



# **Chevron**

**Garfield County, CO (NAD83)  
Skinner Ridge Field  
SKR-598-08-BV-03**

**OH**

**Design: OH**

## **Standard Survey Report**

**14 October, 2013**



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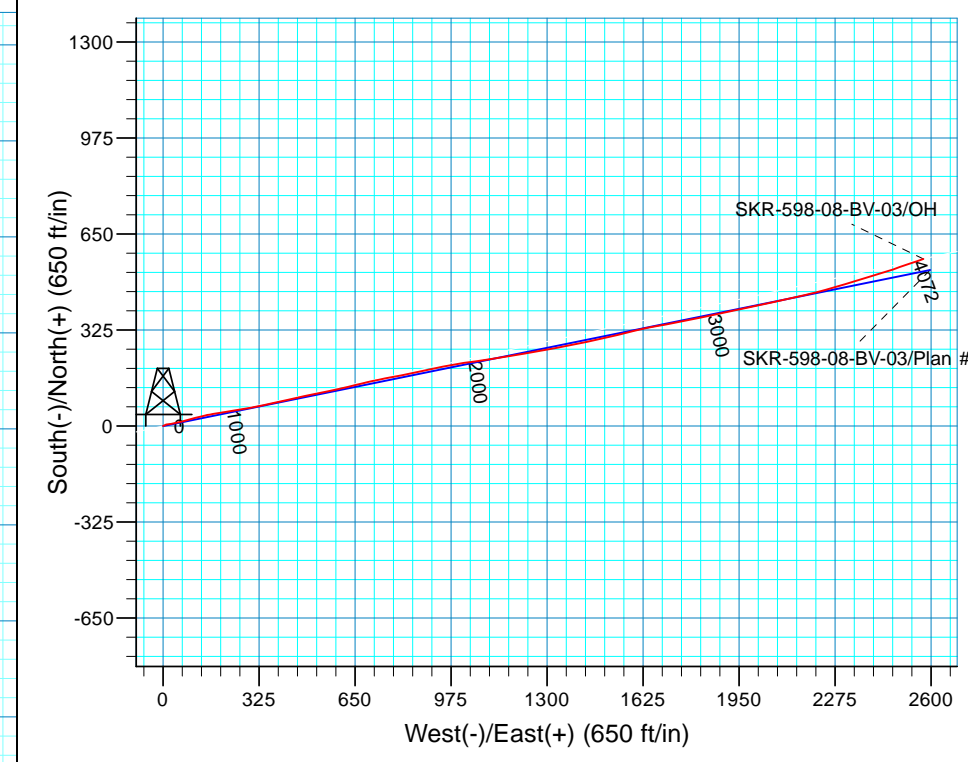
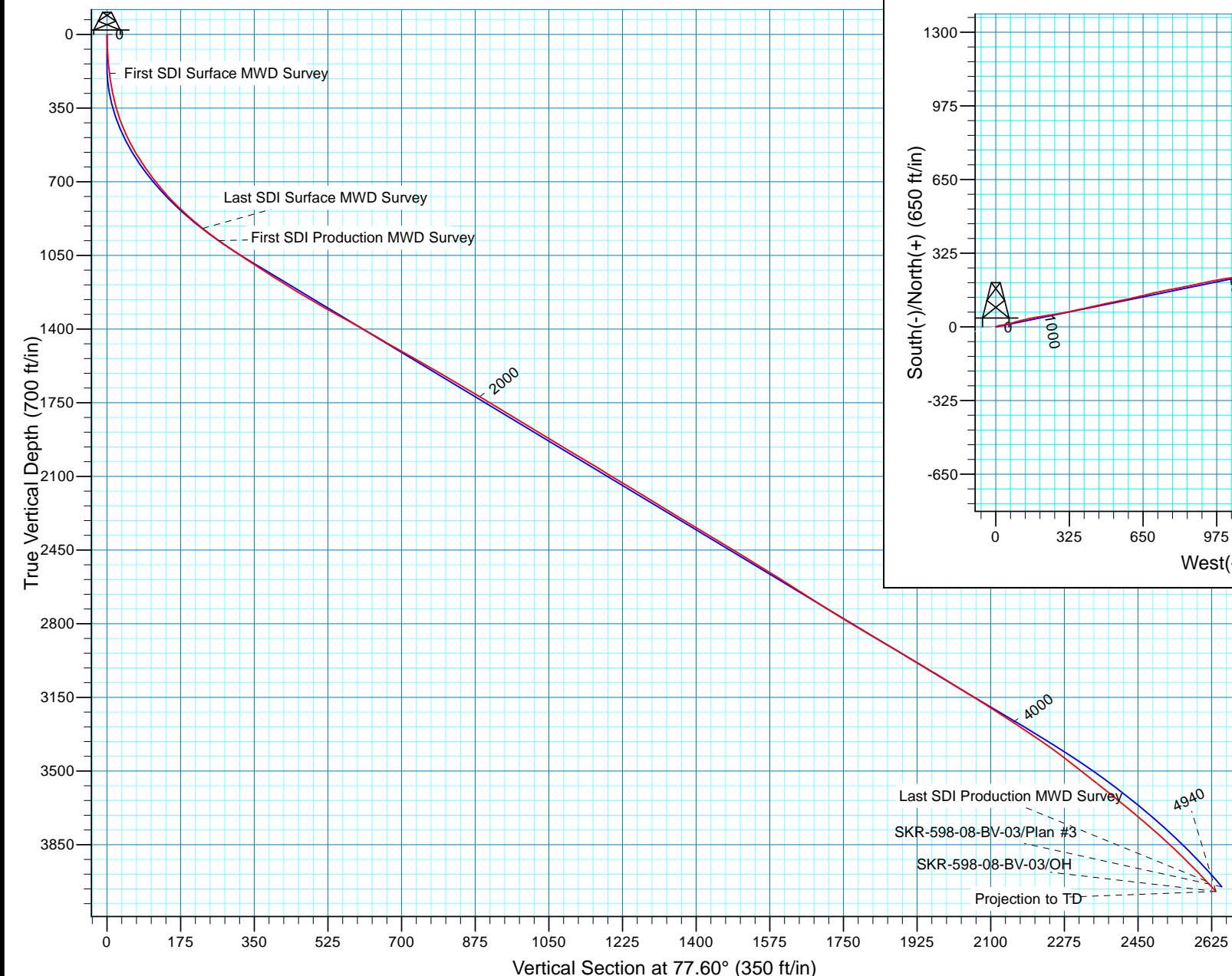
- 1. Directional Plot and Surveys**
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- 4. Graphical Job History**
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WELL DETAILS: SKR-598-08-BV-03

GL 6549.60' & RKB 12.5' @ 6562.10ft  
 +N/-S +E/-W Northing Easting Latitude Longitude  
 0.00 0.00 1664487.92 2179229.31 39° 37' 18.019 N 108° 24' 51.008 W



Design: OH (SKR-598-08-BV-03/OH)
Created By: Janie Collins Date: 11:28, October 14 2013
PROJECT DETAILS: Garfield County, CO (NAD83)
Geodetic System: US State Plane 1983 Datum: North American Datum 1983 Ellipsoid: GRS 1980 Zone: Colorado Central Zone
System Datum: Mean Sea Level Local North: True



<b>Company:</b>	Chevron	<b>Local Co-ordinate Reference:</b>	Well SKR-598-08-BV-03
<b>Project:</b>	Garfield County, CO (NAD83)	<b>TVD Reference:</b>	GL 6549.60' & RKB 12.5' @ 6562.10ft
<b>Site:</b>	Skinner Ridge Field	<b>MD Reference:</b>	GL 6549.60' & RKB 12.5' @ 6562.10ft
<b>Well:</b>	SKR-598-08-BV-03	<b>North Reference:</b>	True
<b>Wellbore:</b>	OH	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	OH	<b>Database:</b>	Grand Junction District

<b>Project</b>	Garfield County, CO (NAD83)		
<b>Map System:</b>	US State Plane 1983	<b>System Datum:</b>	Mean Sea Level
<b>Geo Datum:</b>	North American Datum 1983		
<b>Map Zone:</b>	Colorado Central Zone		

Site	Skinner Ridge Field				
Site Position:		Northing:	1,664,493.63 usft	Latitude:	39° 37' 18.075 N
From:	Lat/Long	Easting:	2,179,228.12 usft	Longitude:	108° 24' 51.026 W
Position Uncertainty:	0.00 ft	Slot Radius:	13.200 in	Grid Convergence:	-1.84 °

Well	SKR-598-08-BV-03					
Well Position	+N/-S	0.00 ft	Northing:	1,664,487.91 usft	Latitude:	39° 37' 18.019 N
	+E/-W	0.00 ft	Easting:	2,179,229.30 usft	Longitude:	108° 24' 51.008 W
Position Uncertainty		0.00 ft	Wellhead Elevation:	ft	Ground Level:	6,549.60 ft

<b>Wellbore</b>	OH				
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination (°)</b>	<b>Dip Angle (°)</b>	<b>Field Strength (nT)</b>
	IGRF200510	5/2/2013	10.28	65.73	52,111

<b>Design</b>	OH				
<b>Audit Notes:</b>					
<b>Version:</b>	1.0	<b>Phase:</b>	ACTUAL	<b>Tie On Depth:</b>	0.00
<b>Vertical Section:</b>	<b>Depth From (TVD) (ft)</b>	<b>+N/-S (ft)</b>	<b>+E/-W (ft)</b>	<b>Direction (°)</b>	
	0.00	0.00	0.00	77.60	

<b>Survey Program</b>	<b>Date</b>	10/14/2013			
<b>From (ft)</b>	<b>To (ft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Description</b>	
185.00	963.00	Survey #1 - Surface MWD (OH)	MWD-SDI		
1,032.00	4,940.00	Survey #2 - Production MWD (OH)	MWD-SDI		

<b>Survey</b>									
<b>Measured Depth (ft)</b>	<b>Inclination (°)</b>	<b>Azimuth (°)</b>	<b>Vertical Depth (ft)</b>	<b>+N/-S (ft)</b>	<b>+E/-W (ft)</b>	<b>Vertical Section (ft)</b>	<b>Dogleg Rate (°/100usft)</b>	<b>Build Rate (°/100usft)</b>	<b>Turn Rate (°/100usft)</b>
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
185.00	3.78	61.32	184.87	2.93	5.35	5.86	2.04	2.04	0.00
<b>First SDI Surface MWD Survey</b>									
276.00	5.64	75.36	275.56	5.50	12.31	13.20	2.39	2.04	15.43
362.00	8.53	84.52	360.89	7.18	22.75	23.76	3.60	3.36	10.65
457.00	11.99	79.32	454.36	9.68	39.47	40.62	3.77	3.64	-5.47
548.00	16.00	75.47	542.65	14.58	60.90	62.61	4.52	4.41	-4.23
639.00	18.76	74.37	629.48	21.67	87.14	89.76	3.05	3.03	-1.21
730.00	22.11	75.22	714.74	29.98	117.80	121.49	3.70	3.68	0.93
851.00	27.42	80.44	824.59	40.43	167.33	172.11	4.74	4.39	4.31



<b>Company:</b>	Chevron	<b>Local Co-ordinate Reference:</b>	Well SKR-598-08-BV-03
<b>Project:</b>	Garfield County, CO (NAD83)	<b>TVD Reference:</b>	GL 6549.60' & RKB 12.5' @ 6562.10ft
<b>Site:</b>	Skinner Ridge Field	<b>MD Reference:</b>	GL 6549.60' & RKB 12.5' @ 6562.10ft
<b>Well:</b>	SKR-598-08-BV-03	<b>North Reference:</b>	True
<b>Wellbore:</b>	OH	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	OH	<b>Database:</b>	Grand Junction District

Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
942.00	31.28	80.58	903.89	47.78	211.32	216.65	4.24	4.24	0.15
963.00	32.18	80.13	921.76	49.63	222.21	227.68	4.43	4.29	-2.14
<b>Last SDI Surface MWD Survey</b>									
1,032.00	34.55	80.90	979.38	55.87	259.63	265.58	3.49	3.43	1.12
<b>First SDI Production MWD Survey</b>									
1,123.00	38.05	79.32	1,052.71	65.15	312.69	319.39	3.98	3.85	-1.74
1,213.00	36.90	77.50	1,124.14	76.14	366.33	374.13	1.77	-1.28	-2.02
1,304.00	39.29	76.88	1,195.75	88.60	421.07	430.27	2.66	2.63	-0.68
1,394.00	40.47	77.93	1,264.81	101.17	477.38	487.97	1.51	1.31	1.17
1,485.00	42.47	79.16	1,333.00	113.13	536.44	548.22	2.37	2.20	1.35
1,575.00	41.47	77.56	1,399.91	125.26	595.39	608.40	1.63	-1.11	-1.78
1,666.00	40.27	75.38	1,468.73	139.18	653.28	667.92	2.05	-1.32	-2.40
1,756.00	41.77	77.49	1,536.63	153.01	710.69	726.97	2.27	1.67	2.34
1,847.00	41.16	80.43	1,604.83	164.56	769.82	787.20	2.24	-0.67	3.23
1,938.00	39.62	77.23	1,674.15	175.95	827.66	846.13	2.84	-1.69	-3.52
2,028.00	39.92	77.75	1,743.32	188.42	883.86	903.70	0.50	0.33	0.58
2,119.00	39.66	79.07	1,813.25	200.13	940.91	961.93	0.97	-0.29	1.45
2,209.00	39.66	80.83	1,882.54	210.15	997.46	1,019.32	1.25	0.00	1.96
2,300.00	39.42	81.64	1,952.71	218.98	1,054.72	1,077.14	0.63	-0.26	0.89
2,390.00	40.25	81.62	2,021.82	227.37	1,111.76	1,134.64	0.92	0.92	-0.02
2,481.00	39.14	80.81	2,091.84	236.24	1,169.19	1,192.65	1.35	-1.22	-0.89
2,571.00	39.91	80.26	2,161.26	245.66	1,225.69	1,249.85	0.94	0.86	-0.61
2,662.00	38.76	79.47	2,231.65	255.81	1,282.47	1,307.48	1.38	-1.26	-0.87
2,752.00	39.83	79.60	2,301.30	266.16	1,338.52	1,364.45	1.19	1.19	0.14
2,843.00	40.31	78.64	2,370.94	277.22	1,396.04	1,423.00	0.86	0.53	-1.05
2,933.00	39.13	78.37	2,440.16	288.68	1,452.40	1,480.51	1.33	-1.31	-0.30
3,024.00	38.65	76.14	2,510.99	301.27	1,508.12	1,537.63	1.63	-0.53	-2.45
3,114.00	39.13	75.99	2,581.05	314.88	1,562.96	1,594.12	0.54	0.53	-0.17
3,205.00	37.72	77.44	2,652.34	327.89	1,618.00	1,650.66	1.84	-1.55	1.59
3,296.00	38.55	80.33	2,723.92	338.71	1,673.13	1,706.82	2.16	0.91	3.18
3,386.00	39.75	78.98	2,793.71	348.92	1,729.02	1,763.61	1.64	1.33	-1.50
3,477.00	40.67	78.54	2,863.21	360.37	1,786.64	1,822.34	1.06	1.01	-0.48
3,567.00	40.45	78.28	2,931.58	372.13	1,843.97	1,880.86	0.31	-0.24	-0.29
3,658.00	39.48	77.84	3,001.33	384.22	1,901.15	1,939.31	1.11	-1.07	-0.48
3,749.00	38.88	77.48	3,071.87	396.50	1,957.31	1,996.80	0.71	-0.66	-0.40
3,839.00	39.35	78.60	3,141.70	408.27	2,012.86	2,053.57	0.94	0.52	1.24
3,930.00	38.08	77.95	3,212.70	419.83	2,068.59	2,110.48	1.47	-1.40	-0.71
4,020.00	37.07	77.25	3,284.03	431.61	2,122.19	2,165.36	1.22	-1.12	-0.78
4,111.00	35.92	76.55	3,357.19	443.87	2,174.90	2,219.48	1.34	-1.26	-0.77
4,201.00	33.77	75.47	3,431.04	456.29	2,224.80	2,270.88	2.49	-2.39	-1.20
4,292.00	31.64	73.40	3,507.62	469.45	2,272.16	2,319.96	2.64	-2.34	-2.27
4,383.00	32.47	73.08	3,584.74	483.38	2,318.40	2,368.12	0.93	0.91	-0.35
4,473.00	32.06	73.27	3,660.84	497.29	2,364.39	2,416.02	0.47	-0.46	0.21



<b>Company:</b>	Chevron	<b>Local Co-ordinate Reference:</b>	Well SKR-598-08-BV-03
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<b>Site:</b>	Skinner Ridge Field	<b>MD Reference:</b>	GL 6549.60' & RKB 12.5' @ 6562.10ft
<b>Well:</b>	SKR-598-08-BV-03	<b>North Reference:</b>	True
<b>Wellbore:</b>	OH	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	OH	<b>Database:</b>	Grand Junction District

Survey										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
4,564.00	30.28	72.64	3,738.70	511.09	2,409.42	2,462.96	1.99	-1.96	-0.69	
4,654.00	28.97	72.62	3,816.94	524.37	2,451.88	2,507.28	1.46	-1.46	-0.02	
4,745.00	27.44	71.51	3,897.13	537.60	2,492.80	2,550.09	1.78	-1.68	-1.22	
4,835.00	26.07	70.66	3,977.49	550.73	2,531.13	2,590.35	1.58	-1.52	-0.94	
4,886.00	25.51	70.04	4,023.41	558.19	2,552.03	2,612.36	1.22	-1.10	-1.22	
Last SDI Production MWD Survey										
4,940.00	25.51	70.04	4,072.15	566.13	2,573.89	2,635.41	0.00	0.00	0.00	
Projection to TD										

Design Annotations					
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates			
		+N/-S (ft)	+E/-W (ft)	Comment	
185.00	184.87	2.93	5.35	First SDI Surface MWD Survey	
963.00	921.76	49.63	222.21	Last SDI Surface MWD Survey	
1,032.00	979.38	55.87	259.63	First SDI Production MWD Survey	
4,886.00	4,023.41	558.19	2,552.03	Last SDI Production MWD Survey	
4,940.00	4,072.15	566.13	2,573.89	Projection to TD	

Checked By: _____	Approved By: _____	Date: _____
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<b>JOB NO.:</b>	420913DEF60897	<b>Report Time:</b>	2400	1 of 8
<b>COMPANY:</b>	Chevron	<b>API JOB #</b>		
<b>LOCATION:</b>	Skinner Ridge Field	<b>WORK ORDER#</b>	165900	
<b>RIG NAME:</b>	Ensign 122	<b>FIELD:</b>	Skinner Ridge	
<b>STATE:</b>	Colorado	<b>Township:</b>	5S	
<b>COUNTY:</b>	Garfield	<b>SECT\</b>	8	98W
<b>WELL NAME:</b>	SKR 598-08-BV-03			

From Tuesday, September 24, 2013 at 0000 to Tuesday, September 24, 2013 at 2400

DRILLING SUMMARY					Drilling Parameters							
Start Depth	81.00	Rotary Hours	9.92	WOB	7	Pick UP	20	Slack Off	20	SPM		
End Depth	999.00	Circulating Hours	0.83	RAB	20	SPP	250	FlowRate	0 - 325	110		
Total Drilled:	918.00	Avg. Total ROP:	53.74	Mud Data								
Total Rotary Drilled:	499.00	Avg. Rotary ROP:	50.32	Type				PV	0	SOLID	0	
Total Drilled Sliding:	419.00	Avg. Slide ROP:	58.47	Weight	0	GAS	0	YP	0	BHT°	0	
Slide Hours:	7.17	Percent Rotary:	54.36	Viscosity	0	SAND	0	PH	0	Flow T°	0	
Below Rotary Hrs.	24.00	Percent Slide:	45.64	Chlorides	0	WL	0			Oil %	0	
PERSONNEL				cASING					BHA			
Lead Directional :	Ed Mackey			Size	Lb/ft	Set Depth		BHA # 1:12.25 / PDC / 9X13s, 8' MOTOR, 8' PONY, 8' MONEL, 8' HOS, 8' GAP, 8' PONY, 8' MONEL, XOVER, 6' DC, 4 1/2 Spiral,				
Second Directional :	Steve Amstutz			Signature:								
MWD Operator1	Luke Kristy											
MWD Operator2												
Directional Company:	Scientific Drilling											
Geologist:												
Company Man:	Greg / Micah											
Incl. In:	0	Azm. In:	0	Incl. Out:	31.28	Azm. Out:	80.58					

#### GENERAL COMMENT

Date	Start Time	End Time	Hours	Start Depth	End Depth	Activity Code	COMMENT
24-Sep-13	00:00	01:00	1.00	0	0	Other	Rig up to drill
24-Sep-13	01:00	02:15	1.25	81	81	Change BHA	P/U MWD and BHA
24-Sep-13	02:15	04:20	2.08	81	81	Rig repair	Repair pumps
24-Sep-13	04:20	04:30	0.17	81	88	Drilling	Rig repair
24-Sep-13	04:30	05:00	0.50	88	115	Sliding	Rig repair
24-Sep-13	05:00	05:10	0.17	115	121	Drilling	Drilling - (WOB:7;GPM :325;RPM:35)
24-Sep-13	05:10	05:35	0.42	121	121	Survey & Conn.	Survey & Conn.
24-Sep-13	05:35	06:15	0.67	121	151	Drilling	Drilling - (WOB:7;GPM :325;RPM:35)
24-Sep-13	06:15	06:30	0.25	151	151	Survey & Conn.	Survey & Conn.
24-Sep-13	06:30	06:45	0.25	151	161	Drilling	Drilling - (WOB:7;GPM :325;RPM:35)
24-Sep-13	06:45	07:10	0.42	161	181	Sliding	Sliding - (WOB:7;GPM :325;TFO:79)
24-Sep-13	07:10	09:50	2.67	181	242	Drilling	Drilling - (WOB:7;GPM :325;RPM:35)
24-Sep-13	09:50	10:10	0.33	242	242	Survey & Conn.	Survey & Conn.
24-Sep-13	10:10	10:30	0.33	242	265	Sliding	Sliding - (WOB:7;GPM :325;TFO:79)
24-Sep-13	10:30	12:00	1.50	265	333	Drilling	Drilling - (WOB:7;GPM :325;RPM:35)
24-Sep-13	12:00	12:05	0.08	333	333	Survey & Conn.	Survey & Conn.
24-Sep-13	12:05	13:00	0.92	333	378	Sliding	Sliding - (WOB:7;GPM :325;TFO:79)
24-Sep-13	13:00	13:10	0.17	378	393	Drilling	Drilling - (WOB:7;GPM :325;RPM:35)
24-Sep-13	13:10	14:00	0.83	393	393	Rig Service-Inhole	Rig Service-Inhole
24-Sep-13	14:00	14:15	0.25	393	424	Drilling	Drilling - (WOB:7;GPM :325;RPM:35)
24-Sep-13	14:15	14:25	0.17	424	424	Survey & Conn.	Survey & Conn.



Date	Start Time	End Time	Hours	Start Depth	End Depth	Activity Code	COMMENT
24-Sep-13	14:25	15:05	0.67	424	469	Sliding	Sliding - (WOB:7;GPM :325;TFO:79)
24-Sep-13	15:05	16:00	0.92	469	514	Drilling	Drilling - (WOB:7;GPM :325;RPM:35)
24-Sep-13	16:00	16:10	0.17	514	514	Survey & Conn.	Survey & Conn.
24-Sep-13	16:10	17:00	0.83	514	567	Sliding	Sliding - (WOB:7;GPM :325;TFO:79)
24-Sep-13	17:00	18:00	1.00	567	605	Drilling	Drilling - (WOB:7;GPM :325;RPM:35)
24-Sep-13	18:00	18:05	0.08	605	605	Survey & Conn.	Survey & Conn.
24-Sep-13	18:05	18:30	0.42	605	620	Sliding	Sliding - (WOB:7;GPM :325;TFO:0)
24-Sep-13	18:30	18:50	0.33	620	636	Drilling	Drilling - (WOB:7;GPM :325;RPM:35)
24-Sep-13	18:50	19:10	0.33	636	651	Sliding	Sliding - (WOB:7;GPM :325;TFO:0)
24-Sep-13	19:10	19:20	0.17	651	666	Drilling	Drilling - (WOB:7;GPM :325;RPM:35)
24-Sep-13	19:20	19:35	0.25	666	682	Sliding	Sliding - (WOB:7;GPM :325;TFO:0)
24-Sep-13	19:35	19:45	0.17	682	696	Drilling	Drilling - (WOB:7;GPM :325;RPM:35)
24-Sep-13	19:45	19:50	0.08	696	696	Survey & Conn.	Survey & Conn.
24-Sep-13	19:50	20:00	0.17	696	712	Sliding	Sliding - (WOB:7;GPM :325;TFO:15)
24-Sep-13	20:00	20:15	0.25	712	727	Drilling	Drilling - (WOB:7;GPM :325;RPM:35)
24-Sep-13	20:15	20:30	0.25	727	744	Sliding	Sliding - (WOB:7;GPM :325;TFO:15)
24-Sep-13	20:30	20:40	0.17	744	757	Drilling	Drilling - (WOB:7;GPM :325;RPM:35)
24-Sep-13	20:40	20:55	0.25	757	773	Sliding	Sliding - (WOB:7;GPM :325;TFO:20)
24-Sep-13	20:55	21:05	0.17	773	787	Drilling	Drilling - (WOB:7;GPM :325;RPM:35)
24-Sep-13	21:05	21:20	0.25	787	804	Sliding	Sliding - (WOB:7;GPM :325;TFO:20)
24-Sep-13	21:20	21:30	0.17	804	818	Drilling	Drilling - (WOB:7;GPM :325;RPM:35)
24-Sep-13	21:30	21:35	0.08	818	818	Survey & Conn.	Survey & Conn.
24-Sep-13	21:35	21:55	0.33	818	843	Sliding	Sliding - (WOB:7;GPM :325;TFO:30)
24-Sep-13	21:55	22:05	0.17	843	863	Drilling	Drilling - (WOB:7;GPM :325;RPM:35)
24-Sep-13	22:05	22:30	0.42	863	887	Sliding	Sliding - (WOB:7;GPM :325;TFO:15)
24-Sep-13	22:30	22:40	0.17	887	908	Drilling	Drilling - (WOB:7;GPM :325;RPM:35)
24-Sep-13	22:40	22:45	0.08	908	908	Survey & Conn.	Survey & Conn.
24-Sep-13	22:45	23:05	0.33	908	930	Sliding	Sliding - (WOB:7;GPM :325;TFO:0)
24-Sep-13	23:05	23:15	0.17	930	954	Drilling	Drilling - (WOB:7;GPM :325;RPM:35)
24-Sep-13	23:15	23:45	0.50	954	977	Sliding	Sliding - (WOB:7;GPM :325;TFO:0)
24-Sep-13	23:45	24:00	0.25	977	999	Drilling	Drilling - (WOB:7;GPM :325;RPM:35)





