



## **ST. JAMES**

**MS #DDOK-110481**

**Larson Farms 1-24  
Weld County, Colorado  
Cade 22**

*September 27, 2011*

**Prepared By:  
Megan Pope**

***Actual Well & Surveys    1***

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***Daily Reports    2***

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***BHA's    3***

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***Job Performance Charts    4***

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***Support Staff    5***

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# St. James

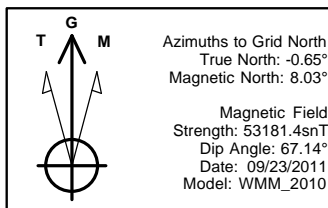
Company: St. James  
Site: Larson Farms  
Well: 1-24  
Project: Weld County, Colorado (NAD 83)  
Rig Name: Cade 22



Planning: 936.442.2510 Fax: 936.442.2515  
Operations: 936.442.2500 Fax: 936.442.2599

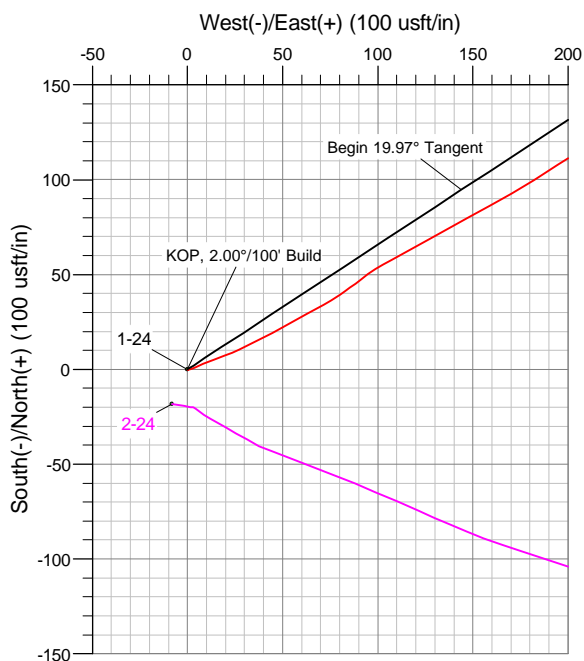
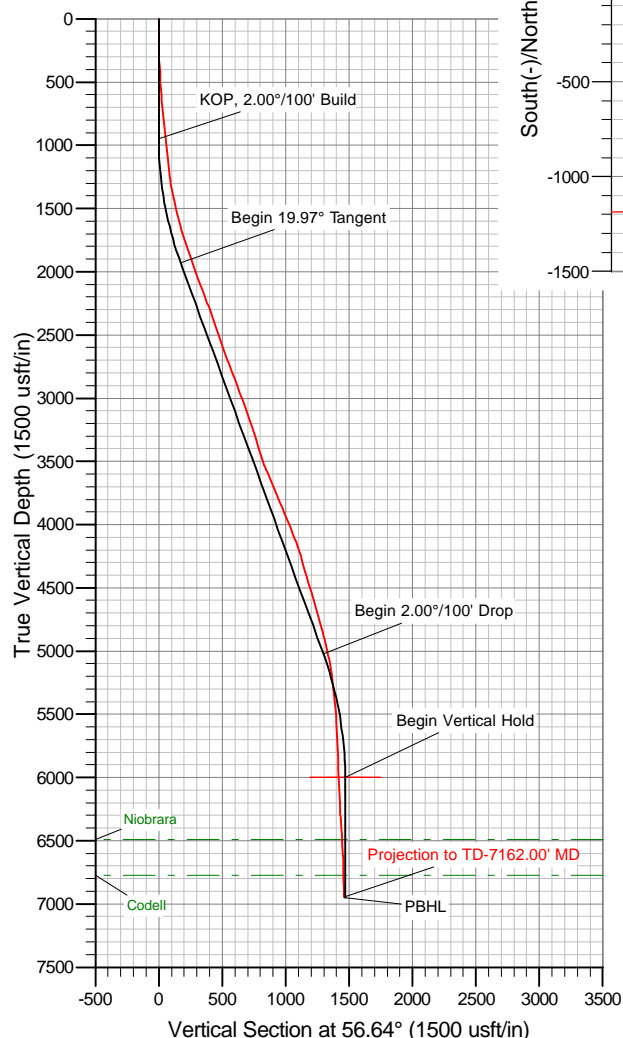
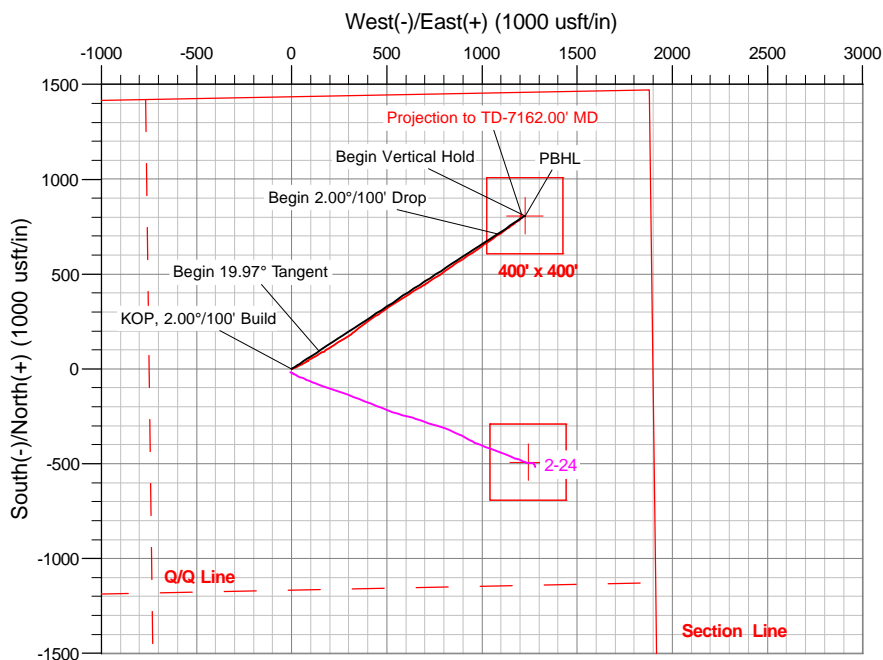
## ANNOTATIONS

MD	Inc	Azi	TVD	+N/-S	+E/-W	Vsect	Departure	Annotation
950.00	0.00	0.00	950.00	0.00	0.00	0.00	0.00	KOP, 2.00°/100' Build
1948.70	19.97	56.64	1928.60	94.76	143.93	172.32	172.32	Begin 19.97° Tangent
5239.46	19.97	56.64	5021.40	712.87	1082.84	1296.43	1296.43	Begin 2.00°/100' Drop
6238.16	0.00	0.00	6000.00	807.63	1226.77	1468.75	1468.75	Begin Vertical Hold
7188.16	0.00	0.00	6950.00	807.63	1226.77	1468.75	1468.75	PBHL



US State Plane 1983  
Colorado Northern Zone

Created By: Megan Pope  
Date: 9:35, September 27 2011  
Plan: Design #2



The customer should only rely on this document after independently verifying all paths, targets, coordinates, lease and hard lines represented. Any decisions made or wells drilled utilizing this or any other information supplied by MS Energy are at the sole risk and responsibility of the customer. MS Energy is not responsible for the accuracy of this schematic or the information contained herein.

# **St. James**

**Weld County, Colorado (NAD 83)**

**Larson Farms**

**1-24**

**Wellbore #1**

**Survey: MS MWD**

## **Standard Survey Report**

**27 September, 2011**

<b>Company:</b>	St. James	<b>Local Co-ordinate Reference:</b>	Well 1-24
<b>Project:</b>	Weld County, Colorado (NAD 83)	<b>TVD Reference:</b>	WELL @ 4658.00usft (Cade 22)
<b>Site:</b>	Larson Farms	<b>MD Reference:</b>	WELL @ 4658.00usft (Cade 22)
<b>Well:</b>	1-24	<b>North Reference:</b>	Grid
<b>Wellbore:</b>	Wellbore #1	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Surveys	<b>Database:</b>	Southern Region

<b>Project</b>	Weld County, Colorado (NAD 83)		
<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 Northern Zone		

Well	1-24					
Well Position	+N/-S	0.00 usft	Northing:	1,417,495.08 usft	Latitude:	40° 28' 30.2940 N
	+E/-W	0.00 usft	Easting:	3,279,415.68 usft	Longitude:	104° 29' 44.216 W
Position Uncertainty		0.00 usft	Wellhead Elevation:	usft	Ground Level:	4,645.00 usft

<b>Wellbore</b>	Wellbore #1				
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination (°)</b>	<b>Dip Angle (°)</b>	<b>Field Strength (nT)</b>
	WMM_2010	09/23/11	8.68	67.14	53,181

<b>Design</b>	Surveys				
<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) (usft)</b>	<b>+N/-S (usft)</b>	<b>+E/-W (usft)</b>	<b>Direction (°)</b>	
	0.00	0.00	0.00	56.64	

<b>Survey Program</b>	<b>Date</b>	09/27/11			
<b>From (usft)</b>	<b>To (usft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Description</b>	
143.00	7,162.00	MS MWD (Wellbore #1)	MWD	MWD - Standard	

<b>Survey</b>									
<b>Measured Depth (usft)</b>	<b>Inclination (°)</b>	<b>Azimuth (°)</b>	<b>Vertical Depth (usft)</b>	<b>+N/-S (usft)</b>	<b>+E/-W (usft)</b>	<b>Vertical Section (usft)</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
143.00	0.20	155.80	143.00	-0.23	0.10	-0.04	0.14	0.14	0.00
234.00	1.10	70.20	233.99	-0.08	0.99	0.78	1.21	0.99	-94.07
325.00	2.90	65.70	324.93	1.17	3.91	3.91	1.98	1.98	-4.95
416.00	3.30	67.30	415.80	3.12	8.42	8.75	0.45	0.44	1.76
508.00	3.80	71.10	507.62	5.13	13.75	14.31	0.60	0.54	4.13
599.00	4.50	68.30	598.39	7.43	19.92	20.72	0.80	0.77	-3.08
690.00	5.50	66.20	689.04	10.51	27.23	28.52	1.12	1.10	-2.31
880.00	6.30	60.60	878.03	19.30	44.64	47.90	0.52	0.42	-2.95
975.00	6.30	61.60	972.46	24.34	53.77	58.29	0.12	0.00	1.05
1,069.00	6.30	61.10	1,065.89	29.29	62.82	68.57	0.06	0.00	-0.53
1,164.00	5.70	61.30	1,160.37	34.07	71.52	78.47	0.63	-0.63	0.21
1,259.00	6.70	56.00	1,254.81	39.44	80.25	88.72	1.21	1.05	-5.58
1,353.00	10.30	52.20	1,347.77	47.66	91.44	102.58	3.87	3.83	-4.04
1,448.00	12.70	61.30	1,440.86	57.88	107.32	121.46	3.16	2.53	9.58
1,543.00	14.20	60.76	1,533.25	68.59	126.65	143.49	1.58	1.58	-0.57

<b>Company:</b>	St. James	<b>Local Co-ordinate Reference:</b>	Well 1-24
<b>Project:</b>	Weld County, Colorado (NAD 83)	<b>TVD Reference:</b>	WELL @ 4658.00usft (Cade 22)
<b>Site:</b>	Larson Farms	<b>MD Reference:</b>	WELL @ 4658.00usft (Cade 22)
<b>Well:</b>	1-24	<b>North Reference:</b>	Grid
<b>Wellbore:</b>	Wellbore #1	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Surveys	<b>Database:</b>	Southern Region

Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
1,639.00	15.10	61.70	1,626.13	80.27	147.93	167.69	0.97	0.94	0.98
1,733.00	16.80	59.80	1,716.51	92.90	170.45	193.46	1.89	1.81	-2.02
1,827.00	18.50	57.00	1,806.08	107.86	194.70	221.94	2.02	1.81	-2.98
1,922.00	19.10	57.90	1,896.01	124.33	220.51	252.55	0.70	0.63	0.95
2,015.00	20.00	58.20	1,983.65	140.80	246.92	283.66	0.97	0.97	0.32
2,110.00	20.40	57.80	2,072.81	158.18	274.74	316.45	0.45	0.42	-0.42
2,203.00	20.70	57.00	2,159.89	175.77	302.24	349.09	0.44	0.32	-0.86
2,295.00	21.00	51.40	2,245.87	194.91	328.76	381.77	2.19	0.33	-6.09
2,390.00	18.90	51.00	2,335.17	215.22	354.02	414.04	2.22	-2.21	-0.42
2,483.00	19.20	52.50	2,423.08	234.01	377.86	444.28	0.62	0.32	1.61
2,577.00	19.00	54.50	2,511.90	252.30	402.58	474.99	0.73	-0.21	2.13
2,672.00	19.90	54.20	2,601.48	270.74	428.29	506.60	0.95	0.95	-0.32
2,767.00	19.90	57.50	2,690.81	288.88	455.04	538.92	1.18	0.00	3.47
2,861.00	21.50	56.00	2,778.74	307.11	482.81	572.14	1.79	1.70	-1.60
2,956.00	20.80	56.10	2,867.34	326.26	511.24	606.41	0.74	-0.74	0.11
3,050.00	19.70	56.20	2,955.53	344.38	538.26	638.95	1.17	-1.17	0.11
3,144.00	20.30	56.90	3,043.86	362.10	565.09	671.10	0.69	0.64	0.74
3,239.00	19.60	57.00	3,133.16	379.78	592.26	703.51	0.74	-0.74	0.11
3,333.00	18.60	57.70	3,221.98	396.37	618.15	734.27	1.09	-1.06	0.74
3,428.00	17.10	59.60	3,312.41	411.54	643.01	763.36	1.69	-1.58	2.00
3,523.00	17.00	59.20	3,403.23	425.72	666.98	791.19	0.16	-0.11	-0.42
3,617.00	18.10	58.10	3,492.85	440.47	691.18	819.51	1.22	1.17	-1.17
3,710.00	22.40	57.00	3,580.09	457.76	718.32	851.69	4.64	4.62	-1.18
3,803.00	22.90	56.20	3,665.91	477.48	748.22	887.50	0.63	0.54	-0.86
3,897.00	23.00	56.90	3,752.47	497.68	778.80	924.15	0.31	0.11	0.74
3,992.00	23.60	55.50	3,839.73	518.59	810.02	961.73	0.86	0.63	-1.47
4,086.00	21.60	55.50	3,926.50	539.05	839.79	997.84	2.13	-2.13	0.00
4,181.00	21.90	55.40	4,014.74	559.01	868.78	1,033.04	0.32	0.32	-0.11
4,274.00	21.30	56.40	4,101.21	578.21	897.13	1,067.27	0.76	-0.65	1.08
4,369.00	18.90	56.70	4,190.42	596.21	924.37	1,099.91	2.53	-2.53	0.32
4,462.00	16.20	56.60	4,279.08	611.62	947.79	1,127.95	2.90	-2.90	-0.11
4,556.00	15.60	56.90	4,369.48	625.74	969.33	1,153.71	0.64	-0.64	0.32
4,648.00	17.50	56.30	4,457.67	640.17	991.20	1,179.91	2.07	2.07	-0.65
4,742.00	16.50	52.70	4,547.56	656.11	1,013.58	1,207.36	1.54	-1.06	-3.83
4,836.00	15.60	56.60	4,637.90	671.15	1,034.75	1,233.32	1.49	-0.96	4.15
4,931.00	15.20	54.40	4,729.49	685.44	1,055.54	1,258.54	0.75	-0.42	-2.32
5,025.00	15.90	54.80	4,820.05	700.03	1,076.08	1,283.72	0.75	0.74	0.43
5,116.00	13.70	54.40	4,908.02	713.49	1,095.03	1,306.95	2.42	-2.42	-0.44
5,212.00	12.90	55.80	5,001.45	726.13	1,113.14	1,329.03	0.90	-0.83	1.46
5,306.00	10.90	55.90	5,093.42	737.01	1,129.18	1,348.41	2.13	-2.13	0.11
5,400.00	8.10	55.70	5,186.12	745.73	1,142.01	1,363.92	2.98	-2.98	-0.21
5,494.00	6.40	52.30	5,279.37	752.67	1,151.63	1,375.76	1.86	-1.81	-3.62
5,587.00	5.10	52.60	5,371.90	758.35	1,159.01	1,385.06	1.40	-1.40	0.32
5,682.00	4.50	58.00	5,466.57	762.89	1,165.53	1,392.99	0.79	-0.63	5.68

<b>Company:</b>	St. James	<b>Local Co-ordinate Reference:</b>	Well 1-24
<b>Project:</b>	Weld County, Colorado (NAD 83)	<b>TVD Reference:</b>	WELL @ 4658.00usft (Cade 22)
<b>Site:</b>	Larson Farms	<b>MD Reference:</b>	WELL @ 4658.00usft (Cade 22)
<b>Well:</b>	1-24	<b>North Reference:</b>	Grid
<b>Wellbore:</b>	Wellbore #1	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Surveys	<b>Database:</b>	Southern Region

Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
5,777.00	3.20	55.40	5,561.35	766.37	1,170.87	1,399.37	1.38	-1.37	-2.74	
5,872.00	2.40	57.80	5,656.24	768.93	1,174.73	1,404.01	0.85	-0.84	2.53	
5,966.00	2.50	48.80	5,750.15	771.33	1,177.94	1,408.01	0.42	0.11	-9.57	
6,060.00	2.30	45.53	5,844.07	774.00	1,180.83	1,411.89	0.26	-0.21	-3.48	
6,155.00	2.10	41.60	5,939.00	776.64	1,183.35	1,415.44	0.26	-0.21	-4.14	
6,249.00	2.10	45.90	6,032.94	779.13	1,185.73	1,418.80	0.17	0.00	4.57	
6,344.00	2.40	71.40	6,127.86	780.97	1,188.86	1,422.43	1.09	0.32	26.84	
6,437.00	2.70	72.00	6,220.77	782.27	1,192.79	1,426.43	0.32	0.32	0.65	
6,532.00	5.30	33.00	6,315.55	786.64	1,197.31	1,432.61	3.81	2.74	-41.05	
6,627.00	5.20	20.00	6,410.15	794.37	1,201.17	1,440.08	1.25	-0.11	-13.68	
6,722.00	4.00	15.60	6,504.85	801.61	1,203.54	1,446.03	1.32	-1.26	-4.63	
6,817.00	3.30	9.80	6,599.65	807.49	1,204.89	1,450.40	0.83	-0.74	-6.11	
6,911.00	2.30	10.20	6,693.54	812.02	1,205.69	1,453.55	1.06	-1.06	0.43	
7,006.00	2.00	23.70	6,788.47	815.41	1,206.69	1,456.26	0.62	-0.32	14.21	
7,101.00	1.50	34.80	6,883.43	817.95	1,208.07	1,458.80	0.63	-0.53	11.68	
7,162.00	1.50	34.80	6,944.41	819.26	1,208.98	1,460.29	0.00	0.00	0.00	
Projection to TD-7162.00' MD										

Survey Annotations					
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment	
		+N/-S (usft)	+E/-W (usft)		
7,162.00	6,944.41	819.26	1,208.98	Projection to TD-7162.00' MD	



<b>JOB NO.:</b>	DDOK-110481	<b>Report Time:</b>	2400	1 of 4
<b>Company:</b>	St. James	<b>API JOB #</b>	05-123-34359-00	
<b>LOCATION:</b>	Weld County	<b>WORK ORDER#</b>	MS#110463RR	
<b>RIG NAME:</b>	Cade 22	<b>FIELD:</b>	Wattenbaurge	
<b>STATE:</b>	Colorado	<b>Township:</b>		
<b>COUNTY:</b>	Weld County	<b>SECT/RANGE:</b>	24	
<b>WELL NAME:</b>	Larson Farms 1-24			

From Friday, September 23, 2011 at 0000 to Friday, September 23, 2011 at 2400

DRILLING SUMMARY				Drilling Parameters							
Start Depth	0.00	Rotary Hours	6.45	WOB	15	Pick UP	40	Slack Off	40	SPM	
End Depth	786.00	Circulating Hours	0.48	RAB	40	SPP	1000	FlowRate	0 - 440	106	
Total Drilled:	786.00	Avg. Total ROP:	114.74	Mud Data							
Total Rotary Drilled:	746.00	Avg. Rotary ROP:	115.66	Type	Water		PV	0	SOLID	0	
Total Drilled Sliding:	40.00	Avg. Slide ROP:	100.00	Weight	8.6	GAS	0	YP	0	BHT°	103
Slide Hours:	0.40	Percent Rotary:	94.91	Viscosity	27	SAND	0	PH	0	Flow T°	0
Below Rotary Hrs.	12.70	Percent Slide:	5.09	Chlorides	0	WL	0		Oil %	0	

PERSONNEL							CASING			BHA	
Lead Directional :		David Cathey					Size	Lb/ft	Set Depth	BHA # 1:12 1/4" WLS R193M Jets 3/22, 8" 4/5 - 5.3 Stage 1.83 ABH, 4 1/2" XH BX - 6 5/8" Reg Pn, 6 9/16" FLT Sub, 6 1/8" NMPC, 6 1/2" UBHO, 5 15/16" NMDC, 6 3/16" NMDC, 2 Jts 6 1/2 Drill Collars, 18 Jts 4 1/2" HWDP, 4 1/2 Drill Pipe,	
Second Directional :		Chris Veniegas & Coty Jeane					8 5/8	36	760		
MWD Operator1		Cody Hart					Signature:				
MWD Operator2											
Directional Company:		MS Energy									
Geologist:											
Company Man:		Eric Geiger							Daily Cost	\$7,500.00	
Incl. In:	0	Azm. In:	0	Incl. Out:	5.5	Azm. Out:	66.2	Cummulative Cost:		\$7,500.00	

#### GENERAL COMMENT

Date	Start Time	End Time	Hours	Start Depth	End Depth	Activity Code	COMMENT
23-Sep-11	00:00	03:00	3.00	0	0	Standby	Standby While Rig Crew Rig Down & Skid Off Of Larson Farms 2-24 Well.
23-Sep-11	03:00	04:00	1.00	0	0	Standby	Standby While Rig Crew Rigs Up On Larson Farms 1-24 Well.
23-Sep-11	04:00	05:55	1.92	0	138	Drilling	Standby While Rig Crew Drill Pilot Hole.
23-Sep-11	05:55	07:35	1.67	138	138	Change BHA	Picked Up BHA#1
23-Sep-11	07:35	08:48	1.22	138	209	Drilling	Drilling - (WOB:10;GPM :440;RPM:85)
23-Sep-11	08:48	08:57	0.15	209	209	Survey & Conn.	Survey & Conn@143- .2 lInc- 155.80 Azm
23-Sep-11	08:57	09:12	0.25	209	229	Sliding	Sliding - (WOB:10;GPM :440;TFO:57)
23-Sep-11	09:12	09:15	0.05	229	239	Drilling	Drilling - (WOB:15;GPM :440;RPM:85)
23-Sep-11	09:15	09:18	0.05	239	239	Survey & Conn.	Conn.
23-Sep-11	09:18	09:38	0.33	239	300	Drilling	Drilling - (WOB:15;GPM :440;RPM:85)
23-Sep-11	09:38	09:48	0.17	300	300	Survey & Conn.	Survey & Conn@234- 1.10 Inc- 70.20 Azm
23-Sep-11	09:48	09:57	0.15	300	320	Sliding	Sliding - (WOB:15;GPM :440;TFO:0)
23-Sep-11	09:57	10:00	0.05	320	330	Drilling	Drilling - (WOB:15;GPM :440;RPM:85)
23-Sep-11	10:00	10:02	0.03	330	330	Survey & Conn.	Conn.
23-Sep-11	10:02	10:20	0.30	330	391	Drilling	Drilling - (WOB:15;GPM :440;RPM:85)
23-Sep-11	10:20	10:29	0.15	391	391	Survey & Conn.	Survey & Conn@325- 2.90 Inc- 65.70 Azm
23-Sep-11	10:29	11:01	0.53	391	482	Drilling	Drilling - (WOB:15;GPM :440;RPM:85)



Date	Start Time	End Time	Hours	Start Depth	End Depth	Activity Code	COMMENT
23-Sep-11	11:01	11:10	0.15	482	482	Survey & Conn.	Survey & Conn@416- 3.30 Inc- 67.30 Azm
23-Sep-11	11:10	11:43	0.55	482	574	Drilling	Drilling - (WOB:15;GPM :440;RPM:85)
23-Sep-11	11:43	11:52	0.15	574	574	Survey & Conn.	Survey & Conn@508- 3.80 Inc- 71.10 Azm
23-Sep-11	11:52	12:30	0.63	574	665	Drilling	Drilling - (WOB:15;GPM :440;RPM:85)
23-Sep-11	12:30	12:38	0.13	665	665	Survey & Conn.	Survey & Conn@599- 4.50 Inc- 68.30 Azm
23-Sep-11	12:38	13:18	0.67	665	756	Drilling	Drilling - (WOB:15;GPM :440;RPM:85)
23-Sep-11	13:18	13:29	0.18	756	756	Survey & Conn.	Survey & Conn@690- 5.50 Inc- 66.20 Azm
23-Sep-11	13:29	13:41	0.20	756	786	Drilling	Drilling - (WOB:15;GPM :440;RPM:85)
23-Sep-11	13:41	13:58	0.28	786	786	Circulating	Circulating
23-Sep-11	13:58	15:03	1.08	786	786	Short Trip	Short Trip
23-Sep-11	15:03	15:15	0.20	786	786	Circulating	Circulating
23-Sep-11	15:15	15:40	0.42	786	786	POOH	POOH
23-Sep-11	15:40	16:42	1.03	786	786	Change BHA	L/D BHA #1
23-Sep-11	16:42	24:00	7.30	786	786	Standby	Standby While Rig Crew Runs Surface CSG & Cement Same.



