Form 3160-5
(August 1999)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

Oil Cons.
N.M. DIV-Dist. 2
1301 W. Grand Avenue
Artesia, NM 88210

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

C/SR

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. NM 07260 BHL
NM-46293-A SHL

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

7. If Unit or CA/Agreement, Name and/or No.
Indian Hills Unit

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

8. Well Name and No.
Indian Hills Unit # 45

2. Name of Operator
Marathon Oil Company

9. API Well No.
30-015-32338

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

3b. Phone No. (include area code)
915-687-8357

10. Field and Pool, or Exploratory Area
Indian Basin

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)
SHL- Sec. 28, T-21-S, R-24-E 806' FNL & 1010' FEL
BHL- Sec. 21, T-21-S, R-24-E 339' FSL & 1148' FEL
Eddy Co. N.M.

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

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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.)

Please see attached Subsequent report to form 3160-5 for End of Well report.

ACCEPTED FOR RECORD
AUG 15 2002
ALEXIS C. SWOBODA
PETROLEUM ENGINEER

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

Title
Engineer Tech.

Date 8/9/02

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.

Marathon Oil Company

Operations Summary Report

Legal Well Name: INDIAN HILLS UNIT NO. 45
Common Well Name: INDIAN HILLS UNIT NO. 45
Event Name: ORIGINAL DRILLING
Contractor Name: MCVAY DRILLING
Rig Name: MCVAY DRILLING

Start: 7/20/2002
Rig Release:
Rig Number: 4

Spud Date: 7/20/2002
End:
Group:

Date	From - To	Hours	Code	Sub Code	Phase	Description of Operations
7/23/2002	-				MIRU	Location: 806' FNL & 1010' FEL, Section 28 T-21-S, R-24-E (Surface). X: 449,465.2 Y: 529,464.4 100' FSL & 1100' FEL, Section 28T-21-S,R-24-E (UP top, 7430 TVD) X: 449,356.0 Y: 530,369.9 340' FSL & 1128' FEL, Section 28 T-21-S, R-24-E (BHL, 8215' TVD) X: 449,327.1 Y: 530,609.9 API #: 30-015-32338 Location built by Sweatt & pit lined by Mesquite. Rig moved by Billy Walker Trucking on 7/15/02. McVay sent drawworks in for repairs. McVay performed repairs & maintenance work while waiting on drawworks to be repaired in shop. Recieved drawworks from machine shop on Saturday afternoon 7/20/02. 7/21/02 MIRU Rig & equipment. Made adjustments to drawworks & raised derrick.
	08:00 - 17:30	9.50	Rig	MIRU	MIRU	R/U equipment on ground, floor & derrick. P/U kelly, mousehole & rathole. Had problems getting mousehole down. Re-fab & installed flowline to existing surface stack. Serviced, inspected & repaired misc. equipment. Started inspecting drillstring. Roustabout gang worked on poly lines & water pumping system to pump water from IHU's 35, 22, & 20. Hammer bit will be on location in morning.
7/24/2002	07:30 - 09:00	1.50			MIRU	Pre-job meeting. P/U BHA- 12-1/4" hammer bit. Install rotating rubber. Build air pressure & check lines for leaks.
	09:00 - 19:30	10.50	Drill	HAMR	DRLSUR	Spud 12-1/4" hammeer bit w/ air @ 09:00 CST. Hit water at 230' w/ appx. 2-4 BPM water in returns @ 2500 - 3400 SCFM air rate.
	19:30 - 19:45	0.25	Surv	TOTC	DRLSUR	W/L @ 389' / 0 degrees
	19:45 - 03:30	7.75	Drill	HAMR	DRLSUR	Air drill w/ appx. 3-4 BPM water in returns. Penetration rate slowed to 24 ft./ hr. during last 2 hrs. of drilling.
	03:30 - 04:30	1.00	Trip	BHA	DRLSUR	TOH to L/D hammer bit.
	04:30 - 06:00	1.50	Trip	BHA	DRLSUR	Break down BHA. Load out hammer bit assembly w/ 2 buttons broke off hammer bit (bit in good cond.). Start picking up new BHA.
7/25/2002	06:00 - 08:15	2.25	Trip	BIT	DRLSUR	TIH w/ 12 1/4" bit w/ reamer & shock sub.
	08:15 - 15:45	7.50	Drill	AIR	DRLSUR	Drill w/ 12 1/4" bit w/ air.
	15:45 - 16:00	0.25	Surv	TOTC	DRLSUR	Wireline survey.
	16:00 - 21:00	5.00	Drill	AIR	DRLSUR	Drill w/ 12 1/4" bit w/ air. Buster pump quit
	21:00 - 21:30	0.50	Rig	RCNT	DRLSUR	Worked on buster pump. No way to repair buster pump till morning. Started #2 pump & swithed to fluid.
	21:30 - 00:00	2.50	Drill	DOH	DRLSUR	Drill w/ 12 1/4" bit w/ fluid to surface T.D. @ Midnight .
	00:00 - 00:45	0.75	Circ	FILL	DRLSUR	POOH Pumped down hole then sweep hole w/ heavy vis pill before coming out of hole.
	00:45 - 02:30	1.75	Trip	BIT	DRLSUR	POOH L/D 12 1/4" reamer, 8" collar, shock sub, & 12 1/4" bit.
	02:30 - 05:30	3.00	Csg	RUN	CSGSUR	R/U caser's. Held safety meeting. Run 27 jt's 9 5/8" casing 36# to T.D.. Tacking btm 3 jt's. Tagged btm @ 1210'. Cir.
	05:30 - 06:00	0.50	Circ	HOLE	CSGSUR	Cir well while having safety meeting w/ Halliburton.
7/26/2002	06:00 - 06:30	0.50	Cemt	PRIM	CSGSUR	R/U Halliberton & tested line to cement.
	06:30 - 08:30	2.00	Cemt	PRIM	CSGSUR	Pumped 500sks Nitrofied cement, tailed by 150 sks liquid cement. Plug down @ 0715 A.M. Did not cir.
	08:30 - 09:45	1.25	Cemt	TJOB	CSGSUR	Pumped 500 sks nitrofied cement down back side, capped w/ 75 sks cement. Shut-in.
	09:45 - 12:45	3.00	Wait	CEMT	CSGSUR	Waited on cement.
	12:45 - 15:00	2.25	BOPwhd	DBOP	CSGSUR	Check pressure on back side. None. Picked up stack & cut 9 5/8" csg. Pulled surface stack. Cut conductor pipe. Checked on cement on backside. Tagged solid cement 8' down.

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Operations Summary Report

Legal Well Name: INDIAN HILLS UNIT NO. 45
Common Well Name: INDIAN HILLS UNIT NO. 45 Spud Date: 7/20/2002
Event Name: ORIGINAL DRILLING Start: 7/20/2002 End:
Contractor Name: MCVAY DRILLING Rig Release: Group:
Rig Name: MCVAY DRILLING Rig Number: 4

