



KERR-MCGEE OIL & GAS ONSHORE LP

Location: COLORADO Slot: SLOT#17 HANSEN STATE 1N-36HZ (721'FNL & 693'FWL, SEC. 35)
Field: WELD COUNTY (KERR MCGEE) Well: HANSEN STATE 1N-36HZ
Facility: SEC.35-T3N-R68W Wellbore: HANSEN STATE 1N-36HZ PWB



Plot reference wellpath is HANSEN STATE 1N-36HZ (PERMIT REV-1) PWP

True vertical depth are referenced to PERMIT (1749) (2008)	Grid System NAD83 Lambert Colorado SP, Northern Zone (2011) US feet
Measured depths are referenced to PERMIT (1749) (2008)	North Reference True north
PERMIT (1749) (2008) to Mean Sea Level: 4652 feet	Scale: True distance
Mean Sea Level to Murfreesboro (AK Sec. 35) HANSEN STATE 1N-36HZ (721'FNL & 693'FWL, SEC. 35) Elev	Depth are in feet
Coordinates are in feet referenced to Grid	Created by production 5/14/2014

Location Information

Location Information							
Facility Name		Grid East (US ft)		Grid North (US ft)		Latitude	Longitude
SEC.35-T3N-R68W		314840.000		123000.000		40°11'04.887N	109°50'51.787W
Site	Local E (ft)	Local N (ft)	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude	
SLOT#17 HANSEN STATE 1N-36HZ (721'FNL & 693'FWL, SEC. 35)	785.00	395.24	314840.000	123000.000	40°11'04.887N	109°50'51.787W	
PERMIT (1749) (2008) to Murfreesboro (AK Sec. 35) HANSEN STATE 1N-36HZ (721'FNL & 693'FWL, SEC. 35)					4652		
Mean Sea Level to Murfreesboro (AK Sec. 35) HANSEN STATE 1N-36HZ (721'FNL & 693'FWL, SEC. 35)					0		
PERMIT (1749) (2008) to Mean Sea Level					4652		

Survey Program

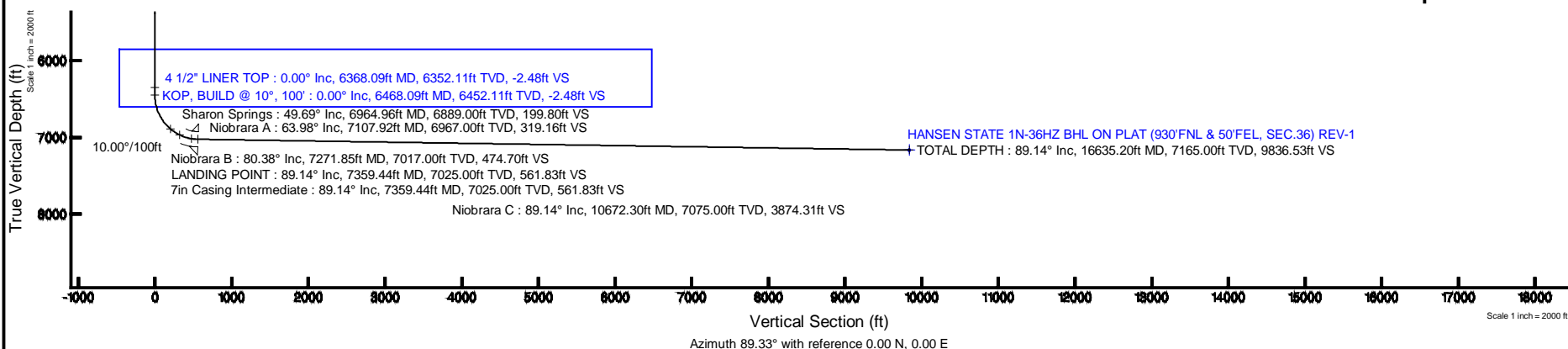
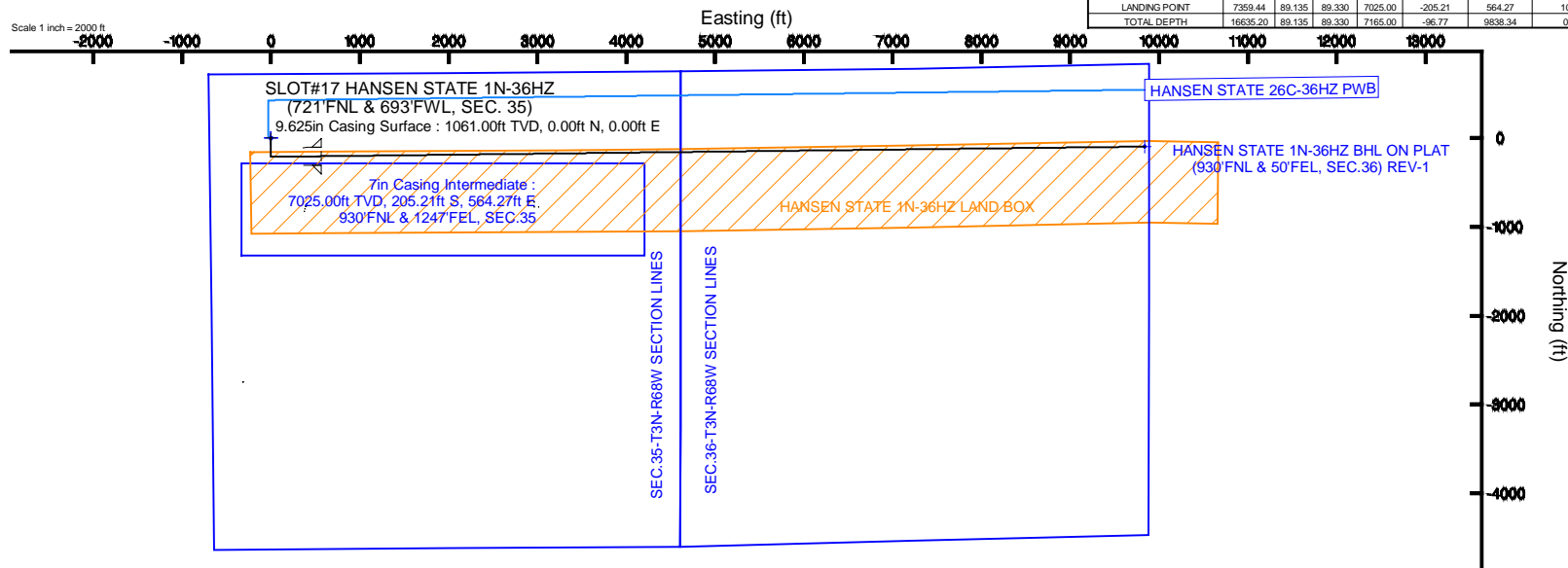
Start MD (ft)	End MD (ft)	Tool	Model	Log Name/Comment	Wellbore
17.00	1300.00	Generic gyro - continuous	Generic gyro - continuous (Standard)		HANSEN STATE 1N-36HZ PWB
1300.00	7359.44	NavTrak	NavTrak (PR)		HANSEN STATE 1N-36HZ PWB
7359.44	16635.20	NavTrak	NavTrak (PR)		HANSEN STATE 1N-36HZ PWB

