



123 Robert S. Kerr Ave.
Oklahoma City, OK 73102

Survey JOCHEMS 2721 2-2H

Step #1 - Create a Deviation Survey

Step

#2 - Attach the survey "Description" to the Wellbore - Deviation Survey

Wellbores - Step #2

Actual Deviation Survey <des>, Proposed? No	Wellbore Name Original Hole
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Deviation Surveys - Step #1

Description	Date 8/25/2012	VS Dir (°) 359.97	Comment
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Tie-in Data

Azimuth North Type True	Convergence (°)	Declination (°)	MD Tie In (ftKB)	Azimuth Tie In (°)	Inclination Tie In (°)	TVDTie In (ftKB)	NSTie In (ft)	EWTie In (ft)
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Survey Data

MD (ftKB)	Incl (°)	Azim (°)	Survey Company	Method	TVD (ftKB)	VS (ft)	NS (ft)	EW (ft)	DLS (°/100ft)
310	0.6	261.20	SandRidge Energy	Incl	310	0	-0.26	-1.68	0.20
650	0.5	261.20	SandRidge Energy	Incl	650	-1	-0.78	-5.06	0.03
986	0.3	261.20	SandRidge Energy	Incl	986	-1	-1.13	-7.32	0.08
1,328	0.8	261.20	Drill right	Incl	1,328	-2	-1.62	-10.44	0.16
1,613	0.4	295.10	Drill right	Incl	1,613	-1	-1.50	-13.31	0.18
1,896	0.4	36.30	Drill right	Incl	1,896	0	-0.28	-13.62	0.22
2,369	1.0	358.20	Drill right	Incl	2,369	5	5.17	-12.77	0.15
2,842	0.7	327.40	Drill right	Incl	2,842	12	11.73	-14.46	0.11
3,314	0.5	346.30	Drill right	Incl	3,314	16	16.16	-16.50	0.06
3,504	0.4	8.40	Drill right	Incl	3,504	18	17.62	-16.60	0.10
3,881	0.5	14.40	Drill right	Incl	3,881	21	20.52	-16.00	0.03
3,914	0.5	348.80	Drill right	Incl	3,914	21	20.80	-15.99	0.67
3,946	0.9	341.30	Drill right	Incl	3,946	21	21.17	-16.10	1.28
3,977	2.0	349.10	Drill right	Incl	3,977	22	21.94	-16.28	3.60
4,009	3.6	357.60	Drill right	Incl	4,009	23	23.49	-16.43	5.15
4,040	4.9	3.80	Drill right	Incl	4,040	26	25.78	-16.38	4.44
4,072	7.5	5.90	Drill right	Incl	4,071	29	29.22	-16.07	8.15
4,104	9.7	8.10	Drill right	Incl	4,103	34	33.97	-15.48	6.95
4,135	10.1	10.10	Drill right	Incl	4,134	39	39.23	-14.63	1.70
4,167	11.2	10.90	Drill right	Incl	4,165	45	45.05	-13.55	3.47
4,198	12.1	8.10	Drill right	Incl	4,195	51	51.22	-12.53	3.43
4,230	14.6	2.90	Drill right	Incl	4,227	59	58.57	-11.85	8.66
4,261	17.8	359.90	Drill right	Incl	4,256	67	67.21	-11.66	10.67
4,293	20.6	359.10	Drill right	Incl	4,287	78	77.73	-11.76	8.79
4,325	23.7	358.90	Drill right	Incl	4,316	90	89.80	-11.97	9.69
4,355	26.6	358.30	Drill right	Incl	4,343	103	102.54	-12.28	9.70
4,387	28.4	359.90	Drill right	Incl	4,372	117	117.31	-12.51	6.08
4,419	28.9	357.60	Drill right	Incl	4,400	133	132.65	-12.85	3.78
4,451	31.1	356.00	Drill right	Incl	4,428	149	148.62	-13.75	7.31
4,483	34.2	356.90	Drill right	Incl	4,454	166	165.85	-14.81	9.81
4,515	36.3	357.10	Drill right	Incl	4,481	184	184.29	-15.78	6.57
4,547	38.9	357.20	Drill right	Incl	4,506	204	203.79	-16.75	8.13
4,579	41.0	356.90	Drill right	Incl	4,530	224	224.31	-17.81	6.59
4,610	43.6	356.90	Drill right	Incl	4,553	245	245.14	-18.93	8.39
4,642	45.5	356.40	Drill right	Incl	4,576	268	267.55	-20.25	6.04
4,673	48.3	356.30	Drill right	Incl	4,597	290	290.14	-21.69	9.04
4,705	49.5	355.50	Drill right	Incl	4,618	314	314.19	-23.41	4.20
4,737	49.2	355.40	Drill right	Incl	4,639	338	338.39	-25.34	0.97
4,768	49.0	354.90	Drill right	Incl	4,660	362	361.74	-27.32	1.38
4,800	50.1	355.40	Drill right	Incl	4,680	386	386.00	-29.38	3.64
4,832	50.4	355.40	Drill right	Incl	4,701	411	410.53	-31.35	0.94
4,864	50.1	355.00	Drill right	Incl	4,721	435	435.04	-33.41	1.34
4,896	49.9	355.00	Drill right	Incl	4,742	459	459.46	-35.55	0.62
4,927	51.7	354.90	Drill right	Incl	4,761	483	483.39	-37.66	5.81
4,959	54.8	354.20	Drill right	Incl	4,781	509	508.91	-40.10	9.84



