TU(11) 3 100-3 (June 1990)

Conditions of approval, if any:

### **UNITED STATES** DEPARTMENT OF THE INTERIOR

# BUREAU OF LAND MANAGEMENT

FORM APPROVED			
Budget Bureau No. 1004-0135			
Expires: March 31, 19	993		

BOILEAU OF LAIN	ID WANAGEWEN	1			
SUNDRY NOTICES AN	5. Lease	5. Lease Designation and Serial No.			
		NM-010989			
	r to deepen or reentry to a different reservoir.	6. If India	n, Allottee or Tribe Nar	ne	
USB AFFLICATION FOR	PERMIT - " for such proposals				
		7 If their	t or CA, Agreement De	eignetion	
		7.11 011	or CA, Agreement De	signation	
1. Type of Well Oil Well Gas Well Other		0.34/-11.44	ame and No.		
Well Other  2. Name of Operator	<b>.</b>	o. Well N	Fields A	#1	
AMOCO PRODUCTION COMPANY	Attention: Pat Archuleta	9. API W			
3. Address and Telephone No.	, ac y to training			4074	
P.O. BOX 800 DENVER, COLORADO 8020	303-830-5217	10 Field	300451		
4. Location of Well (Footage, Sec., T., R., M., or Survey Description	<del></del>		Blanco Mesaverde		
The second of the second of second of the se		11. Coun	ty or Parish, State	<u> </u>	
990' FNL 990' FEL	Sec. 25 T 32N R 11W UNIT.				
			SAN JUAN	NEW MEXICO	
12. CHECK APPROPRIATE BOX(s	) TO INDICATE NATURE OF NOT	TICE . REPORT	OR OTHER I	DATA	
TYPE OF SUBMISSION	TYPE OF A		ON OTHER E	27(17(	
			<del></del>	<del></del>	
57	Abandonment	Change of	Plane		
Notice of Intent	Recompletion	New Cons			
	Plugging Back		e Fracturing		
Subsequent Report	Casing Repair	Water Shu	t-Off		
Final Abandonment Notice	Altering Casing Other Sidetrack	Conversion	to Injection		
	Other Tisotrack	On Dispose W (Note: Report results of		Mall Completion of	
		Recompletion Report an	Log form.)	even Completion of	
13. Describe Proposed or Completed Operations (Clearly state all pert	inent details, and give pertinent dates, including estimated da	te of starting any propose	ed work . If well is dire	ectionally drilled, give	
subsurface locations and measured and true vertical depths for a	III markers and zones pertinent to this work.)*				
Amoco Production Company requests pe	rmission to sidetrack this wellbore in the N	Aesaverde per the	attached proce	edures.	
			<u>C</u>		
			C. F. y		
If you have any technical questions conta	et 화장한 Pothonhorg at (202) 920 E612		*		
ii you nave any technical questions sonta	ct Mark Rothenberg at (503) 850-5612.				
! !				1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1	
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		the state of the s			
OIL CON. I					
ONE GORES					
DISTIC 3					
14. I hereby certify that the folegoing is true and correct					
La Mallet	<u>.</u>	ff A a a last and		06-02-1997	
Signed (But Turner	U Title Sta	ff Assistant	Date	06-02-1997	
This space for Federal or State office use]					
(B)			JUL	3 1997	
Approved by S/ Doage W. Speacer			—— Date —		

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, ficticious, or fraudulent statements or representations as to any matter within its jurisdiction.

Title

## **SJOET Well Work Procedure**

Fields A 1

Version:

#1

Date:

May 22, 1997

**Budget:** Repair Type: Major Cash Sidetrack

Objectives:

1. Directionally sidetrack MV well towards fratured feature at high angle.

Drill with natural gas through the fractured intervals. 2.

Complete either open hole or case, perf, and frac.

Pertinent Information:

Location:

990' FNL x 990' FEL; A25-T32N-R11W

Horizon:

MV

County:

San Juan

API #:

30-045-11271

State:

New Mexico

Engr:

M. Rothenberg

Lease:

Federal NM-010989

Phone:

H-(303)841-8503 W-(303)830-5612

P-(303)553-6448

Well Flac: 978895

**Economic Information:** 

APC WI:

50%

**Estimated Cost:** 

\$500,000

Anticipated Prod.:

1050MCFD

Payout:

ROI

3.3 years

37.6

3.244

IRR %

DROI(13)

0.970

PV(13) \$M

206

Note:

Estimated costs do not include surface equipment.

