UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT

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| | | | 5. | Lease No. | |
| . Type of Well | | | 6. | | an, All. or |
| GAS | | | | Tribe N | |
| | | | 7. | Unit Ag | reement Nam |
| . Name of Operator | | | | | |
| RESOURCES OIL & GAS CO | OMPANY | | | | |
| Allers & Phone We of Occuptor | | | 8. | | me & Number Koch #1C |
| B. Address & Phone No. of Operator PO Box 4289, Farmington, NM 87499 | (505) 326-970 | 00 | 9. | API Wel | l No. |
| L. Location of Well, Footage, Sec., T, | D M | | 10 | Field a | |
| 1890'FNL, 670'FEL, Sec.13, T-31-N, R | | | 10. | | MV/Basin DI |
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| 12. CHECK APPROPRIATE BOX TO INDICATE N Type of Submission | Type of | | ORT, CIRER | DATA | |
| Y Notice of Intent | nandonment | X Cha | ange of Pl | ans | |
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| Subsequent Report Pl | ecompletion Lugging Back asing Repair | No | n-Routine cer Shut o | Fracturi | ng |
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District 1 140 Bag 1980, Hobbs, NM 88241-1980 District II

State of New Mexico Energy, Minerals & Natural Resources Department

Form C-102 Revised October 18, 1994 Instructions on back

OIL CONSERVATION DIVISION 2040 South Pacheco Santa Fe, NM 87505 MII South First, Artesia, NAI 88210 District III

Submit to Appropriate District Office State Lease - 4 Copies

Fee Lease - 3 Copies

☐ AMENDED REPORT

1000 Rio Braun Rd., Aster, NM 17410

| District IV 2040 South Packet | n, Santa Fc, | NA1 117505 | | | | | | | | - VIME | HOLD ROLOIL |
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| | WELL LOCATION AND ACREAGE DEDICATION PLAT 'API Number 'API Number 'API Number 'API Number 'Pool Code Pool Code Blanco Mesaverde/Basin Dakota | | | | | | akota | | | | |
| 30-045-3 | | 72319/71599 Blanco Mesawerder Bassan | | | | | | • Well Number | | | |
| * Property | | WALKER KOCH | | | | | * Elevation | | | | |
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| 14538 | | Bu | rlington | Resour | Surface | Location | | | | | |
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OPERATIONS PLAN

Well Name: Walker Koch #1C

Location: 1890'FNL, 670'FEL, Sec 13, T-31-N, R-10-W

San Juan County, NM

Latitude 36° 54.01, Longitude 107° 49.43

Formation: Blanco Mesaverde/Basin Dakota

Elevation: 6585'GL

| Formation Tops: | Top | Bottom | Contents |
|-----------------------|---------------|---------------|-----------------|
| Surface | San Jose | 1872' | |
| Ojo Alamo | 1872' | 1922 ' | aquifer |
| Kirtland | 1922' | 2807 ′ | gas |
| Fruitland | 2807' | 3387' | gas |
| Pictured Cliffs | 3387' | 3617' | gas |
| Lewis | 3617' | 4112' | gas |
| Intermediate TD | 3717' | | |
| Mesa Verde | 4112' | 4502 ' | gas |
| Chacra | 4502 " | 5212 ' | gas |
| Massive Cliff House | 5212' | 5292' | gas |
| Menefee | 5292' | 5657 ' | gas |
| Massive Point Lookout | 5657' | 6047' | gas |
| Mancos | 6047 ′ | 6972 ' | gas |
| Gallup | 6972 ' | 7675 ' | gas |
| Greenhorn | 7675' | 7732' | gas |
| Graneros | 7732' | 7793' | gas |
| Dakota | 7793 ' | 8301 ′ | gas |
| Morrison | 8301 ′ | | |
| TD | 8350' | | |

Logging Program:

Cased hole - CBL-CCL-GR - TD to surface Open hole - DIL/GR, Density & Neutron Porosity, Bulk Density/Correction, Microlog - TD to minimum operations depth Mudlog - 6500' to TD Cores - none

Mud Program:

| Inter | rval | Type | Weight_ | <u>Vis.</u> | Fluid Loss |
|-------|---------------|--------|---------|-------------|------------|
| 0- | 200' | Spud | 8.4-9.0 | 40-50 | no control |
| 200- | 3717 ′ | LSND | 8.4-9.0 | 30-60 | no control |
| 3717- | 7743 ' | Air/N2 | n/a | n/a | n/a |
| 7743- | 8350' | LSND | 8.4-9.0 | 30-60 | no control |

Pit levels will be visually monitored to detect gain or loss of fluid control.

