Form 3160-4 (July 1992)

SIGNED

## UNITED STATES DEPARTMENT OF THE INTERIOR

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BUREAU OF LAND

March   Marc								•	am c	III Co	ns. Divisio	חכ	. 1				
BUREAU OF LAND MANAGEMENT  WELL COMPLETION OR RECOMPLETION REPORT AND LOG*  I. TYPE OF WELL  DRY  OTHER  7. UNIT AGREEMENT NAME  Grayburg Jackson PSU  8. FARM OR LEASE NAME, WELL NO.  MAN No. 9  AROC (Texas) Inc.  ADDRESS AND TELEPHONE NO.  207 West McKay, Carlsbad, NM 88220  SOS-885-\$433  RECEVED  A surface  18. API WELL NO.  18. API WELL NO.  ALIDER SAND TELEPHONE NO.  207 West McKay, Carlsbad, NM 88220  SOS-885-\$433  RECEVED  A surface  18. API WELL NO.  Section 28-T17S-R30E  Eddy  NM  5. DATE SPUDDED  D. TOTAL DEPTH, MD & TVD  30-015-31272  19. ELEV CASINGHEAD  NO  D. TOTAL DEPTH, MD & TVD  30-07-00 C8/2/4/00  D. TOTAL DEPTH, MD & TVD  CASING RECORD (Report all strings set in well)  CASING RECORD  RECEVED  10. FEEL CASING RECORD  ROAD TO FEEL COME  CASING RECORD (Report all strings set in well)  CASING RECORD  RECORD  SOCIOLAR HIGH STRING RECORD  AMOUNT PULLED  SOCIOLAR HIGH STRING RECORD  AMOUNT PULLED  19. ELEV CASING RECORD  NO  CASING RECORD  RECEVED  10. FEEL NO.  SOCIOLAR HIGH STRING RECORD  NO  TOTAL DEPTH, MD & TVD  25. WAS DIRECTIONAL SURVEY MADE  YES  1. TUBING RECORD  AMOUNT PULLED  19. ELEV CASING RECORD  NO  CASING RECORD  RECORD  SOCIOLAR HIGH STRING RECORD  AMOUNT PULLED  19. ELEV CASING RECORD  NO  CASING RECORD  SOCIOLAR HIGH STRING RECORD  AMOUNT PULLED  10. TUBING RECORD  10. TUBIN	orm 3160-4 July 1992)	r	DEPAR		-	TERIO			^	4 -	itraat		OVED CIS 1				
WELL COMPLETION OR RECOMPLETION REPORT AND LOG *  TYPE OF WELL  OIL  GAS  WELL  WELL  DRY  OTHER  TO OTHER  TO OTHER  TO OTHER  TO OTHER  TO UNIT AGREEMENT NAME  TO OTHER  TO UNIT AGREEMENT NAME  Grayburg Jackson PSU  8. IF INDIAN, ALLOTTEE OR TRIBE NAME  TO UNIT AGREEMENT NAME  TO UNIT AGREEMENT NAME  TO UNIT AGREEMENT NAME  GRAYBURG Jackson PSU  8. FARM OR LEASE NAME, WELL NO.  MA No. 9  8. API WELL NO.  8. FARM OR LEASE NAME, WELL NO.  MA No. 9  8. API WELL NO.  8. FARM OR LEASE NAME, WELL NO.  MA No. 9  8. API WELL NO.  8. API WELL NO.  9. API WELL NO.  GRAYBURG Jackson. TR-QN-GB-SA  11. SEC. T. R., M., OR BLOCK AND SURVEY  OR AREA  12. COUNTY OR PARISH  13. STATE  Eddy  NM  14. PERMIT NO.  15. DATE TO REACHED  08/01/00  08/07/00  0			BURE	AU OF LAND	MANAGE	MENT											
