

NEW MEXICO

BISTI FIELD

Shell-Mudge "8" #301  
(D) Coleman-Andes  
5975' Dakota "B" Test  
8-5/8" csg @ 519'

"FR" Located 1730' FSL and 790' FWL (NW/4, SW/4),  
Section 9-25N-R11W, San Juan County, New Mexico.  
Elev: 6352 GL

Shell Working Interest: 100%

This well continues development of the Basin Dakota  
gas pool in our Bisti Field properties.

6/2: 519/10/1/519. WOC, prep to nipple up BOP.

MI&RU. Spudded 12-1/4" hole @ 4 PM, 6/1/73. Ran  
16 jts 8-5/8", 24#, K-55, 8rd csg (521') and set @  
519' w/Baker insert float valve @ 444 and three Baker  
centralizers @ 513, 444 and 30. Cmt'd by Dowell w/365  
sx Class "A" cmt w/2% CaCl<sub>2</sub>. Cmt circ. Plug down @  
7 AM, 6/2. Dev: 1/4° @ 160 and 3/4° @ 519.

6/3: 1480/10/2/961. Drilling. Dev: 1° @ 1016. WOC  
and nipples up. Press tested weld on hd to 1000 psi,  
OK. Press tested blind rams to 1000 psi, OK. Ran in  
w/DP and DC's. Press tested flanged and check valves,  
and chk to 1000 psi, OK. Tested kelly cock, OK.

6/4: 2627/10/3/1147. Tripping for new bit. Dev:  
1/2° @ 1575, 1° @ 1792 and 1/2° @ 2518. JUN 4 1973  
Mud: Wtr

Shell-Mudge "8" #301  
(D) Coleman-Andes  
5975' Dakota "B" Test  
8-5/8" csg @ 519'

3468/10/4/841. Tripping for new bit. JUN 5 1973  
Mud: Wtr

Shell-Mudge "8" #301  
(D) Coleman-Andes  
5975' Dakota "B" Test  
8-5/8" csg @ 519'

4243/10/5/775. Drilling. Dev: 1° @ 3468.  
Mud: Wtr JUN 6 1973

Shell-Mudge "8" #301  
(D) Coleman-Andes  
5975' Dakota "B" Test  
8-5/8" csg @ 519'

4678/10/6/435. Drilling. Dev: 1/4° @ 4346. Changed  
bit @ 4346. JUN 7 1973  
Mud: (.457) 8.8 x 36

Shell-Mudge "8" #301  
(D) Coleman-Andes  
5975' Dakota "B" Test  
8-5/8" csg @ 519'

5019/10/7/341. Drilling. Dev: 1° @ 4771. Changed  
bit @ 4771. JUN 8 1973  
Mud: (.468) 9.0 x 38 x 10



Shell-Mudge "8" #301  
(D) Coleman-Andes  
5920' Dakota "B" Test  
8-5/8" csg @ 519'

6/9: 5297/10/8/278. Drilling. Dev: 1/2° @ 5092.  
Mud: (.473) 9.1 x 45 x 9.2  
6/10: 5656/10/9/359. Drilling. Dev: 1/4° @ 5430.  
Mud: (.473) 9.1 x 39 x 10.4  
6/11: 5882/10/10/226. Drilling. Dev: 1/2° @ 5822.  
Mud: (.478) 9.2 x 45 x 7.2 JUN 11 1973

Shell-Mudge "8" #301  
(D) Coleman-Andes  
5920' Dakota "B" Test  
8-5/8" csg @ 519'

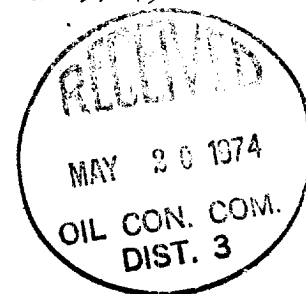
5920/10/11/38. Logging. Dev: 3/4° @ 5920. Circ  
2 hrs prior to logging. Short tripped and pulled out  
to log. RU Schl.  
Mud: (.488) 9.4 x 60 x 7.6 JUN 12 1973

Shell-Mudge "8" #301  
(D)  
5920' Dakota "B" Test  
4 1/2" csg at 5920'

5920/10/12/0 Moving off rig. Ran logs as follows:  
DIL, CML, and PDC. Ran 4 1/2" 11.6# K-55 csg as follows:  
27 jts (1095.29') 8rd w/reg collars, 117 jts (4829.23')  
w/ABC cplgs and cem w/250 sx Hal lite (65-35), 6% gel,  
1% CFR-2, followed by 100 sx Class "A", 1% CFR-2.  
Preflushed w/20 bbls fresh water. Used two-plug  
method. Displaced cement w/91 bbls fresh water con-  
taining 1% KCl. Reciprocated throughout. Plug down  
8:30 PM 6-12-73 w/2,000 psi, held ok. Cut off csg, set  
slips, and installed tbghd. Press tested seals to 2,000  
psi. Released rig 4 AM 6-13-73. Hal shoe at 5920,  
Hal diff float collar at 5880. 5 centralizers at 5914,  
5840, 5756, 5672, and 5588. JUN 13 1973  
Mud: (.488) 9.4 x 65 x 7.6

Shell-Mudge "8" #301  
(D)  
5920' Dakota "B" Test  
4 1/2" csg @ 5920'

TD 5920. MORT. (RDUFA) JUN 14 1973



Shell-Mudge "8" #301  
(D)  
5920' Dakota "B" Test  
4 1/2" csg @ 5920'

TD 5920. PB 5860. (RRD 6/14/73). Prep to install  
donut and 1 jt tbg. Installed 6" BOP. Tested BOP JUN 26 1973  
and csg to 3500 psi for 25 min, OK. RU McC and ran  
3-5/8" gauge ring to PBTD. Ran CBL and PDC logs from  
4200-5860. Top of cmt @ 4360. Bonding good to fair.  
VDL log not run due to unavailability of tools. Perf'd  
2 holes/ft using 3-3/8" csg gun w/JRC charges from  
5807-5827 (40 holes) in Dakota "B" sandstone. RD McC.