Date	From - To	Hours	Code	Sub Code	Phase	Description of Operations
7/26/2002	15:00 - 17:00	2.00	BOPwhd	UWLH	CSGSUR	Weld on C-22 9 5/8" SOW 11" X 3M Surface head.
	17:00 - 22:00	5.00	NuNd	UWLH	CSGSUR	N/U BOP stack w/ Hydril, chock manifold, & hooked up flowline.
	22:00 - 05:30	7.50	Test	EQUI	CSGSUR	R/U tester. Test BOP equipment. R/D Tester
	05:30 - 06:00	0.50	Trip	BBHD	CSGSUR	Picking up PHA w/ 8 3/4" bit.
7/27/2002	06:00 - 07:30	1.50	Trip	BIT	CSGSUR	Finish picking up PHA & TIH w/ 8 3/4" bit to 1173'.
	07:30 - 08:00	0.50	Test	CSG	CSGSUR	Test casing w/ rig pump to 1000 PSI.
	08:00 - 09:30	1.50	Drill	PLUG	CSGSUR	Drill out float collar & cement to 1189'
	09:30 - 10:00	0.50	Test	CSG	CSGSUR	Test shoe jt w/ rig pump to 1000 PSI. Drill out rest of cement.
	10:00 - 11:00	1.00	Drill	DOH	DRLPR	Drill w/ 8 3/4" bit w/ fluid till PHA was bured below shoe jt.
	11:00 - 11:15	0.25	Drill	AIR	DRLPR	Blew casing clean from fluid.
	11:15 - 13:45	2.50	Drill	AIR	DRLPR	Drill w/ 8 3/4" bit w/ air. Running 50 to 55 thousand on bit.
	13:45 - 14:15	0.50	Surv	TOTC	DRLPR	Ran wireline survey. BOP drill.
	14:15 - 20:30	6.25	Drill	AIR	DRLPR	Drill w/ air w/ 8 3/4" bit. Running 40 to 45 thousand on bit.
	20:30 - 20:45	0.25	Surv	TOTC	DRLPR	Ran wireline survey. BOP drill.
	20:45 - 04:30	7.75	Drill	AIR	DRLPR	Drill w/ air w/ 8 3/4" bit. Running 40 to 45 thousand on bit.
	04:30 - 04:45	0.25	Surv	TOTC	DRLPR	Ran wireline survey.
	04:45 - 06:00	1.25	Drill	AIR	DRLPR	Drill w/ air w/ 8 3/4" bit. Running 45 thousand on bit.
7/28/2002	06:00 - 11:00	5.00	Drill	AIR	DRLPR	Drill w/ air w/ 8 3/4" bit w/ 55 thousand on bit.
	11:00 - 11:30	0.50	Surv	TOTC	DRLPR	W.L.S. & BOP drill.
	11:30 - 15:30	4.00	Drill	AIR	DRLPR	Drill w/ air w/ 8 3/4" bit w/ 55 thousand on bit.
	15:30 - 16:00	0.50	Rig	RCNT	DRLPR	Changed out 2" air line that was leaking between stand pipe & compressors.
	16:00 - 18:15	2.25	Drill	AIR	DRLPR	Drill w/ air w/ 8 3/4" bit. w/ 55 thousand.on bit.
	18:15 - 18:30	0.25	Surv	TOTC	DRLPR	W.L.S. & BOP drill.
	18:30 - 00:00	5.50	Drill	AIR	DRLPR	Drill w/ air w/ 8 3/4" bit w/ 55 thousand on bit.
	00:00 - 00:15	0.25	Surv	TOTC	DRLPR	W.L.S. & BOP drill.
	00:15 - 06:00	5.75	Drill	AIR	DRLPR	Drill w/ air w/ 8 3/4" bit w/ 50 thousand on bit.
7/29/2002	06:00 - 07:00	1.00	Drill	AIR	DRLPR	Drill w/ air w/ 8 3/4" bit w/ 55 thousand # on bit.
	07:00 - 07:30	0.50	Surv	TOTC	DRLPR	W.L.S. & BOP drill.
	07:30 - 14:30	7.00	Drill	AIR	DRLPR	Drill w/ air w/ 8 3/4" bit w/ 55 thousand # on bit.
	14:30 - 14:45	0.25	Surv	TOTC	DRLPR	W.L.S.
	14:45 - 16:30	1.75	Drill	AIR	DRLPR	Drill w/ air w/ 8 3/4" bit w/ 55 thousand # on bit.
	16:30 - 17:15	0.75	Circ	FILL	DRLPR	Switched over to fluid & condition hole.
	17:15 - 19:15	2.00	Trip	BHA	DRLPR	TOOH to change out BHA.
	19:15 - 21:30	2.25	Trip	BBHD	DRLPR	L/D PHA. & picked up new BHA. Motor w/ new 8 3/4" bit.
	21:30 - 00:00	2.50	Trip	BIT	DRLPR	TIH w/ bit, motor, teleco, monel, thruster w/ jars.
	00:00 - 00:30	0.50	Circ	HOLE	DRLPR	Broke cir to reserve pit.
	00:30 - 03:30	3.00	WireLn	RURD	DRLPR	R/U Baker & Run gyro. R/D Baker.
	03:30 - 03:45	0.25	Circ	CLN	DRLPR	Orienta tool.
	03:45 - 04:15	0.50	Drill	DOHS	DRLPR	Slide.
	04:15 - 05:15	1.00	Drill	DOHR	DRLPR	Rotate
	05:15 - 05:30	0.25	Circ	FILL	DRLPR	Conn.
	05:30 - 06:00	0.50	Drill	DOHS	DRLPR	Slide.
7/30/2002	06:00 - 06:45	0.75	Drill	DOHR	DRLPR	Rotate
	06:45 - 07:00	0.25	Surv	MWD	DRLPR	Conn
	07:00 - 07:30	0.50	Drill	DOHS	DRLPR	Slide
	07:30 - 08:00	0.50	Drill	DOHR	DRLPR	Rotate.
	08:00 - 08:15	0.25	Surv	MWD	DRLPR	Conn. & BOP drill.
	08:15 - 08:30	0.25	Drill	DOHS	DRLPR	Slide
	08:30 - 09:30	1.00	Drill	DOHR	DRLPR	Rotate
	09:30 - 09:45	0.25	Surv	MWD	DRLPR	Conn.
	09:45 - 10:00	0.25	Drill	DOHS	DRLPR	Slide.
	10:00 - 10:45	0.75	Drill	DOHR	DRLPR	Rotate.

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Marathon Oil Company

Operations Summary Report

Legal Well Name: INDIAN HILLS UNIT NO. 45
Common Well Name: INDIAN HILLS UNIT NO. 45 Spud Date: 7/20/2002
Event Name: ORIGINAL DRILLING Start: 7/20/2002 End:
Contractor Name: MCVAY DRILLING Rig Release: Group:
Rig Name: MCVAY DRILLING Rig Number: 4

