

UNITED STATES  
DEPARTMENT OF THE INTERIOR

BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR DEEPEN

Form approved.  
Budget Bureau No. 1004-0136  
Expires: December 31, 1991

1a. TYPE OF WORK <b>DRILL</b> <input checked="" type="checkbox"/> <b>DEEPEN</b> <input type="checkbox"/>				5. LEASE DESIGNATION AND SERIAL NO. NM-14919	
b. TYPE OF WELL OIL WELL <input type="checkbox"/> GAS WELL <input checked="" type="checkbox"/> OTHER <input type="checkbox"/> SINGLE ZONE <input checked="" type="checkbox"/> MULTIPLE ZONE <input type="checkbox"/>				6. IF INDIAN, ALLOTTEE OR TRIBE NAME	
2. NAME OF OPERATOR Amoco Production Company 778 Attention: Julia L. Acevedo				7. UNIT AGREEMENT NAME	
3. ADDRESS AND TELEPHONE NO. P.O. Box 800, Denver, Colorado 80201 (303) 830-6003				8. FARM OR LEASE NAME, WELL NO. 15510 Carson Federal G #1	
4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements. *) At surface 1540FNL 2630FEL At proposed prod. zone 1782 FNL 1651 FEL				9. API WELL NO. 30-039-25444	
14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE* 62 Miles from Aztec, N.M.				10. FIELD AND POOL, OR WILDCAT 74960 Choza Mesa Pictured Cliffs	
15. DISTANCE FROM PROPOSED* LOCATION TO NEAREST PROPERTY OR LEASE LINE, FT. (Also to nearest drig. unit line, if any)		16. NO. OF ACRES IN LEASE 640		11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA Section 25 Township 28N Range 4W	
18. DISTANCE FROM PROPOSED LOCATION* TO NEAREST WELL, DRILLING, COMPLETED, OR APPLIED FOR, ON THIS LEASE, FT.		19. PROPOSED DEPTH 4580' MD		12. COUNTY OR PARISH Rio Arriba	
21. ELEVATIONS (Show whether on or off lease) 7337' GR		20. ROTARY OR CABLE TOOLS Rotary		13. STATE New Mexico	
23. PROPOSED CASING AND CEMENTING PROGRAM				17. NO. OF ACRES ASSIGNED TO THIS WELL NE/4 160 Acres	
22. APPROX. DATE WORK WILL START* 8/31/94				17. NO. OF ACRES ASSIGNED TO THIS WELL NE/4 160 Acres	
24. SIGNED <i>Julia L. Acevedo</i> TITLE Sr. Staff Assistant DATE 07-14-1994				DRILLING OPERATIONS AUTHORIZED ARE SUBJECT TO COMPLIANCE WITH ATTACHED "GENERAL REQUIREMENTS"	
25. PERMIT NO. _____ APPROVAL DATE _____				QUANTITY OF CEMENT	
Application approval does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations.				233 cf Cl B Cement to Surface	
CONDITIONS OF APPROVAL, IF ANY:				1167 CF Cl B Cement to Surface	
APPROVED BY <i>Holden</i> TITLE NMOC				APPROVED AS AMENDED AUG 11 1994 DISTRICT MANAGER	

Notice of Staking submitted: 06/9/94 as the Carson Federal G #1

Lease Description: T28N - R4W  
Sec. 25: ALL

RECEIVED  
AUG 15 1994  
OIL CON. DIV.  
DIST. 3

RECEIVED  
JUL 18 AM 10:51  
070 FARMINGTON, NM

IN ABOVE SPACE DESCRIBE PROPOSED PROGRAM: If proposal is to deepen, give data on present productive zone and proposed new productive zone. If proposal is to drill or deepen directionally, give pertinent data on subsurface locations and measured and true vertical depths. Give blowout preventer program, if any.

24. SIGNED *Julia L. Acevedo* TITLE Sr. Staff Assistant DATE 07-14-1994

(This space for Federal or State office use)

PERMIT NO. \_\_\_\_\_ APPROVAL DATE \_\_\_\_\_

Application approval does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations.