Targets

Name	MD (ft)	True N (ft)	Local N (ft)	Local E (ft)	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude
SEC.35-T3N-R68W SECTION LINES		0.00	0.00	0.00	314840.000	123000.000	40°11'04.887N	109°50'51.787W
SEC.35-T3N-R68W SECTION LINES		0.00	0.00	0.00	314840.000	123000.000	40°11'04.887N	109°50'51.787W
HANSEN STATE 1N-36HZ BHL ON PLAT (930'FNL & 50'FEL, SEC.36) REV-1	785.00	395.24	785.00	395.24	314840.000	123000.000	40°11'04.887N	109°50'51.787W
HANSEN STATE 1N-36HZ LAND BOX	785.00	395.24	785.00	395.24	314840.000	123000.000	40°11'04.887N	109°50'51.787W

Well Profile Data

Design Comment	MD (ft)	Inc (°)	Az (°)	TVD (ft)	Local N (ft)	Local E (ft)	DLS (°/100ft)	VS (ft)
TI-OH	17.00	0.00	180.00	17.00	0.00	0.00	0.00	0.00
BEGIN NUDGE	1175.00	0.00	180.00	1175.00	0.00	0.00	0.00	0.00
END NUDGE	1675.00	10.00	180.00	1672.47	-43.52	0.00	2.00	-0.51
BEGIN DROP	2393.45	10.00	180.00	2380.00	-168.28	0.00	0.00	-1.97
END DROP	2893.45	0.00	89.33	2877.47	-211.80	0.00	2.00	-2.48
KOP BUILD @ 10°/100'	6468.09	0.00	89.33	6452.11	-211.80	0.00	0.00	-2.48
LANDING POINT	7359.44	89.135	89.330	7025.00	-205.21	964.27	10.00	561.83
TOTAL DEPTH	16635.20	89.135	89.330	7165.00	-96.77	9838.34	0.00	9838.53



REFERENCE WELLPATH IDENTIFICATION

Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#17 HANSEN STATE 1N-36HZ (721'FNL & 693'FWL, SEC. 35)
Area	COLORADO	Well	HANSEN STATE 1N-36HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	HANSEN STATE 1N-36HZ PWB
Facility	SEC.35-T3N-R68W		

REPORT SETUP INFORMATION

Projection System	NAD83 / Lambert Colorado SP, Northern Zone (501), US feet	Software System	WellArchitect® 4.0.0
North Reference	True	User	Precain
Scale	0.999957	Report Generated	14/Jan/2014 at 11:50
Convergence at slot	n/a	Database/Source file	WellArchitectDB/HANSEN_STATE_1N-36HZ_PWB.xml

WELLPATH LOCATION

	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	766.85	-392.24	3146070.35	1311665.16	40°11'15.846"N	104°58'37.790"W
Facility Reference Pt			3146467.10	1310900.67	40°11'08.268"N	104°58'32.736"W
Field Reference Pt			3197771.84	1268891.29	40°04'09.600"N	104°47'36.000"W

WELLPATH DATUM

Calculation method	Minimum curvature	PERMIT (17'KB) (RKB) to Facility Vertical Datum	4953.00ft
Horizontal Reference Pt	Slot	PERMIT (17'KB) (RKB) to Mean Sea Level	4953.00ft
Vertical Reference Pt	PERMIT (17'KB) (RKB)	PERMIT (17'KB) (RKB) to Mud Line at Slot (SLOT#17 HANSEN STATE 1N-36HZ (721'FNL & 693'FWL, SEC. 35))	4953.00ft
MD Reference Pt	PERMIT (17'KB) (RKB)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	89.33°