<b>JOB NO.:</b>	DDOK-110481	<b>Report Time:</b>	2400	2 of 4
<b>Company:</b>	St. James	<b>API JOB #</b>	05-123-34359-00	
<b>LOCATION:</b>	Weld County	<b>WORK ORDER#</b>	MS#110463RR	
<b>RIG NAME:</b>	Cade 22	<b>FIELD:</b>	Wattenbaurge	
<b>STATE:</b>	Colorado	<b>Township:</b>		
<b>COUNTY:</b>	Weld County	<b>SECTORANGE:</b>	24	
<b>WELL NAME:</b>	Larson Farms 1-24			

From Saturday, September 24, 2011 at 0000 to Saturday, September 24, 2011 at 2400

DRILLING SUMMARY						Drilling Parameters					
Start Depth	5.00	Rotary Hours	9.58	WOB	15	Pick UP	110	Slack Off	83	SPM	
End Depth	3489.00	Circulating Hours	0.67	RAB	86	SPP	1760	FlowRate	440 - 440	106	
Total Drilled:	4195.00	Avg. Total ROP:	334.71	Mud Data							
Total Rotary Drilled:	3974.00	Avg. Rotary ROP:	414.68	Type	Water			PV	0	SOLID	0
Total Drilled Sliding:	221.00	Avg. Slide ROP:	74.92	Weight	8.6	GAS	0	YP	0	BHT°	116.7
Slide Hours:	2.95	Percent Rotary:	94.73	Viscosity	27	SAND	0	PH	0	Flow T°	0
Below Rotary Hrs.	21.00	Percent Slide:	5.27	Chlorides	0	WL	0		Oil %	0	
PERSONNEL				CASING				BHA			
Lead Directional :	David Cathey			Size	Lb/ft	Set Depth	BHA # 2:7 7/8" Hughes HCD 405Z, 6 1/4" 7/8 .4.8 Stg 1.83 ABH, 6 9/16" FLT Sub, 6 1/8" NMPC, 6 1/2" UBHO, 5 15/16" NMDC, 6 3/16" NMDC, 2 Jts 6 1/2 Drill Collars, 18 Jts 4 1/2" HWDP, 4 1/2 Drill Pipe,				
Second Directional :	Chris Veniegas & Coty Jeane			8 5/8	36	760					
MWD Operator1	Cody Hart										
MWD Operator2											
Directional Company:	MS Energy										
Geologist:				Signature: <div></div>							
Company Man:	Eric Geiger										
Incl. In:	5.5	Azm. In:	66.2	Incl. Out:	17.1	Azm. Out:	59.6	Daily Cost	\$7,500.00		
						Cummulative Cost:		\$15,000.00			

#### GENERAL COMMENT

Date	Start Time	End Time	Hours	Start Depth	End Depth	Activity Code	COMMENT
24-Sep-11	00:00	00:30	0.50	786	786	Standby	Standby - Nipple Up
24-Sep-11	00:30	03:00	2.50	786	786	Standby	Standby - Test BOP
24-Sep-11	03:00	04:15	1.25	786	786	Change BHA	P/U BHA # 2
24-Sep-11	04:15	05:12	0.95	786	786	TIH	TIH / Tagged @ 732'
24-Sep-11	05:12	05:38	0.43	786	786	Drilling Cement	Drilling - (WOB:15;GPM :440;RPM:85)
24-Sep-11	05:38	06:17	0.65	786	941	Drilling	Drilling - (WOB:15;GPM :440;RPM:85)
24-Sep-11	06:17	06:26	0.15	941	941	Survey & Conn.	Survey & Conn@880- 6.30 Inc- 60.60 Azm
24-Sep-11	06:26	06:45	0.32	941	1036	Drilling	Drilling - (WOB:15;GPM :440;RPM:85)
24-Sep-11	06:45	06:54	0.15	1036	1036	Survey & Conn.	Survey & Conn@975- 6.3 Inc- 61.60 Azm
24-Sep-11	06:54	07:12	0.30	1036	1130	Drilling	Drilling - (WOB:15;GPM :440;RPM:85)
24-Sep-11	07:12	07:21	0.15	1130	1130	Survey & Conn.	Survey & Conn@1069- 6.3 Inc- 61.1 Azm
24-Sep-11	07:21	07:35	0.23	1130	1225	Drilling	Drilling - (WOB:15;GPM :440;RPM:85)
24-Sep-11	07:35	07:43	0.13	1225	1225	Survey & Conn.	Survey & Conn@1164- 5.7 Inc- 61.3 Azm
24-Sep-11	07:43	07:52	0.15	1225	1235	Sliding	Sliding - (WOB:15;GPM :440;TFO:56)
24-Sep-11	07:52	08:03	0.18	1235	1288	Drilling	Drilling - (WOB:15;GPM :440;RPM:85)
24-Sep-11	08:03	08:10	0.12	1288	1288	Survey & Conn.	Conn.
24-Sep-11	08:10	08:15	0.08	1288	1298	Sliding	Sliding - (WOB:15;GPM :440;TFO:300)
24-Sep-11	08:15	08:18	0.05	1298	1320	Drilling	Drilling - (WOB:15;GPM :440;RPM:85)

Date	Start Time	End Time	Hours	Start Depth	End Depth	Activity Code	COMMENT
24-Sep-11	08:18	08:26	0.13	1320	1320	Survey & Conn.	Survey & Conn@1259- 6.7 Inc- 50.1 Azm
24-Sep-11	08:26	08:31	0.08	1320	1330	Sliding	Sliding - (WOB:15;GPM :440;TFO:5)
24-Sep-11	08:31	08:37	0.10	1330	1383	Drilling	Drilling - (WOB:15;GPM :440;RPM:85)
24-Sep-11	08:37	08:46	0.15	1383	1383	Survey & Conn.	Conn.
24-Sep-11	08:46	08:55	0.15	1383	1393	Sliding	Sliding - (WOB:15;GPM :440;TFO:30)
24-Sep-11	08:55	08:58	0.05	1393	1414	Drilling	Drilling - (WOB:15;GPM :440;RPM:85)
24-Sep-11	08:58	09:06	0.13	1414	1414	Survey & Conn.	Survey & Conn@1353- 10.30 Inc- 53.80 Azm
24-Sep-11	09:06	09:09	0.05	1414	1419	Sliding	Sliding - (WOB:15;GPM :440;TFO:5)
24-Sep-11	09:09	09:12	0.05	1419	1477	Drilling	Drilling - (WOB:15;GPM :440;RPM:85)
24-Sep-11	09:12	09:21	0.15	1477	1477	Survey & Conn.	Survey & Conn.
24-Sep-11	09:21	09:31	0.17	1477	1485	Sliding	Sliding - (WOB:15;GPM :440;TFO:30)
24-Sep-11	09:31	09:35	0.07	1485	1509	Drilling	Drilling - (WOB:15;GPM :440;RPM:85)
24-Sep-11	09:35	09:43	0.13	1509	1509	Survey & Conn.	Survey & Conn@1448- 12.7 Inc- 61.3 Azm
24-Sep-11	09:43	09:46	0.05	1509	1514	Sliding	Sliding - (WOB:15;GPM :440;TFO:330)
24-Sep-11	09:46	09:59	0.22	5	1573	Drilling	Drilling - (WOB:15;GPM :440;RPM:85)
24-Sep-11	09:59	10:06	0.12	1573	1573	Survey & Conn.	Conn.
24-Sep-11	10:06	10:11	0.08	1573	1580	Sliding	Sliding - (WOB:15;GPM :440;TFO:330)
24-Sep-11	10:11	10:15	0.07	1580	1604	Drilling	Drilling - (WOB:15;GPM :440;RPM:85)
24-Sep-11	10:15	10:22	0.12	1604	1604	Survey & Conn.	Survey & Conn@1543- 14.2 Inc- 60.70 Azm
24-Sep-11	10:22	10:26	0.07	1604	1609	Sliding	Sliding - (WOB:15;GPM :440;TFO:330)
24-Sep-11	10:26	10:37	0.18	1609	1668	Drilling	Drilling - (WOB:15;GPM :440;RPM:85)
24-Sep-11	10:37	10:44	0.12	1668	1668	Survey & Conn.	Conn.
24-Sep-11	10:44	10:49	0.08	1668	1676	Sliding	Sliding - (WOB:15;GPM :440;TFO:330)
24-Sep-11	10:49	10:53	0.07	1676	1700	Drilling	Drilling - (WOB:15;GPM :440;RPM:85)
24-Sep-11	10:53	11:01	0.13	1700	1700	Survey & Conn.	Survey & Conn@1639- 15.1 Inc- 61.7 Azm
24-Sep-11	11:01	11:04	0.05	1700	1705	Sliding	Sliding - (WOB:15;GPM :440;TFO:330)
24-Sep-11	11:04	11:17	0.22	1705	1763	Drilling	Drilling - (WOB:15;GPM :440;RPM:85)
24-Sep-11	11:17	11:28	0.18	1763	1763	Survey & Conn.	Conn.
24-Sep-11	11:28	11:34	0.10	1763	1771	Sliding	Sliding - (WOB:15;GPM :440;TFO:330)
24-Sep-11	11:34	11:37	0.05	1771	1794	Drilling	Drilling - (WOB:15;GPM :440;RPM:85)
24-Sep-11	11:37	11:45	0.13	1794	1794	Survey & Conn.	Survey & Conn@1733- 16.8 Inc- 59.8 Azm
24-Sep-11	11:45	11:49	0.07	1794	1799	Sliding	Sliding - (WOB:15;GPM :440;TFO:330)
24-Sep-11	11:49	12:00	0.18	1799	1857	Drilling	Drilling - (WOB:15;GPM :440;RPM:85)
24-Sep-11	12:00	12:08	0.13	1857	1857	Survey & Conn.	Conn.
24-Sep-11	12:08	12:11	0.05	1857	1862	Sliding	Sliding - (WOB:15;GPM :440;TFO:330)
24-Sep-11	12:11	12:16	0.08	1862	1888	Drilling	Drilling - (WOB:15;GPM :440;RPM:85)
24-Sep-11	12:16	12:23	0.12	1888	1888	Survey & Conn.	Survey & Conn@1827- 18.5 Inc- 57.0 Azm
24-Sep-11	12:23	12:29	0.10	1888	1894	Sliding	Sliding - (WOB:15;GPM :440;TFO:350)
24-Sep-11	12:29	12:42	0.22	1894	1952	Drilling	Drilling - (WOB:15;GPM :440;RPM:85)
24-Sep-11	12:42	12:50	0.13	1952	1952	Survey & Conn.	Conn.
24-Sep-11	12:50	12:54	0.07	1952	1958	Sliding	Sliding - (WOB:15;GPM :440;TFO:350)
24-Sep-11	12:54	12:58	0.07	1958	1983	Drilling	Drilling - (WOB:15;GPM :440;RPM:85)
24-Sep-11	12:58	13:05	0.12	1983	1983	Survey & Conn.	Survey & Conn@1922- 19.1 Inc- 57.9 Azm
24-Sep-11	13:05	13:10	0.08	1983	1990	Sliding	Sliding - (WOB:15;GPM :440;TFO:350)
24-Sep-11	13:10	13:22	0.20	1990	2044	Drilling	Drilling - (WOB:15;GPM :440;RPM:85)
24-Sep-11	13:22	13:29	0.12	2044	2044	Survey & Conn.	Conn.
24-Sep-11	13:29	13:34	0.08	2044	2054	Sliding	Sliding - (WOB:15;GPM :440;TFO:350)
24-Sep-11	13:34	13:38	0.07	2054	2076	Drilling	Drilling - (WOB:15;GPM :440;RPM:85)

