Form 3160-5 (November 1994)

UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT

FORM APPROVED Budger Bureau No. 1004-0135 Expires November 30 2000

BUREAU OF LAND MANAGEMENT		5. Lease Serial No.
SUNDRY NOTICES AND REPORTS ON WELLS		SF 080382-A
Do not use this form for proposals to drill or to re-enter an abandoned well. Use Form 3160-3 (APD) for such proposals.		6. If Indian, Allottee or Tribe Name NAVAJO
SUBMIT IN TRIPLICATE	2: 22 7. If Unit or CA/Agreement, Name and/or No.	
1. Type of Well Oil X Gas Well Other 2. Name of Operator	8. Well Name and No. SCHWERDTFEGER 10	
Marathon Oil Company	9. API Well No.	
3a. Address	30.045.06583	
P.O. Box 552 Midland, TX 79702	10. Field and Pool, or Exploratory Area	
4. Location of Well (Footage, Sec., T., R., M., or Survey Descript	KUTZ CANYON	
U.L. (C) 990' FNL & 1650' FWL SEC. 16, T-27-N, R-11-W	DIST. 3	II. Court of Parish Court
SEC. 10, 1-2/-N, K-11-W	,	11. County or Parish, State
		SAN JUAN NM
12. CHECK APPROPRIA	TE BOX(ES) TO INDICATE NATURE OF NOT	CE, REPORT, OR OTHER DATA
TYPE OF SUBMISSION	TYPE	OF ACTION
Notice of Intent Subsequent Report	Acidize Deepen Alter Casing Fracture Treat Casing Repair New Construction	Production (Start/Resume) Water Shut-Off Reclamation Well Integrity Recomplete Other
Final Abandonment Notice	Convert to Injection Plug Back	Temporarily Abandon Water Disposal
If the proposal is to deepen directionally or recomp Attach the Bond under which the work will be per following completion of the involved operations. If	lete horizontally, give subsurface locations and measure formed or provide the Bond No. on file with BLM/BIA the operation results in a multiple completion or recompletion shall be filed only after all requirements, included the completion of the	date of any proposed work and approximate duration thereof. i and true vertical depths of all pertinent markers and zones. Required subsequent reports shall be filed within 30 days pletion in a new interval, a Form 3160-4 shall be filed once ing reclamation, have been completed, and the operator has
PROPOSE TO CLEAN OUT OPEN HOLE, R PICTURED CLIFFS AS PER THE ATTACH	UN A LINER AND FRACTURE STIMULATE TO ED PROCEDURE.	HE

14. I hereby certify that the foregoing is true and forrect Name (Printed Typed) R. J. LONGMIRE Walth Guera	Title DRILLING SUPERINTENDENT	
	Date 5/3/99	
THIS SPACE FOR FEDERAL OR STATE OFFICE USE		
Conditions of approval, if any, are attached. Approval of this notice does not warra certify that the applicant holds legal or equitable title to those rights in the subject which would entitle the applicant to conduct operations thereon.	Att or lease Office Date 7 99	

Title 18 U.S.C. Section 1001, makes it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

WORKOVER PROCEDURE

Schwerdtfeger #10

Kutz Canyon Field

990' FNL & 1650' FWL Section 16, T-27-N, R-11-W San Juan County, New Mexico

Date: March 15, 1999

Purpose: Clean out open hole, run a liner, and fracture stimulate the Pictured Cliffs

GWI: 50%

NRI: 41.25%

AFE#: 3???99

AFE Amount: \$1??,?00

AFE Days: 9

Elevations: KB: 6237'

GL: 6228'

TD: 1998' PBTD: 1988'

Surface Csg:

8-5/8" 24.5# 8rd @ 83' cmt'd w/ 75 sks (circulated)

Production Csg: 5-1/2" 13# F-25, 14# H-40, 15.5# & 17# J-55 ST&C @ 1942' cmt'd w/ 128 sks

[Drift = 4.767" (17#)]80% Burst = 1448 psi (13#)]

<u>Tubing:</u> 62 jts 1.9" OD @ 1960' [Note: 37 jts (±820') 1.315" OD 1.7# tbg left in hole 6/2/80]

Wellhead: 8-5/8" x 5-1/2"

Perforations: Pictured Cliffs: 1942-1998' Open Hole (Interval 1955-1988' shot w/ 80 quarts nitroglycerine)

Anticipated BHP: 150 psi

Comments: 1) Use 2% KCl in all workover fluids.

2) Use 2-3/8" 4.7# J-55 tbg w/ turned down collars for production. [Drift = 1.901", 80% Burst = 6160

psil

3) Use 2-7/8" 6.5# J-55 tubing for workstring. [Drift = 2.347", 80% Burst = 5808 psi]

4) Use 4" 10.46# K-55 AB FL-4S for casing. [Drift = 3.351", 80% Burst = 5040 psi]

PROCEDURE

- 1. Inspect location and improve if necessary. Test safety anchors to 22,500#.
- 2. MIRU PU. ND wellhead. NU 7-1/16" BOP w/ pipe rams for 1.9" OD tbg on top & 2 valves below blind rams on bottom. Will need 7-1/16" rotating head also if foam-air unit is used. Function test BOP. POOH & LD 1.5" tubing. Change pipe rams to 2-7/8".
- 3. Fish 1.315" OD tubing as per recommendation from fishing company.
- 4. RU reverse unit and power swivel. PU 4-3/4" bit, 3-1/2" drill collars, & 2-7/8" tbg and RIH. Clean out old open hole to ±2150'. May need to spot a cement plug if circulation is lost, or use a foam-air unit.
- 5. Change pipe rams to 4". Run 4" FJ liner as casing & land @ ±2150'. Cement to surface as per recommendation. WOC 24 hours. ND BOP. Cut off casing. Install tubing head.
- 6. NU BOP w/ 2-3/8" pipe rams. RIH w/ 3-1/4" bit on 2-3/8" tbg. Drill out cement to ±2145'. Circulate well w/ 2% KCl water. Pressure test 4" casing to 2500 psi. POOH w/ tubing.
- 7. RU WL. Run GR-CNL across interval 2145'-surface (or log minimum). Actual perforations to be based on results of log. Perforate the Pictured Cliffs interval(s) ±1940-65' (approximately 25') w/ 3-1/8" slick guns loaded 4 SPF @ 90* phasing w/ 19 gram 311LT charges.
- 8. Breakdown perforations with Stim Tube. Actual length to be based on perforated interval. RD WL.
- 9. RU stimulation company. Sand fracture stimulate Pictured Cliffs perfs as per recommendation with approximately 100,000# 20/40 Arizona sand using 70 quality nitrogen foam @ ±35 BPM and 2500 psi maximum pressure. Actual job design may vary slightly depending on actual interval perforated. RD stimulation company.
- 10. Flow back load. RIH w/ 2-3/8" tbg & clean out any sand fill. Due to low BHP, will have to use a bailer or have to circulate sand out with foam-air or nitrogen. POOH.
- 11. RIH w/ production tubing (including mud anchor and sand screen) & land same w/ SN @ ±1950'. ND BOP. NU wellhead. RIH with rods and pump w/ gas anchor on bottom. Space out pump plunger. RDMO PU.
- 12. Build pad & set pumping unit. Hang well on and begin pumping.

xc: D. K. Barker G. W. Donaghey W. J. Dueease T. P. Kacir R. L. Kleiv

G. D. Muse W. S. Landon R. J. Longmire R. Skinner Well File