Form 9-331
Dec. 1973

Form Approved.
Budget Bureau No. 42-R1424

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: P. O. Box 5540, Denver, Colo. 80217

4. LOCATION OF WELL (REPORT LOCATION CLEARLY. See space 17 below.) Unit C-
AT SURFACE: NE NW, 1260' FNL & 1470' FWL, Sec. 30
AT TOP PROD. INTERVAL: Appx. same
AT TOTAL DEPTH: Appx. same

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.: 293

10. FIELD OR WILDCAT NAME: Horseshoe Gallup

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA: Sec. 30-31N-16W

12. COUNTY OR PARISH: San Juan | 13. STATE: New Mexico

14. API NO.: 30-045-22098

15. ELEVATIONS (SHOW DF, KDB, AND WD): 5625' GL; 5636' KB

16. CHECK APPROPRIATE BOX TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

REQUEST FOR APPROVAL TO:		SUBSEQUENT REPORT OF:	
TEST WATER SHUT-OFF	☐		☐
FRACTURE TREAT	☐		☐
SHOOT OR ACIDIZE	☐		☐
REPAIR WELL	☐		☐
PULL OR ALTER CASING	☐		☐
MULTIPLE COMPLETE	☐		☐
CHANGE ZONES	☐		☐
ABANDON*	☐		☐
(other) Addn'l. Compl. of Upper Gallup and Stimulation of Present Lower Gallup Formation	X		

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

RECEIVED
JUN 15 1982
U. S. GEOLOGICAL SURVEY

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.)*

Well #293 was completed in August, 1976 as a development well and initially tested 54 BOPD and 338 BWPD from the Lower Gallup Formation. Production has declined dramatically to 4 BOPD and 45 BWPD. The well is located in a part of the field where scale problems are common. It is experiencing many stuck plungers and a significant decrease in total fluid production, a sure sign of scale build-up. Stimulation of the well should restore the Lower Gallup to a reasonable production rate and decline.

The Upper Gallup sand has never been completed in this well. We propose to perforate the Upper Gallup formation from ~~1424-1446'~~ $^{1432}_{1442}$, and re-perforate, acidize, and chemically treat the present Lower Gallup perforations in this well.

Attached is the proposed workover procedure for this work.

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

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

SIGNED S. C. Rose (Stephen Rose) TITLE Dist.Prod.Supt. DATE June 7, 1982

(This space for Federal or State office use)

APPROVED
JUN 16 1982
JAMES F. SIMS
DISTRICT ENGINEER

APPROVED BY _____ TITLE _____ DATE _____
CONDITIONS OF APPROVAL, IF ANY:

NMOCC

See Instructions on Reverse Side

JUN 17 1982
OIL CON. COM.
DIST. 3

April 21, 1982

Proposed Workover Procedure
HSGU #293

Well Data:

Location: 1260' FNL, 1470' FWL, Section 30-31N-16W
San Juan County, New Mexico

Elevation: GL - 5625' KB - 5636'
Log measured from KB.

Casing: 5-1/2" 14# K-55 set @ 1500' KB, cemented w/150 sx B-J light and 75 sx neat circ to surface.

Perfs: 1424-36' ELM (Lower Gallup)

Tubing:

1 Jt. 2-7/8" EUE, 8RD 6.5# J-55	16.47'
1 SN 2-7/8" EUE, 8RD	1.10
45 Jts. 2-7/8" EUE, 8RD 6.5# J-55	1413.14
	1430.71'
RKB to top of tbg head	9.00
Bottom of tbg @	1439.71'

TD: 1500'

PBTD: 1470'

Procedure:

1. MIRU. Pull rods, pump and tbg. Clean out hole to PBTD w/casing scraper.

2. Run Gamma Ray-CCL correlation log. Perf csg opposite Lower Gallup f/1424-46' ELM w/2 JET SPF.

3. Run tbg and fill csg and tbg w/water. Spot 500 gal 7-1/2% HCl w/1 drum S-271 scale inhibitor and displace into perfs. (Do not use MSR-100 acid.) POH w/tbg.

4. Set retrievable bridge plug @ 1400' ± w/wireline. Pressure test plug and csg to 2000 psi. Perforate opposite Upper Gallup f/1308-40' ELM w/2 JET SPF.

5. RIH w/tbg and fill up csg and tbg w/water. Spot 500 gallons 7-1/2% HCl w/1 drum S-271 scale inhibitor. Pull tbg and rig up to frac down 5-1/2" casing. (Do not use MSR-100 acid.)