Shell-Mudge "8" #301  
(D)  
5920' Dakota "B" Test  
4 1/2" csg @ 5920'

TD 5920. PB 5860. Prep to treat. Csg on vac on 6/26.  
Removed BOP. Installed donut and 4' sub w/5000# full  
opening valve. JUN 27 1973

Shell-Mudge "8" #301  
(D)  
5920' Dakota "B" Test  
4½" csg @ 5920'

TD 5920. PB 5860. Prep to flow back. MI&RU Dowell on 6/27. Frac'd gross perfs from 5807-5827 w/YF4G frac fluid w/1% KCl concentration. Each 1000# sd contained 1 millicurie radioactive Iridium 192. Trtd well as follows: Pmpd 2000 gal pad, 2500 gal w/1#/gal 20-40 sd, 2500 gal w/2#/gal 20-40 sd, 15,000 gal w/3#/gal 20-40 sd, 3000 gal w/3#/gal 10-20 sd, and 7000 gal w/4#/gal 10-20 sd. Flushed w/3800 gal 1% salt wtr. Max press 2600 psi, avg 1700 psi, min 1400 psi. Max, min and avg rate 10 B/M. ISIP 2100 psi decr to 2000 psi in 5 min, to 1900 psi in 10 min, to 1800 psi in 15 min and remaining @ 1800 psi in 20 min, to 1150 psi in 30 min.  
JUN 28 1973

Shell-Mudge "8" #301  
(D)  
5920' Dakota "B" Test  
4½" csg @ 5920'

TD 5920. PB 5860. Prep to MI rig to run tbg. CP 500 psi. Opened well to pit and flowed 5 hrs, flwg approx 40 BW. Last hr, well flwd est 7 BW and tr oil and gas. SI @ 3 PM, WO rig. JUN 29 1973

Shell-Mudge "8" #301  
(D)  
5920' Dakota "B" Test  
4½" csg @ 5920'

TD 5920. PB 5860.  
6/30: No report.  
7/1: Prep to knock out tbg plug. Ran Baker "F" nipple, 2-3/8" x 1.81", w/pumpout plug on 181 jts 2-3/8" EUE 8rd tbg w/tail @ 5612. Landed donut, removed BOP, installed 3000 psi National Xmas tree and started pulling well through csg. Lost in hole 2-3/8" x 2' perf'd tbg nipple w/collar looking up - did not fish. JUL 2 1973  
7/2: Fishing swab. Flowed to pit 14 hrs, flwg approx 75 bbls gel wtr w/tr oil and gas. RU pump truck. Pmpd out tbg plug and started well flwg through tbg - tbg plugged off w/paraffin (used tbg in well). Unplugged tbg and RU swab. Swbd approx 25 bbls gel wtr w/10-20 sd. Swab stuck @ 750'.

Shell-Mudge "8" #301  
(D)  
5920' Dakota "B" Test  
4½" csg @ 5920'

TD 5920. PB 5860. Prep to circ out sand. Cut swab line @ sfc. Removed Xmas tree and installed BOP. Pulled 930' of tbg, rec'g swab and line. Tbg had approx 600' of wtr and 30' of sd. Circ 20 BW down csg. All gel broken in returned wtr in tbg. JUL 3 1973



Shell-Mudger "8" #301  
(D)  
5920' Dakota "B" Test  
4½" csg @ 5920'

TD 5920. PB 5860.  
7/4: Prep to swab. Ran tbg to PBTD and circ out  
10-20 frac sd from 5800-PBTD. Pulled and laid down  
extra tbg. Tbg tail @ 5612. Landed tbg w/donut.  
Removed BOP and installed Xmas tree.  
7/5: Open to pit - well died overnight. RU and swbd  
approx 80 BW w/show of oil and gas. Released rig @  
4 PM, 7/4/73. JUL 5 1973

Shell-Mudger "8" #301  
(D)  
5920' Dakota "B" Test  
4½" csg @ 5920'

TD 5920. PB 5860. SI. TP zero, CP 375 psi. JUL 6 1973

Shell-Mudger "8" #301  
(D)  
5920' Dakota "B" Test  
4½" csg @ 5920'

TD 5920. PB 5860.  
7/7: SI. TP zero, CP 375 psi.  
7/8: Swbg. Installed overshot and equalized tbg and  
csg. Tried to flow well w/o success. MI well pulling  
unit. Swbd. Well kicked and died after trip w/swab.  
Swbd from 3000'. Gelled wtr broken down. CP 200 psi.  
7/9: Swbg. Swbd 12 hrs. CP 350 psi to 400 psi. Swbd  
from 4000' - good loads. FL 1000' while swbg. JUL 9 1973

Shell-Mudger "8" #301  
(D)  
5920' Dakota "B" Test  
4½" csg @ 5920'

TD 5920. PB 5860. Swabbing. Swbd from 4000'. Ran  
piano wire w/1½" bailer to 5830 (perfs 5807-5827). JUL 10 1973

Shell-Mudger "8" #301  
(D)  
5920' Dakota "B" Test  
4½" csg @ 5920'

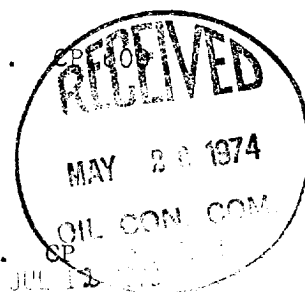
TD 5920. PB 5860. Swabbing. Swbd from 4000'.  
psi. JUL 11 1973

Shell-Mudger "8" #301  
(D)  
5920' Dakota "B" Test  
4½" csg @ 5920'

TD 5920. PB 5860. Swabbing. Swbd from 5000'. CP  
600 psi. Spliced 2000' sd line onto rig line. JUL 12 1973

Shell-Mudger "8" #301  
(D)  
5920' Dakota "B" Test  
4½" csg @ 5920'

TD 5920. PB 5858. Prep to swab. RU and circ lease  
prod wtr. Installed BOPE. Ran in and CO 33' frac sd  
to 5858 and circ clean. Picked up and landed tbg @  
5612. Removed BOP. SD @ 6 PM.  
JUL 13 1973



Shell-Mudge "8" #301  
(D)  
5920' Dakota "B" Test  
4½" csg @ 5920'

TD 5920. PB 5858.

