

Results of Directional Survey

API number:	30-025-41627		
OGRID:		Operator:	CHEVRON U S A INC
		Property:	BRININSTOOL 25 23 33 USA # 2H

surface	ULSTR:	C	25	T 23S	R 33E
				150 FNL	1980 FWL

BH Loc	ULSTR:	N	25	T 23S	R 33E
15630	MD	10960.5	TVD	315 FSL	2028 FWL
4965 FNL					

Top Perf/OH	ULSTR:	C	25	T 23S	R 33E
10660	MD	10650.6	TVD	223 FNL	2185 FWL

Bot Perf/OH	ULSTR:	N	25	T 23S	R 33E
15346	MD	10962.6	TVD	599 FSL	2012 FWL
4681 FNL					

	MD	N/S	E/W	VD
	10644	-70.16	205.14	10634.88
TOP PERFS/OH	10660	-73.26	205.48	10650.57
	10689	-78.87	206.11	10679.01
	15342	-4527.30	31.68	10962.60
BOT PERFS/OH	15346	-4531.30	31.85	10962.58
	15431	-4616.21	35.56	10962.13

NEXT TO LAST	15574	-4758.94	44.26	10960.96
LAST READING	15630	-4814.80	48.17	10960.47
TD	15630	-4814.80	48.17	10960.47

Surface Location	150	FN	1980	FW
Projected BHL	4965	FN	2028	FW
Location of				
Top Perfs/OH	223	FN	2185	FW
Bottom Perfs/OH	4681	FN	2012	FW

SUMMARY of Subsurface Locations

Surface Location	C-25-23S-33E	150	FN	1980	FW	Vert. Depth
Top Perfs/OH	C-25-23S-33E	223	FN	2185	FW	10650.57
Bottom Perfs/OH	N-25-23S-33E	4681	FN	2012	FW	10962.58
Projected TD	N-25-23S-33E	4965	FN	2028	FW	10960.47

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Directional Survey

MOBBS OGD

SEP 17 2014

Well Name BRININSTOOL 25-23-33 USA 002H		Lease Brininstool 25-23-33		Field Name Bell Lake North		Business Unit Mid-Continent	
Ground Elevation (ft) 3,642.00	Original RKB (ft) 3,667.00	Current RKB Elevation 3,667.00, 2/7/2014				Mud Line Elevation (ft)	Water Depth (ft) RECEIVED

Wellbore Name Original Hole		Parent Wellbore Original Hole		Kick Off Depth (ftKB) 10,565		Vertical Section Direction (°) 179.53	
UTM Northing (Y) (ft)			UTM Easting (X) (ft)			UTM Grid Zone	
Date 3/3/2014		Definitive? Y		Description MWD		Planned? N	
MD Tie In (ftKB)		TVD Tie In (ftKB)		Inclination Tie In (°)		Azimuth Tie In (°)	
				NSTie In (ft)		EWTie In (ft)	

