STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT

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

SWD

FORM C-108 ~~Revised 10-1-78~~ Revised 7-1-81

667

RECEIVED
JUN - 6 1997

APPLICATION FOR AUTHORIZATION TO INJECT

I. Purpose: ☐ Secondary Recovery ☐ Pressure Maintenance ☒ Disposal ☐ Storage
Application qualifies for administrative approval? ☐ yes ☐ no

II. Operator: CHEVRON USA PRODUCTION CO.

Address: P.O. BOX 1150 MIDLAND, TX 79702

Contact party: CRAIG WRIGHT Phone: (915) 687-7284

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? ☐ yes ☒ no
If yes, give the Division order number authorizing the project _____.

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: Craig A. Wright Title Petroleum Engineer

Signature: Craig A. Wright Date: 5/21/97

* 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 Santa Fe with one copy to the appropriate Division 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.

Section III See attachment 1.

Section V See attachment 2.

Section VI See attachment 3.

Section VII (Proposed Operation)

1. Est. average daily rate = 1000 bwpd
   Est. maximum daily rate = 2000 bwpd
   Est. injection volume = 7.2 mmbbls

2. The salt water disposal system will be a closed system.

3. Est. average injection pressure = 600 psi
   Est. maximum injection pressure = 1500 psi

4. Injection water chemical analysis (see attachments 4 & 5).
   (Note): Fluid compatibility testing in not necessary since the injection and receiving fluids are both in the Delaware formation.

5. Disposal zone formation water analysis (see attachment 6).

Section VIII (Geologic Description of Proposed Injection Zone)

The proposed injection zone for the Marquardt Federal #6 is the Bell Canyon Formation of the Delaware Mountain Group. The proposed injection interval for the #6 is the middle 500' of the Bell Canyon from 2200' to 2700'. The upper 200' of the Bell Canyon was not considered for injection because it contains hydrocarbon shows and has potential for future production. The Bell Canyon Formation is composed of very-fine grained sandstone with occasional thin siltstone beds. The only known fresh water aquifer in the area is the overlying Quaternary Alluvium at depths less than 250'. No known aquifers underlie the proposed Bell Canyon injection interval.

Section IX (Proposed Stimulation)

Perforate with 4-JHPF between 2200'-2700'. Breakdown the perforations with 2500 gals 15% HCL anti-sludge acid using RCN balls for diversion. Fracture stimulate down tubing with 30,000 gals X-Link gel carrying 90,000 lbs 16/30 sand at 15 BPM and 800 psi.

Section X (Logging and Test Data)

Perfs:	Zone:	Test Data:
5386'-5450'	Delaware-East Loving	Swab 38 BPH with 3% oil cut.
5148'-5209'	Delaware-Brushy Canyon	Swab 30 BPH with a trace of oil.
4846'-4887'	Delaware-Brushy Canyon	Swab 30 BPH with a trace of oil.
3113'-3128'	Delaware-Cherry Canyon	Swab 15 BPH with a small show of gas.

Well logs for the Marquardt Federal #6 have been filed with the Oil Conservation Division and BLM.

Section XI (Fresh Water Analysis)

Mike Stapleton, State Engineers Office, Roswell, NM, confirmed that no fresh water wells are filed on record within one mile of the proposed disposal well location as of 05/01/97.

Chevron's lease operator for this area agrees, to the best of his knowledge and belief, that no fresh water wells exist within one mile of the disposal well location.

Section XII (Affirmative Statement)

All available geologic data has been examined and no known hydrologic connection exists between the shallow aquifer and the proposed Bell Canyon disposal zone. The data consists of well logs, structure maps, and seismic. The Castille Formation, composed of evaporites, immediately overlies the Bell Canyon and provides a seal between the Bell Canyon and any shallow aquifer.