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Step #1 - Create a Deviation Survey

Step

#2 - Attach the survey "Description" to the Wellbore - Deviation Survey

Survey Data

MD (ftKB)	Incl (°)	Azm (°)	Survey Company	Method	TVD (ftKB)	VS (ft)	NS (ft)	EW (ft)	DLS (°/100ft)
4,991	58.0	354.60	Drill right	Incl	4,798	535	535.43	-42.70	10.05
5,023	60.7	353.40	Drill right	Incl	4,815	563	562.81	-45.58	9.03
5,054	64.1	352.70	Drill right	Incl	4,829	590	590.08	-48.91	11.15
5,086	67.7	352.40	Drill right	Incl	4,842	619	619.03	-52.69	11.28
5,117	71.0	353.10	Drill right	Incl	4,853	648	647.81	-56.35	10.85
5,149	74.4	354.10	Drill right	Incl	4,862	678	678.16	-59.75	11.04
5,181	78.1	355.30	Drill right	Incl	4,870	709	709.11	-62.62	12.12
5,213	80.5	355.70	Drill right	Incl	4,876	740	740.45	-65.09	7.60
5,280	83.9	357.00	Drill right	Incl	4,885	807	806.69	-69.31	5.43
5,312	85.5	358.60	Drill right	Incl	4,888	839	838.53	-70.53	7.06
5,344	88.4	0.30	Drill right	Incl	4,890	871	870.47	-70.84	10.50
5,375	92.1	0.90	Drill right	Incl	4,890	902	901.47	-70.52	12.09
5,406	93.6	1.80	Drill right	Incl	4,888	932	932.42	-69.79	5.64
5,437	93.7	1.70	Drill right	Incl	4,886	963	963.34	-68.84	0.46
5,469	93.4	1.40	Drill right	Incl	4,884	995	995.27	-67.98	1.32
5,501	92.9	1.60	Drill right	Incl	4,882	1,027	1,027.21	-67.14	1.68
5,533	93.7	3.20	Drill right	Incl	4,881	1,059	1,059.13	-65.80	5.58
5,564	94.0	4.10	Drill right	Incl	4,878	1,090	1,089.99	-63.83	3.05
5,596	93.9	4.50	Drill right	Incl	4,876	1,122	1,121.83	-61.44	1.29
5,627	94.1	4.10	Drill right	Incl	4,874	1,153	1,152.66	-59.12	1.44
5,659	94.1	3.50	Drill right	Incl	4,872	1,185	1,184.51	-57.01	1.87
5,690	93.8	3.80	Drill right	Incl	4,870	1,215	1,215.38	-55.04	1.37
5,722	94.3	5.00	Drill right	Incl	4,867	1,247	1,247.20	-52.59	4.05
5,754	94.5	5.40	Drill right	Incl	4,865	1,279	1,278.98	-49.70	1.39