<b>JOB NO.:</b>	420913DEF60897	<b>Report Time:</b>	2400	2 of 8
<b>COMPANY:</b>	Chevron	<b>API JOB #</b>		
<b>LOCATION:</b>	Skinner Ridge Field	<b>WORK ORDER#</b>	165900	
<b>RIG NAME:</b>	Ensign 122	<b>FIELD:</b>	Skinner Ridge	
<b>STATE:</b>	Colorado	<b>Township:</b>	5S	
<b>COUNTY:</b>	Garfield	<b>SECT\</b>	8	98W
<b>WELL NAME:</b>	SKR 598-08-BV-03			

From Wednesday, September 25, 2013 at 0000 to Wednesday, September 25, 2013 at 2400

DRILLING SUMMARY				Drilling Parameters							
Start Depth	999.00	Rotary Hours	0.00	WOB	7	Pick UP	20	Slack Off	20	SPM	
End Depth	1020.00	Circulating Hours	3.25	RAB	20	SPP	250	FlowRate	325 - 325	110	
Total Drilled:	21.00	Avg. Total ROP:	42.00	Mud Data							
Total Rotary Drilled:	0.00	Avg. Rotary ROP:	NA	Type		PV	0	SOLID	0		
Total Drilled Sliding:	21.00	Avg. Slide ROP:	42.00	Weight	0	GAS	0	YP	0	BHT°	0
Slide Hours:	0.50	Percent Rotary:	.00	Viscosity	0	SAND	0	PH	0	Flow T°	0
Below Rotary Hrs.	24.00	Percent Slide:	100.00	Chlorides	0	WL	0			Oil %	0

PERSONNEL						cASING			BHA	
Lead Directional :		Ed Mackey				Signature:	Size	Lb/ft	Set Depth	BHA # 1:12.25 / PDC / 9X13s, 8' MOTOR, 8' PONY, 8' MONEL, 8' HOS, 8' GAP, 8' PONY, 8' MONEL, XOVER, 6' DC, 4 1/2 Spiral,
Second Directional :		Steve Amstutz								
MWD Operator1		Luke Kristy								
MWD Operator2										
Directional Company:		Scientific Drilling								
Geologist:										
Company Man:		Greg / Micah								
Incl. In:	31.28	Azm. In:	80.58	Incl. Out:	32.18	Azm. Out:	80.3			

#### GENERAL COMMENT

Date	Start Time	End Time	Hours	Start Depth	End Depth	Activity Code	COMMENT
25-Sep-13	00:00	00:05	0.08	999	999	Survey & Conn.	Survey & Conn.
25-Sep-13	00:05	00:35	0.50	999	1020	Sliding	Sliding - (WOB:7;GPM :325;TFO:0)
25-Sep-13	00:35	03:50	3.25	1020	1020	Circulating	Circulating
25-Sep-13	03:50	05:15	1.42	1020	1020	POOH	POOH
25-Sep-13	05:15	06:00	0.75	1020	1020	Other	Lay down tols
25-Sep-13	06:00	24:00	18.00	1020	1020	Other	Run casing, cmt, N/U and test



<b>JOB NO.:</b>	420913DEF60897	<b>Report Time:</b>	2400	3 of 8
<b>COMPANY:</b>	Chevron	<b>API JOB #</b>		
<b>LOCATION:</b>	Skinner Ridge Field	<b>WORK ORDER#</b>	165900	
<b>RIG NAME:</b>	Ensign 122	<b>FIELD:</b>	Skinner Ridge	
<b>STATE:</b>	Colorado	<b>Township:</b>	5S	
<b>COUNTY:</b>	Garfield	<b>SECT\</b>	8	98W
<b>WELL NAME:</b>	SKR 598-08-BV-03			

From Thursday, September 26, 2013 at 0000 to Thursday, September 26, 2013 at 2400

DRILLING SUMMARY				Drilling Parameters							
Start Depth	1020.00	Rotary Hours	8.92	WOB	7	Pick UP	20	Slack Off	20	SPM	
End Depth	2670.00	Circulating Hours	2.67	RAB	20	SPP	250	FlowRate	325 - 325	110	
Total Drilled:	1650.00	Avg. Total ROP:	147.76	Mud Data							
Total Rotary Drilled:	1432.00	Avg. Rotary ROP:	160.60	Type		PV	0	SOLID	0		
Total Drilled Sliding:	218.00	Avg. Slide ROP:	96.89	Weight	0	GAS	0	YP	0	BHT°	0
Slide Hours:	2.25	Percent Rotary:	86.79	Viscosity	0	SAND	0	PH	0	Flow T°	0
Below Rotary Hrs.	24.00	Percent Slide:	13.21	Chlorides	0	WL	0	Oil %	0		

PERSONNEL						cASING			BHA	
Lead Directional :		Ed Mackey				Signature:	Size	Lb/ft	Set Depth	BHA # 2:7 7/8" DP405 5X15s, 6.5 MOTOR 1.75 BEND, 6.5 PONY, 6.5 HOS, 6.5 MONEL, 6.5 GAP, 6.5 PONY, 6.5 MONEL, 4 1/2 Spiral,
Second Directional :		Steve Amstutz								
MWD Operator1		Luke Kristy								
MWD Operator2										
Directional Company:		Scientific Drilling								
Geologist:										
Company Man:		Greg / Micah								
Incl. In:	32.18	Azm. In:	80.3	Incl. Out:	39.91	Azm. Out:	80.26			

#### GENERAL COMMENT

Date	Start Time	End Time	Hours	Start Depth	End Depth	Activity Code	COMMENT
26-Sep-13	00:00	03:15	3.25	1020	1020	Other	Finish nipple up
26-Sep-13	03:15	04:15	1.00	1020	1020	Change BHA	P/U 6" tools and MWD
26-Sep-13	04:15	05:30	1.25	1020	1020	TIH	TIH
26-Sep-13	05:30	06:15	0.75	1020	1020	Rig repair	Rig repair
26-Sep-13	06:15	07:30	1.25	1020	1020	TIH	TIH
26-Sep-13	07:30	09:40	2.17	1020	1020	Reaming	clean out t/ shoe
26-Sep-13	09:40	10:15	0.58	1020	1086	Drilling	Drilling - (WOB:7;GPM :325;RPM:35)
26-Sep-13	10:15	10:20	0.08	1086	1086	Survey & Conn.	Survey & Conn. @1032' Inc 34.55° Azm 80.9°
26-Sep-13	10:20	10:25	0.08	1086	1091	Drilling	Drilling - (WOB:7;GPM :325;RPM:35)
26-Sep-13	10:25	10:40	0.25	1091	1131	Sliding	Sliding - (WOB:7;GPM :325;TFO:0)
26-Sep-13	10:40	11:00	0.33	1131	1177	Drilling	Drilling - (WOB:7;GPM :325;RPM:35)
26-Sep-13	11:00	11:05	0.08	1177	1177	Survey & Conn.	Survey & Conn. @1123' Inc 38.05° Azm 79.32°
26-Sep-13	11:05	11:30	0.42	1177	1267	Drilling	Drilling - (WOB:7;GPM :325;RPM:35)
26-Sep-13	11:30	11:35	0.08	1267	1267	Survey & Conn.	Survey & Conn. @1213' Inc 36.9° Azm 77.5°
26-Sep-13	11:35	11:50	0.25	1267	1283	Sliding	Sliding - (WOB:7;GPM :325;TFO:-10)
26-Sep-13	11:50	12:20	0.50	1283	1358	Drilling	Drilling - (WOB:7;GPM :325;RPM:35)
26-Sep-13	12:20	12:25	0.08	1358	1358	Survey & Conn.	Survey & Conn. @1304' Inc 39.29° Azm 76.88°
26-Sep-13	12:25	12:35	0.17	1358	1363	Drilling	363Drilling - (WOB:7;GPM :325;RPM:35)
26-Sep-13	12:35	12:45	0.17	1363	1388	Sliding	Sliding - (WOB:7;GPM :325;TFO:-10)
26-Sep-13	12:45	13:15	0.50	1388	1448	Drilling	Drilling - (WOB:7;GPM :325;RPM:35)
26-Sep-13	13:15	13:20	0.08	1448	1448	Survey & Conn.	Survey & Conn. @1394' Inc 40.47° Azm 77.93°

Date	Start Time	End Time	Hours	Start Depth	End Depth	Activity Code	COMMENT
26-Sep-13	13:20	13:25	0.08	1448	1454	Drilling	Drilling - (WOB:7;GPM :325;RPM:35)
26-Sep-13	13:25	13:35	0.17	1454	1474	Sliding	Sliding - (WOB:7;GPM :325;TFO:35)
26-Sep-13	13:35	14:00	0.42	1474	1539	Drilling	Drilling - (WOB:7;GPM :325;RPM:35)
26-Sep-13	14:00	14:05	0.08	1539	1539	Survey & Conn.	Survey & Conn.@1485' Inc 42.47° Azm 79.16°
26-Sep-13	14:05	14:35	0.50	1539	1539	Rig Service-Inhole	Rig Service-Inhole
26-Sep-13	14:35	15:05	0.50	1539	1629	Drilling	Drilling - (WOB:7;GPM :325;RPM:35)
26-Sep-13	15:05	15:10	0.08	1629	1629	Survey & Conn.	Survey & Conn.@1575' Inc 41.47° Azm 77.56°
26-Sep-13	15:10	15:40	0.50	1629	1720	Drilling	Drilling - (WOB:7;GPM :325;RPM:35)
26-Sep-13	15:40	15:45	0.08	1720	1720	Survey & Conn.	Survey & Conn.@1666' Inc 40.27° Azm 75.38°
26-Sep-13	15:45	15:55	0.17	1720	1725	Drilling	Drilling - (WOB:7;GPM :325;RPM:35)
26-Sep-13	15:55	16:10	0.25	1725	1743	Sliding	Sliding - (WOB:7;GPM :325;TFO:35)
26-Sep-13	16:10	16:25	0.25	1743	1810	Drilling	Drilling - (WOB:7;GPM :325;RPM:35)
26-Sep-13	16:25	16:30	0.08	1810	1810	Survey & Conn.	Survey & Conn.@1756' Inc 41.77° Azm 77.49°
26-Sep-13	16:30	16:35	0.08	1810	1817	Drilling	Drilling - (WOB:7;GPM :325;RPM:35)
26-Sep-13	16:35	16:45	0.17	1817	1832	Sliding	Sliding - (WOB:7;GPM :325;TFO:60)
26-Sep-13	16:45	17:10	0.42	1832	1901	Drilling	Drilling - (WOB:7;GPM :325;RPM:35)
26-Sep-13	17:10	17:15	0.08	1901	1901	Survey & Conn.	Survey & Conn.@1847' Inc 41.16° Azm 80.43°
26-Sep-13	17:15	17:45	0.50	1901	1966	Drilling	Drilling - (WOB:7;GPM :325;RPM:35)
26-Sep-13	17:45	18:45	1.00	1966	1966	Rig repair	Cuttings auger down
26-Sep-13	18:45	19:00	0.25	1966	1992	Drilling	Drilling - (WOB:7;GPM :325;RPM:35)
26-Sep-13	19:00	19:05	0.08	1992	1992	Survey & Conn.	Survey & Conn.@1938' Inc 39.62° Azm 77.23°
26-Sep-13	19:05	19:15	0.17	1992	2009	Sliding	Sliding - (WOB:7;GPM :325;TFO:60)
26-Sep-13	19:15	19:40	0.42	2009	2082	Drilling	Drilling - (WOB:7;GPM :325;RPM:35)
26-Sep-13	19:40	19:45	0.08	2082	2082	Survey & Conn.	Survey & Conn.@2028' Inc 39.92° Azm 77.75°
26-Sep-13	19:45	20:00	0.25	2082	2097	Sliding	Sliding - (WOB:7;GPM :325;TFO:45)
26-Sep-13	20:00	20:20	0.33	2097	2173	Drilling	Drilling - (WOB:7;GPM :325;RPM:35)
26-Sep-13	20:20	20:25	0.08	2173	2173	Survey & Conn.	Survey & Conn.@2119' Inc 39.66° Azm 79.07°
26-Sep-13	20:25	20:35	0.17	2173	2188	Sliding	Sliding - (WOB:7;GPM :325;TFO:60)
26-Sep-13	20:35	21:00	0.42	2188	2263	Drilling	Drilling - (WOB:7;GPM :325;RPM:35)
26-Sep-13	21:00	21:05	0.08	2263	2263	Survey & Conn.	Survey & Conn.@2209' Inc 39.66° Azm 80.83°
26-Sep-13	21:05	21:15	0.17	2263	2278	Sliding	Sliding - (WOB:7;GPM :325;TFO:60)
26-Sep-13	21:15	21:35	0.33	2278	2354	Drilling	Drilling - (WOB:7;GPM :325;RPM:35)
26-Sep-13	21:35	21:45	0.17	2354	2354	Survey & Conn.	Survey & Conn.@2300' Inc 39.42° Azm 81.64°
26-Sep-13	21:45	21:50	0.08	2354	2364	Sliding	Sliding - (WOB:7;GPM :325;TFO:30)
26-Sep-13	21:50	22:15	0.42	2364	2444	Drilling	Drilling - (WOB:7;GPM :325;RPM:35)
26-Sep-13	22:15	22:20	0.08	2444	2444	Survey & Conn.	Survey & Conn.@2390' Inc 40.25° Azm 81.62°
26-Sep-13	22:20	22:50	0.50	2444	2535	Drilling	Drilling - (WOB:7;GPM :325;RPM:35)
26-Sep-13	22:50	23:00	0.17	2535	2535	Survey & Conn.	Survey & Conn.@2481' Inc 39.14° Azm 80.81°
26-Sep-13	23:00	23:10	0.17	2535	2547	Sliding	Sliding - (WOB:7;GPM :325;TFO:0)
26-Sep-13	23:10	23:45	0.58	2547	2625	Drilling	Drilling - (WOB:7;GPM :325;RPM:35)
26-Sep-13	23:45	23:50	0.08	2625	2625	Survey & Conn.	Survey & Conn.@2571' Inc 39.91° Azm 80.26°
26-Sep-13	23:50	24:00	0.17	2625	2670	Drilling	Drilling - (WOB:7;GPM :325;RPM:35)