Formation Tops: (Estimated formation tops)

Nacimento:

1925'

Menefee:

4884'

Ojo Alamo: Kirtland Shale:

Point Lookout:

5325'

2038'

Mancos Shale:

5415'

Fruitland:

2752'

Gallup:

Pictured Cliffs: 2979'

Lewis Shale:

Cliff House

30561 4760'

**CSG** 

Graneros: Dakota:

TD:

5458'

**Bradenhead Test Information:** 

**Test Date:** 

INT

7/96

BH

Tubing:

232

Casing:

**CSG** 

304

BH: 1

Time 5 min

10 min

15 min

Comments:

Fields A 1
Orig. Comp. 5/53
TD = 5458' PBTD = 5458'
Page 2 of 2

#### Suggested Procedure:

#### Prep. work: daylight rig

- 1. Check location to ensure adequate size for sidetrack. Install and test anchors.
- 2. MIRUSU.
- 3. Blow down well, NDWH. NUBOPS. (includes cost for wellhead repairs)
- 4. Pull Donut, TOH with tubing.
- 5. TIH with tubing and packer and squeeze perfs with cement. TOH.
- 6. RU wireline. RIH with CBL and GR and log. Perform remedial cementing if necessary.
- 7. PU anchor and TIH, set whipstock, and mill with starting mill.
- 8. TOH and PU window cutting mill. TIH and mill window. TOH.
- 9. PU and TIH with watermellon mill and open window. TOH.
- 10. TIH with bit and build bottom hole assembly and drill approx. 150'. TOH.
- 11. RDMOSU.

#### Directional work: 24hr drilling rig

- 1. MIRURT. NUBOPS and Casing Spool.
- PU 6.25" bit, float, motor, MWD or other continuous survey, DC, DP. TIH and drill, building angle and orientation according to drilling plan. Drill to TD with gas. TOH.
   Run 4.5" casing from TD to point determined from prep work and hang off as liner. (NOTE: If fractured zones are successfully intersected, casing may be landed above MV and leave MV open hole).
- 3. Cement 4.5" casing with appropriate volume of cement.
- 4. RDMORT.

#### Completion: daylight rig

NOTE: If fractured zones are successfully intersected, completion may not be necessary.

- MIRUSU.
- 2. Run cased hole logs (cbl/gr/ccl, neutron log for some wells).
- 3. Perforate Point Lookout/Menefee determined from above logs.
- 4. Acid breakdown and ball off perforations.
- 5. Frac Point Lookout/Menefee.
- 6. Flowback as soon as possible of 1/4" choke, changing to 1/2" or larger depending on activity of well, pressures, and sand production.
- 7. Set RBP above perforations
- 8. Perforate Cliffhouse/Menefee at depths determined from logs.
- 9. Acid breakdown and ball off perforations.
- 10. Frac Cliffhouse/Menefee.
- 11. Flowback as soon as possible of 1/4" choke, changing to 1/2" or larger depending on activity of well, pressures, and sand production
- 12. Cleanout to RBP. Retrieve RBP and clean out to PBTD.
- 13. RDMOSU.
- 14. Turn well over to production.

If problems are encountered, please contact: Mark Rothenberg (W) (303)830-5612 (H) (303)841-8503 (P) (303)553-6448

