



Chevron

**Garfield County, CO (NAD83)
Skinner Ridge Field
SKR-598-08-BV-02**

OH

Design: OH

Standard Survey Report

23 September, 2013



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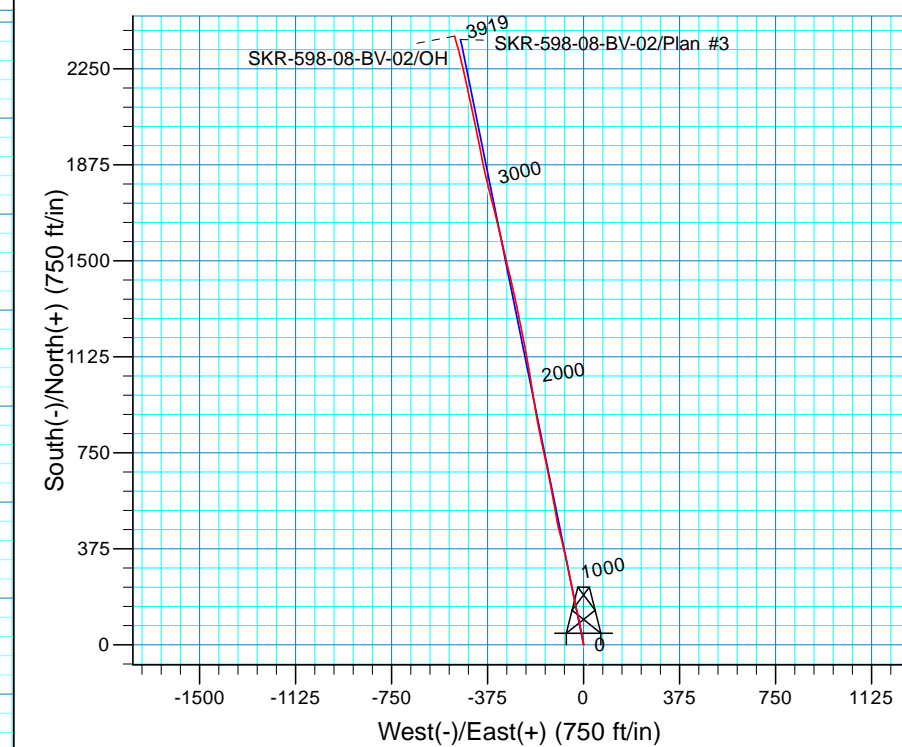
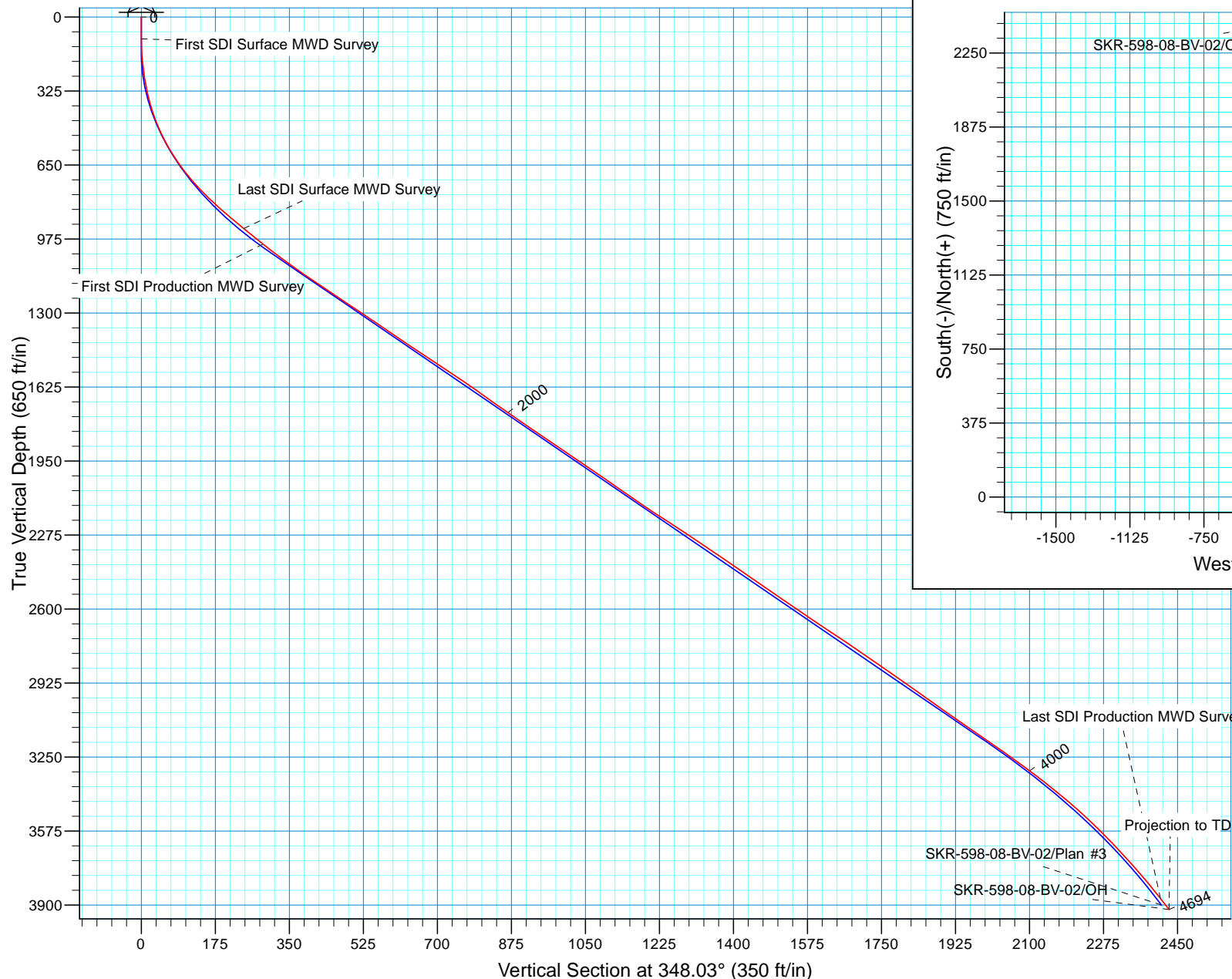
- 1. Directional Plot and Surveys**
- 2. Daily Drilling Reports**
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- 4. Graphical Job History**
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WELL DETAILS: SKR-598-08-BV-02

GL 6549.60' & RKB 12.5' @ 6562.10ft
 +N/-S +E/-W Northing Easting Latitude Longitude
 0.00 0.00 1664507.37 2179225.11 39° 37' 18.210 N 108° 24' 51.070 W



Design: OH (SKR-598-08-BV-02/OH)
 Created By: Janie Collins Date: 16:37, September 23 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



Company:	Chevron	Local Co-ordinate Reference:	Well SKR-598-08-BV-02
Project:	Garfield County, CO (NAD83)	TVD Reference:	GL 6549.60' & RKB 12.5' @ 6562.10ft
Site:	Skinner Ridge Field	MD Reference:	GL 6549.60' & RKB 12.5' @ 6562.10ft
Well:	SKR-598-08-BV-02	North Reference:	True
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	Grand Junction District

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

Site		Skinner Ridge Field			
Site Position: From:		Northing:	1,664,493.63 usft	Latitude:	39° 37' 18.075 N
	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:

Well	SKR-598-08-BV-02					
Well Position	+N/-S	0.00 ft	Northing:	1,664,507.36 usft	Latitude:	39° 37' 18.210 N
	+E/-W	0.00 ft	Easting:	2,179,225.11 usft	Longitude:	108° 24' 51.070 W
Position Uncertainty		0.00 ft	Wellhead Elevation:	ft	Ground Level:	6,549.60 ft

Wellbore	OH				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	BGGM2013	6/24/2013	10.36	65.71	51,988

Design	OH				
Audit Notes:					
Version:	1.0	Phase:	ACTUAL	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)	
	0.00	0.00	0.00	348.03	

Survey Program	Date	9/23/2013			
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
95.00	978.00	Survey #1 - Surface MWD Surveys (OH)	MWD-SDI		
1,060.00	4,694.00	Survey #2 - Production MWD Survey (OH)	MWD-SDI		

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)	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
95.00	0.38	53.28	95.00	0.19	0.25	0.13	0.40	0.40	0.00	
First SDI Surface MWD Survey										
185.00	2.81	352.94	184.96	2.56	0.22	2.46	2.94	2.70	-67.04	
277.00	5.12	347.14	276.73	8.80	-0.97	8.81	2.55	2.51	-6.30	
368.00	8.04	349.10	367.12	19.01	-3.08	19.23	3.22	3.21	2.15	
458.00	11.47	347.44	455.81	33.93	-6.22	34.48	3.82	3.81	-1.84	
549.00	16.09	349.60	544.17	55.17	-10.46	56.14	5.11	5.08	2.37	
640.00	20.05	350.65	630.66	82.98	-15.27	84.34	4.37	4.35	1.15	
731.00	24.59	345.91	714.83	116.76	-22.42	118.87	5.36	4.99	-5.21	



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Site:	Skinner Ridge Field	MD Reference:	GL 6549.60' & RKB 12.5' @ 6562.10ft
Well:	SKR-598-08-BV-02	North Reference:	True
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	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)
804.00	28.66	347.55	780.08	148.59	-29.90	151.56	5.67	5.58	2.25
890.00	31.63	347.88	854.44	190.79	-39.08	194.75	3.46	3.45	0.38
978.00	33.84	348.43	928.46	237.36	-48.84	242.33	2.53	2.51	0.63
Last SDI Surface MWD Survey									
1,060.00	33.68	349.33	996.63	282.07	-57.63	287.89	0.64	-0.20	1.10
First SDI Production MWD Survey									
1,145.00	36.72	348.23	1,066.08	330.12	-67.18	336.88	3.65	3.58	-1.29
1,231.00	37.25	345.81	1,134.78	380.53	-78.80	388.60	1.80	0.62	-2.81
1,317.00	39.30	345.00	1,202.29	432.08	-92.24	441.81	2.45	2.38	-0.94
1,402.00	39.09	349.86	1,268.18	484.47	-103.92	495.49	3.62	-0.25	5.72
1,488.00	38.69	350.11	1,335.12	537.64	-113.31	549.45	0.50	-0.47	0.29
1,573.00	37.78	349.51	1,401.88	589.41	-122.62	602.03	1.16	-1.07	-0.71
1,659.00	39.56	348.70	1,469.03	642.18	-132.78	655.75	2.15	2.07	-0.94
1,745.00	39.08	348.08	1,535.56	695.56	-143.75	710.24	0.72	-0.56	-0.72
1,830.00	38.51	348.28	1,601.81	747.68	-154.65	763.50	0.69	-0.67	0.24
1,916.00	37.03	347.99	1,669.79	799.23	-165.48	816.17	1.73	-1.72	-0.34
2,001.00	37.21	348.53	1,737.56	849.45	-175.92	867.47	0.44	0.21	0.64
2,087.00	38.88	350.37	1,805.29	901.55	-185.61	920.44	2.35	1.94	2.14
2,172.00	38.56	350.88	1,871.61	954.01	-194.27	973.56	0.53	-0.38	0.60
2,258.00	38.20	350.96	1,939.02	1,006.74	-202.69	1,026.88	0.42	-0.42	0.09
2,343.00	37.67	350.81	2,006.06	1,058.33	-210.97	1,079.08	0.63	-0.62	-0.18
2,429.00	38.18	349.97	2,073.90	1,110.45	-219.80	1,131.89	0.84	0.59	-0.98
2,514.00	37.90	349.46	2,140.85	1,161.98	-229.15	1,184.24	0.50	-0.33	-0.60
2,600.00	39.68	348.49	2,207.88	1,214.86	-239.46	1,238.11	2.19	2.07	-1.13
2,685.00	39.34	348.16	2,273.46	1,267.82	-250.40	1,292.18	0.47	-0.40	-0.39
2,771.00	38.80	348.48	2,340.22	1,320.90	-261.38	1,346.39	0.67	-0.63	0.37
2,856.00	38.21	347.52	2,406.74	1,372.66	-272.38	1,399.30	0.99	-0.69	-1.13
2,942.00	37.74	346.86	2,474.53	1,424.26	-284.11	1,452.22	0.72	-0.55	-0.77
3,027.00	37.24	346.80	2,541.98	1,474.63	-295.89	1,503.94	0.59	-0.59	-0.07
3,113.00	38.87	346.70	2,609.69	1,526.23	-308.04	1,556.93	1.90	1.90	-0.12
3,198.00	39.12	347.01	2,675.75	1,578.32	-320.21	1,610.41	0.37	0.29	0.36
3,284.00	38.69	346.35	2,742.68	1,630.87	-332.65	1,664.40	0.69	-0.50	-0.77
3,370.00	37.97	345.91	2,810.14	1,682.65	-345.43	1,717.71	0.90	-0.84	-0.51
3,455.00	37.78	346.17	2,877.24	1,733.30	-358.02	1,769.86	0.29	-0.22	0.31
3,541.00	37.45	345.63	2,945.36	1,784.21	-370.81	1,822.32	0.54	-0.38	-0.63
3,626.00	36.63	346.26	3,013.21	1,833.87	-383.25	1,873.48	1.06	-0.96	0.74
3,712.00	37.90	348.98	3,081.65	1,884.73	-394.39	1,925.54	2.42	1.48	3.16
3,797.00	38.15	349.03	3,148.61	1,936.13	-404.38	1,977.90	0.30	0.29	0.06
3,883.00	37.37	348.10	3,216.60	1,987.74	-414.81	2,030.56	1.12	-0.91	-1.08
3,968.00	36.67	348.37	3,284.47	2,037.85	-425.25	2,081.73	0.85	-0.82	0.32
4,054.00	34.55	348.23	3,354.38	2,086.88	-435.40	2,131.80	2.47	-2.47	-0.16
4,139.00	32.74	348.37	3,425.14	2,132.99	-444.95	2,178.89	2.13	-2.13	0.16
4,225.00	30.99	346.72	3,498.18	2,177.32	-454.73	2,224.29	2.27	-2.03	-1.92