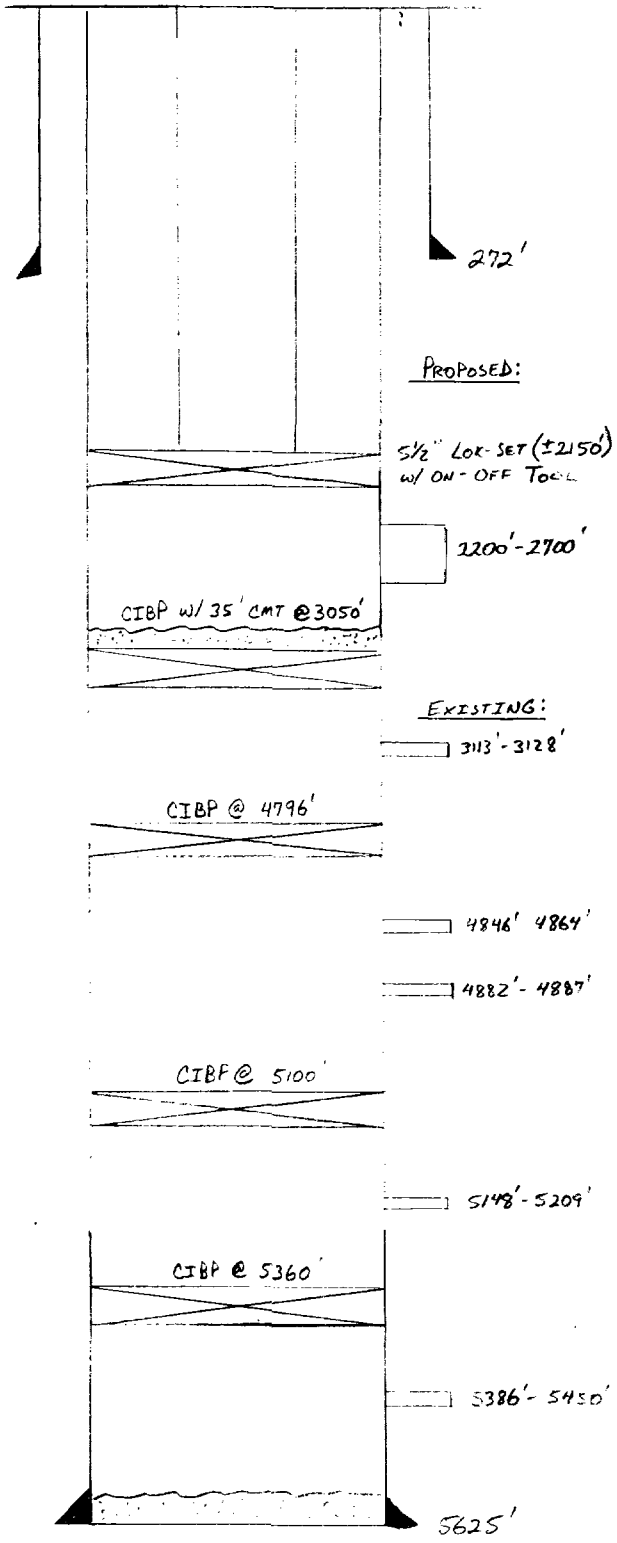
Section XIII ("Proof of Notice")

See attachments 7 & 8.

INJECTION WELL DATA SHEET

OPERATOR	LEASE			
CHEVRON USA PRODUCTION CO.	MARQUARDT FEDERAL			
#6	1980' FNL & 330' FWL	1	T25S	R26E
WELL NO.	FOOTAGE LOCATION	SECTION	TOWNSHIP	RANGE

Schematic



Tabular Data

Surface Casing

Size 8-5/8" Cemented with 200 sx.

TOC @ SFC feet determined by CIRC. 45 SX SFC.

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 1125 sx.

TOC @ SFC feet determined by CIRC. 85 SX SFC.

Hole size 7-7/8"

Total depth 5625'

Injection interval

2200' feet to 2700' feet

(perforated or open-hole, indicate which)

ATTACHMENT 1

Tubing size 2-7/8" lined with Duo-Line (material) set in a

Whitaker Lok-Set w/ On-Off Tool (brand and model) packer at ±2150' feet

(or describe any other casing-tubing seal).

Other Data

1. Name of the injection formation Delaware - Bell Canyon

2. Name of Field or Pool (if applicable) South Black River

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

   If no, for what purpose was the well originally drilled? Delineation of Delaware Acreage.

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)

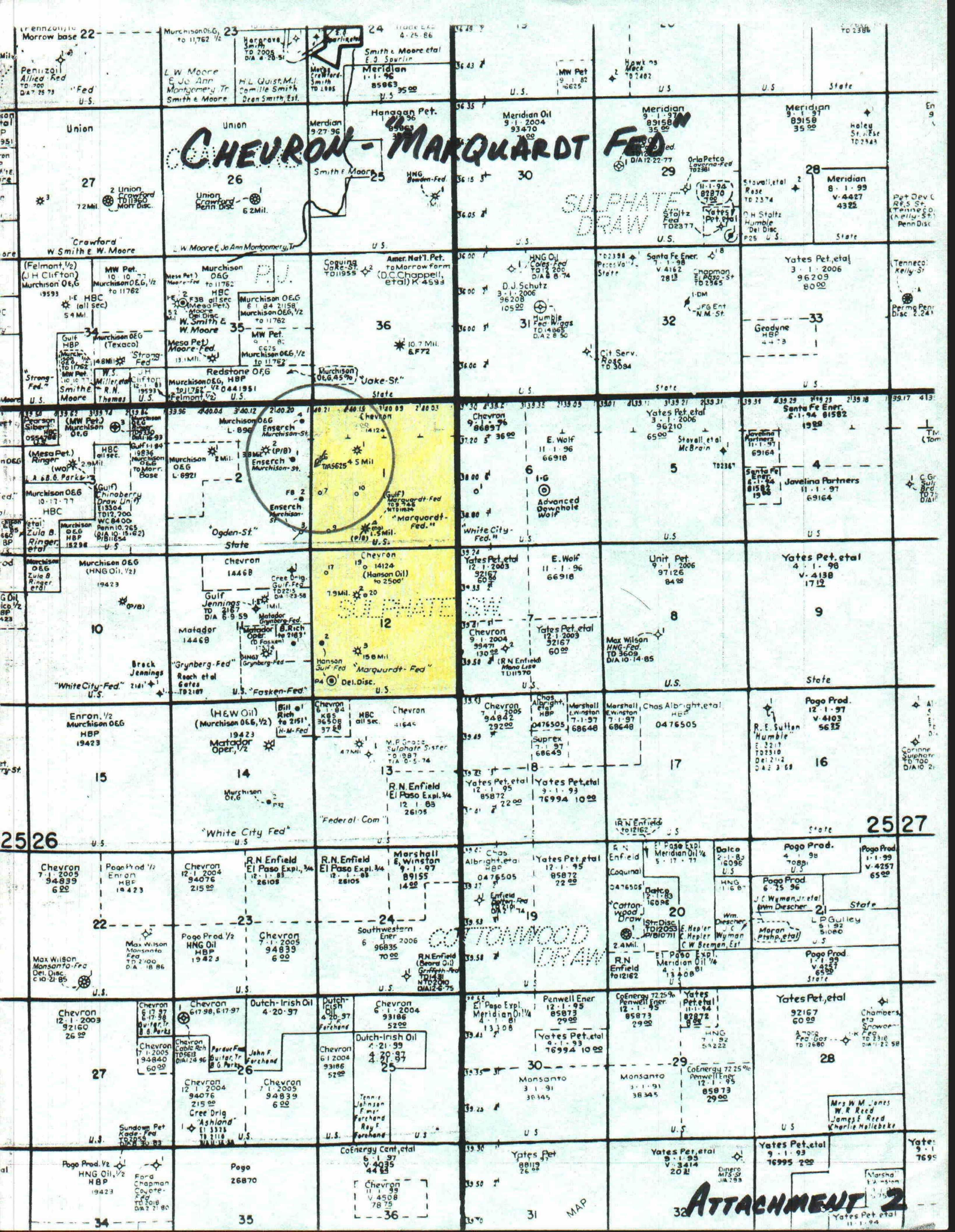
   ① Delaware - East Loving, Perfs: 5386'-5450', CIBP @ 5360'. ② Delaware - Brushy Canyon, Perfs: 4846'-5209', CIBP's @ 4796' & 5100'. ③ Delaware - Cherry Canyon, Perfs: 3113'-3128'.

