°09'41.203"N	104°43'06.389"W	0.00	
2838.00†	16.000	179.000	2812.72	-224.08	-224.16	0.09	40°09'40.931"N	104°43'06.383"W	0.00	
2938.00†	16.000	179.000	2908.85	-251.65	-251.72	0.57	40°09'40.658"N	104°43'06.377"W	0.00	
3038.00†	16.000	179.000	3004.97	-279.21	-279.28	1.05	40°09'40.386"N	104°43'06.370"W	0.00	
3138.00†	16.000	179.000	3101.10	-306.77	-306.84	1.54	40°09'40.114"N	104°43'06.364"W	0.00	
3238.00†	16.000	179.000	3197.23	-334.33	-334.40	2.02	40°09'39.841"N	104°43'06.358"W	0.00	
3338.00†	16.000	179.000	3293.35	-361.90	-361.96	2.50	40°09'39.569"N	104°43'06.352"W	0.00	
3438.00†	16.000	179.000	3389.48	-389.46	-389.52	2.98	40°09'39.297"N	104°43'06.346"W	0.00	
3538.00†	16.000	179.000	3485.60	-417.02	-417.08	3.46	40°09'39.024"N	104°43'06.339"W	0.00	
3638.00†	16.000	179.000	3581.73	-444.58	-444.64	3.94	40°09'38.752"N	104°43'06.333"W	0.00	
3738.00†	16.000	179.000	3677.86	-472.15	-472.20	4.42	40°09'38.480"N	104°43'06.327"W	0.00	
3838.00†	16.000	179.000	3773.98	-499.71	-499.76	4.90	40°09'38.207"N	104°43'06.321"W	0.00	
3938.00†	16.000	179.000	3870.11	-527.27	-527.32	5.38	40°09'37.935"N	104°43'06.315"W	0.00	

# Planned Wellpath Report

DOLPH 1C-1HZ (REV-C.0) PWP

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REFERENCE WELLPATH IDENTIFICATION				
Operator	KERR-MCGEE OIL & GAS ONSHORE LP		Slot	SLOT#21 DOLPH 1C-1HZ (661'FSL & 725'FEL, SEC.1)
Area	COLORADO		Well	DOLPH 1C-1HZ
Field	WELD COUNTY (KERR MCGEE)		Wellbore	DOLPH 1C-1HZ PWB
Facility	SEC.01-T2N-R66W			

