WFX 2-21-96
682

marbob
energy corporation

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

DM/mm

P.O. Box 227 Artesia, New Mexico 88211-0217 (505) 748-3303 Fax (505) 746-2523

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

TABLE OF CONTENTS

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT

OIL CONSERVATION DIVISION
POST OFFICE BOX 2088
STATE LAND OFFICE BUILDING
SANTA FE, NEW MEXICO 87501

FORM C-108
Revised 7-1-81

APPLICATION FOR AUTHORIZATION TO INJECT

I. Purpose: [X] Secondary Recovery [ ] Pressure Maintenance [ ] Disposal [ ] Storage
Application qualifies for administrative approval? [ ] yes [ ] no

II. Operator: Marbob Energy Corporation

Address: P. O. Box 227, Artesia, New Mexico 88211-0227

Contact party: _____ Phone: 505/748-3303

III. Well data: Complete the data required on the reverse side of this form for each well proposed for injection. Additional sheets may be attached if necessary.

IV. Is this an expansion of an existing project? [XX] yes [ ] no
If yes, give the Division order number authorizing the project R-7900-A.

V. Attach a map that identifies all wells and leases within two miles of any proposed injection well with a one-half mile radius circle drawn around each proposed injection well. This circle identifies the well's area of review.

* VI. Attach a tabulation of data on all wells of public record within the area of review which penetrate the proposed injection zone. Such data shall include a description of each well's type, construction, date drilled, location, depth, record of completion, and a schematic of any plugged well illustrating all plugging detail.

VII. Attach data on the proposed operation, including:

1. Proposed average and maximum daily rate and volume of fluids to be injected;
2. Whether the system is open or closed;
3. Proposed average and maximum injection pressure;
4. Sources and an appropriate analysis of injection fluid and compatibility with the receiving formation if other than reinjected produced water; and
5. If injection is for disposal purposes into a zone not productive of oil or gas at or within one mile of the proposed well, attach a chemical analysis of the disposal zone formation water (may be measured or inferred from existing literature, studies, nearby wells, etc.).

*VIII. Attach appropriate geological data on the injection zone including appropriate lithologic detail, geological name, thickness, and depth. Give the geologic name, and depth to bottom of all underground sources of drinking water (aquifers containing waters with total dissolved solids concentrations of 10,000 mg/l or less) overlying the proposed injection zone as well as any such source known to be immediately underlying the injection interval.

IX. Describe the proposed stimulation program, if any.

* X. Attach appropriate logging and test data on the well. (If well logs have been filed with the Division they need not be resubmitted.)

* XI. Attach a chemical analysis of fresh water from two or more fresh water wells (if available and producing) within one mile of any injection or disposal well showing location of wells and dates samples were taken.

XII. Applicants for disposal wells must make an affirmative statement that they have examined available geologic and engineering data and find no evidence of open faults or any other hydrologic connection between the disposal zone and any underground source of drinking water.

XIII. Applicants must complete the "Proof of Notice" section on the reverse side of this form.

XIV. Certification

I hereby certify that the information submitted with this application is true and correct to the best of my knowledge and belief.

Name: _____ Title _____

Signature: _____ Date: _____

* If the information required under Sections VI, VIII, X, and XI above has been previously submitted, it need not be duplicated and resubmitted. Please show the date and circumstance of the earlier submittal. _____

DISTRIBUTION: Original and one copy to the Santa Fe office, one copy to the appropriate District Office

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 material, 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 wells 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 need 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 single 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. 98
Burch-Keely Unit No. 100
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

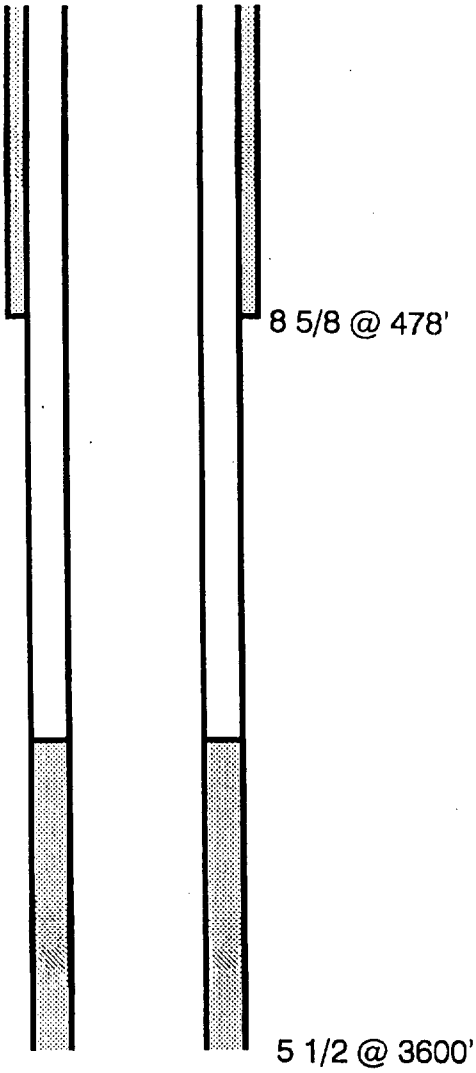
A copy of this application has been furnished to the land owner of the land on which the seven proposed water injection wells are located and the leasehold operators within the Area of Review. Also, a notice has been published in the Artesia Daily Press, Artesia, New Mexico.

BURCH–KEELY WATERFLOOD
PROPOSED INJECTION WELLS

LEASE & WELL #	LOCATION	TD PBTD	TYPE & DATE DRILLED	HOLE SIZE	CASING SZ	CASING WT	SETTING DEPTH	SX CMT	TOC	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'	75 100			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	11 7	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

OPERATION	LEASE			
Marbob Energy Corporation	Burch-Keely Unit			
WELL NO.	FOOTAGE LOCATION	SECTION	TOWNSHIP	RANGE
94	1650' FSL & 2970' FEL	19	17S	30E

Schematic



Tabular Data

Surface Casing

Size 8 5/8 " Cemented with 300 sx.

TOC Surface feet determined by Circulated

Hole size 12 1/4

Intermediate Casing

Size _____ " Cemented with _____ sx.

TOC _____ feet determined by _____

Hole size _____

Long string

Size 5 1/2 " Cemented with 575 sx.

TOC N/A feet determined by N/A

Hole size 7 7/8"

Total depth 3600'

Injection interval

2969 feet to 3208 feet

(perforated ~~xxxxxxxxxxxxxxxxxxxxxxxx~~)

Tubing size 2 3/8 lined with Plastic coated (material) set in a

HALLIBURTON R-4 (brand and model) packer at 2940 + or - feet

(or describe any other casing-tubing seal).

Other Data

1. Name of the injection formation Jackson

2. Name of Field or Pool (if applicable) Grayburg Jackson

3. Is this a new well drilled for injection? ☐ Yes ☒ No

If no, for what purpose was the well originally drilled? Oil & Gas Production

4. Has the well ever been perforated in any other zone(s)? List all such perforated intervals and give plugging detail (sacks of cement or bridge plug(s) used)

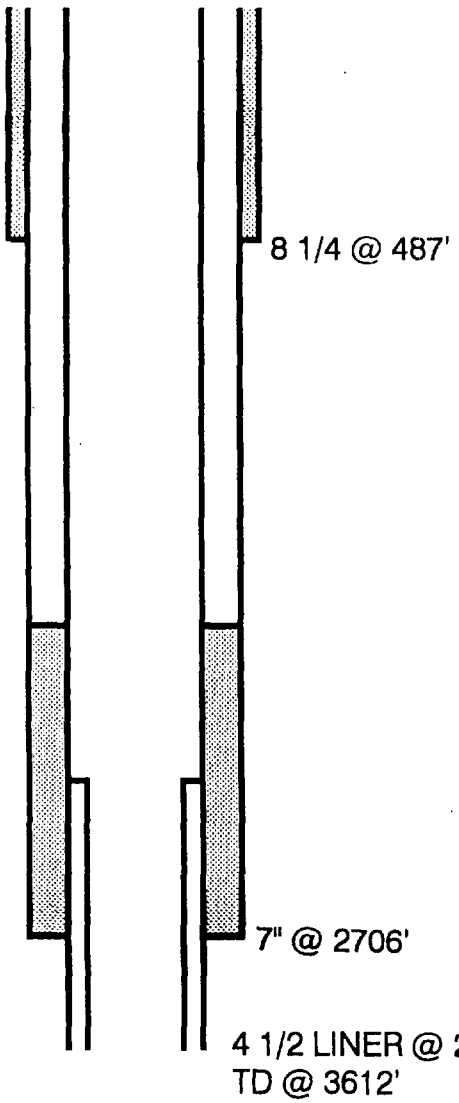
1601-1607 (Seven Rivers), 2490-2500 (Loco Hills), 2561-2597 (Metex)

2839-3208 (Lovington), 3464-3552 (Keely)

5. Give the depth to and name of any overlying and/or underlying oil or gas zones (pools) in this area. 2839-2847 Lovington 3464-3552 Keely

OPERATOR	LEASE			
Marbob Energy Corporation	Burch-Keely Unit			
WELL NO.	FOOTAGE LOCATION	SECTION	TOWNSHIP	RANGE
95	2310' FSL & 2310' FEL	19	17S	30E

Schematic



Tabular Data

Surface Casing

Size 8 1/4 " Cemented with 50 sx.