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

   ±2000' Sulphate - Delaware, Southwest

   ±5000' Black River - Delaware, South

   ±11000' White City Penn - Wolfcamp/Cisco/Atoka



CHEVRON - "MARQUARDT FED"
SULPHATE DRAW
SULPHATE SW
COTTONWOOD DRAW
Marquardt-Fed.
"Marquardt-Fed"
"White City Fed"
"Ogden-St."
"Grynberg-Fed"
"Fasken-Fed"
"Federal Com"
"Jake-St."
Chevron
Enserch
Murchison O&G
Yates Pet, etal
Meridian
Union
"Crawford"
W Smith & W. Moore
Attachment 2

Section VI
Data on all Wells of Public Record Within Area of Review

Well	Type	Method	Construction	Spud Date	Location	TD	PBTD	Record of Completion
Marquardt Federal #1	P	Flowing	9-5/8" @ 2150' (TOC @ sfc by circ) 7" @ 9720' (TOC @ 1339' by calc) 5" 9336'-11659' (Cmt. w/ 250 sxs)	12/19/78	Sec. 1, T25S, R26E 1650' FNL & 1650' FWL Eddy County, NM	11670'	11617'	Perf 11139'-11548', Acidize Perf 10318'-28', Acidize Perf 9609-9746', Acidize
			Note: Cement sqzd. 7" casing on 11/06/96. Original TOC @ 7630' by TS. Perforated 7" casing @ 6500'. Pumped 760 sxs Class "C" cement. Calculated TOC is 1339' from surface utilizing a 8.75" hole size and a 20% loss factor. Refer to Attachments VLA & VLB for documentation of cement squeeze.					
Marquardt Federal #7	SI		8-5/8" @ 517' (TOC @ sfc by circ) 5-1/2" @ 6400' (TOC @ sfc by circ)	07/13/95	Sec. 1, T25S, R26E 1980' FSL & 330' FWL Eddy County, NM	5650'	5050'	Perf 5104'-17', Acidize, Sand Frac Perf 4794'-4836', Acid, Sand Frac
Murchison '2' State #1	P	Rod Pump	13-3/8" @ 256' (TOC @ sfc by circ) 8-5/8" @ 2008' (TOC @ 758' by calc) 5-1/2" @ 5520' (TOC @ sfc by circ)	01/20/95	Sec. 2, T25S, R26E 1980' FNL & 660' FEL Eddy County, NM	8631'	5270'	Perf 5133'-66', Acidize, Sand Frac
Murchison '2' State #2	SI		8-5/8" @ 1947' (TOC @ sfc by circ) 5-1/2" @ 5553' (TOC @ sfc by circ)	05/10/95	Sec. 2, T25S, R26E 1830' FSL & 330' FEL Eddy County, NM	5553'	5451'	Perf 5177'-97', Acidize Perf 5138'-52', Acidize, Sand Frac
Murchison '2' State #4	SI		8-5/8" @ 2010' (TOC @ sfc by circ) 5-1/2" @ 5550' (TOC @ 1620' by CBL)	08/18/95	Sec. 2, T25S, R26E 660' FNL & 330' FEL Eddy County, NM	5550'	5509'	Perf 5202'-06', Acidize, Sand Frac Perf 5167'-71', Acidize, Sand Frac

