

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill or to deepen or plug back to a different reservoir. Use Form 9-331-C for such proposals.)

1. oil ☒ well gas ☐ well other ☐
2. NAME OF OPERATOR ARCO Oil and Gas Co., Div. of Atlantic Richfield Company
3. ADDRESS OF OPERATOR 707 - 17th Street, P.O. Box 5540, Denver, Colo. 80217
4. LOCATION OF WELL (REPORT LOCATION CLEARLY. See space 17 below.) Unit "M", AT SURFACE: (SW SW) 312' FSL & 323' FWL, AT TOP PROD. INTERVAL: Appx. same Sec. 33 AT TOTAL DEPTH: Appx. same
16. CHECK APPROPRIATE BOX TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

5. LEASE 14-20-603-734
6. IF INDIAN, ALLOTTEE OR TRIBE NAME Navajo
7. UNIT AGREEMENT NAME Horseshoe Gallup Unit
8. FARM OR LEASE NAME Horseshoe Gallup Unit
9. WELL NO. 290
10. FIELD OR WILDCAT NAME Horseshoe Gallup
11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA Sec. 33-31N-16W
12. COUNTY OR PARISH 13. STATE San Juan New Mexico
14. API NO. 30-045-21926
15. ELEVATIONS (SHOW DE KDB, AND WD) 5331 GR

REQUEST FOR APPROVAL TO:

- TEST WATER SHUT-OFF ☐
FRACTURE TREAT ☐
SHOOT OR ACIDIZE ☐
REPAIR WELL ☐
PULL OR ALTER CASING ☐
MULTIPLE COMPLETE ☐
CHANGE ZONES ☐
ABANDON* ☐

SUBSEQUENT REPORT OF:

RECEIVED

DEC 10 1982

(NOTE: Report results of multiple completion or zone change on Form 9-330.)

U. S. GEOLOGICAL SURVEY
FARMINGTON, N. M.

(other) Stimulate present Lower Gallup perms and additionally complete Upper Gallup Sand

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.)*

ARCO Oil and Gas Co. desires to re-perforate and acidize the Lower Gallup perforations in the subject well; and attempt additional completion by perforating and fracing the Upper Gallup Sand.

Attached is the planned Workover Procedure and a GR-Compensated Formation Density Log, showing the proposed re-perforations in the Lower Gallup and the proposed perforations in the Upper Gallup Sand.

Subsurface Safety Valve: Manu. and Type _____ Set @ _____ Ft.

18. I hereby certify that the foregoing is true and correct

SIGNED S. C. Rose TITLE Dist. Prod. Supt. DATE November 19, 1982

APPROVED BY _____ (This space for Federal or State office use)

APPROVED BY _____ TITLE _____ DATE _____

CONDITIONS OF APPROVAL: DEC 10 1982
James F. Sim
DISTRICT ENGINEER

*See Instructions on Reverse Side

HSGU #290

Workover Procedure:

1. MIRU. Pull rods, pump, and tbg. Note if any scale is present. Clean out hole to PBTD w/casing scraper.
2. RIH w/csg perforating gun and perf opposite Lower Gallup f/1206-16 and 1226-42 w/2 JET SPF (52 shots). Use premium quality deep penetrating charges.
3. Mix 1 drum S-271 scale inhibitor with 40 bbls of water and displace into perfs 1206-42 w/125 bbls of water.
4. Set retrievable bridge plug @ \pm 1160' w/wireline. Pressure test plug and csg to 2000 psi.
5. RIH w/csg perforating gun and perf opposite Upper Gallup f/1114-38 w/2 0.5" JET SPF (48 shots).
6. RIH w/tbg and spot 500 gal 15% HCl. Acid to contain surfactant. Pull tbg and rig up to frac down 5-1/2' csg.
7. Breakdown Upper Gallup formation with 1000-2000 gal pre-pad of slickwater establishing a rate of 20 BPM. Shut-down for 2 minutes to obtain ISIP.
8. Frac down 5-1/2" csg at 20 BPM at approximately 1000 psi using 10000 gallons low-residue cross-linked 20#/1000 gal gel and 27,800 pounds 10/20 sand. Frac fluid to contain 2% KCl, 2 gal/1000 gal non-emulsifier, and appropriate breakers.

Remarks:

- a. Internal yield for 5-1/2" 14# J-55 csg is 4270 psig and capacity is 1.025 gal/ft.
- b. Bacteriacide to be added to tank water at .25/100 gal prior to treatment.
- c. $HHP = .0245 \times 1000 \times 20 = 490$.
- d. Service company to test fluid gelling and gel breaker agents prior to treatment.
- e. Do not overflush

Schedule

<u>Gals</u>	<u>Bbls</u>	<u>Prop</u>	<u>Prop Conc</u>	<u>Prop Wt.</u>	<u>Fluid</u>
2,500	48	Pad	---	---	Low-Residue Cross Linked Gel
700	17	10/20	1 ppg	700#	"
800	19	10/20	2 ppg	1600#	"
1000	24	10/20	3 ppg	3000#	"
2500	59	10/20	4 ppg	10000#	"
2500	59	10/20	5 ppg	12500#	"
1130	27	Flush	---	---	2% KCl Water
<u>11130</u>	<u>265</u>			<u>27,800#</u>	

9. Allow sufficient time for gel to break. Clean out sand to bridge plug.

10. Retrieve bridge plug.

11. Run pumping equipment, put well on test. (Upper and Lower Gallup commingled production).

Well Data:

Location: 312' FSL, 323' FWL, Section 33-31N-16W
San Juan County, New Mexico

Elevation: GL-5331' KB-5341.5'
Log Measured from KB

Casing: 5-1/2" 14# J-55 set @ 1289' KB, cemented
w/150 sxBJ-lite and 75sx Cl 'B'.

Perfs: 1216-26' ELM (Lower Gallup)

Tubing:	1 Jt. 2-7/8" EUE 8rd J-55 6.5#	12.00
	SN 2-7/8 API	1.10
	39 Jts. 2-7/8" EUE 8rd 6.5 # J-55	<u>1210.50</u>
		<u>1223.60</u>
	RKB to tbg head collar	<u>9.00</u>
		<u>1232.61</u>

TD: 1290'

PBTD: 1260'

HSGU #290
GR-Compensated Formation
Density Log