TOC Mud to Top feet determined by circulated

Hole size 11"

Intermediate Casing

Size 7 " Cemented with 100 sx.

TOC mud to top feet determined by _____

Hole size 7 7/8

Long string

Size 4 1/2 "liner Cemented with 220 sx.

TOC _____ feet determined by _____

Hole size 6 1/4"

Total depth 3612'

Injection interval

2956 feet to 3304 feet

(perforated ~~or open hole, indicate which~~)

Tubing size 2 3/8 lined with plastic lined (material) set in a

Halliburton R-4 (brand and model) packer at 2930 feet

(or describe any other casing-tubing seal).

Other Data

1. Name of the injection formation Jackson

2. Name of Field or Pool (if applicable) Grayburg Jackson

3. Is this a new well drilled for injection? ☐ Yes ☒ No

If no, for what purpose was the well originally drilled? Oil & Gas production

4. Has the well ever been perforated in any other zone(s)? List all such perforated intervals and give plugging detail (sacks of cement or bridge plug(s) used)

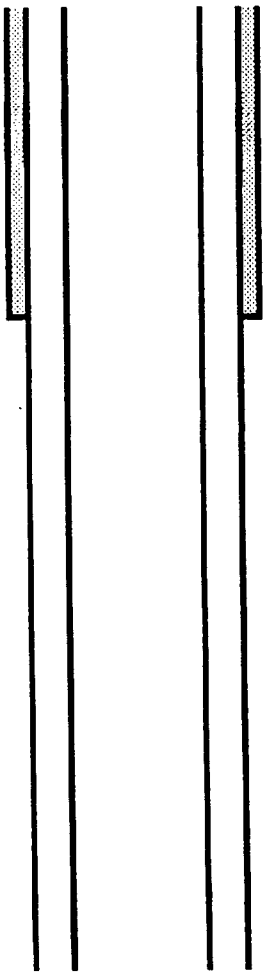
2489-2496 (Loco Hills), 2604-2637 (Metex), 2956-2960 (Jackson)

3300-3307 (Lower San Andres), 3491-3542 (Metex)

5. Give the depth to and name of any overlying and/or underlying oil or gas zones (pools) in this area. 2846-2894 Lovington 3491-3542 Keely

OPERATOR	LEASE			
Marbob Energy Corporation	Burch-Keely Unit			
WELL NO.	FOOTAGE LOCATION	SECTION	TOWNSHIP	RANGE
97	2615' FSL & 1295' FEL	19	17S	30E

Schematic



Tabular Data

Surface Casing

Size 8 5/8 " Cemented with 75 sx.

TOC mud to top feet determined by circulated

Hole size _____

Intermediate Casing

Size _____ " Cemented with _____ sx.

TOC _____ feet determined by _____

Hole size _____

Long string

Size 7 " Cemented with 100 sx.

TOC mud to top feet determined by circulated

Hole size _____

Total depth 3240

Injection interval

2972 feet to 3240 feet

~~perforated or~~ open-hole ~~xxxxxxxxxxxxxxx~~

Tubing size 2 3/8 lined with plastic coated (material) set in a

Halliburton R-4 (brand and model) packer at 2940 + or - feet

(or describe any other casing-tubing seal).

Other Data

1. Name of the injection formation Jackson

2. Name of Field or Pool (if applicable) Grayburg Jackson

3. Is this a new well drilled for injection? ☐ Yes ☒ No

If no, for what purpose was the well originally drilled? Oil and gas production

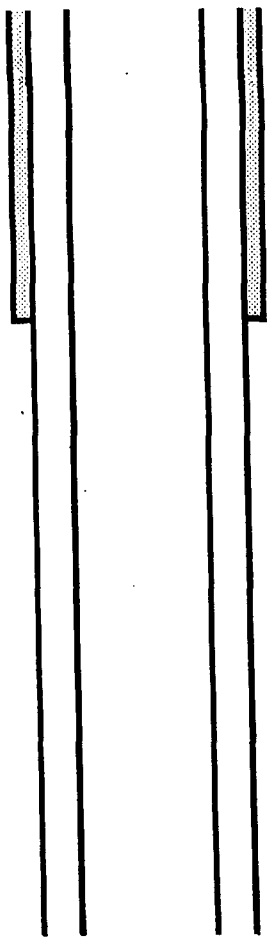
4. Has the well ever been perforated in any other zone(s)? List all such perforated intervals and give plugging detail (sacks of cement or bridge plug(s) used)

2510-2516 (Loco Hills), 2536-2584 (Metex), 2745-2751 (Premier), 2871-2877 (Lovington), 2976-3118 (Jackson), 3208-3240 (Lower San Andres)

5. Give the depth to and name of any overlying and/or underlying oil or gas zones (pools) in this area. 2871-2877 Lovington

OPERATOR	LEASE			
Marbob Energy Corporation	Burch-Keely Unit			
WELL NO.	FOOTAGE LOCATION	SECTION	TOWNSHIP	RANGE
98	1650' FSL & 760' FEL	19	17S	30E

Schematic



Tabular Data

Surface Casing

Size 8 5/8 " Cemented with 100 sx.

TOC _____ feet determined by _____

Hole size 12 1/4"

Intermediate Casing

Size _____ " Cemented with _____ sx.

TOC _____ feet determined by _____

Hole size _____

Long string

Size 4 1/2 " Cemented with 600 sx.

TOC _____ feet determined by _____

Hole size 7 7/8

Total depth 3410'

Injection interval

3242 feet to 3290 feet

(perforated ~~or open hole, indicate which~~)

Tubing size 2 3/8 lined with plastic coated tubing (material) set in a Halliburton R-4 (brand and model) packer at 3200 + or- feet

(or describe any other casing-tubing seal).

Other Data

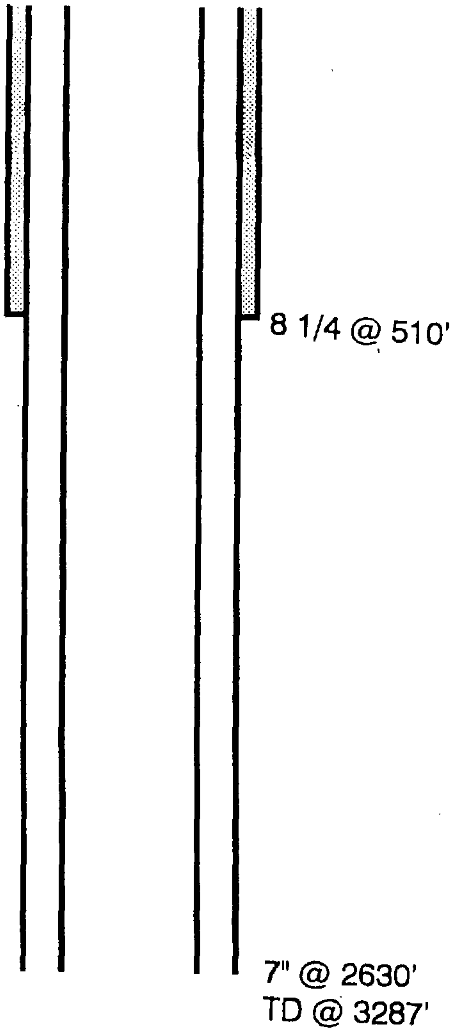
1. Name of the injection formation Jackson
2. Name of Field or Pool (if applicable) Grayburg Jackson
3. Is this a new well drilled for injection? ☐ Yes ☒ No

   If no, for what purpose was the well originally drilled? Oil and Gas Production.
4. Has the well ever been perforated in any other zone(s)? List all such perforated intervals and give plugging detail (sacks of cement or bridge plug(s) used)

   2443-2550 (Loco Hills), 2616-2620 (Metex), 2856-2858 (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 this area.