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#17 HANSEN STATE 1N-36HZ (721'FNL & 693'FWL, SEC. 35)
Area	COLORADO	Well	HANSEN STATE 1N-36HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	HANSEN STATE 1N-36HZ PWB
Facility	SEC.35-T3N-R68W		

WELLPATH DATA (183 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	180.000	0.00	0.00	0.00	0.00	40°11'15.846"N	104°58'37.790"W	0.00	
17.00	0.000	180.000	17.00	0.00	0.00	0.00	40°11'15.846"N	104°58'37.790"W	0.00	TIE-ON
117.00†	0.000	180.000	117.00	0.00	0.00	0.00	40°11'15.846"N	104°58'37.790"W	0.00	
217.00†	0.000	180.000	217.00	0.00	0.00	0.00	40°11'15.846"N	104°58'37.790"W	0.00	
317.00†	0.000	180.000	317.00	0.00	0.00	0.00	40°11'15.846"N	104°58'37.790"W	0.00	
417.00†	0.000	180.000	417.00	0.00	0.00	0.00	40°11'15.846"N	104°58'37.790"W	0.00	
517.00†	0.000	180.000	517.00	0.00	0.00	0.00	40°11'15.846"N	104°58'37.790"W	0.00	
617.00†	0.000	180.000	617.00	0.00	0.00	0.00	40°11'15.846"N	104°58'37.790"W	0.00	
717.00†	0.000	180.000	717.00	0.00	0.00	0.00	40°11'15.846"N	104°58'37.790"W	0.00	
817.00†	0.000	180.000	817.00	0.00	0.00	0.00	40°11'15.846"N	104°58'37.790"W	0.00	
917.00†	0.000	180.000	917.00	0.00	0.00	0.00	40°11'15.846"N	104°58'37.790"W	0.00	
1011.00†	0.000	180.000	1011.00	0.00	0.00	0.00	40°11'15.846"N	104°58'37.790"W	0.00	Fox Hills Marker
1017.00†	0.000	180.000	1017.00	0.00	0.00	0.00	40°11'15.846"N	104°58'37.790"W	0.00	
1117.00†	0.000	180.000	1117.00	0.00	0.00	0.00	40°11'15.846"N	104°58'37.790"W	0.00	
1175.00	0.000	180.000	1175.00	0.00	0.00	0.00	40°11'15.846"N	104°58'37.790"W	0.00	BEGIN NUDGE
1217.00†	0.840	180.000	1217.00	0.00	-0.31	0.00	40°11'15.843"N	104°58'37.790"W	2.00	
1317.00†	2.840	180.000	1316.94	-0.04	-3.52	0.00	40°11'15.811"N	104°58'37.790"W	2.00	
1417.00†	4.840	180.000	1416.71	-0.12	-10.22	0.00	40°11'15.745"N	104°58'37.790"W	2.00	
1517.00†	6.840	180.000	1516.19	-0.24	-20.39	0.00	40°11'15.645"N	104°58'37.790"W	2.00	
1617.00†	8.840	180.000	1615.25	-0.40	-34.03	0.00	40°11'15.510"N	104°58'37.790"W	2.00	
1675.00	10.000	180.000	1672.47	-0.51	-43.52	0.00	40°11'15.416"N	104°58'37.790"W	2.00	END NUDGE
1717.00†	10.000	180.000	1713.83	-0.59	-50.82	0.00	40°11'15.344"N	104°58'37.790"W	0.00	
1817.00†	10.000	180.000	1812.31	-0.80	-68.18	0.00	40°11'15.172"N	104°58'37.790"W	0.00	
1917.00†	10.000	180.000	1910.79	-1.00	-85.55	0.00	40°11'15.001"N	104°58'37.790"W	0.00	
2017.00†	10.000	180.000	2009.27	-1.20	-102.91	0.00	40°11'14.829"N	104°58'37.790"W	0.00	
2117.00†	10.000	180.000	2107.75	-1.41	-120.28	0.00	40°11'14.657"N	104°58'37.790"W	0.00	
2217.00†	10.000	180.000	2206.23	-1.61	-137.64	0.00	40°11'14.486"N	104°58'37.790"W	0.00	
2317.00†	10.000	180.000	2304.71	-1.81	-155.00	0.00	40°11'14.314"N	104°58'37.790"W	0.00	
2393.45	10.000	180.000	2380.00	-1.97	-168.28	0.00	40°11'14.183"N	104°58'37.790"W	0.00	BEGIN DROP
2417.00†	9.529	180.000	2403.21	-2.01	-172.27	0.00	40°11'14.144"N	104°58'37.790"W	2.00	
2517.00†	7.529	180.000	2502.10	-2.19	-187.10	0.00	40°11'13.997"N	104°58'37.790"W	2.00	
2617.00†	5.529	180.000	2601.44	-2.32	-198.47	0.00	40°11'13.885"N	104°58'37.790"W	2.00	
2717.00†	3.529	180.000	2701.13	-2.41	-206.37	0.00	40°11'13.807"N	104°58'37.790"W	2.00	
2817.00†	1.529	180.000	2801.02	-2.46	-210.78	0.00	40°11'13.763"N	104°58'37.790"W	2.00	
2893.45	0.000	89.330	2877.47	-2.48	-211.80	0.00	40°11'13.753"N	104°58'37.790"W	2.00	END DROP
2917.00†	0.000	89.330	2901.02	-2.48	-211.80	0.00	40°11'13.753"N	104°58'37.790"W	0.00	
3017.00†	0.000	89.330	3001.02	-2.48	-211.80	0.00	40°11'13.753"N	104°58'37.790"W	0.00	
3117.00†	0.000	89.330	3101.02	-2.48	-211.80	0.00	40°11'13.753"N	104°58'37.790"W	0.00	
3217.00†	0.000	89.330	3201.02	-2.48	-211.80	0.00	40°11'13.753"N	104°58'37.790"W	0.00	
3317.00†	0.000	89.330	3301.02	-2.48	-211.80	0.00	40°11'13.753"N	104°58'37.790"W	0.00	
3417.00†	0.000	89.330	3401.02	-2.48	-211.80	0.00	40°11'13.753"N	104°58'37.790"W	0.00	
3517.00†	0.000	89.330	3501.02	-2.48	-211.80	0.00	40°11'13.753"N	104°58'37.790"W	0.00	
3617.00†	0.000	89.330	3601.02	-2.48	-211.80	0.00	40°11'13.753"N	104°58'37.790"W	0.00	
3620.98†	0.000	89.330	3605.00	-2.48	-211.80	0.00	40°11'13.753"N	104°58'37.790"W	0.00	Parkman
3717.00†	0.000	89.330	3701.02	-2.48	-211.80	0.00	40°11'13.753"N	104°58'37.790"W	0.00	

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#17 HANSEN STATE 1N-36HZ (721'FNL & 693'FWL, SEC. 35)
Area	COLORADO	Well	HANSEN STATE 1N-36HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	HANSEN STATE 1N-36HZ PWB
Facility	SEC.35-T3N-R68W		

WELLPATH DATA (183 stations) † = interpolated/extrapolated station										
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
3817.00†	0.000	89.330	3801.02	-2.48	-211.80	0.00	40°11'13.753"N	104°58'37.790"W	0.00	
3917.00†	0.000	89.330	3901.02	-2.48	-211.80	0.00	40°11'13.753"N	104°58'37.790"W	0.00	
4017.00†	0.000	89.330	4001.02	-2.48	-211.80	0.00	40°11'13.753"N	104°58'37.790"W	0.00	
4018.98†	0.000	89.330	4003.00	-2.48	-211.80	0.00	40°11'13.753"N	104°58'37.790"W	0.00	Sussex
4117.00†	0.000	89.330	4101.02	-2.48	-211.80	0.00	40°11'13.753"N	104°58'37.790"W	0.00	
4217.00†	0.000	89.330	4201.02	-2.48	-211.80	0.00	40°11'13.753"N	104°58'37.790"W	0.00	
4317.00†	0.000	89.330	4301.02	-2.48	-211.80	0.00	40°11'13.753"N	104°58'37.790"W	0.00	
4417.00†	0.000	89.330	4401.02	-2.48	-211.80	0.00	40°11'13.753"N	104°58'37.790"W	0.00	
4517.00†	0.000	89.330	4501.02	-2.48	-211.80	0.00	40°11'13.753"N	104°58'37.790"W	0.00	
4617.00†	0.000	89.330	4601.02	-2.48	-211.80	0.00	40°11'13.753"N	104°58'37.790"W	0.00	
4717.00†	0.000	89.330	4701.02	-2.48	-211.80	0.00	40°11'13.753"N	104°58'37.790"W	0.00	
4817.00†	0.000	89.330	4801.02	-2.48	-211.80	0.00	40°11'13.753"N	104°58'37.790"W	0.00	
4917.00†	0.000	89.330	4901.02	-2.48	-211.80	0.00	40°11'13.753"N	104°58'37.790"W	0.00	
5017.00†	0.000	89.330	5001.02	-2.48	-211.80	0.00	40°11'13.753"N	104°58'37.790"W	0.00	
5117.00†	0.000	89.330	5101.02	-2.48	-211.80	0.00	40°11'13.753"N	104°58'37.790"W	0.00	
5217.00†	0.000	89.330	5201.02	-2.48	-211.80	0.00	40°11'13.753"N	104°58'37.790"W	0.00	
5317.00†	0.000	89.330	5301.02	-2.48	-211.80	0.00	40°11'13.753"N	104°58'37.790"W	0.00	
5417.00†	0.000	89.330	5401.02	-2.48	-211.80	0.00	40°11'13.753"N	104°58'37.790"W	0.00	
5517.00†	0.000	89.330	5501.02	-2.48	-211.80	0.00	40°11'13.753"N	104°58'37.790"W	0.00	
5617.00†	0.000	89.330	5601.02	-2.48	-211.80	0.00	40°11'13.753"N	104°58'37.790"W	0.00	
5717.00†	0.000	89.330	5701.02	-2.48	-211.80	0.00	40°11'13.753"N	104°58'37.790"W	0.00	
5817.00†	0.000	89.330	5801.02	-2.48	-211.80	0.00	40°11'13.753"N	104°58'37.790"W	0.00	
5917.00†	0.000	89.330	5901.02	-2.48	-211.80	0.00	40°11'13.753"N	104°58'37.790"W	0.00	
6017.00†	0.000	89.330	6001.02	-2.48	-211.80	0.00	40°11'13.753"N	104°58'37.790"W	0.00	
6117.00†	0.000	89.330	6101.02	-2.48	-211.80	0.00	40°11'13.753"N	104°58'37.790"W	0.00	
6217.00†	0.000	89.330	6201.02	-2.48	-211.80	0.00	40°11'13.753"N	104°58'37.790"W	0.00	
6317.00†	0.000	89.330	6301.02	-2.48	-211.80	0.00	40°11'13.753"N	104°58'37.790"W	0.00	
6368.09†	0.000	89.330	6352.11	-2.48	-211.80	0.00	40°11'13.753"N	104°58'37.790"W	0.00	4 1/2" LINER TOP
6417.00†	0.000	89.330	6401.02	-2.48	-211.80	0.00	40°11'13.753"N	104°58'37.790"W	0.00	
6468.09	0.000	89.330	6452.11	-2.48	-211.80	0.00	40°11'13.753"N	104°58'37.790"W	0.00	KOP, BUILD @ 10°, 100'
6517.00†	4.891	89.330	6500.96	-0.39	-211.78	2.09	40°11'13.753"N	104°58'37.763"W	10.00	
6617.00†	14.891	89.330	6599.35	16.77	-211.58	19.24	40°11'13.755"N	104°58'37.542"W	10.00	
6717.00†	24.891	89.330	6693.26	50.75	-211.18	53.22	40°11'13.759"N	104°58'37.104"W	10.00	
6817.00†	34.891	89.330	6779.85	100.52	-210.60	102.99	40°11'13.765"N	104°58'36.463"W	10.00	
6917.00†	44.891	89.330	6856.48	164.57	-209.85	167.03	40°11'13.772"N	104°58'35.638"W	10.00	
6964.96†	49.687	89.330	6889.00	199.80	-209.44	202.26	40°11'13.776"N	104°58'35.184"W	10.00	Sharon Springs
7017.00†	54.891	89.330	6920.82	240.95	-208.96	243.41	40°11'13.781"N	104°58'34.654"W	10.00	
7107.92†	63.983	89.330	6967.00	319.16	-208.04	321.61	40°11'13.790"N	104°58'33.646"W	10.00	Niobrara A
7117.00†	64.891	89.330	6970.92	327.35	-207.95	329.81	40°11'13.791"N	104°58'33.540"W	10.00	
7217.00†	74.891	89.330	7005.26	421.14	-206.85	423.58	40°11'13.802"N	104°58'32.332"W	10.00	
7271.85†	80.376	89.330	7017.00	474.70	-206.22	477.14	40°11'13.808"N	104°58'31.642"W	10.00	Niobrara B
7317.00†	84.891	89.330	7022.79	519.46	-205.70	521.90	40°11'13.813"N	104°58'31.065"W	10.00	
7359.44	89.135	89.330	7025.00	561.83	-205.21	564.27	40°11'13.818"N	104°58'30.519"W	10.00	LANDING POINT
7417.00†	89.135	89.330	7025.87	619.39	-204.53	621.82	40°11'13.825"N	104°58'29.778"W	0.00	
7517.00†	89.135	89.330	7027.38	719.37	-203.36	721.80	40°11'13.836"N	104°58'28.490"W	0.00	

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#17 HANSEN STATE 1N-36HZ (721'FNL & 693'FWL, SEC. 35)
Area	COLORADO	Well	HANSEN STATE 1N-36HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	HANSEN STATE 1N-36HZ PWB
Facility	SEC.35-T3N-R68W		

WELLPATH DATA (183 stations) † = interpolated/extrapolated station										
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
7617.00†	89.135	89.330	7028.89	819.36	-202.19	821.78	40°11'13.848"N	104°58'27.201"W	0.00	
7717.00†	89.135	89.330	7030.39	919.35	-201.03	921.76	40°11'13.859"N	104°58'25.913"W	0.00	
7817.00†	89.135	89.330	7031.90	1019.34	-199.86	1021.75	40°11'13.871"N	104°58'24.625"W	0.00	
7917.00†	89.135	89.330	7033.41	1119.33	-198.69	1121.73	40°11'13.882"N	104°58'23.337"W	0.00	
8017.00†	89.135	89.330	7034.92	1219.32	-197.52	1221.71	40°11'13.894"N	104°58'22.048"W	0.00	
8117.00†	89.135	89.330	7036.43	1319.31	-196.35	1321.69	40°11'13.905"N	104°58'20.760"W	0.00	
8217.00†	89.135	89.330	7037.94	1419.29	-195.18	1421.67	40°11'13.917"N	104°58'19.472"W	0.00	
8317.00†	89.135	89.330	7039.45	1519.28	-194.01	1521.66	40°11'13.928"N	104°58'18.184"W	0.00	
8417.00†	89.135	89.330	7040.96	1619.27	-192.84	1621.64	40°11'13.940"N	104°58'16.895"W	0.00	
8517.00†	89.135	89.330	7042.47	1719.26	-191.67	1721.62	40°11'13.951"N	104°58'15.607"W	0.00	
8617.00†	89.135	89.330	7043.98	1819.25	-190.50	1821.60	40°11'13.963"N	104°58'14.319"W	0.00	
8717.00†	89.135	89.330	7045.49	1919.24	-189.34	1921.58	40°11'13.974"N	104°58'13.031"W	0.00	
8817.00†	89.135	89.330	7047.00	2019.23	-188.17	2021.56	40°11'13.986"N	104°58'11.742"W	0.00	
8917.00†	89.135	89.330	7048.51	2119.21	-187.00	2121.55	40°11'13.997"N	104°58'10.454"W	0.00	
9017.00†	89.135	89.330	7050.02	2219.20	-185.83	2221.53	40°11'14.009"N	104°58'09.166"W	0.00	
9117.00†	89.135	89.330	7051.53	2319.19	-184.66	2321.51	40°11'14.020"N	104°58'07.878"W	0.00	
9217.00†	89.135	89.330	7053.03	2419.18	-183.49	2421.49	40°11'14.032"N	104°58'06.589"W	0.00	
9317.00†	89.135	89.330	7054.54	2519.17	-182.32	2521.47	40°11'14.043"N	104°58'05.301"W	0.00	
9417.00†	89.135	89.330	7056.05	2619.16	-181.15	2621.46	40°11'14.054"N	104°58'04.013"W	0.00	
9517.00†	89.135	89.330	7057.56	2719.15	-179.98	2721.44	40°11'14.066"N	104°58'02.725"W	0.00	
9617.00†	89.135	89.330	7059.07	2819.13	-178.81	2821.42	40°11'14.077"N	104°58'01.436"W	0.00	
9717.00†	89.135	89.330	7060.58	2919.12	-177.65	2921.40	40°11'14.089"N	104°58'00.148"W	0.00	
9817.00†	89.135	89.330	7062.09	3019.11	-176.48	3021.38	40°11'14.100"N	104°57'58.860"W	0.00	
9917.00†	89.135	89.330	7063.60	3119.10	-175.31	3121.36	40°11'14.112"N	104°57'57.572"W	0.00	
10017.00†	89.135	89.330	7065.11	3219.09	-174.14	3221.35	40°11'14.123"N	104°57'56.283"W	0.00	
10117.00†	89.135	89.330	7066.62	3319.08	-172.97	3321.33	40°11'14.135"N	104°57'54.995"W	0.00	
10217.00†	89.135	89.330	7068.13	3419.07	-171.80	3421.31	40°11'14.146"N	104°57'53.707"W	0.00	
10317.00†	89.135	89.330	7069.64	3519.06	-170.63	3521.29	40°11'14.157"N	104°57'52.419"W	0.00	
10417.00†	89.135	89.330	7071.15	3619.04	-169.46	3621.27	40°11'14.169"N	104°57'51.130"W	0.00	
10517.00†	89.135	89.330	7072.66	3719.03	-168.29	3721.25	40°11'14.180"N	104°57'49.842"W	0.00	
10617.00†	89.135	89.330	7074.17	3819.02	-167.12	3821.24	40°11'14.192"N	104°57'48.554"W	0.00	
10672.30†	89.135	89.330	7075.00	3874.31	-166.48	3876.53	40°11'14.198"N	104°57'47.841"W	0.00	Niobrara C
10717.00†	89.135	89.330	7075.67	3919.01	-165.96	3921.22	40°11'14.203"N	104°57'47.265"W	0.00	
10817.00†	89.135	89.330	7077.18	4019.00	-164.79	4021.20	40°11'14.214"N	104°57'45.977"W	0.00	
10917.00†	89.135	89.330	7078.69	4118.99	-163.62	4121.18	40°11'14.226"N	104°57'44.689"W	0.00	
11017.00†	89.135	89.330	7080.20	4218.98	-162.45	4221.16	40°11'14.237"N	104°57'43.401"W	0.00	
11117.00†	89.135	89.330	7081.71	4318.96	-161.28	4321.15	40°11'14.249"N	104°57'42.112"W	0.00	
11217.00†	89.135	89.330	7083.22	4418.95	-160.11	4421.13	40°11'14.260"N	104°57'40.824"W	0.00	
11317.00†	89.135	89.330	7084.73	4518.94	-158.94	4521.11	40°11'14.271"N	104°57'39.536"W	0.00	
11417.00†	89.135	89.330	7086.24	4618.93	-157.77	4621.09	40°11'14.283"N	104°57'38.248"W	0.00	
11517.00†	89.135	89.330	7087.75	4718.92	-156.60	4721.07	40°11'14.294"N	104°57'36.959"W	0.00	
11617.00†	89.135	89.330	7089.26	4818.91	-155.43	4821.05	40°11'14.305"N	104°57'35.671"W	0.00	
11717.00†	89.135	89.330	7090.77	4918.90	-154.27	4921.04	40°11'14.317"N	104°57'34.383"W	0.00	
11817.00†	89.135	89.330	7092.28	5018.88	-153.10	5021.02	40°11'14.328"N	104°57'33.095"W	0.00	
11917.00†	89.135	89.330	7093.79	5118.87	-151.93	5121.00	40°11'14.339"N	104°57'31.806"W	0.00	

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#17 HANSEN STATE 1N-36HZ (721'FNL & 693'FWL, SEC. 35)
Area	COLORADO	Well	HANSEN STATE 1N-36HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	HANSEN STATE 1N-36HZ PWB
Facility	SEC.35-T3N-R68W		

WELLPATH DATA (183 stations) † = interpolated/extrapolated station										Comments
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	
12017.00†	89.135	89.330	7095.30	5218.86	-150.76	5220.98	40°11'14.351"N	104°57'30.518"W	0.00	
12117.00†	89.135	89.330	7096.81	5318.85	-149.59	5320.96	40°11'14.362"N	104°57'29.230"W	0.00	
12217.00†	89.135	89.330	7098.31	5418.84	-148.42	5420.94	40°11'14.373"N	104°57'27.942"W	0.00	
12317.00†	89.135	89.330	7099.82	5518.83	-147.25	5520.93	40°11'14.385"N	104°57'26.653"W	0.00	
12417.00†	89.135	89.330	7101.33	5618.82	-146.08	5620.91	40°11'14.396"N	104°57'25.365"W	0.00	
12517.00†	89.135	89.330	7102.84	5718.80	-144.91	5720.89	40°11'14.407"N	104°57'24.077"W	0.00	
12617.00†	89.135	89.330	7104.35	5818.79	-143.74	5820.87	40°11'14.419"N	104°57'22.789"W	0.00	
12717.00†	89.135	89.330	7105.86	5918.78	-142.58	5920.85	40°11'14.430"N	104°57'21.500"W	0.00	
12817.00†	89.135	89.330	7107.37	6018.77	-141.41	6020.84	40°11'14.441"N	104°57'20.212"W	0.00	
12917.00†	89.135	89.330	7108.88	6118.76	-140.24	6120.82	40°11'14.453"N	104°57'18.924"W	0.00	
13017.00†	89.135	89.330	7110.39	6218.75	-139.07	6220.80	40°11'14.464"N	104°57'17.636"W	0.00	
13117.00†	89.135	89.330	7111.90	6318.74	-137.90	6320.78	40°11'14.475"N	104°57'16.347"W	0.00	
13217.00†	89.135	89.330	7113.41	6418.72	-136.73	6420.76	40°11'14.487"N	104°57'15.059"W	0.00	
13317.00†	89.135	89.330	7114.92	6518.71	-135.56	6520.74	40°11'14.498"N	104°57'13.771"W	0.00	
13417.00†	89.135	89.330	7116.43	6618.70	-134.39	6620.73	40°11'14.509"N	104°57'12.482"W	0.00	
13517.00†	89.135	89.330	7117.94	6718.69	-133.22	6720.71	40°11'14.520"N	104°57'11.194"W	0.00	
13617.00†	89.135	89.330	7119.45	6818.68	-132.05	6820.69	40°11'14.532"N	104°57'09.906"W	0.00	
13717.00†	89.135	89.330	7120.95	6918.67	-130.89	6920.67	40°11'14.543"N	104°57'08.618"W	0.00	
13817.00†	89.135	89.330	7122.46	7018.66	-129.72	7020.65	40°11'14.554"N	104°57'07.329"W	0.00	
13917.00†	89.135	89.330	7123.97	7118.64	-128.55	7120.63	40°11'14.566"N	104°57'06.041"W	0.00	
14017.00†	89.135	89.330	7125.48	7218.63	-127.38	7220.62	40°11'14.577"N	104°57'04.753"W	0.00	
14117.00†	89.135	89.330	7126.99	7318.62	-126.21	7320.60	40°11'14.588"N	104°57'03.465"W	0.00	
14217.00†	89.135	89.330	7128.50	7418.61	-125.04	7420.58	40°11'14.599"N	104°57'02.176"W	0.00	
14317.00†	89.135	89.330	7130.01	7518.60	-123.87	7520.56	40°11'14.611"N	104°57'00.888"W	0.00	
14417.00†	89.135	89.330	7131.52	7618.59	-122.70	7620.54	40°11'14.622"N	104°56'59.600"W	0.00	
14517.00†	89.135	89.330	7133.03	7718.58	-121.53	7720.53	40°11'14.633"N	104°56'58.312"W	0.00	
14617.00†	89.135	89.330	7134.54	7818.57	-120.36	7820.51	40°11'14.644"N	104°56'57.023"W	0.00	
14717.00†	89.135	89.330	7136.05	7918.55	-119.20	7920.49	40°11'14.656"N	104°56'55.735"W	0.00	
14817.00†	89.135	89.330	7137.56	8018.54	-118.03	8020.47	40°11'14.667"N	104°56'54.447"W	0.00	
14917.00†	89.135	89.330	7139.07	8118.53	-116.86	8120.45	40°11'14.678"N	104°56'53.159"W	0.00	
15017.00†	89.135	89.330	7140.58	8218.52	-115.69	8220.43	40°11'14.689"N	104°56'51.870"W	0.00	
15117.00†	89.135	89.330	7142.09	8318.51	-114.52	8320.42	40°11'14.701"N	104°56'50.582"W	0.00	
15217.00†	89.135	89.330	7143.59	8418.50	-113.35	8420.40	40°11'14.712"N	104°56'49.294"W	0.00	
15317.00†	89.135	89.330	7145.10	8518.49	-112.18	8520.38	40°11'14.723"N	104°56'48.005"W	0.00	
15417.00†	89.135	89.330	7146.61	8618.47	-111.01	8620.36	40°11'14.734"N	104°56'46.717"W	0.00	
15517.00†	89.135	89.330	7148.12	8718.46	-109.84	8720.34	40°11'14.745"N	104°56'45.429"W	0.00	
15617.00†	89.135	89.330	7149.63	8818.45	-108.67	8820.33	40°11'14.757"N	104°56'44.141"W	0.00	
15717.00†	89.135	89.330	7151.14	8918.44	-107.51	8920.31	40°11'14.768"N	104°56'42.852"W	0.00	
15817.00†	89.135	89.330	7152.65	9018.43	-106.34	9020.29	40°11'14.779"N	104°56'41.564"W	0.00	
15917.00†	89.135	89.330	7154.16	9118.42	-105.17	9120.27	40°11'14.790"N	104°56'40.276"W	0.00	
16017.00†	89.135	89.330	7155.67	9218.41	-104.00	9220.25	40°11'14.801"N	104°56'38.988"W	0.00	
16117.00†	89.135	89.330	7157.18	9318.39	-102.83	9320.23	40°11'14.813"N	104°56'37.699"W	0.00	
16217.00†	89.135	89.330	7158.69	9418.38	-101.66	9420.22	40°11'14.824"N	104°56'36.411"W	0.00	
16317.00†	89.135	89.330	7160.20	9518.37	-100.49	9520.20	40°11'14.835"N	104°56'35.123"W	0.00	
16417.00†	89.135	89.330	7161.71	9618.36	-99.32	9620.18	40°11'14.846"N	104°56'33.835"W	0.00	

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#17 HANSEN STATE 1N-36HZ (721'FNL & 693'FWL, SEC. 35)
Area	COLORADO	Well	HANSEN STATE 1N-36HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	HANSEN STATE 1N-36HZ PWB
Facility	SEC.35-T3N-R68W		

WELLPATH DATA (183 stations) † = interpolated/extrapolated station										
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
16517.00†	89.135	89.330	7163.22	9718.35	-98.15	9720.16	40°11'14.857"N	104°56'32.546"W	0.00	
16617.00†	89.135	89.330	7164.73	9818.34	-96.98	9820.14	40°11'14.868"N	104°56'31.258"W	0.00	
16635.20	89.135	89.330	7165.00 ¹	9836.53	-96.77	9838.34	40°11'14.870"N	104°56'31.024"W	0.00	TOTAL DEPTH

HOLE & CASING SECTIONS -									
Ref Wellbore: HANSEN STATE 1N-36HZ PWB					Ref Wellpath: HANSEN STATE 1N-36HZ (PERMIT REV-1) 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	17.00	1061.00	1044.00	17.00	1061.00	0.00	0.00	0.00	0.00
9.625in Casing Surface	17.00	1061.00	1044.00	17.00	1061.00	0.00	0.00	0.00	0.00
8.75in Open Hole	1061.00	7359.44	6298.44	1061.00	7025.00	0.00	0.00	-205.21	564.27
7in Casing Intermediate	17.00	7359.44	7342.44	17.00	7025.00	0.00	0.00	-205.21	564.27
6.125in Open Hole	7359.44	16635.20	9275.76	7025.00	NA	-205.21	564.27	NA	NA
4.5in Casing Production	17.00	16635.20	16618.20	17.00	NA	0.00	0.00	NA	NA

TARGETS									
Name	MD [ft]	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
SEC.35-T3N-R68W SECTION LINES		0.00	0.00	0.00	3146070.35	1311665.15	40°11'15.846"N	104°58'37.790"W	polygon
SEC.36-T3N-R68W SECTION LINES		0.00	0.00	0.00	3146070.35	1311665.15	40°11'15.846"N	104°58'37.790"W	polygon
1) HANSEN STATE 1N-36HZ BHL ON PLAT (930'FNL & 50'FEL, SEC.36) REV-1	16635.20	7165.00	-96.77	9838.34	3155908.65	1311626.39	40°11'14.870"N	104°56'31.024"W	point
HANSEN STATE 1N-36HZ LAND BOX		7165.00	0.00	0.00	3146070.35	1311665.15	40°11'15.846"N	104°58'37.790"W	polygon

SURVEY PROGRAM - Ref Wellbore: HANSEN STATE 1N-36HZ PWB					Ref Wellpath: HANSEN STATE 1N-36HZ (PERMIT REV-1) PWP	
Start MD [ft]	End MD [ft]	Positional Uncertainty Model			Log Name/Comment	Wellbore
17.00	1300.00	Generic gyro - continuous (Standard)				HANSEN STATE 1N-36HZ PWB
1300.00	7359.44	NaviTrak (IFR)				HANSEN STATE 1N-36HZ PWB
7359.44	16635.20	NaviTrak (IFR)				HANSEN STATE 1N-36HZ PWB

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#17 HANSEN STATE 1N-36HZ (721'FNL & 693'FWL, SEC. 35)
Area	COLORADO	Well	HANSEN STATE 1N-36HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	HANSEN STATE 1N-36HZ PWB
Facility	SEC.35-T3N-R68W		

WELLPATH COMMENTS					
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Comment	
1011.00	0.000	180.000	1011.00	Fox Hills Marker	
3620.98	0.000	89.330	3605.00	Parkman	
4018.98	0.000	89.330	4003.00	Sussex	
6368.09	0.000	89.330	6352.11	4 1/2" LINER TOP	
6964.96	49.687	89.330	6889.00	Sharon Springs	
7107.92	63.983	89.330	6967.00	Niobrara A	
7271.85	80.376	89.330	7017.00	Niobrara B	
10672.30	89.135	89.330	7075.00	Niobrara C	

DESIGN COMMENTS					
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Comment	
17.00	0.000	180.000	17.00	TIE-ON	
1175.00	0.000	180.000	1175.00	BEGIN NUDGE	
1675.00	10.000	180.000	1672.47	END NUDGE	
2393.45	10.000	180.000	2380.00	BEGIN DROP	
2893.45	0.000	89.330	2877.47	END DROP	
6468.09	0.000	89.330	6452.11	KOP, BUILD @ 10°, 100'	
7359.44	89.135	89.330	7025.00	LANDING POINT	
16635.20	89.135	89.330	7165.00	TOTAL DEPTH	