CONDITIONS OF APPROVAL, IF ANY:

APPROVED BY *Holden* TITLE NMOC

\*See Instructions On Reverse Side

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.

Submit to Appropriate  
District Office  
State Lease - 4 copies  
Fee Lease - 3 copies

Energy, Minerals and Natural Resources Department

# OIL CONSERVATION DIVISION

P.O. Box 2088  
Santa Fe, New Mexico 87504-2088

RECEIVED  
BLM

DISTRICT I  
P.O. Box 1980, Hobbs, NM 88240

DISTRICT II  
P.O. Drawer DD, Artesia, NM 88210

DISTRICT III  
1000 Rio Brazos Rd., Aztec, NM 87410

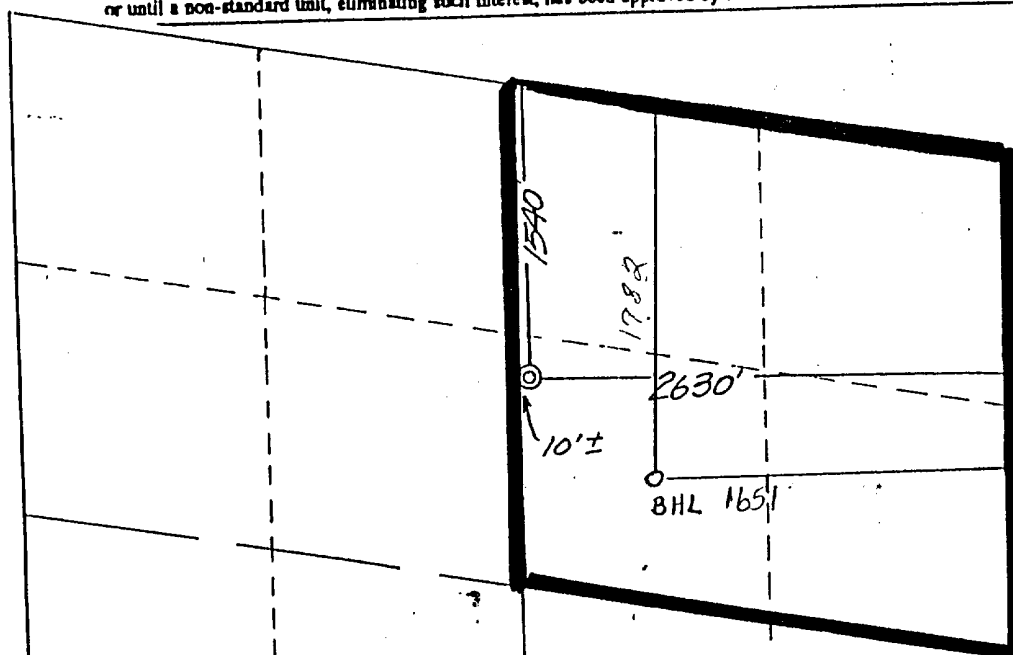
## WELL LOCATION AND ACREAGE DEDICATION PLAT

All Distances must be from the outer boundaries of the section

01 JUL 18 AM 10:51

Operator <b>AMOCO PRODUCTION COMPANY 778</b>			Lease <b>Carson Federal G</b>		070 FARMINGTON, NM	
Unit Letter <b>G</b>	Section <b>25</b>	Township <b>28 NORTH</b>	Range <b>4 WEST</b>	County <b>NMPM</b>	#1	
Actual Footage Location of Well: <b>1540</b> feet from the <b>NORTH</b> line and <b>2630</b> feet from the <b>EAST</b> line						
Ground level Elev. <b>7337</b>	Producing Formation <b>Pictured Cliffs</b>		Pool <b>Choza Mesa Pictured Cliffs</b>		Dedicated Acreage: <b>N 3/4 160 Acres</b>	

- Outline the acreage dedicated to the subject well by colored pencil or hatchure marks on the plat below.
- If more than one lease is dedicated to the well, outline each and identify the ownership thereof (both as to working interest and royalty).
- If more than one lease of different ownership is dedicated to the well, have the interest of all owners been consolidated by communitization, unitization, force-pooling, etc.?  
☐ Yes ☐ No If answer is "yes" type of consolidation \_\_\_\_\_  
If answer is "no" list the owners and tract descriptions which have actually been consolidated. (Use reverse side of this form if necessary.)  
No allowable will be assigned to the well until all interests have been consolidated (by communitization, unitization, forced-pooling, or otherwise) or until a non-standard unit, eliminating such interest, has been approved by the Division.



RECEIVED  
AUG 15 1994  
OIL CON. DIV.  
DIST. 3

### OPERATOR CERTIFICATION

I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief.

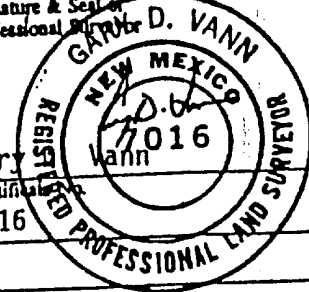
Signature *Julie L. Acevedo*  
Printed Name **Julie L. Acevedo**  
Position **Sr. Staff Assistant**  
Company **Amoco Production Company**  
Date **6/9/94**

### SURVEYOR CERTIFICATION

I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my knowledge and belief.

Date Surveyed **June 1, 1994**

Signature & Seal of Professional Surveyor  
**GARY D. VANN**  
**7016**  
Gary D. Vann  
Certification  
**7016**



**AMOCO PRODUCTION COMPANY  
DRILLING AND COMPLETION PROGRAM**

File No.: Carson  
Date: 6/20/94

Lease: Carson Federal G Well No. #1 (Carson National Forest)  
County: Rio Arriba, New Mexico Surface Location: 1540 feet FNL & 2630 feet FEL, Section 25, T-28N, R4W  
Former name: Reference Well Field: Choza Mesa Pictured Cliffs

25

4

**OBJECTIVE:** Exploit strategic Fruitland Coal locations.

<b>METHOD OF DRILLING</b>		<b>APPROXIMATE DEPTHS OF GEOLOGICAL MARKER</b>		
<b>TYPE OF TOOLS</b>	<b>DEPTH OF DRILLING</b>	Actual GL-----Estimated KB	7337	7349
Rotary	0 - TD	<b>Marker</b>	<b>Depth (ft.)</b>	<b>SS Elev. (ft.)</b>
<b>LOGGING PROGRAM</b>			3,681	3,668
<b>TYPE</b>	<b>DEPTH</b>	Kirtland	3,792	3,557
		*Fruitland	3,889	3,460
HRI-CAL-GR		**Pictured Cliffs	4,046	3,303
SDL-DSN	SFC--TD	Lewis Shale	4,321	3,028
		(Directional Well See Attached Plan)		
<b>REMARKS:</b>		THE DEPTHS ON THE RIGHT ARE APPROXIMATE TVD DEPTHS		
		TOTAL DEPTH		
		* Possible pay		
		** Probable completion		
		OJO ALAMO IS POSSIBLE USEABLE WATER		
<b>SPECIAL TESTS</b>		<b>DRILL CUTTING SAMPLES</b>		<b>DRILLING TIME</b>
<b>TYPE</b>	<b>DEPTH INTERVAL, ETC</b>	<b>FREQUENCY</b>	<b>DEPTH</b>	<b>DEPTH</b>
None		2 Man Unit	Surface to TD	Geolograph
<b>Remarks:</b>		Remarks:		
		Mud Logging Program: Surface to TD		
		Coring Program: See Attached Program		

**MUD PROGRAM:**

Approx. Interval	Type Mud	Weight, #/gal	Vis, sec/qt.	W/L, cc's/30 min.
0-----SCP	SPUD	8.5--9.0	Sufficient to clean hole.	NC
SCP---TD	LSND	8.6-9.0*	Sufficient to clean hole and maintain integrity ff logs.	

**REMARKS:**

\* Use minimum mud weight to control formation pressures.

**CASING PROGRAM:**

Casing String	Estimated Depth	Casing Size	Hole Size	Landing Point, Cement, Etc
Conductor				
Surface	250	8 5/8"	12 1/4"	1,2
Production		5 1/2"	7 7/8"	1,2

**Remarks:**

1. Circulate cement to surface.
2. Drilling Team to design cement programs.

**GENERAL REMARKS:**

Engineering to design completion program.

Form 46 Reviewed by:	Logging program reviewed by:	
<b>PREPARED BY:</b> Logan/Shepard	<b>APPROVED:</b>	<b>APPROVED:</b>
Form 46 7-84bw 7/6/94 11:02	For Production Dept	For Exploration Dept.

# AMOCO PRODUCTION COMPANY

Cementing Procedure/form 46

Well Name: Carson Federal G #1

The well will be drilled to the surface casing point using native mud.  
The well will then be drilled to the production casing point with a non-dispersed mud system.

Reference Well

## Surface Casing:

Quantity (ft)	Size (in)	Weight (ppf)	Description
250	8 5/8"	24	J-55, ST&C

Cement program  
232 cf Class B, 2% CaCl<sub>2</sub>  
+ 0.25 #/sx Floccle  
1.18 cf/sx, 15.6 ppg

Hole Size:

12 1/4" Excess cement:

1.25

## Production Casing

Quantity (ft)	Size (in)	Weight (ppf)	Description
4500 MD	7.875	15.50 or 17.00	J-55, LT&C

Cement program

\* 1st Stg Lead:

984 cf Lite, 7 pps salt, 2% Microbond, 5% Calseal, 3/8 pps Floccle  
1.8 cf/sx, 13 ppg.

300 sx Class B, 0.4% H-344, 0.4% CFR-3, 5 pps GRconite  
2% Microbond, 0.25 pps Floccle  
1.28 cf/sx, 15.1 ppg

Hole size:

7 7/8"

Excess cement:

60%

BY BRAD BRYANT/HARRY HARRIS

Input depths from run in: an attached sheet to calculate cement volumes

07/14/84

AMOCO PRODUCTION COMPANY

Cementing Procedure/form 46

Well Name: Carson Federal G #1

Reference Well

The well will be drilled to the surface casing point using native mud.  
The well will then be drilled to the production casing point with a non-dispersed mud system.

Surface Casing:

Quantity (ft)	Size (in)	Weight (ppf)	Description	Cement program
250	8 5/8"	24	J-55, ST&C	232 cf Class B, 2% CaCl2 + 0.25 #/sx Flocele.
				1.18 cf/sx, 15.8 ppg
Hole Size:	12 1/4"	Excess cement:	1.25	

Production Casing

Quantity (ft)	Size (in)	Weight (ppf)	Description	Cement program
4500 MD	7.875	15.50 or 17.00	J-55, LT&C	
* 1st Stg Lead:	864	cf Lite, 7 pps salt, 2% Microbond, 5% Calceal, 3/8 pps Flocele		
	1.8	cf/sx, 13 ppg.		
	300	xx Class B, 0.4% H-344, 0.4% CFR-3, 5 pps Gilsonite		
		2% Microbond, 0.25 pps Flocele		
	1.29	cf/sx, 15.1 ppg		