<b>JOB NO.:</b>	420913DEF60897	<b>Report Time:</b>	2400	4 of 8
<b>COMPANY:</b>	Chevron	<b>API JOB #</b>		
<b>LOCATION:</b>	Skinner Ridge Field	<b>WORK ORDER#</b>	165900	
<b>RIG NAME:</b>	Ensign 122	<b>FIELD:</b>	Skinner Ridge	
<b>STATE:</b>	Colorado	<b>Township:</b>	5S	
<b>COUNTY:</b>	Garfield	<b>SECT\</b>	8	98W
<b>WELL NAME:</b>	SKR 598-08-BV-03			

From Friday, September 27, 2013 at 0000 to Friday, September 27, 2013 at 2400

DRILLING SUMMARY					Drilling Parameters							
Start Depth	2670.00	Rotary Hours	17.75	WOB	20	Pick UP	70	Slack Off	40	SPM		
End Depth	4708.00	Circulating Hours	1.42	RAB	55	SPP	2000	FlowRate	325 - 545	200		
Total Drilled:	2038.00	Avg. Total ROP:	99.41	Mud Data								
Total Rotary Drilled:	1876.00	Avg. Rotary ROP:	105.69	Type				PV	0	SOLID	0	
Total Drilled Sliding:	162.00	Avg. Slide ROP:	58.91	Weight	0	GAS	0	YP	0	BHT°	0	
Slide Hours:	2.75	Percent Rotary:	92.05	Viscosity	0	SAND	0	PH	0	Flow T°	0	
Below Rotary Hrs.	24.00	Percent Slide:	7.95	Chlorides	0	WL	0			Oil %	0	
PERSONNEL				cASING					BHA			
Lead Directional :	Ed Mackey			Size	Lb/ft	Set Depth		BHA # 2:7 7/8" DP405 5X15s, 6.5 MOTOR 1.75 BEND, 6.5 PONY, 6.5 HOS, 6.5 MONEL, 6.5 GAP, 6.5 PONY, 6.5 MONEL, 4 1/2 Spiral,				
Second Directional :	Steve Amstutz			Signature:								
MWD Operator1	Luke Kristy											
MWD Operator2												
Directional Company:	Scientific Drilling											
Geologist:												
Company Man:	Greg / Micah											
Incl. In:	39.91	Azm. In:	80.26	Incl. Out:	28.97	Azm. Out:	72.62					

#### GENERAL COMMENT

DRILL SUFACE TO 1020 MD NO PROBLEM 8" MOTOR WITH A 2.5 BEND PERFORMED AS EXPECTED .

Date	Start Time	End Time	Hours	Start Depth	End Depth	Activity Code	COMMENT
27-Sep-13	00:00	00:35	0.58	2670	2670	Rig Service-Inhole	Rig Service-Inhole
27-Sep-13	00:35	00:50	0.25	2670	2716	Drilling	Drilling - (WOB:7;GPM :325;RPM:35)
27-Sep-13	00:50	00:55	0.08	2716	2716	Survey & Conn.	Survey & Conn.@2662' Inc 38.76° Azm 79.47°
27-Sep-13	00:55	01:05	0.17	2716	2729	Sliding	Sliding - (WOB:7;GPM :325;TFO:-30)
27-Sep-13	01:05	01:35	0.50	2729	2806	Drilling	Drilling - (WOB:7;GPM :325;RPM:35)
27-Sep-13	01:35	01:45	0.17	2806	2806	Survey & Conn.	Survey & Conn.@2752' Inc 39.83° Azm 79.6°
27-Sep-13	01:45	01:50	0.08	2806	2816	Sliding	Sliding - (WOB:7;GPM :325;TFO:0)
27-Sep-13	01:50	02:20	0.50	2816	2897	Drilling	Drilling - (WOB:7;GPM :325;RPM:35)
27-Sep-13	02:20	02:25	0.08	2897	2897	Survey & Conn.	Survey & Conn.@2843' Inc 40.31° Azm 78.64°
27-Sep-13	02:25	03:05	0.67	2897	2987	Drilling	Drilling - (WOB:7;GPM :325;RPM:35)
27-Sep-13	03:05	03:10	0.08	2987	2987	Survey & Conn.	Survey & Conn.@2933' Inc 39.13° Azm 78.37°
27-Sep-13	03:10	03:20	0.17	2987	3000	Sliding	Sliding - (WOB:7;GPM :325;TFO:-30)
27-Sep-13	03:20	03:55	0.58	3000	3078	Drilling	Drilling - (WOB:20;GPM :545;RPM:55)
27-Sep-13	03:55	04:00	0.08	3078	3078	Survey & Conn.	Survey & Conn.@3024' Inc 38.65° Azm 76.14°
27-Sep-13	04:00	04:15	0.25	3078	3094	Sliding	Sliding - (WOB:7;GPM :325;TFO:-30)
27-Sep-13	04:15	04:55	0.67	3094	3168	Drilling	Drilling - (WOB:20;GPM :545;RPM:55)
27-Sep-13	04:55	05:00	0.08	3168	3168	Survey & Conn.	Survey & Conn.@3114' Inc 39.13° Azm 75.99°
27-Sep-13	05:00	05:05	0.08	3168	3183	Sliding	Sliding - (WOB:7;GPM :325;TFO:-30)
27-Sep-13	05:05	05:45	0.67	3183	3259	Drilling	Drilling - (WOB:20;GPM :545;RPM:55)
27-Sep-13	05:45	05:50	0.08	3259	3259	Survey & Conn.	Survey & Conn.@3205' Inc 37.72° Azm 77.44°
27-Sep-13	05:50	06:30	0.67	3259	3284	Sliding	Sliding - (WOB:7;GPM :325;TFO:30)

Date	Start Time	End Time	Hours	Start Depth	End Depth	Activity Code	COMMENT
27-Sep-13	06:30	07:15	0.75	3284	3350	Drilling	Drilling - (WOB:20;GPM :545;RPM:55)
27-Sep-13	07:15	07:20	0.08	3350	3350	Survey & Conn.	Survey & Conn.@3296' Inc 38.55° Azm 80.33°
27-Sep-13	07:20	07:25	0.08	3350	3355	Drilling	Drilling - (WOB:20;GPM :545;RPM:55)
27-Sep-13	07:25	07:40	0.25	3355	3375	Sliding	Sliding - (WOB:7;GPM :325;TFO:30)
27-Sep-13	07:40	08:25	0.75	3375	3440	Drilling	Drilling - (WOB:20;GPM :545;RPM:55)
27-Sep-13	08:25	08:30	0.08	3440	3440	Survey & Conn.	Survey & Conn.@3386' Inc 39.75° Azm 78.98°
27-Sep-13	08:30	08:45	0.25	3440	3460	Sliding	Sliding - (WOB:7;GPM :325;TFO:0)
27-Sep-13	08:45	09:40	0.92	3460	3531	Drilling	Drilling - (WOB:20;GPM :545;RPM:55)
27-Sep-13	09:40	09:45	0.08	3531	3531	Survey & Conn.	Survey & Conn.@3477' Inc 40.67° Azm 78.54°
27-Sep-13	09:45	10:30	0.75	3531	3621	Drilling	Drilling - (WOB:20;GPM :545;RPM:55)
27-Sep-13	10:30	10:35	0.08	3621	3621	Survey & Conn.	Survey & Conn.@3567' Inc 40.45° Azm 78.28°
27-Sep-13	10:35	11:30	0.92	3621	3712	Drilling	Drilling - (WOB:20;GPM :545;RPM:55)
27-Sep-13	11:30	11:35	0.08	3712	3712	Survey & Conn.	Survey & Conn.@3658' Inc 39.48° Azm 77.84°
27-Sep-13	11:35	12:25	0.83	3712	3803	Drilling	Drilling - (WOB:20;GPM :545;RPM:55)
27-Sep-13	12:25	12:30	0.08	3803	3803	Survey & Conn.	Survey & Conn.@3749' Inc 38.88° Azm 77.48°
27-Sep-13	12:30	12:45	0.25	3803	3818	Sliding	Sliding - (WOB:7;GPM :325;TFO:10)
27-Sep-13	12:45	13:40	0.92	3818	3893	Drilling	Drilling - (WOB:20;GPM :545;RPM:55)
27-Sep-13	13:40	14:30	0.83	3893	3893	Rig Service-Inhole	Rig Service-Inhole
27-Sep-13	14:30	15:20	0.83	3893	3984	Drilling	Drilling - (WOB:20;GPM :545;RPM:55)
27-Sep-13	15:20	15:25	0.08	3984	3984	Survey & Conn.	Survey & Conn.@3930' Inc 38.08° Azm 77.95°
27-Sep-13	15:25	16:05	0.67	3984	4074	Drilling	Drilling - (WOB:20;GPM :545;RPM:55)
27-Sep-13	16:05	16:10	0.08	4074	4074	Survey & Conn.	Survey & Conn.@4020' Inc 37.07° Azm 77.25°
27-Sep-13	16:10	17:00	0.83	4074	4165	Drilling	Drilling - (WOB:20;GPM :545;RPM:55)
27-Sep-13	17:00	17:05	0.08	4165	4165	Survey & Conn.	Survey & Conn.@4111' Inc 35.92° Azm 76.55°
27-Sep-13	17:05	17:45	0.67	4165	4255	Drilling	Drilling - (WOB:20;GPM :545;RPM:55)
27-Sep-13	17:45	17:50	0.08	4255	4255	Survey & Conn.	Survey & Conn.@4201' Inc 33.77° Azm 75.47°
27-Sep-13	17:50	18:35	0.75	4255	4346	Drilling	Drilling - (WOB:20;GPM :545;RPM:55)
27-Sep-13	20:45	20:55	0.17	4437	4437	Survey & Conn.	Survey & Conn.@4383' Inc 32.47° Azm 73.08°
27-Sep-13	20:55	21:30	0.58	4437	4527	Drilling	Drilling - (WOB:20;GPM :545;RPM:55)
27-Sep-13	21:30	21:40	0.17	4527	4527	Survey & Conn.	Survey & Conn.@4473' Inc 32.06° Azm 73.27°
27-Sep-13	21:40	22:35	0.92	4527	4618	Drilling	Drilling - (WOB:20;GPM :545;RPM:55)
27-Sep-13	22:35	22:45	0.17	4618	4618	Survey & Conn.	Survey & Conn.@4564' Inc 30.28° Azm 72.64°
27-Sep-13	22:45	24:00	1.25	4618	4708	Drilling	Drilling - (WOB:20;GPM :545;RPM:55)
27-Sep-13	18:35	18:40	0.08	4346	4346	Survey & Conn.	Survey & Conn.@4292' Inc 31.64° Azm 73.4°
27-Sep-13	18:40	19:15	0.58	4346	4361	Sliding	Sliding - (WOB:7;GPM :325;TFO:10)
27-Sep-13	19:15	20:45	1.50	4361	4437	Drilling	Drilling - (WOB:20;GPM :545;RPM:55)





<b>JOB NO.:</b>	420913DEF60897	<b>Report Time:</b>	2400	5 of 8
<b>COMPANY:</b>	Chevron	<b>API JOB #</b>		
<b>LOCATION:</b>	Skinner Ridge Field	<b>WORK ORDER#</b>	165900	
<b>RIG NAME:</b>	Ensign 122	<b>FIELD:</b>	Skinner Ridge	
<b>STATE:</b>	Colorado	<b>Township:</b>	5S	
<b>COUNTY:</b>	Garfield	<b>SECT\</b>	8	98W
<b>WELL NAME:</b>	SKR 598-08-BV-03			

From Saturday, September 28, 2013 at 0000 to Saturday, September 28, 2013 at 2400

DRILLING SUMMARY						Drilling Parameters							
Start Depth	4708.00	Rotary Hours	2.75	WOB	20	Pick UP	70	Slack Off	40	SPM			
End Depth	4940.00	Circulating Hours	11.83	RAB	55	SPP	2000	FlowRate	545 - 545	200			
Total Drilled:	232.00	Avg. Total ROP:	84.36	Mud Data									
Total Rotary Drilled:	232.00	Avg. Rotary ROP:	84.36	Type				PV	0	SOLID	0		
Total Drilled Sliding:	0.00	Avg. Slide ROP:	NA	Weight	0	GAS	0	YP	0	BHT°	0		
Slide Hours:	0.00	Percent Rotary:	100.00	Viscosity	0	SAND	0	PH	0	Flow T°	0		
Below Rotary Hrs.	24.00	Percent Slide:	.00	Chlorides	0	WL	0			Oil %	0		
PERSONNEL				cASING					BHA				
Lead Directional :	Ed Mackey			Size	Lb/ft	Set Depth		BHA # 2:7 7/8" DP405 5X15s, 6.5 MOTOR 1.75 BEND, 6.5 PONY, 6.5 HOS, 6.5 MONEL, 6.5 GAP, 6.5 PONY, 6.5 MONEL, 4 1/2 Spiral,					
Second Directional :	Steve Amstutz/Jonathen Franklin			Signature:									
MWD Operator1	Luke Kristy												
MWD Operator2													
Directional Company:	Scientific Drilling												
Geologist:													
Company Man:	Greg / Micah												
Incl. In:	28.97	Azm. In:	72.62	Incl. Out:	25.51	Azm. Out:	70.04						

