

February 2, 1996

William LeMay, Director Oil Conservation Division 2040 South Pacheco Street Santa Fe, New Mexico 87505

Attention: Mr. Ben Stone

Dear Mr. Stone:

Marbob Energy Corporation respectfully requests an administrative approval without hearing of an expansion of the Burch-Keely Waterflood pursuant to Order No. R-7900-A of the New Mexico Oil Conservation Division. The area of expansion is described below:

### Township 17 South, Range 30 East, N.M.P.M.

Section 19: SE/4, E/2SW/4, NW/4SW/4

The SW/4SW/4 of Section 19 was included in the original Waterflood Order. The proposed expansion is necessary for the Burch-Keely Unit to obtain maximum hydrocarbon production and to minimize waste over the life of the field.

Attached to this application are all of the necessary exhibits defining and supporting this request. All offset operators have been notified along with the surface owner and grazing lessee. Notice of the proposed waterflood expansion has also been published in the Artesia Daily Press.

Thank you very much for your help in this matter. Should you have any further questions or require any additional information, please contact myself or Raye Miller.

Sincerely,

David Martin Land Department

a Marti

DM/mm

### BEFORE THE NEW MEXICO OIL CONSERVATION DIVISION APPLICATION FOR ADMINISTRATIVE APPROVAL MARBOB ENERGY CORPORATION FOR CONVERSION TO WATER INJECTION FOR WATER FLOODING THE BURCH KEELY FEDERAL UNIT EXPANSION PROJECT

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DISTRIBUTION: Original rad or

### OIL CONSERVATION DIVISION

POST OFFICE BOX 2008 STATE LAND OFFICE BUILDING SANTA FE. NEW MEXICO 87501 FORM C-108 Revised 1-1-81

Ι.	Purpose: X Seco	ndary Recovery Pressure lifies for administrative app	Maintenance Disposal Storage proval? Disposal
II.	Operator: Marbo	b Energy Corporation	
	Address: P. O.	Box 227, Artesia, New Mexi	co 88211 <b>-</b> 0227
	Contact party:		Phone: 505/748-3303
111.			reverse side of this form for each well I sheets may be attached if necessary.
ΙV.	Is this an expansi If yes, give the D	on of an existing project? Division order number authori	xx yes in R-7900-A zing the project
٧.	injection well wit	identifies all wells and lea th a one-half mile radius cir e identifies the well's area	ses within two miles of any proposed cle drawn around each proposed injection of review.
VI.	penetrate the prop well's type, const	posed injection zone. Such d	blic record within the area of review which ata shall include a description of each ion, depth, record of completion, and ll plugging detail.
VII.	Attach data on the	e proposed operation, includi	ng:
	2. Whether the second of the record of the second of the s	ne system is open or closed; average and maximum injection and an appropriate analysis of eiving formation if other thation is for disposal purposes ithin one mile of the propose	injection fluid and compatibility with n reinjected produced water; and into a zone not productive of oil or gas d well, attach a chemical analysis of ay be measured or inferred from existing
III.	detail, geological bottom of all undo total dissolved se	l name, thickness, and depth. erground sources of drinking olids concentrations of 10,00 well as any such source know	ction zone including appropriate lithologic Give the geologic name, and depth to water (aquifers containing waters with O mg/l or less) overlying the proposed n to be immediately underlying the
IX.	Describe the prop	osed stimulation program, if	any.
х.		e logging and test data on th they need not be resubmitted	e well. (If well logs have been filed
XI.	avai!able and pro	analysis of fresh water from ducing) within one mile of an and dates samples were taken	two or more fresh water wells (if y injection or disposal well showing •
XII.	examined availabl	e geologic and engineering da ologic connection between the	irmative statement that they have ta and find no evidence of open faults disposal zone and any underground
III.	Applicants must c	omplete the "Proof of Notice"	section on the reverse side of this form.
XIV.	Certification		
	to the best of my	knowledge and belief.	d with this application is true and correct
			Title
	Signature:		Date:

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### III. WELL DATA

- A. The following well data must be submitted for each injection well covered by this application. The data must be both in tabular and schematic form and shall include:
  - (1) Lease name; Well No.; location by Section, Township, and Range; and footage location within the section.
  - (2) Each casing string used with its size, setting depth, sacks of cement used, hole size, top of cement, and how such top was determined.
  - (3) A description of the tubing to be used including its size, lining materia , and setting depth.
  - (4) The name, model, and setting depth of the packer used or a description of any other seal system or assembly used.

Division District offices have supplies of Well Data Sheets which may be used or which may be used as models for this purpose. Applicants for several identical well: may submit a "typical data sheet" rather than submitting the data for each well.

- B. The following must be submitted for each injection well covered by this application. All items must be addressed for the initial well. Responses for additional wells reed be shown only when different. Information shown on schematics need not be repeated.
  - (1) The name of the injection formation and, if applicable, the field or pool name.
  - (2) The injection interval and whether it is perforated or open-hole.
  - (3) State if the well was drilled for injection or, if not, the original purpose of the well.
  - (4) Give the depths of any other perforated intervals and detail on the sacks of cement or bridge plugs used to seal off such perforations.
  - (5) Give the depth to and name of the next higher and next lower oil or gas zone in the area of the well, if any.

### XIV. PROOF OF NOTICE

All applicants must furnish proof that a copy of the application has been furnished, by certified or registered mail, to the owner of the surface of the land on which the well is to be located and to each leasehold operator within one-half mile of the well location.

Where an application is subject to administrative approval, a proof of publication must be submitted. Such proof shall consist of a copy of the legal advertisement which was published in the county in which the well is located. The contents of such advertisement must include:

- (1) The name, address, phone number, and contact party for the applicant;
- (2) the intended purpose of the injection well; with the exact location of sirgle wells or the section, township, and range location of multiple wells:
- (3) the formation name and depth with expected maximum injection rates and pressures; and
- (4) a notation that interested parties must file objections or requests for hearing with the Oil Conservation Division, P. O. Box 2088, Santa Fe, New Mexico 87501 within 15 days.

NO ACTION WILL BE TAKEN ON THE APPLICATION UNTIL PROPER PROOF OF NOTICE HAS BEEN SUBMITTED.

NOTICE: Surface owners or offset operators must file any objections or requests for hearing of administrative applications within 15 days from the date this application was mailed to them.

