

Well Name: HH 9102-14 G15 2104

Location:	Rio Blanco, Colorado
Field:	Hells Hole
API#:	05103118850000
Surface Location:	Lot 2 Section 15S Range 104W
BH Location:	NWNE Section 14S Range 104W
GL	6966 ft
KB to GL:	22 ft
TD:	8,647 ft
Float Collar:	8,639 ft
KOP:	3,355 ft
Average TVD:	4,243 ft
Lateral Length	3,808 ft
Last Updated	12/28/2011 by Steve Happ

Surface Casing:	10.75" 40.5# J55 LT&C
Set at:	830 ft
Top of Cement:	Surface

Intermediate Casing:	7.625" 26.4# HCP110
Set at:	3,531 ft
Inclination at Interm. CSG Point:	2.60 deg
Burst Pressure:	8,280 psi (80% = 6,625 psi)
Top of Cement:	25 bbls of returns

Production Casing:	4.5" 17# N80 LT&C	
Inside Diameter:	4.892"	Drift: 4.767"
Set at:	3,476	ft
TVD:	3,476	ft
Burst Pressure:	7,740 psi (80% = 6,192 psi)	
Top of Cement:	2,628	ft
Production Casing:	4.5" 11.6# N80 LT&C	
Inside Diameter:	4.000"	Drift: 3.875"
Set at:	8,644	ft
TVD Average:	4,243	ft
Burst Pressure:	7,780 psi (80% = 6,224 psi)	
Top of Cement:	2,628	ft

Directional Survey Information:

KOP ~3,355 ft.			4.5"	5.5"
Deviation = 20° @	3,980 ft	Rate	Velocity	Velocity
Deviation = 40° @	4,145 ft	2 BPM	2.1 ft/s	1.4 ft/s
Deviation = 60° @	4,325 ft	4 BPM	4.3 ft/s	2.9 ft/s
Deviation = 80° @	4,741 ft	6 BPM	6.4 ft/s	4.3 ft/s
Deviation = 90° @	4,860 ft	8 BPM	8.6 ft/s	5.7 ft/s

End of Build Average:	93 Degrees
Short Joints in 5.5" Casing	1079' - 1101', 1476' - 1498', 2548' - 2570'
Short Joints in 4.5" Casing	4565' - 4587', 5633' - 5655', 6609' - 6631', 7585' - 7607'

Displacement Factors:

5.5" 17# N80 LT&C	0.9764	gals/ft
	0.0232	bbbls/ft
4.5" 11.6# N80 LT&C	0.6528	gals/ft
	0.0155	bbbls/ft

Hydrostatic @ TVD = 1837 psi

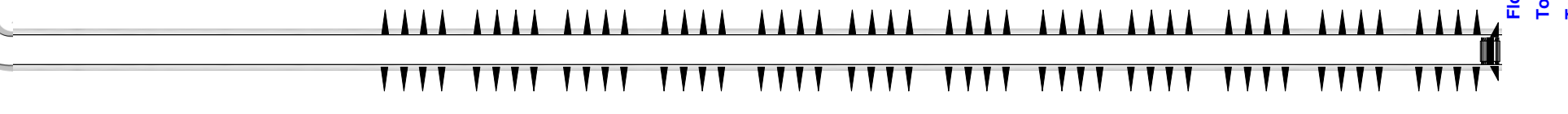
2.875" J55 6.5#
Ultra FJ @ 4681.01'

1.66" N80 2.33#
IJ tbg @ 4668.23'

Jet Pump @ 4669.73'
~ 75 deg into build

7 5/8 Intermediate Casing Set at 3,531

Stage 16	Stage 15	Stage 14	Stage 13	Stage 12	Stage 11	Stage 10	Stage 9	Stage 8	Stage 7	Stage 6	Stage 5	Stage 4	Stage 3	Stage 2	Stage 1
				Pump Down	Pump Down	Pump Down	Pump Down	Pump Down	Pump Down	Pump Down	Pump Down	Pump Down	Pump Down	Pump Down	Pump Down
				60° Phasing	60° Phasing	60° Phasing	60° Phasing	60° Phasing	60° Phasing	60° Phasing	60° Phasing	60° Phasing	60° Phasing	60° Phasing	60° Phasing
				6 spf	6 spf	6 spf	6 spf	6 spf	6 spf	6 spf	6 spf	6 spf	6 spf	6 spf	6 spf
				Plug Set @ 6021 ft	Plug Set @ 6261 ft	Plug Set @ 6501 ft	Plug Set @ 6741 ft	Plug Set @ 6981 ft	Plug Set @ 7221 ft	Plug Set @ 7461 ft	Plug Set @ 7701 ft	Plug Set @ 7941 ft	Plug Set @ 8181 ft	Plug Set @ 8421 ft	Plug Set @ 8629 ft
				3159 bbl	3343 bbl	3360 bbl	3712 bbl	3473 bbl	3436 bbl	3578 bbl	3550 bbl	3538 bbl	3731 bbl	3793 bbl	3771 bbl
				246700 lbs	225100 lbs	226847 lbs	225547 lbs	216006 lbs	225000 lbs	230612 lbs	225000 lbs	215200 lbs	226527 lbs	228140 lbs	223000 lbs



Float @ 8,639

Total MD @ 8,644

Total MD @ 8,644

8 perfs @ 5829	10 perfs @ 5877	14 perfs @ 5925	18 perfs @ 5973	8 perfs @ 6069	10 perfs @ 6117	14 perfs @ 6165	18 perfs @ 6213	8 perfs @ 6309	10 perfs @ 6357	14 perfs @ 6405	18 perfs @ 6453	8 perfs @ 6549	10 perfs @ 6597	14 perfs @ 6645	18 perfs @ 6693	8 perfs @ 6789	10 perfs @ 6837	14 perfs @ 6885	18 perfs @ 6933	8 perfs @ 7029	10 perfs @ 7077	14 perfs @ 7125	18 perfs @ 7173	8 perfs @ 7269	10 perfs @ 7317	14 perfs @ 7365	18 perfs @ 7413	8 perfs @ 7509	10 perfs @ 7557	14 perfs @ 7605	18 perfs @ 7653	8 perfs @ 7749	10 perfs @ 7797	14 perfs @ 7845	18 perfs @ 7893	8 perfs @ 7989	10 perfs @ 8037	14 perfs @ 8085	18 perfs @ 8133	8 perfs @ 8229	10 perfs @ 8277	14 perfs @ 8325	18 perfs @ 8373	8 perfs @ 8469	10 perfs @ 8519	14 perfs @ 8569	18 perfs @ 8619
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Well Total 46644 bbl
Well Total 2713679 lbs