	Amoco Produ	ction Company	File
	ENGINEEF	RING CHART	Appn
SUBJECT FIELDS A 1 - 300 4	1511271	Fed. NM010989	Date 4/27/97
990' FNL × 990' FE	L A25-32N	1-11M	8y _ MD R_
ORIG COMPL. 5/53	9/1//1	1 1 1 1/1/2	oy
150 - Workovers		395/8	", 25,4 #, 5.w. @ 169'
200 - 7/64 - CL9 LK repour	YAI		CMT W/ 125 SX QUICKSET. CLIC TO SUF
450 - 8164 - RUN 442 LIG FOR MU 450 - 9/76 - RUN ROAST PUMP & 5285	.  //		
600 - 9/84 - Ley down Reds + Pump	1/4		oles @ 685' (csq LK)
70- 5/92 - Repair Log Leak	( ] [		N/ 100 SX 50/50 POZMIX, 22 LALLS/
110 -	)		D NOT HOLD) 57, wy 200 SX Regular, 23642
1050 _	{		Herp)
Igoo _			
13.5 <sub></sub>			
	)		
163 -			
1820 _	)		
1925			
1157 -030 ALAMO 2038			
200 - KIRTLAND			
			5/9=
250 <u>-</u>	1/2		. € 2500' (BL 5/92
700 7752			2740-41 W 453PF
287 - FRUITLAND		CMT	w/ 200 5x cluss B, 2% (all 2, soilide, did not w/ 200 5x cluss B, 2% (all 2, above topperfs, lai
PICTURED CUFFS 3056	$ \sqrt{4}$ $1$	Pert @	3060-61 W/4JSF
	<u> </u>	519	2 41/2 csq backed off @ 3193 + Re-rai
3300_			•
P-50 _			
?cop ~	77	Toc	. @ 3595 by T.S. 5/5/53
799 -			
3700_LEN15	1/1/	TILL TOL	44/2 @ 3890 by T.S. 2164
1050 —			
<u> 4200 —</u>			
4200-			
R/64			
40 - 8/64 -23F		7,23	, J-55 @ 4705'
4805 - CLIFFHOUSE 48324 4832	<b>→ !</b>		nt w/ 300 5% regular + 25% flocele
17:0-	53 n (m) (b) (		TOC by Texp Survey at 3575
5/00 - MENEFEE 8/64 - 257 5242	-54		417, 3-55 @ 5321 (5/42) 5:92
255 _ \$370 \$3.0 53.0	-96		hole shot w/ 1440 guarts 5,13,15.
520 - 0- 10-11-17		B 4/2,10	1.5#, J-55 @ 5393 -T W/ 250 5x 50/50 FOZMIX, 1/8#/5x Flore
"" MANCOS			ос ву т.з. е зачо
Form 371 1-86	, ,	_ 5 で 3 と	The second secon