### APPLICATION FOR AUTHORIZATION TO INJECT

### MARBOB ENERGY CORPORATION

Proposed Injectors: Burch-Keely Unit No. 94

Burch-Keely Unit No. 95 Burch-Keely Unit No. 97 Burch-Keely Unit No. 100 Burch-Keely Unit No. 101 Burch-Keely Unit No. 101 Burch-Keely Unit No. 102

### III. WELL DATA (existing)

A. See Injection Well Data Sheet

All proposed injectors will be equipped with 2-3/8", 4.7 lb/ft, plastic lined tubing with a Halliburton R-4 or AD-1 plastic coated packer set approximately 50' above the top perforation.

### B. Reservoir Data

- 1. Injection Formation: Grayburg and San Andres (Grayburg-Jackson Field)
- 2. Proposed Injection Intervals: See Table of Injection Wells.
- 3. Original purpose of 7 proposed injectors: Grayburg and San Andres production.
- 4. Other perforated intervals in 7 proposed injectors: None outside Grayburg and San Andres formations.
- 5. Productive Zones:

Next Higher: Seven Rivers @ ±1500' & Queen @ ±1800'

Next Lower: None

### VII. PROPOSED INJECTION OPERATIONS

1. Injection Rate: Average = 250 bwpd/well Proposed maximum injection rate: 900 psi

- 2. Injection System: Closed
- 3. Injection Pressure: Average = 900 psi

As per Unit Agreement.

Well	Proposed Max Surf Inj Pressure
Burch-Keely Unit No. 94	900 psi
Burch-Keely Unit No. 95	900 psi
Burch-Keely Unit No. 97	900 psi
Burch-Keely Unit No. 98	900 psi
Burch-Keely Unit No. 100	900 psi
Burch-Keely Unit No. 101	900 psi
Burch-Keely Unit No. 102	900 psi

4. Injection Fluid: Produced water from the Burch-Keely Unit.

Make-up water will be purchased from the City of Carlsbad if needed.

### VIII. GEOLOGIC DATE

### A. Injection Zone

- 1. Name: Grayburg and San Andres
- 2. Lithology: Fine grained sandstone w/dolomitic cement changing to dolomite w/ anhydritic veins.
- 3. Thickness: +1250'
- 4. Depth: +2250' +3700'
- B. Fresh Water Sources: Oogalala aquifer @ +300'

### IX. PROPOSED STIMULATION PROGRAM

The Grayburg and San Andres formations will be treated with a solution of 15% NEFE HC1 acid and an aromatic solvent. The volume of each treatment will be approximately 75 gallons per foot of pay.

### X. LOGGING DATA

Well logs for this well have been filed with the Division.

### XI. FRESH WATER ANALYSIS

No fresh water wells produce within one mile of any of the seven proposed injectors.

### XIII. PROOF OF NOTICE

A copy of this application has been furnished to the land owner of the land on which the seven proposed water injection wells are located and the leasehold operators within the Area of Review. Also, a notice has been published in the Artesia Daily Press, Artesia, New Mexico.

# BURCH-KEELY WATERFLOOD PROPOSED INJECTION WELLS

WELL #	LOCATION	TD PBID	TYPE & DATE DRILLED	SIZE	SZ CAS	CASING SZ WT	SETTING DEPTH	SX CMT	ТОС	PACKER DEPTH	PERFS
BKU #94	1650 FSL 2970 FEL 19-17S-30E	3600	OIL 07-31-77	12 1/4 7 7/8	8 5/8 5 1/2	20# 15.5#	478' 3600'	300 575	CIRC(C)		1601 – 1607 2490 – 3552
BKU #95	2310 FSL 2310 FEL 19-17S-30E	3612	OIL 06-13-39	11 7 7/8 6 1/4	8 1/4 7 4 1/2	32# 20# 9.5#	478' 2706' 2682–3610'	50 100 220			2489-3542
BKU #97	2615 FSL 1295 FEL 19-17S-30E	3240	OIL 11-22-49	12 1/4 7 7/8	8 5/8 7	24# 20#	506' 2976'				2510-3240
BKU #98	1650 FSL 760 FEL 19-17S-30E	3410 (3404)	OIL 10-08-74	12 1/4 7 7/8	8 5/8 4 1/2	20# 10.5#	495' 3410	100 600			2443-3366
BKU #101	330 FSL 1650 FEL 19-17S-30E	3450 (3445)	OIL 05-05-73	12 1/4 7 7/8	8 5/8 4 1/2	20# 9.5#	511' 3450'	100 300	CIRC(C)		2566-3326
BKU #100	660 FSL 660 FEL 19-17S-30E	3287	OIL 01-14-43	7 11	8 1/4 7 7/8	32# 24#	510' 2630'	50 100			1656—1661 2563—3273
BKU #102	990 FSL 2310 FEL 19-17S-30E	3246	OIL 09-02-41	12 1/4 7 7/8	8 5/8 7	24# 20#	560' 2734'	50 100		2956'	2598-3246

OFERATOR		LEASE		
Marbob E	nergy Corporation	Burch-Keely U	Init Thunshir	RANI,
94	1650' FSL & 2970'	Surface Casing  Size 8 5/8  TOC Surface  Hale size 12 1/4  Intermediate Casing  Size  TOC  Hale size  Long string  Size 5 1/2  TOC N/A  Hale size 7 7/8  Total depth 3600	Tobular Data  "Commented with feet determined by fe	30E  h 300 ax. Circulated
Tubing si	5 1/2 @ 3600' TD @ 3600'	od with $\frac{P1}{m}$	astic coated	αet in a
	LLIBURTON R-4	****	r at2940 + o	r - feet
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160	the well ever been perform give plugging detail (sack 01-1607 (Seven River: 39-3208 (Lovington),	s), 2490-2500 (L	oco Hills), 256	
	JJ JEGO (EGVINGEON);		undaelylaa oil or as	a specificatel

OFERATOR		LEASE			
	Energy Corporation	Burch-Keely Unit			
WELL NO.	FOOTAGE LUCATION	SECTION	TORNSITT	RANGE	
95	2310' FSL & 2310'	FEL 19	17S	30E	

