

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

(See other In-  
structions on  
reverse side)

WELL COMPLETION OR RECOMPLETION REPORT AND LOG\*

1a. TYPE OF WELL: OIL WELL ☒ GAS WELL ☐ DRY ☐ Other ☐  
b. TYPE OF COMPLETION: NEW WELL ☒ WORK OVER ☐ DEEP-EN ☐ PLUG BACK ☐ DIFF. CENVE. ☐  
2. NAME OF OPERATOR: BCO, INC.  
3. ADDRESS OF OPERATOR: 135 Grant Ave., Santa Fe, N.M. 87501  
4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements):  
At surface 745' FSL and 790' FWL, Sec 9 T23N R7W NMPM, Rio Arriba County, N.M.  
At top prod. interval reported below Same  
At total depth Same

5. LEASE DESIGNATION AND SERIAL NO.

SF-078272

6. IF INDIAN, ALLOTTEE OR TRIBE NAME

7. UNIT AGREEMENT NAME

8. FARM OR LEASE NAME

Dunn

9. WELL NO.

15

10. FIELD AND POOL, OR WILDCAT

Lybrook Gallup

11. SEC., T., R., M., OR BLOCK AND SURVEY OR AREA

Sec 9 T23N R7W NMPM

12. COUNTY OR PARISH

Rio Arriba

13. STATE

New Mexico

15. DATE SPUDDED 5/26/88 16. DATE T.D. REACHED 6/15/88 17. DATE COMPL. (Ready to prod.) 6/30/88 18. ELEVATIONS (DP, RKB, RT, GR, ETC.)\* GR 7130 19. ELEV. CASINGHEAD 7133

20. TOTAL DEPTH, MD & TVD 6610' 21. PLUG BACK T.D., MD & TVD 5740' 22. IF MULTIPLE COMPL., HOW MANY\* 1 23. INTERVALS DRILLED BY XX 24. PRODUCING INTERVAL(S), OF THIS COMPLETION—TOP, BOTTOM, NAME (MD AND TVD)\* 5418' - 5622' Gallup

25. WAS DIRECTIONAL SURVEY MADE Yes filed with OGD 26. TYPE ELECTRIC AND OTHER LOGS RUN Thermal Decay Time Log, compensated Neutron Gamma Ray 27. WAS WELL CORED No

28. CASING RECORD (Report all strings set in well)  
CASING SIZE WEIGHT, LB./FT. DEPTH SET (MD) HOLE SIZE CEMENTING RECORD AMOUNT PULLED  
8 5/8" 23# 208' 220 12 1/4" 158 Sack's Class B  
4 1/2" J-55 11.6# 6607' 7 7/8" 1678 Sack's Class H

29. LINER RECORD 30. TUBING RECORD  
SIZE TOP (MD) BOTTOM (MD) SACKS CEMENT\* SCREEN (MD) SIZE DEPTH SET (MD) PACKER SET (MD)  
2 3/8" 5617"

31. PERFORATION RECORD (Interval, size and number)  
One .39" Select fire shot at 5622; 5596; 5578; 5548; 5538; 5535; 5532; 5508; 5444; 5430; 5426; 5422; and 5418.  
32. ACID, SHOT, FRACTURE, CEMENT SQUEEZE, ETC.  
DEPTH INTERVAL (MD) AMOUNT AND KIND OF MATERIAL USED  
5418-5622 500 gallons 15% acid 355,000 #s  
20/40 sand; 182638 gallons 70% foam  
3,789,759 scf nitrogen.

33. PRODUCTION  
DATE FIRST PRODUCTION 6/30/88 PRODUCTION METHOD (Flowing, gas lift, pumping—size and type of pump) flowing WELL STATUS (Producing or shut-in) producing  
DATE OF TEST 7/4/88 HOURS TESTED 24 CHOKER SIZE 12/64 PROD'N. FOR TEST PERIOD 33 OIL—BSL 198 GAS—MCF 3.67 frac. 6000  
FLOW. TUBING PRESS. 360 CASING PRESSURE 530 CALCULATED 24-HOUR RATE 33 OIL—BSL 198 GAS—MCF 3.67 WATER—BSL 40 OIL GRAVITY-API (CORR.)