Survey Data													
MD (ftKB)	Ind (°)	Azm (°)	TVD (ftKB)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Method	Survey Company	Build (°/100ft)	Depart (ft)	Turn (°/100ft)	Unuse of data
0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Gyro MS		0.00	0.00	0.00	N
100	0.36	262.24	100.00	-0.04	-0.31	0.04	0.36	Gyro MS		0.36	0.31	262.24	N
200	0.48	255.67	200.00	-0.19	-1.03	0.18	0.13	Gyro MS		0.12	1.05	-6.57	N
300	0.38	268.06	299.99	-0.30	-1.77	0.29	0.14	Gyro MS		-0.10	1.79	12.39	N
400	0.35	261.18	399.99	-0.36	-2.40	0.34	0.05	Gyro MS		-0.03	2.43	-6.88	N
500	0.78	255.66	499.99	-0.58	-3.36	0.55	0.43	Gyro MS		0.43	3.41	-5.52	N
600	1.21	250.42	599.97	-1.10	-5.01	1.06	0.44	Gyro MS		0.43	5.13	-5.24	N
700	1.10	256.62	699.95	-1.68	-6.94	1.62	0.17	Gyro MS		-0.11	7.14	6.20	N
800	0.88	262.21	799.94	-2.00	-8.64	1.93	0.24	Gyro MS		-0.22	8.87	5.59	N
900	0.62	265.33	899.93	-2.15	-9.94	2.07	0.26	Gyro MS		-0.26	10.17	3.12	N
1,000	0.41	265.33	999.92	-2.22	-10.83	2.13	0.21	Gyro MS		-0.21	11.06	0.00	N
1,100	0.15	263.30	1,099.92	-2.27	-11.32	2.17	0.26	Gyro MS		-0.26	11.55	-2.03	N
1,200	0.06	319.97	1,199.92	-2.24	-11.48	2.15	0.13	Gyro MS		-0.09	11.70	56.67	N
1,300	0.22	270.82	1,299.92	-2.20	-11.71	2.10	0.19	Gyro MS		0.16	11.91	-49.15	N
1,346	0.03	97.67	1,345.92	-2.20	-11.79	2.10	0.54	Gyro MS		-0.41	11.99	376.41	N
1,473	0.60	92.80	1,472.92	-2.24	-11.09	2.15	0.45	Gyro MS		0.45	11.31	-3.83	N
1,652	0.60	67.00	1,651.91	-1.92	-9.29	1.84	0.15	Gyro MS		0.00	9.49	-14.41	N
1,831	0.80	75.40	1,830.90	-1.24	-7.22	1.18	0.13	Gyro MS		0.11	7.32	4.69	N
2,010	1.20	79.50	2,009.87	-0.58	-4.17	0.54	0.23	Gyro MS		0.22	4.21	2.29	N
2,189	1.40	77.80	2,188.82	0.23	-0.19	-0.23	0.11	Gyro MS		0.11	0.29	-0.95	N
2,368	1.60	75.40	2,367.76	1.32	4.37	-1.28	0.12	Gyro MS		0.11	4.56	-1.34	N
2,546	1.90	72.70	2,545.68	2.82	9.59	-2.74	0.17	Gyro MS		0.17	10.00	-1.52	N
2,725	2.40	70.10	2,724.55	4.98	15.95	-4.85	0.28	Gyro MS		0.28	16.71	-1.45	N
2,904	2.80	67.70	2,903.37	7.91	23.52	-7.72	0.23	Gyro MS		0.22	24.81	-1.34	N
3,083	1.70	89.70	3,082.23	9.59	30.22	-9.34	0.77	Gyro MS		-0.61	31.70	12.29	N
3,262	1.90	82.90	3,261.14	9.97	35.82	-9.67	0.16	Gyro MS		0.11	37.18	-3.80	N
3,440	2.20	83.40	3,439.03	10.72	42.14	-10.38	0.17	Gyro MS		0.17	43.48	0.28	N
3,619	1.50	74.00	3,617.93	11.77	47.81	-11.37	0.42	Gyro MS		-0.39	49.23	-5.25	N
3,798	1.60	56.90	3,796.87	13.78	52.15	-13.35	0.26	Gyro MS		0.06	53.94	-9.55	N
3,977	2.00	60.90	3,975.78	16.66	56.97	-16.19	0.23	Gyro MS		0.22	59.36	2.23	N
4,156	2.30	67.10	4,154.65	19.58	63.01	-19.06	0.21	Gyro MS		0.17	65.98	3.46	N
4,335	3.00	74.10	4,333.46	22.26	70.83	-21.68	0.43	Gyro MS		0.39	74.24	3.91	N
4,514	1.40	135.70	4,512.34	21.98	76.86	-21.34	1.47	Gyro MS		-0.89	79.94	34.41	N
4,693	1.80	126.30	4,691.27	18.75	80.65	-18.08	0.27	Gyro MS		0.22	82.80	-5.25	N
4,872	2.90	120.80	4,870.12	14.76	86.81	-14.05	0.63	Gyro MS		0.61	88.05	-3.07	N
5,051	1.40	68.90	5,049.00	13.23	92.74	-12.47	1.29	Gyro MS		-0.84	93.68	-28.99	N
5,094	1.30	73.30	5,091.99	13.56	93.69	-12.79	0.33	Gyro MS		-0.23	94.67	10.23	N
5,289	1.20	79.70	5,286.95	14.56	97.82	-13.76	0.09	Gyro MS		-0.05	98.90	3.28	N
5,468	1.20	76.10	5,465.91	15.35	101.49	-14.51	0.04	Gyro MS		0.00	102.64	-2.01	N
5,647	1.00	37.10	5,644.88	17.04	104.25	-16.19	0.42	Gyro MS		-0.11	105.63	-21.79	N
5,826	1.10	48.50	5,823.85	19.43	106.48	-18.55	0.13	Gyro MS		0.06	108.23	6.37	N
6,005	1.20	44.40	6,002.81	21.91	109.08	-21.01	0.07	Gyro MS		0.06	111.25	-2.29	N
6,183	0.50	107.60	6,180.79	23.00	111.12	-22.09	0.60	Gyro MS		-0.39	113.48	35.51	N
6,362	0.80	136.10	6,359.78	21.87	112.73	-20.94	0.24	Gyro MS		0.17	114.83	15.92	N
6,541	1.20	301.60	6,538.77	21.95	112.00	-21.03	1.11	Gyro MS		0.22	114.13	92.46	N
6,720	1.50	295.80	6,717.72	23.95	108.29	-23.06	0.18	Gyro MS		0.17	110.91	-3.24	N