## WELLPATH DATA (140 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
4038.00†	16.000	179.000	3966.23	-554.83	-554.88	5.86	40°09'37.663"N	104°43'06.308"W	0.00	
4090.81†	16.000	179.000	4017.00	-569.39	-569.43	6.12	40°09'37.519"N	104°43'06.305"W	0.00	PARKMAN
4138.00†	16.000	179.000	4062.36	-582.40	-582.44	6.35	40°09'37.390"N	104°43'06.302"W	0.00	
4238.00†	16.000	179.000	4158.49	-609.96	-610.00	6.83	40°09'37.118"N	104°43'06.296"W	0.00	
4338.00†	16.000	179.000	4254.61	-637.52	-637.56	7.31	40°09'36.846"N	104°43'06.290"W	0.00	
4437.23	16.000	179.000	4350.00	-664.87	-664.91	7.79	40°09'36.575"N	104°43'06.284"W	0.00	BEGIN DROP
4438.00†	15.985	179.000	4350.74	-665.08	-665.12	7.79	40°09'36.573"N	104°43'06.284"W	2.00	
4501.53†	14.714	179.000	4412.00	-681.90	-681.93	8.08	40°09'36.407"N	104°43'06.280"W	2.00	SUSSEX
4538.00†	13.985	179.000	4447.33	-690.94	-690.97	8.24	40°09'36.318"N	104°43'06.278"W	2.00	
4638.00†	11.985	179.000	4544.77	-713.40	-713.43	8.63	40°09'36.096"N	104°43'06.273"W	2.00	
4738.00†	9.985	179.000	4642.93	-732.46	-732.48	8.96	40°09'35.908"N	104°43'06.269"W	2.00	
4838.00†	7.985	179.000	4741.70	-748.07	-748.10	9.24	40°09'35.753"N	104°43'06.265"W	2.00	
4938.00†	5.985	179.000	4840.96	-760.23	-760.25	9.45	40°09'35.633"N	104°43'06.262"W	2.00	
5038.00†	3.985	179.000	4940.57	-768.92	-768.94	9.60	40°09'35.547"N	104°43'06.260"W	2.00	
5138.00†	1.985	179.000	5040.43	-774.12	-774.15	9.69	40°09'35.496"N	104°43'06.259"W	2.00	
5237.23	0.000	358.438	5139.64	-775.84	-775.87	9.72	40°09'35.479"N	104°43'06.259"W	2.00	END DROP
5238.00†	0.000	358.438	5140.41	-775.84	-775.87	9.72	40°09'35.479"N	104°43'06.259"W	0.00	
5338.00†	0.000	358.438	5240.41	-775.84	-775.87	9.72	40°09'35.479"N	104°43'06.259"W	0.00	
5438.00†	0.000	358.438	5340.41	-775.84	-775.87	9.72	40°09'35.479"N	104°43'06.259"W	0.00	
5538.00†	0.000	358.438	5440.41	-775.84	-775.87	9.72	40°09'35.479"N	104°43'06.259"W	0.00	
5638.00†	0.000	358.438	5540.41	-775.84	-775.87	9.72	40°09'35.479"N	104°43'06.259"W	0.00	
5738.00†	0.000	358.438	5640.41	-775.84	-775.87	9.72	40°09'35.479"N	104°43'06.259"W	0.00	
5838.00†	0.000	358.438	5740.41	-775.84	-775.87	9.72	40°09'35.479"N	104°43'06.259"W	0.00	
5938.00†	0.000	358.438	5840.41	-775.84	-775.87	9.72	40°09'35.479"N	104°43'06.259"W	0.00	
6038.00†	0.000	358.438	5940.41	-775.84	-775.87	9.72	40°09'35.479"N	104°43'06.259"W	0.00	
6138.00†	0.000	358.438	6040.41	-775.84	-775.87	9.72	40°09'35.479"N	104°43'06.259"W	0.00	
6238.00†	0.000	358.438	6140.41	-775.84	-775.87	9.72	40°09'35.479"N	104°43'06.259"W	0.00	
6338.00†	0.000	358.438	6240.41	-775.84	-775.87	9.72	40°09'35.479"N	104°43'06.259"W	0.00	
6438.00†	0.000	358.438	6340.41	-775.84	-775.87	9.72	40°09'35.479"N	104°43'06.259"W	0.00	
6538.00†	0.000	358.438	6440.41	-775.84	-775.87	9.72	40°09'35.479"N	104°43'06.259"W	0.00	
6638.00†	0.000	358.438	6540.41	-775.84	-775.87	9.72	40°09'35.479"N	104°43'06.259"W	0.00	
6738.00†	0.000	358.438	6640.41	-775.84	-775.87	9.72	40°09'35.479"N	104°43'06.259"W	0.00	
6838.00†	0.000	358.438	6740.41	-775.84	-775.87	9.72	40°09'35.479"N	104°43'06.259"W	0.00	
6920.63	0.000	358.438	6823.04	-775.84	-775.87	9.72	40°09'35.479"N	104°43'06.259"W	0.00	KOP, BUILD @ 10°/100'
6938.00†	1.737	358.438	6840.41	-775.58	-775.60	9.72	40°09'35.481"N	104°43'06.259"W	10.00	
7038.00†	11.737	358.438	6939.59	-763.86	-763.89	9.40	40°09'35.597"N	104°43'06.263"W	10.00	
7138.00†	21.737	358.438	7035.24	-735.10	-735.14	8.61	40°09'35.881"N	104°43'06.273"W	10.00	
7177.06†	25.643	358.438	7071.00	-719.41	-719.45	8.18	40°09'36.036"N	104°43'06.279"W	10.00	SHARON SPRINGS
7238.00†	31.737	358.438	7124.43	-690.17	-690.22	7.39	40°09'36.325"N	104°43'06.289"W	10.00	
7257.70†	33.707	358.438	7141.00	-679.52	-679.58	7.10	40°09'36.430"N	104°43'06.293"W	10.00	NIOBRARA A
7313.70†	39.307	358.438	7186.00	-646.22	-646.29	6.19	40°09'36.759"N	104°43'06.304"W	10.00	NIOBRARA B
7338.00†	41.737	358.438	7204.47	-630.43	-630.51	5.76	40°09'36.915"N	104°43'06.310"W	10.00	
7426.97†	50.634	358.438	7266.00	-566.30	-566.40	4.01	40°09'37.549"N	104°43'06.332"W	10.00	NIOBRARA C
7438.00†	51.737	358.438	7272.92	-557.70	-557.81	3.78	40°09'37.634"N	104°43'06.335"W	10.00	
7538.00†	61.737	358.438	7327.69	-474.19	-474.33	1.50	40°09'38.459"N	104°43'06.365"W	10.00	