7/14: Swabbing. Swbd from 4000'. CP 200 psi. FL 2800'.

7/15: Swabbing. Swbd from 4000'. Well kicked after swbg runs. CP 400 psi.

7/16: Flowing. Swbd from 4000'. Well started flwg at 4 PM. At report time, well flwg on 24/64" chk w/150 psi FTP and 300 psi CP.

JUL 16 1973

Shell-Mudge "8" #301  
(D)  
5920' Dakota "B" Test  
KB 6364'  
4½" csg @ 5920'

TD 5920. PB 5858. Flowing. Flwd approx 10 BW/H on 28/64" chk w/50 psi FTP and 600 psi CP.

JUL 17 1973

Shell-Mudge "8" #301  
(D)  
5920' Dakota "B" Test  
KB 6364'  
4½" csg @ 5920'

TD 5920. PB 5858. Well dead, prep to log. CP 600 psi.

JUL 18 1973

Shell-Mudge "8" #301  
(D)  
5920' Dakota "B" Test  
KB 6364'  
4½" csg @ 5920'

TD 5920. PB 5858. Well dead. RU Schl. Attempted to run GR tool - unable to get below 2640. Ran wax cutter to 5612. Ran GR tool - could not get below 450'.

JUL 19 1973

Shell-Mudge "8" #301  
(D)  
5920' Dakota "B" Test  
KB 6364'  
4½" csg @ 5920'

TD 5920. PB 5858. Well dead. RU Schl and ran 1-3/8" press tool. Tagged fill @ 5810.

JUL 20 1973

Shell-Mudge "8" #301  
(D)  
5920' Dakota "B" Test  
KB 6364'  
4½" csg @ 5920'

TD 5920. PB 5858. 7/21-23: Well dead. JUL 23 1973



Shell-Mudge "8" #301  
(D)  
5920' Dakota "B" Test  
KB 6364'  
4½" csg @ 5920'

TD 5920. PB 5858. Well dead. Washed sd from 5810-5839. Acidz w/25,000 gal 5% HCl and 2 gal A-170, 20# L-41 and 1 gal F-63/1000 gal. Pmpd in @ 2.5-3.5 B/M rate @ 2000-2200 psi. Acid in place @ 6:45 PM, 7/23. JUL 24 1973

Shell-Mudge "8" #301  
(D)  
5920' Dakota "B" Test  
KB 6364'  
4½" csg @ 5920'

TD 5920. PB 5858. Well dead. Swbd from 4000'.

JUL 25 1973

Shell-Mudge "8" #301  
(D)  
5920' Dakota "B" Test  
KB 6364'  
4½" csg @ 5920'

TD 5920. PB 5858. Well dead. Swbd from 5500'. JUL 26 1973

Shell-Mudge "8" #301  
(D)  
5920' Dakota "B" Test  
KB 6364'  
4½" csg @ 5920'

TD 5920. PB 5858. Well dead; swabbing from 5500'.  
FL @ 6 PM on 7/26: 2000'. Swbd approx 600 bbls JUL 27 1973  
fluid.

Shell-Mudge "8" #301  
(D)  
5920' Dakota "B" Test  
KB 6364'  
4½" csg @ 5920'

TD 5920. PB 5858.  
7/28: Swabbing from 5500'. FL 2500'. Swbd approx  
800 bbls total fluid. CP 200 psi.  
7/29: Swabbing from 5500'. FL 2800'. Swbd approx  
1000 bbls total fluid. CP 100 psi.  
7/30: Swabbing from 5600'. FL 2600'. Well showing  
some oil in fluid. Swbd approx 1150 bbls total fluid  
since acid job. CP 260 psi. JUL 30 1973

Shell-Mudge "8" #301  
(D)  
5920' Dakota "B" Test  
KB 6364'  
4½" csg @ 5920'

TD 5920. PB 5858. Swabbing. At 7 AM, 7/30 - TP  
and CP 530 psi and FL 2800'. At 5 PM - TP zero, CP  
265 psi and FL 3900'. Swbd from 5500', swbg approx  
100 bbls (1100 bbls total fluid). Fluid breakdown:  
Cl 23,500 ppm, NaCl 38,775 ppm. JUL 31 1973

Shell-Mudge "8" #301  
(D)  
5920' Dakota "B" Test  
KB 6364'  
4½" csg @ 5920'

TD 5920. PB 5858. Swabbing. At 8 AM, 7/31, TP and  
CP 650 psi, FL 2500'. At 5 PM, CP 235 psi, FL 4000'.  
Swbd approx 80 bbls fluid (total of 1330 bbls since  
acid job). Oil show in fluid. AUG 1 1973  
Correction to 7/31 report: Swbd total of 1250 bbls  
fluid since acid job instead of 1100 bbls as reported.