#### GENERAL COMMENT

Date	Start Time	End Time	Hours	Start Depth	End Depth	Activity Code	COMMENT
28-Sep-13	00:00	00:15	0.25	4708	4708	Survey & Conn.	Survey & Conn. @4654' Inc 28.97° Azm 72.62°
28-Sep-13	00:15	00:45	0.50	4708	4754	Drilling	Drilling - (WOB:20;GPM :545;RPM:55)
28-Sep-13	00:45	01:20	0.58	4754	4754	Rig Service-Inhole	Rig Service-Inhole
28-Sep-13	01:20	01:45	0.42	4754	4799	Drilling	Drilling - (WOB:20;GPM :545;RPM:55)
28-Sep-13	01:45	01:50	0.08	4799	4799	Survey & Conn.	Survey & Conn. @4745' Inc 27.44° Azm 71.51°
28-Sep-13	01:50	03:05	1.25	4799	4889	Drilling	Drilling - (WOB:20;GPM :545;RPM:55)
28-Sep-13	03:05	03:10	0.08	4889	4889	Survey & Conn.	Survey & Conn. @4835' Inc 26.07° Azm 70.66°
28-Sep-13	03:10	03:45	0.58	4889	4940	Drilling	Drilling - (WOB:20;GPM :545;RPM:55)
28-Sep-13	03:45	07:30	3.75	4940	4940	Circulating	Circulating
28-Sep-13	07:30	08:00	0.50	4940	4940	POOH	POOH to 4300
28-Sep-13	08:00	14:00	6.00	4940	4940	Circulating	unable to brake tool joints work on hydrolic tongs
28-Sep-13	14:00	16:00	2.00	4940	4940	POOH	POOH
28-Sep-13	16:00	17:30	1.50	4940	4940	Circulating	Circulating tight hole
28-Sep-13	17:30	18:00	0.50	4940	4940	POOH	POOH
28-Sep-13	18:00	20:45	2.75	4940	4940	Pipe Stuck	Pipe Stuck high tq gas kick
28-Sep-13	20:45	24:00	3.25	4940	4940	Work Pipe	Work Pipe make mud



<b>JOB NO.:</b>	420913DEF60897	<b>Report Time:</b>	2400	6 of 8
<b>COMPANY:</b>	Chevron	<b>API JOB #</b>		
<b>LOCATION:</b>	Skinner Ridge Field	<b>WORK ORDER#</b>	165900	
<b>RIG NAME:</b>	Ensign 122	<b>FIELD:</b>	Skinner Ridge	
<b>STATE:</b>	Colorado	<b>Township:</b>	5S	
<b>COUNTY:</b>	Garfield	<b>SECT\</b>	8	98W
<b>WELL NAME:</b>	SKR 598-08-BV-03			

From Sunday, September 29, 2013 at 0000 to Sunday, September 29, 2013 at 2400

DRILLING SUMMARY				Drilling Parameters							
Start Depth	0.00	Rotary Hours	0.00	WOB	20	Pick UP	70	Slack Off	40	SPM	
End Depth	0.00	Circulating Hours	0.00	RAB	55	SPP	2000	FlowRate	545 - 545	200	
Total Drilled:	0.00	Avg. Total ROP:	NA	Mud Data							
Total Rotary Drilled:	0.00	Avg. Rotary ROP:	NA	Type				PV	0	SOLID	0
Total Drilled Sliding:	0.00	Avg. Slide ROP:	NA	Weight	0	GAS	0	YP	0	BHT°	0
Slide Hours:	0.00	Percent Rotary:	NA	Viscosity	0	SAND	0	PH	0	Flow T°	0
Below Rotary Hrs.	24.00	Percent Slide:	NA	Chlorides	0	WL	0			Oil %	0
PERSONNEL				cASING					BHA		
Lead Directional :	Ed Mackey			Size	Lb/ft	Set Depth		BHA # 2:7 7/8" DP405 5X15s, 6.5 MOTOR 1.75 BEND, 6.5 PONY, 6.5 HOS, 6.5 MONEL, 6.5 GAP, 6.5 PONY, 6.5 MONEL, 4 1/2 Spiral,			
Second Directional :	Jonathen Franklin			Signature:							
MWD Operator1	Luke Kristy										
MWD Operator2											
Directional Company:	Scientific Drilling										
Geologist:											
Company Man:	Greg / Micah										
Incl. In:	25.51	Azm. In:	70.04	Incl. Out:	0	Azm. Out:	0				

#### GENERAL COMMENT

Date	Start Time	End Time	Hours	Start Depth	End Depth	Activity Code	COMMENT
29-Sep-13	00:00	01:45	1.75	4940	4940	Work Pipe	Work Pipe make mud
29-Sep-13	01:45	09:15	7.50	4940	4940	POOH	POOH L/D BHA #2
29-Sep-13	09:15	24:00	14.75	4940	4940	Other	WIPER TRIP CASING OPPS





<b>JOB NO.:</b>	420913DEF60897	<b>Report Time:</b>	2400	7 of 8
<b>COMPANY:</b>	Chevron	<b>API JOB #</b>		
<b>LOCATION:</b>	Skinner Ridge Field	<b>WORK ORDER#</b>	165900	
<b>RIG NAME:</b>	Ensign 122	<b>FIELD:</b>	Skinner Ridge	
<b>STATE:</b>	Colorado	<b>Township:</b>	5S	
<b>COUNTY:</b>	Garfield	<b>SECT\</b>	8	98W
<b>WELL NAME:</b>	SKR 598-08-BV-03			

From Monday, September 30, 2013 at 0000 to Monday, September 30, 2013 at 2400

DRILLING SUMMARY				Drilling Parameters							
Start Depth	0.00	Rotary Hours	0.00	WOB	20	Pick UP	70	Slack Off	40	SPM	
End Depth	0.00	Circulating Hours	0.00	RAB	55	SPP	2000	FlowRate	545 - 545	200	
Total Drilled:	0.00	Avg. Total ROP:	NA	Mud Data							
Total Rotary Drilled:	0.00	Avg. Rotary ROP:	NA	Type		PV	0	SOLID		0	
Total Drilled Sliding:	0.00	Avg. Slide ROP:	NA	Weight	0	GAS	0	YP	0	BHT°	0
Slide Hours:	0.00	Percent Rotary:	NA	Viscosity	0	SAND	0	PH	0	Flow T°	0
Below Rotary Hrs.	24.00	Percent Slide:	NA	Chlorides	0	WL	0			Oil %	0

PERSONNEL						cASING			BHA	
Lead Directional :		Ed Mackey				Size	Lb/ft	Set Depth	N/A	
Second Directional :		Jonathen Franklin				Signature:				
MWD Operator1		Luke Kristy								
MWD Operator2										
Directional Company:		Scientific Drilling								
Geologist:										
Company Man:		Greg / Micah								
Incl. In:	0	Azm. In:	0	Incl. Out:	0	Azm. Out:	0			

#### GENERAL COMMENT

Date	Start Time	End Time	Hours	Start Depth	End Depth	Activity Code	COMMENT
30-Sep-13	00:00	24:00	24.00	4940	4940	Other	Other WIPER TRIP CASING OPPS



<b>JOB NO.:</b>	420913DEF60897	<b>Report Time:</b>	2400	8 of 8
<b>COMPANY:</b>	Chevron	<b>API JOB #</b>		
<b>LOCATION:</b>	Skinner Ridge Field	<b>WORK ORDER#</b>	165900	
<b>RIG NAME:</b>	Ensign 122	<b>FIELD:</b>	Skinner Ridge	
<b>STATE:</b>	Colorado	<b>Township:</b>	5S	
<b>COUNTY:</b>	Garfield	<b>SECT\</b>	8	98W
<b>WELL NAME:</b>	SKR 598-08-BV-03			

From Tuesday, October 01, 2013 at 0000 to Tuesday, October 01, 2013 at 2400

DRILLING SUMMARY				Drilling Parameters								
Start Depth	0.00	Rotary Hours	0.00	WOB	20	Pick UP	70	Slack Off	40	SPM		
End Depth	0.00	Circulating Hours	0.00	RAB	55	SPP	2000	FlowRate	545 - 545	200		
Total Drilled:	0.00	Avg. Total ROP:	NA	Mud Data								
Total Rotary Drilled:	0.00	Avg. Rotary ROP:	NA	Type				PV	0	SOLID	0	
Total Drilled Sliding:	0.00	Avg. Slide ROP:	NA	Weight	0	GAS	0	YP	0	BHT°	0	
Slide Hours:	0.00	Percent Rotary:	NA	Viscosity	0	SAND	0	PH	0	Flow T°	0	
Below Rotary Hrs.	24.00	Percent Slide:	NA	Chlorides	0	WL	0			Oil %	0	
PERSONNEL				cASING					BHA			
Lead Directional :	Ed Mackey			Size	Lb/ft	Set Depth		N/A				
Second Directional :	Jonathen Franklin			Signature:								
MWD Operator1	Luke Kristy											
MWD Operator2												
Directional Company:	Scientific Drilling											
Geologist:												
Company Man:	Greg / Micah											
Incl. In:	0	Azm. In:	0	Incl. Out:	0	Azm. Out:	0					

#### GENERAL COMMENT

Date	Start Time	End Time	Hours	Start Depth	End Depth	Activity Code	COMMENT
1-Oct-13	00:00	24:00	0.00	4940	4940	Other	Other Casing opps

## BHA # 1

## SDI



JOB NO.: 420913DEF60897 Work Order: 165900  
 COMPANY: Chevron  
 LOCATION: Skinner Ridge Field  
 RIG NAME: Ensign 122  
 STATE: Colorado  
 COUNTY: Garfield  
 WELL NAME: SKR 598-08-BV-03

FIELD: Skinner Ridge  
 Township: 5S  
 SECT. RANGE: 8 98W  
 Lead DD: Ed Mackey  
 Co. Man: Greg / Micah  
 BHA TYPE: Steerable Assembly  
 BHA WT: 37124 Wt @ Jars: N/A

Time and Depths		MOTOR DATA	Drilling Parameters	
Date In:	24-Sep-13 @ 01:00	Titan II 8 FBH 7:8 lobe 4.0 stage	SO/PU:	20 - 20 / 20-20
Date Out:	25-Sep-13 @ 06:00	MFG.: SDI	Rot Strg Wt:	20-20
Hrs In Hole:	29.00	Pad OD: 8.5	WOB:	7 - 7
Start Depth:	81.00	NB Stab: 0	TORQ:	1000 - 1000
End Depth:	1020.00	Bit to Bend: 4.56	SPP:	250 - 250
Total Drilled:	939.00	Bent Hsg/Sub°: 2.5 /	Motor RPM:	52
Avg. Total ROP:	53.40	Lobe/Stage: 7:8 / 4	Rotary RPM:	35 - 35
Circ Hrs: Tot/Only	21.67 / 4.08	Rev/GAL: 0.16	Flow Rate:	325 - 325
Percent Slide:	46.86	Rotor Jet: 0	Avg Diff:	
Percent Hrs:	43.60	Prop BUR:	Stall Pres.:	
Slide Hours:	7.67	Act BUR:	Off Bot Pres.:	
Total Sliding:	440.00	Mud Data		Bit Record
Avg. Slide ROP:	57.39	Type		BAKER / 12.25 / PDC / 9X13s
Percent Rotary:	53.14	WT: 0	GAS: 0	Run #: 1
Percent Hrs:	56.40	Vis: 0	PV: 0	Type Bit: PDC
Rotary Hours:	9.92	WL: 0	PH: 0	IADC#: TFA: 1.166
Total Rotary:	499.00	SOL: 0	SAND: 0	JETS: 9-13
Avg. Rotary ROP:	50.32	Oil %: 0	T °: 0	Bit Drop: 0 PSI @ 325 GPM
Reason POOH:	TD	Chlor: 0	YP: 0	Cond.: GOOD
MWD Spacing	Gamma: 0	Restiv: 0	Sensor: 57	Last Casing
	GYRO: 0	DNSSC: 0	Sonic: 0	Shoe @: Hanger @:

INC IN: .0 INC OUT: .0 AZM IN: .00 AZM OUT: .00

NEW SDI-896 going in with 0.0 hrs  
 MAX DIFF - 470psi  
 Optimum Diff 100-350psi  
 Max Operating Torque -7800t ft/lbs  
 Max GPM - 900  
 MOTOR YIELD 9.9  
 D&C= 20.83

## BHA Detail

Description	Serial #	I.D.	O.D.	Length	Sum	Top Conn	MFG.
12.25 / PDC / 9X13s	7016120		12.25	1.50	1.50	6 5/8 REGP	
8' MOTOR	SDI-840		8	28.05	29.55	6 5/8 REGB	
8' PONY	SDI --126-068	3.75	8	9.51	39.06	6 5/8 REGB	
8' MONEL	SDI 84-375	3.75	8 1/8	30.93	69.99	6 5/8 REGB	
8' HOS	SDI-89-025	3 3/4	7 7/8	2.63	72.62	6 5/8 REGB	
8' GAP	SDI-69-605	3 1/4	8	5.72	78.34	6 5/8 REGB	
8' PONY	SDI-052	3.75	8	9.50	87.84	6 5/8 REGB	
8' MONEL	NSN	3.75	8 1/8	30.89	118.73	6 5/8 REGB	
XOVER	SDI-1-481	2 3/4	6 1/4	2.51	121.24	6 5/8 REGB	
6' DC	RIG 1			89.75	210.99	4 1/2 XHB	
4 1/2 Spiral	HWDP - Pin	2.75	4.5	607.20	818.19	4 1/2 XHB	

