Chaco 2307-12E #168H LYBROOK GALLUP Horizontal

(page 1)

Spud: 5/9/13

RUN 156 JTS 7",23#,J-55,LT&C 8rd, CASING. LAND @ 6136' MD, 5666' TVD,FC @ 6095 MD

RUN 272 JTS 4-1/2" 11.6#, N-80, 8RD LT&C CASING. SET @ 10433' MD (5532' TVD), MARKER JTS @ 9096', 7561' AND 5102 MD. FC SET @ 10405'

Land well at 5715' w/ 14.5' KB as follows 1/2 MS, 184 jts total, 1 Jt of 2.375" J55 4.7lb 8rnd EUE tbg, 1.78" FN at 5685', 183 Jts of 2.375"

J55 4.7lb 8rnd EUE tbg

RAN 10 JTS, 9-5/8", LT&C, 36#, J-55, CSG SET @ 442'. FC @ 398'

Production Casing - Hole Size: 6-1/8"

Casing - Hole Size: 12-1/4"

Intermediate Casing - Hole Size: 8-3/4"

Completed: 7/30/13

OIL CONS. DIV DIST. 3

AUG 07 2013

Surface Location: 1492' FNL & 303' FWL SW/4 NW/4 Section 12 (E), T23N, R7W

BHL: 563' FNL & 379' FWL NE/4 NE/4 Section 11 (D), T23N, R 7W

RIO ARRIBA Co., NM Elevation: 7036' GR API: 30-039-31173

MD	TVD	
1461 '	1455'	
1597'	1587'	
2082;	2054'	
2200'	2167'	
2560;	2514'	
3662'	3576'	
3717'	3629'	
4465 '	4354'	
4683 '	4569'	
5096'	4981'	
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	1461 ' 1597' 2082 ' 2200' 2560 ' 3662' 3717 ' 4465 ' 4683 ' 5096 '	1461 ' 1455' 1597' 1587' 2082 ' 2054' 2200' 2167' 2560 ' 2514' 3662' 3576' 3717 ' 3629' 4465 ' 4354' 4683 ' 4569'

TD: 10444' MD TVD: 5532' PBTD:10405' MD 3577'. HOLE SIZE CASING CEMENT VOLUME 9-5/8" 225 sx 12-1/4" 298cu.ft. 8-3/4" 7" 1035 sx 1440 cu.ft.

CMT TOP Surface Surface 6-1/8" 3750' TOC 4-1/2" 420 sx 571cu.ft.

Lg 8/1/13

holes. Frac with 24, 0.40" 165,200# 20/40 Gallup 4th stage LYBROOK GALLUP Horizontal holes, Frac PSA Sand with 165,000# . Gallup 6th stage (page 2 – lateral with completion) 20/40 PSA Gallup 14th: with 167.300# . Sand 7188'-7332'-20/40 PSA Gallup 18th: Gallup 16th: Gallup 3rd: with 24, 0.40" Sand 6732'-6886'-6228'-6394'-9762'-9920' Gallup 11th: holes. Frac Gallup with 24, 0,40" with 24, 0.40" with,24, 0.40" 7840'-7982'-14th stage with Gallup 7th; holes, Frac holes, Frac holes, Frac Gallup 217.100# . 20/40 with 24, 0.40" 8796'-8960'-Gallup 18th Gallup 16th 3rd stage with Gallup 5th: holes, Frac Gallup PSA Sand stage with stage with with 24, 0,40" 165.300#, 20/40 9282'-9444'-11th stage with holes. Frac PSA Sand 222.700# 207.400# . with 24, 0.40" 166,700#, 20/40 Gallup 7th 20/40 PSA 20/40 PSA Gallup 8th: PSA Sand holes. Frac Sand Sand stage with 8552'-8712'-Gallup 5th stage Gallup 15h: 169,800# with 24, 0,40" with 168.100#. 6958'-7114'-20/40 PSA holes. Frac Gallup 20/40 PSA with 24, 0.40" Sand 8th stage with Sand holes. Frac Gallup Gallup 13th: Gallup 17th: 166,200# , 20/40 7392'-7524'-15th stage with 6492'-6680'-PSA Sand. with 24, 0.40" 217,700# , 20/40 Gallup 10th: with 24, 0.40" Gallup 2nd: holes. Frac Gallup PSA Sand 8096'-8238'holes. Frac 10000'-10162' 13th stage with with 24, 0,40" Gallup 17th with, 24 total, 165,700# , 20/40 holes. Frac stage with 0.40" holes PSA Sand Gallup 10th 209,700# . Frac Gallup 2nd stage with 20/40 PSA stage with 161,300# Sand 166.500 # 20/40 20/40 PSA PSA Sand Sand Gallup 12th: 7588'-7754'-Gallup 9th: 8320'-8470'with 24, 0,40" with 24, 0,40" holes, Frac Gallup holes, Frac Gallup 12th stage with 9th stage with 164,700# , 20/40 166,000# , 20/40 PSA Sand PSA Sand

Chaco 2307-12F #168H

Gallup 4th:

Gallup 6th:

9044'-9206'

9518'-9686'-

with 24, 0.40"

Gallup 1st:

stage with

10224'-10390'

See page 1 for upper portion of hole