Date	From - To	Hours	Code	Sub Code	Phase	Description of Operations
7/30/2002	10:45 - 11:00	0.25	Surv	MWD	DRLPR	Conn.
	11:00 - 11:15	0.25	Drill	DOHS	DRLPR	Slide.
	11:15 - 12:15	1.00	Drill	DOHR	DRLPR	Rotate
	12:15 - 12:30	0.25	Surv	MWD	DRLPR	Conn.
	12:30 - 12:45	0.25	Drill	DOHS	DRLPR	Slide
	12:45 - 13:30	0.75	Drill	DOHR	DRLPR	Rotate..
	13:30 - 13:45	0.25	Surv	MWD	DRLPR	Conn.
	13:45 - 14:00	0.25	Drill	DOHS	DRLPR	Slide.
	14:00 - 14:30	0.50	Drill	DOHR	DRLPR	Rotate.
	14:30 - 14:45	0.25	Surv	MWD	DRLPR	Conn.
	14:45 - 15:00	0.25	Drill	DOHS	DRLPR	Slide.
	15:00 - 15:45	0.75	Drill	DOHR	DRLPR	Rotate.
	15:45 - 16:00	0.25	Surv	MWD	DRLPR	Conn.
	16:00 - 16:15	0.25	Drill	DOHS	DRLPR	Slide.
	16:15 - 17:15	1.00	Drill	DOHR	DRLPR	Rotate.
	17:15 - 17:30	0.25	Surv	MWD	DRLPR	Conn. & BOP drill.
	17:30 - 17:45	0.25	Drill	DOHS	DRLPR	Slide.
	17:45 - 18:30	0.75	Drill	DOHR	DRLPR	Rotate.
	18:30 - 18:45	0.25	Surv	MWD	DRLPR	Conn.
	18:45 - 19:00	0.25	Drill	DOHS	DRLPR	Slide.
	19:00 - 19:45	0.75	Drill	DOHR	DRLPR	Rotate.
	19:45 - 20:00	0.25	Surv	MWD	DRLPR	Conn.
	20:00 - 20:15	0.25	Drill	DOHS	DRLPR	Slide.
	20:15 - 21:00	0.75	Drill	DOHR	DRLPR	Rotate.
	21:00 - 21:15	0.25	Surv	MWD	DRLPR	Conn.
	21:15 - 21:30	0.25	Drill	DOHS	DRLPR	Slide.
	21:30 - 22:15	0.75	Drill	DOHR	DRLPR	Rotate.
	22:15 - 22:30	0.25	Surv	MWD	DRLPR	Conn.
	22:30 - 22:45	0.25	Drill	DOHS	DRLPR	Slide.
	22:45 - 23:30	0.75	Drill	DOHR	DRLPR	Rotate.
	23:30 - 23:45	0.25	Surv	MWD	DRLPR	Conn.
	23:45 - 00:00	0.25	Drill	DOHS	DRLPR	Slide
	00:00 - 00:45	0.75	Drill	DOHR	DRLPR	Rotate.
	00:45 - 01:00	0.25	Surv	MWD	DRLPR	Conn.
	01:00 - 01:15	0.25	Drill	DOHS	DRLPR	Slide.
	01:15 - 02:15	1.00	Drill	DOHR	DRLPR	Rotate.
	02:15 - 02:30	0.25	Surv	MWD	DRLPR	Conn.
	02:30 - 02:45	0.25	Drill	DOHS	DRLPR	Slide.
	02:45 - 03:45	1.00	Drill	DOHR	DRLPR	Rotate.
	03:45 - 04:00	0.25	Surv	MWD	DRLPR	Conn. & BOP drill.
	04:00 - 04:15	0.25	Drill	DOHS	DRLPR	Slide.
	04:15 - 05:00	0.75	Drill	DOHR	DRLPR	Rotate.
	05:00 - 05:15	0.25	Surv	MWD	DRLPR	Conn.
	05:15 - 05:30	0.25	Drill	DOHS	DRLPR	Slide.
	05:30 - 06:00	0.50	Drill	DOHR	DRLPR	Rotate.
7/31/2002	06:00 - 06:15	0.25	Drill	DOHR	DRLPR	Rotate.
	06:15 - 06:30	0.25	Surv	MWD	DRLPR	Conn.
	06:30 - 06:45	0.25	Drill	DOHS	DRLPR	Slide.
	06:45 - 07:30	0.75	Drill	DOHR	DRLPR	Rotate
	07:30 - 07:45	0.25	Surv	MWD	DRLPR	Conn.
	07:45 - 08:00	0.25	Drill	DOHS	DRLPR	Slide.
	08:00 - 08:45	0.75	Drill	DOHR	DRLPR	Rotate
	08:45 - 09:00	0.25	Surv	MWD	DRLPR	Conn.

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Operations Summary Report

Legal Well Name: INDIAN HILLS UNIT NO. 45
Common Well Name: INDIAN HILLS UNIT NO. 45
Spud Date: 7/20/2002
Event Name: ORIGINAL DRILLING
Start: 7/20/2002
End:
Contractor Name: MCVAY DRILLING
Rig Release:
Group:
Rig Name: MCVAY DRILLING
Rig Number: 4

Date	From - To	Hours	Code	Sub Code	Phase	Description of Operations
7/31/2002	09:00 - 09:15	0.25	Drill	DOHS	DRLPR	Slide
	09:15 - 10:15	1.00	Drill	DOHR	DRLPR	Rotate.
	10:15 - 10:30	0.25	Surv	MWD	DRLPR	Conn.
	10:30 - 10:45	0.25	Drill	DOHS	DRLPR	Slide.
	10:45 - 11:30	0.75	Drill	DOHR	DRLPR	Rotate.
	11:30 - 11:45	0.25	Surv	MWD	DRLPR	Conn.
	11:45 - 12:00	0.25	Drill	DOHS	DRLPR	Slide.
	12:00 - 12:45	0.75	Drill	DOHR	DRLPR	Rotate.
	12:45 - 13:00	0.25	Surv	MWD	DRLPR	Conn.
	13:00 - 13:15	0.25	Drill	DOHS	DRLPR	Slide.
	13:15 - 14:00	0.75	Drill	DOHR	DRLPR	Rotate.
	14:00 - 14:15	0.25	Surv	MWD	DRLPR	Conn.
	14:15 - 14:30	0.25	Drill	DOHS	DRLPR	Slide.
	14:30 - 15:00	0.50	Drill	DOHR	DRLPR	Rotate.
	15:00 - 15:15	0.25	Surv	MWD	DRLPR	Conn.
	15:15 - 15:30	0.25	Drill	DOHS	DRLPR	Slide.
	15:30 - 17:30	2.00	Drill	DOHR	DRLPR	Rotate.
	17:30 - 17:45	0.25	Surv	MWD	DRLPR	Conn.
	17:45 - 18:45	1.00	Drill	DOHR	DRLPR	Rotate.
	18:45 - 19:00	0.25	Surv	MWD	DRLPR	Conn.
	19:00 - 20:45	1.75	Drill	DOHR	DRLPR	Rotate.
	20:45 - 21:00	0.25	Surv	MWD	DRLPR	Conn.
	21:00 - 22:00	1.00	Drill	DOHR	DRLPR	Rotate.
	22:00 - 22:15	0.25	Surv	MWD	DRLPR	Conn.
	22:15 - 22:30	0.25	Drill	DOHS	DRLPR	Slide.
	22:30 - 00:15	1.75	Drill	DOHR	DRLPR	Rotate.
	00:15 - 00:30	0.25	Surv	MWD	DRLPR	Conn.
	00:30 - 01:00	0.50	Drill	DOHS	DRLPR	Slide.
	01:00 - 03:00	2.00	Drill	DOHR	DRLPR	Rotate
	03:00 - 03:15	0.25	Surv	MWD	DRLPR	Conn.
	03:15 - 05:30	2.25	Drill	DOHR	DRLPR	Rotate.
	05:30 - 05:45	0.25	Surv	MWD	DRLPR	Conn.
	05:45 - 06:00	0.25	Drill	DOHS	DRLPR	Slide.
8/1/2002	06:00 - 08:30	2.50	Drill	DOHD	DRLPR	Rotate
	08:30 - 08:45	0.25	Surv	MWD	DRLPR	Survey
	08:45 - 11:15	2.50	Drill	DOHD	DRLPR	Slide 4788'-98' & Rotate
	11:15 - 11:30	0.25	Surv	MWD	DRLPR	Survey
	11:30 - 14:00	2.50	Drill	DOHD	DRLPR	Slide 4851'-57' '& Rotate
	14:00 - 14:15	0.25	Surv	MWD	DRLPR	Survey
	14:15 - 15:00	0.75	Drill	DOHD	DRLPR	Slide 4914'-20' & Rotate. Slow PR & high torque.
	15:00 - 17:30	2.50	Trip	BBHD	DRLPR	TOOH.
	17:30 - 20:30	3.00	Trip	BBHD	DRLPR	Chg bit. TIH. Tagged @ 4585'.Move RT tool f/ 12 stds above HW t/ 4 stds above HW. L/D 10 jts of DP.
	20:30 - 00:45	4.25	Circ	WSHD	DRLPR	Reamed t/ bottom f/ 4585' t/ 4921'.
	00:45 - 02:30	1.75	Drill	DOHD	DRLPR	Rotate
	02:30 - 02:45	0.25	Surv	MWD	DRLPR	Survey
	02:45 - 03:00	0.25	Drill	DOHS	DRLPR	Slide
	03:00 - 04:45	1.75	Drill	DOHD	DRLPR	Rotate
	04:45 - 05:00	0.25	Drill	DOHS	DRLPR	Slide
	05:00 - 06:00	1.00	Drill		DRLPR	Rotate
8/2/2002	06:00 - 07:15	1.25	Drill	DOHD	DRLPR	Rotate
	07:15 - 07:30	0.25	Drill	DOHD	DRLPR	Slide
	07:30 - 09:30	2.00	Drill	DOHD	DRLPR	Rotate