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Site:	Skinner Ridge Field	MD Reference:	GL 6549.60' & RKB 12.5' @ 6562.10ft
Well:	SKR-598-08-BV-02	North Reference:	True
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	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)
4,310.00	28.58	347.31	3,571.94	2,218.46	-464.22	2,266.50	2.86	-2.84	0.69
4,396.00	26.69	347.32	3,648.13	2,257.37	-472.98	2,306.39	2.20	-2.20	0.01
4,481.00	25.68	346.74	3,724.41	2,293.93	-481.40	2,343.89	1.23	-1.19	-0.68
4,567.00	24.18	344.68	3,802.39	2,329.05	-490.32	2,380.10	2.02	-1.74	-2.40
4,642.00	23.04	343.97	3,871.11	2,357.97	-498.44	2,410.08	1.57	-1.52	-0.95
Last SDI Production MWD Survey									
4,694.00	23.04	343.97	3,918.96	2,377.53	-504.06	2,430.38	0.00	0.00	0.00
Projection to TD									

Design Annotations				
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
95.00	95.00	0.19	0.25	First SDI Surface MWD Survey
978.00	928.46	237.36	-48.84	Last SDI Surface MWD Survey
1,060.00	996.63	282.07	-57.63	First SDI Production MWD Survey
4,642.00	3,871.11	2,357.97	-498.44	Last SDI Production MWD Survey
4,694.00	3,918.96	2,377.53	-504.06	Projection to TD

Checked By: _____	Approved By: _____	Date: _____
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JOB NO.:	420913DEF53637	Report Time:	2400	1 of 11
COMPANY:	Chevron	API JOB #		
LOCATION:	Skinner Ridge Field	WORK ORDER#	165885	
RIG NAME:	Ensign 122	FIELD:	Skinner Ridge	
STATE:	Colorado	Township:	5S	
COUNTY:	Garfield	SECT\	8	98W
WELL NAME:	SKR 598-08-BV-02			

From Saturday, September 07, 2013 at 0000 to Saturday, September 07, 2013 at 2400

DRILLING SUMMARY				Drilling Parameters							
Start Depth	0.00	Rotary Hours	0.00	WOB	0	Pick UP	0	Slack Off	0	SPM	
End Depth	0.00	Circulating Hours	0.00	RAB	0	SPP	0	FlowRate	0 - 0		0
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 :		J. Franklin				Signature:				
MWD Operator1		Richard Tomlinson								
MWD Operator2										
Directional Company:		SDI								
Geologist:										
Company Man:		Brent / Joel								
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
7-Sep-13	00:00	24:00	24.00	80	0	Other	Rig Up



JOB NO.:	420913DEF53637	Report Time:	2400	2 of 11
COMPANY:	Chevron	API JOB #		
LOCATION:	Skinner Ridge Field	WORK ORDER#	165885	
RIG NAME:	Ensign 122	FIELD:	Skinner Ridge	
STATE:	Colorado	Township:	5S	
COUNTY:	Garfield	SECT\	8	98W
WELL NAME:	SKR 598-08-BV-02			

From Sunday, September 08, 2013 at 0000 to Sunday, September 08, 2013 at 2400

DRILLING SUMMARY					Drilling Parameters							
Start Depth	80.00	Rotary Hours	4.17	WOB	10	Pick UP	55	Slack Off	50	SPM		
End Depth	576.00	Circulating Hours	0.00	RAB	52	SPP	830	FlowRate	0 - 493	170		
Total Drilled:	496.00	Avg. Total ROP:	48.79	Mud Data								
Total Rotary Drilled:	166.00	Avg. Rotary ROP:	39.84	Type				PV	24	SOLID	1.2	
Total Drilled Sliding:	330.00	Avg. Slide ROP:	55.00	Weight	8.5	GAS	0	YP	24	BHT°	0	
Slide Hours:	6.00	Percent Rotary:	33.47	Viscosity	88	SAND	0.5	PH	0	Flow T°	0	
Below Rotary Hrs.	24.00	Percent Slide:	66.53	Chlorides	400	WL	0.15			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 :	J. Franklin			Signature:								
MWD Operator1	Richard Tomlinson											
MWD Operator2												
Directional Company:	SDI											
Geologist:												
Company Man:	Brent / Joel											
Incl. In:	0	Azm. In:	0	Incl. Out:	11.47	Azm. Out:	347.44					

GENERAL COMMENT

Date	Start Time	End Time	Hours	Start Depth	End Depth	Activity Code	COMMENT
8-Sep-13	00:00	10:30	10.50	80	80	Other	RIGGING UP
8-Sep-13	10:30	11:30	1.00	80	80	Change BHA	Change BHA
8-Sep-13	11:30	12:00	0.50	80	80	TIH	SCRIBE TOOLS
8-Sep-13	12:00	14:00	2.00	80	152	Drilling	DRILL
8-Sep-13	14:00	14:05	0.08	152	152	Survey & Conn.	Survey & Conn.
8-Sep-13	14:05	15:00	0.92	152	182	Sliding	Sliding
8-Sep-13	15:00	15:15	0.25	182	182	Survey & Conn.	Survey & Conn.
8-Sep-13	15:15	15:35	0.33	182	195	Sliding	Sliding - (WOB:5;GPM :300;TFO:348)
8-Sep-13	15:35	16:40	1.08	195	242	Drilling	Drilling - (WOB:5;GPM :300;RPM:40)
8-Sep-13	16:40	16:50	0.17	242	242	Survey & Conn.	Survey & Conn.
8-Sep-13	16:50	17:30	0.67	242	272	Sliding	Sliding - (WOB:5;GPM :300;TFO:348)
8-Sep-13	17:30	17:35	0.08	272	272	Survey & Conn.	Survey & Conn.
8-Sep-13	17:35	18:25	0.83	272	303	Sliding	Sliding - (WOB:5;GPM :300;TFO:348)
8-Sep-13	18:25	18:30	0.08	303	303	Survey & Conn.	Survey & Conn.
8-Sep-13	18:30	19:20	0.83	303	334	Drilling	Drilling - (WOB:5;GPM :300;RPM:40)
8-Sep-13	19:20	19:25	0.08	334	334	Survey & Conn.	Survey & Conn.
8-Sep-13	19:25	20:05	0.67	334	364	Sliding	Sliding - (WOB:5;GPM :300;TFO:348)
8-Sep-13	20:05	20:10	0.08	364	364	Survey & Conn.	Survey & Conn.
8-Sep-13	20:10	20:50	0.67	364	394	Sliding	Sliding - (WOB:5;GPM :300;TFO:348)
8-Sep-13	20:50	20:55	0.08	394	394	Survey & Conn.	Survey & Conn.
8-Sep-13	20:55	21:10	0.25	394	409	Sliding	Sliding - (WOB:5;GPM :300;TFO:348)

Date	Start Time	End Time	Hours	Start Depth	End Depth	Activity Code	COMMENT
8-Sep-13	21:10	21:25	0.25	409	425	Drilling	Drilling - (WOB:5;GPM :300;RPM:40)
8-Sep-13	21:25	21:30	0.08	425	425	Survey & Conn.	Survey & Conn.
8-Sep-13	21:30	21:55	0.42	425	454	Sliding	Sliding - (WOB:10;GPM :493;TFO:0)
8-Sep-13	21:55	22:00	0.08	454	454	Survey & Conn.	Survey & Conn.
8-Sep-13	22:00	22:20	0.33	454	485	Sliding	Sliding - (WOB:10;GPM :493;TFO:0)
8-Sep-13	22:20	22:30	0.17	485	485	Survey & Conn.	Survey & Conn.
8-Sep-13	22:30	22:55	0.42	485	515	Sliding	Sliding - (WOB:10;GPM :493;TFO:0)
8-Sep-13	22:55	23:05	0.17	515	515	Survey & Conn.	Survey & Conn.
8-Sep-13	23:05	23:20	0.25	515	546	Sliding	Sliding - (WOB:10;GPM :493;TFO:0)
8-Sep-13	23:20	23:35	0.25	546	546	Survey & Conn.	Survey & Conn.
8-Sep-13	23:35	23:50	0.25	546	576	Sliding	Sliding - (WOB:10;GPM :493;TFO:0)
8-Sep-13	23:50	24:00	0.17	576	576	Survey & Conn.	Survey & Conn.



JOB NO.:	420913DEF53637	Report Time:	2400	3 of 11
COMPANY:	Chevron	API JOB #		
LOCATION:	Skinner Ridge Field	WORK ORDER#	165885	
RIG NAME:	Ensign 122	FIELD:	Skinner Ridge	
STATE:	Colorado	Township:	5S	
COUNTY:	Garfield	SECT\	8	98W
WELL NAME:	SKR 598-08-BV-02			

From Monday, September 09, 2013 at 0000 to Monday, September 09, 2013 at 2400

DRILLING SUMMARY					Drilling Parameters							
Start Depth	576.00	Rotary Hours	1.75	WOB	5	Pick UP	55	Slack Off	50	SPM		
End Depth	1035.00	Circulating Hours	1.67	RAB	52	SPP	800	FlowRate	300 - 493	160		
Total Drilled:	459.00	Avg. Total ROP:	70.62	Mud Data								
Total Rotary Drilled:	135.00	Avg. Rotary ROP:	77.14	Type				PV	24	SOLID	1.2	
Total Drilled Sliding:	324.00	Avg. Slide ROP:	68.21	Weight	8.5	GAS	0	YP	24	BHT°	0	
Slide Hours:	4.75	Percent Rotary:	29.41	Viscosity	88	SAND	0.5	PH	0	Flow T°	0	
Below Rotary Hrs.	24.00	Percent Slide:	70.59	Chlorides	400	WL	0.15			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 :	J. Franklin			Signature:								
MWD Operator1	Richard Tomlinson											
MWD Operator2												
Directional Company:	SDI											
Geologist:												
Company Man:	Brent / Joel											
Incl. In:	11.47	Azm. In:	347.44	Incl. Out:	33.85	Azm. Out:	348.46					

GENERAL COMMENT

Date	Start Time	End Time	Hours	Start Depth	End Depth	Activity Code	COMMENT
9-Sep-13	00:00	00:20	0.33	576	606	Sliding	Sliding - (WOB:10;GPM :493;TFO:0)
9-Sep-13	00:20	00:30	0.17	606	606	Survey & Conn.	Survey & Conn.
9-Sep-13	00:30	00:55	0.42	606	637	Sliding	Sliding - (WOB:10;GPM :493;TFO:0)
9-Sep-13	00:55	01:10	0.25	637	637	Survey & Conn.	Survey & Conn.
9-Sep-13	01:10	01:30	0.33	637	667	Sliding	Sliding - (WOB:10;GPM :493;TFO:0)
9-Sep-13	01:30	01:55	0.42	667	667	Circulating	Circulating Pump LCM Sweep
9-Sep-13	01:55	02:00	0.08	667	667	Survey & Conn.	Survey & Conn.
9-Sep-13	02:00	02:20	0.33	667	697	Sliding	Sliding - (WOB:12;GPM :464;TFO:-30)
9-Sep-13	02:20	02:35	0.25	697	697	Survey & Conn.	Survey & Conn.
9-Sep-13	02:35	02:55	0.33	697	727	Sliding	Sliding - (WOB:12;GPM :464;TFO:-30)
9-Sep-13	02:55	03:05	0.17	727	727	Survey & Conn.	Survey & Conn.
9-Sep-13	03:05	03:35	0.50	727	758	Sliding	Sliding - (WOB:12;GPM :464;TFO:0)
9-Sep-13	03:35	03:45	0.17	758	758	Survey & Conn.	Survey & Conn.
9-Sep-13	03:45	04:10	0.42	758	788	Sliding	Sliding - (WOB:12;GPM :464;TFO:0)
9-Sep-13	04:10	04:20	0.17	788	788	Survey & Conn.	Survey & Conn.
9-Sep-13	04:20	04:40	0.33	788	813	Sliding	Sliding - (WOB:12;GPM :464;TFO:0)
9-Sep-13	04:40	04:45	0.08	813	818	Drilling	Drilling - (WOB:5; :300;RPM:40)
9-Sep-13	04:45	05:00	0.25	818	818	Survey & Conn.	Survey & Conn.
9-Sep-13	05:00	05:15	0.25	818	843	Drilling	Drilling - (WOB:5; :300;RPM:40)
9-Sep-13	05:15	05:25	0.17	843	863	Sliding	Sliding - (WOB:12; :464;TFO:0)
9-Sep-13	05:25	05:30	0.08	863	863	Survey & Conn.	Survey & Conn.

