

# NE CHACO COM #173H CHACO UNIT NE HZ (OIL)(page 1)

CONFIDENTIAL

Spud: 6/23/14

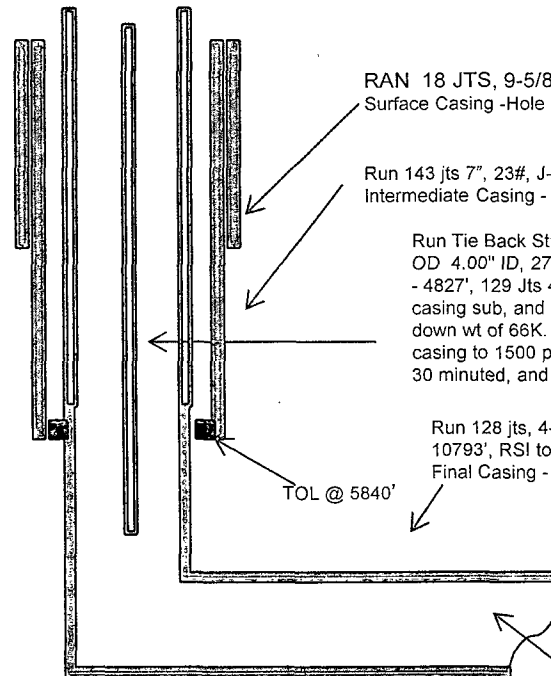
Completed: 12/2/14

SHL: 1205' FNL & 484' FWL  
NW/4 NW/4 Section 13(D), T23N, R7W

BHL: 1209' FNL & 97' FEL  
NE/4 NE/4 Section 15 (A), T23N, R 7W

RIO ARRIBA NM  
Elevation: 7014'  
API: 30-039-31207

| Tops           | MD   | TVD  |
|----------------|------|------|
| OJO_ALAMO      | 1372 | 1369 |
| KIRTLAND       | 1695 | 1690 |
| PICTURE_CLIFFS | 2010 | 2004 |
| LEWIS          | 2087 | 2080 |
| CHACRA         | 2429 | 2422 |
| CLIFF_HOUSE    | 3512 | 3500 |
| MENEFEE        | 3569 | 3556 |
| PT_LOOKOUT     | 4311 | 4294 |
| MANCOS         | 4480 | 4462 |
| GALLUP         | 4889 | 4871 |



RAN 18 JTS, 9-5/8", ST&C, 36#, j-55, CSG SET @ 396', FC @ 349'  
Surface Casing -Hole Size: 12-1/4"

Run 143 jts 7", 23#, J-55, LT&C, 8RD csg, landed @ 5980', FC @ 5935'  
Intermediate Casing - Hole Size: 8-3/4"

Run Tie Back String-No-Go, and 4 1/2" 11.6# N80 casing as follows; Seal Assembly with No-Go 5.85" OD 4.00" ID, 27 Jts 4 1/2" 11.6# N80 casing, 20' X 4 1/2" 11.6# N80 casing sub/ Marker Jt set @ 4807' - 4827', 129 Jts 4 1/2" 11.6# N80 casing, 4.20', 2.02' casing subs, 1 Jt 4 1/2" 11.6# N80 casing, 1 X 2.55' casing sub, and casing hanger. Total length of all Tubulars ran in well = 5839' . Had an up wt of 76K and down wt of 66K. Landed with 36K on liner top and leaving 30K on hanger. Antelope psi test 4 1/2" casing to 1500 psi, held for 30 minutes, and recorded on chart. Psi tested 7" X 4 1/2" to 1500 psi, held for 30 minutes, and recorded on chart. All tests were good.

Run 128 jts, 4-1/2" CSG Liner, 11.6#, N-80, LT&C. 8RD CSG set @ 10869' (TVD 5501'), LC @ 10793', RSI tools 10779', marker jts @ 7504' & 9141', TOL @ 5840'  
Final Casing - Hole Size: 6-1/8"

TD: 10871' MD  
TVD: 5501'  
PBTD: 10793' MD

Land well at 6118' w/ 14' KB as follows 1/2 MS, 7 Jt of 2.375" J55 4.7lb 8rmd EUE tbg, 1.87" xN at 6114', packer 2.375" by 4-1/2 @ 5878', on/off tool with 1.87 FN @ 5512', 2.31" XN @ 5150', 180 Jts of 2.375" J55 4.7lb 8rmd EUE tbg 187 jts total  
Land Gas lift:KB 14.5 ELEVATION Hanger 0.80, 14.80 Tubing Hanger 35jts, 1136.48,- 1151.28 GLV #9 4.10 1155.38 GAS LIFT VALVE 25jts, 811.57,- 1966.95 GLV #8 4.10 1971.05 GAS LIFT VALVE 19jts, 616.80,- 2587.85 GLV #7 4.10,- 2591.95 GAS LIFT VALVE 15jts, 487.09,- 3079.04' GLV # 6 4.10 3083.14 GAS LIFT VALVE 16jts, 514.20,- 3597.34 GLV # 5 4.10,- 3601.44 GAS LIFT VALVE 15jts, 471.63,- 4073.07GLV # 4, 4.10,- 4077.17 GAS LIFT VALVE 16jts, 518.14 4595.31 GLV # 3 4.10,- 4599.41 GAS LIFT VALVE 15jts, 486.57,- 5085.98 GLV # 2 4.10,- 5090.08 GAS LIFT VALVE 13jts, 422.09,- 5512.17 X-nipple 1.00,- 5513.17 1.87" X-nipple 10 324.48,= 5837.65 GLV # 1 4.10,- 5841.75 Screened Orifice 1,jt, 32.47,- 5874.22 SUB 4.05 5878.27 On/Off 1.70,- 5879.97 On/Off tool w/ 1.81" F PKR 6.20,- 5886.17 4.5" AS-1X Packer 7jts, 227.22,- 6113.39 2-3/8"-4.7#-J55 Tubing R-nipple 1.00, 6114'.39, 1.78" R-nipple HM 3.35,- 6117.74 2-3/8" Half Mule Shoe EOT 6117.74 End Of Tubing