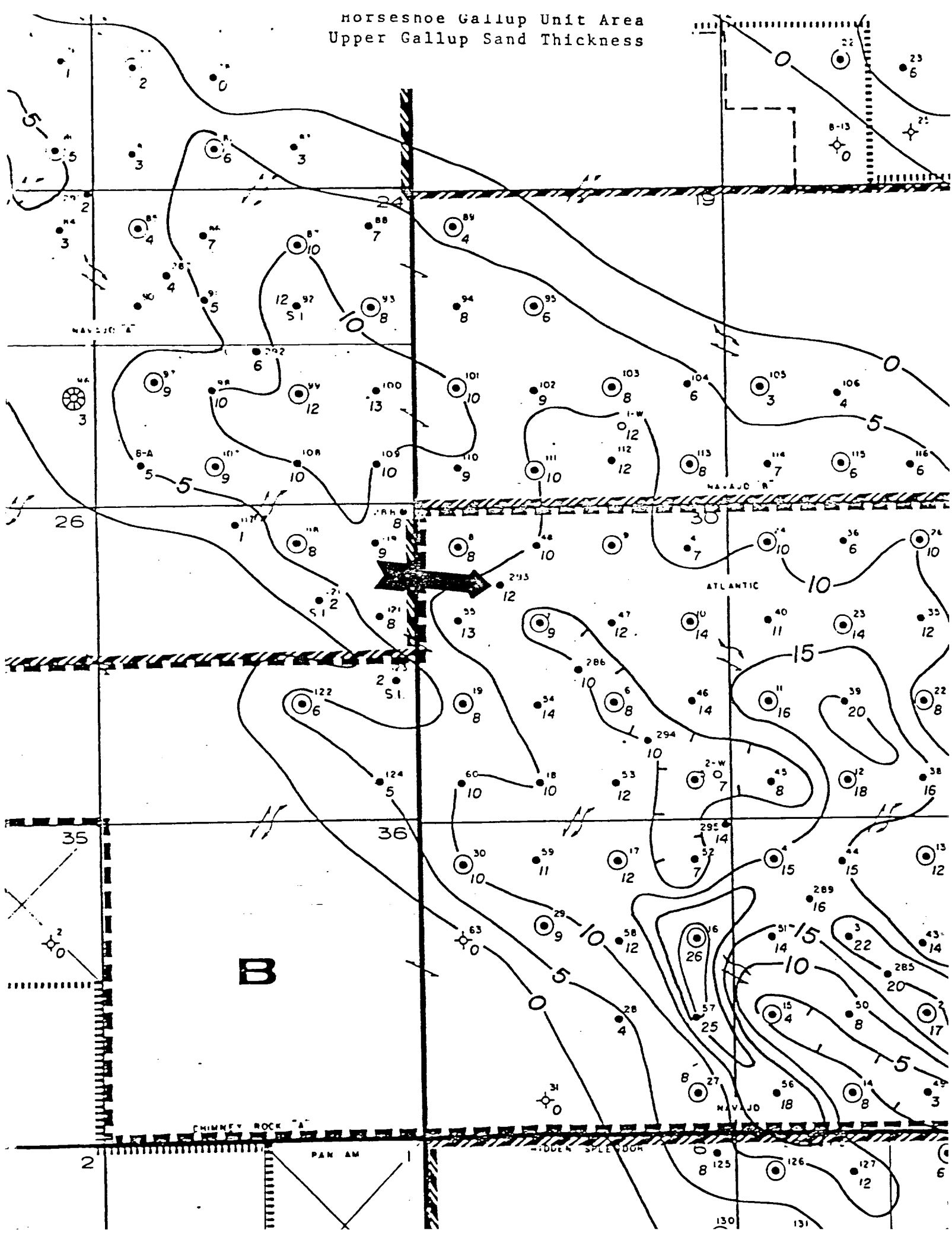
6. Frac down 5-1/2" csg at 15 BPM at approximately 1000 psi using 11,000 gallons pre-gelled Dowell's YF4PSD* fluid and 31,500 pounds 10/20 sand. Frac fluid to contain: 40 lbs/1,000 J-347 Gel, 2% KCl, 2 gal/1,000 M-38W Demulsifier, and .25 gal/1,000 M-76 Bactericide. Appropriate breakers are J-218 Breaker and J-318 Breaker Aid.