	Schematic		Tabular Data		
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tubi	ng size 2 3/8 11	ned with	plastic line	d	met in a
1001	Halliburton R-4		(moterial)		
	(brand and model)		, pocket at		, 555
	describe any other coming-tub	ing meal).			
Othe	or Data	1 Ta 1			
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	Name of Field or Pool (if app				
3.	is this a new well drilled for				
	if no, for what purpose was	the well original	ly drilled? Oil	& Gas pr	oduction
4.	Has the well ever been perfo and give plugging detail (eac 2489-2496 (Loco Hills	cks of coment or	bridge plug(s) use	d)	<del></del>
	3300-3307 (Lower San	Andres), 349	L-3542 (Metex)		
3.	Give the depth to and name of this area. 2846-2894 I	f any averlying a ovington 3	nd/or undorlyling o 491-3542 Keely	il or gas	tones (poels) in

CRATUR			LEASE		
	Energy Cor	poration	Burch-Keely		
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	C		2970 - 0240		
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	2 3	TD @ 3240'	d withplas	stic coated (moterful) kor at 2940	
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or challer	LEASE		-
Marbob Energy Corporation	Burch-Keely	Unit	
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(or describe any other casing-tubi	ing seal).		
Other Data			
1. Name of the injection formation	Jackson		
2. Name of Field or Pool (if app	licable) Graybu	rg Jackson	
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If no, for what purpose was t	he well originally	drillod? Oil and Gas	Production.
4. Has the well ever been perfor and give plugging detail (see	uted in any other z	one(a)? List all such p dge plug(a) used)	perforated interva
2443-2550 (Loco Hills			Hobbs Vacuum),

2924-2932 (Lovington), 3246-3254 (Jackson), 3362-3366 (Lower San Andres)

5. Give the depth to and name of any overlying and/or underlying oil or gas zones (pools) in

OPERATOR		LEASE		
Marbob Er	nergy Corporation	Burch-Keely	Unit	
WELL NO.	FOUTAGE LUCATION	SECTION	TOWNSTILE	RANGE
100	660' FSL & 660'	FEL 19	17S	30E
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	Halliburton R-4	•	naterial) or at3200 -	
(b	rand and model)			
(or descri	be any other coming-tu	bing seel).		
Other Date		To a large		
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2. Name o	of field or Pool (if m	onlicable) Graybu	rg Jackson	
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<u>3065</u>	5-3070 (Lovington	), 3252-3273 (Jack	son)	· <del></del>
5. Give		of any overlying and/or		pas zones (pools) in

arbob Energy				
LL NO. TOO	<i>C</i> orporation	Burch-Keely U	Jnit	
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•	TD @ 3450'	,		
	PBTD @ 344	5'		
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	burton R-4	(•	naterial) or at <u>3100 + o</u>	r – feet
(brand)	and model)			7
(or describe an	ny other coming-tubl	ng meml).		
Other Data	•			
		n Jackson		
2. Name of Fig.	eld or Pool (if appl	icoble) Grayburg	Jackson	<del> </del>
		injection? /7 Yes		
If no, for	what purpose was th	ne well originally dri	110d? Oil and ga	as production
			/-\2	
	11 ever been perfor	ated in any other zone	n(a)? List all suc! Polya(s) used)	perforated intervo
4. Has the we	lugging detail (mac	RE OF COMMITTEE OF INTERNAL	, 1,10,1,0, 0,000,	<del></del>
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and give p 2566-25	lugging dotail (mac			

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	rgy Corporation	Burch-Ke	eely Unit		
III no.	rgy Corporation	SCOTT	ÚN	10482015	RANLE
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	990' FSL & 2310'	Surface Cost Size 8 Toc Surfat Hole size Intermediate Size Toc Mud Hole size Total depth Injection in	Tabular   15/8	Comented with determined by  Comented with determined by	30E  50 ox. circulated
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	) ) ) TD 3246'				
Tubing size	) ) ) TD 3246'	ned with	plastic co	pated	uet in a
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Hall	2 3/8 110 liburton R-4 and and model)		(moteria	11)	
Hall	2 3/8 110		(moteria	11)	
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Hall (or describ Other Data 1. Name of 2. Name of 3. Is this If no,	2 3/8 1ind in the injection formation of the injection formation for what purpose was for wha	ing seel).  on	Jackson  Grayburg Jac  /7 Yes XX  molly drilled?	2660  ckson  V No  Oil and ga	feet  as production
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Hall (or describ  Other Data  1. Name of  2. Name of  3. Is this If no,  4. Hon th ond gi  2598	2 3/8 1ind in the injection formation of the injection formation for what purpose was for wha	ing seel).  on	Jackson Grayburg Jac  /7 Yes XX  nolly drilled?  ther zone(a)? or bridge plug(	2660  2kson  No  Oil and ga  List oil such ;  o) used) Oper  ills), 2672-	feet as production conforated interval Hole

P/A

T/A

								20-170-90E		
2688 — 3280		50 100	530' 2688'	8 5/8 @ 28# 7 @ 24#	10 8 1/4	OIL 37	3500	2310 FSL 1650 FWL	Ν	MCINTYRE E
NO PLUGGING INFO		75 100	533' 3006'	8 5/8 7	10 8	OIL - P & A 07-26-44	3428	660 FSL 1980 FWL 20-17S-30E	თ	MCINTYRE D
1652 - 1688 2560 - 3342		275 325	479' 3447'	8 5/8 5 1/2	12 1/4 7 7/8	OIL 05-22-78	3443 (3435)	1300 FSL 330 FWL 20-17S-30E	4	MCINTYRE B
NO INFO	NFO NFO	NFO O	NO INFO	NO INFO	INFO NO	은	3621	660 FSL 660 FWL 20-17S-30E	N	MCINTYRE B LC-06099
1659 1696 1808 1902 2988 3420		300 575	478' 687' 2778'	8 5/8 @24# 5 1/2 @15.5# 5 1/2 @14#	12 1/2 7 7/8	OIL 04-25-78	3465 (3439)	1650 FSL 990 FWL 20-17S-30E	ω	MCINTYRE B
2640 — 3296		INFO	NO INFO	NO INFO	INFO NO	OIL 0138	3296	2310 FSL 330 FWL 20-17S-30E	_	MCINTYRE B
1698 — 1735 3058 — 3398		325 760	481' 3446'	8 5/8 5 1/2	NFO NO	OIL 05-23-78	3446	330 FNL 330 FWL 29-17S-30E	_	BENSON
11101-129	SURFAC 940'	487 t 1335 790	500' 3487' 11371'	13 3/8 8 5/8 5 1/2	) 171/2 12 1/4 7 7/8	GAS(MORROW) 06-20-77	11400 ( (11287)	1650 FSL 1980 FWL 20-17S-30E	7-A FINC STE. 500 X 76308	MCINTYRE 7-A SABRE OPERATING INC 4301 MAPLEWOOD STE. 500 WITCHITA FALLS, TX 76308
PERFS	10C	SX	SETTING DEPTH	CASING SZ & WT	SIZE	TYPE & DATE DRILLED	TD PBTD	LOCATION	WELL#	LEASE