OPERATOR		LEASE		
Marbob Energy Corporation		Burch-Keely Unit		
WELL NO.	**FOOTAGE LOCATION**	**SECTION**	**TOWNSHIP**	**RANGE**
100	660' FSL & 660' FEL	19	17S	30E

Schematic



Tabular Data

Surface Casing

Size 8 1/4 " Cemented with 50 sx.

TOC mud to top feet determined by circulated

Hole size 11"

Intermediate Casing

Size ______ " Cemented with ______ sx.

TOC ______ feet determined by ______

Hole size ______

Long string

Size 7 " Cemented with 100 sx.

TOC mud to top feet determined by circulated

Hole size 7 7/8

Total depth 3287'

Injection interval

3250 feet to 3275 feet
(perforated ~~XXXXXXXXXXXXXXXXXXXXXXX~~)

Tubing size 2 3/8 lined with plastic coated (material) set in a Halliburton R-4 (brand and model) packer at 3200 + or - feet

(or describe any other casing-tubing seal).

Other Data

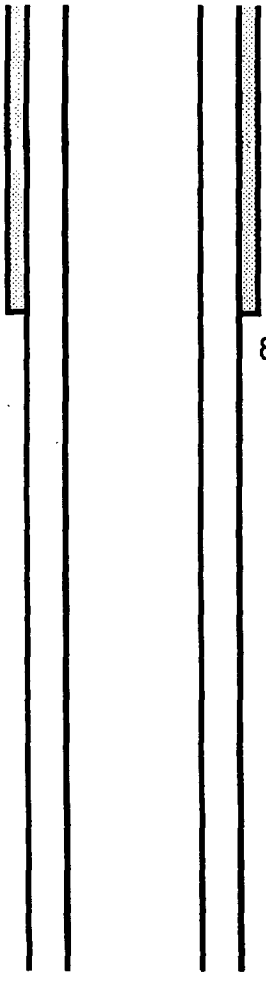
1. Name of the injection formation Jackson
2. Name of Field or Pool (if applicable) Grayburg Jackson
3. Is this a new well drilled for injection? /_7 Yes /X/ No

   If no, for what purpose was the well originally drilled? Oil and gas production
4. Has the well ever been perforated in any other zone(s)? List all such perforated intervals and give plugging detail (sacks of cement or bridge plug(s) used)

   1656-1661 (Seven Rivers), 2563-2573 (Loco Hills), 2692-2700 (Metex), 3065-3070 (Lovington), 3252-3273 (Jackson)
5. Give the depth to and name of any overlying and/or underlying oil or gas zones (pools) in this area. ______

OPERATOR	LEASE			
Marbob Energy Corporation	Burch-Keely Unit			
WELL NO.	FOOTAGE LOCATION	SECTION	TOWNSHIP	RANGE
101	330' FSL & 1650' FEL	19	17S	30E

Schematic



Tabular Data

Surface Casing

Size 8 5/8 " Cemented with 100 sx.

TOC surface feet determined by circulated

Hole size 12 1/4"

Intermediate Casing

Size _____ " Cemented with _____ sx.

TOC _____ feet determined by _____

Hole size _____

Long string

Size 4 1/2 " Cemented with 300 sx.

TOC _____ feet determined by _____

Hole size 7 7/8"

Total depth 3450'

Injection interval

3148 feet to 3326 feet

(perforated ~~or open hole~~)

Tubing size 2 3/8 lined with plastic coated (material) set in a

Halliburton R-4 (brand and model) packer at 3100 + or - feet

(or describe any other casing-tubing seal).

Other Data

1. Name of the injection formation Jackson

2. Name of Field or Pool (if applicable) Grayburg Jackson

3. Is this a new well drilled for injection? ☐ Yes ☒ No

If no, for what purpose was the well originally drilled? Oil and gas production

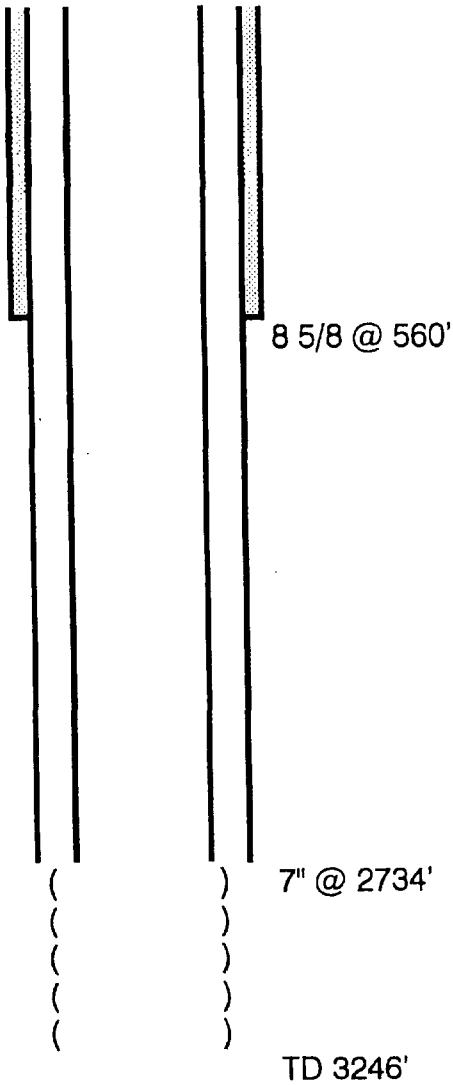
4. Has the well ever been perforated in any other zone(s)? List all such perforated intervals and give plugging detail (sacks of cement or bridge plug(s) used)

2566-2581 (Loco Hills), 2640-2732 (Metex), 2944-2966 (Lovington), 3148-3326 (San Andres)

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

OPERATOR	LEASE			
Marbob Energy Corporation	Burch-Keely Unit			
WELL NO.	FOOTAGE LOCATION	SECTION	TOWNSHIP	RANGE
102	990' FSL & 2310' FEL	19	17S	30E

Schematic



Tabular Data

Surface Casing

Size 8 5/8 " Cemented with 50 sx.

TOC mud to top surface feet determined by circulated

Hole size 12 1/4

Intermediate Casing

Size _____ " Cemented with _____ sx.

TOC _____ feet determined by _____

Hole size _____

Long string

Size 7" OD " Cemented with 100 sx.

TOC mud to top feet determined by circulated

Hole size 7 7/8

Total depth 2734'

Injection interval

2701 feet to 3246 feet

(~~perforated~~ open-hole, ~~indicate which~~)

Tubing size 2 3/8 lined with plastic coated (material) set in a

Halliburton R-4 (brand and model) packer at 2660 feet

(or describe any other casing-tubing seal).