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OFFICE OF ASSISTANT
GENERAL COUNSEL

Marathon Oil Company

Operations Summary Report

Legal Well Name: INDIAN HILLS UNIT NO. 45
Common Well Name: INDIAN HILLS UNIT NO. 45 Spud Date: 7/20/2002
Event Name: ORIGINAL DRILLING Start: 7/20/2002 End:
Contractor Name: MCVAY DRILLING Rig Release: Group:
Rig Name: MCVAY DRILLING Rig Number: 4

Date	From - To	Hours	Code	Sub Code	Phase	Description of Operations
8/2/2002	09:30 - 09:45	0.25	Surv	MWD	DRLPR	Survey
	09:45 - 12:00	2.25	Drill	DOHD	DRLPR	Rotate
	12:00 - 12:15	0.25	Surv	MWD	DRLPR	Survey
	12:15 - 14:00	1.75	Drill	DOHD	DRLPR	Rotate
	14:00 - 14:15	0.25	Surv	MWD	DRLPR	Survey
	14:15 - 16:30	2.25	Drill	DOHD	DRLPR	Rotate
	16:30 - 16:45	0.25	Surv	MWD	DRLPR	Survey
	16:45 - 18:45	2.00	Drill	DOHD	DRLPR	Rotate
	18:45 - 19:00	0.25	Drill	DOHD	DRLPR	Slide
	19:00 - 19:15	0.25	Surv	MWD	DRLPR	Survey
	19:15 - 21:00	1.75	Drill	DOHD	DRLPR	Rotate
	21:00 - 21:30	0.50	Drill	DOHD	DRLPR	Slide
	21:30 - 23:00	1.50	Drill	DOHD	DRLPR	Rotate
	23:00 - 23:15	0.25	Surv	MWD	DRLPR	Survey
	23:15 - 01:30	2.25	Drill	DOHD	DRLPR	Rotate
	01:30 - 01:45	0.25	Surv	MWD	DRLPR	Survey
	01:45 - 03:45	2.00	Drill	DOHD	DRLPR	Rotate
	03:45 - 04:00	0.25	Surv	MWD	DRLPR	Survey
	04:00 - 04:15	0.25	Drill	DOHD	DRLPR	Slide
	04:15 - 06:00	1.75	Drill	DOHD	DRLPR	Rotate
8/3/2002	06:00 - 06:15	0.25	Surv	MWD	DRLPR	Survey
	06:15 - 08:15	2.00	Drill	DOHD	DRLPR	Rotate
	08:15 - 08:30	0.25	Surv	MWD	DRLPR	Survey
	08:30 - 10:30	2.00	Drill	DOHD	DRLPR	Rotate
	10:30 - 10:45	0.25	Surv	MWD	DRLPR	Survey
	10:45 - 11:15	0.50	Drill	DOHD	DRLPR	Slide
	11:15 - 13:00	1.75	Drill	DOHD	DRLPR	Rotate
	13:00 - 13:15	0.25	Surv	MWD	DRLPR	Survey
	13:15 - 15:00	1.75	Drill	DOHD	DRLPR	Rotate
	15:00 - 15:15	0.25	Surv	MWD	DRLPR	Survey
	15:15 - 17:15	2.00	Drill	DOHD	DRLPR	Rotate
	17:15 - 17:30	0.25	Surv	MWD	DRLPR	Survey
	17:30 - 18:00	0.50	Drill	DOHD	DRLPR	Slide
	18:00 - 19:45	1.75	Drill	DOHD	DRLPR	Rotate
	19:45 - 20:00	0.25	Surv	MWD	DRLPR	Survey
	20:00 - 20:30	0.50	Drill	DOHD	DRLPR	Slide
	20:30 - 22:30	2.00	Drill	DOHD	DRLPR	Rotate
	22:30 - 22:45	0.25	Surv	MWD	DRLPR	Survey
	22:45 - 00:45	2.00	Drill	DOHD	DRLPR	Rotate
	00:45 - 01:00	0.25	Surv	MWD	DRLPR	Survey
	01:00 - 03:00	2.00	Drill	DOHD	DRLPR	Slide
	03:00 - 03:15	0.25	Surv	MWD	DRLPR	Survey
	03:15 - 03:30	0.25	Drill	DOHD	DRLPR	Slide
	03:30 - 05:15	1.75	Drill	DOHD	DRLPR	Rotate
	05:15 - 05:30	0.25	Surv	MWD	DRLPR	Survey
	05:30 - 06:00	0.50	Drill	DOHD	DRLPR	Rotate
8/4/2002	06:00 - 07:45	1.75	Drill	DOHD	DRLPR	Rotate
	07:45 - 08:00	0.25	Surv	MWD	DRLPR	Survey
	08:00 - 10:30	2.50	Drill	DOHD	DRLPR	Slide f/ 6427'37'. Rotate f/ 6437'-6481'.
	10:30 - 10:45	0.25	Surv	MWD	DRLPR	Survey
	10:45 - 14:00	3.25	Drill	DOHD	DRLPR	Slide f/ 6489'-99'. Rotate f/ 6499' t/ 6553'
	14:00 - 14:15	0.25	Surv	MWD	DRLPR	Survey
	14:15 - 15:30	1.25	Drill	DOHD	DRLPR	Slide f/ 6553'-63'. Rotate f/ 6563'-6615'.

Marathon Oil Company

Operations Summary Report

Legal Well Name: INDIAN HILLS UNIT NO. 45
Common Well Name: INDIAN HILLS UNIT NO. 45 Spud Date: 7/20/2002
Event Name: ORIGINAL DRILLING Start: 7/20/2002 End:
Contractor Name: MCVAY DRILLING Rig Release: Group:
Rig Name: MCVAY DRILLING Rig Number: 4