Date	Start Time	End Time	Hours	Start Depth	End Depth	Activity Code	COMMENT
9-Sep-13	05:30	06:25	0.92	863	890	Sliding	Sliding - (WOB:12; :464;TFO:0)
9-Sep-13	06:25	06:35	0.17	890	904	Drilling	Drilling - (WOB:5; :300;RPM:40)
9-Sep-13	06:35	06:40	0.08	904	904	Survey & Conn.	Survey & Conn.
9-Sep-13	06:40	07:00	0.33	904	947	Drilling	Drilling - (WOB:5; :300;RPM:40)
9-Sep-13	07:00	07:05	0.08	947	947	Survey & Conn.	Survey & Conn.
9-Sep-13	07:05	07:45	0.67	947	987	Sliding	Sliding - (WOB:12; :464;TFO:0)
9-Sep-13	07:45	08:40	0.92	987	1035	Drilling	Drilling - (WOB:5; :300;RPM:40)
9-Sep-13	08:40	08:45	0.08	1035	1035	Survey & Conn.	Survey & Conn.
9-Sep-13	08:45	10:00	1.25	1035	1035	Circulating	Circulating
9-Sep-13	10:00	12:00	2.00	1035	1035	POOH	POOH
9-Sep-13	12:00	12:15	0.25	1035	1035	Change BHA	Change BHA
9-Sep-13	12:15	24:00	11.75	1035	1035	Other	CASING OPERATIONS



JOB NO.:	420913DEF53637	Report Time:	2400	4 of 11
COMPANY:	Chevron	API JOB #		
LOCATION:	Skinner Ridge Field	WORK ORDER#	165885	
RIG NAME:	Ensign 122	FIELD:	Skinner Ridge	
STATE:	Colorado	Township:	5S	
COUNTY:	Garfield	SECT\	8	98W
WELL NAME:	SKR 598-08-BV-02			

From Tuesday, September 10, 2013 at 0000 to Tuesday, September 10, 2013 at 2400

DRILLING SUMMARY					Drilling Parameters									
Start Depth	0.00	Rotary Hours	0.00	WOB	5	Pick UP	55	Slack Off	50	SPM				
End Depth	0.00	Circulating Hours	0.00	RAB	52	SPP	800	FlowRate	300 - 300	160				
Total Drilled:	0.00	Avg. Total ROP:	NA	Mud Data										
Total Rotary Drilled:	0.00	Avg. Rotary ROP:	NA	Type	LSDN					PV	16	SOLID	3.5	
Total Drilled Sliding:	0.00	Avg. Slide ROP:	NA	Weight	9	GAS	0	YP	16	BHT°	0			
Slide Hours:	0.00	Percent Rotary:	NA	Viscosity	65	SAND	0.75	PH	9	Flow T°	0			
Below Rotary Hrs.	24.00	Percent Slide:	NA	Chlorides	350	WL	0.35				Oil %	0		
PERSONNEL					cASING					BHA				
Lead Directional :		Ed. Mackey			Size		Lb/ft		Set Depth		N/A			
Second Directional :		J. Franklin			Signature:									
MWD Operator1		Kyle Templ 3686												
MWD Operator2														
Directional Company:		SDI												
Geologist:														
Company Man:		Brent / Joel												
Incl. In:	33.85	Azm. In:	348.46	Incl. Out:	33.85	Azm. Out:	348.46							

GENERAL COMMENT

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
 D&C=18 HRS
 Motor yield = 5 to a 6.5 / 100
 Kick off at 150 ft. build to 33.8 degrees with a 348 azmith had to slide almost 100% to achive a 4-5 degree / 100 dogleg

Date	Start Time	End Time	Hours	Start Depth	End Depth	Activity Code	COMMENT
10-Sep-13	00:00	24:00	24.00	1035	1035	Other	NIPPLE UP & TEST BOEs



JOB NO.:	420913DEF53637	Report Time:	2400	5 of 11
COMPANY:	Chevron	API JOB #		
LOCATION:	Skinner Ridge Field	WORK ORDER#	165885	
RIG NAME:	Ensign 122	FIELD:	Skinner Ridge	
STATE:	Colorado	Township:	5S	
COUNTY:	Garfield	SECT\	8	98W
WELL NAME:	SKR 598-08-BV-02			

From Wednesday, September 11, 2013 at 0000 to Wednesday, September 11, 2013 at 2400

DRILLING SUMMARY				Drilling Parameters							
Start Depth	1035.00	Rotary Hours	9.83	WOB	15	Pick UP	65	Slack Off	45	SPM	
End Depth	2352.00	Circulating Hours	3.25	RAB	56	SPP	1500	FlowRate	300 - 493	170	
Total Drilled:	1317.00	Avg. Total ROP:	117.07	Mud Data							
Total Rotary Drilled:	1160.00	Avg. Rotary ROP:	117.97	Type	LSDN			PV	16	SOLID	3.5
Total Drilled Sliding:	157.00	Avg. Slide ROP:	110.82	Weight	9	GAS	0	YP	16	BHT°	0
Slide Hours:	1.42	Percent Rotary:	88.08	Viscosity	65	SAND	0.75	PH	9	Flow T°	0
Below Rotary Hrs.	23.50	Percent Slide:	11.92	Chlorides	350	WL	0.35			Oil %	0
PERSONNEL				cASING					BHA		
Lead Directional :	Ed. Mackey			Size	Lb/ft	Set Depth		BHA # 2:7 7/8 BIT / W 5X14s, 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, xover,			
Second Directional :	J. Franklin			Signature:							
MWD Operator1	Kyle Templ 3686										
MWD Operator2											
Directional Company:	SDI										
Geologist:											
Company Man:	Brent / Joel										
Incl. In:	33.85	Azm. In:	348.46	Incl. Out:	38.2	Azm. Out:	350.96				

GENERAL COMMENT

Date	Start Time	End Time	Hours	Start Depth	End Depth	Activity Code	COMMENT
11-Sep-13	00:00	05:00	5.00	1035	1035	Other	casing opps BOP TEST
11-Sep-13	05:00	06:20	1.33	1035	1035	Change BHA	MAKE UP 6.5 DIR. TOOLS
11-Sep-13	06:50	07:10	0.33	1035	1035	TIH	TIH
11-Sep-13	07:10	10:25	3.25	1035	1035	Reaming	reaming
11-Sep-13	10:25	11:15	0.83	1035	1112	Drilling	Drilling - (WOB:5;GPM :300;RPM:40)
11-Sep-13	11:15	11:25	0.17	1112	1112	Survey & Conn.	Survey & Conn. @1060' Inc 33.68° Azm 349.33°
11-Sep-13	11:25	11:35	0.17	1112	1152	Sliding	Sliding - (WOB:12;GPM :464;TFO:15)
11-Sep-13	11:35	12:00	0.42	1152	1197	Drilling	Drilling - (WOB:5;GPM :300;RPM:40)
11-Sep-13	12:00	12:10	0.17	1197	1197	Survey & Conn.	Survey & Conn. @1145' Inc 36.72° Azm 348.23°
11-Sep-13	12:10	12:40	0.50	1197	1212	Sliding	Sliding - (WOB:12;GPM :464;TFO:0)
11-Sep-13	12:40	13:15	0.58	1212	1283	Drilling	Drilling - (WOB:5;GPM :300;RPM:40)
11-Sep-13	13:15	13:25	0.17	1283	1283	Survey & Conn.	Survey & Conn. @1231' Inc 37.25° Azm 345.81°
11-Sep-13	13:25	13:45	0.33	1283	1315	Sliding	Sliding - (WOB:12;GPM :464;TFO:0)
11-Sep-13	13:45	14:10	0.42	1315	1369	Drilling	Drilling - (WOB:5;GPM :300;RPM:40)
11-Sep-13	14:10	14:20	0.17	1369	1369	Survey & Conn.	Survey & Conn. @1317' Inc 39.3° Azm 345°
11-Sep-13	14:20	15:10	0.83	1369	1454	Drilling	Drilling - (WOB:5;GPM :300;RPM:40)
11-Sep-13	15:10	15:20	0.17	1454	1454	Survey & Conn.	Survey & Conn. @1402' Inc 39.09° Azm 349.86°
11-Sep-13	15:20	16:45	1.42	1454	1540	Drilling	Drilling - (WOB:5;GPM :300;RPM:40)
11-Sep-13	16:45	16:50	0.08	1540	1540	Survey & Conn.	Survey & Conn. @1488' Inc 38.69° Azm 350.11°
11-Sep-13	16:50	17:15	0.42	1540	1625	Drilling	Drilling - (WOB:5;GPM :300;RPM:40)
11-Sep-13	17:15	17:20	0.08	1625	1625	Survey & Conn.	Survey & Conn. @1573' Inc 37.78° Azm 349.51°

Date	Start Time	End Time	Hours	Start Depth	End Depth	Activity Code	COMMENT
11-Sep-13	17:20	17:25	0.08	1625	1645	Sliding	Sliding - (WOB:12;GPM :464;TFO:20)
11-Sep-13	17:25	17:50	0.42	1645	1711	Drilling	Drilling - (WOB:5;GPM :300;RPM:40)
11-Sep-13	17:50	18:00	0.17	1711	1711	Survey & Conn.	Survey & Conn.@1659' Inc 39.56° Azm 348.7°
11-Sep-13	18:00	18:35	0.58	1711	1797	Drilling	Drilling - (WOB:5;GPM :300;RPM:40)
11-Sep-13	18:35	18:45	0.17	1797	1797	Survey & Conn.	Survey & Conn.@1745' Inc 39.08° Azm 348.08°
11-Sep-13	18:45	19:25	0.67	1797	1882	Drilling	Drilling - (WOB:5;GPM :300;RPM:40)
11-Sep-13	19:25	19:35	0.17	1882	1882	Survey & Conn.	Survey & Conn.@1830' Inc 38.51° Azm 348.28°
11-Sep-13	19:35	20:15	0.67	1882	1968	Drilling	Drilling - (WOB:15;GPM :493;RPM:40)
11-Sep-13	20:15	20:25	0.17	1968	1968	Survey & Conn.	Survey & Conn.@1916' Inc 37.03° Azm 347.99°
11-Sep-13	20:25	20:35	0.17	1968	1988	Sliding	Sliding - (WOB:20;GPM :493;TFO:0)
11-Sep-13	20:35	21:15	0.67	1988	2053	Drilling	Drilling - (WOB:15;GPM :493;RPM:40)
11-Sep-13	21:15	21:25	0.17	2053	2053	Survey & Conn.	Survey & Conn.@2001' Inc 37.21° Azm 348.53°
11-Sep-13	21:25	21:35	0.17	2053	2083	Sliding	Sliding - (WOB:20;GPM :493;TFO:0)
11-Sep-13	21:35	22:00	0.42	2083	2139	Drilling	Drilling - (WOB:15;GPM :493;RPM:40)
11-Sep-13	22:00	22:10	0.17	2139	2139	Survey & Conn.	Survey & Conn.@2087' Inc 38.88° Azm 350.37°
11-Sep-13	22:10	22:50	0.67	2139	2224	Drilling	Drilling - (WOB:15;GPM :493;RPM:40)
11-Sep-13	22:50	23:00	0.17	2224	2224	Survey & Conn.	Survey & Conn.@2172' Inc 38.56° Azm 350.88°
11-Sep-13	23:00	23:35	0.58	2224	2310	Drilling	Drilling - (WOB:15;GPM :493;RPM:40)
11-Sep-13	23:35	23:45	0.17	2310	2310	Survey & Conn.	Survey & Conn.@2258' Inc 38.2° Azm 350.96°
11-Sep-13	23:45	24:00	0.25	2310	2352	Drilling	Drilling - (WOB:15;GPM :493;RPM:40)



JOB NO.:	420913DEF53637	Report Time:	2400	6 of 11
COMPANY:	Chevron	API JOB #		
LOCATION:	Skinner Ridge Field	WORK ORDER#	165885	
RIG NAME:	Ensign 122	FIELD:	Skinner Ridge	
STATE:	Colorado	Township:	5S	
COUNTY:	Garfield	SECT\	8	98W
WELL NAME:	SKR 598-08-BV-02			