Other Data

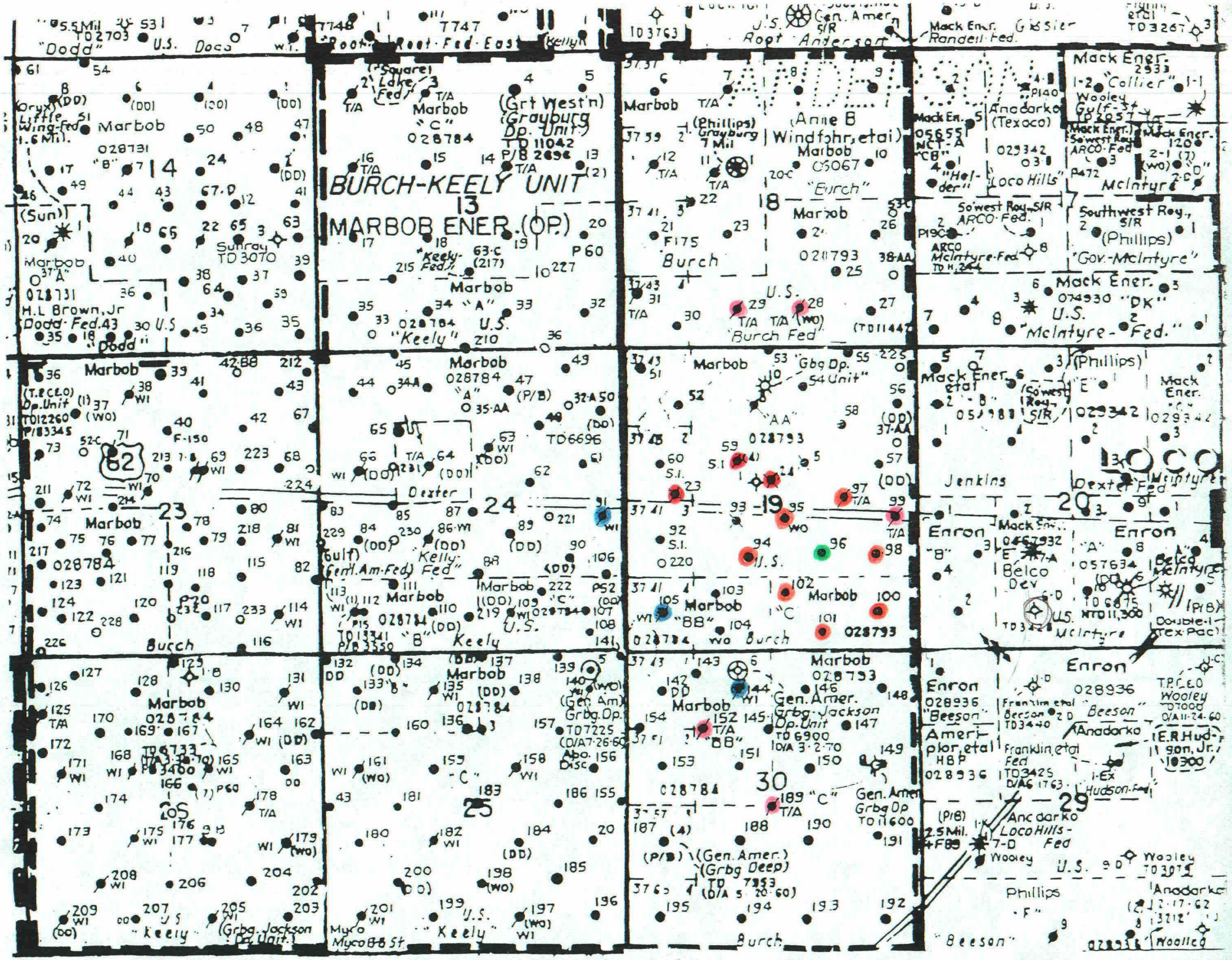
1. Name of the injection formation Jackson
2. Name of Field or Pool (if applicable) Grayburg Jackson
3. Is this a new well drilled for injection? ___ Yes XX No

   If no, for what purpose was the well originally drilled? Oil and gas production
4. Has the well ever been perforated in any other zone(s)? List all such perforated intervals and give plugging detail (sacks of cement or bridge plug(s) used) Open Hole

   2598-2624 (Upper Metex), 2540-2554 (Loco Hills), 2672-2680 (Metex), 3044-3051 (Lovington), 3220-3246 (Jackson)
5. Give the depth to and name of any overlying and/or underlying oil or gas zones (pools) in this area.

C-108 V

- T/A
- Water Injection Well
- P/A
- Proposed Water Inj Well
- Producing



WELL DATA

Attachment C–108 VI

LEASE	WELL#	LOCATION	TD PBTD	TYPE & DATE DRILLED	HOLE SIZE	CASING SZ & WT	SETTING DEPTH	SX CMT	TOC	PERFS
MCINTYRE SABRE OPERATING INC 4301 MAPLEWOOD STE. 500 WITCHITA FALLS, TX 76308	7–A	1650 FSL 1980 FWL 20–17S–30E	11400 (11287)	GAS(MORROW) 06–20–77	171/2 12 1/4 7 7/8	13 3/8 8 5/8 5 1/2	500' 3487' 11371'	487 1335 790	SURFAC 940'	11101–129
BENSON	1	330 FNL 330 FWL 29–17S–30E	3446	OIL 05–23–78	NO INFO	8 5/8 5 1/2	481' 3446'	325 760		1698 – 1735 3058 – 3398
MCINTYRE B	1	2310 FSL 330 FWL 20–17S–30E	3296	OIL 01– –38	NO INFO	NO INFO	NO INFO	NO INFO		2640 – 3296
MCINTYRE B	3	1650 FSL 990 FWL 20–17S–30E	3465 (3439)	OIL 04–25–78	12 1/2 7 7/8	8 5/8 @24# 5 1/2 @15.5# 5 1/2 @14#	478' 687' 2778'	300 575		1659 – 1696 1808 – 1902 2988 – 3420
MCINTYRE B LC–06099	2	660 FSL 660 FWL 20–17S–30E	3621	OIL	NO INFO	NO INFO	NO INFO	NO INFO	NO INFO	NO INFO
MCINTYRE B	4	1300 FSL 330 FWL 20–17S–30E	3443 (3435)	OIL 05–22–78	12 1/4 7 7/8	8 5/8 5 1/2	479' 3447'	275 325		1652 – 1688 2560 – 3342
MCINTYRE D	6	660 FSL 1980 FWL 20–17S–30E	3428	OIL – P & A 07–26–44	10 8	8 5/8 7	533' 3006'	75 100		NO PLUGGING INFO
MCINTYRE E	2	2310 FSL 1650 FWL 20–17S–30E	3500	OIL – –37	10 8 1/4	8 5/8 @ 28# 7 @ 24#	530' 2688'	50 100		2688 – 3280

WELL DATA

Attachment C-108 VI

LEASE	WELL#	LOCATION	TD PBTD	TYPE & DATE DRILLED	HOLE SIZE	CASING SZ & WT	SETTING DEPTH	SX CMT	TOC	PERFS
JENKINS B	1	1650 FNL 330 FWL 20-17S-30E	3258	SWD 02-28-36	12	10 3/4 7	479' 3000'	22+50 100	SURF 1' 2663'	
JENKINS B	2	990 FNL 330 FWL 20-17S-30E	3265	OIL 01-15-38		8 1/4 @ 32# 7 @ 20#	500' 2912'	50 100		OPEN HOLE
JENKINS B	3	330 FNL 2310 FWL 20-17S-30E	3300	OIL 06-28-38		8 1/4 @ 32# 7 @ 20#	505' 2875'	50 100		OPEN HOLE
JENKINS B	4	1650 FNL 1650 FWL 20-17S-30E	3253	OIL 05-10-37		8 1/4 @ 32# 7 @ 20#	506' 2843'	50 100		OPEN HOLE
JENKINS B	5	330 FNL 330 FWL 20-17S-30E	3693	OIL 01-11-77		8 5/8 @ 22# 4 1/2 @ 10.5#	496' 3667'	200 675		2480 3620
GRAYBURG DEEP UNIT	6	UNIT LTR C 30-17S-30E	6900	P & A 03-02-70	NO INFO	NO INFO	NO INFO	NO INFO	NO INFO	NO INFO
GRAYBURG DEEP UNIT	8	1980 FNL 760 FEL 30-17S-30E	11600	GAS (MORROW 01-13-79	17 1/2 11	11 3/4 @ 42# 8 5/8 @ 32#	476' 3525'	325 750		
GRAYBURG DEEP UNIT	10	660 FNL 2480 FWL 19-17S-30E	11240 (11160)	GAS (PENN) 12-31-87	17 1/2 11 7 7/8	13 3/8 @ 54.5# 8 5/8 @ 32# 5 1/2 @ 17#	429' 3510' 11240'	500 2500 1050		10891 - 10960