| HOLE SIZE | CASING | CEMENT | VOLUME       | CMT TOP   |
|-----------|--------|--------|--------------|-----------|
| 12-1/4"   | 9-5/8" | 245 sx | 222 cu.ft.   | Surface   |
| 8-3/4"    | 7"     | 882 sx | 1308 cu. ft. | Surface   |
| 6-1/8"    | 4-1/2" | 390 sx | 509 cu. ft.  | TOL 5840' |

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DEC 10 2014

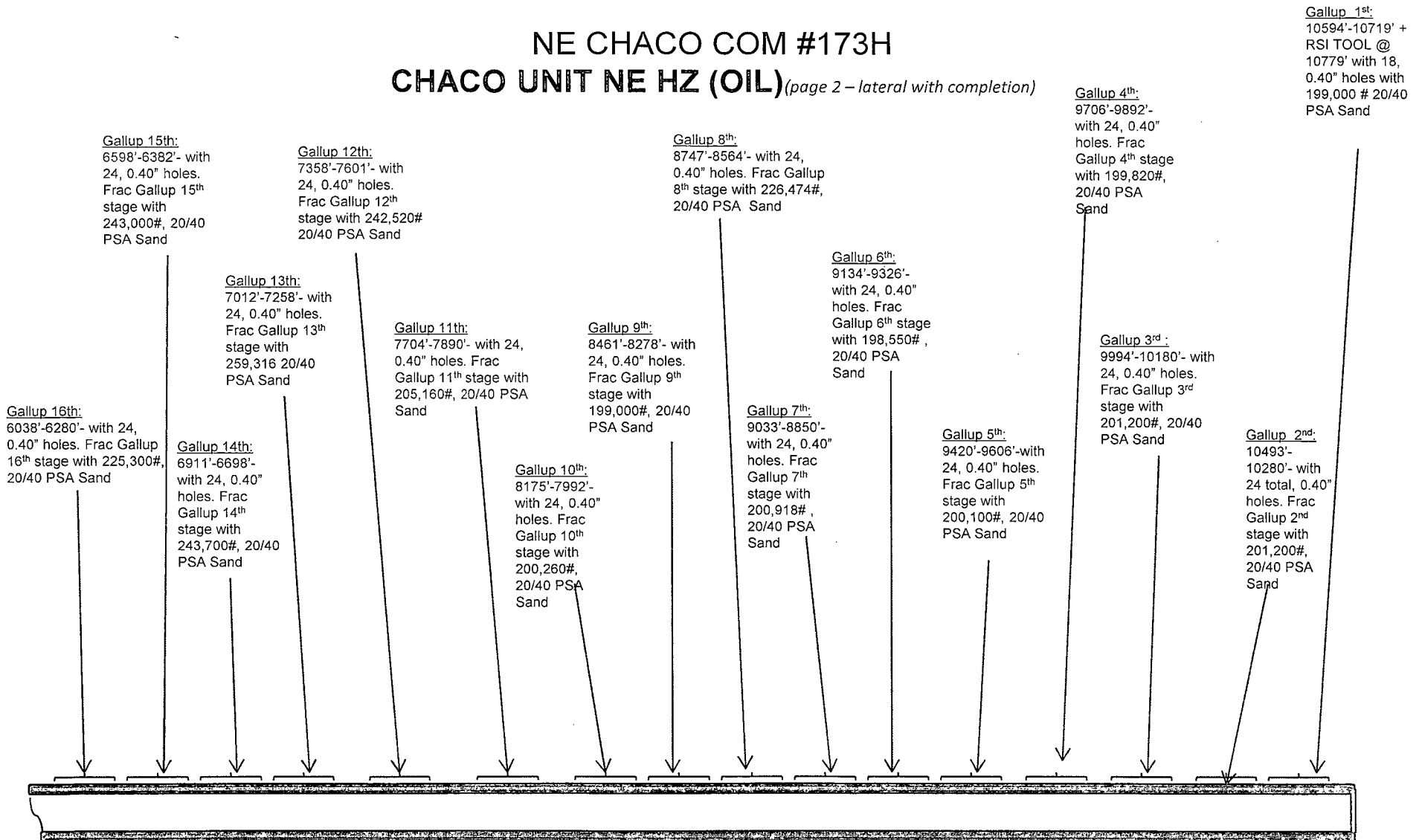
Lg 12/8/14

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# NE CHACO COM #173H

## CHACO UNIT NE HZ (OIL) (page 2 – lateral with completion)



See page 1 for upper portion of hole

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