Date	From - To	Hours	Code	Sub Code	Phase	Description of Operations
8/4/2002	15:30 - 15:45	0.25	Surv	MWD	DRLPR	Survey
	15:45 - 18:15	2.50	Drill	DOHD	DRLPR	Rotate
	18:15 - 18:30	0.25	Surv	MWD	DRLPR	Survey
	18:30 - 21:15	2.75	Drill	DOHD	DRLPR	Rotate f/ 6679'-6710'.
	21:15 - 22:00	0.75	NuNd	URTH	DRLPR	Install rotating head rubber.
	22:00 - 22:45	0.75	Check	BHA	DRLPR	Ck downhole motor. Stalling out. Blew nail on pump. Ck OK.
	22:45 - 00:00	1.25	Drill	DOHD	DRLPR	Rotate
	00:00 - 00:15	0.25	Surv	MWD	DRLPR	Survey
	00:15 - 02:00	1.75	Drill	DOHD	DRLPR	Rotate
	02:00 - 02:15	0.25	Surv	MWD	DRLPR	Survey
	02:15 - 05:15	3.00	Drill	DOHD	DRLPR	Rotate
	05:15 - 05:30	0.25	Surv	MWD	DRLPR	Survey
	05:30 - 06:00	0.50	Drill	DOHD	DRLPR	Rotate
8/5/2002	06:00 - 08:15	2.25	Drill	DOHD	DRLPR	Rotate
	08:15 - 08:30	0.25	Surv	MWD	DRLPR	Survey
	08:30 - 11:15	2.75	Drill	DOHD	DRLPR	Slide f/ 6929'-39'. Rotate f/ 6939'-92'.
	11:15 - 11:30	0.25	Surv	MWD	DRLPR	Survey
	11:30 - 14:15	2.75	Drill	DOHD	DRLPR	Slide f/ 6992' t/ 7002'. Rotate f/ 7002'-56'.
	14:15 - 18:00	3.75	Trip	MOTR	DRLPR	Motor stalled out. High pump pressure due t/ Motor. TOOH. Found small hole in DP. Slip area. Std # 38.
	18:00 - 20:15	2.25	Trip	BBHD	DRLPR	Bearing out on Motor. Chg out motor & bit. Seal out on bit. Cone # 1. 1/4" out of gauge.
	20:15 - 21:15	1.00	Trip	BIT	DRLPR	TIH w/ DC's & HWDP.
	21:15 - 22:00	0.75	Rig	SCDL	DRLPR	Cut drilling line
	22:00 - 00:00	2.00	Trip	BIT	DRLPR	TIH w/ DP.
	00:00 - 00:30	0.50	BOPwhd	URTH	DRLPR	Intalled Rotaing head. Washed 15' to bottom. No fill.
	00:30 - 01:00	0.50	Surv	MWD	DRLPR	Orientate tool. Survey
	01:00 - 01:45	0.75	Drill	DOHD	DRLPR	Slide f/ 7056'-66' Rotate
	01:45 - 02:00	0.25	Surv	MWD	DRLPR	Survey
	02:00 - 03:00	1.00	Drill	DOHD	DRLPR	Slide f/ 8088'-98'. Rotate
	03:00 - 03:15	0.25	Surv	MWD	DRLPR	Survey
	03:15 - 05:00	1.75	Drill	DOHD	DRLPR	Slide f/ 7120'-30' Rotate 7130'-84'
	05:00 - 05:15	0.25	Surv	MWD	DRLPR	Survey
	05:15 - 06:00	0.75	Drill	DOHD	DRLPR	Slide f/ 7184'-94'. Rotate t/ 7245'.
8/6/2002	06:00 - 06:15	0.25	Surv	MWD	DRLPR	Survey
	06:15 - 07:15	1.00	Drill	DOHD	DRLPR	Slide f/ 7245' t/ 7257'. Rotate t/ 7277'.
	07:15 - 07:30	0.25	Surv	MWD	DRLPR	Survey
	07:30 - 08:15	0.75	Drill	DOHD	DRLPR	Slide f/ 7277'-87'. Rotate t/ 7309'.
	08:15 - 08:30	0.25	Surv	MWD	DRLPR	Survey
	08:30 - 09:15	0.75	Drill	DOHD	DRLPR	Slide f/ 7277'-87'. Rotate t/ 7309'.
	09:15 - 09:30	0.25	Surv	MWD	DRLPR	Survey
	09:30 - 10:15	0.75	Drill	DOHD	DRLPR	Slide f/ 7241'-51'. Rotate t/ 7372'.
	10:15 - 10:30	0.25	Surv	MWD	DRLPR	Survey
	10:30 - 11:15	0.75	Drill	DOHD	DRLPR	Slide f/ 7272'-82'. Rotate t/ 7404'.
	11:15 - 11:30	0.25	Surv	MWD	DRLPR	Survey
	11:30 - 12:30	1.00	Drill	DOHD	DRLPR	Slide f/ 7404'-14'. Rotate t/ 7436'.
	12:30 - 12:45	0.25	Surv	MWD	DRLPR	Survey
	12:45 - 13:30	0.75	Drill	DOHD	DRLPR	Slide f/ 7436'-44'. Rotate t/ 7468'.
	13:30 - 13:45	0.25	Surv	MWD	DRLPR	Survey
	13:45 - 15:00	1.25	Drill	DOHD	DRLPR	Slide f/ 7468-78'. Rotate t/ 7500'.
	15:00 - 15:15	0.25	Surv	MWD	DRLPR	Survey
	15:15 - 15:45	0.50	Drill	DOHD	DRLPR	Slide f/ 7500'-10'. Rotate t/ 7532'.
	15:45 - 16:00	0.25	Surv	MWD	DRLPR	Survey

Marathon Oil Company

Operations Summary Report

Legal Well Name: INDIAN HILLS UNIT NO. 45
Common Well Name: INDIAN HILLS UNIT NO. 45
Event Name: ORIGINAL DRILLING
Contractor Name: MCVAY DRILLING
Rig Name: MCVAY DRILLING

Start: 7/20/2002
Rig Release:
Rig Number: 4

Spud Date: 7/20/2002
End:
Group:

Date	From - To	Hours	Code	Sub Code	Phase	Description of Operations
8/6/2002	16:00 - 17:00	1.00	Drill	DOHD	DRLPR	Slide f/ 7542' 52'. Rotate t/ 7564'. Top of Cisco @ 7562'. Drilled w/ 80% returns thru Cisco. No complete loses.
	17:00 - 17:15	0.25	Surv	MWD	DRLPR	Survey
	17:15 - 18:15	1.00	Drill	DOHD	DRLPR	Slide f/ 7564'-74'. Rotate t/ 7595'.
	18:15 - 18:30	0.25	Surv	MWD	DRLPR	Survey
	18:30 - 19:00	0.50	Drill	DOHD	DRLPR	Slide f/ 7595'-7605'. Rotate t/ 7627'.
	19:00 - 19:30	0.50	Rig	RCNT	DRLPR	Chg out flowline valve.
	19:30 - 20:00	0.50	Surv	MWD	DRLPR	Survey
	20:00 - 20:45	0.75	Drill	DOHD	DRLPR	Slide f/ 7629'-39'. Rotate t/ 7659'.
	20:45 - 21:15	0.50	Surv	MWD	DRLPR	Survey. Started to build angle while rotating.
	21:15 - 22:00	0.75	Drill	DOHD	DRLPR	Rotate
	22:00 - 22:15	0.25	Surv	MWD	DRLPR	Survey
	22:15 - 22:45	0.50	Drill	DOHD	DRLPR	Rotate
	22:45 - 23:00	0.25	Surv	MWD	DRLPR	Survey
	23:00 - 00:00	1.00	Drill	DOHD	DRLPR	Slide f/ 7723'-33'. Rotate
	00:00 - 00:15	0.25	Surv	MWD	DRLPR	Survey
	00:15 - 01:30	1.25	Drill	DOHD	DRLPR	Rotate
	01:30 - 01:45	0.25	Surv	MWD	DRLPR	Survey
	01:45 - 02:30	0.75	Drill	DOHD	DRLPR	Rotate
	02:30 - 02:45	0.25	Surv	MWD	DRLPR	Survey
	02:45 - 04:00	1.25	Drill	DOHD	DRLPR	Slide f/ 7914'-24'.Rotate Mudding up @ 7900'.
	04:00 - 04:15	0.25	Surv	MWD	DRLPR	Survey
	04:15 - 06:00	1.75	Drill	DOHD	DRLPR	Slide f/ 7976'-86'. Rotate
8/7/2002	06:00 - 08:00	2.00	Drill	DOHD	DRLPR	Rotate
	08:00 - 08:15	0.25	Surv	MWD	DRLPR	Survey
	08:15 - 11:00	2.75	Drill	DOHD	DRLPR	Rotate
	11:00 - 11:15	0.25	Surv	MWD	DRLPR	Survey
	11:15 - 15:15	4.00	Drill	DOHD	DRLPR	Rotate. TD w/ 95% returns (46 vis, 20 YP)
	15:15 - 16:45	1.50	Circ	MUD	DRLPR	Circ.
	16:45 - 18:15	1.50	Trip	WTRP	DRLPR	Pulled 10 stds w/ 45,000 drag. TIH . Washed 48' to bottom. No fill.
	18:15 - 19:30	1.25	Circ	MUD	DRLPR	Circ.
	19:30 - 00:00	4.50	Trip	BIT	DRLPR	TOOH t/ log.
	00:00 - 02:00	2.00	Trip	BBHD	DRLPR	L/D Inteq's tool. Loaded out on truck
	02:00 - 06:00	4.00	Log	OPEN	EVALPR	RU Schlumberger. Ran Platform Express ,HALS,HRLA,NGT, FMI. Run t/ 8130'. (stayed 100' off bottom). Logging the Wolfcamp @ 0600 hrs.
8/8/2002	06:00 - 10:00	4.00	Log	OPEN	EVALPR	Finish logging & R/D loggers.

Marathon Oil Company

Casing Report

Legal Well Name:	INDIAN HILLS UNIT NO. 45		Spud Date: 7/20/2002
Common Well Name:	INDIAN HILLS UNIT NO. 45	Report #: 1	Report Date: 7/25/2002
Event Name:	ORIGINAL DRILLING	Start: 7/20/2002	End:

General Information

String Type: SURFACE CASING		Permanent Datum:	KELLY BUSHING	Hole Size:		Hole TMD:	1,210.0 (ft)
Hole TVD:	1,210.0 (ft)	KB-Datum:	0.00 (ft)	Water TMD:		Str Wt on Slips:	(lb)
Ground Level:	3,654.00 (ft)	CF Elevation:	(ft)	Liner Overlap:	(ft)	Max Hole Angle:	(°)
Circ Hours:	1.50 (hr)	Mud Lost:	(bbl)	KB to Cutoff:	(ft)	Days From Spud:	2 (days)

Casing Flange / Wellhead

Manufacturer:		Model:	FMC C-22	Top Hub/Flange: (in) / (psi)	
Hanger Model:	11" 3M	Packoff Model:		BTM Hub/Flange: (in) / (psi)	

Actual TMD Set: 1,209.850 (ft)

Integral Casing Detail

Item	Size (in)	Weight (lb/ft)	Grade	Drift (in)	Threads	JTS	Length (ft)	Top (ft)	MU Torq. (ft-lbf)	THD	Manufacturer	Model	Cond.	Max OD (in)	Min ID (in)	Comp. Name
CASING JOINT(S)	9.625	36.0	J-55	8.921	8rd	26	1,162.280									
CASING FLOAT COLLA	9.625		J-55	8.921	8rd		1.200	1,162.28								
CASING JOINT(S)	9.625	36.0	J-55	8.921	8rd	1	44.870	1,163.48								
CASING FLOAT SHOE	9.625		J-55	8.921	8rd		1.500	1,208.35								

Non-Integral Casing Accessories

Accessory	Manufacturer	Number	Spacing (ft)	Interval		How Fixed
				Top (ft)	Bottom (ft)	
CENTRALIZER	Weatherford	16	45.0			CLAMPED

Marathon Oil Company

Cementing Report

Legal Well Name:	INDIAN HILLS UNIT NO. 45			Spud Date:	7/20/2002
Common Well Name:	INDIAN HILLS UNIT NO. 45	Report #:	1	Report Date:	7/26/2002
Event Name:	ORIGINAL DRILLING	Start:	7/20/2002	End:	

Cement Job Type: Primary

Primary	Squeeze Open Hole	Squeeze Casing	Plug
Hole Size: 12.250 (in)	Hole Size:	Hole Size:	Hole Size:
TMD Set: 1,210.0 (ft)	SQ TMD: (ft)	TMD Set:	Top Set: (ft)
Date Set: 7/25/2002	SQ Date:	Date Set:	BTM set: (ft)
Csg Type: SURFACE CASING	SQ Type:	Csg Type:	Plug Date:
Csg Size: 9.625 (in)		SQ TMD:	Plug Type:
		SQ Date:	Drilled Out:
Cmtd. Csg: SURFACE CASING	Cmtd. Csg:	Cmtd. Csg:	Cmtd. Csg:

Cement Co: HALLIBURTON Cementer: Pipe Movement: NO MOVEMENT

Pipe Movement

Rot Time Start: :	Time End: :	RPM:	Init Torque: (ft-lbf)	Avg Torque: (ft-lbf)	Max Torque: (ft-lbf)
Rec Time Start: :	Time End: :	SPM:	Stroke Length: (ft)	Drag Up: (lb)	Drag Down: (lb)

Stage No: 1 of 1

Type: PRIM CMT 1ST STAGE	Start Mix Cmt: 06:30	Disp Avg Rate: 6.00 (bbl/min)	Returns: None
Volume Excess %: 100.00	Start Slurry Displ: :	Disp Max Rate: 7.50 (bbl/min)	Total Mud Lost: (bbl)
Meas. From: T.D. to surface	Start Displ: :	Bump Plug: Y	Cmt Vol to Surf: (bbl)
Time Circ Prior	End Pumping: :	Press Prior: 120 (psi)	
To Cementing: 1.00	End Pump Date:	Press Bumped: 660 (psi)	Ann Flow After: N
Mud Circ Rate: 310 (gpm)	Top Plug: N	Press Held: 5 (min)	Mixing Method:
Mud Circ Press: 400 (psi)	Bottom Plug: N	Float Held: Y	Density Meas By:

Mud Data

Type: FOAM Density: 8.4 (ppg) Visc: 38 (s/qt) PV/YP: (cp)/ (lb/100ft²) Gels 10 sec: (lb/100ft²) Gels 10 min: (lb/100ft²)

Bottom Hole Circulating Temperature: (°F) Bottom Hole Static Temperature: (°F)

Displacement Fluid Type: FRESH WATER Density: 8.4 (ppg) Volume: 90.30 (bbl)

Stage No: 1 Slurry No: 1 of 4

Slurry Data

Fluid Type: LEAD	Description: NITRIFIED		Class: CLASS C	Purpose: FILLER CEM
Slurry Interval: 12,100.00 (ft) to: 1,210.00 (ft)	Cmt Vol: 500 (sk)	Density: 14.8 (ppg)	Yield: 1.34 (ft³/sk)	Mix Water: 3.50 (gal/sk)
Water Source: Frac tanks	Slurry Vol 20.0 (bbl)	Water Vol: 20.0 (bbl)	Other Vol: ()	Foam Job: Y

Test Data

			Time	Temp	Pressure
Thickening Time:	Temperature: (°F)	Compressive Strength 1:		(°F)	(psi)
Free Water: (%)	Temperature: (°F)	Compressive Strength 2:		(°F)	(psi)
Fluid Loss: (cc)	Temperature: (°F)				
Fluid Loss Pressure: (°F)					

Cementing Report

Legal Well Name:	INDIAN HILLS UNIT NO. 45			Spud Date:	7/20/2002
Common Well Name:	INDIAN HILLS UNIT NO. 45	Report #:	1	Report Date:	7/26/2002
Event Name:	ORIGINAL DRILLING	Start:	7/20/2002	End:	

Stage No: 1 Slurry No: 2 of 4

Slurry Data

Fluid Type:	TAIL		Description: NEAT			Class: CLASS C	Purpose: FILLER CEM
Slurry Interval:	1,210.00 (ft)	To: 1,210.00 (ft)	Cmt Vol: 150 (sk)	Density:	6.3 (ppg)	Yield: 14.80 (ft³/sk)	Mix Water: 6.30 (gal/sk)
Water Source:	Frac-tank		Slurry Vol: (bbl)	Water Vol:	35.0 (bbl)	Other Vol: ()	Foam Job: N

Test Data				**Time**	**Temp**	**Pressure**
Thickening Time:		Temperature: (°F)	Compressive Strength 1:		(°F)	(psi)
Free Water:	(%)	Temperature: (°F)	Compressive Strength 2:		(°F)	(psi)
Fluid Loss:	(cc)	Temperature: (°F)				
Fluid Loss Pressure:	(°F)					

Stage No: 1 Slurry No: 3 of 4

Slurry Data

Fluid Type:	OTHER		Description: FOAM			Class: CLASS C	Purpose: FILLER CEM
Slurry Interval:	8.00 (ft)	To: 500.00 (ft)	Cmt Vol: 500 (sk)	Density:	14.8 (ppg)	Yield: 1.34 (ft³/sk)	Mix Water: 6.30 (gal/sk)
Water Source:	Frac-tank		Slurry Vol: (bbl)	Water Vol:	20.0 (bbl)	Other Vol: ()	Foam Job: Y

Test Data				**Time**	**Temp**	**Pressure**
Thickening Time:		Temperature: (°F)	Compressive Strength 1:		(°F)	(psi)
Free Water:	(%)	Temperature: (°F)	Compressive Strength 2:		(°F)	(psi)
Fluid Loss:	(cc)	Temperature: (°F)				
Fluid Loss Pressure:	(°F)					

Stage No: 1 Slurry No: 4 of 4

Slurry Data

Fluid Type:	OTHER		Description: NEAT			Class: CLASS C	Purpose: FW PROTEC
Slurry Interval:	9.00 (ft)	To: 500.00 (ft)	Cmt Vol: 75 (sk)	Density:	14.8 (ppg)	Yield: 1.34 (ft³/sk)	Mix Water: 6.30 (gal/sk)
Water Source:	Frac-tank		Slurry Vol: (bbl)	Water Vol:	26.5 (bbl)	Other Vol: ()	Foam Job: N

Test Data				**Time**	**Temp**	**Pressure**
Thickening Time:		Temperature: (°F)	Compressive Strength 1:		(°F)	(psi)
Free Water:	(%)	Temperature: (°F)	Compressive Strength 2:		(°F)	(psi)
Fluid Loss:	(cc)	Temperature: (°F)				
Fluid Loss Pressure:	(°F)					

Marathon Oil Company

Cementing Report

Legal Well Name:	INDIAN HILLS UNIT NO. 45			Spud Date:	7/20/2002
Common Well Name:	INDIAN HILLS UNIT NO. 45	Report #:	1	Report Date:	7/26/2002
Event Name:	ORIGINAL DRILLING	Start:	7/20/2002	End:	

Casing Test	Shoe Test	Liner Top Test
Test Press: (psi)	Pressure: (ppge)	Liner Lap:
For: (min)	Tool:	Pos Test: (ppge) Tool:
Cement Found between	Open Hole: (ft)	Neg Test: (ppge) Tool:
Shoe and Collar:	Hrs Before Test:	Hrs Before Test:
		Cement Found on Tool:

Log/Survey Evaluation	Interpretation Summary
CBL Run:	Cement Top: (ft)
Under Pressure: (psi)	How Determined:
Bond Quality:	TOC Sufficient:
Cet Run:	Job Rating:
Bond Quality:	If Unsuccessful Detection Indicator:
Temp Survey:	Remedial Cementing Required:
Hrs Prior to Log:	Number of Remedial Squeezes:

Remarks

Pumped 500sks foam cement down backside & capped off w/ 75 sks. Shut-in well for 3 Hr's.Tagged top of cement 8' below surface.

Marathon Oil Company

Operations Summary Report

Legal Well Name: INDIAN HILLS UNIT NO. 45
Common Well Name: INDIAN HILLS UNIT NO. 45
Event Name: ORIGINAL COMPLETION
Contractor Name: MCVAY DRILLING
Rig Name: MCVAY DRILLING

Start: 8/2/2002
Rig Release:
Rig Number: 4

Spud Date: 7/20/2002
End:
Group:

Date	From - To	Hours	Code	Sub Code	Phase	Description of Operations
8/8/2002	10:00 - 13:15	3.25	Trip	BIT	CSGPR	TIH to condition well.
	13:15 - 15:00	1.75	Circ	CLN	CSGPR	Cir & condition hole to run casing.
	15:00 - 21:45	6.75	Trip	LDDP	CSGPR	POOH L/D D.P., HWDP, Jars, & Dill collars.
	21:45 - 22:45	1.00	Csg	RUN	CSGPR	R/U casers & held sSafety Meeting. Changed out rams.
	22:45 - 06:00	7.25	Csg	RUN	CSGPR	Run 189 jys of 7" 26# & 23 # csg to 8230'.
8/9/2002	06:00 - 08:30	2.50	Circ	HOLE	CSGPR	Cir. & condition hole. Circulated alittle longer than normal due to waiting for traffic to slow down f/ road where if we got alot of N2 around might cross the road.
	08:30 - 13:30	5.00	Cemt	PRIM	CSGPR	Held safety meeting. R/U Halliburton. Changed out swedge w/ cementing head. Tested lines to 4000PSI. Pumped 50000 SCF of N2 ahead.Followed by 10 bbl's C.C. wtr w/ N2, 10 bbl wtr spacer, Followed w/ 24 bbl's Super flush 101, 10 bbl wtr spacer behind w/ N2, 1st stage 200 sks acid sol. cement. (91 bbl's) . Nitrofied . 2nd stage 1000 sks Premium H .(223 bbl's). Nitrofied. Tailed w/ 120 sks Super H. (36 bbl's). Dropped plug Displaced w/ 318 bbl's fresh wtr.Bumped plug to 3750 PSI.Cir about 80 sks to pit. Pressures were higher than normal while cementing. After 60 bbls of displacement csg pressue started increasing. Bump plug @ 12:30A.M.. Capped backside w/ 75 sks P.+ w/ 10# calseal. (18 bbl's).
	13:30 - 17:30	4.00	Wait	CEMT	CSGPR	Waiting on cement.
	17:30 - 22:00	4.50	BOPwhd	UWLH	CSGPR	Bleed off casing pressure & Picked up stack & set slips. Cut off 7" casing. Pulled stack. R/U Tbg hanger & tested to 3000 PSI.
	22:00 - 22:30	0.50	BOPwhd	BOP	CSGPR	Removed 7" pipe rams from BOP. Released rig from well @ 22:30Hr 8/8/2002.

Marathon Oil Company

Casing Report

Legal Well Name: INDIAN HILLS UNIT NO. 45
Common Well Name: INDIAN HILLS UNIT NO. 45
Event Name: ORIGINAL COMPLETION

Report #: 1
Start: 8/2/2002

Spud Date: 7/20/2002
Report Date: 8/8/2002
End:

General Information

String Type: PRODUCTION CASING #1
Hole TVD: 8,071.0 (ft)
Ground Level: 3,654.00 (ft)
Circ Hours: 2.00 (hr)

Permanent Datum: KELLY BUSHING
KB-Datum: 0.00 (ft)
CF Elevation: (ft)
Mud Lost: (bbl)

Hole Size:
Water TMD:
Liner Overlap: (ft)
KB to Cutoff: (ft)

Hole TMD: 8,230.0 (ft)
Str Wt on Slips: (lb)
Max Hole Angle: 18.00 (°)
Days From Spud: (days)

Casing Flange / Wellhead

Manufacturer: Woods Group
Hanger Model: 11"

Model: FMC C-22
Packoff Model:

Top Hub/Flange: (in) / (psi)
BTM Hub/Flange: (in) / (psi)

Actual TMD Set: 8,238.400 (ft)