From Thursday, September 12, 2013 at 0000 to Thursday, September 12, 2013 at 2400

DRILLING SUMMARY				Drilling Parameters							
Start Depth	2352.00	Rotary Hours	16.83	WOB	15	Pick UP	87	Slack Off	57	SPM	
End Depth	3678.00	Circulating Hours	2.08	RAB	69	SPP	2000	FlowRate	493 - 493	170	
Total Drilled:	1326.00	Avg. Total ROP:	71.04	Mud Data							
Total Rotary Drilled:	1253.00	Avg. Rotary ROP:	74.44	Type	LSDN			PV	16	SOLID	3.5
Total Drilled Sliding:	73.00	Avg. Slide ROP:	39.82	Weight	9	GAS	0	YP	16	BHT°	0
Slide Hours:	1.83	Percent Rotary:	94.49	Viscosity	65	SAND	0.75	PH	9	Flow T°	0
Below Rotary Hrs.	24.00	Percent Slide:	5.51	Chlorides	350	WL	0.35			Oil %	0
PERSONNEL				cASING					BHA		
Lead Directional :	Ed. Mackey			Size	Lb/ft	Set Depth		BHA # 2:7 7/8 BIT / W 5X14s, 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, xover,			
Second Directional :	J. Franklin			Signature:							
MWD Operator1	L. Kristy										
MWD Operator2											
Directional Company:	SDI										
Geologist:											
Company Man:	Brent / Joel										
Incl. In:	38.2	Azm. In:	350.96	Incl. Out:	37.45	Azm. Out:	345.63				

GENERAL COMMENT

Date	Start Time	End Time	Hours	Start Depth	End Depth	Activity Code	COMMENT
12-Sep-13	00:00	00:30	0.50	2352	2352	Rig Service-Inhole	Rig Service-Inhole
12-Sep-13	00:30	00:45	0.25	2352	2395	Drilling	Drilling - (WOB:15;GPM :493;RPM:40)
12-Sep-13	00:45	00:50	0.08	2395	2395	Survey & Conn.	Survey & Conn.@2343' Inc 37.67° Azm 350.81°
12-Sep-13	00:50	01:05	0.25	2395	2415	Sliding	Sliding - (WOB:20;GPM :493;TFO:0)
12-Sep-13	01:05	02:00	0.92	2415	2415	Reaming	work pipe tight hole pump sweep
12-Sep-13	02:00	02:35	0.58	2415	2481	Drilling	Drilling - (WOB:15;GPM :493;RPM:40)
12-Sep-13	02:35	02:45	0.17	2481	2481	Survey & Conn.	Survey & Conn.@2429' Inc 38.18° Azm 349.97°
12-Sep-13	02:45	03:30	0.75	2481	2566	Drilling	Drilling - (WOB:15;GPM :493;RPM:40)
12-Sep-13	03:30	03:40	0.17	2566	2566	Survey & Conn.	Survey & Conn.@2514' Inc 37.9° Azm 349.46°
12-Sep-13	03:40	04:10	0.50	2566	2594	Sliding	Sliding - (WOB:20;GPM :493;TFO:-30)
12-Sep-13	04:10	04:50	0.67	2594	2652	Drilling	Drilling - (WOB:15;GPM :493;RPM:40)
12-Sep-13	04:50	05:00	0.17	2652	2652	Survey & Conn.	Survey & Conn.@2600' Inc 39.68° Azm 348.49°
12-Sep-13	05:00	05:50	0.83	2652	2737	Drilling	Drilling - (WOB:15;GPM :493;RPM:40)
12-Sep-13	05:50	06:00	0.17	2737	2737	Survey & Conn.	Survey & Conn.@2685' Inc 39.34° Azm 348.16°
12-Sep-13	06:00	07:00	1.00	2737	2823	Drilling	Drilling - (WOB:15;GPM :493;RPM:40)
12-Sep-13	07:00	07:10	0.17	2823	2823	Survey & Conn.	Survey & Conn.@2771' Inc 38.8° Azm 348.48°
12-Sep-13	07:10	08:00	0.83	2823	2908	Drilling	Drilling - (WOB:15;GPM :493;RPM:40)
12-Sep-13	08:00	08:10	0.17	2908	2908	Survey & Conn.	Survey & Conn.@2856' Inc 38.21° Azm 347.52°
12-Sep-13	08:10	09:10	1.00	2908	2994	Drilling	Drilling - (WOB:15;GPM :493;RPM:40)
12-Sep-13	09:10	09:20	0.17	2994	2994	Survey & Conn.	Survey & Conn.@2942' Inc 37.74° Azm 346.86°
12-Sep-13	09:20	10:30	1.17	2994	3079	Drilling	Drilling - (WOB:15;GPM :493;RPM:40)

Date	Start Time	End Time	Hours	Start Depth	End Depth	Activity Code	COMMENT
12-Sep-13	10:30	10:35	0.08	3079	3079	Survey & Conn.	Survey & Conn.@3027' Inc 37.24° Azm 346.8°
12-Sep-13	10:35	10:45	0.17	3079	3089	Drilling	Drilling - (WOB:15;GPM :493;RPM:40)
12-Sep-13	10:45	11:50	1.08	3089	3114	Sliding	Sliding - (WOB:20;GPM :493;TFO:-30)
12-Sep-13	11:50	12:25	0.58	3114	3165	Drilling	Drilling - (WOB:15;GPM :493;RPM:40)
12-Sep-13	12:25	12:35	0.17	3165	3165	Survey & Conn.	Survey & Conn.@3113' Inc 38.87° Azm 346.7°
12-Sep-13	12:35	13:15	0.67	3165	3165	Rig Service-Inhole	Rig Service-Inhole
12-Sep-13	13:15	14:35	1.33	3165	3250	Drilling	Drilling - (WOB:15;GPM :493;RPM:40)
12-Sep-13	14:35	14:45	0.17	3250	3250	Survey & Conn.	Survey & Conn.@3198' Inc 39.12° Azm 347.01°
12-Sep-13	14:45	16:10	1.42	3250	3322	Drilling	Drilling - (WOB:15; :493;RPM:40)
12-Sep-13	16:10	16:35	0.42	3322	3322	Rig repair	Rig repair
12-Sep-13	16:35	17:15	0.67	3322	3336	Drilling	Drilling - (WOB:15; :493;RPM:40)
12-Sep-13	17:15	17:20	0.08	3336	3336	Survey & Conn.	Survey & Conn.@3284' Inc 38.69° Azm 346.35°
12-Sep-13	17:20	19:00	1.67	3336	3422	Drilling	Drilling - (WOB:15; :493;RPM:40)
12-Sep-13	19:00	19:10	0.17	3422	3422	Survey & Conn.	Survey & Conn.@3370' Inc 37.97° Azm 345.91°
12-Sep-13	19:10	19:40	0.50	3422	3422	Rig repair	Rig repair WORK ON PUMP
12-Sep-13	19:40	21:20	1.67	3422	3507	Drilling	Drilling - (WOB:15; :493;RPM:40)
12-Sep-13	21:20	21:35	0.25	3507	3507	Survey & Conn.	Survey & Conn.@3455' Inc 37.78° Azm 346.17°
12-Sep-13	21:35	22:45	1.17	3507	3593	Drilling	Drilling - (WOB:15; :493;RPM:40)
12-Sep-13	22:45	22:55	0.17	3593	3593	Survey & Conn.	Survey & Conn.@3541' Inc 37.45° Azm 345.63°
12-Sep-13	22:55	24:00	1.08	3593	3678	Drilling	Drilling - (WOB:15; :493;RPM:40)



JOB NO.:	420913DEF53637	Report Time:	2400	7 of 11
COMPANY:	Chevron	API JOB #		
LOCATION:	Skinner Ridge Field	WORK ORDER#	165885	
RIG NAME:	Ensign 122	FIELD:	Skinner Ridge	
STATE:	Colorado	Township:	5S	
COUNTY:	Garfield	SECT\	8	98W
WELL NAME:	SKR 598-08-BV-02			

From Friday, September 13, 2013 at 0000 to Friday, September 13, 2013 at 2400

DRILLING SUMMARY				Drilling Parameters							
Start Depth	3678.00	Rotary Hours	3.67	WOB	15	Pick UP	87	Slack Off	57	SPM	
End Depth	4000.00	Circulating Hours	0.50	RAB	69	SPP	2000	FlowRate	493 - 493	170	
Total Drilled:	322.00	Avg. Total ROP:	75.76	Mud Data							
Total Rotary Drilled:	292.00	Avg. Rotary ROP:	79.64	Type	LSDN	PV	16	SOLID	3.5		
Total Drilled Sliding:	30.00	Avg. Slide ROP:	51.43	Weight	9	GAS	0	YP	16	BHT°	0
Slide Hours:	0.58	Percent Rotary:	90.68	Viscosity	65	SAND	0.75	PH	9	Flow T°	0
Below Rotary Hrs.	24.00	Percent Slide:	9.32	Chlorides	350	WL	0.35			Oil %	0

PERSONNEL						cASING			BHA
Lead Directional :		Ed. Mackey				Size	Lb/ft	Set Depth	BHA # 2:7 7/8 BIT / W 5X14s, 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, xover,
Second Directional :		J. Franklin							
MWD Operator1		L. Kristy							
MWD Operator2									
Directional Company:		SDI							
Geologist:									
Company Man:		Greg / Joel				Signature:			
Incl. In:	37.45	Azm. In:	345.63	Incl. Out:	37.37				

GENERAL COMMENT

Date	Start Time	End Time	Hours	Start Depth	End Depth	Activity Code	COMMENT
13-Sep-13	00:00	00:30	0.50	3678	3678	Rig Service-Inhole	Rig Service-Inhole
13-Sep-13	00:30	00:40	0.17	3678	3678	Survey & Conn.	Survey & Conn. @3626' Inc 36.63° Azm 346.26°
13-Sep-13	00:40	01:15	0.58	3678	3708	Sliding	Sliding - (WOB:25;GPM :493;TFO:40)
13-Sep-13	01:15	02:10	0.92	3708	3764	Drilling	Drilling - (WOB:15;GPM :493;RPM:60)
13-Sep-13	02:10	02:20	0.17	3764	3764	Survey & Conn.	Survey & Conn. @3712' Inc 37.9° Azm 348.98°
13-Sep-13	02:20	03:10	0.83	3764	3849	Drilling	Drilling - (WOB:15;GPM :493;RPM:60)
13-Sep-13	03:10	03:20	0.17	3849	3849	Survey & Conn.	Survey & Conn. @3797' Inc 38.15° Azm 349.03°
13-Sep-13	03:20	04:30	1.17	3849	3935	Drilling	Drilling - (WOB:15; :493;RPM:60)
13-Sep-13	04:30	04:35	0.08	3935	3935	Survey & Conn.	Survey & Conn. @3883' Inc 37.37° Azm 348.1°
13-Sep-13	04:35	04:50	0.25	3935	3961	Drilling	Drilling - (WOB:15; :493;RPM:60)
13-Sep-13	04:50	05:35	0.75	3961	3961	Rig repair	Rig repair WORK ON PUMPS
13-Sep-13	05:35	06:05	0.50	3961	4000	Drilling	Drilling - (WOB:15; :493;RPM:60)
13-Sep-13	06:05	24:00	17.92	4000	4000	Rig repair	Rig repair work on pumps



JOB NO.:	420913DEF53637	Report Time:	2400	8 of 11
COMPANY:	Chevron	API JOB #		
LOCATION:	Skinner Ridge Field	WORK ORDER#	165885	
RIG NAME:	Ensign 122	FIELD:	Skinner Ridge	
STATE:	Colorado	Township:	5S	
COUNTY:	Garfield	SECT\	8	98W
WELL NAME:	SKR 598-08-BV-02			

From Saturday, September 14, 2013 at 0000 to Saturday, September 14, 2013 at 2400

DRILLING SUMMARY				Drilling Parameters							
Start Depth	0.00	Rotary Hours	0.00	WOB	15	Pick UP	87	Slack Off	57	SPM	
End Depth	0.00	Circulating Hours	0.00	RAB	69	SPP	2000	FlowRate	493 - 493	170	
Total Drilled:	0.00	Avg. Total ROP:	NA	Mud Data							
Total Rotary Drilled:	0.00	Avg. Rotary ROP:	NA	Type	LSDN			PV	16	SOLID	3.5
Total Drilled Sliding:	0.00	Avg. Slide ROP:	NA	Weight	9	GAS	0	YP	16	BHT°	0
Slide Hours:	0.00	Percent Rotary:	NA	Viscosity	65	SAND	0.75	PH	9	Flow T°	0
Below Rotary Hrs.	24.00	Percent Slide:	NA	Chlorides	350	WL	0.35			Oil %	0
PERSONNEL				cASING					BHA		
Lead Directional :	Ed. Mackey			Size	Lb/ft	Set Depth		BHA # 2:7 7/8 BIT / W 5X14s, 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, xover,			
Second Directional :	J. Franklin			Signature:							
MWD Operator1	L. Kristy										
MWD Operator2											
Directional Company:	SDI										
Geologist:											
Company Man:	Greg / Joel										
Incl. In:	37.37	Azm. In:	348.1	Incl. Out:	37.37	Azm. Out:	348.1				