Shell-Mudge "8" #301  
(D)  
5920' Dakota "B" Test  
KB 6364'  
4½" csg @ 5920'

TD 5920. PB 5858. Swabbing. At 8 AM, 8/1, CP 170  
psi, FL 4000'. At 5 PM, CP 310 psi, FL 4600'. Swbd  
approx 50 bbls fluid (1380 bbls total since acid job).  
AUG 2 1973

Shell-Mudge "8" #301  
(D)  
5920' Dakota "B" Test  
KB 6364'  
4½" csg @ 5920'

TD 5920. PB 5858. Swabbing. At 8 AM, 8/2, CP 220  
psi, FL 3500'. At 5 PM, CP 220 psi, FL 4600'. Swbd  
approx 50 bbls off btm (1430 bbls total since acid  
job). Fluid breakdown for 8/1: Cl 21,000 ppm, NaCl  
34,650 ppm, pH 6.0. AUG 2 1973



Shell-Mudge "8" #301  
(D)  
5920' Dakota "B" Test  
KB 6364'  
4½" csg @ 5920'

TD 5920. PB 5858.  
8/4: SI for press build-up. TP 725 psi. CP 775 psi.  
8/5: SI for press build-up. TP 1050 psi. CP 1200 psi.  
Flwd 4 hrs w/200 psi CP w/press dropping to 600 psi  
after 4 hrs. Getting good kick-back. AUG 6 1973  
8/6: SI for press build-up.

Shell-Mudge "8" #301  
(D)  
5920' Dakota "B" Test  
KB 6364'  
4½" csg @ 5920'

TD 5920. PB 5858. SI for press build-up. Well dead  
at 8 AM, 8/6/73 - TP 10 psi, CP 90 psi. RU to swab.  
FL 3600'. Swbd 40 BW from 5000'. CP built to 250 psi.  
(Total of 1470 bbls rec'd since acid job.) AUG 7 1973

Shell-Mudge "8" #301  
(D)  
5920' Dakota "B" Test  
KB 6364'  
4½" csg @ 5920'

TD 5920. PB 5858. SI for press build-up. At 8 AM,  
TP 500 psi, CP 620 psi. Opened well at 8 AM. Flwd  
for short while - CP decr to 450 psi. Made four swab  
runs, swbg 20 bbls fluid. CP decr to 225 psi. Released  
rig @ 10:30 AM. (Rec'd total of 1490 bbls fluid since  
acid job.) SI for press build-up. AUG 8 1973

Shell-Mudge "8" #301  
(D)  
5920' Dakota "B" Test  
KB 6364'  
4½" csg at 5920'

TD 5920. PB 5858. SI for press buildup. At 8 AUG 9 1973  
AM 8-8, TP 450, CP 550. At 5 PM, TP 600, CP 725.

Shell-Mudge "8" #301  
(D)  
5920' Dakota "B" Test  
KB 6364'  
4½" csg at 5920'

TD 5920. PB 5858. SI for press buildup. Before  
opening, TP 610, CP 725. Opened from 8 AM-12 noon  
and had flowed no water. CP 500. Plan to reopen AUG 10 1973  
Saturday or Sunday.

Shell-Mudge "8" #301  
(D)  
5920' Dakota "B" Test  
KB 6364'  
4½" csg @ 5920'

TD 5920. PB 5858.  
8/11: SI for press buildup. At 8 AM, 8/10, TP 100  
psi, CP 350 psi. AUG 13 1973  
8/12: SI for press buildup. TP 250 psi, CP 750 psi.  
8/13: SI for press buildup. TP 400 psi, CP 800 psi.  
Opened well at 8 AM w/good gas first hour; unloaded no  
wtr. SI at noon for buildup.



Shell-Mudge "8" #301  
(D)  
5920' Dakota "B" Test  
KB 6364'  
4½" csg @ 5920'

TP 5920. PB 5858. SI for press buildup, prep to run WL.  
At 8 AM, 8/13, TP 50 psi, CP 500 psi. AUG 14 1973

Shell-Mudge "8" #301  
(D)  
5920' Dakota "B" Test  
KB 6364'  
4½" csg @ 5920'

TD 5920. PB 5860. SI for press buildup. TP 600 psi,  
CP 625 psi. FL at 3200'. Ran WL to 5829. AUG 15 1973

Shell-Mudge "8" #301  
(D)  
5920' Dakota "B" Test  
KB 6364'  
4½" csg @ 5920'

TD 5920. PB 5860. Prep to open well. At 8 AM, 8/15,  
TP 675 psi, CP 700 psi. At 5 PM, TP 725 psi, CP 875  
psi. AUG 16 1973

Shell-Mudge "8" #301  
(D)  
5920' Dakota "B" Test  
KB 6364'  
4½" csg @ 5920'

TD 5920. PB 5860. Flowing. Opened well at 8 AM  
w/750 psi TP and 900 psi CP. Unloaded 20 BW (total  
of 1510 BW). At 5 PM, well gassing and heading up  
some wtr. CP 650 psi. AUG 17 1973

Shell-Mudge "8" #301  
(D)  
5920' Dakota "B" Test  
KB 6364'  
4½" csg @ 5920'

TD 5920. PB 5860.  
8/18: SI for buildup. TP zero, CP 400 psi. SI well  
at 5 PM.  
8/19: SI. TP 450 psi, CP 500 psi. AUG 20 1973  
8/20: SI. TP 600 psi, CP 700 psi.