34. DISPOSITION OF GAS (Sold, used for fuel, vented, etc.) Vented (will be sold as soon as all nitrogen recovered) TEST WITNESSED BY Robert Ramirez  
35. LIST OF ATTACHMENTS All sent previously  
36. I hereby certify that the foregoing and attached information is complete and correct as determined from all available records

SIGNED Elizabeth B. Keeshan TITLE Vice President DATE 7/16/88

\*(See Instructions and Spaces for Additional Data on Reverse Side)

37. SUMMARY OF POROUS ZONES: (Show all important zones of porosity and contents thereof; gored intervals and all drill-stem, tests, including depth interval tested, cushion used, time tool open, flowing and shut-in pressures, and recoveries):

### 38. GEOLOGIC MARKERS

NAME	TOP	
	MEAS. DEPTH	TRUE VERT. DEPTH
Lower Graneros	6474.	
Upper Graneros	6402.	
Greenhorn	6312.	
Mayre	5528.	
Skelly	5412.	
Gallup	5128.	
Mancos	4540.	
Point Lookout	4374.	
Menefee	3568.	
Cliff House	3533.	
Chacra	2454.	
Pictured Cliffs	2044.	
Fruitland	1732.	
Kirtland	1534.	
Ojo Alamo	1448.	
Depths reported were measured when cased logs were run.		

## ATTACHMENT TO FORM 3160-4

RECEIVED  
BLM MAIL ROOM

88 JUL -7 AM 11:03

FARMINGTON RESOURCE AREA  
FARMINGTON, NEW MEXICODunn 15

(Well Name)

Sec 9, T23N, R7W NMPM

(Sec, T, R)

SF-078272

(Lease No.)

The following summarizes the cement job on the above well as required by item 28 of 3160-4 and the approved APD.

8-5/8" surface casing 208' to surface. 158 sacks  
Class B 2% CaCl, 1/4# flocele per sack mixed at 15.6 lbs with a yield  
of 1.18 or 186.44 cubic feet. Cement circulated to surface.

4-1/2" casing, Stage 1: T.D. to 4690'. Ran 10 barrels  
mud flush, 403 sacks Class H mixed with 2% CaCl, 8 lbs salt per  
sack, 1/2# flocele per sack, 6 1/2 lbs Gilsonite per sack. Mixed at 15.2 lbs  
per gallon. Yield 1.377 cubic feet per sack or a total of 555 cubic feet.  
About 98 bbls slurry.  
Cement was not designed to circulate above DV tool. It did not circulate  
above DV tool. Top of cement is 5052'.

4-1/2" casing, Stage 2: 4690' to surface. Waited 4 hours for  
Stage 1 to set. Ran 10 barrels of water, 20 bbls. of Flo Check, 5  
barrels of water. 1275 sacks of 65/35 Class H poz mix mixed with  
3% gel, 12 1/2# Gilsonite per sack, 5.6# salt per sack, 8.2# Calseal per sack.  
Mixed at 13 lbs per gallon with a yield of 1.78 cubic feet per sack or a  
total of 2270 cubic feet. (about 405 bbls slurry). Cement was designed to circulate. It circulated  
85 barrels of cement.

5 BLM; 1 - HLB,  
(Formerly 9-331)

RR, DS, file = 9 copies  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

SUNDRY NOTICES AND REPORTS ONLY

(Do not use this form for proposals to drill or to deepen or plug back to a different reservoir.  
Use "APPLICATION FOR PERMIT—" for such proposals.)

1. OIL WELL <input checked="" type="checkbox"/> GAS WELL <input type="checkbox"/> OTHER <input type="checkbox"/>		2. NAME OF OPERATOR BCO, INC.		3. ADDRESS OF OPERATOR 135 Grant Ave., Santa Fe, N.M. 87501		4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.* See also space 17 below.) At surface 745' FSL and 790' FWL Section 9 T23N R7W NMPM Rio Arriba County		5. LEASE DESIGNATION AND SERIAL NO. SF-078272	
14. PERMIT NO.		15. ELEVATIONS (Show whether DF, RT, CR, etc.) GR 7130		12. COUNTY OR PARISH Rio Arriba		13. STATE New Mexico		6. IF INDIAN, ALLOTTEE OR TRIBE NAME	
16. PERMIT NO.		15. ELEVATIONS (Show whether DF, RT, CR, etc.) GR 7130		12. COUNTY OR PARISH Rio Arriba		13. STATE New Mexico		7. UNIT AGREEMENT NAME	
16. PERMIT NO.		15. ELEVATIONS (Show whether DF, RT, CR, etc.) GR 7130		12. COUNTY OR PARISH Rio Arriba		13. STATE New Mexico		8. FARM OR LEASE NAME Dunn	
16. PERMIT NO.		15. ELEVATIONS (Show whether DF, RT, CR, etc.) GR 7130		12. COUNTY OR PARISH Rio Arriba		13. STATE New Mexico		9. WELL NO. 15	
16. PERMIT NO.		15. ELEVATIONS (Show whether DF, RT, CR, etc.) GR 7130		12. COUNTY OR PARISH Rio Arriba		13. STATE New Mexico		10. FIELD AND POOL, OR WILDCAT Lybrook Gallup	
16. PERMIT NO.		15. ELEVATIONS (Show whether DF, RT, CR, etc.) GR 7130		12. COUNTY OR PARISH Rio Arriba		13. STATE New Mexico		11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA Sec 9 T23N R7W NMPM	