GENERAL COMMENT

Date	Start Time	End Time	Hours	Start Depth	End Depth	Activity Code	COMMENT
14-Sep-13	00:00	14:15	14.25	4000	4000	Rig repair	Rig repair work on pumps
14-Sep-13	14:15	24:00	9.75	4000	4000	Short Trip	Short Trip



JOB NO.:	420913DEF53637	Report Time:	2400	9 of 11
COMPANY:	Chevron	API JOB #		
LOCATION:	Skinner Ridge Field	WORK ORDER#	165885	
RIG NAME:	Ensign 122	FIELD:	Skinner Ridge	
STATE:	Colorado	Township:	5S	
COUNTY:	Garfield	SECT\	8	98W
WELL NAME:	SKR 598-08-BV-02			

From Sunday, September 15, 2013 at 0000 to Sunday, September 15, 2013 at 2400

DRILLING SUMMARY				Drilling Parameters							
Start Depth	4000.00	Rotary Hours	9.58	WOB	15	Pick UP	87	Slack Off	57	SPM	
End Depth	4694.00	Circulating Hours	4.08	RAB	69	SPP	2000	FlowRate	493 - 493	170	
Total Drilled:	694.00	Avg. Total ROP:	54.79	Mud Data							
Total Rotary Drilled:	600.00	Avg. Rotary ROP:	62.61	Type	LSDN			PV	16	SOLID	3.5
Total Drilled Sliding:	94.00	Avg. Slide ROP:	30.49	Weight	9	GAS	0	YP	16	BHT°	0
Slide Hours:	3.08	Percent Rotary:	86.46	Viscosity	65	SAND	0.75	PH	9	Flow T°	0
Below Rotary Hrs.	24.00	Percent Slide:	13.54	Chlorides	350	WL	0.35			Oil %	0
PERSONNEL				cASING					BHA		
Lead Directional :	Ed. Mackey			Size	Lb/ft	Set Depth		BHA # 2:7 7/8 BIT / W 5X14s, 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, xover,			
Second Directional :	J. Franklin			Signature:							
MWD Operator1	L. Kristy										
MWD Operator2											
Directional Company:	SDI										
Geologist:											
Company Man:	Greg / Joel										
Incl. In:	37.37	Azm. In:	348.1	Incl. Out:	23.04	Azm. Out:	343.97				

GENERAL COMMENT

Date	Start Time	End Time	Hours	Start Depth	End Depth	Activity Code	COMMENT
15-Sep-13	00:00	04:30	4.50	4000	4000	Short Trip	Short Trip
15-Sep-13	04:30	05:00	0.50	4000	4000	TIH	TIH
15-Sep-13	05:00	06:10	1.17	4000	4020	Drilling	Drilling - (WOB:15;GPM :493;RPM:60)
15-Sep-13	06:10	06:15	0.08	4020	4020	Survey & Conn.	Survey & Conn.@3968' Inc 36.67° Azm 348.37°
15-Sep-13	06:15	07:00	0.75	4020	4035	Sliding	Sliding - (WOB:25;GPM :493;TFO:40)
15-Sep-13	07:00	08:00	1.00	4035	4106	Drilling	Drilling - (WOB:15;GPM :493;RPM:60)
15-Sep-13	08:00	08:10	0.17	4106	4106	Survey & Conn.	Survey & Conn.@4054' Inc 34.55° Azm 348.23°
15-Sep-13	08:10	08:20	0.17	4106	4116	Drilling	Drilling - (WOB:15;GPM :493;RPM:60)
15-Sep-13	08:20	08:30	0.17	4116	4126	Sliding	Sliding - (WOB:25;GPM :493;TFO:160)
15-Sep-13	08:30	09:30	1.00	4126	4191	Drilling	Drilling - (WOB:15;GPM :493;RPM:60)
15-Sep-13	09:30	09:40	0.17	4191	4191	Survey & Conn.	Survey & Conn.@4139' Inc 32.74° Azm 348.37°
15-Sep-13	09:40	09:50	0.17	4191	4200	Drilling	Drilling - (WOB:15;GPM :493;RPM:60)
15-Sep-13	09:50	10:15	0.42	4200	4210	Sliding	Sliding - (WOB:25;GPM slide 5 ft ream slide and slide 5 ft.:493;TFO:160)
15-Sep-13	10:15	11:00	0.75	4210	4277	Drilling	Drilling - (WOB:15; :493;RPM:60)
15-Sep-13	11:00	11:10	0.17	4277	4277	Survey & Conn.	Survey & Conn.@4225' Inc 30.99° Azm 346.72°
15-Sep-13	11:10	11:20	0.17	4277	4287	Drilling	Drilling - (WOB:15; :493;RPM:60)
15-Sep-13	11:20	11:35	0.25	4287	4299	Sliding	Sliding - (WOB:25; :493;TFO:170)
15-Sep-13	11:35	11:50	0.25	4299	4318	Drilling	Drilling - (WOB:15; :493;RPM:60)
15-Sep-13	11:50	13:00	1.17	4318	4318	Rig Service-Inhole	Rig Service-Inhole
15-Sep-13	13:00	13:30	0.50	4318	4362	Drilling	Drilling - (WOB:15; :493;RPM:60)
15-Sep-13	13:30	14:00	0.50	4362	4372	Sliding	Sliding - (WOB:25; :493;TFO:170)

Date	Start Time	End Time	Hours	Start Depth	End Depth	Activity Code	COMMENT
15-Sep-13	14:00	14:50	0.83	4372	4448	Drilling	Drilling - (WOB:15; :493;RPM:60)
15-Sep-13	14:50	15:00	0.17	4448	4448	Survey & Conn.	Survey & Conn.@4396' Inc 26.69° Azm 347.32°
15-Sep-13	15:00	15:20	0.33	4448	4456	Drilling	Drilling - (WOB:15; :493;RPM:60)
15-Sep-13	15:20	16:00	0.67	4456	4478	Sliding	Sliding - (WOB:25; :493;TFO:170)
15-Sep-13	16:00	16:45	0.75	4478	4533	Drilling	Drilling - (WOB:15; :493;RPM:60)
15-Sep-13	16:45	16:55	0.17	4533	4533	Survey & Conn.	Survey & Conn.@4481' Inc 25.68° Azm 346.74°
15-Sep-13	16:55	17:10	0.25	4533	4543	Drilling	Drilling - (WOB:15; :493;RPM:60)
15-Sep-13	17:10	17:30	0.33	4543	4558	Sliding	Sliding - (WOB:25; :493;TFO:170)
15-Sep-13	17:30	18:30	1.00	4558	4619	Drilling	Drilling - (WOB:15;GPM :493;RPM:60)
15-Sep-13	18:30	18:35	0.08	4619	4619	Survey & Conn.	Survey & Conn.@4567' Inc 24.18° Azm 344.68°
15-Sep-13	18:35	19:50	1.25	4619	4694	Drilling	Drilling - (WOB:15;GPM :493;RPM:60)
15-Sep-13	19:50	19:55	0.08	4694	4694	Survey & Conn.	Survey & Conn.@4642' Inc 23.04° Azm 343.97°
15-Sep-13	19:55	22:50	2.92	4694	4694	Circulating	Circulating
15-Sep-13	22:50	24:00	1.17	4694	4694	POOH	POOH



JOB NO.:	420913DEF53637	Report Time:	2400	10 of 11
COMPANY:	Chevron	API JOB #		
LOCATION:	Skinner Ridge Field	WORK ORDER#	165885	
RIG NAME:	Ensign 122	FIELD:	Skinner Ridge	
STATE:	Colorado	Township:	5S	
COUNTY:	Garfield	SECT\	8	98W
WELL NAME:	SKR 598-08-BV-02			

From Monday, September 16, 2013 at 0000 to Monday, September 16, 2013 at 2400

DRILLING SUMMARY				Drilling Parameters									
Start Depth	0.00	Rotary Hours	0.00	WOB	15	Pick UP	87	Slack Off	57	SPM			
End Depth	0.00	Circulating Hours	0.00	RAB	69	SPP	2000	FlowRate	493 - 493	170			
Total Drilled:	0.00	Avg. Total ROP:	NA	Mud Data									
Total Rotary Drilled:	0.00	Avg. Rotary ROP:	NA	Type	LSDN	PV	16	SOLID	3.5				
Total Drilled Sliding:	0.00	Avg. Slide ROP:	NA	Weight	9	GAS	0	YP	16	BHT°	0		
Slide Hours:	0.00	Percent Rotary:	NA	Viscosity	65	SAND	0.75	PH	9	Flow T°	0		
Below Rotary Hrs.	24.00	Percent Slide:	NA	Chlorides	350	WL	0.35			Oil %	0		
PERSONNEL				cASING				BHA					
Lead Directional :	Ed. Mackey			Size	Lb/ft	Set Depth		BHA # 2:7 7/8 BIT / W 5X14s, 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, xover,					
Second Directional :	J. Franklin												
MWD Operator1	L. Kristy												
MWD Operator2													
Directional Company:	SDI												
Geologist:													
Company Man:	Greg / Joel			Signature:									
Incl. In:	23.04	Azm. In:	343.97	Incl. Out:	0	Azm. Out:	0						

GENERAL COMMENT

Date	Start Time	End Time	Hours	Start Depth	End Depth	Activity Code	COMMENT
16-Sep-13	00:00	07:30	7.50	4694	4694	POOH	POOH L/D TOOLS
16-Sep-13	07:30	07:45	0.25	4694	4694	Change BHA	Change BHA
16-Sep-13	07:45	24:00	16.25	4694	4694	Other	Casing operations



JOB NO.:	420913DEF53637	Report Time:	2400	11 of 11
COMPANY:	Chevron	API JOB #		
LOCATION:	Skinner Ridge Field	WORK ORDER#	165885	
RIG NAME:	Ensign 122	FIELD:	Skinner Ridge	
STATE:	Colorado	Township:	5S	
COUNTY:	Garfield	SECT\	8	98W
WELL NAME:	SKR 598-08-BV-02			

From Tuesday, September 17, 2013 at 0000 to Tuesday, September 17, 2013 at 2400

DRILLING SUMMARY				Drilling Parameters								
Start Depth	0.00	Rotary Hours	0.00	WOB	15	Pick UP	87	Slack Off	57	SPM		
End Depth	0.00	Circulating Hours	0.00	RAB	69	SPP	2000	FlowRate	493 - 493	170		
Total Drilled:	0.00	Avg. Total ROP:	NA	Mud Data								
Total Rotary Drilled:	0.00	Avg. Rotary ROP:	NA	Type	LSDN			PV	16	SOLID	3.5	
Total Drilled Sliding:	0.00	Avg. Slide ROP:	NA	Weight	9	GAS	0	YP	16	BHT°	0	
Slide Hours:	0.00	Percent Rotary:	NA	Viscosity	65	SAND	0.75	PH	9	Flow T°	0	
Below Rotary Hrs.	0.00	Percent Slide:	NA	Chlorides	350	WL	0.35			Oil %	0	
PERSONNEL				cASING					BHA			
Lead Directional :	Ed. Mackey			Size	Lb/ft	Set Depth		N/A				
Second Directional :	J. Franklin			Signature:								
MWD Operator1	L. Kristy											
MWD Operator2												
Directional Company:	SDI											
Geologist:												
Company Man:	Greg / Joel											
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
17-Sep-13	00:00	24:00	0.00	4694	4694	Standby	Standby

BHA # 1

SDI



JOB NO.: 420913DEF53637 Work Order: 165885
 COMPANY: Chevron
 LOCATION: Skinner Ridge Field
 RIG NAME: Ensign 122
 STATE: Colorado
 COUNTY: Garfield
 WELL NAME: SKR 598-08-BV-02

FIELD: Skinner Ridge
 Township: 5S
 SECT. RANGE: 8 98W
 Lead DD: Ed. Mackey
 Co. Man: Brent / Joel
 BHA TYPE: Steerable Assembly
 BHA WT: 32391 Wt @ Jars: N/A

Time and Depths		MOTOR DATA		Drilling Parameters	
Date In:	08-Sep-13 @ 10:30	Titan II 8 FBH 7:8 lobe 4.0 stage		SO/PU:	0 - 50 / 33-55
Date Out:	09-Sep-13 @ 12:15	MFG.: SDI		Rot Strg Wt:	33-52
Hrs In Hole:	25.75	Pad OD: 8.5		WOB:	5 - 12
Start Depth:	80.00	NB Stab: 0		TORQ:	0 - 3
End Depth:	1035.00	Bit to Bend: 4.56		SPP:	400 - 830
Total Drilled:	955.00	Bent Hsg/Sub°: 2.25 /		Motor RPM:	48 - 79
Avg. Total ROP:	57.30	Lobe/Stage: 7:8 / 4		Rotary RPM:	40 - 40
Circ Hrs: Tot/Only	18.33 / 1.67	Rev/GAL: 0.16		Flow Rate:	300 - 493
Percent Slide:	68.48	Rotor Jet: 0		Avg Diff:	
Percent Hrs:	64.50	Prop BUR:		Stall Pres.:	
Slide Hours:	10.75	Act BUR:		Off Bot Pres.:	
Total Sliding:	654.00				
Avg. Slide ROP:	60.84				
Percent Rotary:	31.52				
Percent Hrs:	35.50				
Rotary Hours:	5.92				
Total Rotary:	301.00				
Avg. Rotary ROP:	50.87				
Reason POOH:	TD				
		Mud Data		Bit Record	
		Type		BAKER / 12.25 / PDC / 9X13s	
		WT: 8.5	GAS: 0	Run #: 1	
		Vis: 88	PV: 24	Type Bit: PDC	
		WL: 0.15	PH: 0	IADC#: TFA: 1.166	
		SOL: 1.2	SAND: 0.5	JETS: 9-13	
		Oil %: 0	T °: 0	Bit Drop: 140 PSI @ 493 GPM	
		Chlor: 400	YP: 24	Cond.: GOOD	
MWD	Gamma: 0	Restiv: 0	Sensor: 57	Last Casing	
Spacing	GYRO: 0	DNSSC: 0	Sonic: 0	Shoe @:	Hanger @:

INC IN: .0 INC OUT: 17.3 AZM IN: .00 AZM OUT: 349.90

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

D&C=18 HRS

Motor yield = 5 to a 6.5 / 100

Kick off at 150 ft. build to 33.8 degrees with a 348 azmith had to slide almost 100% to achive a 4-5 degree / 100 dogle

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-896		8	28.80	30.30	6 5/8 REGB	
8' PONY	SDI --126-068	3.75	8	9.51	39.81	6 5/8 REGB	
8' MONEL	SDI 84-375	3.75	8 1/8	30.93	70.74	6 5/8 REGB	
8' HOS	SDI-89-025	3 3/4	7 7/8	2.63	73.37	6 5/8 REGB	
8' GAP	SDI-69-605	3 1/4	8	5.72	79.09	6 5/8 REGB	
8' PONY	SDI-052	3.75	8	9.50	88.59	6 5/8 REGB	
8' MONEL	NSN	3.75	8 1/8	30.89	119.48	6 5/8 REGB	
XOVER	SDI-1-481	2 3/4	6 1/4	2.51	121.99	6 5/8 REGB	
6' DC	RIG 1			89.75	211.74	4 1/2 XHB	
4 1/2 Spiral	HWDP - Pin	2.75	4.5	607.20	818.94	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=28.8

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



JOB NO.: 420913DEF53637
COMPANY: Chevron
LOCATION: Skinner Ridge Field
RIG NAME: Ensign 122
STATE: Colorado
COUNTY: Country
WELL NAME: SKR 598-08-BV-02

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: 2.25/ 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	8-Sep	Drilling	12:00	14:00	2.00	80	152	72	5	36.0	40	0	300	400		1.85	110.00	2.94	
1	8-Sep	Sliding	14:05	15:00	0.92	152	182	30	5	32.7	40	0	300	400	348	2.72	113.00	2.94	
1	8-Sep	Sliding	15:15	15:35	0.33	182	195	13	5	39.0	40	0	300	400	348	3.06	354.00	2.55	
1	8-Sep	Drilling	15:35	16:40	1.08	195	242	47	5	43.4	40	0	300	400		4.24	357.00	2.55	
1	8-Sep	Sliding	16:50	17:30	0.67	242	272	30	5	45.0	40	0	300	400	348	4.99	359.00	2.55	
1	8-Sep	Sliding	17:35	18:25	0.83	272	303	31	5	37.2	40	0	300	400	348	5.95	348.00	3.22	
1	8-Sep	Drilling	18:30	19:20	0.83	303	334	31	5	37.2	40	0	300	400		6.95	349.00	3.22	
1	8-Sep	Sliding	19:25	20:05	0.67	334	364	30	5	45.0	40	0	300	400	348	7.91	349.00	3.22	
1	8-Sep	Sliding	20:10	20:50	0.67	364	394	30	5	45.0	40	0	300	400	348	9.03	350.00	3.82	
1	8-Sep	Sliding	20:55	21:10	0.25	394	409	15	5	60.0	40	0	300	400	348	9.60	350.00	3.82	
1	8-Sep	Drilling	21:10	21:25	0.25	409	425	16	5	64.0	40	0	300	400		10.21	350.00	3.82	
1	8-Sep	Sliding	21:30	21:55	0.42	425	454	29	10	69.6	40	3	493	830		11.32	351.00	3.82	
1	8-Sep	Sliding	22:00	22:20	0.33	454	485	31	10	93.0	40	3	493	830		12.84	348.00	5.11	
1	8-Sep	Sliding	22:30	22:55	0.42	485	515	30	10	72.0	40	3	493	830		14.36	349.00	5.11	
1	8-Sep	Sliding	23:05	23:20	0.25	515	546	31	10	124.0	40	3	493	830		15.94	350.00	5.11	
1	8-Sep	Sliding	23:35	23:50	0.25	546	576	30	10	120.0	40	3	493	830		17.26	350.00	4.37	
1	9-Sep	Sliding	00:00	00:20	0.33	576	606	30	10	90.0	40	3	493	830		18.57	350.00	4.37	
1	9-Sep	Sliding	00:30	00:55	0.42	606	637	31	10	74.4	40	3	493	830		19.92	351.00	4.37	
1	9-Sep	Sliding	01:10	01:30	0.33	637	667	30	10	90.0	40	3	493	830		21.38	352.00	5.36	
1	9-Sep	Sliding	02:00	02:20	0.33	667	697	30	12	90.0	40	3	464	800	-30	22.88	354.00	5.36	
1	9-Sep	Sliding	02:35	02:55	0.33	697	727	30	12	90.0	40	3	464	800	-30	24.39	355.00	5.36	
1	9-Sep	Sliding	03:05	03:35	0.50	727	758	31	12	62.0	40	3	464	800		26.09	347.00	5.67	
1	9-Sep	Sliding	03:45	04:10	0.42	758	788	30	12	72.0	40	3	464	800		27.77	347.00	5.67	
1	9-Sep	Sliding	04:20	04:40	0.33	788	813	25	12	75.0	40	3	464	800		28.97	348.00	3.46	
1	9-Sep	Drilling	04:40	04:45	0.08	813	818	5	5	60.0	40	3	300	800		29.14	348.00	3.46	

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	9-Sep	Drilling	05:00	05:15	0.25	818	843	25	5	100.0	40	3	300	800		30.01	348.00	3.46	
1	9-Sep	Sliding	05:15	05:25	0.17	843	863	20	12	120.0	40	3	464	800		30.70	348.00	3.46	
1	9-Sep	Sliding	05:30	06:25	0.92	863	890	27	12	29.5	40	3	464	800		31.63	348.00	3.46	
1	9-Sep	Drilling	06:25	06:35	0.17	890	904	14	5	84.0	40	3	300	800		31.98	348.00	2.53	
1	9-Sep	Drilling	06:40	07:00	0.33	904	947	43	5	129.0	40	3	300	800		33.06	348.00	2.53	
1	9-Sep	Sliding	07:05	07:45	0.67	947	987	40	12	60.0	40	3	464	800	15	33.82	349.00	0.64	
1	9-Sep	Drilling	07:45	08:40	0.92	987	1035	48	5	52.4	40	3	300	800		33.73	349.00	0.64	

Total Drilled:	955	Avg. Total ROP:	57.30	DEPTH% - TIME %
Total Rotary Drilled:	301	Avg. Rotary ROP:	50.87	Percent Rotary: 31.52 - 35.50
Total Drilled Sliding:	654	Avg. Slide ROP:	60.84	Percent Slide: 68.48 - 64.50

BHA # 2

SDI



JOB NO.: 420913DEF53637 Work Order: 165885
 COMPANY: Chevron
 LOCATION: Skinner Ridge Field
 RIG NAME: Ensign 122
 STATE: Colorado
 COUNTY: Garfield
 WELL NAME: SKR 598-08-BV-02

FIELD: Skinner Ridge
 Township: 5S
 SECT. RANGE: 8 98W
 Lead DD: Ed. Mackey
 Co. Man: Greg / Joel
 BHA TYPE: Steerable Assembly
 BHA WT: 25860 Wt @ Jars: N/A

Time and Depths		MOTOR DATA	Drilling Parameters	
Date In:	11-Sep-13 @ 05:00	6.5 MOTOR	SO/PU:	45 - 57 / 55-87
Date Out:	16-Sep-13 @ 07:45	MFG.: SDI	Rot Strg Wt:	52-69
Hrs In Hole:	122.25	Pad OD: 6 3/4	WOB:	5 - 25
Start Depth:	1035.00	NB Stab: 0	TORQ:	3 - 12
End Depth:	4694.00	Bit to Bend: 5.6	SPP:	800 - 2000
Total Drilled:	3659.00	Bent Hsg/Sub°: 1.75 /	Motor RPM:	74 - 79
Avg. Total ROP:	78.13	Lobe/Stage: 7/8 / 3.3	Rotary RPM:	40 - 60
Circ Hrs: Tot/Only	56.75 / 9.92	Rev/GAL: 0.16	Flow Rate:	300 - 493
Percent Slide:	9.67	Rotor Jet: 0	Avg Diff:	
Percent Hrs:	14.77	Prop BUR:	Stall Pres.:	
Slide Hours:	6.92	Act BUR:	Off Bot Pres.:	
Total Sliding:	354.00	Mud Data		Bit Record
Avg. Slide ROP:	51.18	Type LSDN	Halliburton / 7 7/8 BIT / W 5X14s	
Percent Rotary:	90.33	WT: 9	GAS: 0	Run #: 2
Percent Hrs:	85.23	Vis: 65	PV: 16	Type Bit: PDC
Rotary Hours:	39.92	WL: 0.35	PH: 9	IADC#: TFA: 0.751
Total Rotary:	3305.00	SOL: 3.5	SAND: 0.75	JETS: 5-14
Avg. Rotary ROP:	82.80	Oil %: 0	T °: 0	Bit Drop: 357 PSI @ 493 GPM
Reason POOH:		Chlor: 350	YP: 16	Cond.:
MWD Spacing	Gamma: 0	Restiv: 0	Sensor: 55	Last Casing
	GYRO: 0	DNSC: 1035	Sonic: 0	Shoe @: Hanger @:

INC IN: 17.3 INC OUT: 23.0 AZM IN: 349.90 AZM OUT: 343.97

BHA Detail

Description	Serial #	I.D.	O.D.	Length	Sum	Top Conn	MFG.
7 7/8 BIT / W 5X14s	12033685		7 5/8	1.00	1.00	(NONE)P	
6.5 MOTOR 1.75 BEND	SDI-6524		6 1/4	30.25	31.25	4 1/2 XHB	
6.5 PONY	SDI-125-083	3.25	6.25	9.67	40.92	4 1/2 XHB	
6.5 HOS	SDI-8-245	3.25	6 1/8	1.97	42.89	4 1/2 XHB	
6.5 MONEL	SDI-122-354	3 3/8	6	30.40	73.29	4 1/2 XHB	
6.5 GAP	SDI-69-734	2.875	6.5	4.91	78.20	4 1/2 XHB	
6.5 PONY	SDI-125-179		6.5	10.04	88.24	4 1/2 XHB	
6.5 MONEL	SDI-122-522	3.25	6.25	30.81	119.05	4 1/2 XHB	
4 1/2 Spiral	HWDP - Pin	2.75	4.5	607.20	726.25	4 1/2 XHB	
xover	rig 2	2 7/8	6	1.35	727.60	4 IFB	

xover
O.D.=6
4 1/2 Spiral
O.D.=4.5
Length=607.2

6.5 MONEL
O.D.=6.25
Length=30.81

6.5 PONY
O.D.=6.5
Length=10.04

6.5 GAP
O.D.=6.5
Length=4.91

6.5 MONEL
O.D.=6
Length=30.4

6.5 HOS
O.D.=6 1/8

6.5 PONY
O.D.=6.25
Length=9.67

6.5 MOTOR 1.75 BEND
O.D.=6 1/4
Length=30.25

7 7/8 BIT / W 5X14s
O.D.=7 5/8
Length=1



JOB NO.: 420913DEF53637
COMPANY: Chevron
LOCATION: Skinner Ridge Field
RIG NAME: Ensign 122
STATE: Colorado
COUNTY: Country
WELL NAME: SKR 598-08-BV-02

FIELD: Skinner Ridge
Township: 5S
Range 98W

MOTOR INFORMATION	
Desc: 6.5 MOTOR	
Bent Hsg/Sub: 1.75/ 0	Bit to Bend: 5.6
Pad OD: 6 3/4	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	11-Sep	Drilling	10:25	11:15	0.83	1035	1112	77	5	92.4	40	3	300	800		35.54	350.00	3.65	
2	11-Sep	Sliding	11:25	11:35	0.17	1112	1152	40	12	240.0	40	3	464	800		36.76	348.00	1.80	
2	11-Sep	Drilling	11:35	12:00	0.42	1152	1197	45	5	108.0	40	3	300	800		37.03	350.00	1.80	
2	11-Sep	Sliding	12:10	12:40	0.50	1197	1212	15	12	30.0	40	3	464	800		37.13	350.00	1.80	
2	11-Sep	Drilling	12:40	13:15	0.58	1212	1283	71	5	121.7	40	3	300	800		38.49	346.00	2.45	
2	11-Sep	Sliding	13:25	13:45	0.33	1283	1315	32	12	96.0	40	3	464	800	20	39.25	347.00	2.45	
2	11-Sep	Drilling	13:45	14:10	0.42	1315	1369	54	5	129.6	40	3	300	800		39.15	348.00	3.62	
2	11-Sep	Drilling	14:20	15:10	0.83	1369	1454	85	5	102.0	40	3	300	800		38.85	350.00	0.50	
2	11-Sep	Drilling	15:20	16:45	1.42	1454	1540	86	5	60.7	40	3	300	800		38.13	350.00	1.16	
2	11-Sep	Drilling	16:50	17:15	0.42	1540	1625	85	5	204.0	40	3	300	800		38.86	350.00	2.15	
2	11-Sep	Sliding	17:20	17:25	0.08	1625	1645	20	12	240.0	40	3	464	800		39.27	350.00	2.15	
2	11-Sep	Drilling	17:25	17:50	0.42	1645	1711	66	5	158.4	40	3	300	800		39.27	349.00	0.72	
2	11-Sep	Drilling	18:00	18:35	0.58	1711	1797	86	5	147.4	40	3	300	800		38.73	348.00	0.69	
2	11-Sep	Drilling	18:45	19:25	0.67	1797	1882	85	5	127.5	40	3	300	800		37.62	348.00	1.73	
2	11-Sep	Drilling	19:35	20:15	0.67	1882	1968	86	15	129.0	40	7	493	1500		37.14	348.00	0.44	
2	11-Sep	Sliding	20:25	20:35	0.17	1968	1988	20	20	120.0	40	7	493	1500		37.18	348.00	0.44	
2	11-Sep	Drilling	20:35	21:15	0.67	1988	2053	65	15	97.5	40	7	493	1500		38.22	350.00	2.35	
2	11-Sep	Sliding	21:25	21:35	0.17	2053	2083	30	20	180.0	40	7	493	1500		38.80	350.00	2.35	
2	11-Sep	Drilling	21:35	22:00	0.42	2083	2139	56	15	134.4	40	7	493	1500		38.68	351.00	0.53	
2	11-Sep	Drilling	22:10	22:50	0.67	2139	2224	85	15	127.5	40	7	493	1500		38.34	351.00	0.42	
2	11-Sep	Drilling	23:00	23:35	0.58	2224	2310	86	15	147.4	40	7	493	1500		37.88	351.00	0.63	
2	11-Sep	Drilling	23:45	24:00	0.25	2310	2352	42	15	168.0	40	7	493	1500		37.72	351.00	0.84	
2	12-Sep	Drilling	00:30	00:45	0.25	2352	2395	43	15	172.0	40	7	493	1500		37.98	351.00	0.84	
2	12-Sep	Sliding	00:50	01:05	0.25	2395	2415	20	20	80.0	40	7	493	1500		38.10	352.00	0.84	
2	12-Sep	Drilling	02:00	02:35	0.58	2415	2481	66	15	113.1	40	7	493	1500		38.01	350.00	0.50	

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	12-Sep	Drilling	02:45	03:30	0.75	2481	2566	85	15	113.3	40	7	493	1500		38.98	350.00	2.19	
2	12-Sep	Sliding	03:40	04:10	0.50	2566	2594	28	20	56.0	40	7	493	1500	-30	39.56	350.00	2.19	
2	12-Sep	Drilling	04:10	04:50	0.67	2594	2652	58	15	87.0	40	7	493	1500		39.47	349.00	0.47	
2	12-Sep	Drilling	05:00	05:50	0.83	2652	2737	85	15	102.0	40	7	493	1500		39.01	348.00	0.67	
2	12-Sep	Drilling	06:00	07:00	1.00	2737	2823	86	15	86.0	40	7	493	1500		38.44	349.00	0.99	
2	12-Sep	Drilling	07:10	08:00	0.83	2823	2908	85	15	102.0	40	7	493	1500		37.93	348.00	0.72	
2	12-Sep	Drilling	08:10	09:10	1.00	2908	2994	86	15	86.0	40	7	493	1500		37.43	347.00	0.59	
2	12-Sep	Drilling	09:20	10:30	1.17	2994	3079	85	15	72.9	40	7	493	1500		38.23	347.00	1.90	
2	12-Sep	Drilling	10:35	10:45	0.17	3079	3089	10	15	60.0	40	7	493	1500		38.42	347.00	1.90	
2	12-Sep	Sliding	10:45	11:50	1.08	3089	3114	25	20	23.1	40	7	493	1500	30	38.87	347.00	0.37	
2	12-Sep	Drilling	11:50	12:25	0.58	3114	3165	51	15	87.4	40	7	493	1500		39.02	347.00	0.37	
2	12-Sep	Drilling	13:15	14:35	1.33	3165	3250	85	15	63.8	40	7	493	1500		38.86	347.00	0.69	
2	12-Sep	Drilling	14:45	16:10	1.42	3250	3322	72	15	50.8	40	7	493	1500		38.37	347.00	0.90	
2	12-Sep	Drilling	16:35	17:15	0.67	3322	3336	14	15	21.0	40	7	493	1500		38.25	347.00	0.90	
2	12-Sep	Drilling	17:20	19:00	1.67	3336	3422	86	15	51.6	40	7	493	1500		37.85	346.00	0.29	
2	12-Sep	Drilling	19:40	21:20	1.67	3422	3507	85	15	51.0	40	7	493	1500		37.58	346.00	0.54	
2	12-Sep	Drilling	21:35	22:45	1.17	3507	3593	86	15	73.7	40	7	493	1500		36.95	346.00	1.06	
2	12-Sep	Drilling	22:55	24:00	1.08	3593	3678	85	15	78.5	40	7	493	2000		37.39	348.00	2.42	
2	13-Sep	Sliding	00:40	01:15	0.58	3678	3708	30	25	51.4	60	12	493	2000	40	37.84	349.00	2.42	
2	13-Sep	Drilling	01:15	02:10	0.92	3708	3764	56	15	61.1	60	12	493	2000		38.05	349.00	0.30	
2	13-Sep	Drilling	02:20	03:10	0.83	3764	3849	85	15	102.0	60	12	493	2000		37.68	350.00	1.12	
2	13-Sep	Drilling	03:20	04:30	1.17	3849	3935	86	15	73.7	60	12	493	2000		36.94	348.00	0.85	
2	13-Sep	Drilling	04:35	04:50	0.25	3935	3961	26	15	104.0	60	12	493	2000		36.73	348.00	0.85	
2	13-Sep	Drilling	05:35	06:05	0.50	3961	4000	39	15	78.0	60	12	493	2000		35.88	348.00	2.47	
2	15-Sep	Drilling	05:00	06:10	1.17	4000	4020	20	15	17.1	60	12	493	2000		35.39	348.00	2.47	
2	15-Sep	Sliding	06:15	07:00	0.75	4020	4035	15	25	20.0	60	12	493	2000	160	35.02	348.00	2.47	
2	15-Sep	Drilling	07:00	08:00	1.00	4035	4106	71	15	71.0	60	12	493	2000		33.44	348.00	2.13	
2	15-Sep	Drilling	08:10	08:20	0.17	4106	4116	10	15	60.0	60	12	493	2000		33.23	348.00	2.13	
2	15-Sep	Sliding	08:20	08:30	0.17	4116	4126	10	25	60.0	60	12	493	2000	160	33.02	348.00	2.13	
2	15-Sep	Drilling	08:30	09:30	1.00	4126	4191	65	15	65.0	60	12	493	2000		31.68	349.00	2.27	
2	15-Sep	Drilling	09:40	09:50	0.17	4191	4200	9	15	54.0	60	12	493	2000		31.50	350.00	2.27	
2	15-Sep	Sliding	09:50	10:15	0.42	4200	4210	10	25	24.0	60	12	493	2000	170	31.29	350.00	2.27	
2	15-Sep	Drilling	10:15	11:00	0.75	4210	4277	67	15	89.3	60	12	493	2000		29.52	347.00	2.86	

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	15-Sep	Drilling	11:10	11:20	0.17	4277	4287	10	15	60.0	60	12	493	2000		29.23	347.00	2.86	
2	15-Sep	Sliding	11:20	11:35	0.25	4287	4299	12	25	48.0	60	12	493	2000	170	28.89	347.00	2.86	
2	15-Sep	Drilling	11:35	11:50	0.25	4299	4318	19	15	76.0	60	12	493	2000		28.40	347.00	2.20	
2	15-Sep	Drilling	13:00	13:30	0.50	4318	4362	44	15	88.0	60	12	493	2000		27.44	347.00	2.20	
2	15-Sep	Sliding	13:30	14:00	0.50	4362	4372	10	25	20.0	60	12	493	2000	170	27.22	347.00	2.20	
2	15-Sep	Drilling	14:00	14:50	0.83	4372	4448	76	15	91.2	60	12	493	2000		26.07	348.00	1.23	
2	15-Sep	Drilling	15:00	15:20	0.33	4448	4456	8	15	24.0	60	12	493	2000		25.98	348.00	1.23	
2	15-Sep	Sliding	15:20	16:00	0.67	4456	4478	22	25	33.0	60	12	493	2000	170	25.72	348.00	1.23	
2	15-Sep	Drilling	16:00	16:45	0.75	4478	4533	55	15	73.3	60	12	493	2000		24.77	348.00	2.02	
2	15-Sep	Drilling	16:55	17:10	0.25	4533	4543	10	15	40.0	60	12	493	2000		24.60	348.00	2.02	
2	15-Sep	Sliding	17:10	17:30	0.33	4543	4558	15	25	45.0	60	12	493	2000	170	24.34	349.00	2.02	
2	15-Sep	Drilling	17:30	18:30	1.00	4558	4619	61	15	61.0	60	12	493	2000		23.39	345.00	1.57	
2	15-Sep	Drilling	18:35	19:50	1.25	4619	4694	75	15	60.0	60	12	493	2000		23.04	344.00	0.00	

Total Drilled:

3659

Avg. Total ROP:

78.13

DEPTH% - TIME %

Total Rotary Drilled:

3305

Avg. Rotary ROP:

82.80

Percent Rotary:

90.33 - 85.23

Total Drilled Sliding:

354

Avg. Slide ROP:

51.18

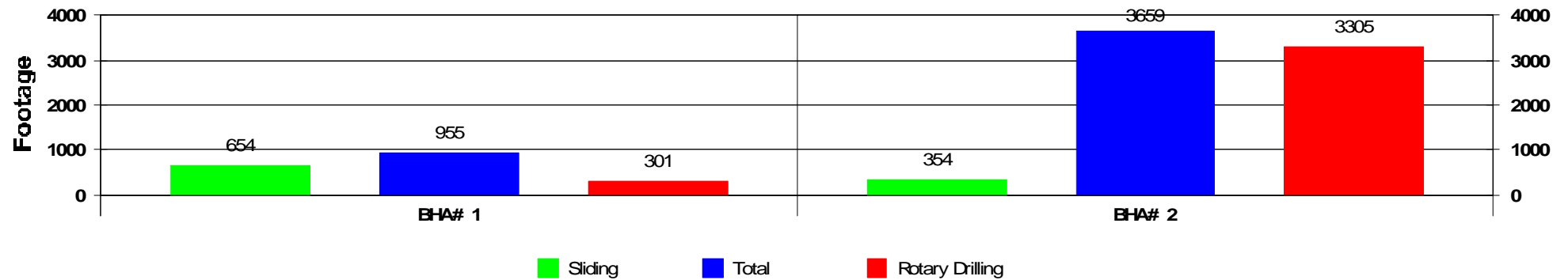
Percent Slide:

9.67 - 14.77

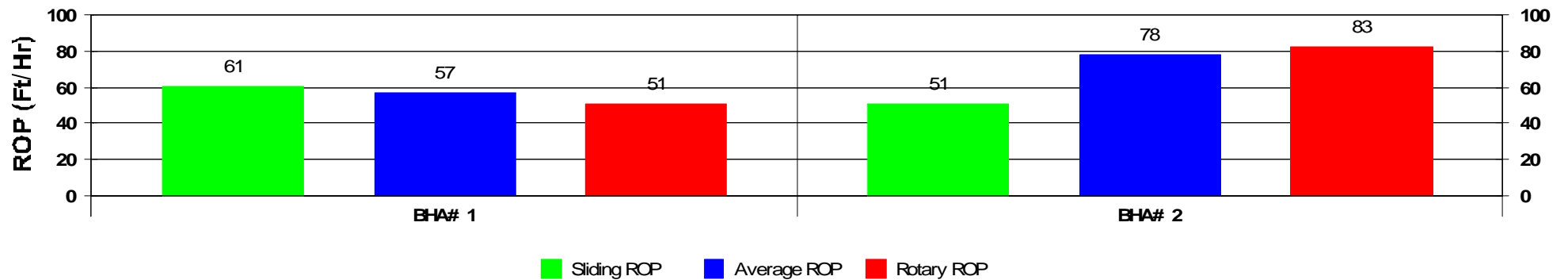


JOB NO.:	420913DEF53637	FIELD:	Skinner Ridge	
COMPANY:	Chevron	Township:	5S	
LOCATION:	Skinner Ridge Field	SECT/RANGE:	8	98W
RIG NAME:	Ensign 122	COMMENT		
STATE:	Colorado			
COUNTY:	Garfield			
WELL NAME:	SKR 598-08-BV-02			

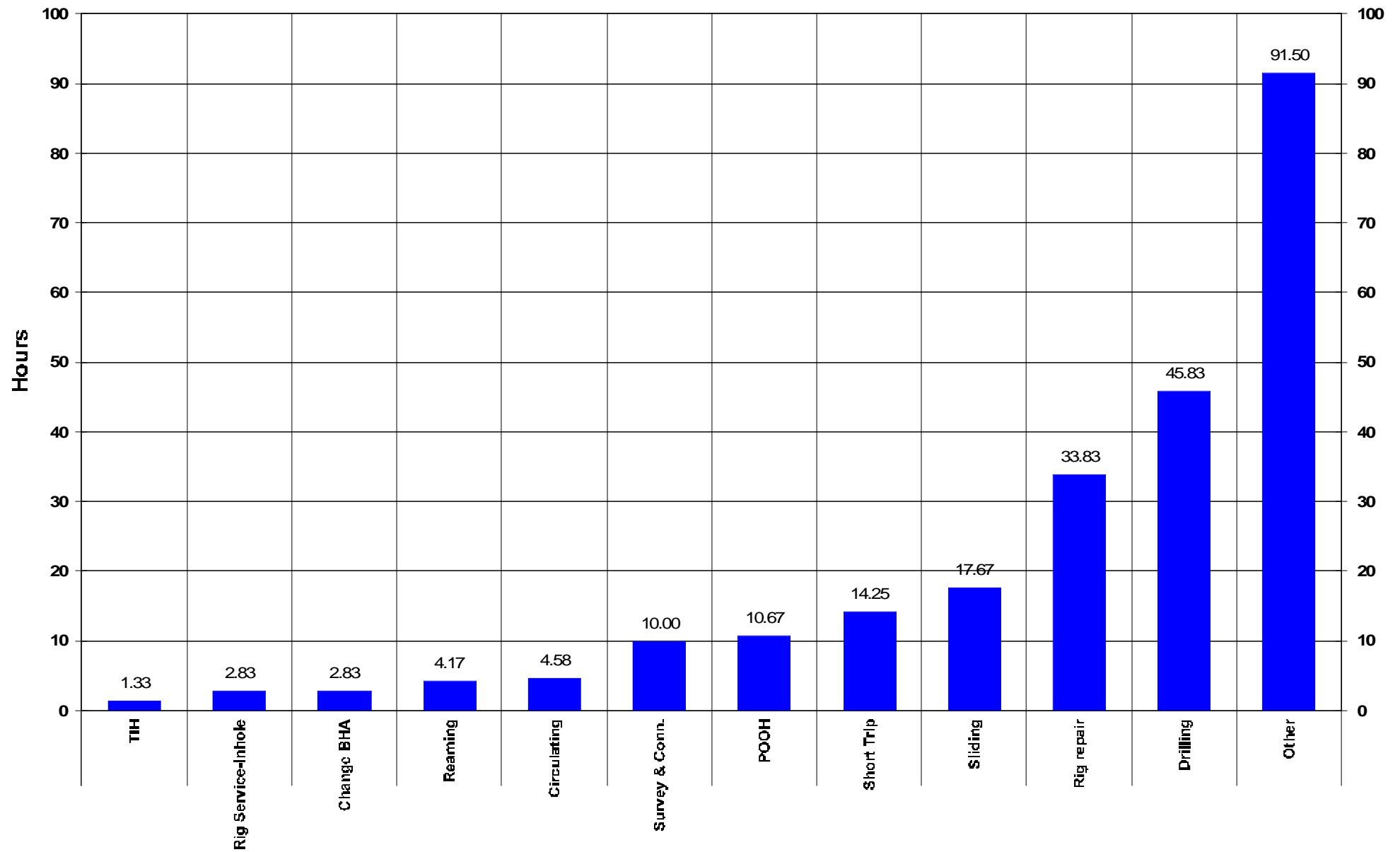
Footage Drilled with BHA



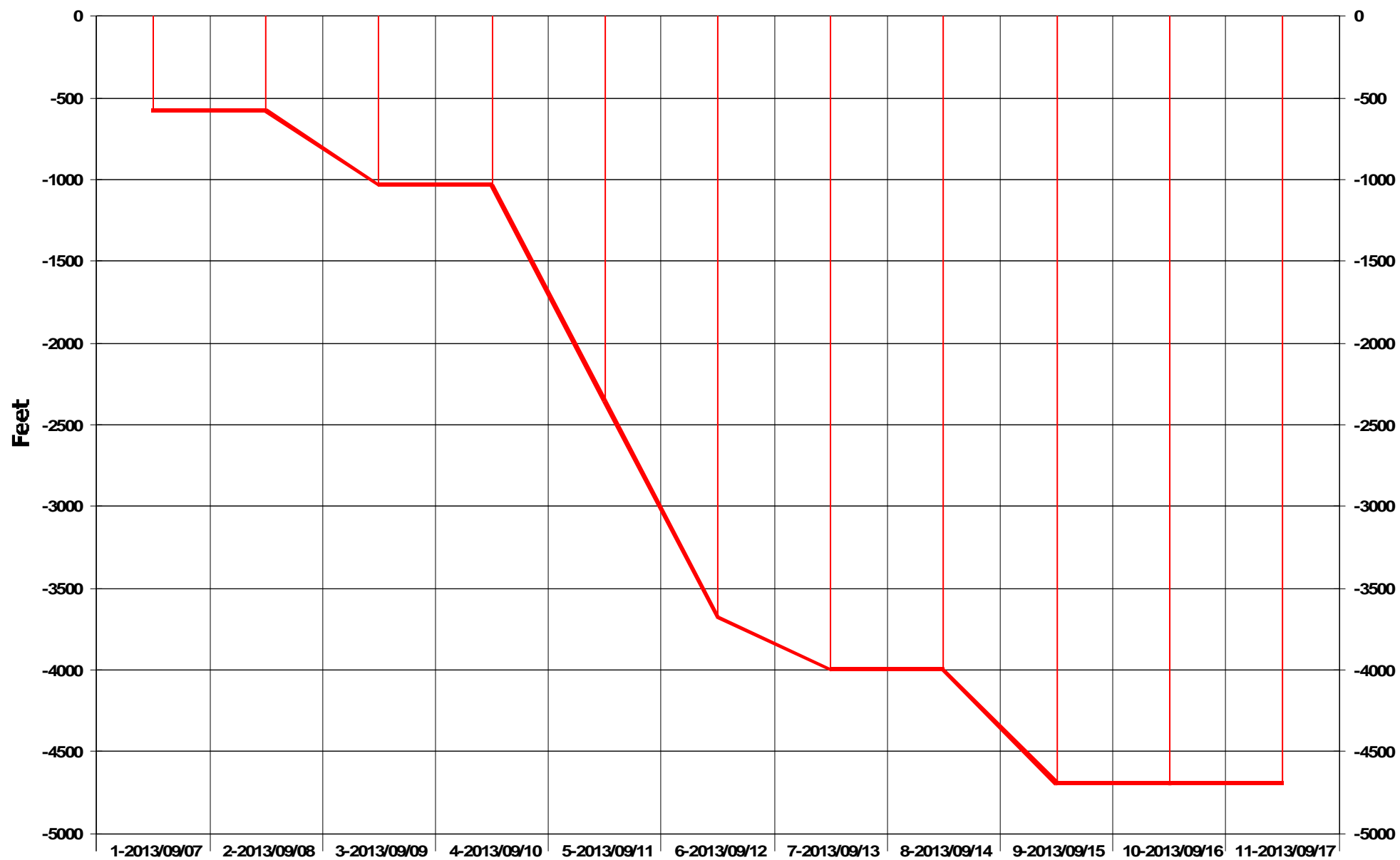
ROP vs BHA



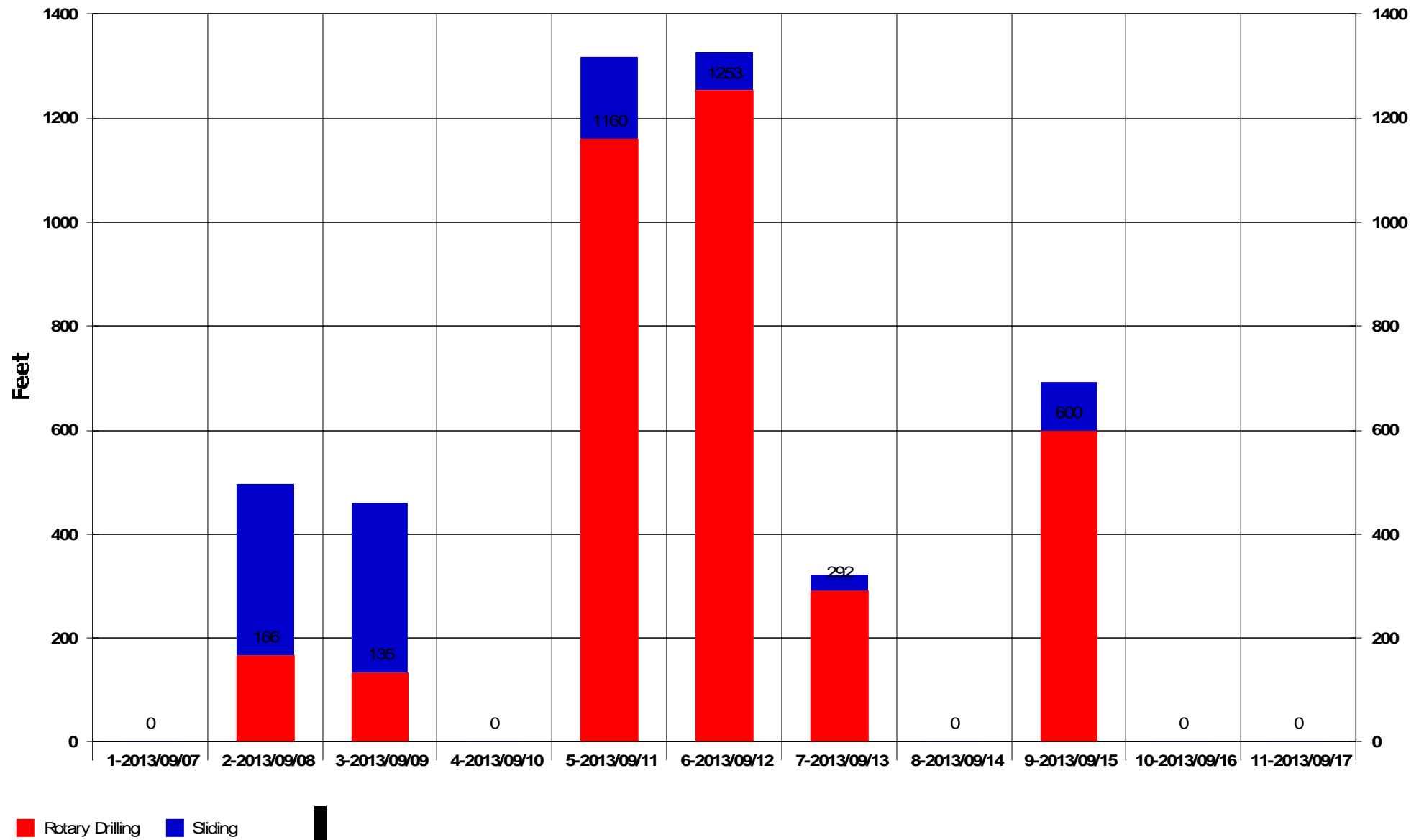
Activity Histogram



Measured Depth vs Days



Daily Footage



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