5,785	94.5	5.30	Drill right	Incl	4,863	1,310	1,309.74	-46.82	0.32
5,817	94.1	5.60	Drill right	Incl	4,860	1,342	1,341.51	-43.79	1.56
5,848	93.0	5.20	Drill right	Incl	4,858	1,372	1,372.31	-40.87	3.77
5,880	92.7	6.00	Drill right	Incl	4,857	1,404	1,404.12	-37.76	2.67
5,912	92.7	5.90	Drill right	Incl	4,855	1,436	1,435.91	-34.44	0.31
5,944	92.6	5.70	Drill right	Incl	4,854	1,468	1,467.72	-31.21	0.70
5,976	92.3	5.00	Drill right	Incl	4,852	1,500	1,499.55	-28.23	2.38
6,007	91.1	5.40	Drill right	Incl	4,851	1,530	1,530.40	-25.42	4.08
6,039	91.0	5.40	Drill right	Incl	4,851	1,562	1,562.26	-22.41	0.31
6,071	90.8	5.40	Drill right	Incl	4,850	1,594	1,594.11	-19.40	0.62
6,102	90.6	5.30	Drill right	Incl	4,850	1,625	1,624.97	-16.51	0.72
6,134	90.9	3.30	Drill right	Incl	4,849	1,657	1,656.88	-14.11	6.32
6,165	90.8	2.70	Drill right	Incl	4,849	1,688	1,687.83	-12.49	1.96
6,197	90.9	3.00	Drill right	Incl	4,849	1,720	1,719.79	-10.90	0.99
6,229	90.9	3.40	Drill right	Incl	4,848	1,752	1,751.74	-9.11	1.25
6,260	90.8	3.40	Drill right	Incl	4,848	1,783	1,782.68	-7.27	0.32
6,292	91.2	2.00	Drill right	Incl	4,847	1,815	1,814.64	-5.77	4.55
6,324	91.2	1.80	Drill right	Incl	4,846	1,847	1,846.61	-4.71	0.62
6,356	91.0	1.60	Drill right	Incl	4,846	1,879	1,878.59	-3.76	0.88
6,387	90.9	359.80	Drill right	Incl	4,845	1,910	1,909.58	-3.38	5.81
6,419	91.1	0.00	Drill right	Incl	4,845	1,942	1,941.58	-3.43	0.88
6,450	91.0	0.30	Drill right	Incl	4,844	1,973	1,972.57	-3.35	1.02
6,482	91.4	359.90	Drill right	Incl	4,843	2,005	2,004.57	-3.30	1.77
6,514	91.5	359.10	Drill right	Incl	4,843	2,037	2,036.56	-3.58	2.52
6,546	91.6	359.00	Drill right	Incl	4,842	2,069	2,068.54	-4.11	0.44
6,577	90.0	359.00	Drill right	Incl	4,841	2,100	2,099.53	-4.65	5.16
6,609	90.1	359.20	Drill right	Incl	4,841	2,132	2,131.53	-5.15	0.70
6,640	89.8	358.60	Drill right	Incl	4,841	2,163	2,162.52	-5.74	2.16