Attachment C-108 VI

10891 – 10960		500 2500 1050	429' 3510' 11240'	13 3/8 @ 54.5# 8 5/8 @ 32# 5 1/2 @ 17#	17 1/2 11 7 7/8	GAS (PENN) 12-31-87	11240 (11160)	660 FNL 2480 FWL 19-17S-30E	10	GRAYBURG DEEP UNIT
		325 750	476' 3525'	11 3/4 @ 42# 8 5/8 @ 32#	17 1/2	11600 GAS (MORRO W 17 1/2 01-13-79 11	11600 (	1980 FNL 760 FEL 30-17S-30E	8	GRAYBURG DEEP UNIT
NO INFO	NFO O	INFO O	NO INFO	NO INFO	NFO O	P & A 03-02-70	6900	UNIT LTR C 30-17S-30E	<b>o</b>	GRAYBURG DEEP UNIT
2480 3620		200 675	496' 3667'	85/8@22# 41/2@10.5#		OIL 01-11-77	3693	330 FNL 330 FWL 20-17S-30E	Ŋ	JENKINS B
OPEN HOLE		50 100	506' 2843'	8 1/4 @ 32# 7 @ 20#		OIL 05-10-37	3253	1650 FNL 1650 FWL 20-17S-30E	4	JENKINS B
OPEN HOLE		50 100	505' 2875'	8 1/4 @ 32# 7 @ 20#		OIL 06-28-38	3300	330 FNL 2310 FWL 20-17S-30E	ω	JENKINS B
OPEN HOLE		50 100	500' 2912'	8 1/4 @ 32# 7 @ 20#		OIL 01-15-38	3265	990 FNL 330 FWL 20-17S-30E	8	JENKINS B
	SURF 1' 2663'	22+50 100	479' 3000'	10 3/4 7	12	SWD 02-28-36	3258	1650 FNL 330 FWL 20-17S-30E		JENKINS B
PERFS	TOC	SX CMT	SETTING DEPTH	CASING SZ & WT	SIZE	TYPE & DATE	TD PBTD	LOCATION	WELL#	LEASE

	1	1	<del>                                     </del>	T	T	T	<del>                                     </del>	$\overline{}$
BKC	BKU	BKU	BKC	BKC	BKC	BKU	BKC	LEASE V
92	91	58	57	56	55	54	52	WELL#
1980 FNL 660 FEL 19-17S-30E	2310 FSL 330 FEL 24-17S-29E	1345 FNL 1295 FEL 19-17S-30E	1980 FNL 660 FEL 19-17S-30E	990 FNL 330 FEL 19-17S-30E	165 FNL 1155 FEL 19-17S-30E	660 FNL 1980 FEL 19-17S-30E	990 FNL 990 FWL 19-17S-30E	LOCATION
3142 (3137)	3613 (3613)	3223	3702 (3696)	3678 (3672)	3625 (3619)	3645 (3639)	3127 (2730)	TD PBTD
OIL 06-27-29	OIL 05-07-40	OIL 02-06-50	OIL 04-11-35	OIL 01-15-38	OIL 02-06-76	OIL 08-24-36	OIL 12-06-37	DRILLED
	10 8 1/4	10 3/4 8 1/4		10 3/4 8 1/4 6 1/4	12 1/4 7 7/8	10 3/4 8 1/4	10 3/4 8 1/4	SIZE
12 1/2 @ 50# 10 3/4 @ 40# 6 5/8 @ 24#	8 1/4 @ 24# 7 @ 20#	8 5/8 @ 24# 7 @ 20#	10 @ 40# 6 5/8 @ 24# 4 1/2 @ 9.5#	8 1/4 @ 32# 7 @ 20# 4 1/2 LINER	8 5/8 @ 24# 5 1/2 @ 15.5#	8 1/4 @ 30# 7 @ 24#	8 1/4 @ 30# 7 @ 24#	CASING SZ & WT
368' 900' 2865'	515' 2727'	493' 2676'	460' 2900' 2693-3702'	486' 2899' 2868-3678'	496' 3625'	475' 2715'	430' 2784'	SETTING DEPTH
15 20	50 100	50 100	70 40 160	50 100 250	100 625	50 100	50 100	SX CMT
								ТОС
2845-3142 OPEN HOLE 277'	2479-2482 2520-2525 (OPEN HOLE) (2727-2613)	2978-3218 2348-2617 (OPEN HOLE) (2676-3223)	2498-2506 2628-2880 3054-3478	2488-2788 3282-3613	1613-1618 2483-2774 3067-3582	2538-2620	2424-2663 3000-3157	PERFS

Attachment C-108 VI

I I I	m	m	<u> </u>	CD	Œ	œ	8	E
BKC	BKC	BKC	BKC	BKU	BKU	BK∪	BKC	ASE I
146	145	144	142	143	104	103	96	LEASE WELL#
660 FNL 1980 FEL 30-17S-30E	1295 FNL 2665 FEL 30-17S-30E	660 FNL 1980 FWL 30-17S-30E	660 FNL 660 FWL 30-17S-30E	330 FNL 1260 FWL 30-178-30E	330 FSL 1650 FWL 19-17S-30E	990 FSL 1650 FWL 19-17S-30E	1650 FSL 1650 FEL 19-17S-30E	LOCATION
3320 (3295)	3295	3246	4900 (4837)	3263 (3263)	3277 (3272)	3605 (3600)	3247 (3242)	PBTD
OIL 05-29-44	OIL 02-13-76	WIW 04-17-44	OIL 02-15-44	OIL 08-17-49	OIL 08-23-41	OIL 01-25-47	OIL 08-01-50	DRILLED
11 8 1/4	12 1/4 7 7/8	11 8 1/4	12 1/4 8 1/4 7 7/8		11 8 1/4	11 8 1/4 6 1/2	11 8 1/4	SIZE
8 5/8 @ 24# 7 @ 20#	85/8@24# 51/2@14#	8 5/8 @ 24# 7 @ 20#	85/8 @ 24# 7 @ 20# 5 1/2 @ 17#	8 5/8 @ 24# 7 @ 20#	85/8@24# 7@20#	85/8@24# 7@20# 41/2@9.5#	85/8@24# 7@23#	CASING SZ & WT
535 2682	504' 3295'	508' 2911'	502' 2891' 4900'	506' 3013'	533' 2730'	464' 2942' 2906–3605'	509 2560	DEPTH
50 100	100 550	50 100	100 225	75 100	50 100	75 110 140	50 100	CMT
			1650'		320' 1315'			ТОС
(OPEN HOLE) (2682-3295)	1702-1709 2641-2762 3020-3247	2533-2810 (OPEN HOLE) (2911-3246)	3100-3240 4478-4744	2548-2989 3013-3263 OPEN HOLE 250'	2633–2781 (OPEN HOLE) (2730–3277)	2942-3247 2504-3061 (OPEN HOLE) (2942-3605)	1611-1704 2620-3240	PERFS