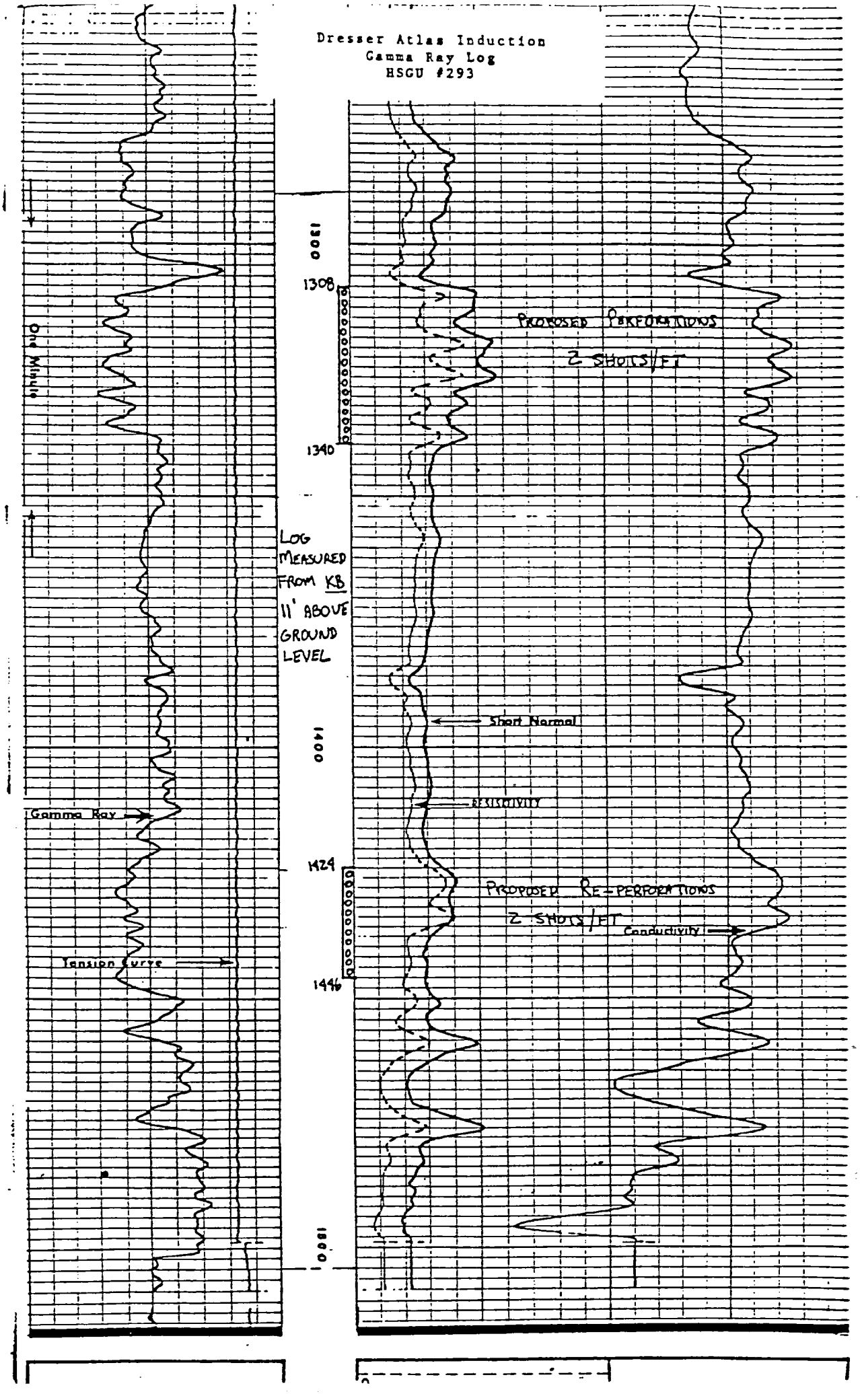
Gals	Bbls	Prop	Prop Conc	Fluid
2,000	48	----	----	Pad-YF4PSD
750	18	10/20	1 ppg	YF4PSD
1,500	36	10/20	2 ppg	YF4PSD
1,500	36	10/20	3 ppg	YF4PSD
3,000	72	10/20	4 ppg	YF4PSD
2,250	54	10/20	5 ppg	YF4PSD
1,140	27		Flush	2% KCl water

* This fracture treatment was designed for Dowell YF4PSD cross-linked fracturing fluid. We cannot expect the same results from some other fluid. If Dowell does not do this job, please notify Engineering Department for redesign.

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

8. Retrieve bridge plug, run pumping equipment, put well on test. (Upper and Lower Gallup commingled production.)


Horseshoe Gallup Unit Area
Upper Gallup Sand Thickness
B
ATLANTIC
NAVAJO "A"
NAVAJO "B"
CHIMNEY ROCK "A"
PAN AM
HIDDEN SPLENDOR
24
19
26
30
35
36
2
1


Dresser Atlas Induction
Gamma Ray Log
HSGU #293
One Minute
1300
1308
1340
LOG MEASURED FROM KB 11' ABOVE GROUND LEVEL
PROPOSED PERFORATIONS
2 SHOTS/FT
Short Normal
1400
RESISTIVITY
Gamma Ray
1429
PROPOSED RE-PERFORATIONS
2 SHOTS/FT
Conductivity
Tension Curve
1496
1500