WELL DATA

Attachment C-108 VI

LEASE	WELL#	LOCATION	TD PBTD	TYPE & DATE DRILLED	HOLE SIZE	CASING SZ & WT	SETTING DEPTH	SX CMT	TOC	PERFS
BKU	52	990 FNL 990 FWL 19-17S-30E	3127 (2730)	OIL 12-06-37	10 3/4 8 1/4	8 1/4 @ 30# 7 @ 24#	430' 2784'	50 100		2424-2663 3000-3157
BKU	54	660 FNL 1980 FEL 19-17S-30E	3645 (3639)	OIL 08-24-36	10 3/4 8 1/4	8 1/4 @ 30# 7 @ 24#	475' 2715'	50 100		2538-2620
BKU	55	165 FNL 1155 FEL 19-17S-30E	3625 (3619)	OIL 02-06-76	12 1/4 7 7/8	8 5/8 @ 24# 5 1/2 @ 15.5#	496' 3625'	100 625		1613-1618 2483-2774 3067-3582
BKU	56	990 FNL 330 FEL 19-17S-30E	3678 (3672)	OIL 01-15-38	10 3/4 8 1/4 6 1/4	8 1/4 @ 32# 7 @ 20# 4 1/2 LINER	486' 2899' 2868-3678'	50 100 250		2488-2788 3282-3613
BKU	57	1980 FNL 660 FEL 19-17S-30E	3702 (3696)	OIL 04-11-35		10 @ 40# 6 5/8 @ 24# 4 1/2 @ 9.5#	460' 2900' 2693-3702'	70 40 160		2498-2506 2628-2880 3054-3478
BKU	58	1345 FNL 1295 FEL 19-17S-30E	3223	OIL 02-06-50	10 3/4 8 1/4	8 5/8 @ 24# 7 @ 20#	493' 2676'	50 100		2978-3218 2348-2617 (OPEN HOLE) (2676-3223)
BKU	91	2310 FSL 330 FEL 24-17S-29E	3613 (3613)	OIL 05-07-40	10 8 1/4	8 1/4 @ 24# 7 @ 20#	515' 2727'	50 100		2479-2482 2520-2525 (OPEN HOLE) (2727-2613)
BKU	92	1980 FNL 660 FEL 19-17S-30E	3142 (3137)	OIL 06-27-29		12 1/2 @ 50# 10 3/4 @ 40# 6 5/8 @ 24#	368' 900' 2865'	15 20		2845-3142 OPEN HOLE 277'

WELL DATA

Attachment C–108 VI

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

WELL DATA

Attachment C–108 VI

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

WELL DATA

Attachment C–108 VI

LEASE	WELL#	LOCATION	TD PBTD	TYPE & DATE DRILLED	HOLE SIZE	CASING SZ & WT	SETTING DEPTH	SX CMT	TOC	PERFS
BKU	144	660 FNL 1980 FWL 30–17S–30E	3254	WIW 04–20–44	11 7 7/8	8 5/8 @ 24# 7 @ 20#	508' 2911'	50 100	311' 1502'	(OPEN HOLE) (2572–2690) 2911–3246
BKU	60	1980 FNL 660 FWL 19–17S–30E	3137	P&A 05–02–32		10 @ 40# 6 5/8 @ 20#	372.7' 2783'	NONE NONE		

WELL DATA

Attachment C–108 VI

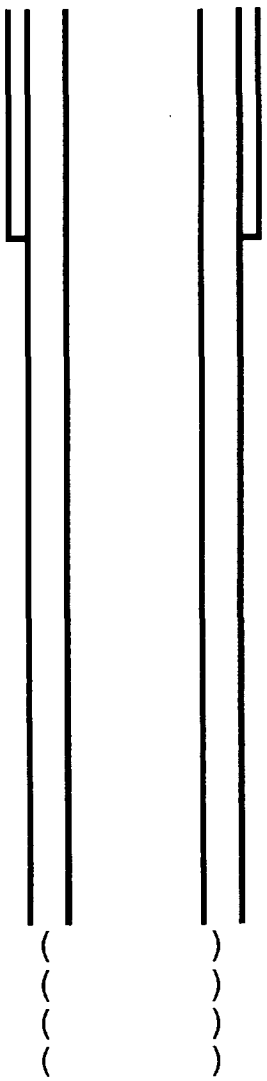
LEASE	WELL#	LOCATION	TD PBTD	TYPE & DATE DRILLED	HOLE SIZE	CASING SZ & WT	SETTING DEPTH	SX CMT	TOC	PERFS
BURCH A	5	1980 FNL 1980 FEL 19–17S–30E	3154	OIL–P&A 05–08–34		10 @ 40# 6 5/8 @ 24#	456.7' 2858'	10 75		
BURCH A	23	2565 FNL 955 FWL 19–17S–30E	3150	OIL–P&A 06–04–49		8 5/8 @ 24# 7 @ 20#	455' 2492'	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		
BKU	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	8	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

PLUGGED WELL DATA

C-108 VI

OPERATOR	LEASE			
ENRON	MCINTYRE 'D'			
WELL NO.	FOOTAGE LOCATION	SECTION	TOWNSHIP	RANGE
6	660 FSL & 1980 FWL	20	17S	30E

Schematic



Tabular Data

Surface Casing

Size 8 5/8 " Cemented with 75 sx.

TOC _____ feet determined by _____

Hole size _____

Intermediate Casing

Size _____ " Cemented with _____ sx.

TOC _____ feet determined by _____

Hole size _____

Long string

Size 7 " Cemented with 100 sx.

TOC _____ feet determined by _____

Hole size _____

Total depth 3428

~~Injection interval~~

~~_____ feet to _____ feet~~

~~(perforated or open hole, indicate which)~~

~~Tubing size _____ lined with _____ set in a~~

~~(material)~~

~~_____ packer at _____ feet~~

~~(brand and model)~~

~~(or describe any other casing-tubing seal).~~

Other Data

1. Name of the injection formation _____

2. Name of Field or Pool (if applicable) _____

3. Is this a new well drilled for injection? ☐ Yes ☐ No

If no, for what purpose was the well originally drilled? _____

4. Has the well ever been perforated in any other zone(s)? List all such perforated intervals and give plugging detail (sacks of cement or bridge plug(s) used) _____

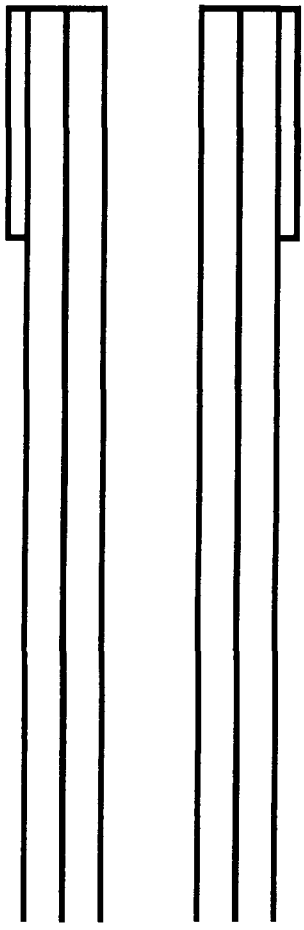
5. Give the depth to and name of any overlying and/or underlying oil or gas zones (pools) in this area. _____

PLUGGED WELL DATA

C-108 VI

OPERATOR	LEASE			
PHILLIPS	GRAYBURG DEEP UNIT			
WELL NO.	FOOTAGE LOCATION	SECTION	TOWNSHIP	RANGE
6		30	17S	30E

Schematic



Tabular Data

Surface Casing

Size _____" Cemented with _____ sx.

TOC _____ feet determined by _____

Hole size _____

Intermediate Casing

Size _____" Cemented with _____ sx.

TOC _____ feet determined by _____

Hole size _____

Long string

Size _____" Cemented with _____ sx.

TOC _____ feet determined by _____

Hole size _____

Total depth _____

Injection interval

_____ feet to _____ feet

(perforated or open-hole, indicate which)

Tubing size _____ lined with _____ (material) set in a

_____ (brand and model) packer at _____ feet

(or describe any other casing-tubing seal).

Other Data

1. Name of the injection formation _____

2. Name of Field or Pool (if applicable) _____

3. Is this a new well drilled for injection? ☐ Yes ☐ No

If no, for what purpose was the well originally drilled? _____

4. Has the well ever been perforated in any other zone(s)? List all such perforated intervals and give plugging detail (sacks of cement or bridge plug(s) used) _____

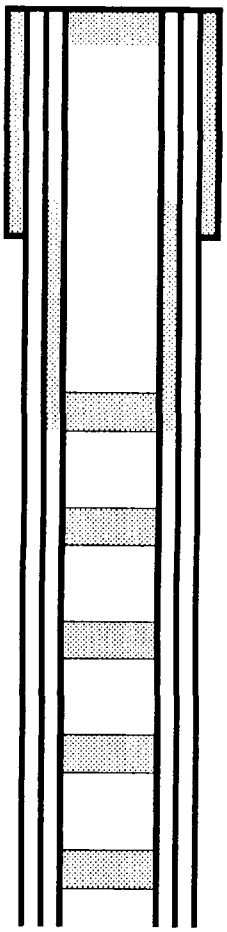
5. Give the depth to and name of any overlying and/or underlying oil or gas zones (pools) in this area. _____

PLUGGED WELL DATA

C-108 VI

OPERATOR	LEASE			
PHILLIPS	GRAYBURG DEEP UNIT			
WELL NO.	FOOTAGE LOCATION	SECTION	TOWNSHIP	RANGE
8	1980 FNL 760 FEL	30	17S	30E

Schematic



Tabular Data

Surface Casing

Size 11 3/4" 54.5# Cemented with 325 sx.

TOC _____ feet determined by _____

Hole size 17 1/2

Intermediate Casing

Size 8 5/8"@ 32# " Cemented with 750 sx.

TOC _____ feet determined by _____

Hole size 11"

Long string

Size _____" Cemented with _____ sx.

TOC _____ feet determined by _____

Hole size _____

Total depth _____

Injection interval

_____ feet to _____ feet

(perforated or open-hole, indicate which)

Tubing size _____ lined with _____ (material) set in a

_____ (brand and model) packer at _____ feet

(or describe any other casing-tubing seal).

Other Data

1. Name of the injection formation _____

2. Name of Field or Pool (if applicable) _____

3. Is this a new well drilled for injection? ☐ Yes ☐ No

If no, for what purpose was the well originally drilled? _____

4. Has the well ever been perforated in any other zone(s)? List all such perforated intervals and give plugging detail (sacks of cement or bridge plug(s) used) _____

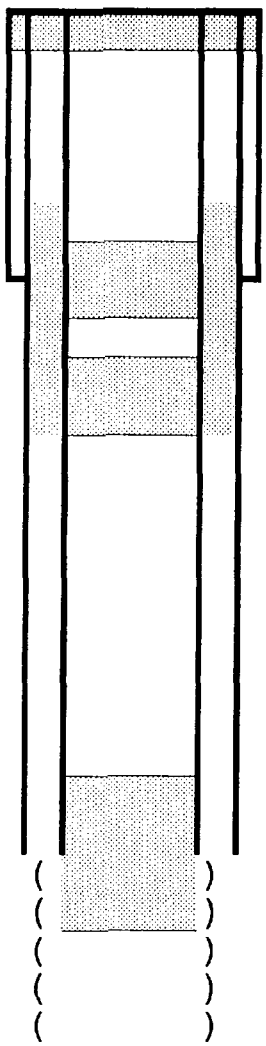
5. Give the depth to and name of any overlying and/or underlying oil or gas zones (pools) in this area. _____

PLUGGED WELL DATA

C-108 VI

OPERATOR	LEASE			
MARBOB ENERGY CORPORATION	BKU			
WELL NO.	FOOTAGE LOCATION	SECTION	TOWNSHIP	RANGE
60	1980 FNL 660 FWL	19	17S	30E

Schematic



Tabular Data

Surface Casing

Size 10 @ 40# " Cemented with -0- sx.

TOC _____ feet determined by _____

Hole size _____

Intermediate Casing

Size _____ " Cemented with _____ sx.

TOC _____ feet determined by _____

Hole size _____

Long string

Size 6 5/8 @ 20# " Cemented with -0- sx.

TOC _____ feet determined by _____

Hole size _____

Total depth 3137

~~Injection Interval~~

~~_____ feet to _____ feet~~

~~(perforated or open-hole, indicate which)~~

~~Tubing size _____ lined with _____ set in a~~

~~(material)~~

~~_____ packer at _____ feet~~

~~(brand and model)~~

~~(or describe any other casing-tubing seal).~~

Other Data

1. Name of the injection formation _____

2. Name of Field or Pool (if applicable) _____

3. Is this a new well drilled for injection? ☐ Yes ☐ No

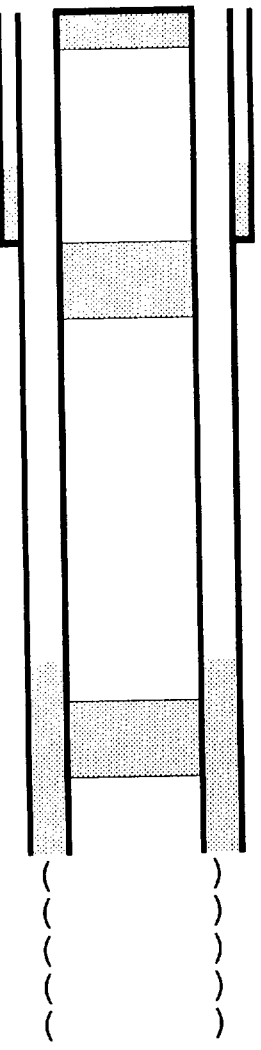
If no, for what purpose was the well originally drilled? _____

4. Has the well ever been perforated in any other zone(s)? List all such perforated intervals and give plugging detail (sacks of cement or bridge plug(s) used) _____

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

OPERATOR	LEASE			
MARBOB ENERG CORPORATION	BURCH A			
WELL NO.	FOOTAGE LOCATION	SECTION	TOWNSHIP	RANGE
5	1980 FNL 1980 FEL	19	17S	30E

Schematic



Tabular Data

Surface Casing

Size 10 " Cemented with 10 sx.

TOC _____ feet determined by _____

Hole size _____

Intermediate Casing

Size _____ " Cemented with _____ sx.

TOC _____ feet determined by _____

Hole size _____

Long string

Size 6 5/8 " Cemented with 75 sx.

TOC _____ feet determined by _____

Hole size _____

Total depth 3154

~~Injection Interval~~

~~XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX feet~~

~~XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX~~

Tubing size _____ lined with _____ set in a _____ (material)

_____ (brand and model) packer at _____ feet

(or describe any other casing-tubing seal).

Other Data

1. Name of the injection formation _____

2. Name of Field or Pool (if applicable) _____

3. Is this a new well drilled for injection? ☐ Yes ☐ No

   If no, for what purpose was the well originally drilled? _____

4. Has the well ever been perforated in any other zone(s)? List all such perforated intervals and give plugging detail (sacks of cement or bridge plug(s) used) _____

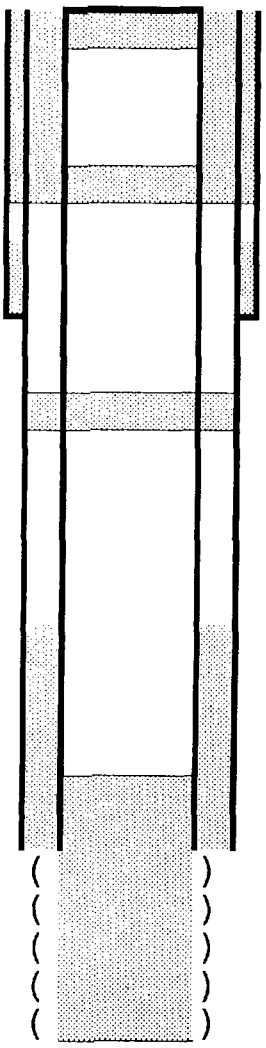
5. Give the depth to and name of any overlying and/or underlying oil or gas zones (pools) in this area. _____

PLUGGED WELL DATA

C-108 VI

OPERATOR	LEASE			
MARBOB ENERGY CORPORATION	BURCH A			
WELL NO.	FOOTAGE LOCATION	SECTION	TOWNSHIP	RANGE
23	2565 FNL 995 FWL	19	17S	30E

Schematic



Tabular Data

Surface Casing

Size 8 5/8 @ 24# " Cemented with 75 sx.

TOC 316 feet determined by CALC @ 50%

Hole size

Intermediate Casing

Size " Cemented with sx.

TOC feet determined by

Hole size

Long string

Size 7 @ 20# " Cemented with 100 sx.

TOC 1876 feet determined by CALC @ 50%

Hole size

Total depth 3150

~~Injection Interval~~

~~feet to feet~~

~~(perforated or open-hole, indicate which)~~

~~Tubing size lined with (material) set in a~~

~~(brand and model) packer at feet~~

~~(or describe any other casing-tubing seal).~~

Other Data

1. Name of the injection formation
2. Name of Field or Pool (if applicable)
3. Is this a new well drilled for injection? ☐ Yes ☐ No

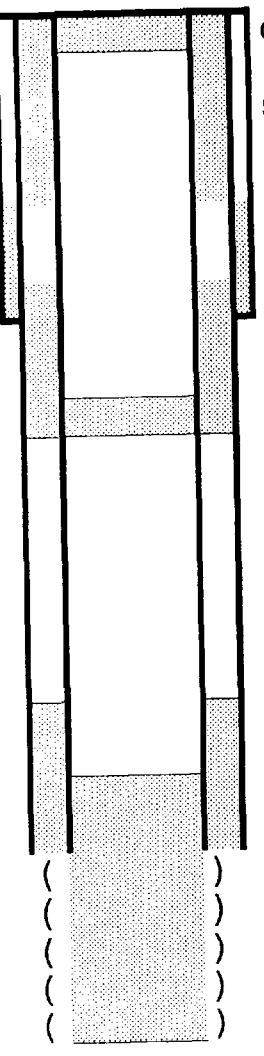
   If no, for what purpose was the well originally drilled?
4. Has the well ever been perforated in any other zone(s)? List all such perforated intervals and give plugging detail (sacks of cement or bridge plug(s) used)
5. Give the depth to and name of any overlying and/or underlying oil or gas zones (pools) in this area.

PLUGGED WELL DATA

C-108 VI

OPERATOR	LEASE			
MARBOB ENERGY CORPORATION	BURCH A			
WELL NO.	FOOTAGE LOCATION	SECTION	TOWNSHIP	RANGE
24	2310 FNL 2615 FEL	19	17S	30E

Schematic



Tabular Data

Surface Casing

Size 8 5/8 @ 24# " Cemented with 75 sx.

TOC 343 feet determined by CALC @ 50%

Hole size _____

Intermediate Casing

Size _____ " Cemented with _____ sx.

TOC _____ feet determined by _____

Hole size _____

Long string

Size 7 @ 20# " Cemented with 100 sx.

TOC 1898 feet determined by CALC @ 50%

Hole size _____

Total depth 3183

~~Injection Interval~~

~~_____ feet to _____ feet~~
~~(perforated or open hole; indicate which)~~

~~Tubing size _____ lined with _____ set in a~~
~~(material)~~
~~_____ packer at _____ feet~~
~~(brand and model)~~
~~(or describe any other casing-tubing seal).~~

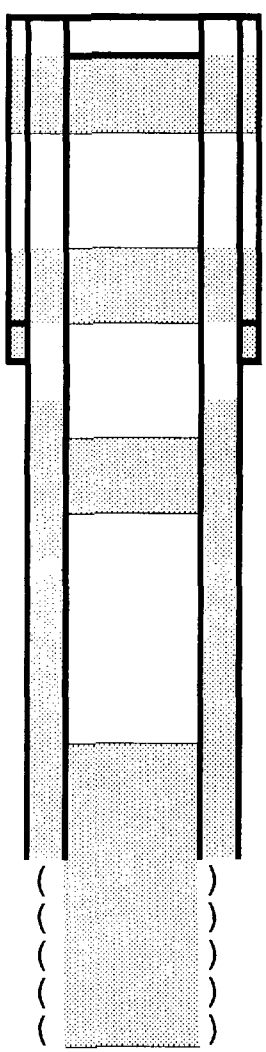
Other Data

1. Name of the injection formation _____
2. Name of Field or Pool (if applicable) _____
3. Is this a new well drilled for injection? ☐ Yes ☐ No
   If no, for what purpose was the well originally drilled? _____
4. Has the well ever been perforated in any other zone(s)? List all such perforated intervals and give plugging detail (sacks of cement or bridge plug(s) used) _____
5. Give the depth to and name of any overlying and/or underlying oil or gas zones (pools) in this area. _____

PROPOSED WELL DATA

OPERATOR	LEASE			
MARBOB ENERGY CORPORATION	BKU			
WELL NO.	FOOTAGE LOCATION	SECTION	TOWNSHIP	RANGE
59	1980 FNL 1980 FWL	19	17S	30E

Schematic



Tabular Data

Surface Casing

Size 10 @ 40# " Cemented with 10 sx.

TOC _____ feet determined by _____

Hole size _____

Intermediate Casing

Size _____ " Cemented with _____ sx.

TOC _____ feet determined by _____

Hole size _____

Long string

Size 6 5/8 @ 24# Cemented with MUD TOP TO BOTTOM

TOC _____ feet determined by _____

Hole size _____

Total depth 3660

~~Injection interval~~

~~_____ feet to _____ feet~~
~~(perforated or open-hole, indicate which)~~

~~Tubing size _____ lined with _____ set in a~~
~~(material)~~
~~_____ packer at _____ feet~~
~~(brand and model)~~
~~(or describe any other casing-tubing seal).~~

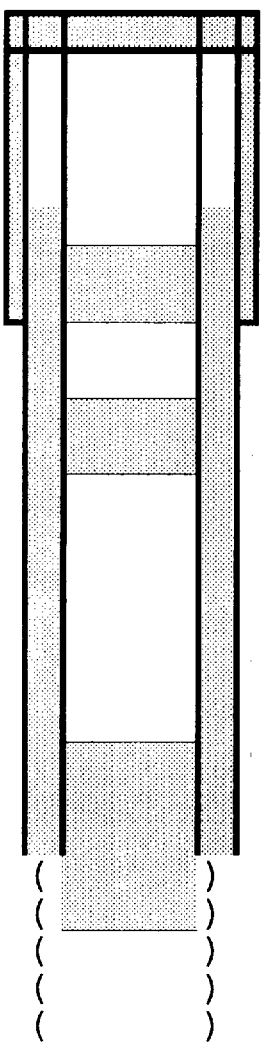
Other Data

1. Name of the injection formation _____
2. Name of Field or Pool (if applicable) _____
3. Is this a new well drilled for injection? ☐ Yes ☐ No
   If no, for what purpose was the well originally drilled? _____
4. Has the well ever been perforated in any other zone(s)? List all such perforated intervals and give plugging detail (sacks of cement or bridge plug(s) used) _____
5. Give the depth to and name of any overlying and/or underlying oil or gas zones (pools) in this area. _____

PROPOSED WELL DATA

OPERATION	LEASE			
MARBOB ENERGY CORPORATION	BKU			
WELL NO.	FOOTAGE LOCATION	SECTION	TOWNSHIP	RANGE
93	2310 FSL 1650 FWL	19	17S	30E

Schematic



Tabular Data

Surface Casing

Size 8 5/8 @ 24# " Cemented with 50 sx.

TOC 60' feet determined by 6

Hole size _____

Intermediate Casing

Size _____ " Cemented with _____ sx.

TOC _____ feet determined by _____

Hole size _____

Long string

Size 7 @ 20# " Cemented with 100 sx.

TOC 1230 feet determined by _____

Hole size _____

Total depth _____

Injection Interval

_____ feet to _____ feet

(perforated or open-hole, indicate which)

Tubing size _____ lined with _____ set in a

(material)

_____ packer at _____ feet

(brand and model)

(or describe any other casing-tubing seal).

Other Data

1. Name of the injection formation _____

2. Name of Field or Pool (if applicable) _____

3. Is this a new well drilled for injection? ☐ Yes ☐ No

If no, for what purpose was the well originally drilled? _____

4. Has the well ever been perforated in any other zone(s)? List all such perforated intervals and give plugging detail (sacks of cement or bridge plug(s) used) _____

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

PLUGGED WELL DATA

C-108 VI

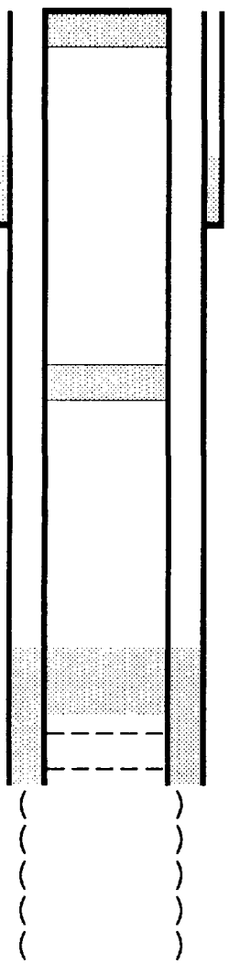
OPERATOR LEASE

MARBOB ENERGY CORPORATION BURCH A

WELL NO. FOOTAGE LOCATION SECTION TOWNSHIP RANGE

8 990 FNL 2310 FWL 19 17S 30E

Schematic



Tabular Data

Surface Casing

Size 8 1/4 @ 32# " Cemented with 50 sx.

TOC 352 feet determined by CALC @ 50%

Hole size _____

Intermediate Casing

Size _____ " Cemented with _____ sx.

TOC _____ feet determined by _____

Hole size _____

Long string

Size 7 @ 20# " Cemented with 100 sx.

TOC 2209 feet determined by CALC @ 50%

Hole size _____

Total depth 3225

~~Injection interval~~

~~_____ feet to _____ feet~~

~~(perforated or open hole, indicate which)~~

~~Tubing size _____ lined with _____ set in a~~

~~(material)~~

~~_____ packer at _____ feet~~

~~(brand and model)~~

~~(or describe any other casing-tubing seal).~~

Other Data

1. Name of the injection formation _____

2. Name of Field or Pool (if applicable) _____

3. Is this a new well drilled for injection? ☐ Yes ☐ No

If no, for what purpose was the well originally drilled? _____

4. Has the well ever been perforated in any other zone(s)? List all such perforated intervals and give plugging detail (sacks of cement or bridge plug(s) used) _____

marbob
energy corporation

January 26, 1996

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.

If you have no objections to this expansion of the existing Burch-Keely Unit Waterflood project, please sign below and forward one copy to the New Mexico Oil Conservation Division in Santa Fe, one copy to the New Mexico Oil Conservation Division in Artesia, one copy to Marbob Energy Corporation, and retain one copy for your records. Addressed, stamped envelopes have been provided for your convenience. If you do have an objection to this project, you must notify the New Mexico Oil Conservation Division in Santa Fe in writing within fifteen days of this notice. Thank you for your quick response in this matter.

Sincerely,

David Martin
Land Department

DM/mm
Enclosures

CHARLES MARTIN, INC.:

By: _____

Date: _____

marbob
energy corporation

January 26, 1996

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

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,

David Martin

David Martin
Land Department

DM/mm
Enclosures

BUREAU OF LAND MANAGEMENT:

By: _____

Date: _____

marbob
energy corporation

January 26, 1996

Phillips Petroleum Company
4001 Penbrook
Odessa, Texas 79762

Re: Burch-Keely Unit Waterflood Expansion Project
S/2 Section 19-17S-30E, Eddy County, New Mexico

Gentlemen:

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Sincerely,

David Martin

David Martin
Land Department

DM/mm
Enclosures

PHILLIPS PETROLEUM COMPANY:

By: _____

Date: _____

P.O. Box 227 Artesia, New Mexico 88211-0217 (505) 748-3303 Fax (505) 746-2523

marbob
energy corporation

January 26, 1996

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

Gentlemen:

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Sincerely,

David Martin

David Martin
Land Department

DM/mm
Enclosures

SABRE OPERATING:

By: _____

Date: _____

marbob
energy corporation

January 26, 1996

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

Re: Burch-Keely Unit Waterflood Expansion Project
S/2 Section 19-17S-30E, Eddy County, New Mexico

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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,

David Martin

David Martin
Land Department

DM/mm
Enclosures

MACK ENERGY CORPORATION:

By: _____

Date: _____

Affidavit of Publication

No. 15352

STATE OF NEW MEXICO,

County of Eddy:

Gary D. Scott being duly sworn, says: That he is the Publisher of The Artesia Daily Press, a daily newspaper of general circulation, published in English at Artesia, said county and state, and that the hereto attached Legal Notice

was published in a regular and entire issue of the said Artesia Daily Press, a daily newspaper duly qualified for that purpose within the meaning of Chapter 167 of the 1937 Session Laws of the state of New Mexico for 3 days" consecutive weeks on the same day as follows:

First Publication January 30, 1996

Second Publication January 31, 1996

Third Publication February 1, 1996

Fourth Publication

Gary D. Scott

Subscribed and sworn to before me this 6th day of February 19 96

Barbara Ann Boone

Notary Public, Eddy County, 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 Conservation Division, 2040 South Pacheco Street, Santa Fe, New 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

marbob
energy corporation

January 26, 1996

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

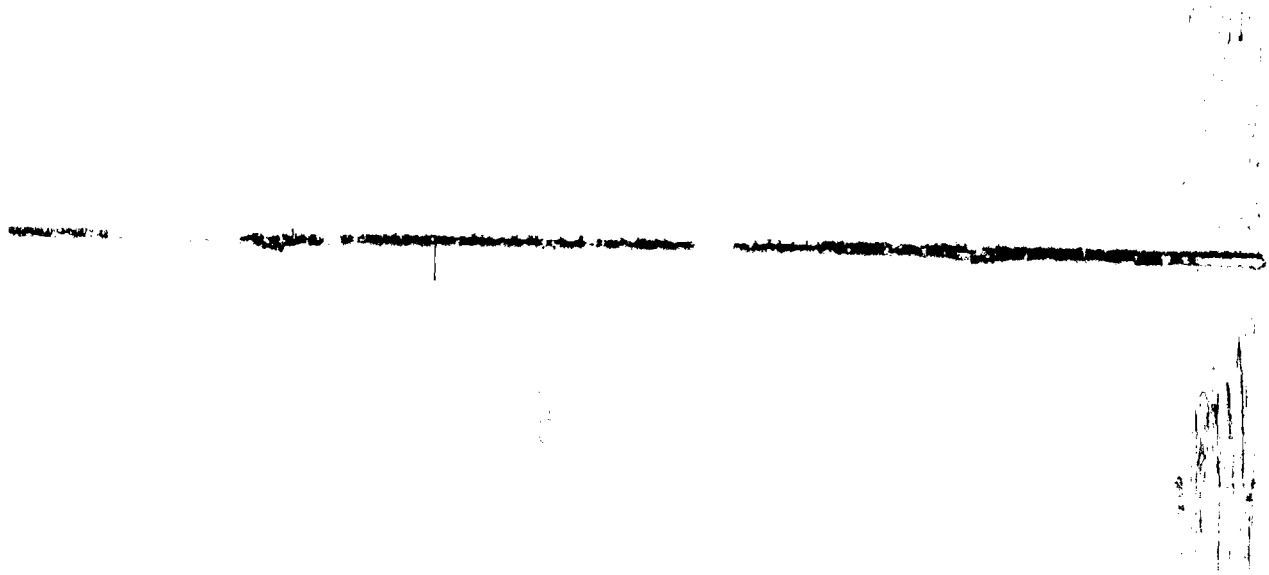
David Martin
Land Department

DM/mm
Enclosures

MACK ENERGY CORPORATION:

By: Mark C. Chase
Mack C. Chase, President

Date: 2/2/96



marbob
energy corporation

January 26, 1996

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

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

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Sincerely,

David Martin

David Martin
Land Department

DM/mm
Enclosures

SABRE OPERATING:

By: Kathy Allen

Date: 2-2-96

WFX-682

marbob
energy corporation

January 26, 1996

Charles R. 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:

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Sincerely,

David Martin

David Martin
Land Department

DM/mm
Enclosures

CHARLES R. MARTIN, INC.:

By: Charles M. Ward

Date: 2-1-96

P.O. Box 227 Artesia, New Mexico 88211-0217 (505) 748-3303 Fax (505) 746-2523