Shell-Mudge "8" #301  
(D)  
5920' Dakota "B" Test  
KB 6364'  
4½" csg @ 5920'

TD 5920. PB 5860. SI, prep to open well. TP 650  
psi, CP 750 psi. At 5 PM, CP 825 psi. AUG 21 1973

Shell-Mudge "8" #301  
(D)  
5920' Dakota "B" Test  
KB 6364'  
4½" csg @ 5920'

TD 5920. PB 5860. Flowing. TP 700 psi, CP 850 psi.  
Unloaded approx 5 BW (total of 1515 BW). At 5 PM, TP  
zero, CP 700 psi. AUG 22 1973





Shell-Mudge "8" #301  
(D)  
5920' Dakota "B" Test  
KB 6364'  
4½" csg @ 5920'

TD 5920. PB 5860. Flowing. TP zero, CP 350 psi.  
Flwd sm1 amt of gas. Well unloaded approx 3 BO (total  
of 1518 bbls fluid). Oil gravity approx 60°. AUG 23 1973

Shell-Mudge "8" #301  
(D)  
5920' Dakota "B" Test  
KB 6364'  
4½" csg @ 5920'

TD 5920. PB 5860. SI for press buildup. TP 20 psi,  
CP 30 psi. Unloaded approx 2 BO (total of 1520 BF).  
AUG 24 1973

Shell-Mudge "8" #301  
(D)  
5920' Dakota "B" Test  
KB 6364'  
4½" csg @ 5920'

TD 5920. PB 5860.  
8/25: SI. TP 20 psi, CP 500 psi.  
8/26: SI. TP 500 psi, CP 600 psi. AUG 27 1973  
8/27: SI, prep to open. TP 550 psi, CP 700 psi.

Shell-Mudge "8" #301  
(D)  
5920' Dakota "B" Test  
KB 6364'  
4½" csg @ 5920'

TD 5920. PB 5860. Flowing. TP 750 psi, CP 800 psi.  
Unloaded 5 BO when well opened at 8 AM. At 5 PM, well  
started unloading sli amt of fluid again. (Total of  
1525 BF unloaded) AUG 28 1973

Shell-Mudge "8" #301  
(D)  
5920' Dakota "B" Test  
KB 6364'  
4½" csg @ 5920'

TD 5920. PB 5860. Flowing. TP 20 psi, CP 450 psi.  
Well did not unload any fluid overnight. Unloaded 2  
BO at noon. (Unloaded total of 1527 BF). At 5 PM,  
TP 20 psi, CP 450 psi. AUG 29 1973

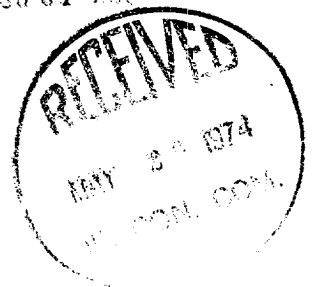
Shell-Mudge "8" #301  
(D)  
5920' Dakota "B" Test  
KB 6364'  
4½" csg @ 5920'

TD 5920. PB 5860. Flowing. TP 25 psi, CP 375 psi.  
Well unloaded 1 BO (total of 1528 BF) AUG 30 1973

Shell-Mudge "8" #301  
(D)  
5920' Dakota "B" Test  
KB 6364'  
4½" csg @ 5920'

TD 5920. PB 5860. Flowing. TP 20 psi, CP 400 psi.  
Well did not unload any fluid. At 5 PM, TP 20 psi,  
CP 400 psi.

AUG 31 1973



Shell-Mudge "8" #301  
(D)  
5920' Dakota "B" Test  
KB 6364'  
4 1/2" csg at 5920'

TD 5920. PB 5860.

9-1: TP 20, CP 450. Shut in.  
9-2: TP built up to 400, CP 500. Shut in. SEP 4 1973  
9-3: TP 500, CP 575, Shut in.  
9-4: TP 575, CP 625, Shut in. Prep to open today.

Shell-Mudge "8" #301  
(D)  
5920' Dakota "B" Test  
KB 6364'  
4 1/2" csg at 5920'

TD 5920. PB 5860. Shut in. TP 600, CP 700.  
Waiting for increase in CP before opening well. SEP 5 1973

Shell-Mudge "8" #301  
(D)  
5920' Dakota "B" Test  
KB 6364'  
4 1/2" csg at 5920'

TD 5920. PB 5860. Plan to shut in. TP 600, CP 800.  
Op'd up well and produced 3 BO. SEP 6 1973

Shell-Mudge "8" #301  
(D)  
5920' Dakota "B" Test  
KB 6364'  
4 1/2" csg at 5920'

TD 5920. PB 5860. Shut in. TP 180, CP 650. SEP 7 1973

Shell-Mudge "8" #301  
(D)  
5920' Dakota "B" Test  
KB 6364'  
4 1/2" csg at 5920'

TD 5920. PB 5860. Shut in.

9-8: TP 188, CP 660. SEP 10 1973  
9-9: TP 890, CP 700.  
9-10: TP 600, CP 700.

Shell-Mudge "8" #301  
(D)  
5920' Dakota "B" Test  
KB 6364'  
4 1/2" csg @ 5920'

TD 5920. PB 5860. SI. TP 620 psi, CP 775 psi. SEP 11 1973

Shell-Mudge "8" #301  
(D)  
5920' Dakota "B" Test  
KB 6364'  
4 1/2" csg @ 5920'

TD 5920. PB 5860.  
9/15: SI. TP 450 psi, CP 625 psi. SEP 17 1973  
9/16: SI. TP 500 psi, CP 650 psi.  
9/17: SI. TP 575 psi, CP 700 psi.



Shell-Mudge "8" #301  
(D)  
5920' Dakota "B" Test  
KB 6364'  
4½" csg @ 5920'

TD 5920. PB 5860. SI. TP 640 psi, CP 800 psi. SEP 12 1973

Shell-Mudge "8" #301  
(D)  
5920' Dakota "B" Test  
KB 6364'  
4½" csg @ 5920'

TD 5920. PB 5860. Flowing. Opened well w/800 psi TP  
and 1000 psi CP. Well unloaded 5-6 BO w/no wtr (total  
of 1536 BF unloaded). SEP 13 1973

Shell-Mudge "8" #301  
(D)  
5920' Dakota "B" Test  
KB 6364'  
4½" csg @ 5920'

TD 5920. PB 5860. SI. TP 20 psi, CP 600 psi. SEP 14 1973

Shell-Mudge "8" #301  
(D)  
5920' Dakota "B" Test  
KB 6364'  
4½" csg @ 5920'