REFERENCE WELLPATH IDENTIFICATION				
Operator	KERR-MCGEE OIL & GAS ONSHORE LP		Slot	SLOT#21 DOLPH 1C-1HZ (661'FSL & 725'FEL, SEC.1)
Area	COLORADO		Well	DOLPH 1C-1HZ
Field	WELD COUNTY (KERR MCGEE)		Wellbore	DOLPH 1C-1HZ PWB
Facility	SEC.01-T2N-R66W			

WELLPATH DATA (140 stations) † = interpolated/extrapolated station										
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
7634.40†	71.377	358.438	7366.00	-385.86	-386.02	-0.91	40°09'39.331"N	104°43'06.396"W	10.00	FORT HAYS
7638.00†	71.737	358.438	7367.14	-382.44	-382.61	-1.00	40°09'39.365"N	104°43'06.397"W	10.00	
7738.00†	81.737	358.438	7390.05	-285.23	-285.43	-3.65	40°09'40.325"N	104°43'06.431"W	10.00	
7744.88†	82.425	358.438	7391.00	-278.42	-278.62	-3.84	40°09'40.393"N	104°43'06.433"W	10.00	CODELL
7820.63	90.000	358.438	7396.00	-202.88	-203.12	-5.90	40°09'41.139"N	104°43'06.460"W	10.00	LANDING POINT
7838.00†	90.000	358.438	7396.00	-185.52	-185.76	-6.37	40°09'41.310"N	104°43'06.466"W	0.00	
7938.00†	90.000	358.438	7396.00	-85.52	-85.80	-9.10	40°09'42.298"N	104°43'06.501"W	0.00	
8038.00†	90.000	358.438	7396.00	14.48	14.17	-11.82	40°09'43.286"N	104°43'06.536"W	0.00	
8138.00†	90.000	358.438	7396.00	114.48	114.13	-14.55	40°09'44.274"N	104°43'06.571"W	0.00	
8238.00†	90.000	358.438	7396.00	214.48	214.09	-17.27	40°09'45.262"N	104°43'06.606"W	0.00	
8338.00†	90.000	358.438	7396.00	314.48	314.06	-20.00	40°09'46.250"N	104°43'06.642"W	0.00	
8438.00†	90.000	358.438	7396.00	414.48	414.02	-22.72	40°09'47.237"N	104°43'06.677"W	0.00	
8538.00†	90.000	358.438	7396.00	514.48	513.98	-25.45	40°09'48.225"N	104°43'06.712"W	0.00	
8638.00†	90.000	358.438	7396.00	614.48	613.94	-28.18	40°09'49.213"N	104°43'06.747"W	0.00	
8738.00†	90.000	358.438	7396.00	714.48	713.91	-30.90	40°09'50.201"N	104°43'06.782"W	0.00	
8838.00†	90.000	358.438	7396.00	814.48	813.87	-33.63	40°09'51.189"N	104°43'06.817"W	0.00	
8938.00†	90.000	358.438	7396.00	914.48	913.83	-36.35	40°09'52.177"N	104°43'06.852"W	0.00	
9038.00†	90.000	358.438	7396.00	1014.48	1013.80	-39.08	40°09'53.164"N	104°43'06.887"W	0.00	
9138.00†	90.000	358.438	7396.00	1114.48	1113.76	-41.80	40°09'54.152"N	104°43'06.922"W	0.00	
9238.00†	90.000	358.438	7396.00	1214.48	1213.72	-44.53	40°09'55.140"N	104°43'06.958"W	0.00	
9338.00†	90.000	358.438	7396.00	1314.48	1313.68	-47.25	40°09'56.128"N	104°43'06.993"W	0.00	