16. Check Appropriate Box To Indicate Nature of Notice, Report, or Other Data

NOTICE OF INTENTION TO:

TEST WATER SHUT-OFF  
FRACTURE TREAT  
SHOOT OR ACIDIZE  
REPAIR WELL  
(Other)

PCLL OR ALTER CASING  
MULTIPLE COMPLETE  
ABANDON\*  
CHANGE PLANS

SUBSEQUENT REPORT OF:

WATER SHUT-OFF  
FRACTURE TREATMENT  
SHOOTING OR ACIDIZING  
(Other)

REPAIRING WELL  
ALTERING CASING  
ABANDONMENT\*

(NOTE: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)

17. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)\*

June 13, 1988

Moved to location. Rigged up. Tagged cement at 4591'.

Drilled to 4689' where tagged DV tool. Drilled through DV. Tagged float collar at 6590'. Tagged cement at 6350'. Drilled to 6604' which is PBTD.

Rolled hole with KCL. Came out.

Schlumberger ran Thermal Decay Time Log, Compensated Neutron and Cement Bond Log. Schlumberger will send two copies of each Log to BLM and one to OCD. Determined top of first stage cement is 5052'. Set drillable bridge plug at 6575'. Pressure tested at 3000 lbs. Held.

June 15, 1988

Perforated with one 3-1/8" 0.39" select fire shot at 6573', 6571', 6432', 6428', 6425', 6422', 6412', 6410', 6408' and 6406'. Went in with straddle packers. Spotted 500 gallons 7 1/2% double inhibited HCL acid. Broke down perforations. Determined perms at 6573' & 6571' only making water. With verbal permission of Ken Townsend of BLM set a bridge plug at 6550'. Used dump bailer to place about 5 sacks of cement on top of bridge plug to abandon 6571'-6573'.

June 16, and 18, 1988

June 20, 1988

I hereby certify that the foregoing is true and correct  
SIGNED Elizabeth B. Keeshan TITLE Vice President DATE 7/6/88

(This space for Federal or State office use)

APPROVED BY  
CONDITIONS OF APPROVAL, IF ANY:

TITLE

DATE

RECEIVED  
JUL 4 1988

\*See Instructions on Re

NMOCC

CON. DIV  
DIST. 3

SUNDRY NOTICES AND REPORTS ON WELLS  
Lease No. SF-078272  
Dunn 15

Page Two

June 23, 1988

Treated 30,000 gallons of water with 120 gallons TRI-S, 60 gallons of 3N, 3750 lbs KCL, 30 gallons LP55 scalecheck, 650 lbs WG-11, 100 lbs HYG-3, 200 lbs K-34 and 20 lbs GBW-30. Sand water foam fracked (70%) 6404' - 6432' with 24707 gallons of foam, 110,000 lbs 20-40 sand, 1,961,213 standard cubic feet of nitrogen. Average treating pressure 4900 lbs at 24 foam bbls per minute. Sanded off.

June 27, 1988

Determined Graneros was tight and not capable of producing hydrocarbons. With verbal permission of BLM set bridge plug at 5750'. Spotted five sacks of cement on top of plug. PBTD is 5740'.

Perforated with one 3-1/8" 0.39" select fire shot at 5644', 5622', 5596', 5578', 5548', 5538', 5535', 5532', 5508', 5444' and 5430'. <sup>5426'</sup> 5422' and 5418'. Set straddle packers.

June 28, 1988

Spotted 500 gallons 15 % double inhibited HCL acid. Broke down each perforation. Shot at 5644 did not penetrate.

June 29, 1988

Treated 60000 gallons of water with 300 gallons TRI-S, 120 gallons of 3N, 5600 lbs of KCL, 60 gallons LP-55 scalecheck, 650 lbs WG-11, 150 lbs HYG-3, 350 lbs K-34 and 35 lbs GBW-30. Sand water foam fracked (70%) 5418' - 5622' with 182638 gallons of foam, 355,000 lbs 20/40 sand, 3,789,759 standard cubic feet of nitrogen. Average treating pressure 3950 lbs at 40 foam bbls per minute. ISIP 2850, 5 min 2000, 10 min 1960, 15 min 1960.

June 30, 1988

Well flowing to frac tank.

Went in with expandable check on 2-3/8" tubing. Tagged sand at 5622'. Cleaned out to 5740'. Landed 2-3/8" tubing at 5617'. Pumped out expandable check. Put to flow at 1:15 p.m.

July 5, 1988

Determined initial potential of Gallup is 33 BOPD and 198 MCF of gas with 3.67 bbls of recovered frac water. Tubing pressure was 360; casing pressure 530.