Date	Start Time	End Time	Hours	Start Depth	End Depth	Activity Code	COMMENT
24-Sep-11	13:38	13:46	0.13	2076	2076	Survey & Conn.	Survey & Conn@2015- 20.0 Inc- 58.2 Azm
24-Sep-11	13:46	14:00	0.23	2076	2139	Drilling	Drilling - (WOB:15;GPM :440;RPM:85)
24-Sep-11	14:00	14:08	0.13	2139	2139	Survey & Conn.	Conn.
24-Sep-11	14:08	14:16	0.13	2139	2149	Sliding	Sliding - (WOB:15;GPM :440;TFO:350)
24-Sep-11	14:16	14:19	0.05	2149	2171	Drilling	Drilling - (WOB:15;GPM :440;RPM:85)
24-Sep-11	14:19	14:26	0.12	2171	2171	Survey & Conn.	Survey & Conn@2110- 20.4 Inc- 57.8 Azm
24-Sep-11	14:26	14:41	0.25	2171	2232	Drilling	Drilling - (WOB:15;GPM :440;RPM:85)
24-Sep-11	14:41	14:48	0.12	2232	2232	Survey & Conn.	Conn.
24-Sep-11	14:48	14:56	0.13	2232	2242	Sliding	Sliding - (WOB:15;GPM :440;TFO:350)
24-Sep-11	14:56	14:58	0.03	2242	2264	Drilling	Drilling - (WOB:15;GPM :440;RPM:85)
24-Sep-11	14:58	15:05	0.12	2264	2264	Survey & Conn.	Survey & Conn@2203- 20.7 Inc- 57.0 Azm
24-Sep-11	15:05	15:12	0.12	2264	2272	Sliding	Sliding - (WOB:15;GPM :440;TFO:350)
24-Sep-11	15:12	15:24	0.20	2272	2326	Drilling	Drilling - (WOB:15;GPM :440;RPM:85)
24-Sep-11	15:24	15:34	0.17	2326	2326	Survey & Conn.	Conn.
24-Sep-11	15:34	15:40	0.10	2326	2356	Drilling	Drilling - (WOB:15;GPM :440;RPM:85)
24-Sep-11	15:40	15:48	0.13	2356	2356	Survey & Conn.	Survey & Conn@2295- 21.0 Inc- 51.4 Azm
24-Sep-11	15:48	16:15	0.45	2356	2451	Drilling	Drilling - (WOB:15;GPM :440;RPM:85)
24-Sep-11	16:15	16:23	0.13	2451	2451	Survey & Conn.	Survey & Conn@2390- 18.9 Inc- 51.0 Azm
24-Sep-11	16:23	16:29	0.10	2451	2461	Sliding	Sliding - (WOB:15;GPM :440;TFO:350)
24-Sep-11	16:29	16:33	0.07	2461	2483	Drilling	Drilling - (WOB:15;GPM :440;RPM:85)
24-Sep-11	16:33	16:48	0.25	2483	2483	Other	Installing The Rotating Head
24-Sep-11	16:48	17:07	0.32	2483	2544	Drilling	Drilling - (WOB:15;GPM :440;RPM:85)
24-Sep-11	17:07	17:15	0.13	2544	2544	Survey & Conn.	Survey & Conn@2483- 19.2 Inc- 52.5 Azm
24-Sep-11	17:15	17:20	0.08	2544	2554	Sliding	Sliding - (WOB:15;GPM :440;TFO:350)
24-Sep-11	17:20	17:41	0.35	2554	2638	Drilling	Drilling - (WOB:15;GPM :440;RPM:85)
24-Sep-11	17:41	18:18	0.62	2638	2733	Drilling	Drilling - (WOB:15;GPM :440;RPM:85)
24-Sep-11	18:18	18:25	0.12	2733	2733	Survey & Conn.	Survey & Conn @ 2672 19.9 Inc 54.2 Azi
24-Sep-11	18:25	18:33	0.13	2733	2741	Sliding	Sliding - (WOB:15;GPM :440;TFO:350)
24-Sep-11	18:33	18:57	0.40	2741	2828	Drilling	Drilling - (WOB:15;GPM :440;RPM:85)
24-Sep-11	18:57	19:05	0.13	2828	2828	Survey & Conn.	Survey & Conn @ 2767 19.9 Inc 57.5 Azi
24-Sep-11	19:05	19:10	0.08	2828	2836	Sliding	Sliding - (WOB:15;GPM :440;TFO:360)
24-Sep-11	19:10	19:28	0.30	2836	2922	Drilling	Drilling - (WOB:15;GPM :440;RPM:85)
24-Sep-11	19:28	19:34	0.10	2922	2922	Survey & Conn.	Survey & Conn @ 2861 Inc 21.5 Azi 56.0
24-Sep-11	19:34	19:58	0.40	2922	3017	Drilling	Drilling - (WOB:15;GPM :440;RPM:85)
24-Sep-11	19:58	20:05	0.12	3017	3017	Survey & Conn.	Survey & Conn @2956- 20.8 Inc- 56.1 Azm
24-Sep-11	20:05	20:12	0.12	3034	3025	Sliding	Sliding - (WOB:15;GPM :440;TFO:340)
24-Sep-11	20:12	20:17	0.08	3025	3047	Drilling	Drilling - (WOB:15;GPM :440;RPM:85)
24-Sep-11	20:17	20:57	0.67	3047	3047	Rig Service-Inhole	Rig Service
24-Sep-11	20:57	21:10	0.22	3047	3111	Drilling	Drilling - (WOB:15;GPM :440;RPM:85)
24-Sep-11	21:10	21:17	0.12	3111	3111	Survey & Conn.	Survey & Conn @ 3050 Inc 19.7 Azi 56.2
24-Sep-11	21:17	21:24	0.12	3111	3119	Sliding	Sliding - (WOB:15;GPM :440;TFO:360)
24-Sep-11	21:24	21:35	0.18	3119	3205	Drilling	Drilling - (WOB:15;GPM :440;RPM:85)
24-Sep-11	21:35	21:56	0.35	3205	3205	Survey & Conn.	Survey & Conn @ 3144 Inc 20.3 Azi 56.9
24-Sep-11	21:56	22:02	0.10	3205	3213	Sliding	Sliding - (WOB:15;GPM :440;TFO:360)
24-Sep-11	22:02	22:26	0.40	3213	3300	Drilling	Drilling - (WOB:15;GPM :440;RPM:85)
24-Sep-11	22:26	22:32	0.10	3300	3300	Survey & Conn.	Survey & Conn @ 3239 Inc 19.6 Azi 57.0
24-Sep-11	22:32	22:41	0.15	3300	3308	Sliding	Sliding - (WOB:15;GPM :440;TFO:0)
24-Sep-11	22:41	23:07	0.43	3308	3394	Drilling	Drilling - (WOB:15;GPM :440;RPM:85)

Date	Start Time	End Time	Hours	Start Depth	End Depth	Activity Code	COMMENT
24-Sep-11	23:07	23:15	0.13	3394	3394	Survey & Conn.	Survey & Conn @ 3333 Inc
24-Sep-11	23:15	23:22	0.12	3394	3406	Sliding	Sliding - (WOB:15;GPM :440;TFO:360)
24-Sep-11	23:22	23:49	0.45	3406	3489	Drilling	Drilling - (WOB:15;GPM :440;RPM:85)
24-Sep-11	23:49	24:00	0.18	3489	3489	Survey & Conn.	Survey & Conn @ 3428 Inc 17.1 Azi 59.6



<b>JOB NO.:</b>	DDOK-110481	<b>Report Time:</b>	2400	3 of 4
<b>Company:</b>	St. James	<b>API JOB #</b>	05-123-34359-00	
<b>LOCATION:</b>	Weld County	<b>WORK ORDER#</b>	MS#110463RR	
<b>RIG NAME:</b>	Cade 22	<b>FIELD:</b>	Wattenbaurge	
<b>STATE:</b>	Colorado	<b>Township:</b>		
<b>COUNTY:</b>	Weld County	<b>SECT/RANGE:</b>	24	
<b>WELL NAME:</b>	Larson Farms 1-24			

From Sunday, September 25, 2011 at 0000 to Sunday, September 25, 2011 at 2400

DRILLING SUMMARY						Drilling Parameters					
Start Depth	3489.00	Rotary Hours	13.55	WOB	15	Pick UP	198	Slack Off	135	SPM	
End Depth	6605.00	Circulating Hours	0.27	RAB	138	SPP	2200	FlowRate	440 - 440	106	
Total Drilled:	3116.00	Avg. Total ROP:	168.89	Mud Data							
Total Rotary Drilled:	2909.00	Avg. Rotary ROP:	214.69	Type	Water Base			PV	13	SOLID	7.3
Total Drilled Sliding:	207.00	Avg. Slide ROP:	42.24	Weight	9.4	GAS	0	YP	11	BHT°	0
Slide Hours:	4.90	Percent Rotary:	93.36	Viscosity	51	SAND	0	PH	0	Flow T°	0
Below Rotary Hrs.	24.00	Percent Slide:	6.64	Chlorides	650	WL	9.6			Oil %	0
PERSONNEL				CASING				BHA			
Lead Directional :	David Cathey			Size	Lb/ft	Set Depth		BHA # 2:7 7/8" Hughes HCD 405Z, 6 1/4" 7/8 .4.8 Stg 1.83 ABH, 6 9/16" FLT Sub, 6 1/8" NMPC, 6 1/2" UBHO, 5 15/16" NMDC, 6 3/16" NMDC, 2 Jts 6 1/2 Drill Collars, 18 Jts 4 1/2" HWDP, 4 1/2 Drill Pipe,			
Second Directional :	Chris Veniegas & Coty Jeane			8 5/8	36	760					
MWD Operator1	Cody Hart										
MWD Operator2											
Directional Company:	MS Energy										
Geologist:				Signature: <div></div>							
Company Man:	Eric Geiger										
Incl. In:	17.1	Azm. In:	59.6	Incl. Out:	5.3	Azm. Out:	33	Daily Cost		\$7,500.00	
						Cummulative Cost:		\$22,500.00			