9438.00†	90.000	358.438	7396.00	1414.48	1413.65	-49.98	40°09'57.116"N	104°43'07.028"W	0.00	
9538.00†	90.000	358.438	7396.00	1514.48	1513.61	-52.70	40°09'58.104"N	104°43'07.063"W	0.00	
9638.00†	90.000	358.438	7396.00	1614.48	1613.57	-55.43	40°09'59.091"N	104°43'07.098"W	0.00	
9738.00†	90.000	358.438	7396.00	1714.48	1713.54	-58.16	40°10'00.079"N	104°43'07.133"W	0.00	
9838.00†	90.000	358.438	7396.00	1814.48	1813.50	-60.88	40°10'01.067"N	104°43'07.168"W	0.00	
9938.00†	90.000	358.438	7396.00	1914.48	1913.46	-63.61	40°10'02.055"N	104°43'07.203"W	0.00	
10038.00†	90.000	358.438	7396.00	2014.48	2013.42	-66.33	40°10'03.043"N	104°43'07.238"W	0.00	
10138.00†	90.000	358.438	7396.00	2114.48	2113.39	-69.06	40°10'04.031"N	104°43'07.274"W	0.00	
10238.00†	90.000	358.438	7396.00	2214.48	2213.35	-71.78	40°10'05.018"N	104°43'07.309"W	0.00	
10338.00†	90.000	358.438	7396.00	2314.48	2313.31	-74.51	40°10'06.006"N	104°43'07.344"W	0.00	
10438.00†	90.000	358.438	7396.00	2414.48	2413.28	-77.23	40°10'06.994"N	104°43'07.379"W	0.00	
10538.00†	90.000	358.438	7396.00	2514.48	2513.24	-79.96	40°10'07.982"N	104°43'07.414"W	0.00	
10638.00†	90.000	358.438	7396.00	2614.48	2613.20	-82.68	40°10'08.970"N	104°43'07.449"W	0.00	
10738.00†	90.000	358.438	7396.00	2714.48	2713.16	-85.41	40°10'09.958"N	104°43'07.484"W	0.00	
10838.00†	90.000	358.439	7396.00	2814.48	2813.13	-88.13	40°10'10.945"N	104°43'07.519"W	0.00	
10938.00†	90.000	358.439	7396.00	2914.48	2913.09	-90.86	40°10'11.933"N	104°43'07.554"W	0.00	
11038.00†	90.000	358.439	7396.00	3014.48	3013.05	-93.58	40°10'12.921"N	104°43'07.589"W	0.00	
11138.00†	90.000	358.439	7396.00	3114.48	3113.02	-96.31	40°10'13.909"N	104°43'07.625"W	0.00	
11238.00†	90.000	358.439	7396.00	3214.48	3212.98	-99.03	40°10'14.897"N	104°43'07.660"W	0.00	
11338.00†	90.000	358.439	7396.00	3314.48	3312.94	-101.76	40°10'15.885"N	104°43'07.695"W	0.00	
11438.00†	90.000	358.439	7396.00	3414.48	3412.90	-104.48	40°10'16.872"N	104°43'07.730"W	0.00	
11538.00†	90.000	358.439	7396.00	3514.48	3512.87	-107.21	40°10'17.860"N	104°43'07.765"W	0.00	
11638.00†	90.000	358.439	7396.00	3614.48	3612.83	-109.93	40°10'18.848"N	104°43'07.800"W	0.00	
11738.00†	90.000	358.439	7396.00	3714.48	3712.79	-112.66	40°10'19.836"N	104°43'07.835"W	0.00	