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Survey Data

MD (RKB)	Ind (°)	Azm (°)	TVD (RKB)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Method	Survey Company	Build (°/100ft)	Depart (ft)	Turn (°/100ft)	Unuse d data
6,900	1.10	288.00	6,897.67	25.51	104.53	-24.65	0.24	Gyro MS		-0.22	107.60	-4.33	N
7,079	1.10	291.90	7,076.64	26.68	101.30	-25.85	0.04	Gyro MS		0.00	104.76	2.18	N
7,258	1.60	265.60	7,255.59	27.13	97.22	-26.33	0.44	Gyro MS		0.28	100.93	-14.69	N
7,434	1.80	255.80	7,431.52	26.26	92.09	-25.51	0.20	Gyro MS		0.11	95.76	-5.57	N
7,616	1.80	219.50	7,613.43	23.36	87.50	-22.64	0.62	Gyro MS		0.00	90.56	-19.95	N
7,795	1.70	207.80	7,792.35	18.84	84.47	-18.14	0.21	Gyro MS		-0.06	86.55	-6.54	N
7,974	2.20	209.10	7,971.24	13.49	81.56	-12.82	0.28	Gyro MS		0.28	82.67	0.73	N
8,153	2.20	195.60	8,150.11	7.18	78.97	-6.53	0.29	Gyro MS		0.00	79.29	-7.54	N
8,332	2.00	182.90	8,328.99	0.75	77.88	-0.11	0.28	Gyro MS		-0.11	77.89	-7.09	N
8,511	2.20	167.60	8,507.88	-5.73	78.46	6.37	0.33	Gyro MS		0.11	78.67	-8.55	N
8,690	2.20	151.60	8,686.74	-12.11	80.84	12.77	0.34	Gyro MS		0.00	81.74	-8.94	N
8,869	2.80	129.10	8,865.58	-17.89	85.86	18.59	0.64	Gyro MS		0.34	87.71	-12.57	N
9,047	2.20	111.30	9,043.41	-21.87	92.42	22.63	0.55	Gyro MS		-0.34	94.97	-10.00	N
9,226	2.80	116.20	9,222.24	-25.05	99.54	25.86	0.36	Gyro MS		0.34	102.65	2.74	N
9,405	4.60	104.50	9,400.86	-28.77	110.42	29.68	1.09	Gyro MS		1.01	114.11	-6.54	N
9,583	5.40	97.80	9,578.18	-31.70	125.63	32.73	0.56	Gyro MS		0.45	129.56	-3.76	N
9,762	6.60	106.30	9,756.20	-35.73	143.85	36.91	0.83	Gyro MS		0.67	148.22	4.75	N
9,941	5.30	119.00	9,934.24	-42.62	160.95	43.94	1.03	Gyro MS		-0.73	166.50	7.09	N
9,988	5.10	117.90	9,981.05	-44.65	164.70	46.00	0.48	Gyro MS		-0.43	170.64	-2.34	N
10,167	5.80	109.20	10,159.24	-51.35	180.27	52.83	0.60	Gyro MS		0.39	187.44	-4.86	N
10,346	2.80	118.00	10,337.72	-56.38	192.67	57.96	1.71	Gyro MS		-1.68	200.75	4.92	N
10,524	3.00	109.10	10,515.49	-59.95	200.91	61.59	0.28	Gyro MS		0.11	209.67	-5.00	N
10,600	6.10	163.80	10,591.27	-64.48	203.92	66.15	6.58	Magn MWD		4.08	213.87	71.97	N
10,644	9.10	170.70	10,634.88	-70.16	205.14	71.84	7.11	Magn MWD		6.82	216.80	15.68	N
10,689	13.40	175.60	10,679.01	-78.87	206.11	80.56	9.78	Magn MWD		9.56	220.69	10.89	N
10,734	18.20	177.40	10,722.30	-91.10	206.83	92.79	10.72	Magn MWD		10.67	226.01	4.00	N
10,779	22.30	176.50	10,764.51	-106.65	207.67	108.35	9.14	Magn MWD		9.11	233.46	-2.00	N
10,867	33.80	177.30	10,842.04	-147.90	209.85	149.62	13.07	Magn MWD		13.07	256.73	0.91	N
10,912	41.20	180.10	10,877.72	-175.26	210.42	176.98	16.87	Magn MWD		16.44	273.85	6.22	N
10,957	46.20	185.80	10,910.25	-206.27	208.75	207.98	14.14	Magn MWD		11.11	293.47	12.67	N
11,002	52.00	193.00	10,939.73	-239.76	203.11	241.42	17.66	Magn MWD		12.89	314.23	16.00	N
11,046	59.30	197.20	10,964.55	-274.78	193.60	276.36	18.36	Magn MWD		16.59	336.13	9.55	N
11,091	67.60	200.40	10,984.65	-312.83	180.60	314.30	19.51	Magn MWD		18.44	361.22	7.11	N
11,138	75.77	203.00	10,999.40	-354.24	164.10	355.58	18.16	Magn MWD		17.38	390.40	5.53	N
11,183	78.20	203.30	11,009.54	-394.55	146.86	395.74	5.44	Magn MWD		5.40	421.00	0.67	N
11,228	80.40	202.90	11,017.89	-435.22	129.52	436.27	4.97	Magn MWD		4.89	454.08	-0.89	N
11,272	82.20	202.80	11,024.55	-475.30	112.63	476.21	4.10	Magn MWD		4.09	488.46	-0.23	N
11,362	85.30	200.70	11,034.35	-558.38	79.49	559.02	4.15	Magn MWD		3.44	564.01	-2.33	N
11,496	91.90	192.10	11,037.62	-686.71	41.73	687.03	8.09	Magn MWD		4.93	687.97	-6.42	N