ATTACHMENT 3

LEASE NAME **WELL #** **Daily Completion / WO Report**

MARQUARDT FE # 1

Start Da 10/22/96	Act.Da 12	Ath. Day:	TD: 11617	PBTD 11617'				
Job Description:	CO-MINGLE WOLFCAMP & PENN		KB Correction:	16'				
Fluid Ty N/R		Weight:						
Prod Cs 7"		Weight: 26#	Grd: N/A		Set: 9720'	TOC: N/A		
Liner Of 5"		Weight: 15 #	Grd: N/A		Liner Set at:	MD: 11659'		
Tubing (Wt	Grade	Threads	Depth	Details	Liner Top At:	MD: 93336'	TOC: N/A	
2.375" 4.700	N-80	8 RD	9497	304JTS				

Packer @	Packer Make & Model	Perfs From:	To:	Details
9518	5" LOK-SET W/ 1.78 (F) PROFILE NIPPLE	9609'	9746'	WOLFCAMP
6254'	WHITAKER FULLBORE PKR.	10318'	10328'	STRAWN
7500'	WHITAKER LOK-SET RBP.	11139'	11544'	MORROW
Fish To	Details:			

Hrs From	To:	Operations Covering 24 Hours - Ending at Midnight (24:00 hrs)
07:00	10:00	R/U STAR R.U. PUMP BBLS @ 2.4 BPM @ 1000 PSI HAD NO
		RETURNS OUT SURFACE .
10:00	03:30	R/U BJ SERVICES PUMP 20 BBL F/ W SPACER EST RATE 2.5 BPM @ 1500 PSI.
		MIXED & PUMP 500 SXS (C) + 5/10 % FL-62 LEAD CMT W / FLUID LOSS : 488 . PUMPED
		@ 2.5 BPM @ 2000 PSI. MIXED & PUMP 260 SXS (C) + 2 % CACL2 + 6/10 % BA-10 + 3/10 % GEL
		PUMPED @ 2.8 BPM @ 1000 PSI. SHUT DOWN WASH UP PUMP & LINES.
		STARTED DISPLACEMENT 2. 5 BPM @ 50 PSI DISPLACED W/ 26.5 BBLS .
		ISIP 1200 PSI STARTED HESITATION . MADE 8 HESITATIONS FINIAL SQZ
		PRSSURE 2000 PSI . TOTAL BBLS DISPLACED 28 BBLS .
		DISPLACE CMT DOWN TO 6351' . S.W.I.F.N.
		PREP TO RIH W/ T.S. LOG

CONTRACTOR HRS:	RIG: 34		OTHERS: 42.5	TOTAL: 77				
Fld. lost to Form.	Daily:		Cumulative:					
Hours Charged To	Cont.:		Chevron		Other:		Total: 0	
Remarks:								
G&A: 0	H2S:		ACCIDENTS:					
Cum Int. 70,423	Daily Well Cost: 13,138				AFE #: PU 972000		Chev %:	
Cum Tar 0	Cum W/O G&A: 70,423				AFE TOTAL:			
MISC:								
District: PGPC	Rig: PRIDE # 185		Phone: (915) 556-5155		WO Rep: DEWAYNE JARRE			
Field: S.BLACK RIVER	Lease: MARQUARDT FED		Well No: # 1		Date: 11/6/96			

ATTACHMENT VI. A

BJ Services Company — CEMENT JOB DETAIL SHEET

CUSTOMER	DATE	F.R. #	SER. SUP.	TYPE JOB
Chevron USA	11-6-96	394070	Marty Hales	SQZ

LEASE & WELL NAME-OCSG	LOCATION	COUNTY-PARISH-BLOCK
Marquardt Fed #1		Eddy

DISTRICT	DRILLING CONTRACTOR RIG #	OPERATOR
Artesia	Pride Petroleum Service	S. Sedillos

MATERIAL FURNISHED BY WPS	TYPE OF PLUGS TOP	TYPE OF PLUGS BTM	LIST-CSG-HARDWARE	SQ MANI FOLD Y	SQ MANI FOLD N	TOP OF EACH FLUID	PHYSICAL SLURRY PROPERTIES: SLURRY WGT PPG	SLURRY YLD FT³	WATER GPS	PUMP TIME HR:MIN	Bbl SLURRY	Bbl MIX WATER
			500 sks "C" + 5/10% FL-62				14.8	1.32	6.32		117.5	75.2
			200 sks "C" + 2% CaCl2 + 6/10% BA-10 + 3/10% Gel				14.8	1.32	6.32		61.1	39.1
										TOTAL	178.6	114.3

Available Mix Water 300 Bbl. Available Displ. Fluid 165 Bbl.