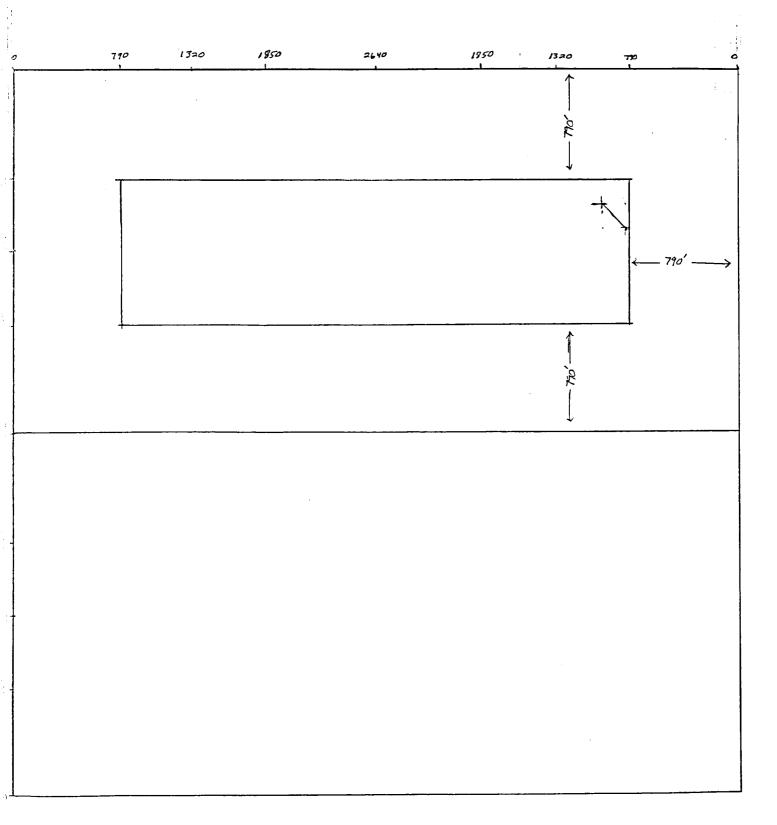
#### ENGINEERING CHART

SUBJECT Fields A 1 - 3004511271

990' FNL x 990' FEL Sec. 25 32N-11W

pn \_\_\_\_\_

Bv



# Sperry-Sun Drilling Services



Proposal Report for Fields A 1 - Alternate Fields A 1

Amoco Production Co. New Mexico Re-Entry Wells Sec 25-T32N-R11W

Measured Depth (it)	inci.	Azim.	Vertical Depth (ft)	Northings (ft)	Eastings (ft)	Vertical Section (ft)	Dogleg Rate (*/100ft)
0.00	0.660	0.000	0.00	0.00 N	0.00 E	0.00	
3000.60	0.000	0.000	3000,00	0.00 N	0.00 E	0.00	. 0.000
4875.00	0.000	0.000	4875.00	0.00 N	0.00 E	0.00	0.000
5321,61	44.661	135.000	5277.74	116.98 S	116.98 E	165.43	10.000
5388.06	44.661	135.000	5325.60	150.00 S	150.00 E	212.13	0.000
5423.21	44.661	135.000	5350.00	167.47 S	167.47 E	236.84	0.000

All data is in feet unless otherwise stated. Directions and coordinates are relative to True North. Vertical depths are relative to Well. Northings and Eastings are relative to Well.

The Dogleg Severity is in Degrees per 100ft.

Vertical Section is from Well and calculated along an Azimuth of 135.000° (True).

Coordinate System is NM-W. Grid Convergence at Surface is -0.822°.

Based Upon Minimum Curvature type calculations, at a Measured Depth of 5423.21ft, The Sottom Hole Displacement is 236.84ft., in the Direction of 135.000° (True).

Customer: Amoco Production Co. Folder: Amoco Production Co.

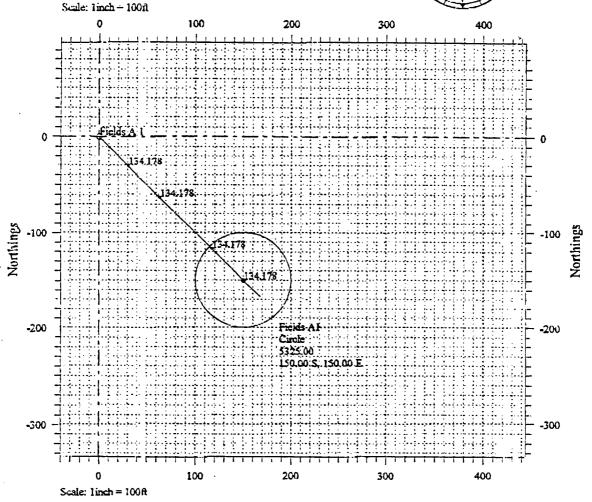
Field: New Mexico Project: Re-Entry Wells

Structure: Sec 25-T32N-R11W

Well: Fields A 1

#### Eastings





Reference is True North

Eastings

#### SJOET Well Work Procedure

Fields A 1

Version:

#1

Date:

June 19, 1997

**Budget:** 

Major Cash

Repair Type:

Sidetrack

#### **Objectives:**

Directionally sidetrack MV well towards fratured feature at high angle.

2. Drill with natural gas through the fractured intervals.

Complete either open hole or case, perf, and frac.

Pertinent Information:

Location:

990' FNL x 990' FEL; A25-T32N-R11W

County:

San Juan

State: Lease:

New Mexico Federal NM-010989

Well Flac:

978895

Horizon:

MV

API #: Engr:

30-045-11271 M. Rothenberg

Phone:

H-(303)841-8503 W-(303)830-5612

P-(303)553-6448

**Economic Information:** 

APC WI:

50%

**Estimated Cost:** 

\$500,000 **Anticipated Prod.:**  1050MCFD

Payout:

ROI

3.3 years

3.244

IRR %

37.6

**DROI(13)** 

0.970

PV(13) \$M

206

Note: Estimated costs do not include surface equipment.