Directional Survey

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Survey Data													
MD (ft)	Incl (°)	Azm (°)	TVD (ft)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Method	Survey Company	Build (°/100ft)	Depart (ft)	Turn (°/100ft)	Unuse d data
11,586	91.60	189.30	11,034.88	-775.09	25.03	775.27	3.13	Magn MWD		-0.33	775.50	-3.11	N
11,675	91.70	186.20	11,032.31	-863.23	13.04	863.31	3.48	Magn MWD		0.11	863.33	-3.48	N
11,764	91.20	183.60	11,030.06	-951.87	5.44	951.88	2.97	Magn MWD		-0.56	951.89	-2.92	N
11,854	90.20	180.70	11,028.96	-1,041.79	2.06	1,041.77	3.41	Magn MWD		-1.11	1,041.79	-3.22	N
11,943	92.00	178.40	11,027.25	-1,130.76	2.76	1,130.74	3.28	Magn MWD		2.02	1,130.76	-2.58	N
12,033	92.60	177.50	11,023.64	-1,220.63	5.98	1,220.64	1.20	Magn MWD		0.67	1,220.64	-1.00	N
12,122	92.90	176.80	11,019.37	-1,309.42	10.40	1,309.46	0.85	Magn MWD		0.34	1,309.46	-0.79	N
12,212	91.80	178.30	11,015.68	-1,399.25	14.24	1,399.32	2.07	Magn MWD		-1.22	1,399.33	1.67	N
12,301	91.70	178.30	11,012.96	-1,488.17	16.88	1,488.26	0.11	Magn MWD		-0.11	1,488.27	0.00	N
12,390	92.50	180.30	11,009.70	-1,577.10	17.97	1,577.20	2.42	Magn MWD		0.90	1,577.20	2.25	N
12,479	93.10	180.00	11,005.35	-1,665.99	17.73	1,666.08	0.75	Magn MWD		0.67	1,666.09	-0.34	N
12,569	93.40	179.20	11,000.25	-1,755.85	18.36	1,755.94	0.95	Magn MWD		0.33	1,755.94	-0.89	N
12,658	92.00	180.00	10,996.06	-1,844.74	18.98	1,844.84	1.81	Magn MWD		-1.57	1,844.84	0.90	N
12,748	91.70	179.40	10,993.15	-1,934.69	19.45	1,934.79	0.75	Magn MWD		-0.33	1,934.79	-0.67	N
12,837	92.10	178.60	10,990.20	-2,023.63	21.01	2,023.73	1.00	Magn MWD		0.45	2,023.74	-0.90	N
12,927	92.40	178.10	10,986.67	-2,113.52	23.59	2,113.65	0.65	Magn MWD		0.33	2,113.66	-0.56	N
13,016	93.00	178.70	10,982.47	-2,202.39	26.08	2,202.53	0.95	Magn MWD		0.67	2,202.54	0.67	N
13,105	91.70	180.20	10,978.82	-2,291.31	26.93	2,291.45	2.23	Magn MWD		-1.46	2,291.46	1.69	N
13,194	91.80	180.60	10,976.11	-2,380.26	26.31	2,380.40	0.46	Magn MWD		0.11	2,380.41	0.45	N
13,284	90.00	182.20	10,974.69	-2,470.22	24.11	2,470.33	2.68	Magn MWD		-2.00	2,470.33	1.78	N
13,374	89.70	182.30	10,974.93	-2,560.15	20.58	2,560.23	0.35	Magn MWD		-0.33	2,560.23	0.11	N
13,463	89.90	182.20	10,975.24	-2,649.08	17.08	2,649.13	0.25	Magn MWD		0.22	2,649.13	-0.11	N
13,553	90.70	180.80	10,974.77	-2,739.04	14.73	2,739.07	1.79	Magn MWD		0.89	2,739.08	-1.56	N
13,642	91.00	180.70	10,973.45	-2,828.03	13.56	2,828.04	0.36	Magn MWD		0.34	2,828.06	-0.11	N
13,732	91.10	180.10	10,971.80	-2,918.01	12.93	2,918.02	0.68	Magn MWD		0.11	2,918.04	-0.67	N
13,821	92.00	179.60	10,969.39	-3,006.97	13.17	3,006.98	1.16	Magn MWD		1.01	3,007.00	-0.56	N
13,910	92.30	179.80	10,966.05	-3,095.91	13.63	3,095.92	0.41	Magn MWD		0.34	3,095.94	0.22	N
14,089	92.80	179.60	10,958.09	-3,274.73	14.57	3,274.74	0.30	Magn MWD		0.28	3,274.76	-0.11	N
14,179	91.70	179.90	10,954.56	-3,364.66	14.96	3,364.67	1.27	Magn MWD		-1.22	3,364.69	0.33	N



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Survey Data													
MD (ftKB)	Inc (°)	Azm (°)	TVD (ftKB)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Method	Survey Company	Build (°/100ft)	Depth (ft)	Turn (°/100ft)	Unuse d data
14,268	89.50	180.20	10,953.62	-3,453.65	14.88	3,453.65	2.49	Magn MWD		-2.47	3,453.68	0.34	N
14,358	88.90	180.30	10,954.88	-3,543.64	14.49	3,543.64	0.68	Magn MWD		-0.67	3,543.67	0.11	N
14,447	89.30	179.60	10,956.28	-3,632.63	14.57	3,632.62	0.91	Magn MWD		0.45	3,632.65	-0.79	N
14,537	89.40	180.00	10,957.30	-3,722.62	14.88	3,722.62	0.46	Magn MWD		0.11	3,722.65	0.44	N
14,626	89.00	179.50	10,958.54	-3,811.61	15.27	3,811.61	0.72	Magn MWD		-0.45	3,811.64	-0.56	N
14,715	88.90	179.30	10,960.17	-3,900.59	16.20	3,900.59	0.25	Magn MWD		-0.11	3,900.62	-0.22	N
14,805	89.20	179.60	10,961.66	-3,990.57	17.07	3,990.58	0.47	Magn MWD		0.33	3,990.61	0.33	N
14,894	89.60	179.60	10,962.60	-4,079.57	17.69	4,079.57	0.45	Magn MWD		0.45	4,079.60	0.00	N
14,984	89.80	179.10	10,963.07	-4,169.56	18.71	4,169.57	0.60	Magn MWD		0.22	4,169.60	-0.56	N
15,073	90.30	178.50	10,962.99	-4,258.54	20.57	4,258.56	0.88	Magn MWD		0.56	4,258.59	-0.67	N
15,163	90.20	178.00	10,962.60	-4,348.49	23.32	4,348.54	0.57	Magn MWD		-0.11	4,348.56	-0.56	N
15,252	89.80	176.80	10,962.60	-4,437.40	27.36	4,437.48	1.42	Magn MWD		-0.45	4,437.49	-1.35	N
15,342	90.20	177.70	10,962.60	-4,527.30	31.68	4,527.40	1.09	Magn MWD		0.44	4,527.41	1.00	N
15,431	90.40	177.30	10,962.13	-4,616.21	35.56	4,616.35	0.50	Magn MWD		0.22	4,616.35	-0.45	N
15,521	90.50	176.20	10,961.42	-4,706.06	40.66	4,706.24	1.23	Magn MWD		0.11	4,706.24	-1.22	N
15,574	90.50	176.00	10,960.96	-4,758.94	44.26	4,759.14	0.38	Magn MWD		0.00	4,759.14	-0.38	N
15,630	90.50	176.00	10,960.47	-4,814.80	48.17	4,815.03	0.00	Extrap.		0.00	4,815.04	0.00	N