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Step

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Survey Data

MD (ft)	Incl (°)	Azm (°)	Survey Company	Method	TVD (ft)	VS (ft)	NS (ft)	EW (ft)	DLS (°/100ft)
6,672	89.4	358.40	Drill right	Incl	4,842	2,195	2,194.51	-6.58	1.40
6,705	90.1	358.80	Drill right	Incl	4,842	2,228	2,227.50	-7.39	2.44
6,737	90.4	0.00	Drill right	Incl	4,842	2,259	2,259.50	-7.72	3.87
6,768	91.3	0.50	Drill right	Incl	4,841	2,290	2,290.49	-7.59	3.32
6,800	91.6	0.60	Drill right	Incl	4,840	2,322	2,322.48	-7.28	0.99
6,831	91.8	0.20	Drill right	Incl	4,839	2,353	2,353.47	-7.07	1.44
6,863	91.2	1.40	Drill right	Incl	4,838	2,385	2,385.45	-6.62	4.19
6,895	90.1	2.20	Drill right	Incl	4,838	2,417	2,417.43	-5.61	4.25
6,927	90.5	2.70	Drill right	Incl	4,838	2,449	2,449.40	-4.25	2.00
6,959	91.8	3.60	Drill right	Incl	4,837	2,481	2,481.35	-2.49	4.94
6,990	91.6	3.10	Drill right	Incl	4,836	2,512	2,512.28	-0.68	1.74
7,022	89.7	1.60	Drill right	Incl	4,836	2,544	2,544.25	0.64	7.56
7,054	89.6	1.30	Drill right	Incl	4,836	2,576	2,576.24	1.44	0.99
7,085	89.1	2.20	Drill right	Incl	4,837	2,607	2,607.22	2.39	3.32
7,117	89.4	2.10	Drill right	Incl	4,837	2,639	2,639.20	3.59	0.99
7,148	90.0	2.70	Drill right	Incl	4,837	2,670	2,670.17	4.89	2.74
7,181	90.2	3.20	Drill right	Incl	4,837	2,703	2,703.12	6.59	1.63
7,213	90.2	4.90	Drill right	Incl	4,837	2,735	2,735.04	8.85	5.31
7,244	90.5	1.60	Drill right	Incl	4,837	2,766	2,765.99	10.61	10.69
7,276	91.0	359.40	Drill right	Incl	4,836	2,798	2,797.98	10.88	7.05
7,308	90.8	358.80	Drill right	Incl	4,836	2,830	2,829.97	10.38	1.98
7,339	90.9	358.70	Drill right	Incl	4,835	2,861	2,860.96	9.71	0.46
7,371	91.2	358.70	Drill right	Incl	4,835	2,893	2,892.95	8.98	0.94
7,403	91.8	359.00	Drill right	Incl	4,834	2,925	2,924.93	8.34	2.10
7,435	90.9	358.10	Drill right	Incl	4,833	2,957	2,956.91	7.53	3.98
7,467	91.1	358.40	Drill right	Incl	4,833	2,989	2,988.89	6.55	1.13
7,498	89.9	358.50	Drill right	Incl	4,832	3,020	3,019.88	5.71	3.88
7,530	89.8	358.00	Drill right	Incl	4,832	3,052	3,051.86	4.74	1.59
7,561	89.2	358.30	Drill right	Incl	4,833	3,083	3,082.85	3.73	2.16
7,593	89.3	358.20	Drill right	Incl	4,833	3,115	3,114.83	2.76	0.44
7,625	89.2	358.20	Drill right	Incl	4,834	3,147	3,146.81	1.75	0.31
7,657	89.2	357.90	Drill right	Incl	4,834	3,179	3,178.79	0.66	0.94
7,688	89.3	358.00	Drill right	Incl	4,834	3,210	3,209.77	-0.44	0.46
7,719	89.6	359.40	Drill right	Incl	4,835	3,241	3,240.76	-1.15	4.62
7,751	90.3	0.20	Drill right	Incl	4,835	3,273	3,272.75	-1.26	3.32
7,783	90.5	0.20	Drill right	Incl	4,835	3,305	3,304.75	-1.15	0.62
7,814	90.3	1.20	Drill right	Incl	4,834	3,336	3,335.75	-0.77	3.29
7,846	90.4	0.70	Drill right	Incl	4,834	3,368	3,367.75	-0.24	1.59
7,877	90.7	0.90	Drill right	Incl	4,834	3,399	3,398.74	0.19	1.16
7,909	90.9	1.30	Drill right	Incl	4,833	3,431	3,430.73	0.81	1.40
7,941	90.1	0.70	Drill right	Incl	4,833	3,463	3,462.72	1.37	3.12
7,973	89.9	0.30	Drill right	Incl	4,833	3,495	3,494.72	1.65	1.40
8,005	89.8	359.90	Drill right	Incl	4,833	3,527	3,526.72	1.70	1.29
8,037	89.9	359.40	Drill right	Incl	4,833	3,559	3,558.72	1.51	1.59
8,069	89.6	359.50	Drill right	Incl	4,833	3,591	3,590.72	1.20	0.99
8,100	89.7	359.30	Drill right	Incl	4,834	3,622	3,621.72	0.87	0.72
8,132	89.6	359.90	Drill right	Incl	4,834	3,654	3,653.72	0.65	1.90
8,163	89.6	359.60	Drill right	Incl	4,834	3,685	3,684.72	0.52	0.97
8,195	89.9	359.50	Drill right	Incl	4,834	3,717	3,716.71	0.26	0.99
8,227	89.9	359.50	Drill right	Incl	4,834	3,749	3,748.71	-0.01	0.00
8,259	90.1	359.40	Drill right	Incl	4,834	3,781	3,780.71	-0.32	0.70
8,290	90.5	359.20	Drill right	Incl	4,834	3,812	3,811.71	-0.70	1.44



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Step

#2 - Attach the survey "Description" to the Wellbore - Deviation Survey

Survey Data

MD (ftKB)	Incl (°)	Azm (°)	Survey Company	Method	TVD (ftKB)	VS (ft)	NS (ft)	EW (ft)	DLS (°/100ft)
8,322	90.9	359.30	Drill right	Incl	4,834	3,844	3,843.70	-1.12	1.29
8,354	90.7	359.00	Drill right	Incl	4,833	3,876	3,875.70	-1.59	1.13
8,385	89.6	359.20	Drill right	Incl	4,833	3,907	3,906.69	-2.08	3.61
8,417	89.5	358.20	Drill right	Incl	4,833	3,939	3,938.68	-2.81	3.14
8,449	89.1	358.30	Drill right	Incl	4,834	3,971	3,970.67	-3.78	1.29
8,481	87.6	359.30	Drill right	Incl	4,835	4,003	4,002.64	-4.45	5.63
8,512	87.4	359.00	Drill right	Incl	4,836	4,034	4,033.61	-4.91	1.16
8,544	87.2	359.70	Drill right	Incl	4,838	4,066	4,065.57	-5.28	2.27
8,575	87.4	359.50	Drill right	Incl	4,839	4,097	4,096.54	-5.49	0.91
8,607	86.9	359.40	Drill right	Incl	4,841	4,128	4,128.50	-5.80	1.59
8,639	87.1	359.10	Drill right	Incl	4,842	4,160	4,160.45	-6.22	1.13
8,671	87.4	359.30	Drill right	Incl	4,844	4,192	4,192.41	-6.66	1.13
8,703	87.6	359.30	Drill right	Incl	4,845	4,224	4,224.38	-7.05	0.62
8,734	87.5	359.30	Drill right	Incl	4,847	4,255	4,255.35	-7.43	0.32
8,766	87.2	359.10	Drill right	Incl	4,848	4,287	4,287.31	-7.88	1.13
8,797	87.2	359.20	Drill right	Incl	4,850	4,318	4,318.27	-8.34	0.32
8,828	87.3	358.90	Drill right	Incl	4,851	4,349	4,349.23	-8.85	1.02
8,860	87.5	359.50	Drill right	Incl	4,852	4,381	4,381.19	-9.30	1.97
8,891	87.6	359.60	Drill right	Incl	4,854	4,412	4,412.16	-9.54	0.46
8,923	87.5	359.90	Drill right	Incl	4,855	4,444	4,444.13	-9.68	0.99
8,955	87.4	0.10	Drill right	Incl	4,857	4,476	4,476.10	-9.68	0.70
8,987	87.5	359.80	Drill right	Incl	4,858	4,508	4,508.07	-9.71	0.99
9,019	87.5	359.90	Drill right	Incl	4,859	4,540	4,540.04	-9.79	0.31
9,050	87.5	359.20	Drill right	Incl	4,861	4,571	4,571.01	-10.04	2.26
9,082	87.4	359.70	Drill right	Incl	4,862	4,603	4,602.98	-10.34	1.59
9,113	87.4	359.80	Drill right	Incl	4,864	4,634	4,633.94	-10.48	0.32
9,145	87.4	359.50	Drill right	Incl	4,865	4,666	4,665.91	-10.67	0.94
9,167	87.2	359.50	Drill right	Incl	4,866	4,688	4,687.88	-10.86	0.91
9,217	87.2	359.50	Drill right	Incl	4,869	4,738	4,737.82	-11.30	0.00