Casing Program (as listed, the equivalent, or better):

| Hole Size | Depth Interval | Csg.Size | <u>wc.</u> | Grade |
|-----------|----------------|----------|------------|-------|
| 12 1/4" | 0' - 200' | 9 5/8" | 32.3# | H-40 |
| 8 3/4" | 0' - 3717' | 7" | 20.0# | J-55 |
| 6 1/4" | 3617' - 8350' | 4 1/2" | 10.5# | J-55 |

Tubing Program:

0' - 8350' 2 3/8" 4.7# J-55

BOP Specifications, Wellhead and Tests:

Surface to Intermediate TD -

11" 3000 psi minimum double gate BOP stack (Reference Figure #1). After nipple-up prior to drilling out surface casing, rams and casing will be tested to 600 psi for 30 minutes.

Intermediate TD to Total Depth -

11" 3000 psi minimum double gate BOP stack (Reference Figure #1). After nipple-up prior to drilling out intermediate casing, rams and casing will be tested to 1500 psi for 30 minutes.

Surface to Total Depth -

2" nominal, 3000 psi minimum choke manifold (Reference Figure #3).

Completion Operations -

7 1/16" 3000 psi double gate BOP stack (Reference Figure #2). After nipple-up prior to completion, pipe rams, casing and liner top will be tested to 2000 psi for 15 minutes.

Wellhead -

9 5/8" x 7" x 2 3/8" x 3000 psi tree assembly.

- Pipe rams will be actuated once each day and blind rams will be actuated once each trip to test proper functioning.
- · An upper kelly cock valve with handle available and drill string valves to fit each drill string will be available on the rig floors at all times.
- BOP pit level drill will be conducted weekly for each drilling crew.
- All BOP tests and drills will be recorded in daily drilling reports.
- Blind and pipe rams will be equipped with extension hand wheels.

9 5/8" surface casing - cement with 159 sx Class "B" cement with 1/4# celloflake/sx and 3% calcium chloride (188 cu.ft. of slurry, 200% excess to circulate to surface). WOC 8 hrs. Test casing to 600 psi for 30 minutes.

Saw tooth guide shoe on bottom. Bowspring centralizers will be run in accordance with Onshore Order #2.

7" intermediate casing -

Lead w/388 sx 50/50 Class G/TXI lightweight w/2.5% sodium metasilicate, 2% calcium chloride, 10# gilsonite/sx and 1/2# celloflake/sx. Tail w/90 sx 50/50 Class "G" Poz w/2% calcium chloride, 2% gel, 1/4 pps celloflake, 5 pps gilsonite, 0.1% antifoam agent (1117 cu.ft. of slurry, 100% excess to circulate to surface.) WOC minimum of 8 hours before drilling out intermediate casing. If cement does not circulate to surface, a CBL will be run during completion operations to determine TOC. Test casing to 1500 psi for 30 minutes.

See attached alternative intermediate lead slurry.

7" intermediate casing alternative two stage: Stage collar at 2707'. First stage: cement with 237 sx 50/50 Class "G" Poz w/2% calcium chloride, 2% gel, 1/4 pps celloflake, 5 pps gilsonite, 0.1% antifoam agent. Second stage: 315 sx 50/50 Class \bar{G}/TXI lightweight w/2.5 $\frac{1}{8}$ sodium metasilicate, 2% calcium chloride, 10# gilsonite/sx and 1/2# celloflake/sx (1117 cu.ft., 100% excess to circulate to surface).

Cement nose guide shoe on bottom with float collar spaced on top of shoe joint. Bowspring centralizers spaced every other joint off bottom, to the base of the Ojo Alamo at 1922'. Two turbolating centralizers at the base of the Ojo Alamo at 1922'. Bowspring centralizers spaced every fourth joint from the base of the Ojo Alamo to the base of the surface casing.

- 4 1/2" Production Casing Cement to cover minimum of 100' of 4 1/2" x 7" overlap. Lead
 with 472 sx 50/50 Class "G" Poz with 5% gel, 0.25#
 celloflake/sx, 5# gilsonite/sx, 0.1% retardant and 0.25% fluid
 loss additive, 0.15% dispersant, 0.1% antifoam agent (680
 cu.ft.), 40% excess to cement 4 1/2" x 7" overlap). WOC a
 minimum of 18 hrs prior to completing.
- 4 1/2" production casing alternative: Lead w/179 sx 9.5 PPG Litecrete Blend w/0.11% dispersant, 0.5% fluid loss. Tail w/193 sx Class G 50/50 poz w/5% gel, 0.25 pps celloflake, 5 pps gilsonite, 0.25% fluid loss, 0.15% dispersant, 0.1% retarder, 0.1% antifoam (728 cu.ft., 50% excess to cement 4 ½" x 7" overlap).