TYPE OF WELL		WELL COM	PI FTI	ON OR REC	OMPLETI	ON RE	PORT ANI	D LOG	<del> </del>								
TYPE OF COMPLETION  NEW WORK DEEP- PLUG DIFF  WELL X OVER EN BACK RESVR OTHER  AROC (Texas) Inc.  ADDRESS AND TELEPHONE NO. 207 West McKay, Carlsbad, NM 88220 505-885-5433 RECEIVED  207 West McKay, Carlsbad, NM 88220 505-885-5433 RECEIVED  As surface  1840' FSL & 1680' FEL, Unit J  At loop frod, interval reported below  At loop frod, interval reported below  At loop frod, Inc.  At lo	a. TYPE OF WELL	C	NL	GAS							6. IF INDIAN, ALLOT	TEE OR TRIBE	ENAME				
NAME OF OPERATOR   AROC (Texas) Inc.   AROC (Texas) Inc.   ADDRESS AND TELEPHONE NO.   207 West McKey, Carisbad, NM 88220   505-885-5433   OLD   ARTLESIA   AROC (Texas) Inc.   30-015-31272   10. FIELD AND POOL, OR WILDCAT   Grayburg Jackson. 7R-QN-GB-SA   1840' FSL & 1680' FEL, Unit J   Al total depth   14. PERMIT NO.   DATE ISSUED   12. COUNTY OR PARISH   13. STATE   Eddy   NM   NM   NM   NM   NM   NM   NM   N																	
NAME OF OPERATOR   AROC (Texas) Inc.   ADDRESS AND TELEPHONE NO.   207 West McKay, Carlsbad, NM 88220   505-885-5433   RECEIVED   10. FIELD AND POOL, OR WILLCAT   Grayburg Jackson. 7R-QN-GB-SA	NEW	WORK	DEEP-	PLUG	DIFF	: _	_	1.		2							
AROC (Texas) Inc.  ADDRESS AND TELEPHONE NO. 207 West McKay, Carlsbad, NM 88220  505-885-5433  RECEIVED  10. FIELD AND POOL, or WILDCAT Grayburg Jackson. 7R-QN-GB-SA  11. SEC., T., R., M., OR BLOCK AND SURVEY OR AREA  11. SEC., T., R., M., OR BLOCK AND SURVEY OR AREA  11. SEC., T., R., M., OR BLOCK AND SURVEY OR AREA  12. COUNTY OR PARISH 13. STATE Eddy NM  14. PERMIT NO. DATE ISSUED 12. COUNTY OR PARISH 13. STATE Eddy NM  14. PERMIT NO. DATE ISSUED 15. DATE SUED 16. DATE TO REACHED 17. DATE COMP (Ready to Prod.) 18. ELEVATION (OF, RKB, RT, GR, ETC') 19. ELEV. CASINGHEAD  19. CASING SIZE/GRADE 19. WAS DIRECTIONAL SURVEY MADE Yes  19. CASING RECORD 19. WAS WELL CORED NO  10. TOTAL DEPTH, MD & TVD 10. TOTAL DEPTH, MD & TVD 11. PLUGBACK TD, MD & TVD 12. IF MULTIPLE COMP. HOW MANY' 13. INTERVALS DRILLED BY 24. WAS DIRECTIONAL SURVEY MADE Yes  17. WAS WELL CORED NO  18. CASING SIZE/GRADE 19. WEIGHT LB/FT 19. DEPTH SET (MD) 19. LINER RECORD 19. SACKS CEMENT' 19. SCREEN (MD) 19. SIZE 10. DEPTH SET (MD) 19. PACKER SET (MD) 19. SACKS CEMENT' 19. SCREEN (MD) 19. SIZE 10. DEPTH SET (MD) 19. PACKER SET (MD) 19. PACKER SET (MD) 19. PACKER SET (MD) 19. SACKS CEMENT' 19. SCREEN (MD) 19. SIZE 10. DEPTH SET (MD) 19. PACKER SET (MD) 19. SACKS CEMENT' 19. SCREEN (MD) 19. SACKS CEMENT' 19. SACKS CEMENT SACKS CEMENT' 19. SACKS CEMENT SACKS CEMENT' 19. SACKS CEMENT	WELL X	OVER	EN	BACK	RES	VR L	OTHER		<b>\</b>	<u> </u>	8. FARM OR LEASE	NAME, WELL	NO.				