		· · · · · · · · · · · · · · · · · · ·	<del></del>	<del></del>	<del></del>	<del></del>		
BKU	BKU	BKC	BKC	BKC	BKC	BKU	BKC	LEASE V
152	105	59	151	150	149	148	147	WELL#
1345 FNL 1260 FWL 30-17S-30E	660 FSL 660 FWL 19-17S-30E	1980 FNL 1980 FWL 19-17S-30E	1980 FNL 1980 FWL 30-17S-30E	1980 FNL 1980 FEL 30-17S-30E	1980 FNL 660 FEL 30-17S-30E	660 FNL 660 FEL 30-17S-30E	1295 FNL 1295 FEL 30-17S-30E	LOCATION
3316	3599 (3505)	3660	3310	3475 (3649)	3355 (3344)	3355	3390	TD PBTD
OIL-T/A 12-14-49	WIW 04-29-42	OIL-P&A 01-15-34	OIL 07-09-45	OIL 04-17-71	OIL 06-20-72	OIL 02-06-71	OIL 12-17-80	TYPE & DATE
11 8 1/4	11 8 1/4 7 7/8	8 1/4 6 1/4		12 1/4 7 7/8	12 1/4 7 7/8	12 1/4 7 7/8	12 1/4 7 7/8	HOLE
8 5/8 @ 24# 7 @ 23#	85/8@24# 7@20# 41/2@9.5#	10 1/4 @40# 6 5/8 @ 24# 4.5LIME @9.5#	8 @ 24# 7 @ 20#	8 5/8 @ 20# 4 1/2 @ 9.5#	8 5/8 @ 20# 4 1/2 @ 9.5#	8 5/8 @ 20# 5 1/2 @ 15.5#	8 5/8 @ 20# 5 1/2 @ 15.5#	CASING SZ & WT
507' 3061'	508' 2773' 2750-3599'	385' 2801' 2775–3660'	522' 3195'	515' 3475'	499' 3350'	485' 3357'	506' 3390'	SETTING DEPTH
50 100	100 150	10 MUD 150	50 100	100 400	100 500	100 225	357 850	SX CMT
2000'								ТОС
2588-2596 2708-2716 2915-2984 (OPEN HOLE) (3061-3316)	2511-2517 2591-2605 2798-3558		2610-2648 (OPEN HOLE) (3195-3310)	2680-2811 3076-3088 3304-3446	2670-2705 3102-3110 3324-3330	2758-2771 3039-3340	2662-2790 2928-3072 3211-3293	PERFS

BK∪	BKU	LEASE
60	4 4	WELL#
1980 FNL 660 FWL 19-17S-30E	660 FNL 1980 FWL 30-17S-30E	EASE WELL# LOCATION
3137	3254	PBTD
P&A 05-02-32	WIW 04-20-44	DRILLED SIZE
	11 7 7/8	SIZE
10 @ 40# 6 5/8 @ 20#	8 5/8 @ 24# 7 @ 20#	CASING SZ & WT
372.7' 2783'	508' 2911'	SETTING DEPTH
NONE	50 100	CMT
	311' 1502'	100
	(OPEN HOLE) (2572–2690) 2911–3246	PERFS

LEASE	WELL#	LOCATION	TD PBTD	TYPE & DATE DRILLED	HOLE SIZE	CASING SZ & WT	SETTING DEPTH	CMT	TOC	PERFS
BURCH A	Ŋ	1980 FNL 1980 FEL 19-17S-30E	3154	OIL-P&A 05-08-34		10 @ 40# 6 5/8 @ 24#	456.7' 2858'	10 75		
BURCH A	23	2565 FNL 955 FWL 19-17S-30E	3150	OIL-P&A 06-04-49		8 5/8 @ 24# 7 @ 20#	455' 2492'	75 100		
BURCH A	24	2310 FNL 2615 FEL 19-17S-30E	3183	OIL-P&A 06-12-49		8 5/8 @ 24# 7 @ 20#	482' 2514'	75 100		
BKC	93	2310 FSL 1650 FWL 19-17S-30E	3148	OIL-P&A		8 5/8 7	478' 2660'	50 100	60' 1230'	2540 – 2543 2885 – 2889 OPEN HOLE
BURCH A	<b>o</b>	990 FNL 2310 FWL 19-17S-30E	3225	OIL-P&A 12-10-73		8 1/4 @32# 7 @ 20#	445' 2825'	50 100		2455-2772

OPERATOR		LEASE		
ENRON		MCINTYRE 'D"	1	
HELL NII.	TOUTAGE LUCATION	SECTION	(minsul)	RANLE
6	660 FSL & 1980 F	WL 20	178	30E
Scher	mutle		Tobulor Data	
			"Cemented wit	
	8 5/8 @ 533'	Intermediate Casing		
		tong string Size 7	"Cemented wit	11 100 24
		Total depth 3428	8	,
		Test for a test	i <del>t to</del> - <del>hole, indicate which</del>	
	7" @3006'	Toe Toraled or open	it to	
	7" @3006' ) ) ) ) ) TD 3428	Total BO OF OPEN	i hele, indicete which	feet
Lubing size	) ) ) ) TD 3428			feet
	) ) ) TD 3428		material)	teet In a
(b) (or description of the Data	Tand and model) be any other cosing-tubin	pock	material)	
Other Data  1. Name o  2. Name o  3. is thi	TD 3428  Tagd and model) be any other cosing-tubic	pack ng seel).  n tcable)	material) or at	Teot
Other Data  1. Name of 2. Name of 3. Is this if no,	TD 3428  Tand and model) be any other cosing-tubin if the injection forestion of Field or Pool (if appliance in the cost of th	pock  ng seel).  n  teable)  injection? /7 Yea  well originatly dri	material) or ot  // No illed?	Teot