Integral Casing Detail

Item	Size (in)	Weight (lb/ft)	Grade	Drift (in)	Threads	JTS	Length (ft)	Top (ft)	MU Torq. (ft-lbf)	THD	Manufacturer	Model	Cond.	Max OD (in)	Min ID (in)	Comp. Name
CASING JOINT(S)	7.000	26.0	K-55	6.276	8rd	6	262.270							7.656	6.151	
CASING JOINT(S)	7.000	23.0	K-55	6.366	8rd	98	4,365.810	262.27						7.656	6.241	
CASING JOINT(S)	7.000	26.0	K-55	6.276	8rd	68	2,893.980	4,628.08						7.656	6.151	
PUP JOINT	7.000	26.0	K-55	6.276	8rd	1	20.650	7,522.06						7.656	6.151	
CASING JOINT(S)	7.000	26.0	K-55	6.276	8rd	15	649.980	7,542.71						7.656	6.151	
CASING FLOAT COLLA	7.000			6.276	8rd		1.500	8,192.69						7.656	6.151	
CASING JOINT(S)	7.000	26.0	K-55	6.276	8rd	1	42.710	8,194.19						7.656	6.151	
CASING GUIDE SHOE	7.000			6.276	8rd		1.500	8,236.90						7.656	6.151	

Non-Integral Casing Accessories

Accessory	Manufacturer	Number	Spacing (ft)	Interval Top (ft)	Interval Bottom (ft)	How Fixed
CENTRALIZER	Weatherford	20	80.0			CLAMPED

Marathon Oil Company

Cementing Report

Legal Well Name:	INDIAN HILLS UNIT NO. 45			Spud Date:	7/20/2002
Common Well Name:	INDIAN HILLS UNIT NO. 45	Report #:	1	Report Date:	8/8/2002
Event Name:	ORIGINAL COMPLETION	Start:	8/2/2002	End:	

Cement Job Type: Primary

Primary	Squeeze Open Hole	Squeeze Casing	Plug
Hole Size: 8.750 (in)	Hole Size:	Hole Size:	Hole Size:
TMD Set: 8,230.0 (ft)	SQ TMD: (ft)	TMD Set:	Top Set: (ft)
Date Set: 8/8/2002	SQ Date:	Date Set:	BTM set: (ft)
Csg Type: PRODUCTION CASIN	SQ Type:	Csg Type:	Plug Date:
Csg Size: 7.000 (in)		SQ TMD:	Plug Type:
		SQ Date:	Drilled Out:
Cmtd. Csg: OPEN HOLE	Cmtd. Csg:	Cmtd. Csg:	Cmtd. Csg:

Cement Co: HALLIBURTON Cementer: Pipe Movement: NO MOVEMENT

Pipe Movement

Rot Time Start: 00:00	Time End: :	RPM:	Init Torque: (ft-lbf)	Avg Torque: (ft-lbf)	Max Torque: (ft-lbf)
Rec Time Start: :	Time End: :	SPM:	Stroke Length: (ft)	Drag Up: (lb)	Drag Down: (lb)

Stage No: 1 of 1

Type: PRIM CMT 1ST STAGE	Start Mix Cmt: 20:00	Disp Avg Rate: (bbl/min)	Returns:
Volume Excess %: 100.00	Start Slurry Displ: :	Disp Max Rate: (bbl/min)	Total Mud Lost: (bbl)
Meas. From:	Start Displ: :	Bump Plug: Y	Cmt Vol to Surf: 20.00 (bbl)
Time Circ Prior	End Pumping: :	Press Prior: (psi)	
To Cementing: 2.00	End Pump Date:	Press Bumped: 3,700 (psi)	Ann Flow After: N
Mud Circ Rate: 5 (gpm)	Top Plug: N	Press Held: 45 (min)	Mixing Method:
Mud Circ Press: (psi)	Bottom Plug: N	Float Held: Y	Density Meas By:

Mud Data

Type: FRESH WATER Density: (ppg) Visc: (s/qt) PV/YP: (cp)/ (lb/100ft²) Gels 10 sec: (lb/100ft²) Gels 10 min: (lb/100ft²)

Bottom Hole Circulating Temperature:75 (°F) Bottom Hole Static Temperature: (°F)

Displacement Fluid Type: Density: (ppg) Volume: (bbl)

Stage No: 1 Slurry No: 1 of 3

Slurry Data

Fluid Type: SPACER	Description: NITRIFIED		Class: CLASS H	Purpose: FILLER CEM
Slurry Interval: (ft) To: (ft)	Cmt Vol: 200 (sk)	Density: 15.0 (ppg)	Yield: 2.55 (ft³/sk)	Mix Water: 11.70 (gal/sk
Water Source: Frac tank	Slurry Vol:10.0 (bbl)	Water Vol: 91.0 (bbl)	Other Vol: ()	Foam Job: N

Test Data

			Time	Temp	Pressure
Thickening Time:	Temperature: (°F)	Compressive Strength 1:		(°F)	(psi)
Free Water: (%)	Temperature: (°F)	Compressive Strength 2:		(°F)	(psi)
Fluid Loss: (cc)	Temperature: (°F)				
Fluid Loss Pressure: (°F)					

Marathon Oil Company

Cementing Report

Legal Well Name:	INDIAN HILLS UNIT NO. 45			Spud Date:	7/20/2002
Common Well Name:	INDIAN HILLS UNIT NO. 45	Report #:	1	Report Date:	8/8/2002
Event Name:	ORIGINAL COMPLETION	Start:	8/2/2002	End:	

Stage No: 1 Slurry No: 2 of 3

Slurry Data

Fluid Type: SPACER
Description: NITRIFIED
Class: CLASS H
Purpose: FILLER CEM
Slurry Interval: (ft) To: (ft)
Cmt Vol: 1,000 (sk)
Density: 15.2 (ppg)
Yield: 1.25 (ft³/sk)
Mix Water: 5.74 (gal/sk)
Water Source: Frac-tank
Slurry Vol: (bbl)
Water Vol: 223.0 (bbl)
Other Vol: ()
Foam Job: Y

Test Data

			Time	Temp	Pressure
Thickening Time:		Temperature: (°F)	Compressive Strength 1:	(°F)	(psi)
Free Water:	(%)	Temperature: (°F)	Compressive Strength 2:	(°F)	(psi)
Fluid Loss:	(cc)	Temperature: (°F)			
Fluid Loss Pressure:	(°F)				

Stage No: 1 Slurry No: 3 of 3

Slurry Data

Fluid Type: TAIL
Description: FLOW AFTER CEMENT
Class: CLASS H
Purpose: SHOE INTEG
Slurry Interval: (ft) To: (ft)
Cmt Vol: 120 (sk)
Density: 13.0 (ppg)
Yield: 1.67 (ft³/sk)
Mix Water: 8.27 (gal/sk)
Water Source: Frac tank
Slurry Vol: (bbl)
Water Vol: 36.0 (bbl)
Other Vol: ()
Foam Job: N

Test Data

			Time	Temp	Pressure
Thickening Time:		Temperature: (°F)	Compressive Strength 1:	(°F)	(psi)
Free Water:	(%)	Temperature: (°F)	Compressive Strength 2:	(°F)	(psi)
Fluid Loss:	(cc)	Temperature: (°F)			
Fluid Loss Pressure:	(°F)				

Casing Test

Test Press: (psi)
For: (min)
Cement Found between Shoe and Collar:

Shoe Test

Pressure: (ppge)
Tool:
Open Hole: (ft)
Hrs Before Test:

Liner Top Test

Liner Lap:
Pos Test: (ppge) Tool:
Neg Test: (ppge) Tool:
Hrs Before Test:
Cement Found on Tool:

Log/Survey Evaluation

CBL Run:
Under Pressure: (psi)
Bond Quality:
Cet Run:
Bond Quality:
Temp Survey:
Hrs Prior to Log:

Interpretation Summary

Cement Top: (ft)
How Determined:
TOC Sufficient:
Job Rating:
If Unsuccessful Detection Indicator:
Remedial Cementing Required:
Number of Remedial Squeezes: