Form 9-331 C (May 1963)	NMO	C COPY		SUBMIT IN		 Form approved. Budget Bureau No. 42-R1425
THEOR IONN	UNITED STATES			(Other Instru- reverse si	.tons on de)	30-015-22569
	DEPARTMEN	T OF THE I	NTEF	RIOR	c	5. LEASE DESIGNATION AND SERIAL NO.
	GEOLO	GICAL SURV	EY			LC 067858
	N FOR PERMIT	to drill, i	DEEPE	EN, OR PLUG B	ACK	6. IF INDIAN, ALLOTTEE OR TRIBE NAME
1a. TYPE OF WORK DR b. TYPE OF WELL	RILL X	DEEPEN		PLUG BAC	К 🗌	7. UNIT AGREEMENT NAME Empire Abo Pressure
	GAS OTHER			NGLE MULTIP		Maintenance Project 8. FARM OR LEASE NAME
	hfield Company	/		·····	·	Empire Abo Unit "M" 9. WELL NO.
	10, Hobbs, New M Report location clearly and	1exico 88240	C	RECEIVE		152 10. FIELD AND FOOL, OR WILDCAT
At surface				tate requirements.*)		Empire Abo
560' Fl At proposed prod. zo	NL & 2588' FEL	(Unit letter	r B)	JUN - 2 1978	}	11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA 11-18S-27E
14. DISTANCE IN MILES	AND DIRECTION FROM NEA	REST TOWN OR POS	T OFFICI	ARTESIA, OFFICE	······	12. COUNTY OR PARISH 13. STATE Eddy N.M.
15. DISTANCE FROM PROI LOCATION TO NEARES	ST		16. NO). OF ACRES IN LEASE	17. NO. C	DF ACRES ASSIGNED HIS WELL
	lg. unit line, if any)		10			40
1S. DISTANCE FROM PRO TO NEAREST WELL, OR APPLIED FOR, ON TI	DRILLING, COMPLETED,			6300 ¹		RY OR CABLE TOOLS
	hether DF, RT, GR, etc.)		1	0300	1	Rotary 22. APPROX. DATE WORK WILL START*
3589.8' GR						8/1/78
23.		PROPOSED CASI:	NG ANI	CEMENTING PROGRA	M	
SIZE OF HOLE	SIZE OF CASING	WEIGHT PER F	оот •	SETTING DEPTH		QUANTITY OF CEMENT
11"	8-5/8" OD	<u>24# K−55</u>		_1000'	40	0 sx
7-7/8"	<u>5-1/2" OD</u>	<u>14# K-55</u> 15.5# K-55		<u> 6000 ' </u>		5 sx
economically	rill an infill o recover additio ith Unit OCC Rul	onal oil res	serve	s and conserve	ire Ab reserv	o Unit area to more oir pressure in
	enter Program at	-	11ati		CEIV	/ED
DIOWOUL TIEVE	enter riogram at	. Lached .		_	R 21 1	
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				U.S. GEI ARTES	ia, new	L SURVEY Mexico
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zone. If proposal is to	o drill or deepen direction			blug back, give data on pr	esent prod	luctive zone and proposed new productiv
one. If proposal is to preventer program, if a	o drill or deepen direction			blug back, give data on pr	esent prod	luctive zone and proposed new productiv
zone. If proposal is to preventer program, if a	o drill or deepen direction	ally, give pertinent	t data o	blug back, give data on pr	esent prod d measure	luctive zone and proposed new productive
cone. If proposal is to preventer program, if a: 24. SIGNED	o drill or deepen direction	ally, give pertinent	t data o	olug back, give data on pr on subsurface locations an	esent prod d measure	Luctive zone and proposed new productiv d and true vertical depths. Give blowou
zone. If proposal is to preventer program, if a: 24. SIGNED	o drill or deepen direction ny.	ally, give pertinent	t data o	olug back, give data on pr on subsurface locations an	esent prod d measure	luctive zone and proposed new productiv d and true vertical depths. Give blowou
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N NEXICO OIL CONSERVATION COMMISS WELL LOCATION AND ACREAGE DEDICATION PLAT

Form C-102 Supersodes C-128 Effective 1-1-65

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			REG. PRO-	TATE 670	Or SUR		hown on this p otes of actua nder my super	fy that the well location plat was plotted from field I surveys made by me or rvision, and that the same arrect to the best of my belief.
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ATLANTIC RICHFIELD COMPANY Blow Out Preventer Program

Lease 'Name Empire Abo Unit "M"

Well No. 152

Location 560' FNL & 2588' FEL Sec 11-18S-27E Eddy County

BOP to be tested before installed on well and will be maintained in good working condition during drilling. All wellhead fittings to be of sufficient pressure to operate in a safe manner. To supplement USGS Form 9-331-C " Application for Permit to Drill, Deepen or Plugback", the following additional information is submitted:

Operator: Atlantic Richfield Company Lease & Well No: "M" 152 Empire Abo Unit Location: Unit letter B, 560' FNL & 2588' FEL Sec 11-18S-27E, Eddy County, New Mexico

1. See Form 9-331-C.

2. See Form 9-331-C.

3. The geologic name of the surface formation is: Tertiary with some Triassic exposed.

- 4. See Form 9-331C.
- 5. See Form 9-331C.
- 6. The estimated tops of important geologic markers are: Queen 345', San Andres 925', Abo 6060'
- 7. The estimated depths at which anticipated water, oil, gas or other mineral bearing formations are expected to be encountered are:

Santa Rosa Water Formation	+	300'	Brackish
Empire Yates Seven Rivers	Ŧ	345'	Oil & Gas
Artesia Grayburg Queen SA	Ŧ	925'	0il & Gas
Abo Reef	-	6060 '	0il & Gas

- 8. The proposed casing program including the size, grade and weight-per-foot of each string has been indicated on Form 9-331C. All strings of casing will be new.
- 9. See Form 9-331C for amount of cmt. The type of cmt & additives for the production string will be 1st stage 100 BFW w/2% KCL, 1 gal/1000 Mor-flo II, 10 bb1s SAM-5 spacer, 25 BFW, 480 sx Howco C1 C, 2% CaCl. 2nd stage thru DV tool will be 50 BFW, 25 sx Thin cmt, 600 sx Howco Lite cont'g 8# salt/sk, 100 sx C1 C cont'g 8# salt/sk. Cement for surface string will be 250 sx C1 C cont'g 6# salt, 2% CaCl, 1/4# flocele/sk followed by 150 sx C1 C cont'g 6# salt/sk, 2% CaCl.

10. The pressure control diagram is attached to Form 9-331C. The following additional information of the pressure control equipment is as follows:

Size: 10" x 900 API Series - Dbl ram w/hydraulic closing unit
Pressure Ratings or API Series - 3000# WP, 6000# T
Testing Procedures - Pressure up to 1500# before drilling out of casing
Testing Frequency - Upon installation, daily and on all trips.

11. The type and characteristics of the proposed circulating medium or mediums to be employed for rotary drilling and the quantities and types of mud and weighting materials to be maintained will be as follows:

0	-	1000'	Spud Mud
1000		6000'	Brackish Water
6000	-	6300'	Starch-SWG, 8.8#/gal, 35-50 Vis as needed, 9.5 ph will
			be maintained below surface pipe

- 12. The auxiliary equipment to be used will consist of: Kelly cocks and a sub on floor with full opening valve to be used when needed. No mud logging to be performed.
- 13. The testing, logging and coring programs will be:

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GR-DLL w/RXO, GR-Neutron, GR-CNL-FDC, Sonic-VDL and tape logs for Coriband Analysis. There will be coring and Drill Stem testing of the Abo Reef section.

- 14. No abnormal pressures or temperatures are expected to be encountered.
- 15. The starting date will be approximately 8/1/78 and will be completed approximately 8/30/78.

-2-