ERATOR		LEASE		
HILLIPS		GRAYBURG D		
ut no.	LOGINGE FACTION	SCCTION	Townsiile	
		30	17S	30E
Schemn	tic	funkara fanti	Tobular Data	
<del></del>		Surface Casing	" Cemented wit	
			feet determined by	
11	111			
11	1111	Internediate Cas		To a second
	111		" Cemented wit	<del>_</del>
			feet determined by	
	1 1 1	Hole eize		
		Long string		
1 1	111	Size	" Cemented wit	ו ו
			feet determined by	
1 1	111	•	4	
	111	Total depth		1
		Injection interv	a l	
		7	feet to pen-hole, indicate which	_ feet
1 1	111	theriotated or of	pen-noie, indicate which	,
				.,
			•	
•				
		•		
esie pnidu		_ lined with	(moterial)	net 10 e
75	nd and made )	ρι	ocker at	feet
	any other coming.			
ther Data	· ·			
	the injection for	mation		
		d for injection? /7		
			drilled?	
	well ever ligen pe	rforuted in any other a	one(s)? List all such p dg# plug(s) used)	erforated intervo
4. Ilas the	e plugging dotall	, 550		
4. Ilas the and giv	e plugging detail			
4. Ilas the	e plugging detail			

BEERATOR		CCASC		The street of th
PHILLIPS		GRAYBURG DEF		
	POUTAGE EUCATION		TownsiiTr	HANLE
8	1980 FNL 760 FEL	30	178	30E
<u>Sche</u>	mutic	Surface Caping	Tobulor Data	
	cmt plug 15'-surface	sire 11 3/4" 54	4.5# Cemented with Feet determined by 1/2	·
	11 3/4 42# @ 476'		2# " Cemented with	
	8 5/8 32# @ 3525' cmt plua 3550–3450'	100	" Cemented with feet determined by	
	cmt plug 5550-5400'	Total depth  Injection interval		•
	cmt plug 7975–7825'	fe (perforated or one	net to n-hale, indicate which)	_ fect
	cmt plug 9700–9750'			.,
	cmt plug 10900 – 10700'			
	TD 11600'			,
Tubing siz	e line	d with	(moterial) kor at	uet in a
(or descri	be any other coming-tubin	g seel).		
	of Field or Pool (if appli			
3. In th	is a new well drilled for , for what purpose was the	injection? /7 Ye	в <u>/</u> 7 No	
A. Has t	he well ever been perform ive plugging detail (suck	ted in any other zer a of coment or bridg	ne(s)? List oll such per pe plug(s) used)	rforated interval

5. Give the depth to and name of any overlying and/or underlying oil or gas zones (paels) in this area.

		LEASE		
MARBOB ENER	GY CORPORATION	BKU		
itti iii. r	OUTAGE EUCATION	SECTION	TOWNSHIP	II.ANI.L
60 1	980 FNL 660 FWL	19	178	30E
Schemitt	<u>c</u>		Tobular Data	
	cmt plug 95sx 60' – surface		Cemented with feet determined by	
	cmt plug 170sx 425-306' 10" 40# @372.7'	Intermediate Casing	" Cemented with	
	cmt plug 50sx 875810'	Hole mize	)#" Cemented with	
		<del>Injection interval</del>	t to	<del>feet</del>
)	cmt plug 35sx 2858–2690' 6 5/8 20# @ 278	3'		
)	TD 3137'			
Lubing also	line	d with	material)	set in e
	and model)	pock	or at	foot
	any ethor casing-tubin	ng smal).		
Other Data				
1. Name of t	he injection formation			
2. Name of F	ield or Pool (if appl.	109010)		
3. la this a	new well drilled for	injections /7 Yes		
If no, fo	r what purpose was th	e well originally dri	111ed?	
4. Hop the	rell over hoen perforu	ted in any other zone a of coment or bridge	e(a)? List all such pe e plug(a) used).	rforated interv
and give	bindding agents (and		<del></del>	

Give the depth to and name of any overlying and/or underlying oil or gas zones (ponls) in

TOP CHAINT		CCASC		
MARBOB E	ENERG CORPORATION	BURCH A		
		SECTION	TOWNSHIP	
5	1980 FNL 1980 FEL	19	178	30E
Scl	<u>remotic</u>		Tobular Data	
	cmt plug surface to 60'		"Cemented with	·
	10" 40# @ 456.7'	Intermediate Coming		
	cmt plug 460–960'	Hole size		
		Hole size Total depth 315		
			**************************************	
	cmt plug 2795–2720'			.,
	) 6 5/8 24# @ 2850 ) TOC 2858' )	8'		
	) ) TD 3154'			
<u>Lubing al</u>	linec	I with	moterial)	cot in •
	(brand and model)	pock	or at	1001
	ribe any other casing-tubing	g seal).	/	
Other Dn	_			
	of the injection formation			<del></del>
	of Field or Pool (if appli his a new well drilled for		17 No	
	o, for what purpose was the			
A. Han	the well ever been performt give plugging detail (sucke	ed in any other zons	c(a)? Link all such per	rforated interva

5. Give the depth to and name of any averlying and/or underlying oil or gas zones (pools) in this area.

. . .

	LEASE		
RGY CORPORATION	BURCH A		
FOUTAGE LUCATION	3((110))	(mayatt)	HANLE
565 FNL 995 FWL	19	178	30E
	- Technology		
<u>l c</u>	<del></del>	obulor Data	•
cmt plug 10sx		" Cemented wit	n 75 ax.
	Hole size		
cmt plug 175sx	Intermediate Cosing		
293-243			
8 5/8 24# @ 455'			
TOC 316'	Long string		
cmt plua 55sx			
875-825			CALC @ 50%
	•		
		0	
		10-	<del></del>
	Tperferated or open-	tole, indicate which	7
			• •
7" 20# @ 2492'			
TOC 1876'			
omt plug 145ev			
cmt plug 145sx 3150-2447'			
3150-2447'			
3150-2447' TD 3150'	1 with		set in s
3150-2447' TD 3150'	( M Q	iterial)	tool
3150-2447' TD 3150'	packer	iterial)	Teet in a
3150-2447' TD 3150'	packer		Teet In a
3150-2447' TD 3150'  lines  d and model)  any other coming-tubing  the injection formation	pocker	· ot	Teet
3150-2447'  TD 3150'  lines  d and model)  any other coming-tubin  the injection formation	pocker pocker	ot	Teet In a
3150-2447'  TD 3150'  line  d and model)  any other coming-tubin  the injection formation  field or Pool (if applies  new well drilled for	pocker  g seel).  cable)  injection? /7 Yes		
3150-2447'  TD 3150'  lines  d and model)  any other coming-tubin  the injection formation	pocker  g seel).  cable)  injection? /7 Yes		
	565 FNL 995 FWL  cmt plug 10sx  cmt plug 175sx 293-243  8 5/8 24# @ 455' TOC 316'  cmt plug 55sx 875-825	RGY CORPORATION BURCH A    OTHER COMMINION SUCCESS   SOUTH   19	RGY CORPORATION  BURCH A  SUTTAGE CONTON  SURFace Complete  Comt plug 10sx  Size 8 5/8 @ 24# " Cemented with 10c 316   reet determined by 10c size   reet de