HOLE SIZE	HOLE % EXCESS	HOLE DEPTH	TBG-CSG-D.P. SIZE	TBG-CSG-D.P. WGT.	TBG-CSG-D.P. TYPE	TBG-CSG-D.P. DEPTH	TBG-CSG-D.P. SIZE	TBG-CSG-D.P. WGT	TBG-CSG-D.P. TYPE	TBG-CSG-D.P. DEPTH	COLLAR DEPTHS SHOE	COLLAR DEPTHS FLOAT	COLLAR DEPTHS STAGE

LAST CASING SIZE	LAST CASING WGT	LAST CASING TYPE	LAST CASING DEPTH	PKR-CMT RET-BR PL-LINER BRAND & TYPE	PKR-CMT RET-BR PL-LINER DEPTH	PERF. DEPTH TOP	PERF. DEPTH BTM	TOP CONN SIZE	TOP CONN THREAD	WELL FLUID TYPE	WELL FLUID WGT

CAL. DISPL. VOL.-Bbl. TBG.	CSG.	CSG.	TOTAL	CAL. PSI BUMP PLUG	CAL. MAX PSI TO REV	OP. MAX SQ. PSI	MAX TBG PSI RATED	MAX TBG PSI OP	MAX CSG PSI RATED	MAX CSG PSI OP	DISPL. FLUID TYPE	DISPL. FLUID WGT.	WATER SOURCE
											/		

EXPLANATION: TROUBLE SETTING TOOL, RUNNING CSG., ETC. PRIOR TO CEMENTING:

PRESSURE/RATE DETAIL TIME HR: MIN.	PRESSURE-PSI PIPE	PRESSURE-PSI ANNULUS	RATE BPM	Bbl. FLUID PUMPED	FLUID TYPE	EXPLANATION
						SAFETY MEETING: WPS CREW ☐ CO. REP ☐
						TEST LINES PSI
						CIRCULATING WELL-RIG ☐ WPS ☐
6:15 AM						Arrived on Location Spotted Truck Rigged up Line
10:30 AM	3000		.5	.5		Rigged up To Tubing Test Liner
10:35 AM	1500		2.5	20		Started Spacer
10:48 AM	2000		2.5	118		Started Lead Slurry
11:30 AM	1000		2.8	61		Started Tail Slurry
12:38 AM	100		5	10		Shut Down Wash Pumps To Pit
12:01 PM	50		2.5-1.3	26.5		Started Disp
12:18 PM	1200					Shut Down
12:20 PM	600 to 2000		1	1/2		Pressured up On Tubing
12:45 PM	600 to 2000		.1	1/10		Pressured up ON Tubing
1:14 PM	600 to 2000		.1	1/10		Pressured up ON Tubing
1:19 PM	500 to 2000		.1	1/4		Pressured up ON Tubing
1:30 PM	1200 to 2000		.1	1/8		Pressured up ON Tubing
1:42 PM	600 to 2000		.1	1/8		Pressured up ON Tubing
1:47 PM	600 to 2000		.1	1/4		Pressured up ON Tubing
2:00 PM	600 to 2000		.1	1/8		Pressured up ON Tubing Established Squeeze

BUMPED PLUG Y N	PSI TO BUMP PLUG	TEST FLOAT EQUIP. Y N	TOTAL Bbl. PUMPED	Bbl. CMT RETURNS/ REVERSED	PSI LEFT ON CSG	SPOT TOP CEMENT	SER. SUP. Marty Hales	CUSTOMER REP.
			28					

BJS-1552 (7-95)

ATTACHMENT VI F

UNICHEM

A Division of BJ Services Company

Lab Test No : 6951

Chevron

Sample Date : 8/28/95
Lab Date In : 8/31/95
Lab Date Out : 9/1/95

Water Analysis

Listed below please find water analysis report from : Marquart — Fed #6 Zone

Specific Gravity :	1.187
Total Dissolved Solids :	262288
pH :	5.35
Conductivity (uohms):	
Ionic Strength :	5.558

MARQUARDT FEDERAL #6
1980' FNL & 330 FWL
SEC. 1, T25S-R26E, EDDY CO. NM

Cations:		mg/l
Calcium	(Ca++):	24000
Magnesium	(Mg++):	7290
Sodium	(Na+):	65733
Iron	(Fe++):	362.60
Dissolved Iron	(Fe++):	
Barium	(Ba++):	0.70
Strontium	(Sr):	
Manganese	(Mn++):	11.01
Resistivity :		.044 @ 72
Anions:		
Bicarbonate	(HCO3-):	85
Carbonate	(CO3--):	0
Hydroxide	(OH-):	0
Sulfate	(SO4--):	180
Chloride	(Cl-):	165000

BRUSHY CANYON
PERFS: 5148'-5209'

Gases:		ppm
Carbon Dioxide	(CO2):	
Oxygen	(O2):	
Hydrogen Sulfide	(H2S):	

Scale Index (positive value indicates scale tendency) a blank indicates some tests were not run

Temperature		CaCO3 SI	CaSO4 SI
86F	30.0C	1.14	-3.37
104F	40.0C	1.97	-3.37
122F	50.0C	2.27	-3.93
140F	60.0C	2.27	-3.81
168F	70.0C	2.27	-3.33
176F	80.0C	2.27	-2.57

Comments :

If you have any questions or require further information, please contact us.
Sincerely,

John Paul Gonzales
Laboratory Technician

cc: John Offutt
Joe Hay

P.O. Box 61427, 4312 S. County Rd. 1298, Midland, TX 79711 • Office: (915) 563-0241 • Fax: (915) 563-0243

ATTACHMENT 4

UNICHEM

A Division of BJ Services Company

Lab Test No : 6953

Chevron

Sample Date : 8/28/95
Lab Date In : 8/31/95
Lab Date Out : 9/1/95

Water Analysis

Listed below please find water analysis report from : Marquart

Fed #7 5104-5117

Specific Gravity :	1.157
Total Dissolved Solids :	219238
pH :	5.99
Conductivity (uohms):	
Ionic Strength :	4.698

MARQUARDT FEDERAL #7
1980' FSL & 330' FWL
SEC. 1, T25S-R26E, EDDY CO, NM

BRUSHY CANYON
PERFS: 5104'-5117'

Cations:		mg/l
Calcium	(Ca++):	22000
Magnesium	(Mg++):	6075
Sodium	(Na+):	52844
Iron	(Fe++):	65.90
Dissolved Iron	(Fe++):	
Barium	(Ba++):	0.80
Strontium	(Sr):	
Manganese	(Mn++):	5.67
Resistivity :		.047 @ 72
Anions:		
Bicarbonate	(HCO3-):	122
Carbonate	(CO3--):	0
Hydroxide	(OH-):	0
Sulfate	(SO4--):	197
Chloride	(Cl-):	138000

Gases:		ppm
Carbon Dioxide	(CO2):	
Oxygen	(O2):	
Hydrogen Sulfide	(H2S):	

Scale Index (positive value indicates scale tendency) a blank indicates some tests were not run

Temperature		CaCO3 SI	CaSO4 SI
86F	30.0C	0.96	-5.15
104F	40.0C	1.40	-5.15
122F	50.0C	1.82	-5.54
140F	60.0C	2.89	-5.68
168F	70.0C	3.03	-5.68
176F	80.0C	3.03	-5.55

Comments :

If you have any questions or require further information, please contact us.

Sincerely,

Peter Paul Gonzales

Laboratory Technician

cc: John Offutt
Joe Hay

P.O. Box 61427, 4312 S. County Rd. 1298, Midland, TX 79711 • Office: (915) 563-0241 • Fax: (915) 563-0243

ATTACHMENT 5

Post-it Fax Note 7671	Date 10/29	# of pages ▶ 1
To Nathan Mauser	From John Offutt	
Co./Dept. USA	Co. Unichem	
Phone #	Phone #	
Fax # 394-1293	Fax # 393-1150	

UNICHEM

A Division of BJ Services Company

Lab Test No : 13060

Chevron

Sample Date : 10/2/96
Lab Date In : 10/10/96
Lab Date Out : 10/29/96

Water Analysis

Listed below please find water analysis report from : White City 6 Fed #1

White City "6" Federal #1
Sec. 6 - T25S - R27E, Eddy Co. N.M.

Bell Canyon
Perfs 2092 - 2116

≈ .07 @ 80° F Est. BHT

Specific Gravity :		1.078
Total Dissolved Solids :		109130
pH :		
Conductivity (µmhos):		
Ionic Strength :		2.171
Cations:		**mg/l**
Calcium	(Ca++):	6000
Magnesium	(Mg++):	2430
Sodium	(Na+):	32633
Iron	(Fe++):	22.90
Dissolved Iron	(Fe++):	
Barium	(Ba++):	4.40
Strontium	(Sr):	
Manganese	(Mn++):	8.30
Resistivity :		
Anions:		
Bicarbonate	(HCO3-):	
Carbonate	(CO3--):	
Hydroxide	(OH-):	0
Sulfate	(SO4--):	67
Chloride	(Cl-):	68000
Gases:		**ppm**
Carbon Dioxide	(CO2):	
Hydrogen Sulfide	(H2S):	
Oxygen	(O2):	

Scale Index (positive value indicates scale tendency) a blank indicates some tests were not run

Temperature		CaCO3 SI	CaSO4 SI
86F	30.0C		
104F	40.0C		
122F	50.0C		
140F	60.0C		
158F	70.0C		
176F	80.0C		

Comments :

If you have any questions or require further information, please contact us.

Sincerely,

cc: John Offutt
Joe Hay

Laboratory Technician

P.O. Box 61427, Midland, TX 79711 • 4513 S. County Rd. 1298, Midland, TX 79765
Office: (915) 563-0241 • Fax: (915) 563 0243

ATTACHMENT 6

Affidavit of Publication

№ 18965

State of New Mexico,
County of Eddy, ss.

Amy McKay,
being first duly sworn, on oath says:

That she is Business Manager of the Carlsbad Current-Argus, a newspaper published daily at the City of Carlsbad, in said county of Eddy, state of New Mexico and of general paid circulation in said county; that the same is a duly qualified newspaper under the laws of the state wherein legal notices and advertisements may be published; that the printed notice attached hereto was published in the regular and entire edition of said newspaper and not in supplement thereof on the date as follows, to wit:

May 14, 19 97
_____, 19____
_____, 19____
_____, 19____
_____, 19____
_____, 19____

That the cost of publication is $ 15.77, and that payment thereof has been made and will be assessed as court costs.

Amy McKay

Subscribed and sworn to before me this

15th day of May, 1997

Donna Crump

My commission expires 8/1/98

Notary Public

Legals.....100

May 14, 1997

Chevron USA Production Co., P.O. Box 1150, Midland, TX 79702, New Mexico Gas Group (915)687-7284, intends to permit a salt water disposal well on the Marquardt Federal Lease. The legal location is Section 1, T25S, R26E, 1980' FNL & 330' FWL, Eddy County, New Mexico. Injection formation is the Delaware-Bell Canyon, South Black River Field, approximately 2300'. Estimated maximum injection rate and pressure is 2000 bwpd & 150 psi.

Note: Interested parties must file objections or requests for hearing with the Oil Conservation Division, P.O. Box 2088, Santa Fe, NM 87501 within 15 days from the date an application was mailed to them.

ATTACHMENT 7

Leasehold Operators Within One-Half Mile of Proposed SWD Well Location:

American National Petroleum Company
P.O. Box 27725
Houston, TX 77227-7725

SENDER:
- Complete items 1 and/or 2 for additional services.
- Complete items 3, 4a, and 4b.
- Print your name and address on the reverse of this form so that we can return this card to you.
- Attach this form to the front of the mailpiece, or on the back if space does not permit.
- Write *"Return Receipt Requested"* on the mailpiece below the article number.
- The Return Receipt will show to whom the article was delivered and the date delivered.

I also wish to receive the following services (for an extra fee):
1. ☐ Addressee's Address
2. ☐ Restricted Delivery

Consult postmaster for fee.

3. Article Addressed to:
American Nat'l Petroleum Co.
P.O. Box 27725
Houston TX 77227-7725

4a. Article Number
002767

4b. Service Type
☐ Registered ☒ Certified
☐ Express Mail ☐ Insured
☐ Return Receipt for Merchandise ☐ COD

7. Date of Delivery
5-29-97

5. Received By: *(Print Name)*

8. Addressee's Address *(Only if requested and fee is paid)*

6. Signature: *(Addressee or Agent)*
X

PS Form 3811, December 1994 Domestic Return Receipt

Is your RETURN ADDRESS completed on the reverse side?

Thank you for using Return Receipt Service.

Enserch Exploration, Inc.
4849 Greenville Ave., Suite 1200
Dallas, TX 75206-4145

SENDER:
- Complete items 1 and/or 2 for additional services.
- Complete items 3, 4a, and 4b.
- Print your name and address on the reverse of this form so that we can return this card to you.
- Attach this form to the front of the mailpiece, or on the back if space does not permit.
- Write *"Return Receipt Requested"* on the mailpiece below the article number.
- The Return Receipt will show to whom the article was delivered and the date delivered.

I also wish to receive the following services (for an extra fee):
1. ☐ Addressee's Address
2. ☐ Restricted Delivery

Consult postmaster for fee.

3. Article Addressed to:
Enserch Exploration Inc.
4849 Greenville Ave Ste 1200
Dallas, TX 75206-4145

4a. Article Number
002766

4b. Service Type
☒ Registered ☒ Certified
☐ Express Mail ☐ Insured
☐ Return Receipt for Merchandise ☐ COD

7. Date of Delivery
5-29-97

5. Received By: *(Print Name)*

8. Addressee's Address *(Only if requested and fee is paid)*

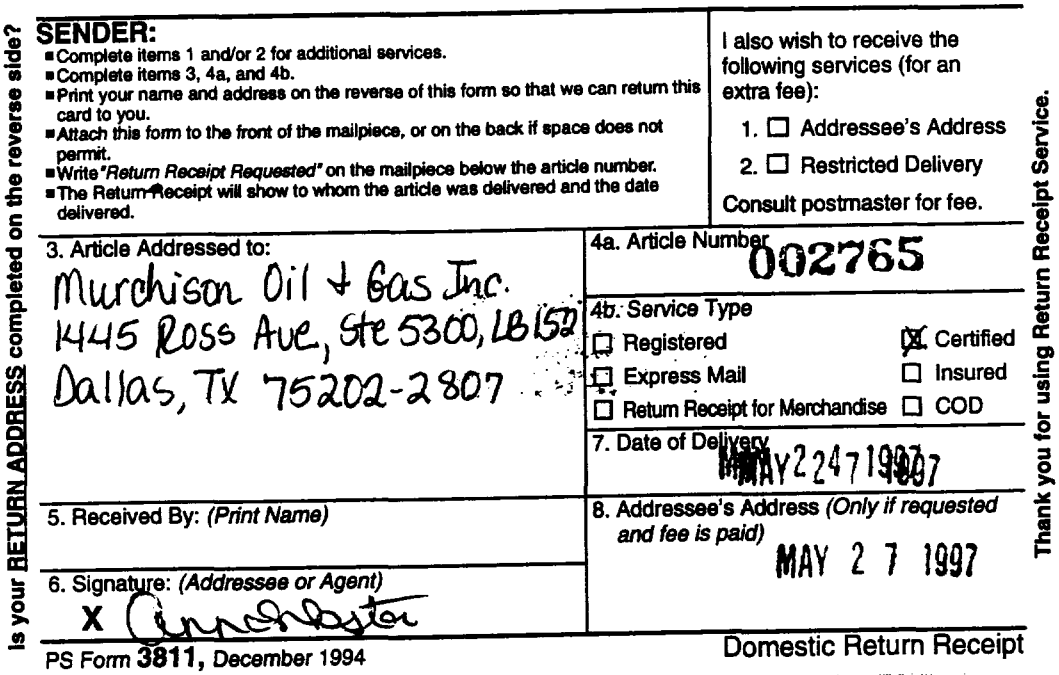
6. Signature: *(Addressee or Agent)*
X

PS Form 3811, December 1994 Domestic Return Receipt

Is your RETURN ADDRESS completed on the reverse side?

Thank you for using Return Receipt Service.

Murchison Oil & Gas, Inc.
1445 Ross Ave., Suite 5300, LB 152
Dallas, TX 75202-2807



SENDER:
- Complete items 1 and/or 2 for additional services.
- Complete items 3, 4a, and 4b.
- Print your name and address on the reverse of this form so that we can return this card to you.
- Attach this form to the front of the mailpiece, or on the back if space does not permit.
- Write *"Return Receipt Requested"* on the mailpiece below the article number.
- The Return Receipt will show to whom the article was delivered and the date delivered.

I also wish to receive the following services (for an extra fee):
1. ☐ Addressee's Address
2. ☐ Restricted Delivery

Consult postmaster for fee.

3. Article Addressed to:
Murchison Oil & Gas Inc.
1445 Ross Ave, Ste 5300, LB 152
Dallas, TX 75202-2807

4a. Article Number 002765

4b. Service Type
☐ Registered ☒ Certified
☐ Express Mail ☐ Insured
☐ Return Receipt for Merchandise ☐ COD

7. Date of Delivery MAY 22 1997

5. Received By: *(Print Name)*

8. Addressee's Address *(Only if requested and fee is paid)*
MAY 27 1997

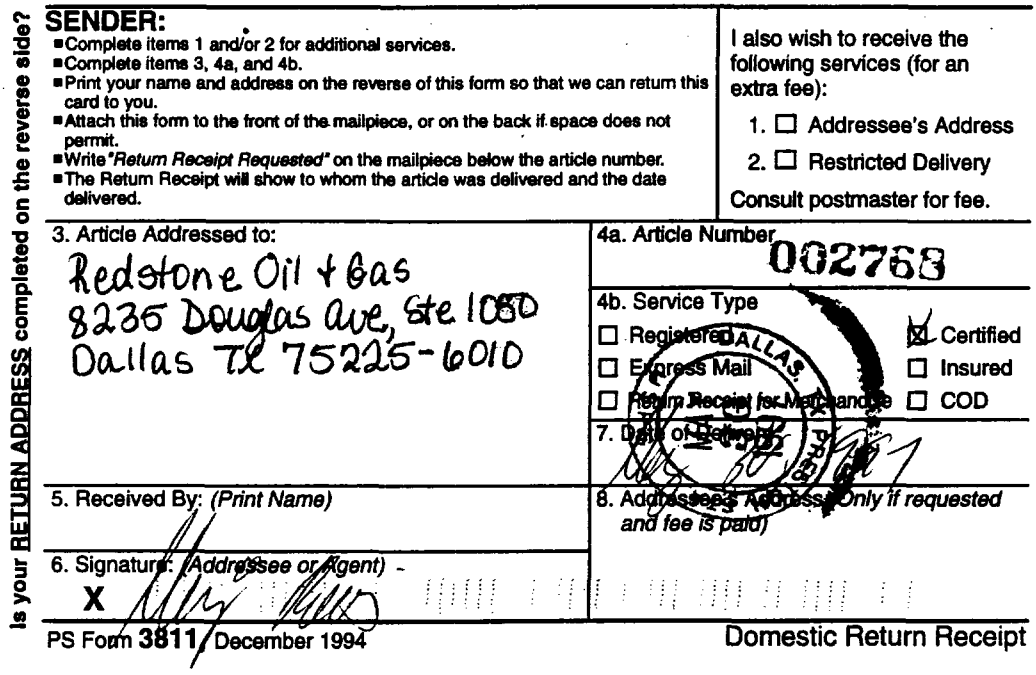
6. Signature: *(Addressee or Agent)*
X

PS Form **3811**, December 1994 Domestic Return Receipt

Is your RETURN ADDRESS completed on the reverse side?

Thank you for using Return Receipt Service.

Redstone Oil & Gas
8235 Douglas Ave., Suite 1050
Dallas, TX 75225-6010



SENDER:
- Complete items 1 and/or 2 for additional services.
- Complete items 3, 4a, and 4b.
- Print your name and address on the reverse of this form so that we can return this card to you.
- Attach this form to the front of the mailpiece, or on the back if space does not permit.
- Write *"Return Receipt Requested"* on the mailpiece below the article number.
- The Return Receipt will show to whom the article was delivered and the date delivered.

I also wish to receive the following services (for an extra fee):
1. ☐ Addressee's Address
2. ☐ Restricted Delivery

Consult postmaster for fee.

3. Article Addressed to:
Redstone Oil & Gas
8235 Douglas Ave, Ste 1050
Dallas TX 75225-6010

4a. Article Number 002768

4b. Service Type
☐ Registered ☒ Certified
☐ Express Mail ☐ Insured
☐ Return Receipt for Merchandise ☐ COD

7. Date of Delivery MAY 22 1997

5. Received By: *(Print Name)*

8. Addressee's Address *(Only if requested and fee is paid)*

6. Signature: *(Addressee or Agent)*
X

PS Form **3811**, December 1994 Domestic Return Receipt

Is your RETURN ADDRESS completed on the reverse side?

Thank you for using Return Receipt Service.