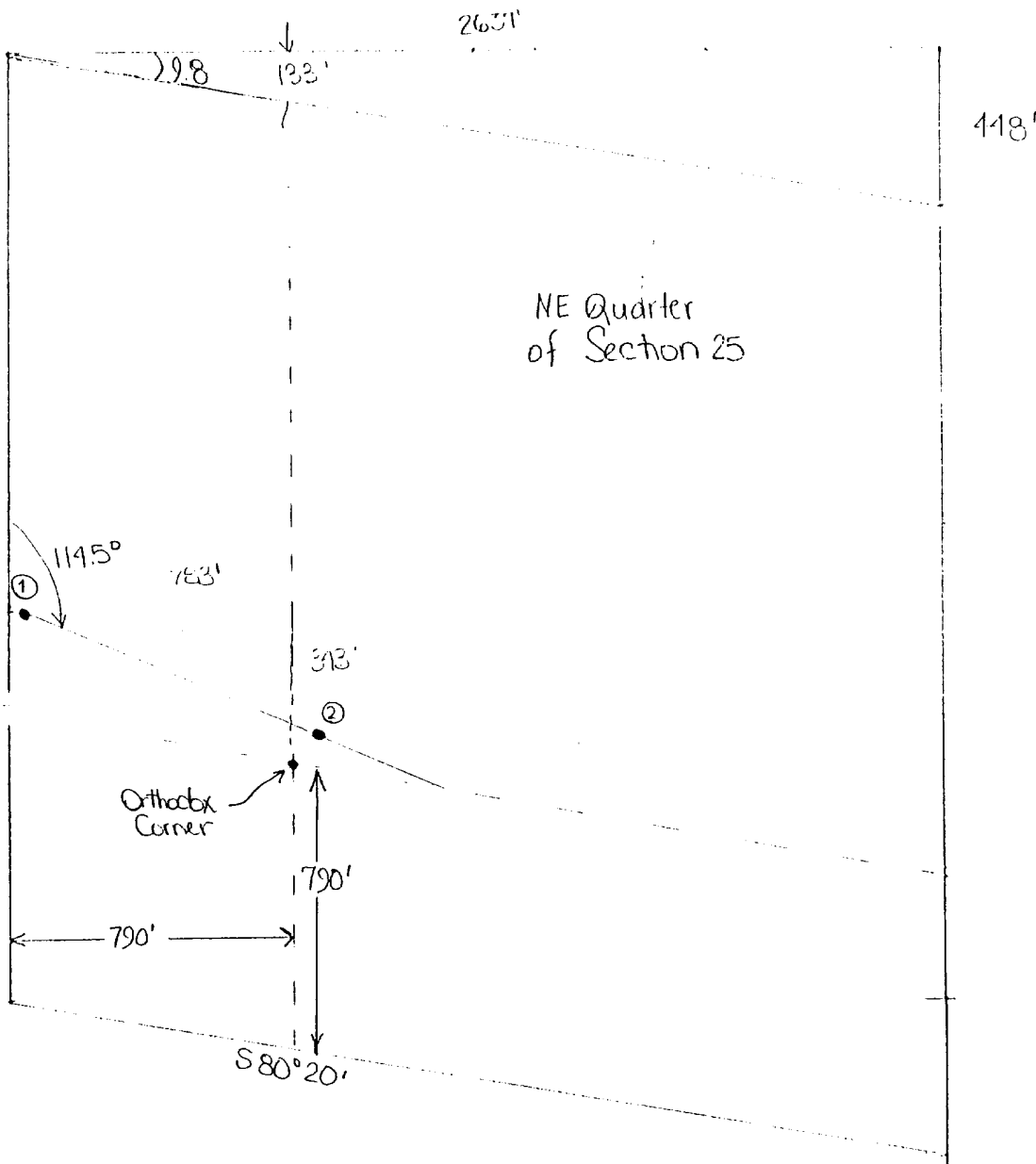
Hole size: 7 7/8" Excess cement: 60%

# Amoco Production Company

## ENGINEERING CHART

Sheet No. \_\_\_\_\_ Of \_\_\_\_\_  
 File \_\_\_\_\_  
 Appn \_\_\_\_\_  
 Date 6 Jul 94  
 By \_\_\_\_\_

SUBJECT Carson Federal Galt  
Directional Plan



### ① Surface Location

1540' FNL & 2630' FEL Sec 25, T28N, R4W Rio Arriba Co

### ② Point we cross legal lines at top of Picture Cliffs

1750' FNL & 1797' FEL (100' North of legal corner & 50' East)

③ End of build MD  $\approx 2735'$  TVD  
 MD  $\approx 2762'$  MD ( $\approx 30^\circ$ ) KOP  $\approx 2162'$  MD  
 1574' FNL & 2488' FEL