Give the depth to and name of any overlying and/or underlying oil or gas zones (pools) in

OPERATOR		LEASE		
MARROR F	ENERGY CORPORATION	BURCH A		
HOLL HU.	COUTAGE EUCATION	SECTION	Tomasida	RANGE
24	2310 FNL 2615 FEL	19	17S	30E
Schem	natic	•	Tobular Data	
	T and plug 10ev	Surface Chaing		
	cmt plug 10sx	Sizo 8 5/8 @ 24#	· ·	
	750v	10C <u>343</u>	_ feet determined b	y <u>CALC @ 50%</u>
	sqzd 75sx into casing	Hole size		
		Intermediate Casing		
18888		Size	" Cemented vi	th no
	8 5/8 24# @ 482'	Hole size		y
	TOC 343'			
		Long string		100
	cmt plug 55sx	Size 7 @ 20#		
	905-864	TOC 1898	feet determined b	y CALC @ 50%
i		Hole size	•	
		Total depth 3	183	
		Injection interval		
1		(perforated or enem-	hole, indreals which	11)
333		•		
	cmt plug 260sx			
	3183-2216			
	3100-2210			
J,	7 20# @ 2514			
	TOC 1898'			
,	100 1000			
)				
)				
<u> </u>	TD 3183'	•		
	100100			
Lubing als	• 11ne	nd with(n	naterial)	001 100
		packo	or at	(eet
	tend and model) be any other casing-tuble	ng seal).		
		.,		
Other Data		_		
	of the injection formatio			
	of Field or Pool (if appl		/7 N=	<del></del>
	is a new well drilled for			
If no	, for what purpose was th	e well originally dri	11md?	
· · · ·				
4. Hos t	he well ever been perford live plugging detail (angl	ited in any other zone	color list oil such	bariotates interv
	ilva blundina abinii imica	to at compute or negative	hradia Zanaai	

Give the depth to and name of any overlying and/or underlying oil or gas zones (manls) in

DE L RATIOR		CEASE			
ARBOB ENE	RGY CORPORATION	BKU			
attitui.	TOUTAGE LUCATION	SCCTION	(mansul)	RANLE	-
59	1980 FNL 1980 FWL	19	17S	30E	
Schemn	tie		Tobular Data		
	cmt plug 15sx	Surface Chaing			
		Size 10 @ 40#	" Cemented w		
			feet determined	by	
	100-75'	Hole size			
		Intermediate Casin	1	•	
	cmt plug 65sx	Sizo	" Cemented s	ith	sх.
	435-278'	100	feet determined	by	-
		Hole size		-	
	10"	Long string			
	40#@385	sire 6 5/8 @	24# Cemented v	otth MUD TOP TO	TTO&
	cmt plug 50sx		feet determined		
	875–775'	Hole size	•	•	
		Total depth	3660	-	•
		Injection interval			
		<u> </u>	et to	(eet	
		tperforated or ope	n-hole, indicato will	i <del>ch) -</del>	
<u></u>	cmt plug 225sx				
	3660-2100				
)	6 5/8 24# @ 280	01'			
ý	,			,	
)					
)					
	TD 3660'				
					•,
Jubing sire	line	d with	material)		-
	ind and model)	poc	cor at		
	any other coming-tubin	g seel).			
Other Data			/		
1. Name of	the injection formation				
2. Name of	Field or Pool (if appl)	ceble)			_
3. Is this	a new well drilled for	injection? /7 Ye			
lf no,	for what purpose was the	well originally dr	illed7		
<del></del>				· · · · · · · · · · · · · · · · · · ·	
A. Han the	well ever been perforu	ted in any other zen	loud lie deil (0)	h perforated inter	vols
and niv	o plugging dotail (sack	C of comput of price	e brad(a) asea!		

5. Give the depth to and name of any averlying and/or underlying ail or gas zones (pools) in this ares.

Protogram with the market

NECTATOR .	LLASE			
MARBOB ENERGY CORPORATION				
HELL NO. FOUTAGE LUCATION	SECTION	TOWNSTILL	IIANI, E	
93 2310 FSL 1650 FW	L 19	17S	30E	
Schemutic		Tobuler Data		
cmt plug 70sx 60'-surface	100 <u>8 5/8 @ 24</u>	#" Cemented with		•••
cmt plug 50sx 478'-346	Size			
8 5/8 @ 560'	Hole size			
cmt plug 50sx 910'-	3120	" Cemented with		• :
	Total depth  Injection interval	t to	feet	
cmt plug 85 s 2785-2441 7" @ 20# @ 26			.,	
) TOC 1230'				
) TD 3148'				restry -
Tubing sizelin	ed with	enterial)	oet in a	
(or describe any other casing-tub)  Other Data  1. Name of the injection formation	ing seel).			
2. Name of field or Pool (if app.				
<ol> <li>Is this a new well drilled for If no, for what purpose was to</li> </ol>	<del></del>			
4. Has the well ever been perfor and give plugging detail (eac	ks of coment or bridge	plug(a) used)	,	
5. Give the depth to mnd name of				

THOOODD HIDD DUITS

UFERATOR		[[ASC		***************************************
MARBOR	FNFRCY CORPORATION LINEAU CORPORATION	BURCH A		
8	990 FNL 2310 FWL	19	17S	30E
		** ***********************************		
20	cmt plug 45sx	Surface Casing Size <u>8 1/4 @ 32</u> #	Tobular Bata  "Cemonted with  Feet determined by	
	8 5/8 32# @445' TOC 352'		"——Cemented with	
	cmt plug 25sx 1200-1300'			
		Injection interval		
	cmt plug 120sx 2255-2790' CIBP @ 2793' no 7" 20# @ 2825' TOC 2209	Cmt	to hole, indicate which	feet 
;	) ) TD 3225'			
1	<u>.</u> .	-1		
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Other Dn				
	of the injection formations of the injection of the injection for the following the state of the state of the injection for the injection injecti			
	this a new well drilled for			
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Charles Martin, Inc. Post Office Box 706 Artesia, New Mexico 88211

Re: Burch-Keely Unit Waterflood Expansion Project

S/2 Section 19-17S-30E, Eddy County, New Mexico

### Gentlemen:

Marbob Energy Corporation, as operator of the Burch-Keely Unit, notifies you that we have applied to the New Mexico Oil Conservation Division for Administrative Approval for an expansion of the currently approved Burch-Keely Waterflood Project to include the above referenced lands. The purpose of this expansion is to gain optimal control over the flow of formation hydrocarbons and to increase oil production.

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Sincerely,

Darkie Matei

David Martin

Land Department

DM/mm Enclosures

CHARLES M	ARTIN, INC.:	
Ву:		
Date:		



Bureau of Land Management Post Office Box 1778 Carlsbad. New Mexico 88220

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David Martin

Land Department

DM/mm Enclosures

BUREAU OF	LAND MANAGEMENT:
Ву:	
Date:	



Phillips Petroleum Company 4001 Penbrook Odessa, Texas 79762

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S/2 Section 19-17S-30E, Eddy County, New Mexico

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Sound Martin

David Martin

Land Department

DM/mm Enclosures

PHILLIPS PI	ETROLEUM COMPANY:
Ву:	
Date:	



Sabre Operating 4301 Maplewood, Suite 500 Wichita Falls, Texas 76306

Re: Burch-Keely Unit Waterflood Expansion Project

S/2 Section 19-17S-30E, Eddy County, New Mexico

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Sincerely,

David Martin
Land Department

DM/mm
Enclosures

SABRE OPERATING:

By:

Date:



Mack Energy Corporation Post Office Box 1767 Artesia, New Mexico 88211

Re: Burch-Keely Unit Waterflood Expansion Project

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David Martin

Land Department

DM/mm
Enclosures

MACK ENERGY CORPORATION:

By:

Date:

### Affidavit of Publication

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STATE OF NEW MEXIC	co,				
County of Eddy:					
Gary D. Scot	t			t	eing duly
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Artesia Daily Press, a	daily	newspaj	per of	general c	irculation,
published in English a	t Arte	sia, said	county	y and state	e, and that
the hereto attached	Leg	al Noti	ce		
was published in a re	gular	and entir	e Issu	e of the s	aid Artesia
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within the meaning of					
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the same day as follow	vs:				
First Publication	Jan	uary 30	, 19	96	
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Third Publication	Feb	ruary 1	, 19	96	)
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Subscribed and sworn	ı to be	efore me t	his	6t.h	day
of					19 96
	13.	Buch	An	B	Din n l
-	Note	ry Public	Eddy	Z County, i	New Mexico

My Commission expires September 23, 1999

### Copy of Publication

### **LEGAL NOTICE**

Pursuant to State of New Mexico Oil Conservation Division Rule 701-C-1 Marbob Energy Corporation gives public notice that it has applied to the New Mexico Oil Conservation Division for an expansion of the Burch-Keely Waterflood Unit. The area of expansion includes the S/2 of Section 19, Township 17 South, Range 30 East, Eddy County, New Mexico, N.M.P.M. The purpose of the waterflood expansion is to gain optimum control over the flow of formation hydrocarbons and to increase oil production. The Grayburg Jackson formation is the formation to be injected at a depth of 3,000 - 3,250 feet under a maximum expected pressure of 900 lbs at a rate of 250 barrels of formation water per day per well. Any interested party who has an objection to this waterflood expansion must give notice in writing to the Oil Conserva-tion Division, 2040 South Pacheco Street, Santa Fe, New 1 Mexico 87505 within fifteen (15) days of this notice. Any interested party with questions or comments may contact Johnny C. Gray at Marbob Energy Corporation, Post Office Box 227, Artesia, New Mexico 88211-0227 or call 505/748-3303. Published in the Artesia Daily Press, Artesia, New Mexico, January 30, 31; February 1, 1996.

\*\* Legal 15352



Mack Energy Corporation Post Office Box 1767 Artesia, New Mexico 88211

Re: Burch-Keely Unit Waterflood Expansion Project

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Sincerely,

David Martin Land Department

and Martin

DM/mm Enclosures

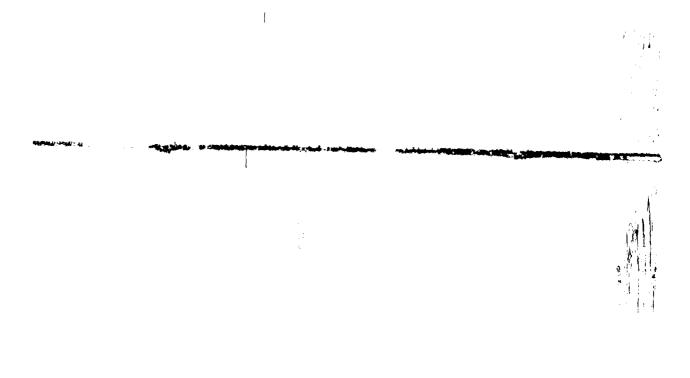
**MACK ENERGY CORPORATION:** 

By:

Mark C Chara Provident

Date:

2/2/96



The state of the s



Sabre Operating 4301 Maplewood, Suite 500 Wichita Falls, Texas 76306

> **Burch-Keely Unit Waterflood Expansion Project** Re:

> > S/2 Section 19-17S-30E, Eddy County, New Mexico

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Sincerely,

David Martin

Land Department

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DM/mm **Enclosures** 

**SABRE OPERATING:** 

By:

Date:



Charles Martin, Inc. Post Office Box 706 Artesia, New Mexico 88211

Burch-Keely Unit Waterflood Expansion Project

S/2 Section 19-17S-30E, Eddy County, New Mexico

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Sincerely,

**David Martin** 

Land Department

Dardid Mati

DM/mm **Enclosures** 

CHARLES MARTIN, INC.:

By:

Ekarlene M. Ward

Date: