UNITED STATES DEPARTMENT OF THE INTERIOR

GEOLOGICAL SURVEY

(Other instructions on reverse side)

30	-0	45		25	7	2	Ŷ	,
1 5 7		HOYON	ATTO M	ANT	OPDI	4.7	NO	

14-20-603-734

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R	10	INDIAN	AT.T.O	小叶花花	OR TRIBE	NAME

6.	IJ	ALLONTER		NAME

		O DOUL DEE	DENI OD DILIG D	ACV	6. IF INDIAN, ALLOTTEE	OR TRIBE NAME
APPLICATION	FOR PERMIT I	O DRILL, DEE	PEN, OR PLUG BA	ACK	Navajo	
a. TYPE OF WORK	. 🗔	DEEDEN!	PLUG BAC	r 🗆	7. UNIT AGREEMENT NA	ME
	L X	DEEPEN	PLUG BAC	•	Horseshoe Gal	.lup
b. TYPE OF WELL OIL GAS	. —		SINGLE X MULTIPL	JE 🗍	8. FARM OR LEASE NAM	
WELL X WE	LL OTHER		ZONE LX ZONE		Horseshoe Gal	.lup
	C Dir	icion of Atla	ntic Richfield Co	าพกลทุง	9. WELL NO.	
ARCO U11 and G	as company, Div	ISTOR OF ACTA	ntic Richfield Co	Jupany	298)
	D Calam	ado 80217			10. FIELD AND POOL, O	R WILDCAT
P. O. Box 5540 4. LOCATION OF WELL (Re	, Denver, Color	in accordance with an	y State requirements.*)		Horseshoe Gal	Jup Unit
At suriace					11. SEC., T., R., M., OR E	LK.
122	0' FSL & 140' F	WL OHITCH			AND SURVEY OF AR	EA
At proposed prod. zone				M	33-31N-16W	
	Approx the	Same	FICH*		12. COUNTY OR PARISH	13. STATE
14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE* Shiprock, New Mexico approximately 10 miles northeast			San Juan	New Mexico		
Shiprock, Ne	w Mexico approx	imately 10 mi	NO. OF ACRES IN LEASE	17. NO.	OF ACRES ASSIGNED	1
15. DISTANCE FROM PROPO- LOCATION TO NEAREST PROPERTY OR LEASE LI (Also to nearest drig	INE. FT. 10,354,	to unit	LD 2685 ?	TO T	40 ONA	1208
19 DISTINCE FROM PROPO	SED LOCATION*	19.	PROPOSED DEPTH	20. вота	RY OR CABLE TOOLS	
TO NEAREST WELL, DE OR APPLIED FOR, ON THE		857'	1260'	<u></u>	Rotary	
21. ELEVATIONS (Show whe	ther DF, RT, GR, etc.)	RILLING OPERATIONS	NOT WITH ATTACHED		22. APPROX. DATE WO	
5349 '			NCE WITH ATTACHED		When appr'd	app'l rec'd
23.		ROPOSED CASING A	ENTS" AND CEMENTING PROGRA	M This bo	tion is subject to com	alstrative
			SETTING DEPTH	- Appoal.	pursuant to 30 CFR 2	5U.
SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT			(67.26 cu.ft.	
17-1/2"	13-3/8"	48.0#	30'	3/ S2	(122 0 6*) C1 "P" + add
12-1/4"	8-5/8"	24.0#	140'	105 SZ	x (123.9 cu.ft.) C1 "P" + add
7-7/8"	5-1/2"	14.0#	1260' or 200'	220 S	x (377.05 cu.ft.) (I B + aut
		l	below top of	•		
			Gallup Sand			
						. • .
Propose to	drill well to s	ufficient dep	th to test the Ga	allup :	tormation, sett	ing

surface and intermediate casing as above. Logging and setting production casing, perforate, test and treat if necessary, and fracture as required. Will apply to permit this well as a water injection well if it is not an economically productive oil well.