4 1/2 Spiral  
 O.D.=4.5  
 Length=607.2

6' DC  
 O.D.=  
 Length=89.75

XOVER  
 O.D.=6 1/4  
 8' MONEL  
 O.D.=8 1/8  
 Length=30.89

8' PONY  
 O.D.=8  
 Length=9.5

8' GAP  
 O.D.=8  
 Length=5.72

8' HOS  
 O.D.=7 7/8

8' MONEL  
 O.D.=8 1/8  
 Length=30.93

8' PONY  
 O.D.=8  
 Length=9.51

8' MOTOR  
 O.D.=8  
 Length=28.05

12.25 / PDC / 9X13s  
 O.D.=12.25



**JOB NO.:** 420913DEF60897  
**COMPANY:** Chevron  
**LOCATION:** Skinner Ridge Field  
**RIG NAME:** Ensign 122  
**STATE:** Colorado  
**COUNTY:** Country  
**WELL NAME:** SKR 598-08-BV-03

**FIELD:** Skinner Ridge  
**Township:** 5S  
**Range** 98W

MOTOR INFORMATION	
Desc: Titan II 8 FBH 7:8 lobe 4.0 stage @2.25	
Bent Hsg/Sub: 2.5 / 0	Bit to Bend: 4.56
Pad OD: 8.5	NB Stab:

## Slide Report for BHA # 1

Note: Surveys listed are interpolated from the actual surveys

#	Date	Drill Mode	Start Time	End Time	Hours	Start MD	End MD	Depth Drilled	WOB	ROP	RPM	Surf. Torque	Flow Rate	SPP	TFO	INC	AZM	DLS	Note
1	24-Sep	Drilling	04:20	04:30	0.17	81	88	7	7	42.0	35	1000	325	250		0.00	0.00	0.00	
1	24-Sep	Sliding	04:30	05:00	0.50	88	115	27	7	54.0	35	1000	325	250	79	0.00	0.00	0.00	
1	24-Sep	Drilling	05:00	05:10	0.17	115	121	6	7	36.0	35	1000	325	250	79	0.00	0.00	0.00	
1	24-Sep	Drilling	05:35	06:15	0.67	121	151	30	7	45.0	35	1000	325	250		0.00	0.00	0.00	
1	24-Sep	Drilling	06:30	06:45	0.25	151	161	10	7	40.0	35	1000	325	250		0.00	0.00	0.00	
1	24-Sep	Sliding	06:45	07:10	0.42	161	181	20	7	48.0	35	1000	325	250	79	0.00	0.00	0.00	
1	24-Sep	Drilling	07:10	09:50	2.67	181	242	61	7	22.9	35	1000	325	250		0.00	0.00	0.00	
1	24-Sep	Sliding	10:10	10:30	0.33	242	265	23	7	69.0	35	1000	325	250	79	0.00	0.00	0.00	
1	24-Sep	Drilling	10:30	12:00	1.50	265	333	68	7	45.3	35	1000	325	250		0.00	0.00	0.00	
1	24-Sep	Sliding	12:05	13:00	0.92	333	378	45	7	49.1	35	1000	325	250	79	0.00	0.00	0.00	
1	24-Sep	Drilling	13:00	13:10	0.17	378	393	15	7	90.0	35	1000	325	250		0.00	0.00	0.00	
1	24-Sep	Drilling	14:00	14:15	0.25	393	424	31	7	124.0	35	1000	325	250		0.00	0.00	0.00	
1	24-Sep	Sliding	14:25	15:05	0.67	424	469	45	7	67.5	35	1000	325	250	-10	0.00	0.00	0.00	
1	24-Sep	Drilling	15:05	16:00	0.92	469	514	45	7	49.1	35	1000	325	250		0.00	0.00	0.00	
1	24-Sep	Sliding	16:10	17:00	0.83	514	567	53	7	63.6	35	1000	325	250		0.00	0.00	0.00	
1	24-Sep	Drilling	17:00	18:00	1.00	567	605	38	7	38.0	35	1000	325	250		0.00	0.00	0.00	
1	24-Sep	Sliding	18:05	18:30	0.42	605	620	15	7	36.0	35	1000	325	250		0.00	0.00	0.00	
1	24-Sep	Drilling	18:30	18:50	0.33	620	636	16	7	48.0	35	1000	325	250		0.00	0.00	0.00	
1	24-Sep	Sliding	18:50	19:10	0.33	636	651	15	7	45.0	35	1000	325	250		0.00	0.00	0.00	
1	24-Sep	Drilling	19:10	19:20	0.17	651	666	15	7	90.0	35	1000	325	250		0.00	0.00	0.00	
1	24-Sep	Sliding	19:20	19:35	0.25	666	682	16	7	64.0	35	1000	325	250	15	0.00	0.00	0.00	
1	24-Sep	Drilling	19:35	19:45	0.17	682	696	14	7	84.0	35	1000	325	250		0.00	0.00	0.00	
1	24-Sep	Sliding	19:50	20:00	0.17	696	712	16	7	96.0	35	1000	325	250	15	0.00	0.00	0.00	
1	24-Sep	Drilling	20:00	20:15	0.25	712	727	15	7	60.0	35	1000	325	250		0.00	0.00	0.00	
1	24-Sep	Sliding	20:15	20:30	0.25	727	744	17	7	68.0	35	1000	325	250	20	0.00	0.00	0.00	

# Slide Report for BHA # 1

Note: Surveys listed are interpolated from the actual surveys

#	Date	Drill Mode	Start Time	End Time	Hours	Start MD	End MD	Depth Drilled	WOB	ROP	RPM	Surf. Torque	Flow Rate	SPP	TFO	INC	AZM	DLS	Note
1	24-Sep	Drilling	20:30	20:40	0.17	744	757	13	7	78.0	35	1000	325	250		0.00	0.00	0.00	
1	24-Sep	Sliding	20:40	20:55	0.25	757	773	16	7	64.0	35	1000	325	250	20	0.00	0.00	0.00	
1	24-Sep	Drilling	20:55	21:05	0.17	773	787	14	7	84.0	35	1000	325	250		0.00	0.00	0.00	
1	24-Sep	Sliding	21:05	21:20	0.25	787	804	17	7	68.0	35	1000	325	250	30	0.00	0.00	0.00	
1	24-Sep	Drilling	21:20	21:30	0.17	804	818	14	7	84.0	35	1000	325	250		0.00	0.00	0.00	
1	24-Sep	Sliding	21:35	21:55	0.33	818	843	25	7	75.0	35	1000	325	250	15	0.00	0.00	0.00	
1	24-Sep	Drilling	21:55	22:05	0.17	843	863	20	7	120.0	35	1000	325	250		0.00	0.00	0.00	
1	24-Sep	Sliding	22:05	22:30	0.42	863	887	24	7	57.6	35	1000	325	250		0.00	0.00	0.00	
1	24-Sep	Drilling	22:30	22:40	0.17	887	908	21	7	126.0	35	1000	325	250		0.00	0.00	0.00	
1	24-Sep	Sliding	22:45	23:05	0.33	908	930	22	7	66.0	35	1000	325	250		0.00	0.00	0.00	
1	24-Sep	Drilling	23:05	23:15	0.17	930	954	24	7	144.0	35	1000	325	250		0.00	0.00	0.00	
1	24-Sep	Sliding	23:15	23:45	0.50	954	977	23	7	46.0	35	1000	325	250		0.00	0.00	0.00	
1	24-Sep	Drilling	23:45	24:00	0.25	977	999	22	7	88.0	35	1000	325	250		0.00	0.00	0.00	
1	25-Sep	Sliding	00:05	00:35	0.50	999	1020	21	7	42.0	35	1000	325	250		0.00	0.00	0.00	

**Total Drilled:**

939

**Avg. Total ROP:**

53.40

**DEPTH% - TIME %**

**Total Rotary Drilled:**

499

**Avg. Rotary ROP:**

50.32

**Percent Rotary:**

53.14 - 56.40

**Total Drilled Sliding:**

440

**Avg. Slide ROP:**

57.39

**Percent Slide:**

46.86 - 43.60

## BHA # 2

## SDI



JOB NO.: 420913DEF60897 Work Order: 165900  
 COMPANY: Chevron  
 LOCATION: Skinner Ridge Field  
 RIG NAME: Ensign 122  
 STATE: Colorado  
 COUNTY: Garfield  
 WELL NAME: SKR 598-08-BV-03

FIELD: Skinner Ridge  
 Township: 5S  
 SECT. RANGE: 8 98W  
 Lead DD: Ed Mackey  
 Co. Man: Greg / Micah  
 BHA TYPE: Steerable Assembly  
 BHA WT: 27103 Wt @ Jars: N/A

Time and Depths		MOTOR DATA	Drilling Parameters	
Date In:	26-Sep-13 @ 03:15	6.5 in 7:8 lobe 3.3 stg .14 rpg	SO/PU:	20 - 172020 / 20-70
Date Out:	29-Sep-13 @ 09:15	MFG.: SDI	Rot Strg Wt:	20-55
Hrs In Hole:	78.00	Pad OD: 6.85	WOB:	7 - 20
Start Depth:	1020.00	NB Stab: 0	TORQ:	1000 - 10000
End Depth:	4940.00	Bit to Bend: 6.8	SPP:	250 - 2000
Total Drilled:	3920.00	Bent Hsg/Sub°: 1.75 /	Motor RPM:	46
Avg. Total ROP:	113.90	Lobe/Stage: 7:8 / 3.3	Rotary RPM:	35 - 55
Circ Hrs: Tot/Only	50.33 / 15.92	Rev/GAL: 0.14	Flow Rate:	325 - 545
Percent Slide:	9.69	Rotor Jet: 0	Avg Diff:	
Percent Hrs:	14.53	Prop BUR:	Stall Pres.:	
Slide Hours:	5.00	Act BUR:	Off Bot Pres.:	
Total Sliding:	380.00	Mud Data		Bit Record
Avg. Slide ROP:	76.00	Type	BAKER / 7 7/8" DP405 5X15s	
Percent Rotary:	90.31	WT: 0 GAS: 0	Run #:	1rr
Percent Hrs:	85.47	Vis: 0 PV: 0	Type Bit:	PDC
Rotary Hours:	29.42	WL: 0 PH: 0	IADC#:	TFA: 1.035
Total Rotary:	3540.00	SOL: 0 SAND: 0	JETS:	6-15
Avg. Rotary ROP:	120.34	Oil %: 0 T °: 0	Bit Drop:	0 PSI @ 545 GPM
Reason POOH:		Chlor: 0 YP: 0	Cond.:	
MWD	Gamma: 0	Restiv: 0	Sensor: 57	Last Casing
Spacing	GYRO: 0	DNSSC: 0	Sonic: 0	Shoe @: Hanger @:

INC IN: .0 INC OUT: .0 AZM IN: .00 AZM OUT: .00

## BHA Detail

Description	Serial #	I.D.	O.D.	Length	Sum	Top Conn	MFG.
7 7/8" DP405 5X15s	7037697		7 5/8	1.00	1.00	(NONE)P	
6.5 MOTOR 1.75 BEND	SDI-6558			29.62	30.62	4 1/2 XHB	
6.5 PONY	SDI-125-083	3.25	6.25	9.67	40.29	4 1/2 XHB	
6.5 HOS	SDI-8-245	3.25	6 1/8	1.97	42.26	4 1/2 XHB	
6.5 MONEL	SDI-122-354	3 3/8	6	30.40	72.66	4 1/2 XHB	
6.5 GAP	SDI-69-734	2.875	6.5	4.91	77.57	4 1/2 XHB	
6.5 PONY	SDI-125-179	3.25	6.25	10.04	87.61	4 1/2 XHB	
6.5 MONEL	SDI-122-522	3.25	6.25	30.81	118.42	4 1/2 XHB	
4 1/2 Spiral	HWDP - Pin	2.75	4.5	606.09	724.51	4 1/2 XH	

4 1/2 Spiral  
O.D.=4.5  
Length=606.09

6.5 MONEL  
O.D.=6.25  
Length=30.81

6.5 PONY  
O.D.=6.25  
Length=10.04

6.5 GAP  
O.D.=6.5  
Length=4.91

6.5 MONEL  
O.D.=6  
Length=30.4

6.5 PONY  
O.D.=6.25  
Length=9.67

6.5 MOTOR 1.75 BEND  
O.D.=  
Length=29.62

7 7/8" DP405 5X15s  
O.D.=7 5/8  
Length=1



**JOB NO.:** 420913DEF60897  
**COMPANY:** Chevron  
**LOCATION:** Skinner Ridge Field  
**RIG NAME:** Ensign 122  
**STATE:** Colorado  
**COUNTY:** Country  
**WELL NAME:** SKR 598-08-BV-03

**FIELD:** Skinner Ridge  
**Township:** 5S  
**Range** 98W

MOTOR INFORMATION	
Desc:	6.5 in 7.610 lb 5.5 stg 1.14 tpg 1.75 deg fixed
Bent Hsg/Sub:	1.75/ 0 Bit to Bend: 6.8
Pad OD:	6.85 NB Stab:

