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-1
Revised 7-1-81

APPLICATION FOR AUTHORIZATION TO INJECT

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

II. Operator: Marathon Oil Company

Address: P.O. Box 552, Midland, TX 79702

Contact party: Ginny Larke Phone: (915)-687-8321

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: Ginny Larke Title Engineer Technician

Signature: Ginny Larke Date: 3-12-01

* 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.

Indian Hills Unit Well No. 30 SWD
Proposed Injection Well
Attachments to Form C-108

Part III

Well Data

Proposed Completion for the Indian Hills Unit No. 30 SWD

Surface Location: 1494' FSL, 688' FWL
Bottom Hole Location: 1050' FNL, 1930' FWL
Sec. 20, T-21-S, R-24-E, Eddy County, New Mexico

17.5" hole to 1200'. Set 13-3/8" casing cemented to surface w/1250 sacks.
12.25" hole to 9,500'. Set 9-5/8" casing cemented to surface w/2610 sacks.
8.5" hole to 11,000'. Set 7" liner from 9,000'-11,000' cemented w/300 sacks.

7", 26#, L-80 tubing from surface to 9,000'.

7" Monobore Packer set @ 9,000'.

Proposed injection zone: Devonian

Injection Interval: 10,595' - 11,792' open hole (measured depth)
10,250' - 11,401' open hole (true vertical depth)

This well will be drilled for the purpose of injection/disposal of produced water from offsetting leases. The next higher oil or gas zone is the Morrow at a depth of 9580'. There are no zones lower than the Devonian that have ever been produced in this area.

Attached is a copy of the Application for Permit to Drill (Form 3160-3) for this well. It was originally permitted to be drilled to the Morrow zone. A Sundry Notice (Form 3160-5) has been submitted with the casing program and zone changes shown.

Part 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.

See attached map.

Part 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 details.

There are no wells in the area of review that penetrate the proposed injection zone. There is one well, just outside the area of review, the Rocky Hills Well No. 2 SWD, that is completed in the Devonian zone. This well was originally drilled as a disposal well and was completed on June 23, 1999. TD is 11,307'. Disposal Zone is Devonian, 10,343' - 11,307' Open Hole.

See attached well completion report and wellbore diagram for details on this well.

Part VII

Attach data on proposed operation

Fluid to be injected will be produced water from the Upper Penn and Morrow formations.
Average Rate is expected to be 20,000 BWPD. Maximum rate will be 60,000 BWPD.

The proposed system will be a closed system. Produced water will be gathered to a central location into closed top fiberglass tanks, with thief hatches. These tanks will be hooked up to a Vapor Recovery Unit. The water will then be pumped to the proposed injection well.

Average injection pressure will be 400 psi. Maximum pressure will be 2050 psi per OCD rules.

If injection well 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.)

Marathon Oil Company ran a drill stem test (DST) on North Indian Basin Unit Well No. 1 (Section 9, T-21-S, R-23-E, Eddy County New Mexico) in 1963. The DST tested the interval 10,009 ft to 10,100 ft. Based on the DST, the following analysis was reported:

Specific Gravity	1.109
pH	6.8
Resistivity	.285 @ 94° F
Chlorides (Cl)	11,000
Sulfates (SO_4)	1,500
Alkalinity (HCO_3)	610
Calcium (Ca)	1,080
Magnesium (Mg)	775
Iron (Fe)	20
Sodium (Na)	5,359
Sulfides (H_2S)	Negligible

Part VIII

Attach appropriate geological data on the injection zone including appropriate lithologic detail, geological name, thickness, and depth. Give the goelogic name and depth to bottom of all underground sources of drinking water (aquifers containing waters with total dissolved solid 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.

Injection Zone

Geological Name: Devonian

Lithology: Dolomite

Thickness: ± 1,000 feet

Depth: 10,595 feet (measured depth), 10,250 feet (true vertical depth) to top of Devonian

Drinking Water - Overlying

Geological Name: Grayburg

Depth to Bottom: ±181' to 217' (Section 22 & 23 – 9 to 17 ppm, Cond 627-722 M-Mhos).

Aquifer w/dissolved solids concentration less than 10,000 mg/L:

Geological Name: Paddock

Depth to bottom: ± 2,800' (Section 23 - 3600 ppm, 1.009 specific gravity)

Above data is based on Geological data obtained from Ken Fresquez, Geologist, of the State Engineer's Office in Roswell, NM

Drinking Water - Underlying

NONE

Part IX

Describe the proposed stimulation program, if any.

The proposed injection well will be completed open hole. The proposed open hole interval will be stimulated using 15% CCA sour acid (50,000 gallons).

Part X

Attach appropriate logging and test data on the well.

The appropriate forms, along with an inclination survey and logs will be filed on this well when it is completed.

Part 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.

See attachments.

Part 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.

Marathon Oil Company, as Operator of the proposed injection well, has reviewed and examined available geologic and engineering data and finds no evidence of open faults or any other hydrologic connection between the disposal zone and any underground source of drinking water.

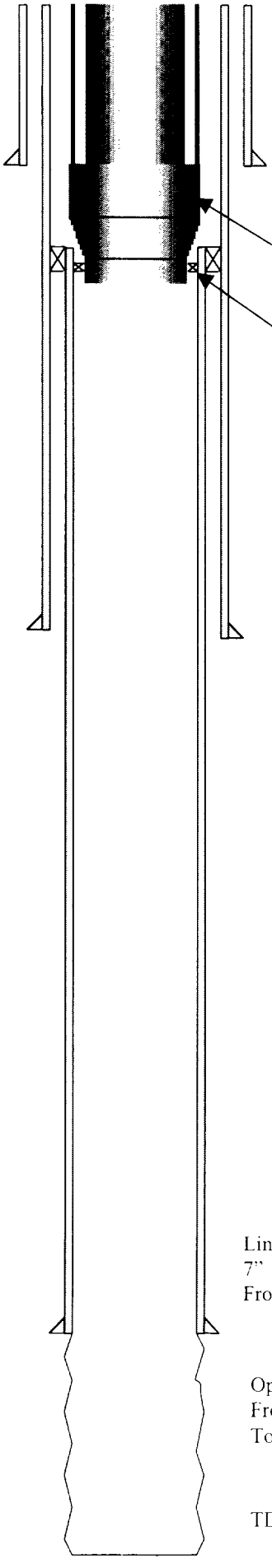
K. W. Tatarzyn
Indian Basin Asset Team Manager

Part XIII

Proof of Notice

See attachments.

PROPOSED WELL BORE DIAGRAM
Indian Hills Unit No. 30 SWD
Date: 3/21/01
SHL: UL "L", 1494' FSL, 688' FWL
BHL: UL "C", 1050' FNL, 1930' FWL
Sec. 20, T-21-S, R-24-E
Eddy Co., N.M.
Lease No.: LC-064391-B
API No.: Not Available at this time



13 3/8" K-55
Set at 1200', No Circ.
Cement W/ 905 sks.

7", L-80 Tubing
Surface to 9,000'

MONOBORE Packer set @ 9000'

Intermediate Casing
9 5/8", 40# & 53.5#,K-55 & L-80 Csg.
Set at 9500', Cmt. w/2610 sks.

Liner
7" L-80 Csg.
From 9,000' to 11,000', Cmt. w 300 sks.

Open Hole Section:
From: 10,595' (MD), 10,250' (TVD)
To: 11,792' (MD), 11,401' (TVD)

TD: 11,792' (MD)
11,401' (TVD)

Form 3160-3
(July 1992)

SUBMIT IN TRIPLICATE*
(Other instructions on reverse side)

FORM APPROVED
OMB NO. 1004-0136
Expires: February 28, 1995

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR DEEPEN

5 LEASE DESIGNATION AND SERIAL NO: LC-064391-B

6 IF INDIAN, ALLOTTEE OR TRIBE NAME: N/A

7 UNIT AGREEMENT NAME: Indian Hills Unit

1a TYPE OF WORK: DRILL [X] DEEPEN [ ]

b TYPE OF WELL: OIL WELL [ ] GAS WELL [X] OTHER — SINGLE ZONE [X] MULTIPLE ZONE [ ]

8 FARM OR LEASE NAME, WELL NO: Indian Hills Unit 30

2 NAME OF OPERATOR: Marathon Oil Company

9 API WELL NO:

3 ADDRESS AND TELEPHONE NO: P.O. Box 552 Midland, TX 79702 1-800-351-1417

10 FIELD AND POOL, OR WILDCAT: Indian Basin Morrow

4 LOCATION OF WELL (Report location clearly and in accordance with any State requirements *)
At surface: 1373' FSL & 808' FWL
At proposed prod. zone: 4308' FSL & 1403' FWL

11 SEC., T., R., M., OR BLK. AND SURVEY OR AREA: Sec. 20, T-21-S, R-24-E

14 DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE*: 15- Miles N.W. of Carlsbad

12 COUNTY OR PARISH: Eddy

13 STATE: N.M.

15 DISTANCE FROM PROPOSED* LOCATION TO NEAREST PROPERTY OR LEASE LINE, FT (Also to nearest drlg. unit line, if any)	16 NO. OF ACRES IN LEASE	17 NO. OF ACRES ASSIGNED TO THIS WELL
808' FWL	640	640
**18 DISTANCE FROM PROPOSED LOCATION* TO NEAREST WELL, DRILLING, COMPLETED, OR APPLIED FOR, ON THIS LEASE, FT	19 PROPOSED DEPTH	20 ROTARY OR CABLE TOOLS
** 29'	10,500	Rotary

21 ELEVATIONS (Show whether DF, RT, GR, etc.): 3791' G.L.

22 APPROX. DATE WORK WILL START*: ASAP

23 PROPOSED CASING AND CEMENTING PROGRAM

SIZE OF HOLE	GRADE, SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
17.50"	13-3/8" K-55	54.50#	1200'	1250 sks.
12.25"	9-5/8" K-55, L-80	40# , 53.50#	8900'	2610 sks.
8.50"	5-1/2" K-55	17.0#	10,500'	200 sks.

Marathon Oil Co. is proposing to directionaly drill a Indian Basin Morrow primary target with secondary target in the Indian Basin Upper Penn. Assoc. Either zone will have a standard BHL.

This well is to be drilled on the existing pad of our Rocky Hills SWD # 2 well, located @ 1400' FSL & 800' FWL, SEC. 20, T-21-S, R-24-E. This will significantly reduce surface disturbance in the E/A area.
The pit used for the existing well will be re-opened.

Reference BLM Archaeology report # 99-NM-080-245. A 600 x 600 area was cleared for existing Rocky Hills. ** Distance F/ Rocky Hills SWD @ 1400'FSL & 800' FWL is 29 feet.

SENT 5+1 to BLM-Roswell 12/07/00

IN ABOVE SPACE DESCRIBE PROPOSED PROGRAM: If proposal is to deepen, give data on present productive zone and proposed new productive zone. If proposal is to drill or deepen directionally, give pertinent data on subsurface locations and measured and true vertical depths. Give blowout preventer program, if any.

24 SIGNED Jerry Fletcher TITLE Engineer Tech. DATE 12/06/00

(This space for Federal or State office use)

PERMIT NO _____ APPROVAL DATE _____

Application approval does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.

CONDITIONS OF APPROVAL, IF ANY:

APPROVED BY _____ TITLE _____ DATE _____

*See Instructions On Reverse Side

Title 18 U.S.C. Section 1001, makes it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

Form 3160-5
(August 1999)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

FORM APPROVED
OMB NO. 1004-0135
Expires: November 30, 2000

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill or to re-enter an abandoned well. Use Form 3160-3 (APD) for such proposals.

SUBMIT IN TRIPLICATE - Other instructions on reverse side

5. Lease Serial No.
LC-064391-B

6. If Indian, Allottee or Tribe Name
N/A

7. If Unit or CA/Agreement, Name and/or N
Indian Hills Unit

1. Type of Well
☐ Oil Well ☒ Gas Well ☐ Other

8. Well Name and No.
Indian Hills Unit 30

2. Name of Operator
Marathon Oil Company

9. API Well No.

3a. Address
P.O. Box 552 Midland, TX 79702

3b. Phone No. (*include area code*)
1-800-351-1417

10. Field and Pool, or Exploratory Area
Indian Basin Morrow

4. Location of Well (*Footage, Sec., T., R., M., or Survey Description*)
Sec. 20, T-21-S, R-24-E, SHL @ UL "L" 1494'FSL & 688' FWL, Sec. 20, T-21-S, R-24-E.
BHL @ UL "C" 972' FNL & 1403' FWL, Sec. 20, T-21-S, R-24-E.

11. County or Parish, State
Eddy N.M.

12. CHECK APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION			
☒ Notice of Intent	☐ Acidize	☐ Deepen	☐ Production (Start/Resume)	☐ Water Shut-Off
☐ Subsequent Report	☐ Alter Casing	☐ Fracture Treat	☐ Reclamation	☐ Well Integrity
☐ Final Abandonment Notice	☐ Casing Repair	☐ New Construction	☐ Recomplete	☐ Other
	☒ Change Plans	☐ Plug and Abandon	☐ Temporarily Abandon	
	☐ Convert to Injection	☐ Plug Back	☐ Water Disposal	

13. Describe Proposed or Completed Operation (clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recomplete horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports shall be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompletion in a new interval, a Form 3160-4 shall be filed once testing has been completed. Final Abandonment Notices shall be filed only after all requirements, including reclamation, have been completed, and the operator has determined that the final site is ready for final inspection.)

Marathon has re-staked this well approx. 151' Northwest of existing Rocky Hills SWD well located @ 1400' FSL & 800' FWL, in Sec, 20 T-21-S, R-24-E.

The New surface hole location stake is @ 1494' FSL & 688' FWL of Sec. 20, T-21-S, R-24-E.

This will again reduce surface disturbance in the E/A area. The existing pad and pit will be utilized again.

A new Directional plan is attached to form 3160-5.
Reference BLM Archaeology report # 99-NM-080-245. A 600' x 600' area was cleared on the existing Rocky Hills SWD # 2
Distance f/ Rocky hills SWD @ 1400' FSL & 800' FWL to the IHU # 30 is 151'.

Sent 5+1 to BLM Roswell 2/21/01

Items to be changed on 3160-3 APD: Item # 15, 688' FWL, Item # 18, 151',Item # 4, SHL @ 1494 FSL & 688' FWL, BHL @ 972' FNL & 1403' FWL.
All casing and cementing program remains the same.

14. I hereby certify that the foregoing is true and correct
Name (*Printed/Typed*) Jerry Fletcher

Title Engineer Tech.

Jerry Fletcher

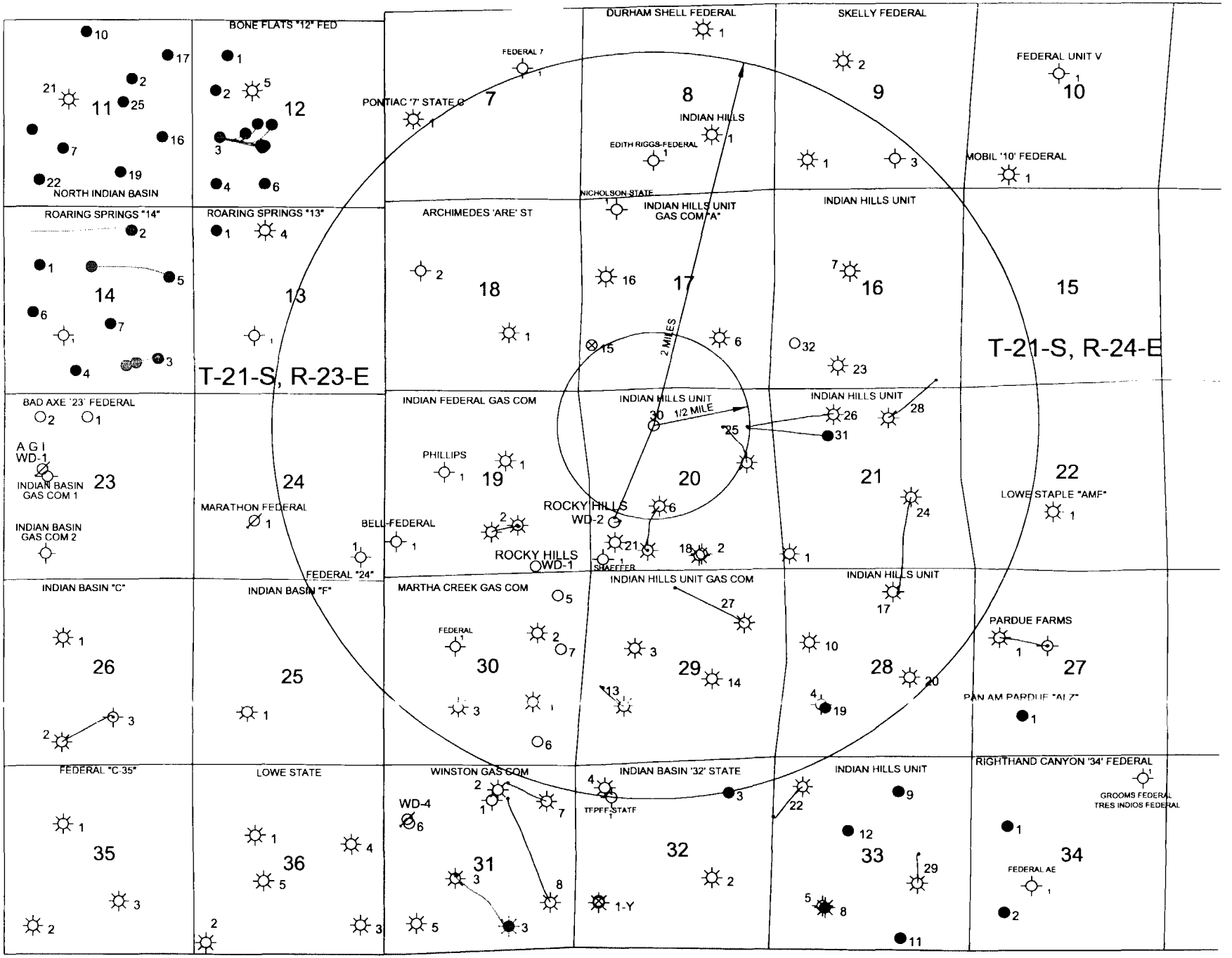
Date 2/21/01

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved by	Title	Date
Conditions of approval, if any, are attached. Approval of this notice does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.	Office	

Title 18 U.S.C. Section 1001, and Title 43 U.S.C. Section 1212, makes it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

Indian Hills Unit No. 30 SWD
Proposed Injection Well
Attachment to Form C-108 (Part V)



Form 3160-4
(July 1992)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

SUBMIT IN DUPLICATE* (See other instructions on reverse side)

FORM APPROVED
OMB NO. 1004-0137
Expires: February 28, 1995

WELL COMPLETION OR RECOMPLETION REPORT AND LOG*

5. LEASE DESIGNATION AND SERIAL NO.: LC-064391-B

6. IF INDIAN, ALLOTTEE OR TRIBE NAME:

1a. TYPE OF WELL: OIL WELL ☐ GAS WELL ☐ DRY ☐ Other SWD WELL

b. TYPE OF COMPLETION: NEW WELL ☒ WORK OVER ☐ DEEP-EN ☐ PLUG BACK ☐ DIFF. RESVR. ☐ Other

7. UNIT AGREEMENT NAME:

2. NAME OF OPERATOR: Marathon Oil Company

8. FARM OR LEASE NAME, WELL NO.: ROCKY HILLS SWD #2

3. ADDRESS AND TELEPHONE NO.: P.O. Box 552 Midland, TX 79702 915-682-1626

9. API WELL NO.: 30-015-30600

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements)*
At surface: 1400' FSL & 800' FWL
At top prod. interval reported below
At total depth

10. FIELD AND POOL, OR WILDCAT: SWD - DEVONIAN 96101

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA: SEC. 20, T-21-S, R-24-E

14. PERMIT NO.	DATE ISSUED	12. COUNTY OR PARISH	13. STATE
SWD-738	3/3/99	EDDY	NM

15. DATE SPUDDED	16. DATE T.D. REACHED	17. DATE COMPL. (Ready to prod.)	18. ELEVATIONS (DF, RKB, RT, GR, ETC.)*	19. ELEV. CASINGHEAD
3/30/99	5/31/99	6/23/99	KB: 3816', GL: 3794'	

20. TOTAL DEPTH, MD & TVD	21. PLUG, BACK T.D., MD & TVD	22. IF MULTIPLE COMPL., HOW MANY*	23. INTERVALS DRILLED BY	ROTARY TOOLS	CABLE TOOLS
11307'	11307'		→	ALL	

24. PRODUCING INTERVAL(S), OF THIS COMPLETION - TOP, BOTTOM, NAME (MD AND TVD)*
DISPOSAL INTERVAL - DEVONIAN OPEN HOLE 10,343'-11,307'MD

25. WAS DIRECTIONAL SURVEY MADE: NO

26. TYPE ELECTRIC AND OTHER LOGS RUN
CNL, LDT, GR, NGT, SDT

27. WAS WELL CORED:

28. CASING RECORD (Report all strings set in well)

CASING SIZE/GRADE	WEIGHT, LB./FT.	DEPTH SET (MD)	HOLE SIZE	TOP OF CEMENT, CEMENTING RECORD	AMOUNT PULLED
13-3/8" K-55	54.5#	1206'		905 SX - DID NOT CIRC.	
9-5/8" L-80	48 & 54#	9790'		3250 SX-CIRC. 370 SX 2ND STG.	

29. LINER RECORD

SIZE	TOP (MD)	BOTTOM (MD)	SACKS CEMENT*	SCREEN (MD)
7" L-80	9408'	10,343'	300	

30. TUBING RECORD

SIZE	DEPTH SET (MD)	PACKER SET (MD)

31. PERFORATION RECORD (Interval, size and number)
DEVONIAN OPEN HOLE 10,343'-11,307' (964')

32. ACID, SHOT, FRACTURE, CEMENT SQUEEZE, ETC.

DEPTH INTERVAL (MD)	AMOUNT AND KIND OF MATERIAL USED
10343'-11307' OH	30,000 GALS. CCA 150 ACID

33.* PRODUCTION

DATE FIRST PRODUCTION	PRODUCTION METHOD (Flowing, gas lift, pumping - size and type of pump)	WELL STATUS (Producing or shut-in)

DATE OF TEST	HOURS TESTED	CHOKE SIZE	PROD'N. FOR TEST PERIOD →	OIL - BBL.	GAS - MCF.	WATER - BBL.	GAS - OIL RATIO

FLOW. TUBING PRESS.	CASING PRESSURE	CALCULATED 24-HOUR RATE →	OIL - BBL.	GAS - MCF.	WATER - BBL.	OIL GRAVITY - API (CORR.)

ACCEPTED FOR RECORD
AUG 16 1999
BUREAU OF LAND MANAGEMENT
CARLSBAD, NEW MEXICO

34. DISPOSITION OF GAS (Sold, used for fuel, vented, etc.)

TEST WITNESSED BY

35. LIST OF ATTACHMENTS
LOGS & INCLINATION SURVEY

36. I hereby certify that the foregoing and attached information is complete and correct as determined from all available records

SIGNED Ginny Larke TITLE Engineer Technician DATE 8/3/99

*(See Instructions and Spaces for Additional Data on Reverse Side)

Title 18 U.S.C. Section 1001, makes it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdicton.

37. SUMMARY OF POROUS ZONES: (Show all important zones of porosity and contents thereof; cored intervals; and all drill-stem, tests, including depth interval tested, cushion used, time tool open, flowing and shut-in pressures, and recoveries):

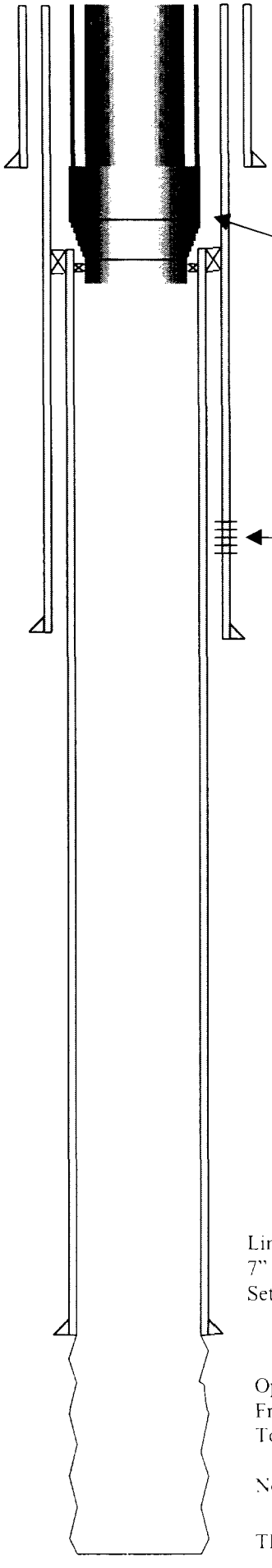
FORMATION	TOP	BOTTOM	DESCRIPTION, CONTENTS, ETC.
DEVONIAN	10342	NOT REACHED	DOLOMITE - WATER

GEOLOGIC MARKERS

NAME	TOP MEAS. DEPTH	TOP TRUE VERT. DEPTH
Glorietta	2378	
Yeso	2532	
3rd Bn Springs Lm	4580	
3rd Bn Sprgs Sand	6544	
Wolfcamp	6577	
Upper Penn(Cisco)	7472	
Atoka	8876	
Morrow	9018	
Lwr Miss Lime	9918	
Woodford	10288	
Devonian	10342	

RECEIVED
OCD - TEXLA

U.S. GOVERNMENT PRINTING OFFICE: 1992-774-672



Spud: 03/30/99
G.L. Elev.: 3794'
K.B.: 3816'

13 3/8" K-55 Conductor Casing
Set at 1206', No Circ.
Cement W/ 905 sks.

Rocky Hills SWD No. 2
Date Completed: 06/23/99
U.L. "L", 1400' FSL, 800' FWL
Sec. 20, T-21-S, R-24-E
Eddy Co., N.M.
Lease No.: LC-064391-B
API No.: 30-015-30600

Tubing:

#/JTS	SIZE	WGT	GR	CPL	LN	TOP	BTM
			KBC		22.95	0.00	22.95
1	7"	26	L-80	8rd	43.63	22.95	66.58
Sub	7"	26	L-80	8rd	10.10	66.58	76.68
224	7"	26	L-80	8rd	9342.9	76.68	9417.58
	7 7/16	Stem	Assy		10.62	9417.58	9428.20

Perforated 9752' w/4 holes:
Attempt to squeeze w/400 PSI
No injection.

Intermediate Casing
9 5/8" 48 & 54#, L-80 Csg.
Set at 9790', Cmt. W/3620 sks.
No Circ.

Well History:

6/19/99 – Acidized well w/ 30,000 gals of CCA 150 acid, using 8000 gals 10# gelled brine and rock salt as divert. Inj. rate @ 50 BPM @ 1927 psi. While on 9th stage, formation was blocked off w/ diverter Did not break back on remaining stages. Final pressure: 3250 psi at 4.4 BPM. Wireline tagged bridge at 10,400'

6/21/99 – Reran wirleine, tagged at 10,840'. Good treatment in open hole. RIH with Coiled Tubing. Could not get past 10.343'. Pumped 1000 gals of 15% acid. no help.

7/8/00 – Acidized well w/ 47,500 gals 15% CSA 150 acid w/ 1000 lbs of block on 4th stage.

Liner
7" L-80 Csg.
Set at 10,343'. Cmt. W/300 sks.

Open Hole Section:
From: 10,343'
To: 11,307'

Note: Possible bridge or ledge at 10,348'.

TD: 11,307'

INDIAN HILLS UNIT NO. 30 SWD
Proposed Injection Well
Attachments to Form C-108
(Part XI)

The following water analyses are for fresh water wells within 1 mile of the bottom hole location of the Indian Hills Unit No. 30. The information on the wells of interest is highlighted in yellow and the wells' names and locations are as follows:

Well Name	Location Description
MW-071	SW ¼, NE ¼, NW ¼ of Section 19, T-21-S, R-24-E
MW-087	SE ¼, NW ¼, SW ¼ of Section 19, T-21-S, R-24-E
MW-087A	SE ¼, NW ¼, SW ¼ of Section 19, T-21-S, R-24-E
LYMAN RANCH	NW ¼, NE ¼, NE ¼, of Section 29, T-21-S, R-23-E

Appendix C

Historical General Chemistry Analytical Data
May 1991 - December 2000
Marathon Oil Company, Indian Basin Remediation Project, Eddy County, New Mexico

Parameter / Well ID / Date Sampled	MW-070 4/28/00	MW-071 9/1/93	MW-071 10/12/93	MW-071 1/11/94	MW-071 4/6/94	MW-071 7/18/94	MW-071 10/4/94	MW-071 1/10/95	MW-071 6/23/95	MW-071 7/18/95	MW-071 10/10/95	MW-071 1/18/96
Bicarbonate Alkalinity	--	--	--	--	--	--	--	--	--	--	--	--
Ammonia (as N)	--	--	--	--	--	--	--	--	--	--	--	--
Bromide	--	--	--	--	--	--	--	--	--	--	--	--
Carbonate Alkalinity	--	--	--	--	--	--	--	--				
Chloride	8.61	9	15	18	17	<5	22	<5	16	22	21	18
Cyanide	--	--	--	--	--	--	--	--	--	--		
Fluoride	--	--	--	--	--	--	--	--	--	--	--	--
Hydroxide	--	--	--	--	--	--	--	--	--	--	--	--
Carbon Dioxide	--	--	--	--	--	--	--	--	--	--	--	--
Nitrate	--	--	--	--	--	--	--	--	--	--	--	--
Nitrogen, Kjeldahl, total (as N)	--	--	--	--	--	--	--	--	--	--	--	--
Orthophosphate	--	--	--	--	--	--	--	--	--	--	--	--
pH*	--	--	--	--	--	--	--	--	--	--	--	--
Phenols, total	--	--	--	--	--	--	--	--	--	--	--	--
Specific conductivity**	--	--	--	--	--	--	--	--	--	--	--	
Sulfate	--	--	--	--	--	--	--	--	--	--	--	--
Total dissolved solids (TDS)	385	--	--	--	--	--	--	--	--	--	--	--

Notes:

Concentrations listed in milligrams per liter (mg/L), except where noted otherwise.

* Measured in standard units (su)

** Measured in Micro-mhos per centimeter (unho/cm)

-- Not analyzed or not reported

< Constituent not detected above noted laboratory detection limit

Appendix C

Historical General Chemistry Analytical Data
May 1991 - December 2000
Marathon Oil Company, Indian Basin Remediation Project, Eddy County, New Mexico

Parameter / Well ID / Date Sampled	MW-071 4/17/96	MW-071 7/1/96	MW-071 10/1/96	MW-071 2/9/97	MW-071 5/6/97	MW-071 7/17/97	MW-071 10/16/97	MW-071 6/19/98	MW-071 10/11/98	MW-071 4/21/99	MW-071 4/28/00	MW-072 4/5/94
Bicarbonate Alkalinity	--	--	--	--	--	--	--	--	--	--	--	--
Ammonia (as N)	--	--	--	--		--	0.63	--	--	--	--	--
Bromide	--	--	--	--	--	--	--	--	--	--	--	--
Carbonate Alkalinity	--	--	--	--		--		--	--	--	--	--
Chloride	23	26	30	24	17	16	--	4	--	22	36.2	32
Cyanide	--	--	--	-		--	--	<0.005	-		--	--
Fluoride	--	--	--	--	--	--	--	2.2	--	-	--	--
Hydroxide	--	--	--	--	--	--	--	--	--	--	--	--
Carbon Dioxide	--	--	--	--	--	--		--	--	--	--	--
Nitrate	--	--	--	--	--	--	0.06	--	--	--	--	--
Nitrogen, Kjeldahl, total (as N)	--	--	--	--	--	--	0.6	--	--	--	--	--
Orthophosphate	--	--	--	--	--	--	0.18	--	--	--	--	--
pH*	--	--	--	--	--	--	--	7.2	--	--	--	--
Phenols, total	--	--	--	--	--	--	--	<0.005	--	--	--	--
Specific conductivity**	--	--	--	--	--	-	--	--	--	-	--	-
Sulfate	--	--	--	--	--	--	--	650	550	--	--	--
Total dissolved solids (TDS)	--	--	--	--	--	-	--	1100	--	1100	1240	-

Notes:
Concentrations listed in milligrams per liter (mg/L), except where noted otherwise.
* Measured in standard units (su)
* Measured in micro-mhos per centimeter (umho/cm)
-- Not analyzed or not reported.
< Constituent not detected above noted laboratory detection limit.

Appendix C

Historical General Chemistry Analytical Data
May 1991 - December 2000
Marathon Oil Company, Indian Basin Remediation Project, Eddy County, New Mexico

Parameter / Well ID / Date Sampled	MW-087 10/16/97	MW-087 6/19/98	MW-087 10/12/98	MW-087 4/20/99	MW-087 5/1/00	MW-087A 10/1/96	MW-087A 2/9/97	MW-087A 5/7/97	MW-087A 10/16/97	MW-087A 5/1/00	MW-088 2/5/97	MW-088 4/30/97
Bicarbonate Alkalinity	--	--	--	--	--	--	352	--	--	--	--	--
Ammonia (as N)	<0.03			--	--		--	--	0.17	--	--	--
Bromide	--	--	--	--	--	--	1.2	--	--	--	--	--
Carbonate Alkalinity	--	--		--	--	--	<1	--	--		--	--
Chloride	--	13	--	10	10.3	110	150	140		127	30	20
Cyanide	--	<0.005	--	--	--	--	--	--	--	--	--	--
Fluoride	--	0.9	--	--	--	--	1.9	--	--	--	1.13	--
Hydroxide	--	--	--	--	--	--	<1	--	--	--	--	--
Carbon Dioxide	--	--	--	--	--	--	--	--	--	--	--	--
Nitrate	0.52	--	--	--	--	--	--	--	<0.06	--	--	--
Nitrogen, Kjeldahl, total (as N)	<0.2	--	--	--	--	--	--	--	0.9	--	--	--
Orthophosphate	0.06	--	--	--	--	--	--	--	0.09	--	--	--
pH*	--	7.4	--	--	--	--	7.2	--	--	--		
Phenols, total	--	<0.005	--	--	--	--	--	--	--	--	--	--
Specific conductivity**	--	--	--	--	--	--	3350	--	--	--	--	--
Sulfate	--	360	260	--	--	--	1900	--	--	--	390	--
Total dissolved solids (TDS)	--	710	--	680	690	--	3200	--	--	3290	970	--

Notes:
Concentrations listed in milligrams per liter (mg/L), except where noted otherwise.
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** Measured in micro-mhos per centimeter (umho/cm)
-- Not analyzed or not reported.
< Constituent not detected above noted laboratory detection limit.

Appendix C

Historical General Chemistry Analytical Data
May 1991 - December 2000
Marathon Oil Company, Indian Basin Remediation Project, Eddy County, New Mexico

Parameter / Well ID / Date Sampled	LYMAN 7/1/91	LYMAN 4/1/92	LYMAN 7/1/92	LYMAN 10/1/92	LYMAN 1/1/93	LYMAN 4/15/93	LYMAN 5/12/93	LYMAN 6/28/93	LYMAN 7/15/93	LYMAN 8/3/93	LYMAN 9/21/93	LYMAN 10/14/93
Bicarbonate Alkalinity	--	--	--	--	--	--	--	--	--	--	--	--
Ammonia (as N)	--	--	--	--	--	--	--	--	--	--	--	--
Bromide	--	--	--	--	--	--	--	--	--	--	--	--
Carbonate Alkalinity	--	--	--	--	--	--	--	--	--	--	--	--
Chloride	20	12.6	14.6	15.5	13.2	13	13	12.5	15	13.1	12.4	14.6
Cyanide	--	--	--	--	--	--	--	--	--	--	--	--
Fluoride	1.3	--	--	--	--	--	--	--	--	--	--	--
Hydroxide	--	--	--	--	--	--	--	--	--	--	--	--
Carbon Dioxide			--	--	--	--	--	--	--	--	--	--
Nitrate	--	--	--	--	--	--	--	--	--	--	--	--
Nitrogen, Kjeldahl, total (as N)	--	--	--	--	--	--	--	--	--	--	--	--
Orthophosphate	--	--	--	--	--	--	--	--	--	--	--	--
pH*	--	--	--	--	--	--	--	--	--	--	--	--
Phenols, total	--	--	--	--	--	--	--	--	--	--	--	--
Specific conductivity**	--	--	--	--	--	--	--	--	--	--	--	--
Sulfate	450	--	--	--	--	--	--	--	--	--	--	--
Total dissolved solids (TDS)	980	--					--	--	--	--	--	--

Notes:

Concentrations listed in milligrams per liter (mg/L), except where noted otherwise.

* Measured in standard units (su)

* Measured in micro-mhos per centimeter (umho/cm)

Not analyzed or not reported

< Constituent not detected above noted laboratory detection limit.

LYMAN 11/30/94	LYMAN 12/16/94	LYMAN 1/11/95	LYMAN 3/9/95	LYMA 4/7/9
--	--	--	--	--
--	--	--	--	--
--	--	--	--	--
--	--	--	--	--
12.1	11.8	11	12	13
--	--	--	--	--
--	--	--	--	--
--	--	--	--	--
--	--	--	--	--
--	--	--	--	--
--	--	--	--	--
--	--	--	--	--
--	--	--	--	--
--	--	--	--	--
--	--	--	--	--
--	--	--	--	--
--	--	--	--	--

Notes:
Concentrations listed in milligrams per liter (mg/L), except where
* Measured in standard units (su)
** Measured in micro-mhos per centimeter (umho/cm)
-- Not analyzed or not reported
< Constituent not detected above noted laboratory detection lim

Parameter / Well ID / Date Sampled	LYMAN 11/10/93	LYMAN 12/6/93	LYMAN 1/12/94	LYMAN 2/9/94	LYMAN 3/16/94	LYMAN 4/5/94	LYMAN 5/19/94	LYMAN 6/23/94	LYMAN 7/21/94	LYMAN 8/24/94	LYMAN 9/20/94	LYMAN 10/6/94
Bicarbonate Alkalinity	--	--	--	--	--	--	--	--	--	--	--	--
Ammonia (as N)	--	--	--	--	--	--	--	--	--	--	--	--
Bromide	--	--	--	--	--	--	--	--	--	--	--	--
Carbonate Alkalinity	--	--	--	--	--	--	--	--	--	--	--	--
Chloride	482	14	13	12.6	13	12.5	12.1	12	12	11.5	11	14
Cyanide	--	--	--	--	--	--	--	--	--	--	--	--
Fluoride	--	--	--	--	--	--	--	--	--	--	--	--
Hydroxide	--	--	--	--	--	--	--	--	--	--	--	--
Carbon Dioxide	--	--	--	--	--	--	--					
Nitrate		--	--	--	--	--	--	--	--	--	--	
Nitrogen, Kjeldahl, total (as N)	--		--	--	--	--	--	--	--	--	--	--
Orthophosphate	--	--	--	--	--	--	--	--	--	--	--	--
pH*	--	--	--	--	--	--	--	--	--	--	--	--
Phenols, total	--	--	--	--	--	--	--	--	--	--	--	--
Specific conductivity**	--	--	--	--	--	--	--	--	--	--	--	--
Sulfate	--	--	--	--	--	--	--	--	--	--	--	--
Total dissolved solids (TDS)	--	--	--	--	--	--	--	--	--	--	--	--

Notes:
Concentrations listed in milligrams per liter (mg/L), except where noted otherwise.
* Measured in standard units (su)
* Measured in micro-mhos per centimeter (umho/cm)
-- Not analyzed or not reported.
< Constituent not detected above noted laboratory detection limit.

Appendix C

Historical General Chemistry Analytical Data
May 1991 - December 2000
Marathon Oil Company, Indian Basin Remediation Project, Eddy County, New Mexico

Parameter / Well ID / Date Sampled	LYMAN 2/10/97	LYMAN 4/30/98	LYMAN 6/29/98	LYMAN 12/18/00	MW-001 4/1/91	MW-001 5/1/91	MW-001 12/1/91	MW-010 5/1/91	MW-010 9/1/91	MW-010 12/1/91	MW-010 4/1/92	MW-010 7/1/92	MW-010 10/1/92
Bicarbonate Alkalinity	--	--	--	--	--	--	--	--	--	--	--	--	--
Ammonia (as N)	--	--	--	--	--	--	--	--	--	--	--	--	--
Bromide	--	--	--	--	--	--	--	--	--	--	--	--	--
Carbonate Alkalinity	--	--	--	--	--	--	--	--	--	--	--	--	--
Chloride	11	15	13	15	2000	310	152	60	--	323	319	240	312
Cyanide	--	--	<0.005	--	--	--	--	--	--	--	--	--	--
Fluoride	--	--	0.6	--	--	--	--	--	--	--	--	--	--
Hydroxide	--	--	--	--	--	--	--	--	--	--	--	--	--
Carbon Dioxide	--	--	--	--	--	--	--	--	--	--	--	--	--
Nitrate	--	--	--	--	--	--	--	--	--	--	--	--	--
Nitrogen, Kjeldahl, total (as N)	--	--	--	--	--	--	--	--	--	--	--	--	--
Orthophosphate	--	--	--	--	--	--	--	--	--	--	--	--	--
pH*	--	--	7.4	--	--	--	--	--	--	--	--	--	--
Phenols, total	--	--	<0.005	--	--	--	--	--	--	--	--	--	--
Specific conductivity**	--	--	--	--	--	--	--	--	--	--	--	--	--
Sulfate	--	--	670	--	--	--	--	--	<10	--	--	--	--
Total dissolved solids (TDS)	--	--	1000	--	--	820	--	1600	1440	--	--	--	--

Notes:
Concentrations listed in milligrams per liter (mg/L), except where noted otherwise.
* Measured in standard units (su)
** Measured in micro-mhos per centimeter (umho/cm)
-- Not analyzed or not reported.
< Constituent not detected above noted laboratory detection limit.

Appendix C

Historical General Chemistry Analytical Data
May 1991 - December 2000
Marathon Oil Company, Indian Basin Remediation Project, Eddy County, New Mexico

Parameter / Well ID / Date Sampled	MW-082 10/11/95	MW-082 6/25/98	MW-082 10/12/98	MW-083 6/25/98	MW-084 6/23/98	MW-085 6/23/98	MW-086 10/17/97	MW-086 6/26/98	MW-087 8/1/96	MW-087 8/22/96	MW-087 10/1/96	MW-087 2/9/97	MW-087 5/6/97
Bicarbonate Alkalinity	--	--	--	--	--	--	--	--	--	--	--	222	--
Ammonia (as N)	--	--	--	--	--	--	2.77	--	--	--	--	--	--
Bromide	--	--	--	--	--	--	--	--	--	--	--	<0.3	--
Carbonate Alkalinity	--	--	--	--	--	--	--	--	--	--	--	<1	--
Chloride	76	72	--	49	7	120	--	330	--	11	12	11	13
Cyanide	--	<0.005	--	<0.005	<0.005	<0.005	--	<0.005	--	--	--	--	--
Fluoride	--	0.7	--	0.7	0.5	1.3	--	1.1	--	--	--	0.63	--
Hydroxide	--	--	--	--	--	--	--	--	--	--	--	<1	--
Carbon Dioxide	--	--	--	--	--	--	--	--	--	--	--	--	--
Nitrate	--	--	--	--	--	--	1.91	--	--	--	--	--	--
Nitrogen, Kjeldahl, total (as N)	--	--	--	--	--	--	14	--	--	--	--	--	--
Orthophosphate	--	--	--	--	--	--	0.5	--	--	--	--	--	--
pH*	--	7.1	--	7.2	7.5	7.5	--	7	--	--	--	7.8	--
Phenols, total	--	0.006	--	<0.005	0.008	0.034	--	0.068	--	--	--	--	--
Specific conductivity**	--	--	--	--	--	--	--	--	--	--	--	814	--
Sulfate	--	390	190	270	<5	<5	--	29	--	--	--	230	--
Total dissolved solids (TDS)	--	730	--	640	370	1100	--	1500	810	--	--	580	--

Notes:
Concentrations listed in milligrams per liter (mg/L), except where noted otherwise.
* Measured in standard units (su)
** Measured in micro-mhos per centimeter (umho/cm)
-- Not analyzed or not reported.
< Constituent not detected above noted laboratory detection limit.

Southern U.S. Business Unit
Domestic Production

Marathon Oil Company

P.O. Box 552
Midland, TX 79702-0552
Telephone 915/682-1626

March 23, 2001

Fasken Oil and Ranch
Attn: Engineering Department
303 W. Wall, Suite 1800
Midland, Texas 79701

Offset Operator
Indian Hills Unit Well No. 30 SWD
Section 20, T-21-S, R-23-E
Eddy County, New Mexico

Re: Application for Authorization to Inject (C-108)

Gentlemen:

Marathon Oil Company is making application to the State of New Mexico, Oil Conservation Division for authorization to dispose of produced water from offsetting leases into a proposed well, the Indian Hills Unit Well No. 30. In accordance with the application process, Marathon is notifying offset operators in the "area of review" of the proposed injection well. A copy of the complete application is attached. Objections must be filed with the Oil Conservation Division, 1220 South St. Francis Drive, Santa Fe, New Mexico 87501, within 15 days of the date of this letter.

Sincerely,

K. W. Tatarzyn
Indian Basin Asset Team Manager

Enclosures

GL:m:\winword\IHU30OFFSET.doc

Southern U.S. Business Unit
Domestic Production

Marathon Oil Company

P.O. Box 552
Midland, TX 79702-0552
Telephone 915/682-1626

March 23, 2001

Yates Petroleum
Attn: Engineering Department
104 S. Fourth Street
Artesia, New Mexico 88210

Offset Operator
Indian Hills Unit Well No. 30 SWD
Section 20, T-21-S, R-23-E
Eddy County, New Mexico

Re: Application for Authorization to Inject (C-108)

Gentlemen:

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Sincerely,

K. W. Tatarzyn
Indian Basin Asset Team Manager

Enclosures

GL:m:\winword\IHU30OFFSET.doc

Southern U.S. Business Unit
Domestic Production

Marathon Oil Company

P.O. Box 552
Midland, TX 79702-0552
Telephone 915/682-1626

March 23, 2001

Bureau of Land Management
2909 West Second Street
Roswell, New Mexico 88201

Surface Owner
Indian Hills Unit Well No. 30 SWD
Section 20, T-21-S, R-24-E
Eddy County, New Mexico

Re: Application for Authorization to Inject (C-108)

Gentlemen:

Marathon Oil Company is in the process of making application to the State of New Mexico, Energy and Minerals Department, Oil Conservation Division for authorization to drill a disposal well located in Section 20, T-21-S, R-24-E, of Eddy County, New Mexico. The surface location will be 1494' FSL and 688 FWL, and the bottom hole location will be 1050' FNL and 1930' FWL of Section 20. In accordance with the application process, Marathon is submitting the application to the BLM as surface owner of the property on which the proposed disposal well will be drilled.

Sincerely,

K. W. Tatarzyn
Indian Basin Asset Team Manager

Enclosures