#### GENERAL COMMENT

Date	Start Time	End Time	Hours	Start Depth	End Depth	Activity Code	COMMENT
25-Sep-11	00:00	00:10	0.17	3489	3514	Sliding	Sliding - (WOB:15;GPM :440;TFO:340)
25-Sep-11	00:10	00:30	0.33	3514	3584	Drilling	Drilling - (WOB:15;GPM :440;RPM:85)
25-Sep-11	00:30	00:40	0.17	3584	3584	Survey & Conn.	Survey & Conn @ 3523 Inc 17.0 Azi 59.2
25-Sep-11	00:40	00:57	0.28	3584	3604	Sliding	Sliding - (WOB:15;GPM :440;TFO:330)
25-Sep-11	00:57	01:08	0.18	3604	3646	Drilling	Drilling - (WOB:15;GPM :440;RPM:85)
25-Sep-11	01:08	01:14	0.10	3646	3646	Survey & Conn.	Check Shot Survey
25-Sep-11	01:14	01:24	0.17	3646	3656	Sliding	Sliding - (WOB:15;GPM :440;TFO:330)
25-Sep-11	01:24	01:28	0.07	3656	3678	Drilling	Drilling - (WOB:15;GPM :440;RPM:85)
25-Sep-11	01:28	01:35	0.12	3678	3678	Survey & Conn.	Survey & Conn @ 3617 Inc 18.1 Azi 58.1
25-Sep-11	01:35	01:44	0.15	3678	3688	Sliding	Sliding - (WOB:15;GPM :440;TFO:360)
25-Sep-11	01:44	02:02	0.30	3688	3771	Drilling	Drilling - (WOB:15;GPM :440;RPM:85)
25-Sep-11	02:02	02:08	0.10	3771	3771	Survey & Conn.	Survey & Conn @ 3710 Inc 22.4 Azi 57.0
25-Sep-11	02:08	02:28	0.33	3771	3864	Drilling	Drilling - (WOB:15;GPM :440;RPM:85)
25-Sep-11	02:28	02:38	0.17	3864	3864	Survey & Conn.	Survey & Conn @ 3803 Inc 22.9 Azi 56.2
25-Sep-11	02:38	02:57	0.32	3864	3958	Drilling	Drilling - (WOB:15;GPM :440;RPM:85)
25-Sep-11	02:57	03:05	0.13	3958	3958	Survey & Conn.	Survey & Conn @ 3897 Inc 23.0 Azi 56.9
25-Sep-11	03:05	03:25	0.33	3958	4053	Drilling	Drilling - (WOB:15;GPM :440;RPM:85)
25-Sep-11	03:25	03:31	0.10	4053	4053	Survey & Conn.	Survey & Conn @ 3992 Inc 23.6 aZi 55.5



Date	Start Time	End Time	Hours	Start Depth	End Depth	Activity Code	COMMENT
25-Sep-11	03:31	03:54	0.38	4053	4147	Drilling	Drilling - (WOB:15;GPM :440;RPM:85)
25-Sep-11	03:54	04:00	0.10	4147	4147	Survey & Conn.	Survey & Conn @ 4086 iNC 21.6 aZI 55.5
25-Sep-11	04:00	04:12	0.20	4147	4162	Sliding	Sliding - (WOB:15;GPM :440;TFO:330)
25-Sep-11	04:12	04:32	0.33	4162	4242	Drilling	Drilling - (WOB:15;GPM :440;RPM:85)
25-Sep-11	04:32	04:38	0.10	4242	4242	Survey & Conn.	Survey & Conn @ 4181 Inc 21.9 Azi 55.4
25-Sep-11	04:38	04:46	0.13	4242	4250	Sliding	Sliding - (WOB:15;GPM :440;TFO:360)
25-Sep-11	04:46	05:06	0.33	4250	4335	Drilling	Drilling - (WOB:15;GPM :440;RPM:85)
25-Sep-11	05:06	05:14	0.13	4335	4335	Survey & Conn.	Survey & Conn @ 4274' - 21.3 Inc - 56.4 Azm
25-Sep-11	05:14	05:45	0.52	4335	4430	Drilling	Drilling - (WOB:15;GPM :440;RPM:85)
25-Sep-11	05:45	06:00	0.25	4430	4442	Sliding	Sliding - (WOB:15;GPM :440;TFO:360)
25-Sep-11	06:00	06:21	0.35	4442	4523	Drilling	Drilling - (WOB:15;GPM :440;RPM:85)
25-Sep-11	06:21	06:28	0.12	4523	4523	Survey & Conn.	Survey & Conn@4462- 16.2 Inc- 60.5 Azm
25-Sep-11	06:28	06:48	0.33	4523	4533	Sliding	Sliding - (WOB:15;GPM :440;TFO:360)
25-Sep-11	06:48	07:02	0.23	4533	4585	Drilling	Drilling - (WOB:15;GPM :440;RPM:85)
25-Sep-11	07:02	07:09	0.12	4585	4585	Survey & Conn.	Conn.
25-Sep-11	07:09	07:22	0.22	4585	4595	Sliding	Sliding - (WOB:15;GPM :440;TFO:360)
25-Sep-11	07:22	07:26	0.07	4595	4617	Drilling	Drilling - (WOB:15;GPM :440;RPM:85)
25-Sep-11	07:26	07:33	0.12	4617	4617	Rig Service-Inhole	Rig Service-Inhole
25-Sep-11	07:33	07:40	0.12	4617	4617	Survey & Conn.	Survey & Conn@4556- 15.6 Inc- 56.9 Azm
25-Sep-11	07:40	07:49	0.15	4617	4617	Rig Service-Inhole	Rig Service-Inhole
25-Sep-11	07:49	08:04	0.25	4617	4627	Sliding	Sliding - (WOB:15;GPM :440;TFO:360)
25-Sep-11	08:04	08:17	0.22	4627	4678	Drilling	Drilling - (WOB:15;GPM :440;RPM:85)
25-Sep-11	08:17	08:24	0.12	4678	4678	Survey & Conn.	Conn.
25-Sep-11	08:24	08:29	0.08	4678	4709	Drilling	Drilling - (WOB:15;GPM :440;RPM:85)
25-Sep-11	08:29	08:36	0.12	4709	4709	Survey & Conn.	Survey & Conn@4648- 17.5 Inc- 56.3 Azm
25-Sep-11	08:36	08:51	0.25	4709	4719	Sliding	Sliding - (WOB:15;GPM :440;TFO:360)
25-Sep-11	08:51	09:06	0.25	4719	4771	Drilling	Drilling - (WOB:15;GPM :440;RPM:85)
25-Sep-11	09:06	09:15	0.15	4771	4771	Survey & Conn.	Conn.
25-Sep-11	09:15	09:29	0.23	4771	4781	Sliding	Sliding - (WOB:15;GPM :440;TFO:360)
25-Sep-11	09:29	09:34	0.08	4781	4803	Drilling	Drilling - (WOB:15;GPM :440;RPM:85)
25-Sep-11	09:34	09:42	0.13	4803	4803	Survey & Conn.	Survey & Conn@4742- 16.5 Inc- 52.7 Azm
25-Sep-11	09:42	09:51	0.15	4803	4808	Sliding	Sliding - (WOB:15;GPM :440;TFO:360)
25-Sep-11	09:51	10:04	0.22	4808	4865	Drilling	Drilling - (WOB:15;GPM :440;RPM:85)
25-Sep-11	10:04	10:13	0.15	4865	4865	Survey & Conn.	Conn.
25-Sep-11	10:13	10:29	0.27	4865	4875	Sliding	Sliding - (WOB:15;GPM :440;TFO:360)
25-Sep-11	10:29	10:37	0.13	4875	4897	Drilling	Drilling - (WOB:15;GPM :440;RPM:85)
25-Sep-11	10:37	10:45	0.13	4897	4897	Survey & Conn.	Survey & Conn@4836- 15.6 Inc- 53.4 Azm
25-Sep-11	10:45	11:02	0.28	4897	4960	Drilling	Drilling - (WOB:15;GPM :440;RPM:85)
25-Sep-11	11:02	11:18	0.27	4960	4960	Other	L/D Bad Joint
25-Sep-11	11:18	11:26	0.13	4960	4960	Survey & Conn.	Conn.
25-Sep-11	11:26	11:40	0.23	4960	4970	Sliding	Sliding - (WOB:15;GPM :440;TFO:360)
25-Sep-11	11:40	11:46	0.10	4970	4992	Drilling	Drilling - (WOB:15;GPM :440;RPM:85)
25-Sep-11	11:46	11:53	0.12	4992	4992	Survey & Conn.	Survey & Conn@4931- 15.2 Inc- 54.4 Azm
25-Sep-11	11:53	12:11	0.30	4992	5086	Drilling	Drilling - (WOB:15;GPM :440;RPM:85)
25-Sep-11	12:11	12:18	0.12	5086	5086	Survey & Conn.	Survey & Conn@5025- 15.9 Inc- 54.8 Azm
25-Sep-11	12:18	12:54	0.60	5086	5177	Drilling	Drilling - (WOB:15;GPM :440;RPM:85)
25-Sep-11	12:54	13:06	0.20	5177	5177	Survey & Conn.	Survey & Conn@5116- 13.7 Inc- 54.4 Azm
25-Sep-11	13:06	13:30	0.40	5177	5237	Drilling	Drilling - (WOB:15;GPM :440;RPM:85)

Date	Start Time	End Time	Hours	Start Depth	End Depth	Activity Code	COMMENT
25-Sep-11	13:30	13:37	0.12	5237	5237	Survey & Conn.	Survey & Conn@5212- 12.9 Inc- 55.8 Azm
25-Sep-11	13:37	13:54	0.28	5237	5335	Drilling	Drilling - (WOB:15;GPM :440;RPM:85)
25-Sep-11	13:54	14:01	0.12	5335	5335	Survey & Conn.	Conn.
25-Sep-11	14:01	14:39	0.63	5335	5355	Sliding	Sliding - (WOB:15;GPM :440;TFO:360)
25-Sep-11	14:39	14:42	0.05	5355	5367	Drilling	Drilling - (WOB:15;GPM :440;RPM:85)
25-Sep-11	14:42	14:49	0.12	5367	5367	Survey & Conn.	Survey & Conn@5306- 10.9 Inc- 55.9 Azm
25-Sep-11	14:49	14:55	0.10	5367	5398	Drilling	Drilling - (WOB:15;GPM :440;RPM:85)
25-Sep-11	14:55	15:03	0.13	5398	5398	Survey & Conn.	Conn.
25-Sep-11	15:03	15:20	0.28	5398	5461	Drilling	Drilling - (WOB:15;GPM :440;RPM:85)
25-Sep-11	15:20	15:28	0.13	5461	5461	Survey & Conn.	Survey & Conn@5400- 8.1 Inc- 55.7 Azm
25-Sep-11	15:28	15:50	0.37	5461	5555	Drilling	Drilling - (WOB:15;GPM :440;RPM:85)
25-Sep-11	15:50	16:02	0.20	5555	5555	Survey & Conn.	Survey & Conn@5494- 6.4 Inc- 52.3 Azm
25-Sep-11	16:02	16:34	0.53	5555	5648	Drilling	Drilling - (WOB:15;GPM :440;RPM:85)
25-Sep-11	16:34	16:42	0.13	5648	5648	Survey & Conn.	Survey & Conn@5587- 5.1 Inc- 52.6 Azm
25-Sep-11	16:42	17:26	0.73	5648	5743	Drilling	Drilling - (WOB:15;GPM :440;RPM:85)
25-Sep-11	17:26	17:33	0.12	5743	5743	Survey & Conn.	Survey & Conn@5682- 4.5 Inc- 58.00 Azm
25-Sep-11	17:33	18:00	0.45	5743	5839	Drilling	Drilling - (WOB:15;GPM :440;RPM:85)
25-Sep-11	18:00	18:06	0.10	5839	5839	Survey & Conn.	Survey & Conn @ 5777 Inc 3.2 Azi 55.4
25-Sep-11	18:06	18:35	0.48	5839	5933	Drilling	Drilling - (WOB:15;GPM :440;RPM:85)
25-Sep-11	18:35	18:41	0.10	5933	5933	Survey & Conn.	Survey & Conn @ 5872 Inc 2.4 Azi 57.8
25-Sep-11	18:41	19:08	0.45	5933	6027	Drilling	Drilling - (WOB:15;GPM :440;RPM:85)
25-Sep-11	19:08	19:14	0.10	6027	6027	Survey & Conn.	Survey & Conn @ 5966 Inc 2.5 Azi 48.8
25-Sep-11	19:14	19:43	0.48	6027	6121	Drilling	Drilling - (WOB:15;GPM :440;RPM:85)
25-Sep-11	19:43	19:48	0.08	6121	6121	Survey & Conn.	Survey & Conn @ 6060 Inc 2.3 Azi 27.0
25-Sep-11	19:48	20:13	0.42	6121	6216	Drilling	Drilling - (WOB:15;GPM :440;RPM:85)
25-Sep-11	20:13	20:21	0.13	6216	6216	Survey & Conn.	Survey & Conn @ 6155 Inc 2.1 Azi 41.6
25-Sep-11	20:21	20:49	0.47	6216	6310	Drilling	Drilling - (WOB:15;GPM :440;RPM:85)
25-Sep-11	20:49	20:56	0.12	6310	6310	Survey & Conn.	Survey & Conn @ 6249 Inc 2.1 Azi 45.9
25-Sep-11	20:56	21:24	0.47	6310	6405	Drilling	Drilling - (WOB:15;GPM :440;RPM:85)
25-Sep-11	21:24	21:31	0.12	6405	6405	Survey & Conn.	Survey & Conn @ 6344 iNC 2.4 aZI 71.4
25-Sep-11	21:31	21:58	0.45	6405	6498	Drilling	Drilling - (WOB:15;GPM :440;RPM:85)
25-Sep-11	21:58	22:04	0.10	6498	6498	Survey & Conn.	Survey & Conn @ 6437 Inc 2.7 Azi 72.0
25-Sep-11	22:04	22:51	0.78	6498	6593	Drilling	Drilling - (WOB:15;GPM :440;RPM:85)
25-Sep-11	22:51	23:01	0.17	6593	6593	Survey & Conn.	Survey & Conn @ 6532 Inc 5.3 Azi 33.0
25-Sep-11	23:01	24:00	0.98	6593	6605	Sliding	Sliding - (WOB:15;GPM :440;TFO:360)





<b>JOB NO.:</b>	DDOK-110481	<b>Report Time:</b>	2400	4 of 4
<b>Company:</b>	St. James	<b>API JOB #</b>	05-123-34359-00	
<b>LOCATION:</b>	Weld County	<b>WORK ORDER#</b>	MS#110463RR	
<b>RIG NAME:</b>	Cade 22	<b>FIELD:</b>	Wattenbaurge	
<b>STATE:</b>	Colorado	<b>Township:</b>		
<b>COUNTY:</b>	Weld County	<b>SECTORANGE:</b>	24	
<b>WELL NAME:</b>	Larson Farms 1-24			

From Monday, September 26, 2011 at 0000 to Monday, September 26, 2011 at 2400

DRILLING SUMMARY				Drilling Parameters						
Start Depth	6605.00	Rotary Hours	5.48	WOB	15	Pick UP	198	Slack Off	135	SPM
End Depth	7162.00	Circulating Hours	1.57	RAB	138	SPP	2200	FlowRate	440 - 440	106
Total Drilled:	557.00	Avg. Total ROP:	88.88	Mud Data						
Total Rotary Drilled:	551.00	Avg. Rotary ROP:	100.49	Type	Water Base		PV	13	SOLID	7.3
Total Drilled Sliding:	6.00	Avg. Slide ROP:	7.66	Weight	9.4	GAS	0	YP	11	BHT°
Slide Hours:	0.78	Percent Rotary:	98.92	Viscosity	51	SAND	0	PH	8	Flow T°
Below Rotary Hrs.	12.87	Percent Slide:	1.08	Chlorides	650	WL	9.6	Oil %		0

PERSONNEL							CASING			BHA	
Lead Directional :		David Cathey					Size	Lb/ft	Set Depth	BHA # 2:7 7/8" Hughes HCD 405Z, 6 1/4" 7/8 .4.8 Stg 1.83 ABH, 6 9/16" FLT Sub, 6 1/8" NMPC, 6 1/2" UBHO, 5 15/16" NMDC, 6 3/16" NMDC, 2 Jts 6 1/2 Drill Collars, 18 Jts 4 1/2" HWDP, 4 1/2 Drill Pipe,	
Second Directional :		Chris Veniegas & Coty Jeane					8 5/8	36	760		
MWD Operator1		Cody Hart					4 1/2	11.6	7162		
MWD Operator2											
Directional Company:		MS Energy					Signature:				
Geologist:											
Company Man:		Eric Geiger									
Incl. In:		5.3	Azm. In:		33	Incl. Out:	1.5	Azm. Out:	34.8	Daily Cost	\$7,500.00
									Cummulative Cost:	\$30,000.00	

#### GENERAL COMMENT

Date	Start Time	End Time	Hours	Start Depth	End Depth	Activity Code	COMMENT
26-Sep-11	00:00	00:47	0.78	6605	6611	Sliding	Sliding - (WOB:15;GPM :440;TFO:360)
26-Sep-11	00:47	01:25	0.63	6611	6688	Drilling	Drilling - (WOB:15;GPM :440;RPM:85)
26-Sep-11	01:25	01:34	0.15	6688	6688	Survey & Conn.	Survey & Conn @ 6627 Inc 5.2 Azi 20.0
26-Sep-11	01:34	02:23	0.82	6688	6783	Drilling	Drilling - (WOB:15;GPM :440;RPM:85)
26-Sep-11	02:23	02:30	0.12	6783	6783	Survey & Conn.	Survey & Conn @ 6722 Inc 4.0 Azi 15.6
26-Sep-11	02:30	03:04	0.57	6783	6878	Drilling	Drilling - (WOB:15;GPM :440;RPM:85)
26-Sep-11	03:04	03:11	0.12	6878	6878	Survey & Conn.	Survey & Conn @ 6817 Inc 3.3 Azi 9.8
26-Sep-11	03:11	03:50	0.65	6878	6972	Drilling	Drilling - (WOB:15;GPM :440;RPM:85)
26-Sep-11	03:50	03:57	0.12	6972	6972	Survey & Conn.	Survey & Conn @ 6911 Inc 2.3 Azi 10.2
26-Sep-11	03:57	04:51	0.90	6972	7052	Drilling	Drilling - (WOB:15;GPM :440;RPM:85)
26-Sep-11	04:51	05:19	0.47	7052	7052	Other	Mud Tanks sucked air
26-Sep-11	05:19	05:30	0.18	7052	7067	Drilling	Drilling - (WOB:15;GPM :440;RPM:85)
26-Sep-11	05:30	05:45	0.25	7067	7067	Survey & Conn.	Survey & Conn @ 7006 Inc 2.0 Azi 23.7
26-Sep-11	05:45	07:29	1.73	7067	7162	Drilling	Drilling - (WOB:15;GPM :440;RPM:85)
26-Sep-11	07:29	07:35	0.10	7162	7162	Survey & Conn.	Survey & Conn@7101- 1.5 Inc- 34.80 Azm
26-Sep-11	07:35	07:55	0.33	7162	7162	Circulating	Circulating
26-Sep-11	07:55	10:28	2.55	7162	7162	Short Trip	Short Trip
26-Sep-11	10:28	11:42	1.23	7162	7162	Circulating	Circulating

Date	Start Time	End Time	Hours	Start Depth	End Depth	Activity Code	COMMENT
26-Sep-11	11:42	16:10	4.47	7162	7162	L/D DP	L/D DP
26-Sep-11	16:10	17:20	1.17	7162	7162	Change BHA	Lay Down BHA
26-Sep-11	17:20	24:00	6.67	7162	7162	Standby	Close Out Paper Work & Wait On Trucks To Back Load Tools.

## BHA # 1



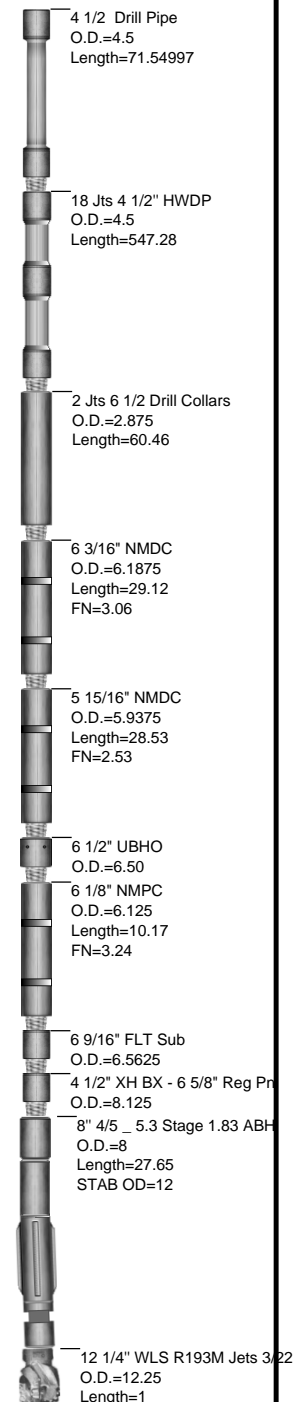
**JOB NO.:** DDOK-110481    **Work Order:** MS#110463RR    **FIELD:** Wattenbauge  
**Company:** St. James    **Township:**  
**LOCATION:** Weld County    **SECT. RANGE:** 24  
**RIG NAME:** Cade 22    **Lead DD:** David Cathey  
**STATE:** Colorado    **Co. Man:** Eric Geiger  
**COUNTY:** Weld County    **BHA TYPE:** Steerable Assembly  
**WELL NAME:** Larson Farms 1-24    **BHA WT:** 24893    **Wt @ Jars:** N/A

Time and Depths	MOTOR DATA	Drilling Parameters
<b>Date In:</b> 23-Sep-11 @ 07:35	Performance	<b>SO/PU:</b> 40 - 40 / 40-40
<b>Date Out:</b> 23-Sep-11 @ 16:42	<b>MFG.:</b> Mpact	<b>Rot Strg Wt:</b> 40-40
<b>Hrs In Hole:</b> 9.12	<b>Pad OD:</b> .25	<b>WOB:</b> 15 - 15
<b>Start Depth:</b> 138.00	<b>NB Stab:</b> 12	<b>TORQ:</b> 2 - 2
<b>End Depth:</b> 786.00	<b>Bit to Bend:</b> 6.88	<b>SPP:</b> 1000 - 1000
<b>Total Drilled:</b> 648.00	<b>Bent Hsg/Sub°:</b> 1.83 /	<b>Motor RPM:</b> 110
<b>Avg. Total ROP:</b> 131.35	<b>Lobe/Stage:</b> 4/5 / 5.3	<b>Rotary RPM:</b> 85 - 85
<b>Circ Hrs: Tot/Only</b> 5.42 / .48	<b>Rev/GAL:</b> 0.25	<b>Flow Rate:</b> 440 - 440
<b>Percent Slide:</b> 6.17	<b>Rotor Jet:</b> 0	<b>Avg Diff:</b> 350
<b>Percent Hrs:</b> 8.11	<b>Prop BUR:</b> 10	<b>Stall Pres.:</b> 1800
<b>Slide Hours:</b> .40	<b>Act BUR:</b> 9	<b>Off Bot Pres.:</b> 1000
<b>Total Sliding:</b> 40.00		
<b>Avg. Slide ROP:</b> 100.00		
<b>Percent Rotary:</b> 93.83		
<b>Percent Hrs:</b> 91.89		
<b>Rotary Hours:</b> 4.53		
<b>Total Rotary:</b> 608.00		
<b>Avg. Rotary ROP:</b> 134.12		
<b>Reason POOH:</b> TD		

MWD Spacing	Gamma: 0	Restiv: 0	Sensor: 61.23	Last Casing O.D.
	GYRO: 0	DNCS: 0	Sonic: 0	Shoe @: Hanger @:

**INC IN:** .9    **INC OUT:** 5.5    **AZM IN:** 93.72    **AZM OUT:** 66.20

BHA Detail							
Description	Serial #	I.D.	O.D.	Length	Sum	Top Conn	MFG.
12 1/4" WLS R193M Jets 3/22	0276011		12.25	1.00	1.00	6 5/8 REGP	WLS
8" 4/5 _ 5.3 Stage 1.83 ABH	MSD77D116D		8	27.65	28.65	6 5/8 REGB	MPACT
4 1/2" XH BX - 6 5/8" Reg Pn	SD107921	2.8125	8.125	3.71	32.36	4 1/2 XHB	StabilDrill
6 9/16" FLT Sub	SD105679	2.9375	6.5625	3.05	35.41	4 1/2 XHB	Stabil Drill
6 1/8" NMPC	SD38939	2.8125	6.125	10.17	45.58	4 1/2 XHB	Stabil Drill
6 1/2" UBHO	6521	3.00	6.50	3.48	49.06	4 1/2 XHB	MS Energy
5 15/16" NMDC	SD39672	2.875	5.9375	28.53	77.59	4 1/2 XHB	Stabil Drill
6 3/16" NMDC	SD41167	2.875	6.1875	29.12	106.71	4 1/2 XHB	Stabil Drill
2 Jts 6 1/2 Drill Collars	Rig	6.25	2.875	60.46	167.17	4 1/2 XHB	
18 Jts 4 1/2" HWDP	Rig	2.75	4.5	547.28	714.45	4 1/2 XHB	Rig
4 1/2 Drill Pipe	Rig	3.64	4.5	71.55	786.00	X.H.B	Rig



## BHA # 2

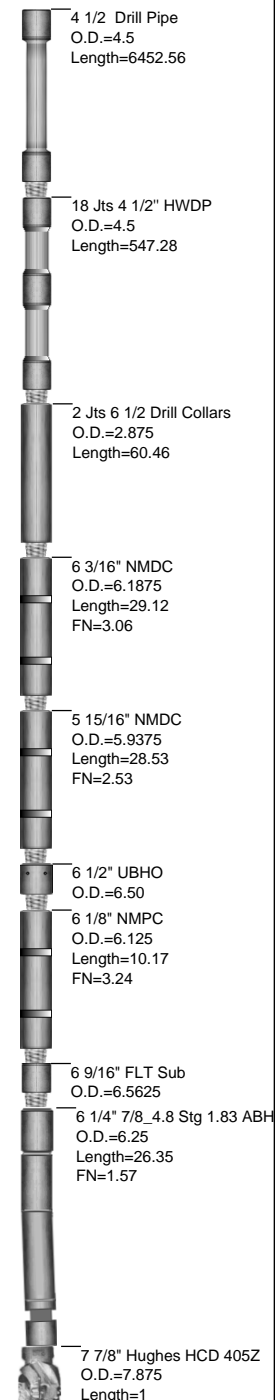


JOB NO.: DDOK-110481      Work Order: MS#110463RR      FIELD: Wattenbauge  
 Company: St. James      Township:  
 LOCATION: Weld County      SECT. RANGE: 24  
 RIG NAME: Cade 22      Lead DD: David Cathey  
 STATE: Colorado      Co. Man: Eric Geiger  
 COUNTY: Weld County      BHA TYPE: Steerable Assembly  
 WELL NAME: Larson Farms 1-24      BHA WT: 143576      Wt @ Jars: N/A

Time and Depths		MOTOR DATA	Drilling Parameters	
Date In:	24-Sep-11 @ 04:15	Performance	SO/PU:	40 - 135 / 40-198
Date Out:	26-Sep-11 @ 17:20	MFG.: Mpack	Rot Strg Wt:	40-138
Hrs In Hole:	56.62	Pad OD:	WOB:	15 - 15
Start Depth:	5.00	NB Stab:	TORQ:	2 - 2
End Depth:	7162.00	Bit to Bend:	SPP:	1000 - 2200
Total Drilled:	7868.00	Bent Hsg/Sub°: 1.83 / 1.83	Motor RPM:	150
Avg. Total ROP:	211.22	Lobe/Stage: 7/8 / 4.8	Rotary RPM:	85 - 85
Circ Hrs: Tot/Only	39.75 / 2.50	Rev/GAL:	Flow Rate:	440 - 440
Percent Slide:	5.52	Rotor Jet:	Avg Diff:	550
Percent Hrs:	23.18	Prop BUR:	Stall Pres.:	2500
Slide Hours:	8.63	Act BUR:	Off Bot Pres.:	1550
Total Sliding:	434.00	Mud Data		Bit Record
Avg. Slide ROP:	50.27	Type	Water Base	
Percent Rotary:	94.48	WT:	9.4	
Percent Hrs:	76.82	Vis:	51	
Rotary Hours:	28.62	WL:	9.6	
Total Rotary:	7434.00	SOL:	7.3	
Avg. Rotary ROP:	259.78	Oil %:	0	
Reason POOH:	TD	Chlor:	650	
MWD		Gamma: 0	Restiv: 0	Sensor: 56.22
Spacing		GYRO: 0	DNSC: 0	Sonic: 0
INC IN: 5.9		INC OUT: 1.5		AZM IN: 63.37
				AZM OUT: 34.80
				Last Casing O.D.
				Shoe @: Hanger @:

## BHA Detail

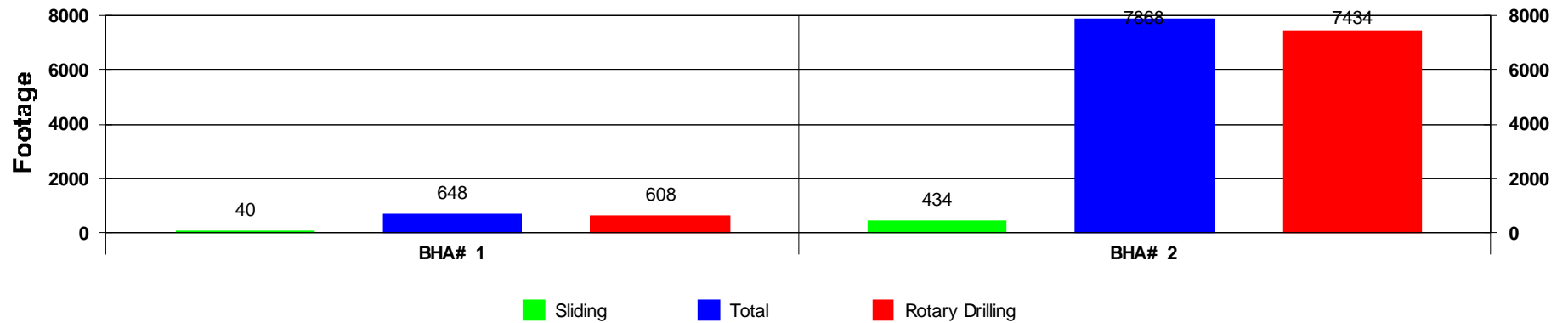
Description	Serial #	I.D.	O.D.	Length	Sum	Top Conn	MFG.
7 7/8" Hughes HCD 405Z	7128601		7.875	1.00	1.00	4 1/2 REGP	BAKER
6 1/4" 7/8_4.8 Stg 1.83 ABH	MSD62D245S		6.25	26.35	27.35	4 1/2 XHB	Mpack
6 9/16" FLT Sub	SD105679	2.9375	6.5625	3.05	30.40	4 1/2 XHB	Stabil Drill
6 1/8" NMPC	SD38939	2.8125	6.125	10.17	40.57	4 1/2 XHB	Stabil Drill
6 1/2" UBHO	6521	3.00	6.50	3.48	44.05	4 1/2 XHB	MS Energy
5 15/16" NMDC	SD39672	2.875	5.9375	28.53	72.58	4 1/2 XHB	Stabil Drill
6 3/16" NMDC	SD41167	2.875	6.1875	29.12	101.70	4 1/2 XHB	Stabil Drill
2 Jts 6 1/2 Drill Collars	Rig	6.25	2.875	60.46	162.16	4 1/2 XHB	
18 Jts 4 1/2" HWDP	Rig	2.75	4.5	547.28	709.44	4 1/2 XHB	Rig
4 1/2 Drill Pipe	Rig	3.64	4.5	6,452.56	7162.00	X.H.B	Rig



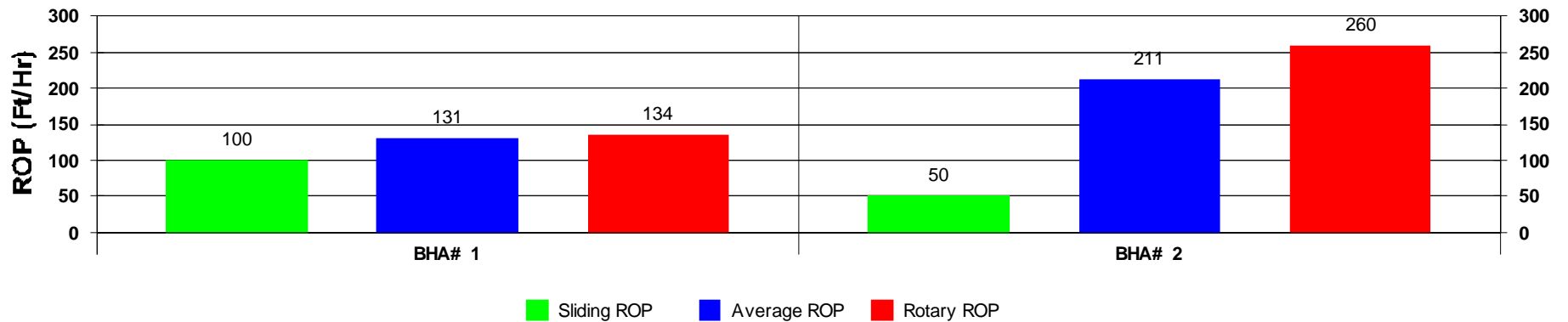


JOB NO.:	DDOK-110481	FIELD:	Wattenbauge	
Company:	St. James	Township:		
LOCATION:	Weld County	SECT/RANGE:	24	
RIG NAME:	Cade 22	COMMENT		
STATE:	Colorado			
COUNTY:	Weld County			
WELL NAME:	Larson Farms 1-24			

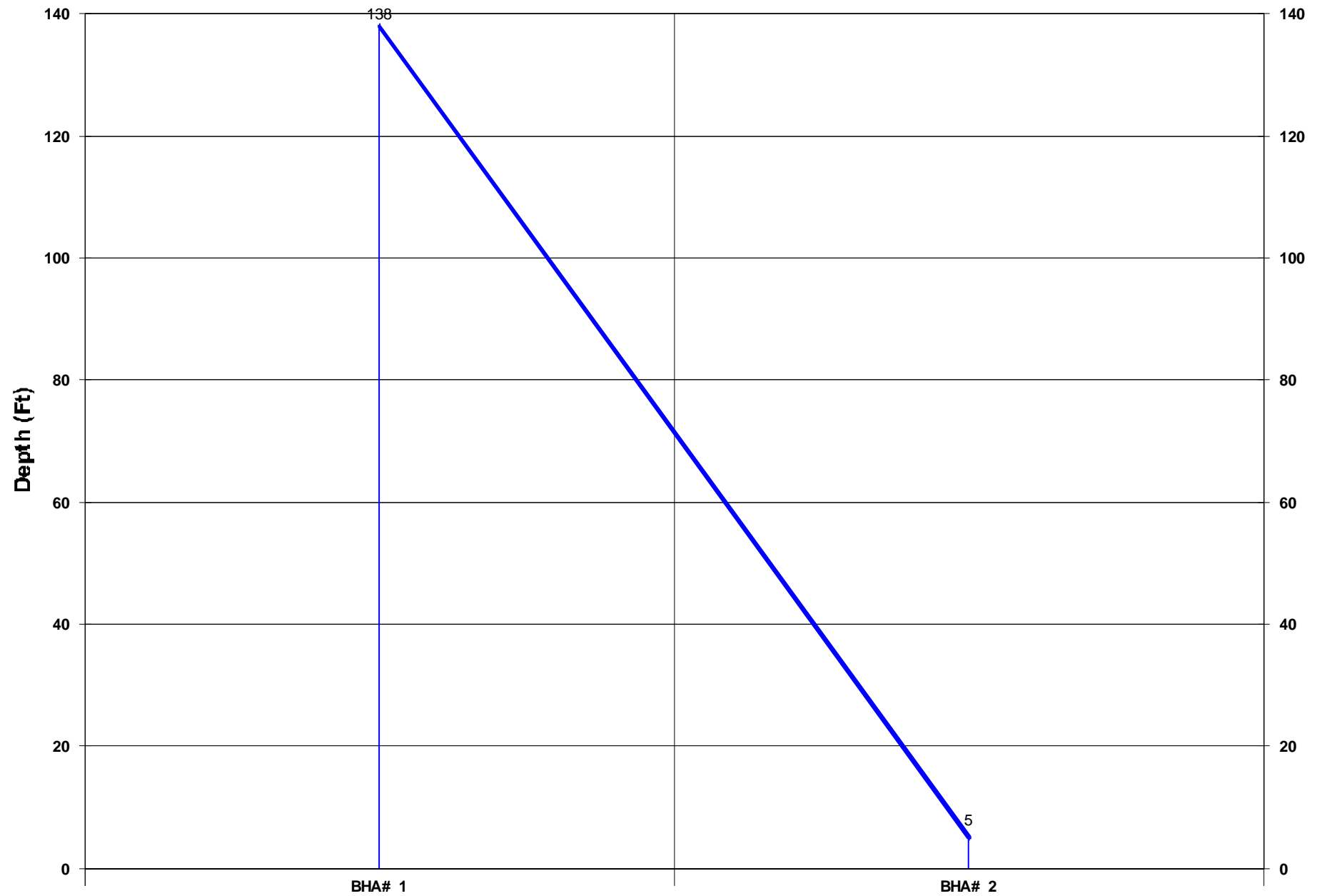
### Footage Drilled with BHA



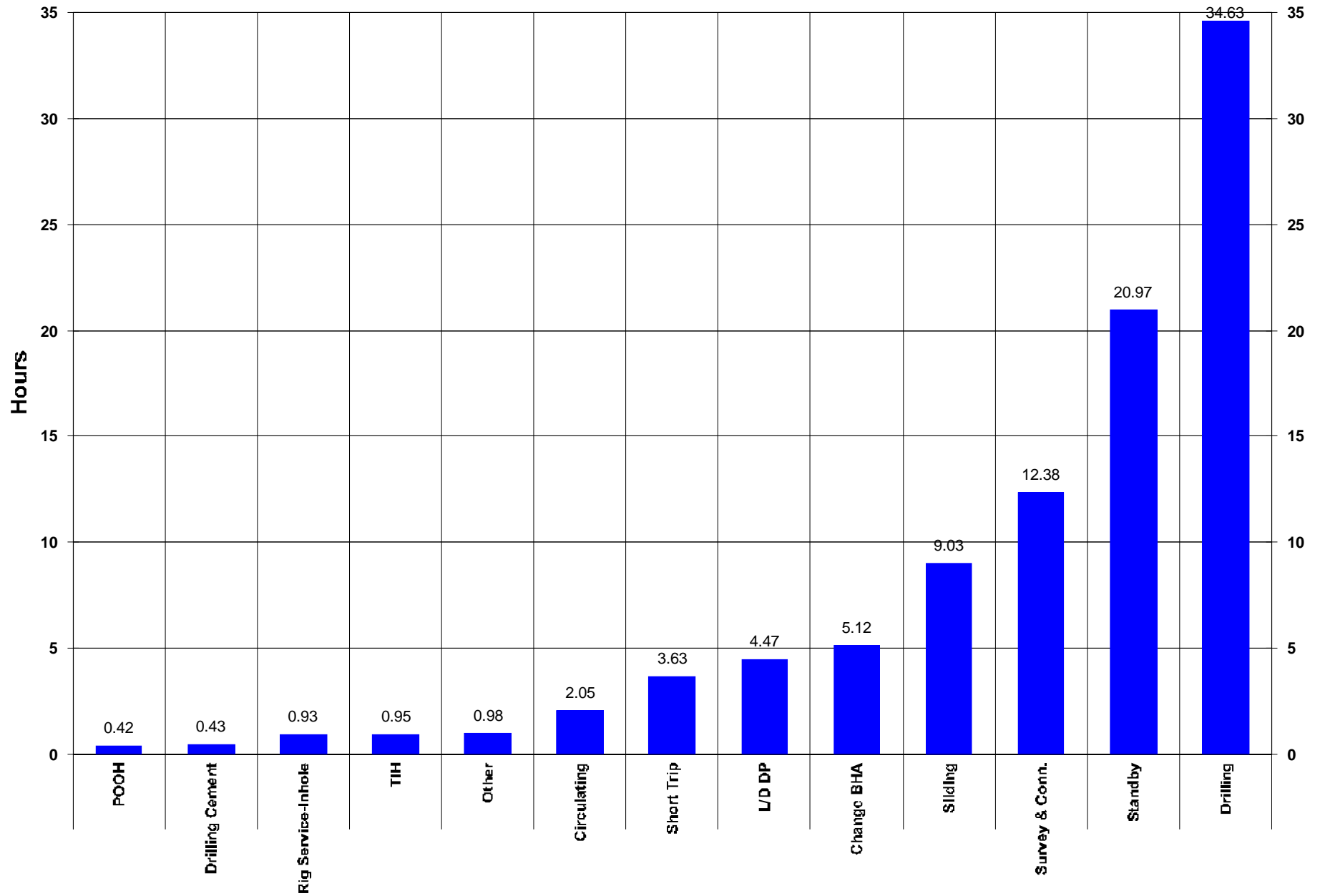
### ROP vs BHA



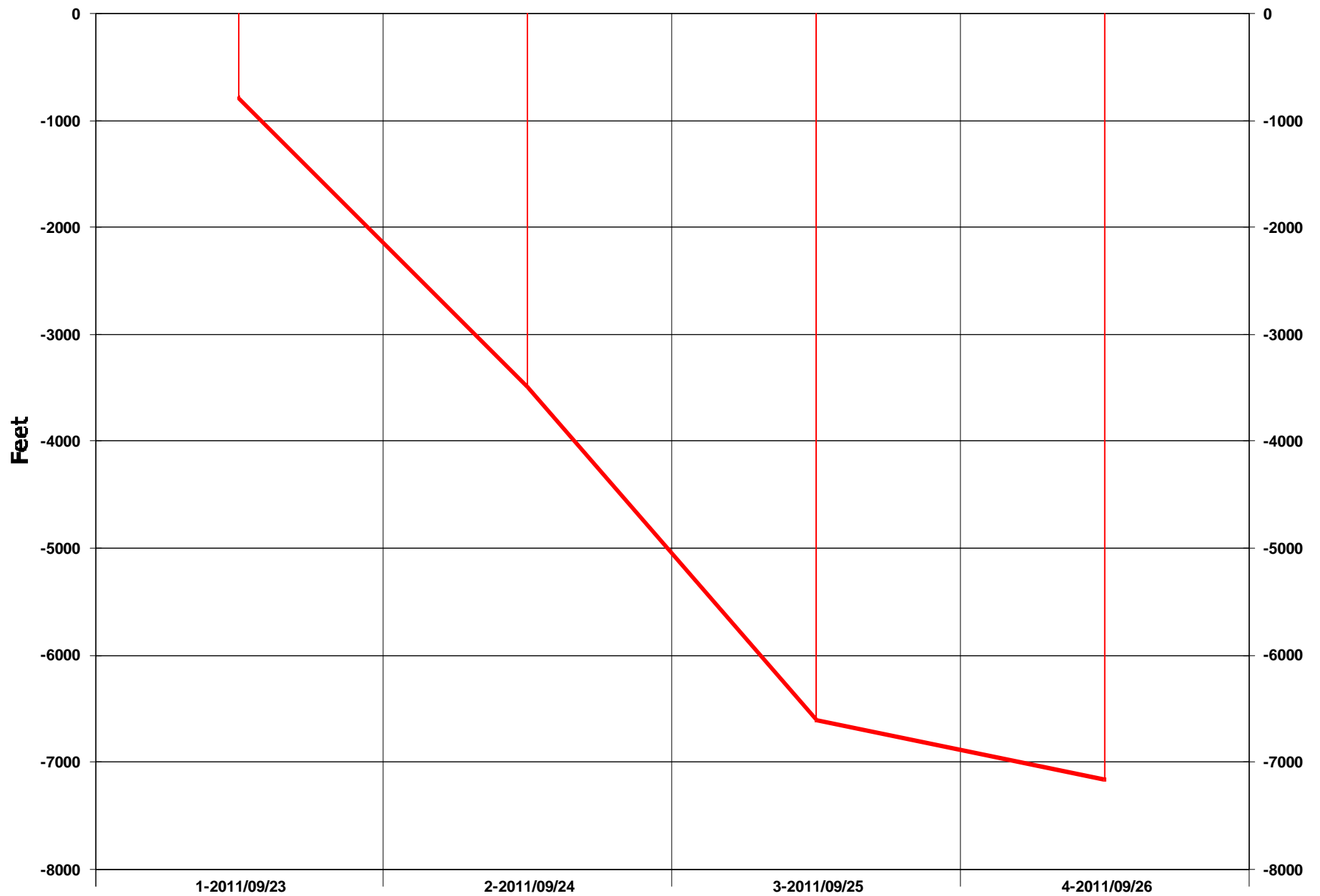
## Depth vs BHA



## Activity Histogram

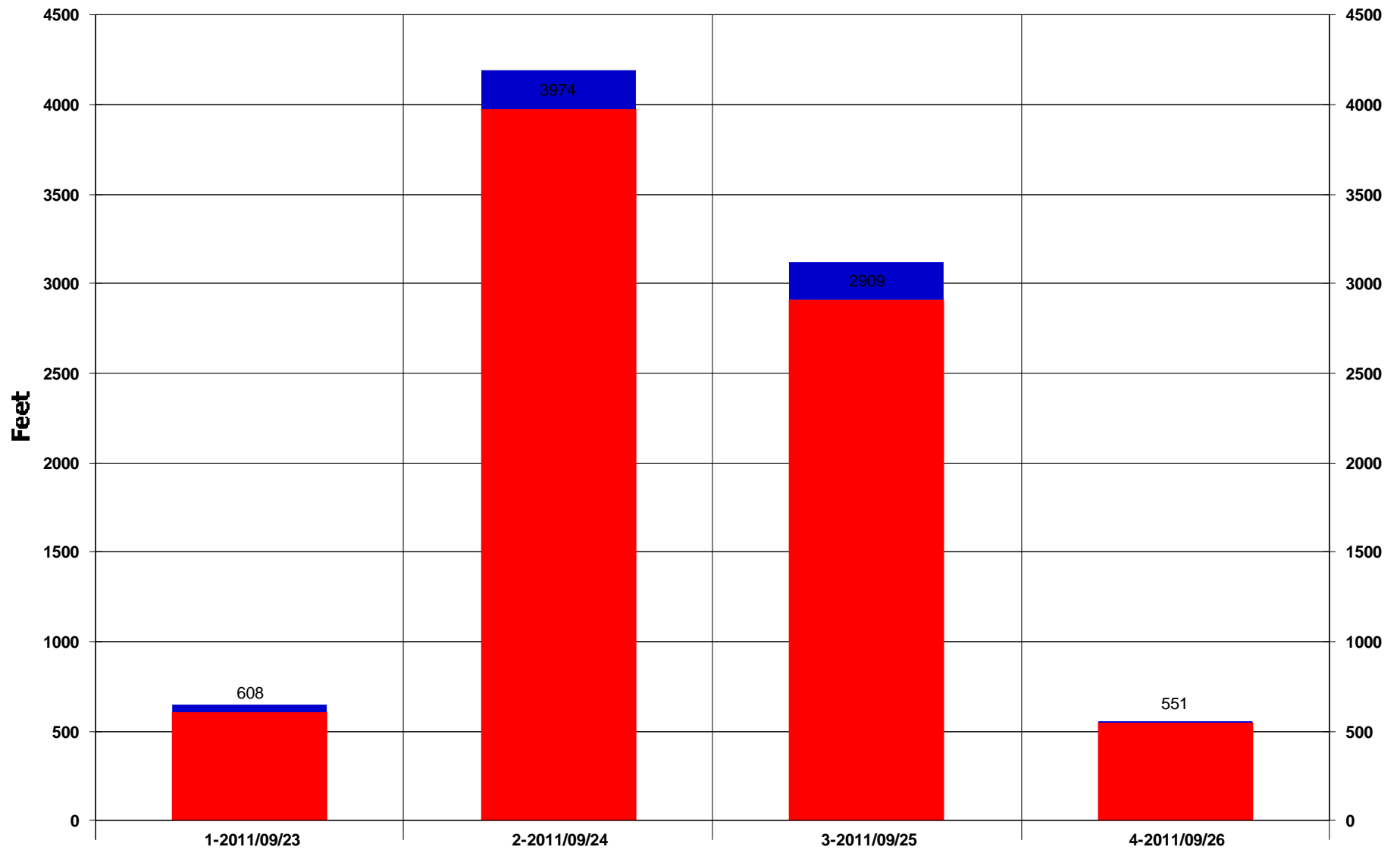


Measured Depth vs Days





## Daily Footage



Rotary Drilling Sliding

**Baker, MT**

22 S. 4th St. W.  
Baker, MT 59313  
Phone: 406.778.3983  
Watts: 877.844.9850  
Fax: 406.778.3982

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Conroe, TX 77303  
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Watts: 800.769.5988  
Fax: 936.442.2599

**Corpus Christi, TX**

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**Dallas, TX**

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Ft. Worth, TX 76102  
Phone: 817.870.4847  
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**Denver, CO**

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**Odessa, TX**

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**Oklahoma City, OK**

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**West Alexander, PA**

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