TD 5920. PB 5860. SI. TP 650 psi, CP 800 psi. SEP 18 1973

Shell-Mudge "8" #301  
(D)  
5920' Dakota "B" Test  
K3 6364'  
4½" csg @ 5920'

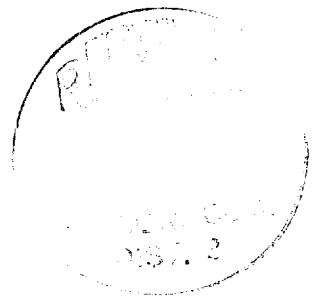
TD 5920. PB 5860. SI. TP 700 psi, CP 850 psi. SEP 19 1973

Shell-Mudge "8" #301  
(D)  
5920' Dakota "B" Test  
KB 6364'  
4½" csg @ 5920'

TD 5920. PB 5860. SI. TP 700 psi, CP 850 psi. SEP 20 1973

Shell-Mudge "8" #301  
(D)  
5920' Dakota "B" Test  
KB 6364'  
4½" csg at 5920'

TD 5920. PB 5860. SI. TP 900, CP 1050 psi. SEP 21 1973



Shell-Mudge "8" #301  
(D)  
5920' Dakota "B" Test  
KB 6364'  
4½" csg @ 5920'

TD 5920. PB 5860.  
9/22: SI. Blew well down @ 6 PM on 9/21. Well kicked to pit in heads through 1" chk w/100 psi TP, 750 psi CP. Flwd to pit in heads for 1 hr. Rec'd condensate and gas (unmeasured). SI @ 7 PM w/100 psi TP, 760 psi CP. SIP's as follows: 10 min - 200 psi, 15 min - 230 psi, 20 min - 250 psi, 25 min - 275 psi, CP 800 psi.  
9/23: SI. SITP after 15 hrs 700 psi, CP 1150 psi. Blew well down @ 10 AM, 9/22. Flwd by heads for 30 min and died. CP 900 psi. Left open to atmosphere for 7 hrs and SI at 5 PM. SEP 24 1973  
9/24: SI. SITP 500 psi, CP 950 psi.

Shell-Mudge "8" #301  
(D)  
5920' Dakota "B" Test  
KB 6364'  
4½" csg at 5920'

TD 5920. PB 5860. SI. TP 600, CP 1000. SEP 25 1973

Shell-Mudge "8" #301  
(D)  
5920' Dakota "B" Test  
KB 6364'  
4½" csg @ 5920'

TD 5920. PB 5860. SI. TP 650 psi, CP 1025 psi.  
SEP 26 1973

Shell-Mudge "8" #301  
(D)  
5920' Dakota "B" Test  
KB 6364'  
4½" csg @ 5920'

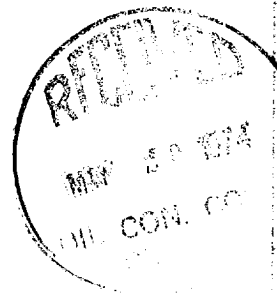
TD 5920. PB 5860. SI. TP and CP 750 psi. Installed new gauges - previous press's incorrect due to faulty gauges. SEP 27 1973

Shell-Mudge "8" #301  
(D)  
5920' Dakota "B" Test  
KB 6364'  
4½" csg @ 5920'

TD 5920. PB 5860. SI. TP 800 psi, CP 800 psi. SEP 28 1973

Shell-Mudge "8" #301  
(D)  
5920' Dakota "B" Test  
KB 6364'  
4½" csg @ 5920'

TD 5920. PB 5860.  
9/29: SI. TP 875 psi, CP 875 psi.  
9/30: SI. TP 925 psi, CP 925 psi.  
10/1: SI. TP 950 psi, CP 950 psi. OCT 1 1973



Shell-Mudge "8" #301  
(D)  
5920' Dakota "B" Test  
KB 6364'  
4½" csg @ 5920'

TD 5920. PB 5860. SI. TP 950 psi, CP 950 psi. OCT 9 1973

Shell-Mudge "8" #301  
(D)  
5920' Dakota "B" Test  
KB 6364'  
4½" csg @ 5920'

TD 5920. PB 5860. SI. TP 950 psi, CP 950 psi. OCT 9 1973

Shell-Mudge "8" #301  
(D)  
5920' Dakota "B" Test  
KB 6364'  
4½" csg @ 5920'

TD 5920. PB 5860. SI. TP 1025 psi, CP 1025 psi. OCT 14 1973

Shell-Mudge "8" #301  
(D)  
5920' Dakota "B" Test  
KB 6364', GL 6352'  
4½" csg @ 5920'

TD 5920. PB 5860. SI. TP 1025 psi, CP 1025 psi.

OCT 8 1973

Shell-Mudge "8" #301  
(D)  
5920' Dakota "B" Test  
KB 6364', GL 6352'  
4½" csg @ 5920'

TD 5920. PB 5860.  
10/6-8: SI. TP 1050 psi, CP 1050 psi. OCT 8 1973

Shell-Mudge "8" #301  
(D)  
5920' Dakota "B" Test  
KB 6364', GL 6352'  
4½" csg @ 5920'

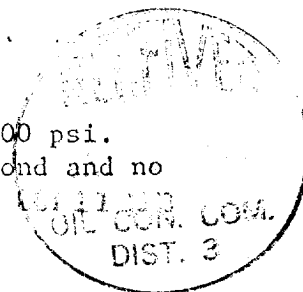
TD 5920. PB 5860. SI. TP 1050 psi, CP 1050 psi. OCT 9 1973

Shell-Mudge "8" #301  
(D)  
5920' Dakota "B" Test  
KB 6364', GL 6352'  
4½" csg @ 5920'

TD 5920. PB 5860. SI. TP 1050 psi, CP 1050 psi. OCT 10 1973

Shell-Mudge "8" #301  
(D)  
5920' Dakota "B" Test  
KB 6364', GL 6352'  
4½" csg @ 5920'

TD 5920. PB 5860. SI. TP 1100 psi, CP 1100 psi.  
Blew well down in 2½ hrs, blowing 10 bbls cond and no  
wtr. Well open from 10 AM to 5 PM.