Formation Tops: (Estimated formation tops)

Nacimento: Oio Alamo:

1925'

Kirtland Shale: 2038'

Fruitland:

2752'

Pictured Cliffs: 2979' Lewis Shale:

Cliff House

3056'

4760'

Menefee:

Point Lookout:

5325' 5415'

Mancos Shale:

Gallup:

Graneros:

Dakota:

TD:

5458'

4884'

**Bradenhead Test Information:** 

**Test Date:** 

7/96

Tubing:

232

Casing:

304

BH: 1

Time BH **CSG** INT **CSG** 5 min 10 min 15 min

Comments:

Fields A 1 Orig. Comp. 5/53 TD = 5458' PBTD = 5458' Page 2 of 2

#### Suggested Procedure:

Prep. work: daylight rig

- 1. Check location to ensure adequate size for sidetrack. Install and test anchors.
- MIRUSU.
- 3. Blow down well, NDWH. NUBOPS. (includes cost for wellhead repairs)
- 4. Pull Donut, TOH with tubing.
- 3193 5. Back off casing as deep as possible. (In 1992 casing was backed off at 3163'. Following procedures assumes that is where casing will backoff).
- 6. RIH with CIBP and set at 4850. Mix and pump 25sx Class "B" neat cement at 15.6 ppg and spot on top of bridge plug (330').
- 7. RU wireline. RIH with CBL and GR and log. Perform remedial cementing if necessary. (Ensure that there is good cement 50' below the 7" shoe, and that there is good cement above liner for KOP).
- 8. PU anchor and TIH, set whipstock at approximately 3150', and mill with starting mill.
- 9. TOH and PU window cutting mill. TIH and begin to mill 6.25" window. TOH.
- 10. PU and TIH with watermellon mill and open window to 6.25". TOH.
- 11. TIH with bit and build bottom hole assembly and drill approx, 150'. TOH.
- 12. RDMOSU.

#### Directional work: 24hr drilling rig

- 1. MIRURT. NUBOPS and Casing Spool.
- 2. PU 6.25" bit, float, motor, MWD or other continuous survey, DC, DP. TIH and drill, building angle and orientation according to drilling plan. Drill to TD with gas. TOH. Run 4.5" casing from TD to point determined from prep work and hang off as liner at approximately 3000'. (NOTE:

If fractured zones are successfully intersected, casing may be landed above MV and leave MV open hole).

- 3. Cement 4.5" casing with appropriate volume of cement, approximately 345 cuft of Class "B" neat cement.
- 4. RDMORT.

#### Completion: daylight rig

NOTE: If fractured zones are successfully intersected, completion may not be necessary.

- MIRUSU.
- 2. Run cased hole logs (cbl/gr/ccl, neutron log for some wells).
- 3. Perforate Point Lookout/Menefee determined from above logs.
- Acid breakdown and ball off perforations.
- Frac Point Lookout/Menefee.
- 6. Flowback as soon as possible of 1/4" choke, changing to 1/2" or larger depending on activity of well, pressures, and sand production.
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- 12. Cleanout to RBP. Retrieve RBP and clean out to PBTD.
- 13. RDMOSU.
- 14. Turn well over to production.

#### If problems are encountered, please contact:

Mark Rothenberg (W) (303)830-5612 (H) (303)841-8503

(P) (303)553-6448



# United States Department of the Interior

#### **BUREAU OF LAND MANAGEMENT**

Farmington District Office 1235 La Plata Highway Farmington, New Mexico 87401

IN REPLY REFER TO:

Attachment to Notice of

Re: Sidetrack

**Intention to Workover** 

Well: 1 Fields A

#### **CONDITIONS OF APPROVAL**

- 1. Move the CIBP from 4850' to 4750' and spot the cement plug on top. (Our records show the top perforation is at 4800'.)
- 2. Spot a 100 ' cement plug at the top of the 4 1/2" casing cut off. ( 50' of cement in the 4 1/2" csg. and 50' of cement int the 7.0" csg.)
- 3. **Mike Flaniken** with the Farmington District Office is to be notified at least 24 hours before the workover operations commence (505) 599-8907.