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#21 DOLPH 1C-1HZ (661'FSL & 725'FEL, SEC.1)
Area	COLORADO	Well	DOLPH 1C-1HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	DOLPH 1C-1HZ PWB
Facility	SEC.01-T2N-R66W		

WELLPATH DATA (140 stations) † = interpolated/extrapolated station										
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
11838.00†	90.000	358.439	7396.00	3814.48	3812.76	-115.38	40°10'20.824"N	104°43'07.870"W	0.00	
11938.00†	90.000	358.439	7396.00	3914.48	3912.72	-118.10	40°10'21.812"N	104°43'07.905"W	0.00	
12038.00†	90.000	358.439	7396.00	4014.48	4012.68	-120.83	40°10'22.799"N	104°43'07.941"W	0.00	
12138.00†	90.000	358.439	7396.00	4114.48	4112.64	-123.55	40°10'23.787"N	104°43'07.976"W	0.00	
12196.22	90.000	358.439	7396.00 <sup>1</sup>	4172.70	4170.84	-125.14	40°10'24.362"N	104°43'07.996"W	0.00	TOTAL DEPTH

HOLE & CASING SECTIONS - Ref Wellbore: DOLPH 1C-1HZ PWB Ref Wellpath: DOLPH 1C-1HZ (REV-C.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	1338.00	1325.00	13.00	1337.98	0.00	0.00	-5.87	-2.27
13.5in Open Hole	1338.00	1427.00	89.00	1337.98	1426.98	-5.87	-2.27	-6.23	-2.44
9.625in Casing Surface	13.00	1417.00	1404.00	13.00	1416.98	0.00	0.00	-6.19	-2.42
8.75in Open Hole	1427.00	7820.63	6393.63	1426.98	7396.00	-6.23	-2.44	-203.12	-5.90
7in Casing Intermediate	13.00	7820.63	7807.63	13.00	7396.00	0.00	0.00	-203.12	-5.90
6.125in Open Hole	7820.63	12196.22	4375.59	7396.00	7396.00	-203.12	-5.90	4170.84	-125.14
4.5in Casing Production	13.00	12196.22	12183.22	13.00	7396.00	0.00	0.00	4170.84	-125.14

TARGETS									
Name	MD [ft]	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
DOLPH SECTION 1 LINES		6996.00	0.40	30.20	3218464.13	1302817.57	40°09'43.150"N	104°43'05.995"W	polygon
DOLPH 1C-1HZ BHL (460'FNL & 825'FEL, SEC.01) REV-2		7396.00	4170.84	-100.14	3218297.04	1306986.51	40°10'24.362"N	104°43'07.674"W	point
1) DOLPH 1C-1HZ BHL (460'FNL & 850'FEL, SEC.01) REV-3	12196.22	7396.00	4170.84	-125.14	3218272.05	1306986.29	40°10'24.362"N	104°43'07.996"W	point
DOLPH 1C-1HZ BHL ON PLAT (460'FNL & 795'FEL, SEC.01) REV-1		7396.00	4170.84	-70.14	3218327.04	1306986.77	40°10'24.362"N	104°43'07.288"W	point
DOLPH 1C-1HZ LANDBOX		7446.00	0.00	0.00	3218433.93	1302816.90	40°09'43.146"N	104°43'06.384"W	polygon

SURVEY PROGRAM - Ref Wellbore: DOLPH 1C-1HZ PWB Ref Wellpath: DOLPH 1C-1HZ (REV-C.0) PWP				
Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
13.00	1338.00	Generic gyro - continuous (Standard)		DOLPH 1C-1HZ AWB
1338.00	7820.63	NaviTrak (MAGCORR,IFR)		DOLPH 1C-1HZ PWB
7820.63	12196.22	NaviTrak (MAGCORR,IFR)		DOLPH 1C-1HZ PWB

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#21 DOLPH 1C-1HZ (661'FSL & 725'FEL, SEC.1)
Area	COLORADO	Well	DOLPH 1C-1HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	DOLPH 1C-1HZ PWB
Facility	SEC.01-T2N-R66W		

WELLPATH COMMENTS				
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Comment
1296.02	0.285	201.204	1296.00	FOX HILLS MARKER
4090.81	16.000	179.000	4017.00	PARKMAN
4501.53	14.714	179.000	4412.00	SUSSEX
7177.06	25.643	358.438	7071.00	SHARON SPRINGS
7257.70	33.707	358.438	7141.00	NIOBRARA A
7313.70	39.307	358.438	7186.00	NIOBRARA B
7426.97	50.634	358.438	7266.00	NIOBRARA C
7634.40	71.377	358.438	7366.00	FORT HAYS
7744.88	82.425	358.438	7391.00	CODELL

DESIGN COMMENTS				
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Comment
1338.00	0.260	205.210	1337.98	TIE-INTO GYRO SURVEYS
1665.02	0.260	205.210	1665.00	BEGIN NUDGE
2453.38	16.000	179.000	2443.00	END NUDGE
4437.23	16.000	179.000	4350.00	BEGIN DROP
5237.23	0.000	358.438	5139.64	END DROP
6920.63	0.000	358.438	6823.04	KOP, BUILD @ 10°/100'
7820.63	90.000	358.438	7396.00	LANDING POINT
12196.22	90.000	358.439	7396.00	TOTAL DEPTH