④ Anticipated PHL @  $\approx 4309'$  TVD  
 $\approx 1782'$  FNL & 1651' FEL

# AMOCO PRODUCTION COMPANY

Structure : SEC.25-T28N-R4W Well : CARSON FED G #1  
Field : RIO ARRIBA COUNTY Location : NEW MEXICO

## WELL PROFILE DATA

Point	MD	Inc	Dir	TVD	North	East	Deg/100
Tie on	0	0.00	112.78	0	0	0	0.00
KOP	2162	0.00	112.78	2162	0	0	0.00
End of Build	2762	30.00	112.78	2735	-59	142	5.00
Target	4262	30.00	112.78	4034	-350	833	0.00
End of Hold	4580	30.00	112.78	4309	-411	979	0.00

Scale 1 : 50.00

<-- True Vertical Depth

1600  
1700  
1800  
1900  
2000  
2100  
2200  
2300  
2400  
2500  
2600  
2700  
2800  
2900  
3000  
3100  
3200  
3300  
3400  
3500  
3600  
3700  
3800  
3900  
4000  
4100  
4200  
4300  
4400

Kick off Point

5.00

10.00

15.00

20.00

25.00

End of Build

Scale 1 : 50.00

East -->

200 100 0 100 200 300 400 500 600 700 800 900 1000 1100

Scale 1 : 50.00

South -->

SURFACE LOC:  
1540' FNL & 2630' FEL  
SEC.25-T28N-R4W

50' RADIUS TARGET

BOTTOM HOLE LOG:  
1750' FNL & 1797' FEL  
SEC.25-T28N-R4W

Target Location

TRUE  
N  
MAGNETIC  
DECLINATION  
11.5 DEG

ALAMO TOP

KIRKLAND TOP

FRUITLAND TOP

TARGET P.C. TOP

LEWIS SHALE TOP

**BAKER**  
**HUGHES**  
**INTEQ**

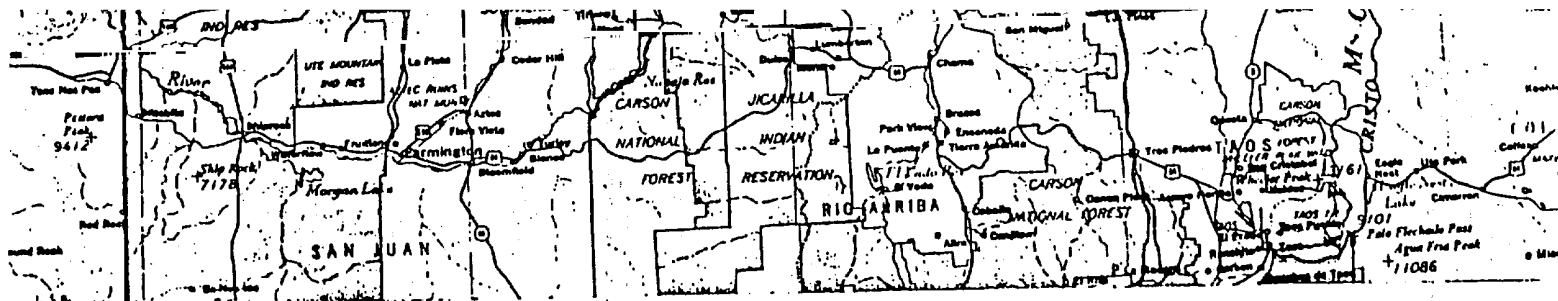
-- Baker Hughes INTEQ --  
DRAWN BY: WALLY HOLBROOK  
DATE: JUNE 29, 1994  
TVD REFERENCED WELLHEAD.  
DENVER, COLORADO  
PHONE: (303) 860-0509

Scale 1 : 50.00

Vertical Section on 112.78 azimuth with reference 0.00 N, 0.00 E from SLOT #1







VALLENCIA CANYON UNIT # 188

540' F/NL 2630' F/EL

SEC. 25, T28N, R4W, NMPM

RAIL POINT: 204 miles from Montrose, Co

MUD POINT: 62 miles from Aztec, N.M.

CEMENT POINT: 66 miles from Farmington, N.M.