## Slide Report for BHA # 2

Note: Surveys listed are interpolated from the actual surveys

#	Date	Drill Mode	Start Time	End Time	Hours	Start MD	End MD	Depth Drilled	WOB	ROP	RPM	Surf. Torque	Flow Rate	SPP	TFO	INC	AZM	DLS	Note
2	26-Sep	Drilling	09:40	10:15	0.58	1020	1086	66	7	113.1	35	1000	325	250		36.62	82.00	3.98	
2	26-Sep	Drilling	10:20	10:25	0.08	1086	1091	5	7	60.0	35	1000	325	250		36.82	82.00	3.98	
2	26-Sep	Sliding	10:25	10:40	0.25	1091	1131	40	7	160.0	35	1000	325	250	-10	37.95	79.00	1.77	
2	26-Sep	Drilling	10:40	11:00	0.33	1131	1177	46	7	138.0	35	1000	325	250		37.36	80.00	1.77	
2	26-Sep	Drilling	11:05	11:30	0.42	1177	1267	90	7	216.0	35	1000	325	250		38.32	78.00	2.66	
2	26-Sep	Sliding	11:35	11:50	0.25	1267	1283	16	7	64.0	35	1000	325	250	-10	38.74	78.00	2.66	
2	26-Sep	Drilling	11:50	12:20	0.50	1283	1358	75	7	150.0	35	1000	325	250		40.00	78.00	1.51	
2	26-Sep	Drilling	12:25	12:35	0.17	1358	1363	5	7	30.0	35	1000	325	250		40.06	78.00	1.51	
2	26-Sep	Sliding	12:35	12:45	0.17	1363	1388	25	7	150.0	35	1000	325	250	35	40.39	78.00	1.51	
2	26-Sep	Drilling	12:45	13:15	0.50	1388	1448	60	7	120.0	35	1000	325	250		41.66	79.00	2.37	
2	26-Sep	Drilling	13:20	13:25	0.08	1448	1454	6	7	72.0	35	1000	325	250		41.79	79.00	2.37	
2	26-Sep	Sliding	13:25	13:35	0.17	1454	1474	20	7	120.0	35	1000	325	250	35	42.23	79.00	2.37	
2	26-Sep	Drilling	13:35	14:00	0.42	1474	1539	65	7	156.0	35	1000	325	250		41.87	80.00	1.63	
2	26-Sep	Drilling	14:35	15:05	0.50	1539	1629	90	7	180.0	35	1000	325	250		40.75	79.00	2.05	
2	26-Sep	Drilling	15:10	15:40	0.50	1629	1720	91	7	182.0	35	1000	325	250		41.17	77.00	2.27	
2	26-Sep	Drilling	15:45	15:55	0.17	1720	1725	5	7	30.0	35	1000	325	250		41.25	77.00	2.27	
2	26-Sep	Sliding	15:55	16:10	0.25	1725	1743	18	7	72.0	35	1000	325	250	60	41.55	77.00	2.27	
2	26-Sep	Drilling	16:10	16:25	0.25	1743	1810	67	7	268.0	35	1000	325	250		41.40	79.00	2.24	
2	26-Sep	Drilling	16:30	16:35	0.08	1810	1817	7	7	84.0	35	1000	325	250		41.35	79.00	2.24	
2	26-Sep	Sliding	16:35	16:45	0.17	1817	1832	15	7	90.0	35	1000	325	250	60	41.26	80.00	2.24	
2	26-Sep	Drilling	16:45	17:10	0.42	1832	1901	69	7	165.6	35	1000	325	250		40.24	82.00	2.84	
2	26-Sep	Drilling	17:15	17:45	0.50	1901	1966	65	7	130.0	35	1000	325	250		39.71	77.00	0.50	
2	26-Sep	Drilling	18:45	19:00	0.25	1966	1992	26	7	104.0	35	1000	325	250		39.80	78.00	0.50	
2	26-Sep	Sliding	19:05	19:15	0.17	1992	2009	17	7	102.0	35	1000	325	250	45	39.86	78.00	0.50	
2	26-Sep	Drilling	19:15	19:40	0.42	2009	2082	73	7	175.2	35	1000	325	250		39.76	79.00	0.97	



# Slide Report for BHA # 2

Note: Surveys listed are interpolated from the actual surveys

#	Date	Drill Mode	Start Time	End Time	Hours	Start MD	End MD	Depth Drilled	WOB	ROP	RPM	Surf. Torque	Flow Rate	SPP	TFO	INC	AZM	DLS	Note
2	26-Sep	Sliding	19:45	20:00	0.25	2082	2097	15	7	60.0	35	1000	325	250	60	39.72	79.00	0.97	
2	26-Sep	Drilling	20:00	20:20	0.33	2097	2173	76	7	228.0	35	1000	325	250		39.66	80.00	1.25	
2	26-Sep	Sliding	20:25	20:35	0.17	2173	2188	15	7	90.0	35	1000	325	250	60	39.66	80.00	1.25	
2	26-Sep	Drilling	20:35	21:00	0.42	2188	2263	75	7	180.0	35	1000	325	250		39.52	81.00	0.63	
2	26-Sep	Sliding	21:05	21:15	0.17	2263	2278	15	7	90.0	35	1000	325	250	30	39.48	81.00	0.63	
2	26-Sep	Drilling	21:15	21:35	0.33	2278	2354	76	7	228.0	35	1000	325	250		39.92	82.00	0.92	
2	26-Sep	Sliding	21:45	21:50	0.08	2354	2364	10	7	120.0	35	1000	325	250		40.01	82.00	0.92	
2	26-Sep	Drilling	21:50	22:15	0.42	2364	2444	80	7	192.0	35	1000	325	250		39.59	82.00	1.35	
2	26-Sep	Drilling	22:20	22:50	0.50	2444	2535	91	7	182.0	35	1000	325	250		39.60	81.00	0.94	
2	26-Sep	Sliding	23:00	23:10	0.17	2535	2547	12	7	72.0	35	1000	325	250	-30	39.70	81.00	0.94	
2	26-Sep	Drilling	23:10	23:45	0.58	2547	2625	78	7	133.7	35	1000	325	250		39.23	81.00	1.38	
2	26-Sep	Drilling	23:50	24:00	0.17	2625	2670	45	7	270.0	35	1000	325	250		38.86	79.00	1.19	
2	27-Sep	Drilling	00:35	00:50	0.25	2670	2716	46	7	184.0	35	1000	325	250		39.40	80.00	1.19	
2	27-Sep	Sliding	00:55	01:05	0.17	2716	2729	13	7	78.0	35	1000	325	250		39.56	80.00	1.19	
2	27-Sep	Drilling	01:05	01:35	0.50	2729	2806	77	7	154.0	35	1000	325	250		40.11	80.00	0.86	
2	27-Sep	Sliding	01:45	01:50	0.08	2806	2816	10	7	120.0	35	1000	325	250	-30	40.17	80.00	0.86	
2	27-Sep	Drilling	01:50	02:20	0.50	2816	2897	81	7	162.0	35	1000	325	250		39.60	79.00	1.33	
2	27-Sep	Drilling	02:25	03:05	0.67	2897	2987	90	20	135.0	55	10000	545	2000		38.84	80.00	1.63	
2	27-Sep	Sliding	03:10	03:20	0.17	2987	3000	13	7	78.0	55	10000	325	2000	-30	38.77	80.00	1.63	
2	27-Sep	Drilling	03:20	03:55	0.58	3000	3078	78	20	133.7	55	10000	545	2000		38.94	76.00	0.54	
2	27-Sep	Sliding	04:00	04:15	0.25	3078	3094	16	7	64.0	55	10000	325	2000	-30	39.02	76.00	0.54	
2	27-Sep	Drilling	04:15	04:55	0.67	3094	3168	74	20	111.0	55	10000	545	2000		38.29	77.00	1.84	
2	27-Sep	Sliding	05:00	05:05	0.08	3168	3183	15	7	180.0	55	10000	325	2000	30	38.06	77.00	1.84	
2	27-Sep	Drilling	05:05	05:45	0.67	3183	3259	76	20	114.0	55	10000	545	2000		38.20	79.00	2.16	
2	27-Sep	Sliding	05:50	06:30	0.67	3259	3284	25	7	37.5	55	10000	325	2000	30	38.44	80.00	2.16	
2	27-Sep	Drilling	06:30	07:15	0.75	3284	3350	66	20	88.0	55	10000	545	2000		39.27	81.00	1.64	
2	27-Sep	Drilling	07:20	07:25	0.08	3350	3355	5	20	60.0	55	10000	545	2000		39.33	81.00	1.64	
2	27-Sep	Sliding	07:25	07:40	0.25	3355	3375	20	7	80.0	55	10000	325	2000		39.60	82.00	1.64	
2	27-Sep	Drilling	07:40	08:25	0.75	3375	3440	65	20	86.7	55	10000	545	2000		40.30	79.00	1.06	
2	27-Sep	Sliding	08:30	08:45	0.25	3440	3460	20	7	80.0	55	10000	325	2000	10	40.50	79.00	1.06	
2	27-Sep	Drilling	08:45	09:40	0.92	3460	3531	71	20	77.5	55	10000	545	2000		40.54	79.00	0.31	
2	27-Sep	Drilling	09:45	10:30	0.75	3531	3621	90	20	120.0	55	10000	545	2000		39.87	79.00	1.11	
2	27-Sep	Drilling	10:35	11:30	0.92	3621	3712	91	20	99.3	55	10000	545	2000		39.12	78.00	0.71	

# Slide Report for BHA # 2

Note: Surveys listed are interpolated from the actual surveys

#	Date	Drill Mode	Start Time	End Time	Hours	Start MD	End MD	Depth Drilled	WOB	ROP	RPM	Surf. Torque	Flow Rate	SPP	TFO	INC	AZM	DLS	Note
2	27-Sep	Drilling	11:35	12:25	0.83	3712	3803	91	20	109.2	55	10000	545	2000		39.16	78.00	0.94	
2	27-Sep	Sliding	12:30	12:45	0.25	3803	3818	15	7	60.0	55	10000	325	2000	10	39.24	78.00	0.94	
2	27-Sep	Drilling	12:45	13:40	0.92	3818	3893	75	20	81.8	55	10000	545	2000		38.60	79.00	1.47	
2	27-Sep	Drilling	14:30	15:20	0.83	3893	3984	91	20	109.2	55	10000	545	2000		37.47	78.00	1.22	
2	27-Sep	Drilling	15:25	16:05	0.67	3984	4074	90	20	135.0	55	10000	545	2000		36.39	78.00	1.34	
2	27-Sep	Drilling	16:10	17:00	0.83	4074	4165	91	20	109.2	55	10000	545	2000		34.63	77.00	2.49	
2	27-Sep	Drilling	17:05	17:45	0.67	4165	4255	90	20	135.0	55	10000	545	2000		32.50	77.00	2.64	
2	27-Sep	Drilling	17:50	18:35	0.75	4255	4346	91	20	121.3	55	10000	545	2000		32.13	74.00	0.93	
2	27-Sep	Sliding	18:40	19:15	0.58	4346	4361	15	7	25.7	55	10000	325	2000	10	32.27	74.00	0.93	
2	27-Sep	Drilling	19:15	20:45	1.50	4361	4437	76	20	50.7	55	10000	545	2000		32.22	73.00	0.47	
2	27-Sep	Drilling	20:55	21:30	0.58	4437	4527	90	20	154.3	55	10000	545	2000		31.00	74.00	1.99	
2	27-Sep	Drilling	21:40	22:35	0.92	4527	4618	91	20	99.3	55	10000	545	2000		29.49	73.00	1.46	
2	27-Sep	Drilling	22:45	24:00	1.25	4618	4708	90	20	72.0	55	10000	545	2000		28.06	73.00	1.78	
2	28-Sep	Drilling	00:15	00:45	0.50	4708	4754	46	20	92.0	55	10000	545	2000		27.30	72.00	1.58	
2	28-Sep	Drilling	01:20	01:45	0.42	4754	4799	45	20	108.0	55	10000	545	2000		26.62	72.00	1.58	
2	28-Sep	Drilling	01:50	03:05	1.25	4799	4889	90	20	72.0	55	10000	545	2000		25.51	70.00	0.00	
2	28-Sep	Drilling	03:10	03:45	0.58	4889	4940	51	20	87.4	55	10000	545	2000		25.51	70.00	0.00	

**Total Drilled:** 3920 **Avg. Total ROP:** 113.90 **DEPTH% - TIME %**

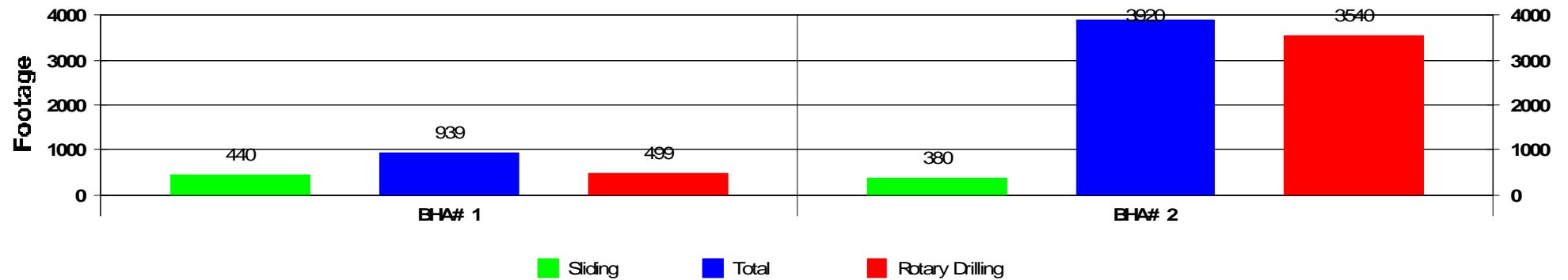
**Total Rotary Drilled:** 3540 **Avg. Rotary ROP:** 120.34 **Percent Rotary:** 90.31 - 85.47