Pursuant to NTL-6, attached are:

Certified Location Plat

Drilling Plan with attachments

Surface Use and Operations Plan with attachments

NABOVE SPACE DESCRIBE PROPOSED PROGRAM: If proposal is one. If proposal is to drill or deepen directionally, give pereventer program, if any.	to deepen or plug back, give data on present prortinent data on subsurface locations and measure	oductive zone and proposed new productive red and true vertical depths. Give blowout
signed W. A. Walther, Jr.	TITLE Operations Manager	
(This space for Federal or State office use)	APPROVAL DATE	
APPROVED BY	TITLE	APPROVED
old C104 or C108 for NSL		AS AMENDED
		MAY 1 6 1983

Joint with #6U #208 +290

JAMES F. SIMS DISTRICT ENGINEER

OIL CONSERVATION DIVISION

STATE OF NEW MEXICO TRGY SHO MINERALS DEPARTMENT

P. O. BOX 2088

SANTA FE, NEW MEXICO 87501

Form C-107 kevised 10-1-

All distances must be from the cuter boundaries of the Section.

Operator			Lease			Well No.
ARCO OIL & G.	AS COMPANY		HORSESHOR	E GALI		-298
	Section Township)	Range		County	
м.	33	31N	1	óW	San Juan	
Actual Footage Locat			22.5	_	77 .4	ltna
1190	feet from the South	line and	215	fe	et from the West	Dedicated Acreage: Villa File 1999
Ground Level Elev:	Producing Formation (3ally	_	HOLSE	cha	e	40 Acres
5347						the plat below
	acreage dedicated to 1					
interest and	l royalty).	_		•		p thereof (both as to working
3. If more than dated by co	n one lease of different mmunitization, unitizati	ownership is on, force-poo	dedicated to thing. etc?	he wel	l, have the interests	of all owners been consoli-
Yes	No If answer is	"yes," type	of consolidation	on		
If answer is	s "no," list the owners	and tract des	criptions whic	h have	actually been conso	olidated. (Use reverse side of
this form if	necessary.)	**	11 1	1		communitization unitization
No allowab forced-pool	le will be assigned to th ing, or otherwise) or until	e well until a l a non-standa	II interests ha ird unit, elimin	ve beer ating s	uch interests, has b	communitization, unitization, een approved by the Commis-
sion.	· ·					
		-				CERTIFICATION
			!			
	1		1		I her	eby certify that the information con-
	I MEPER		1			d herein is true and complete to the
			j.			of my knowledge and belief
	1111	1	1			
	MAY 1 7	963	1			(Mailly
	1	1			Name	W.A. Walther, dr.
	- → - OH EON				Positio	on
		3	i 1		1 1	ations Manager
	1		1			my ARCO Oil and Gas Com
	}		ŧ		Div	of Atlantic Richfield C
	Sec.		i ,		Date	
			† 		Apri	1 18, 1983
	1		l 1			
	ı		!		1 4	ereby certify that the well-location
	1	33	I 1		1 1	wn on this plat was plotted from field
	1		1		1 1	s of actual surveys made by me or
	1		1		unde	er my supervision, and that the same
•	1				is	true and correct to the best of my
Ň	·		1		kno	wledge and ballef.
215	_1 =					
·	- 		****			
	· •		l		1 1	Surveyed TO 1/2
1	$<$ \mathbf{i}		1			11/8, 1983
io /	1		1		Regis and	tared Professional Engineer
1190	1.		1			- FI
	· 1		I			ad 3 Kerr Jr
	1				Certi	licate No. A
<u> </u>	Scale: 1	n=10001			l l	950
	Scale: 1	r = ∓∩∩∩ ,			ررا	<u> </u>

P. O. BOX 2088 NERGY AND MINERALS DEPARTMENT SANTA FE, NEW MEXICO 87501

		All distances must be i	from the cuter boundaries	o of the Section.	
Operator			Lease		Well No.
	GAS COMPANY	1-		ALLUP UNIT B	298
Unit Letter M	Section 33	Township 31N	Romge 16W	San Juan	
Actual Footage Loca	ation of Well:	Cauth	140	west	
1220 Ground Level Elev:	feet from the Producing For	South line and	P001	eet from the West	line Dedicated Acreage:
5349		ip Sand			NA UNIT 40 Acres
			Gallup	l or hachure marks on	
2. If more th interest an	an one lease is ad royalty).	dedicated to the wo	ell, outline each and	identify the ownership	thereof (both as to working
dated by c Yes	ommunitization, No If a is "no," list the	unitization, force-poonswer is "yes," type	of consolidation		of all owners been consoli- idated. (Use reverse side of
No allowab	_			•	ommunitization, unitization, en approved by the Commis-
			İ		CERTIFICATION
				tained best of	y certify that the information con- herein is true and complete to the my knowledge and belief.
	 - - 		·	Name W Opera Position Divis: Company	A. Walther, Jr. ations Manager ARCO Oil and Gas Compion of Atlantic Richfie Company rch 17, 1983
	Se	c.	 	Date	
140'		33	 	shown notes o under n is true	by certify that the well location on this plat was plotted from field of actual surveys made by me or my supervision, and that the same and correct to the best of my dge and belief.
1220'				Fred Certificat	d Professional Engineer and Surveyor B. Kerr Jr.
	Saa	10001		3050	