Shell-Mudge "8" #301  
(D)  
5920' Dakota "B" Test  
KB 6364', GL 6352'  
4½" csg @ 5920'

TD 5920. PB 5860. SI. TP 500 psi, CP 550 psi.

OCT 13 1973

Shell-Mudge "8" #301  
(D)  
5920' Dakota "B" Test  
KB 6364', GL 6352'  
4½" csg @ 5920'

TD 5920. PB 5860.  
10/13: SI. TP 575 psi, CP 650 psi.  
10/14: SI. TP 625 psi, CP 700 psi.  
10/15: SI. TP 650 psi, CP 700 psi.

OCT 15 1973

Shell-Mudge "8" #301  
(D)  
5920' Dakota "B" Test  
KB 6364', GL 6352'  
4½" csg @ 5920'

TD 5920. PB 5860. SI. TP 675 psi, CP 725 psi.

OCT 16 1973

Shell-Mudge "8" #301  
(D)  
5920' Dakota "B" Test  
KB 6364', GL 6352'  
4½" csg @ 5920'

TD 5920. PB 5860. SI. TP 725 psi, CP 800 psi.

OCT 17 1973

Shell-Mudge "8" #301  
(D)  
5920' Dakota "B" Test  
KB 6364', GL 6352'  
4½" csg @ 5920'

TD 5920. PB 5860. SI. TP 800 psi, CP 850 psi.

OCT 18 1973

Shell-Mudge "8" #301  
(D)  
5920' Dakota "B" Test  
KB 6364', GL 6352'  
4½" csg @ 5920'

TD 5920. PB 5860. SI. TP 850 psi, CP 900 psi.

OCT 19 1973

Shell-Mudge "8" #301  
(D)  
5920' Dakota "B" Test  
KB 6364', GL 6352'  
4½" csg @ 5920'

TD 5920. PB 5860. SI.  

| Report Date | TP   | CP   |
|-------------|------|------|
| 10/20       | 890  | 925  |
| 10/21       | 950  | 975  |
| 10/22       | 1000 | 1100 |

OCT 22 1973

OIL CO. CO.  
DIST. 3

Shell-Mudge "8" #301  
(D)  
5920' Dakota "B" Test  
KB 6364', GL 6352'  
4½" csg @ 5920'

TD 5920. PB 5860. SI. TP 1100 psi, CP 1150 psi.  
Checked FL before blowing well down. FL 98 jts down  
(3087'). Blew well down in 20 min, unloading 5 bbls  
cond. Reshot FL - FL 102 jts down (3213'). TP zero,  
CP 980. OCT 22 1973

Shell-Mudge "8" #301  
(D)  
5920' Dakota "B" Test  
KB 6364', GL 6352'  
4½" csg @ 5920'

TD 5920. PB 5860. SI. TP 300 psi, CP 775 psi. OCT 24 1973

Shell-Mudge "8" #301  
(D)  
5920' Dakota "B" Test  
KB 6364', GL 6352'  
4½" csg @ 5920'

TD 5920. PB 5860. SI. TP 500 psi, CP 900 psi. OCT 25 1973

Shell-Mudge "8" #301  
(D)  
5920' Dakota "B" Test  
KB 6364', GL 6352'  
4½" csg at 5920'

TD 5920. PB 5860. SI. TP 600 psi, CP 975. OCT 26 1973

Shell-Mudge "8" #301  
(D)  
5920' Dakota "B" Test  
KB 6364', GL 6352'  
4½" csg @ 5920'

TD 5920. PB 5860.  
10/27: SI. TP 850 psi, CP 950 psi.  
10/28: SI. TP 1000 psi, CP 1050 psi. OCT 28 1973  
10/29: SI. TP 1200 psi, CP 1250 psi.

Shell-Mudge "8" #301  
(D)  
5920' Dakota "B" Test  
KB 6364', GL 6352'  
4½" csg @ 5920'

TD 5920. PB 5860. SI. TP 1225 psi, CP 1275 psi. OCT 30 1973

Shell-Mudge "8" #301  
(D)  
5920' Dakota "B" Test  
KB 6364', GL 6352'  
4½" csg @ 5920'

TD 5920. PB 5860. SI. TP 1300 psi, CP 1350 psi. OCT 31 1973

OIL  
DIST. 3

Shell-Mudge "8" #301  
(D)  
5920' Dakota "B" Test  
KB 6364', GL 6352'  
4½" csg @ 5920'

TD 5920. PB 5860. SI. TP 1325 psi, CP 1375 psi.

NOV 1 1973

Shell-Mudge "8" #301  
(D)  
5920' Dakota "B" Test  
KB 6364', GL 6352'  
4½" csg @ 5920'

TD 5920. PB 5860. Flowing. At 10 AM, TP 1400 psi,  
CP 1425 psi. Opened well to blow down. At 4 PM, TP  
400 psi, CP 1100 psi. Flwd est 10 BW and 5 BO in 6 hrs.

NOV 2 1973

Shell-Mudge "8" #301  
(D)  
5920' Dakota "B" Test  
KB 6364', GL 6352'  
4½" csg @ 5920'

TD 5920. PB 5860.

11/3: Flowing. TP 100 psi, CP 500 psi. Flwd approx 5  
BW and 2 bbls cond.

11/4: SI. Well gassing - flwd no fluid. TP 50 psi,  
CP 400 psi.

11/5: SI. TP 500 psi, CP 600 psi.

NOV 5 1973

Shell-Mudge "8" #301  
(D)  
5920' Dakota "B" Test  
KB 6364', GL 6352'  
4½" csg @ 5920'

TD 5920. PB 5860. SI. TP 600 psi, CP 700 psi.

NOV 6 1973

Shell-Mudge "8" #301  
(D)  
5920' Dakota "B" Test  
KB 6364', GL 6352'  
4½" csg @ 5920'

TD 5920. PB 5860. SI. (RDUFA) NOV 7 1973



# CASING AND CEMENTING

Field BISTI (BASIN DAKOTA) Well MUDGE 8 #301  
 Job: 8-5/8 " O.D. Casing/~~XXXX~~ Ran to 519 feet (KB) on 6/1, 1973  
 Jts. Wt. Grade Thread New Feet From To  
14 24# K-55 ST&C 8rd Yes 438.81 CHF 452.81  
Baker Insert Float Valve 452.81  
2 24# K-55 ST&C 8rd Yes 65.19 CHF 518.00  
Baker Guide Shoe .85 518.85  
Csg set at 519

## Casing Hardware:

Float shoe and collar type Baker Guide Shoe and Ball Type INsert Float Valve

Centralizer type and product number 3- Baker Hinged Type

Centralizers installed on the following joints #1, 3 & 4 collars, 15 & 16 collars

Other equipment (liner hanger, D.V. collar, etc.)

## Cement Volume:

Caliper type None Caliper volume ft<sup>3</sup> + excess over caliper

ft<sup>3</sup> + float collar to shoe volume ft<sup>3</sup> + liner lap ft<sup>3</sup>

+ cement above liner ft<sup>3</sup> = 420 ft<sup>3</sup> (Total Volume). Gauge hole and 100 excess

## Cement:

Preflush-Water 20 bbls, other Volume bbls

First stage, type and additives Class "A" regular and 2% CaCl<sub>2</sub>

Weight 15 lbs/gal, yield 1.18

ft<sup>3</sup>/sk, volume 365 sx. Pumpability 1:17 hours at 91 °F.

Second stage, type and additives None

Weight lbs/gal, yield

ft<sup>3</sup>/sk, volume sx. Pumpability hours at °F.

## Cementing Procedure:

Rotate/reciprocate No

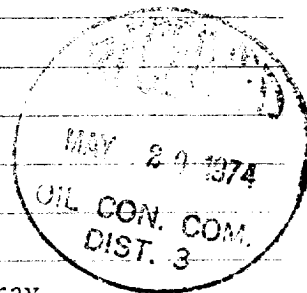
Displacement rate 6 B/M. Displaced w/35 bbls fresh wtr

Percent returns during job 100%. Circ out 140 sx

Bumped plug at 7:00 AM/PM with 600 psi. Bled back 1/2 bbls. Hung csg with N.A. lbs on slips.

## Remarks:

Float held OK.



Drilling Foreman M. G. Gray  
 Date 6/1/73

CASING AND CEMENTING

Field BISTI (BASIN DAKOTA) Well MUDGE 8 #301  
Job: 4 1/2 " O.D. Casing, ~~XXXX~~ Ran to 5920 feet (KB) on 6/12, 1973

| Jts. | Wt | Grade | Thread | New | Feet | From | To  |
|------|----|-------|--------|-----|------|------|-----|
|      |    |       |        |     | 14   | KB   | CHF |
|      |    |       |        |     |      | CHF  |     |

|     |      |      |                         |     |         |  |  |
|-----|------|------|-------------------------|-----|---------|--|--|
| 27  | 11.6 | K-55 | 8rd reg collars         | Yes | 1095.29 |  |  |
| 117 | 11.6 | K-55 | 8rd, Atlas-<br>Bradford | Yes | 4827.28 |  |  |

Guide Shoe .70

Float Collar 1.65

Ran total of 5924.92' of casing w/shoe @ 5920 and FC @ 5880; 4.92' of csg above KB.

Casing Hardware:

Float shoe and collar type Halliburton regular guide shoe, Halliburton Differential FC (#824-525)  
Centralizer type and product number Halliburton S-3  
Centralizers installed on the following joints 6' above shoe, collars 3&4, 5&6 7&8 9&10  
(5914) (5840) (5956) (5672) (5588)  
Other equipment (liner hanger, D.V. collar, etc.)

Cement Volume:

Caliper type Schl Caliper volume 416.4600 ft<sup>3</sup> + excess over caliper  
Oil in 100 sx + 22 ~~835~~ float collar to shoe volume 3.5 ft<sup>3</sup> + liner lap ft<sup>3</sup>  
+ cement above liner ft<sup>3</sup> = ft<sup>3</sup> (Total Volume).

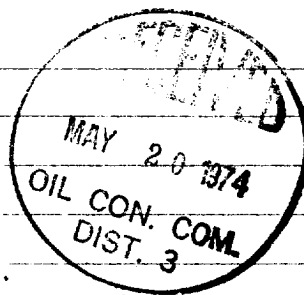
Cement:

String to FC @ 5880, Fresh Water and 2% KCl  
Preflush-Water 20 bbls, other Volume bbls  
First stage, type and additives 250 sx Halliburton Lite (65:35) w/6% gel, 1% CFR-2 retarder  
Weight 12.4 lbs/gal, yield 1.92  
ft<sup>3</sup>/sk, volume sx Pumpability 4 hours at 145 °F.  
Second stage, type and additives 100 sx Class "A" w/1% CFR-2 retarder  
Weight 15.0 lbs/gal, yield 1.18  
ft<sup>3</sup>/sk, volume sx Pumpability 4 hours at 145 °F.

Cementing Procedure:

Rotate/reciprocate Reciprocate 20' throughout job. No mud loss, no drag.  
Displacement rate 5 bbl per min  
Percent returns during job 100%  
Bumped plug at 8:30 ~~AM~~ PM with 2000 psi. Bled back 1 1/4 bbls. Hung csg  
with 62,000 lbs on slips.

Remarks:



Drilling Foreman M. G. Gray  
Date 6/12/73