**Total Drilled Sliding:** 380 **Avg. Slide ROP:** 76.00 **Percent Slide:** 9.69 - 14.53

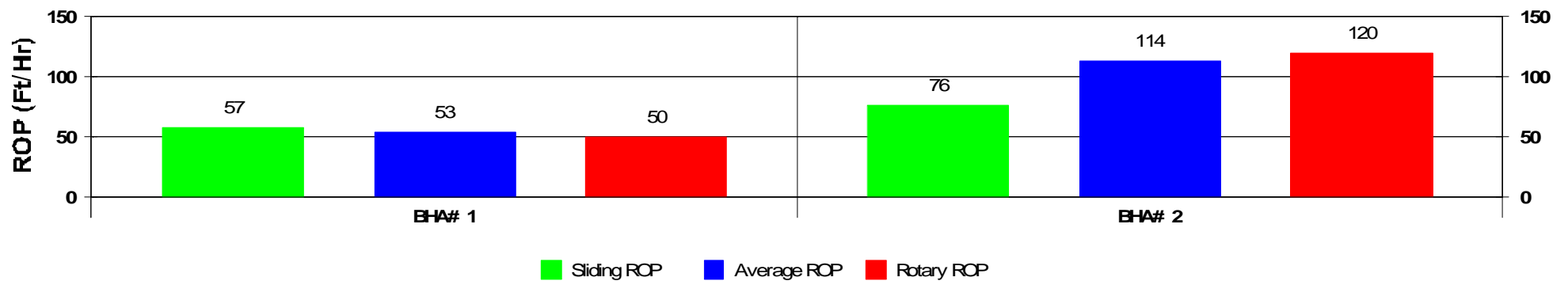


JOB NO.:	420913DEF60897	FIELD:	Skinner Ridge	
COMPANY:	Chevron	Township:	5S	
LOCATION:	Skinner Ridge Field	SECT/RANGE:	8	98W
RIG NAME:	Ensign 122	COMMENT		
STATE:	Colorado			
COUNTY:	Garfield			
WELL NAME:	SKR 598-08-BV-03			

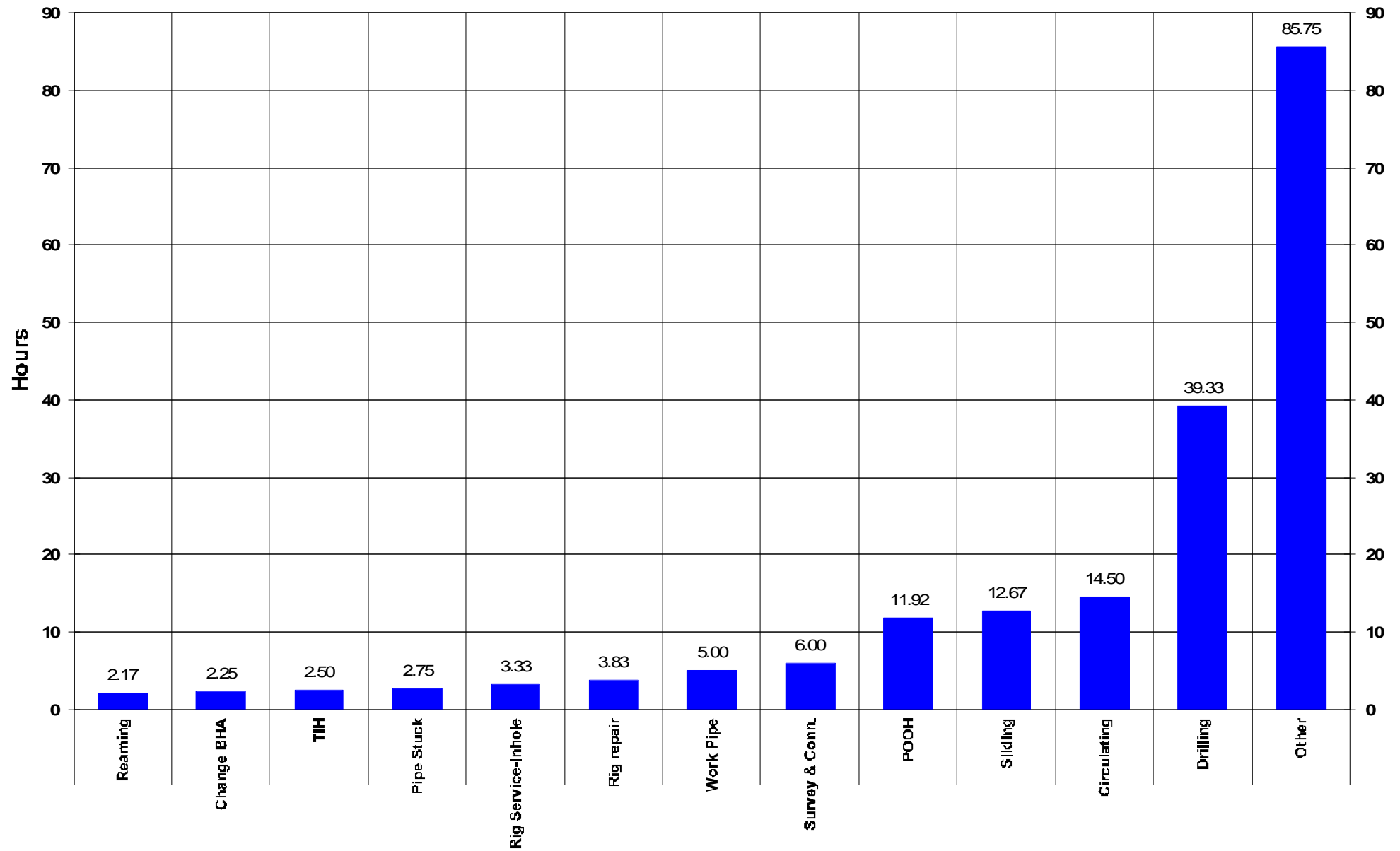
### Footage Drilled with BHA



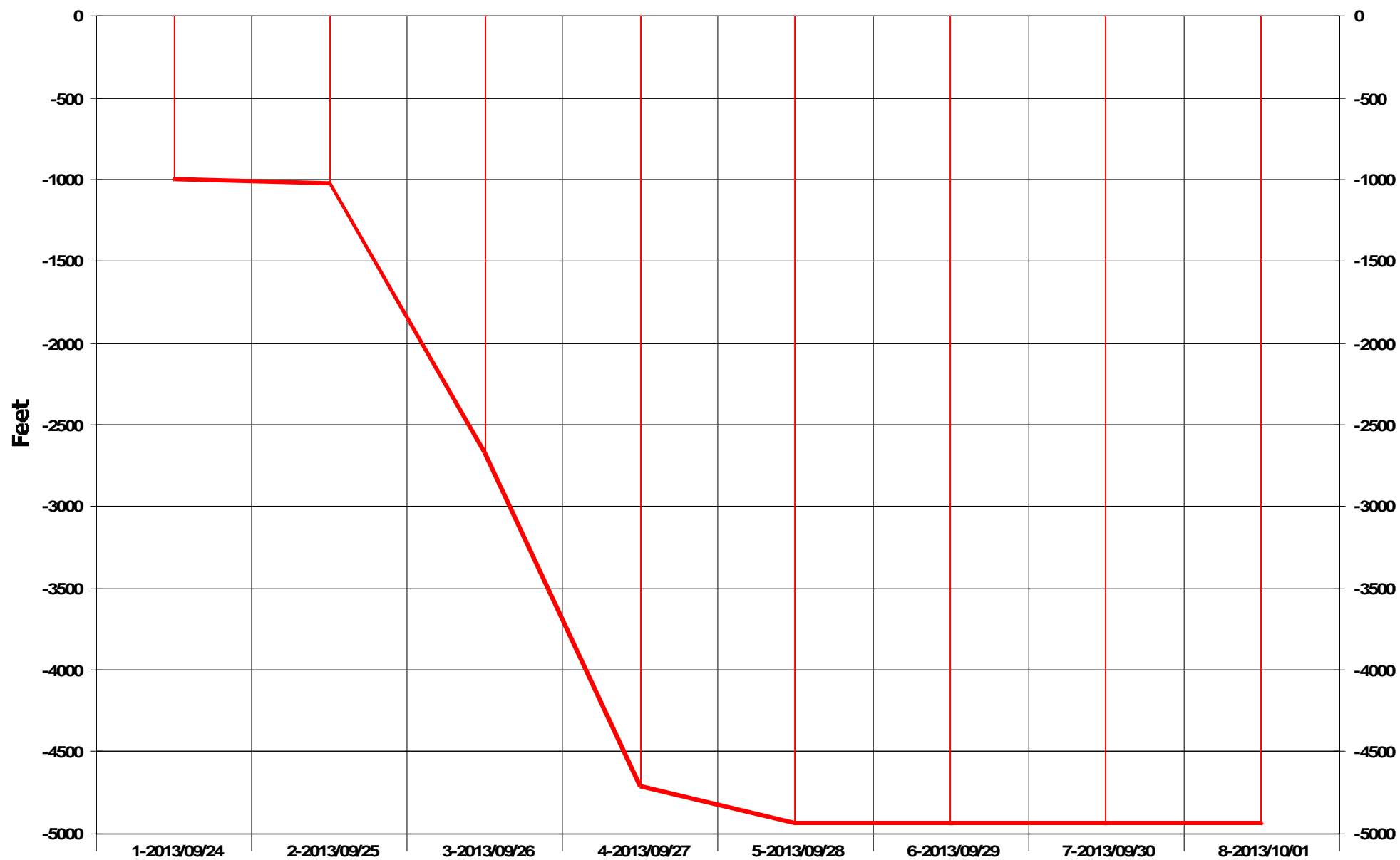
### ROP vs BHA



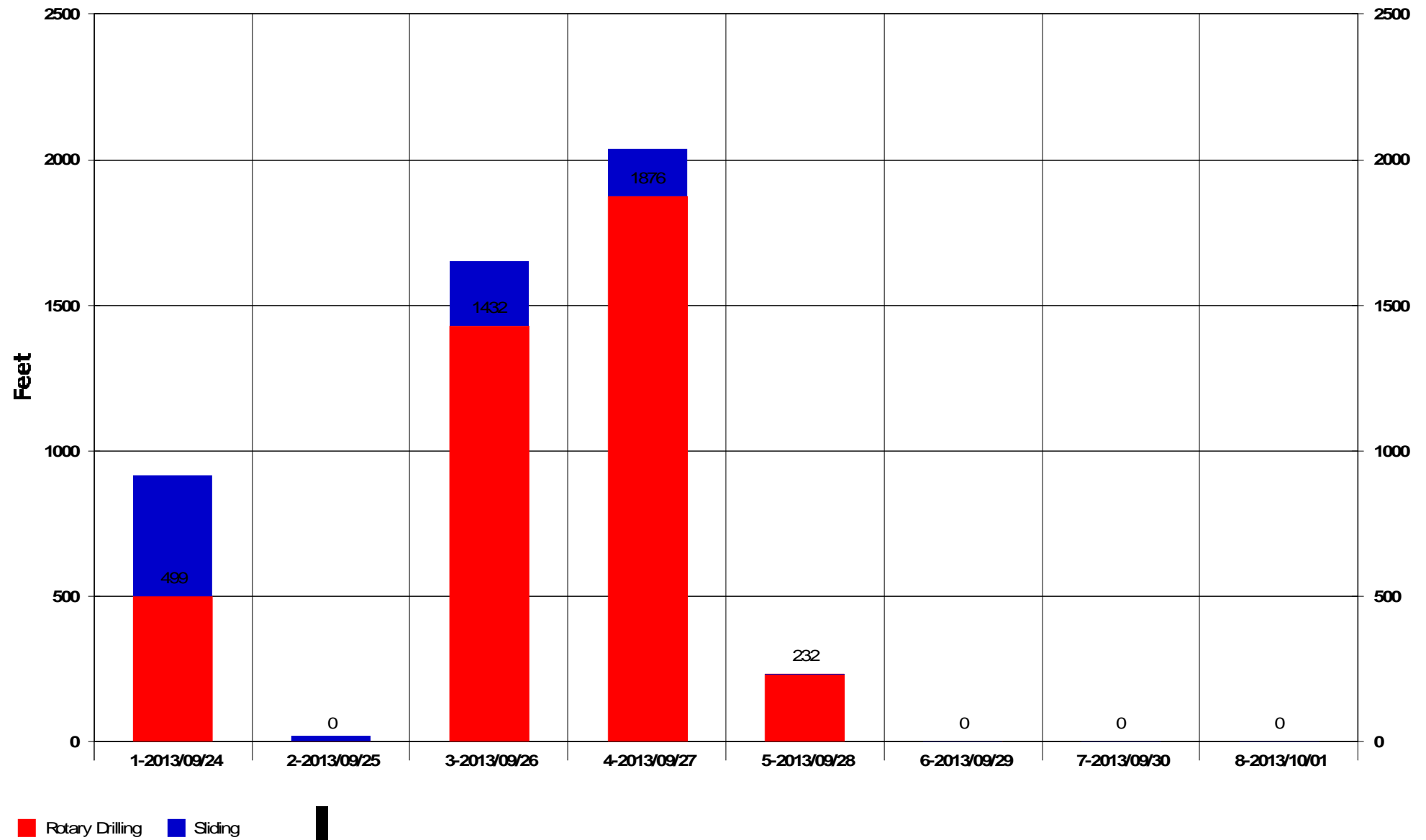
Activity Histogram



Measured Depth vs Days



## Daily Footage



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