TEN POINT DRILLING PLAN

Attach to APD Form 9-331-C ARCO Oil and Gas Company Horseshoe Gallup Unit "B" #298 Section 33-31N-16W San Juan County, New Mexico

- 1. Surface Geological Formation: Upper Mancos Shale
- 2. Estimated Tops of Geological Markers: Gallup Sand 1054'
- 3. Estimated Tops of Possible Water, Oil, Gas or Minerals:

Sands in Upper Mancos Shale Fm - 0-1054' Water
Gallup Sands - 1054-TD Oil and/or Water

4. Proposed Casing Program:

Casing	Hole Size	Interval	Section Length	Size OD	Weight Grade and Joint	New Used
Conductor	17-1/2"	0- 30'	30'	13-3/8"	48#,H-40,STC	New or Used
Surface	12-1/4"	30- 140'	110'	8-5/8"	24#,K-55,STC	New
Intermediate	1	None				
Production	7-7/8"	140-1260' or +200' belo top of Galluj		5-1/2"	14#,K-55,STC	New

Liner ---- None -----

Cement Program:

Conductor Cement $w/57 \text{ sx Cl "B"} + 3\% \text{ CaCl}_2$. Yield = 1.18 cu

ft/sx. Cement w/100% volumetric excess.

Surface Cement w/105 sx Cl "B" + 2% CaCl₂ + 1/4#/sx Flocele.

Yield = 1.18 cu ft/sx. Cement w/100% open hole

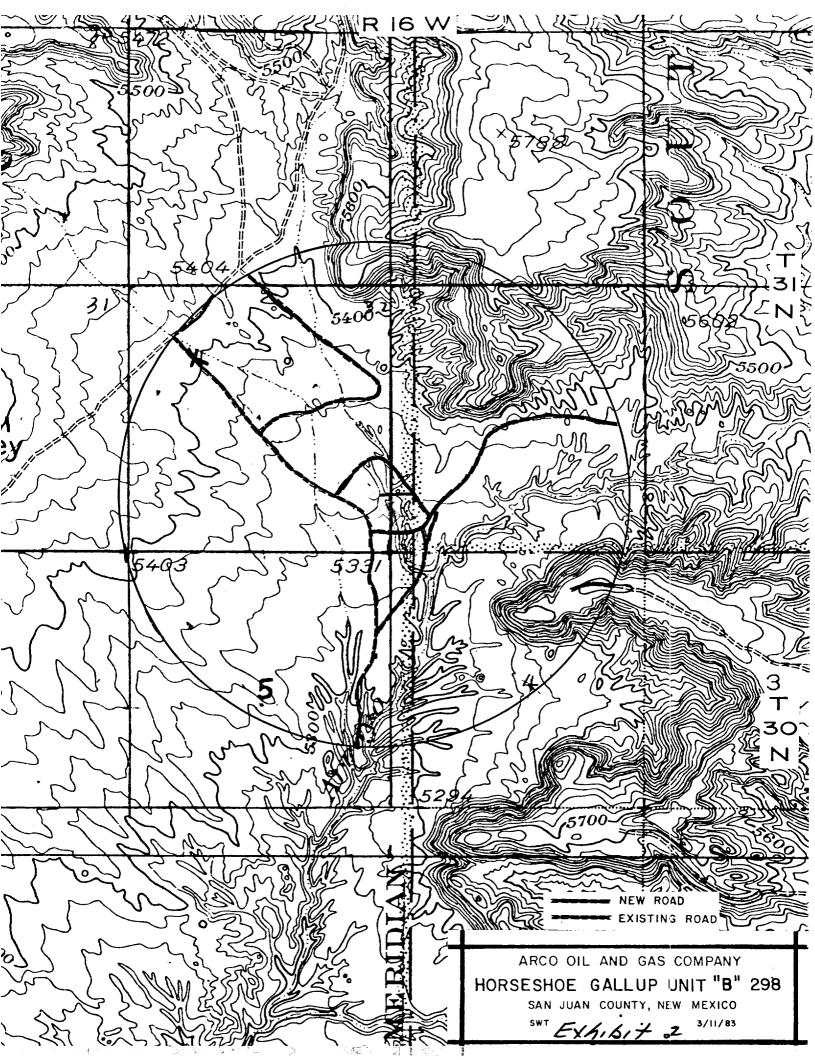
volumetric excess.

Intermediate None

Production Cement w/10 bbls mud flush (or 200' annular column)

foll'd w/145 sx Cl "B" + 12-1/2#/sx Gilsorite + 6% gel + 3/4% CFR-2 (top slurry @ surface). Yield = 1.99 cu ft/sx, foll'd w/75 sx Cl "B" + 1/4#/sx Flocele + 2% CaCl₂. Yield = 1.18 cu ft/sx. Use calipered hole ID to

calculate lead and tail slurry volumes.



Dec. 1973	pender parent its as are in
UNITED STATES	5. LEASE
DEPARTMENT OF THE INTERIOR	14-20-603-734
GEOLOGICAL SURVEY	6. IF INDIAN, ALLOTTEE OR TRIBE NAME
GEOLOGICAL CONTE	Navajo
SUNDRY NOTICES AND REPORTS ON WELLS	7. UNIT AGREEMENT NAME
SUNDRY NUTICES AND REPORTS ON WELLS	Horseshoe Gallup
(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.)	8. FARM OR LEASE NAME
1. oil 🖂 gas 🖂	Horseshoe Gallup
well well other	9. WELL NO.
2. NAME OF OPERATOR ARCO Oil and Gas Company	298
Division of Atlantic Richfield Company	10. FIELD OR WILDCAT NAME
3. ADDRESS OF OPERATOR	Horseshoe Gallup
P. O. Box 5540, Denver, Colorado 80217	11. SEC., T., R., M., OR BLK. AND SURVEY OF
4. LOCATION OF WELL (REPORT LOCATION CLEARLY. See space 17	AREA
below.)	33-31N-16W
AT SURFACE: 1190' FSL & 215' FWL ***	12. COUNTY OR PARISH 13. STATE
AT TOP PROD. INTERVAL:	San Juan New Mexico
AT TOTAL DEPTH: Approx the same	14. API NO.
16. CHECK APPROPRIATE BOX TO INDICATE NATURE OF NOTICE,	<u> </u>
REPORT, OR OTHER DATA	15. ELEVATIONS (SHOW DF, KDB, AND WD)
REQUEST FOR APPROVAL TO: SUBSEQUENT REPORT OF:	5347' GĽ
	TO DEAR
TEST WATER SHUT-OFF FRACTURE TREAT	ED RECEIV
SHOOT OR ACIDIZE	
REPAIR WELL	100 TE: Report results of multiple completion or zone
PULL OR ALTER CASING U	1989TE: Report results of multiple completion or zone change on Form 9–330. AT 1 7 1983
MULTIPLE COMPLETE	CURVEY OIL COM DO
ABANDON*	CAL SURVEY OIL CON. DI
MULTIPLE COMPLETE	CHST. 3
17. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state including estimated date of starting any proposed work. If well is d	e all pertinent details, and give pertinent dates
measured and true vertical depths for all markers and zones pertinen	t to this work.)*
·	
*** Location of this well is changed from 1220'	
1190' FSL & 215' FWL. Location was changed	
lies in a disputed corridor between the Nava	
Indian Reservations. The well has been move	
that it is not closer than 200' to either cl	aimants boundary.
A new Certified Location Plat is attached.	
50/71 25	
Elevation is amended to read 5347' GL.	
	(ARR AMMAGURE)
A new 13-Point Surface Use Plan is attached.	(SEE ATTACHED)
Subsurface Safety Valve: Manu. and Type	Set @ Fi
18. I hereby certify that the foregoing is true and correct	
SIGNED //////// TITLE Operations Ma	nageтрате 4-18-83
W. A. Walther Ir.	

Joint with HGU #208+290

*See Instructions on Reverse Side

AS AMENDED