ADDRESS AND TELEPHONE NO.   207 West McKay, Carlsbad, NM 88220   505-885-5433   OCD   ARTESTA   10. FIELD AND POOL, OR WILLCAT   Grayburg Jackson. 7R-QN-GB-SA   11. SEC. T. R. M., OR BLOCK AND SURVEY   OR AREA   11. SEC. T. R. M., OR BLOCK AND SURVEY   OR AREA   11. SEC. T. R. M., OR BLOCK AND SURVEY   OR AREA   11. SEC. T. R. M., OR BLOCK AND SURVEY   OR AREA   12. COUNTY OR PARISH   13. STATE   13. STATE   14. PERMIT NO.   DATE ISSUED   12. COUNTY OR PARISH   13. STATE   13. STATE   14. PERMIT NO.   OR/O1/00   OR/O1/00   OR/O1/00   OR/O2/400   OR/O	. NAME OF OPERA	TOR					7		- • 100 - 1	150/	i						
207 West McKay, Carlsbad, NM 88220 505-885-5433 (CLT VT) 10. FIELD AND POOL, OR WILDCAT Grayburg Jackson. 7R-QN-GB-SA 1. Sec. T., R., M., OR BLOCK AND SURVEY OR AREA 1. Sec.	ARC	OC (Texas)	Inc.				1704.		1000	6)		20 045 24	1070				
LOCATION OF WELL   (Report location clearly and in accordance with any State requirem (sts.*)   ARTESTA   Caryburg Jackson. 7R-QN-GB-SA							- Noo	REC	EIVED	272							
At surface  1840' FSL & 1680' FEL, Unit J  At lotal depth  14. PERMIT NO. DATE ISSUED  15. COUNTY OF PARISH 13. STATE Eddy  NM  5. DATE SPUDDED  08/01/00  08/07/00  18. ELEVATION (OF, RKB, RT, GR, ETC') 19. ELEV. CASINGHEAD 3631'  ROTARY TOOLS  CABLE TOOLS  ORBIT TOOLS							+	)(:[ <del>)</del>	ARTESIA	<u>~~~~/</u>		•					
18.40° FSL & 1680° FEL, Unit J At top prod. intervisi reported below  At total depth  14. PERMIT NO.  DATE ISSUED  12. COUNTY OR PARISH  13. STATE Eddy  NM  5. DATE SPUDDED  08/07/00  19. ELEV. CASINGHEAD  09. ELEV. CASI	LOCATION OF WI	ELL '(Rep	ort locatio	n clearly and in acc	ordance with a	ny State re	quirements *)			- ¿%/							
At total depth  At total depth  14. PERMIT NO. DATE ISSUED  12. COUNTY OR PARISH Eddy NM  5. DATE SPUDDED  18. DATE TD REACHED  08/01/00  08/07/00  08/07/00  08/024/		0.401.001.0	169011	EEI Unit 1			ं क्		,	$\varsigma^{{\cal O}_{i,j}^{(r)}}$	l .						
14. PERMIT NO.   DATE ISSUED   12. COUNTY OR PARISH   13. STATE   Eddy   NM				ret, Unit J			``.` <b>.</b> <	300	E 7153		OR AREA						
Eddy   NM	At top prod. inter	var reported belov	•					*****	100								
08/01/00	At total depth					14. F	PERMIT NO.	DAT	E ISSUED			JRISH 13					