Note: If open hole logs are run, cement volumes will be based on 25% excess over caliper volumes.

Cement float shoe on bottom with float collar spaced on top of float shoe.

- Note: To facilitate higher hydraulic stimulation completion work, no liner hanger will be used. In its place, a long string of 4 1/2" casing will be run and cemented with a minimum of 100' of cement overlap between the 4 1/2" x 7" casing strings. After completion of the well, a 4 1/2" retrievable bridge plug will be set below the top of cement in the 4 1/2" x 7" overlap. The 4 1/2" casing will then be backed off above the top of cement in the 4 1/2" x 7" overlap and laid down. The 4 1/2" bridge plug will then be retrieved and the production tubing will be run to produce the well.
- If hole conditions permit, an adequate water spacer will be pumped ahead of each cement job to prevent cement/ mud contamination or cement hydration.

Special Drilling Operations (Gas/Mist Drilling):

The following equipment will be operational while gas/mist drilling:

- An anchored blooie line will be utilized to discharge all cuttings and circulating medium to the blow pit a minimum of 100' from the wellhead.
- The blooie line will be equipped with an automatic igniter or pilot light.
- Compressors will be located a minimum of 100' from the wellhead in the opposite direction from the blooie line.
- Engines will have spark arresters or water cooled exhaust.
- Deduster equipment will be utilized.
- The rotating head will be properly lubricated and maintained.
- A float valve will be utilized above the bit.
- Mud circulating equipment, water, and mud materials will be sufficient to maintain control of the well.

Additional Information:

 The Dakota and Mesa Verde formations will be completed and commingled.

No abnormal temperatures or hazards are anticipated.

• Anticipated pore pressures are as follows:

Fruitland Coal 300 psi Pictured Cliffs 600 psi Mesa Verde 700 psi Dakota 2500 psi

• Sufficient LCM will be added to the mud system to maintain well control, if lost circulation is encountered.

• The east half of Section 13 is dedicated to the Mesa Verde and Dakota in this well.

• This gas is dedicated.

Drilling Engineer

9/11/2001

Alternative Intermediate Lead Slurry

Dowell-

Class G: D49(50:50) w/ 2.5% D79, 2% S1, 10pps D24, .5pps D29, .2%D46

where: D49-TXI Light weight Cement

D79-Sodium Metasilicate S1-Calcium Chloride

D24-Gilsonite

D46-Antifoam Agent

Properties-

Density:11.4 lb/gal Yield:2.58 cu ft./sk Water:14.55 gal/sk

Thick Time 70 b.c.(deg F): 4:06(101)

Free Water:0

Fluid Loss:462ml/30 min CS(crush)@24hr:394 CS(crush)@48hr:550

Halliburton-

Class H 47#/sk, 37#/sk Blended Silicalite, 3% Bentonite, 4% Calcium Chloride

Properties-

Density:11.4 lb/gal Yield:2.42 cu.ft./sk Water:14.02 gal/sk

Thick Time(70 bc): 11:00+ Fluid Loss: 702 cc/30min

Free Water: 0%

Compressive Strength (@25:19):500 Compressive Strength (@48:00):630

BURLINGTON RESOURCES

Burlington Resources

3000 psi System **Drilling Rig**

RIG FLOOR

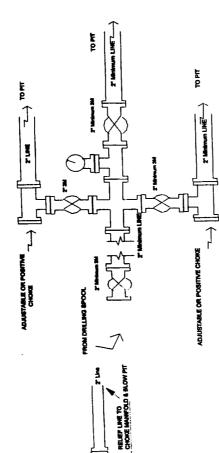
ROTATING HEAD: -

T FILL-UP LINE

FLOW MPPLE/BLOOF LINE

DOUBLE GATE

Drilling Rig Choke Manifold Configuration 3000 psi System



GROUND LEVEL

Choke manifold installation from Surface Casing Poster to Total Depth. 3,000psi working pressure equipment with two chokes.

Figure #2

4-20-01

Figure #1

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pressure double gate BOP to be equipped with bilind aind pipe rams. A stripping head to be installed on the top of Minimum BOP Installation for all Completion/Workover Operations. 7-1/18" bore, 3000 psi minimum working pressure or greater excluding 500 psi stripping head. the BOP. All BOP equipment is 3000 psi working Figure #3

4-20-01