0. TOTAL DEPTH, MD & TVD  0. TOTAL DEPTH, MD & TVD  3650'  3570'  4. PRODUCING INTERVAL (S), OF THIS COMPLETION - TOP, BOTTOM, NAME (MD AND TVD*)  6. TYPE ELECTRIC AND OTHER LOGS RUN  GR-DLL-MLL, GR-CDL-CNL-CAL, GR-CBL-CCL  8. CASING RECORD (Report all strings set in well)  CASING SIZE/GRADE WEIGHT LB/FT DEPTH SET (MD) HOLE SIZE TOP OF CEMENT, CEMENTING RECORD AMOUNT PULLED  8. 51/2"  10. TOTAL DEPTH, MD & TVD  22. IF MULTIPLE COMP., HOW MANY*  23. INTERVALS ROTARY TOOLS CABLE TOOLS  AD III  25. WAS DIRECTIONAL SURVEY MADE  26. WAS DIRECTIONAL SURVEY MADE  27. WAS WELL CORED  NO  27. WAS WELL CORED  NO  28. TOP OF CEMENT, CEMENTING RECORD AMOUNT PULLED  8. 5/8"  24#  511'  12. 1/4"  400 sx - circulated none  51/2"  10. TUBING RECORD  SIZE TOP (MD) BOTTOM (MD) SACKS CEMENT* SCREEN (MD) SIZE DEPTH SET (MD)  PACKER SET (MD)  PACKER SET (MD)  PACKER SET (MD)  PACKER SET (MD)	15. DATE SPUDDED	,	16. DATE	TD REACHED	17. DATE CO	OMP	(Ready to Prod	.) 18.	ELEVATION	(DF, RKB, F	RT, GR, ETC*)	19. ELEV.	CASINGHEAD				
3650' 3570'  HOW MANY*  DRILLED BY  all  25. WAS DIRECTIONAL SURVEY MADE  3027' - 3227' (Grayburg Premier)  6. TYPE ELECTRIC AND OTHER LOGS RUN  GR-DLL-MLL, GR-CDL-CNL-CAL, GR-CBL-CCL  8. CASING RECORD (Report all strings set in well)  CASING SIZE/GRADE WEIGHT LB/FT DEPTH SET (MD) HOLE SIZE TOP OF CEMENT. CEMENTING RECORD AMOUNT PULLED  8 5/8"  24#  511'  12 1/4"  400 sx - circulated none  5 1/2"  15.5 #  3650'  7 7/8"  1075 sx - circulated none  SIZE TOP (MD BOTTOM (MD) SACKS CEMENT* SCREEN (MD) SIZE DEPTH SET (MD) PACKER SET (MD)  27 WAS WELL CORED  NO  10 NO  11 NO  12 TUBING RECORD  10 PACKER SET (MD)  PACKER SET (MD)  27 WAS WELL CORED  NO  27 WAS WELL CORED  NO  10 NO  11 NO  12 TUBING RECORD  13 3316'			0	8/07/00		08/24	/00			363	1'	<u> </u>					
3650' 3570'  A. PRODUCING INTERVAL (S), OF THIS COMPLETION - TOP, BOTTOM, NAME (MD AND TVD")  25. WAS DIRECTIONAL SURVEY MADE  Yes  6. TYPE ELECTRIC AND OTHER LOGS RUN  GR-DLL-MLL, GR-CDL-CNL-CAL, GR-CBL-CCL  8. CASING RECORD (Report all strings set in well)  CASING SIZE/GRADE WEIGHT LB/FT DEPTH SET (MD) HOLE SIZE TOP OF CEMENT, CEMENTING RECORD AMOUNT PULLED  8 5/8"  5 1/2"  15.5 #  3650'  7 7/8"  1075 sx - circulated none  15.5 #  SIZE  TOP (MD  BOTTOM (MD)  SACKS CEMENT SCREEN (MD)  SIZE  DEPTH SET (MD)  PACKER SET (MD)  PACKER SET (MD)	20. TOTAL DEPTH,	MD & TVD	21. Pl	UGBACK TD, MD	& TVD			٥.,			ROTAR	Y TOOLS	CABLE TOOLS				
3027' - 3227' (Grayburg Premier)   Yes	3650'	3650' 3570'				HOW MANY				D BY	all						
6. TYPE ELECTRIC AND OTHER LOGS RUN GR-DLL-MLL, GR-CDL-CNL-CAL, GR-CBL-CCL  8.	24. PRODUCING IN	ITERVAL (S), OF	THIS COM	APLETION - TOP, E	SOTTOM, NAM	NE (MID AN	D TVD*)				25. WAS DIRECTIC	NAL SURVEY	MADE				
10   10   10   10   10   10   10   10	3027' - 32	27' (Graybui	rg Pren	nier)							Yes						
CASING RECORD (Report all strings set in well)   CASING SIZE/GRADE	26. TYPE ELECTRIC AND OTHER LOGS RUN					·		27			1						
CASING SIZE/GRADE         WEIGHT LB/FT         DEPTH SET (MD)         HOLE SIZE         TOP OF CEMENT, CEMENTING RECORD         AMOUNT PULLED           8 5/8"         24#         511'         12 1/4"         400 sx - circulated         none           5 1/2"         15.5 #         3650'         7 7/8"         1075 sx - circulated         none           9.         LINER RECORD         30.         TUBING RECORD           SIZE         TOP (MD         BOTTOM (MD)         SACKS CEMENT*         SCREEN (MD)         SIZE         DEPTH SET (MD)         PACKER SET (MD)           2 7/8"         3316'         3316'         NO.         3316'         NO.	GR-DLL-M	ILL, GR-CD	L-CNL	-CAL, GR-C	BL-CCL							40					
8 5/8" 24# 511' 12 1/4" 400 sx - circulated none 15.5 # 3650' 7 7/8" 1075 sx - circulated none 1075 sx - circulated none 15.5 # 3650' 5 1/2" 30. TUBING RECORD SIZE TOP (MD BOTTOM (MD) SACKS CEMENT* SCREEN (MD) SIZE DEPTH SET (MD) PACKER SET (MD) 2 7/8" 3316'	28.	CASING RECORD (Report all strings set in we															
5 1/2"  15.5 # 3650' 7 7/8" 1075 sx - circulated none  9. LINER RECORD 30. TUBING RECORD  SIZE TOP (MD BOTTOM (MD) SACKS CEMENT* SCREEN (MD) SIZE DEPTH SET (MD) PACKER SET (MD)  2 7/8" 3316'	CASING SIZE	E/GRADE	WEIGHT LB/FT DEPTH SE			ET (MO) HOLE SIZE						**********					
SIZE TOP (MD BOTTOM (MD) SACKS CEMENT SCREEN (MD) SIZE DEPTH SET (MD) PACKER SET (MD 2 7/8" 3316'				1				•									
SIZE TOP (MD BOTTOM (MD) SACKS CEMENT SCREEN (MD) SIZE DEPTH SET (MD) PACKER SET (MD)  2 7/8" 3316'	29.			LINER R	ECORD		L		30								
								· · · · · · · · · · · · · · · · · · ·				PACKER SET (M					
ACID SHOT EDACTIBE CEMENT SOLIETE ETC										2 7/8"	331	<u>6'</u>					
13 PERFORATION RECORD (Interval. size, and number) [32. ACID, SHOT, FRACTURE, CEMENT, SQUEEZE, ETC.		250000	/tat	val. size. and numb			3.	2	ACIF	SHOT	FRACTURE, CF	MENT. SOU	EEZE. ETC.				

AMOUNT AND KIND OF MATERIAL USED

09/08/00

3027' 28', 56', 57	', 59', 98', 99', 31	29', 30', 37', 38', 4	45', 46', 47', 50',	3601'-	3614'	Acid w/2500 gals 15% NEFE					
		4 <sup>+</sup> , 27 <sup>+</sup> (Grayburg F		3027'-	3227'	Acid w/2500 gals 15% NEFE					
3601', 09', 10', 12	2, 14' (San Andre	es) 29 total holes	•			Frac w/44,940 gals 20# 140 Delta					
	' '	•				w/70,000# 16/	30 & 30,000# 12/20				
33.*				PRODUCTION							
DATE FIRST PRODUCTI	ON	PRODUCTION METHOD	(Flowing, gas lift,	pumping - size and typ	e of pump)	WELL STATUS (Producing or Shut In)					
08/25/00		Pumpir	ng			Producing					
DATE OF TEST HOURS TESTED CHOKE SIZE			PRODN FOR OIL - BBL		GAS - MCF	WATER - BBL	GAS-OIL RATIO				
			TEST PERIOD								
08/29/00 24				<u> 51 2</u> 51 2		240	490				
FLOW TBG PRESS	CASING PRESSUR	E CALCULATED	OIL - BBL	GAS - MCF	WATER - BBL	. OIL GRAVITY - A	VPI (€ORR.)				
		24-HOUR RATE	PETE	R W. CHE		37.0 °					
34. DISPOSITION OF G. Sold to D	AS (Sold, used uke Energy (GPN	for fuel, vented, etc.) (A)	بر د د	R W. CHESTI	ER Mr. W	ssed by /ade White					
35. LIST OF ATTACHME	tidad Suprey		OCT		1						

DEPTH INTERVAL (MD)

Project Manager

See Instructions and Spaces for Additional Data on Reverse Side) Title 18 U.S.C. 1001, makes it a crime for any person knowingly and willfully to make to any department or age es any faise, fictitious or fraudulent statements

or representations as to any matter within its jurisdiction

	San Andres	Grayburg	Queen	7-Rivers	FORMATION	37. SUMMARY OF POROUS drill-stem tests, including recoveries):
	3230'	2814'	2390'	1934'	TOP	SZONES: (Show depth interval tes
	3650'	3230'	2814'	2390'	воттом	all important zones ited, cushion used,
					DESCRIPTION, CONTENTS, ETC.	SUMMARY OF POROUS ZONES: (Show all important zones of porosity and contents thereof; cored intervals; and all drill-stem tests, including depth interval tested, cushion used, time tool open, flowing and shut-in pressures, and recoveries):
		Grayburg San Andres	7-Rivers		NAME	GEOL
50:11:03 (11:03)		2814' 3230'	1934'	MEAS DEPTH VERT DEPTH	ТОР	GEOLOGIC MARKERS



## PATTERSON DRILLING COMPANY LP

– A LIMITED PARTNERSHIP –

410 North Loraine Street • Midland, Texas 79701 (915) 682-9401 • Fax (915) 682-1565

August 15, 2000

AROC (Texas), Inc. c/o Shahara Oil, LLC Attn: Perry Hughes 207 W. McKay Carlsbad, New Mexico 88220

Re:

**Deviation Report** 

Grayburg Jackson PSU # MA 9

## Gentlemen:

The following is a deviation survey on the above-referenced well located in Eddy County, New Mexico.

481' – 1.50	2363' – 1.00
789' – 0.50	2855' - 1.50
1098' - 0.50	3345' - 2.00
1375' - 0.50	3650' - 3.50
1868' - 0.75	

Sincerely,

Treva Forrester

STATE OF TEXAS

COUNTY OF MIDLAND

The foregoing was acknowledged before me this 15<sup>th</sup> day of August, 2000 by Treva Forrester.

MY COMMISSION EXPIRES:

NOTARY PUBLIC

REBECCA EDWARDS
Notary Public
STATE OF TEXAS
My Comm. Exp. 07/24/2003