PLC 2/18/98
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Mid-Continent Region
Production United States

Marathon Oil Company

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

January 15, 1998

Oil Conservation Division
2040 South Pacheco
Santa Fe, New Mexico 87505

Re: Surface Commingling, Off-Lease Storage, Measurement, and Sales and Alternative Measurement Method of Hydrocarbon Production for the Indian Hills Unit Lease, Indian Hills Unit Gas Com Lease, and the IB "32" State Lease; Sections 20, 21, 28, 29, 32 and 33 of Township 21 South, Range 24 East

Gentlemen:

33685 AISC
79040 GAS

Marathon Oil Company, as operator of the aforementioned leases, respectfully requests administrative approval for surface commingling, off-lease storage, measurement and sales, and alternative measurement method of the production from the Indian Hills Unit Lease, the Indian Hills Unit Gas Com Lease and the IB "32" State Lease.

It is requested that surface commingling of the Indian Basin Upper Penn Gas Pool in sections 20, 21, 28, 29, and 32 and the Indian Basin Upper Penn Associated Pool in section 33 be approved. This involves Federal Lease Nos. NM07260, NM07260-F, NM06293, NM06293-A, LC064391B, LC067649-A, NM0330449, and NM030482, and State Lease Nos. V-992-3 and V-993-3.

Marathon proposes to surface commingle Upper Penn production at a central battery. The proposed central battery will consist of a 3-phase test separator and a 3-phase production separator for gathering and metering the production from Section 29, and a 3-phase production separator that will receive the liquid production from 4 satellite locations for re-separation. The gas will be compressed, processed through a dehydrator, metered, and then transported to the Indian Basin Gas Plant for processing. After processing, the gas and NGLs will be metered and sold at the tail-gate of the plant. Liquid hydrocarbon production delivered to the consolidated facility will be processed and stored in tanks at the facility. Processing may include the use of heat treating or other liquid hydrocarbon processing equipment. The liquid hydrocarbons will be metered through a LACT unit prior to sales at the truck loading rack. Water production will be run through a gun barrel tank for further separation, stored in tanks, metered, and pumped to a disposal well.

The attached drawings illustrate the proposed separation equipment and the proposed

production battery and flow scheme for liquids processed and gas dehydrated and compressed in this facility and the four satellite facilities. Also attached is a more detailed description of the proposed flow and metering of all production, along with a map showing flow from wellhead to central facility.

Marathon has made notification to all parties owning an interest in these leases, including the liquid hydrocarbon purchaser, of the intent to commingle this production. Attached as part of this application is a copy of the letter submitted, by certified mail, to each party and the purchaser and a copy of the sundry notice that was sent to the BLM.

If you require any additional information concerning this application, please call Ginny Larke at (915) 687-8449. Thank you for your consideration of this request.

Sincerely,

A. B. Schoffmann
Indian Basin Asset Team Manager

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Attachments

xc: Oil Conservation Division
District II Manager
Artesia, NM

Upper Penn Commingling Application
Indian Hills Unit, Indian Hills Unit Gas Com, and IB "32" State Leases
Indian Basin Upper Penn Gas Pool and Indian Basin Upper Penn Associated Pool
Eddy County, New Mexico

Northeast Satellite Facility - Future Separation And Test Facility

The gas, liquid hydrocarbons and water from wells in Sections 20 and 21 will be gathered at a satellite facility located in Section 21. Initially this facility will consist of one 3-phase production separator. However, after a second well is drilled in either Section 20 or 21, the facility will consist of a 3-phase test separator and a 3-phase production separator. A production manifold at the facility will allow for individual well testing in the 3-phase test separator while production from the remaining wells flows to the 3-phase production separator. The gas from the separators will be metered at this satellite facility before being delivered to the compressors at the Storage and Measurement facility in Section 19. The liquid hydrocarbons and water, after being metered at the satellite facility, will be commingled and then will flow to a 3-phase separator at the Storage and Measurement facility in Section 19 via a liquid pipeline.

East Satellite Facility - Future Separation And Test Facility

The gas, liquid hydrocarbons and water from wells in Section 28 will be gathered at a second satellite facility located in Section 28. Initially this facility will consist of one 3-phase production separator. However, after a second well is drilled in this Section, the facility will consist of a 3-phase test separator and a 3-phase production separator. A production manifold at the facility will allow for individual well testing in the 3-phase test separator while production from the remaining wells flows to the 3-phase production separator. The gas from the separators will be metered at this satellite facility before flowing to the gas pipeline that transports it to the compressors at the Storage and Measurement facility in Section 19. The liquid hydrocarbons and water, after being metered at the satellite facility, will be commingled and then will flow to a 3-phase separator at the Storage and Measurement facility in Section 19 via a liquid pipeline.

Southeast Satellite Facility - Separation And Test Facility

The gas, liquid hydrocarbons, and water from wells in Section 33 will be gathered at a third satellite facility. This facility will be located in Section 33, T-21-S, R-24-E. The facility will consist of a 3-phase test separator and a 3-phase production separator. A production manifold at the facility will allow for individual well testing in the 3-phase test separator while production from the remaining wells flows to the 3-phase production separator. The gas from the separators will be metered at this satellite facility before flowing to the gas pipeline that transports it to the compressors at the Storage and Measurement facility in Section 19. The liquid hydrocarbons and water, after being metered at the satellite facility, will be commingled and then will flow to a 3-phase separator at the Storage and Measurement facility in Section 19 via a liquid pipeline.

Southwest Satellite Facility - Separation And Test Facility

The gas, liquid hydrocarbons, and water from wells in Section 32 will be gathered at a fourth satellite facility. This facility will be located in Section 32, T-21-S, R-24-E. The facility will consist of a 3-phase test separator and a 3-phase production separator. A production manifold at the facility will allow for individual well testing in the 3-phase test separator while production from the remaining wells flows to the 3-phase production separator. The gas from the separators will be metered at this

satellite facility before flowing to the gas pipeline that transports it to the compressors at the Storage and Measurement facility in Section 19. The liquid hydrocarbons and water, after being metered at the satellite facility, will be commingled and then will flow to a 3-phase separator at the Storage and Measurement facility in Section 19 via a liquid pipeline.

Indian Hills Unit Central Production Battery-Consolidated Storage and Measurement Facility
The Central production facility, located in Section 19, T-21-S, R-24-E, Eddy County, New Mexico, will consist of a 3-phase test separator and two 3-phase production separators. The test separator and one production separator will receive the production from Section 29. A production manifold will allow for individual well testing in the 3-phase test separator while production from the remaining wells flows to the 3-phase production separator. After separation, the gas will be metered and then commingled with the gas from the other two separators and sent to the compressors. The liquid hydrocarbons will be metered and commingled with the liquid hydrocarbons from the other two separators for processing. The water will be metered and commingled with the water from the other two separators and sent to the gun barrel for further separation.

The other production separator will receive the previously metered and commingled liquid production from the four satellite facilities for re-separation. After separation, the gas will be metered, commingled with the gas from the other two separators and sent to the compressors. The liquid hydrocarbons will be metered, commingled with the liquid hydrocarbons from the other two separators, processed, and stored in tanks. The water will be metered, commingled with the water from the other two separators and sent to the gun barrel for further separation.

Gas production, after being compressed, will be processed through a dehydrator, metered and delivered to the Indian Basin Gas Plant for further processing. After processing, the gas and NGLs will be metered and sold at the tail-gate of the plant. Gas from the tanks, heater treater, and dehydrator still vent will be compressed by a vapor recovery unit and sent to the facility compressors.

Liquid hydrocarbon production, after being commingled, will be processed and stored in tanks at the facility. Processing may include the use of heat treating or other liquid hydrocarbon processing equipment. The liquid hydrocarbons will be metered through a LACT unit prior to sales at the truck loading rack.

Water production, after being sent to the gun barrel for further separation, will be stored in tanks at the facility. The water will be metered prior to being pumped to the SWD system. The SWD system has been designed with the flexibility to send or receive water to or from two other SWD facilities. Water in and out of the consolidated facility will be metered prior to entering or leaving the facility.

Upper Penn Commingling Application
Indian Hills Unit, Indian Hills Unit Gas Com, and IB "32" State Leases
Indian Basin Upper Penn Gas Pool and Indian Basin Upper Penn Associated Pool
Eddy County, New Mexico

Production Allocation - Lease

Liquid Hydrocarbons

Daily gross production for the consolidated facility will be based on daily liquid hydrocarbon sales and daily tank gauges.

Production = Liquid Hydrocarbon Sales + (Tank Gauge Change)

Daily liquid hydrocarbon production will be allocated back to each property based on its daily liquid hydrocarbon meter readings and the gross daily production.

Indian Hills Unit Prod.=(Sum of LHC Readings from Indian Hills Unit wells) / (Sum of All LHC Readings) X Gross Consolidated Facility Production

Indian Hills Unit Gas Com Prod.=(Sum of LHC Readings from Gas Com wells) / (Sum of All LHC Readings) X Gross Consolidated Facility Prod.

IB "32" State Lease Prod.=(Sum of LHC Readings from IB "32" State wells) / (Sum of All LHC Readings) X Gross Consolidated Facility Production

GAS

Monthly production for the consolidated facility will be based on the six inch gas meter (Master Meter) located at the discharge of the dehydration unit.

Monthly gas production will be allocated back to each property based on its monthly gas meter readings and the gross monthly production.

Indian Hills Unit Prod.=(Monthly gas reading from Indian Hills Unit Wells) / (Monthly Master Meter Gas Reading) X Gross Consolidated Facility Production

Indian Hills Unit Gas Com Prod.=(Monthly gas reading from Gas Com Wells) / (Monthly Master Meter Gas Reading) X Gross Consolidated Facility Production

IB "32" State Lease Prod.=(Monthly gas reading from IB "32" State Wells) / (Monthly Master Meter Gas Reading) X Gross Consolidated Facility Production

Secondary separation gas =(Monthly gas reading from secondary separation) / (Monthly Master Meter Gas Reading) X Gross Consolidated Facility Production

Upper Penn Commingling Application
Indian Hills Unit, Indian Hills Unit Gas Com, and IB "32" State Leases
Indian Basin Upper Penn Gas Pool and Indian Basin Upper Penn Associated Pool
Eddy County, New Mexico

Secondary Separation Gas (Sections 20, 21, 28, 32, 33)

Monthly secondary separation gas production originates from the commingled liquids stream entering the 3-phase separator which receives production from Sections 20, 21, 28, 32, and 33. As such, it will be allocated back to each property based on its monthly liquid hydrocarbon production and the gross monthly production as follows:

Indian Hills Unit Prod.=(Sum of LHC Readings from Indian Hills Unit Wells) X Allocated Secondary separation gas
(Sum of LHC Readings from Indian Hills Unit & IB "32" State Wells)

IB "32" State Lease Prod.=(Sum of LHC Readings from IB "32" State wells) X Allocated Secondary separation gas
(Sum of LHC Readings from Indian Hills Unit & IB "32" State Wells)

Production Allocation - Well

The production attributable to wells within a specific lease which are not individually metered shall be allocated as follows:

$$\text{Well Production} = \frac{\text{Production Well Test}}{\text{Sum of all Production Well Tests}} \times \text{Lease Allocated Production}$$

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Form 3160-5
(June 1990)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

FORM APPROVED
Budget Bureau No. 1004-0135
Expires: March 31, 1993

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill or to deepen or reentry to a different reservoir.
Use "APPLICATION FOR PERMIT - " for such proposals

SUBMIT IN TRIPLICATE

5. Lease Designation and Serial No.: SEE ATTACHMENTS
6. If Indian, Allottee or Tribe Name:
7. If Unit or CA, Agreement Designation: INDIAN HILLS UNIT
1. Type of Well: ☐ Oil Well ☐ Gas Well ☐ Other
8. Well Name and No.:
2. Name of Operator: Marathon Oil Company
9. API Well No.:
3. Address and Telephone No.: P.O. Box 552 Midland, TX 79702 915/687-8449
10. Field and Pool, or exploratory Area: INDIAN BASIN UPPER PENN GAS POOL & ASSOCIATED POOL
4. Location of Well (Footage, Sec., T., R., M., or Survey Description): CENTRAL FACILITY LOCATION: UL "P" SECTION 19, T-21-S, R-24-E
11. County or Parish, State: EDDY NM

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

TYPE OF SUBMISSION	TYPE OF ACTION	
[X] Notice of Intent	[ ] Abandonment	[ ] Change of Plans
[ ] Subsequent Report	[ ] Recompletion	[ ] New Construction
[ ] Final Abandonment Notice	[ ] Plugging Back	[ ] Non-Routine Fracturing
	[ ] Casing Repair	[ ] Water Shut-Off
	[ ] Altering Casing	[ ] Conversion to Injection
	[X] Other COMMINGLE, MEASUREMENT	[ ] Dispose Water

(Note: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)

13. Describe Proposed or Completed Operations (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)*

As required by 43 CFR 3162.7-2 and Onshore Oil and Gas Order No. 4, Marathon Oil Company is requesting approval of off-lease measurement, storage & sales, alternate measurement method, and surface commingling of liquid hydrocarbons at a central facility for the Indian Hills Unit wells. Also as required by CFR 3162.7-3 and Onshore Oil and Gas Order No. 5, we are requesting approval of off-lease measurement storage & sales of gas. Turbine meters are proposed to be used for the alternate method of metering liquid hydrocarbons.

We are also requesting permission to utilize automatic custody transfer equipment for the disposition of liquid hydrocarbons produced from these leases. Installation, operation and maintenance will be in accordance with 43 CFR 3160 and Onshore Oil and Gas Order No. 4.

A form along with maps and schematics are attached showing the leases and wells addressed by this request, and the equipment which will be used.

14. I hereby certify that the foregoing is true and correct
Signed Henry Parke Title Engineer Technician Date 12/15/97

(This space for Federal or State office use)

Approved by _____ Title _____ Date _____
Conditions of approval, if any:

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.

*** See Instruction on Reverse Side**

APPLICATION FOR SURFACE COMMINGLING OFF-LEASE MEASUREMENT, STORAGE AND ALTERNATE MEASUREMENT APPROVAL

To: **Bureau of Land Management**
P.O. Box 1778
Carlsbad, New Mexico 88220-1778

Marathon Oil Company is requesting approval for Surface Commingling, and Off Lease Storage & Measurement, and Alternate Measurement of hydrocarbon production from the following formation(s) and well(s) on:

Lease Name: **Indian Hills Unit**

Well No.	UL	Sec	TWP	RNG	Formation	Fed. Lease #	COM
1	M	21	21-S	24-E	Upper Penn	NM07260F	N/A
2	O	20	21-S	24-E	Upper Penn	LC064391B	N/A
4	K	28	21-S	24-E	Upper Penn	NM030482	N/A
6	N	20	21-S	24-E	Upper Penn	LC064391B	N/A
8	N	33	21-S	24-E	Upper Penn	NM07260	N/A
9	B	33	21-S	24-E	Upper Penn	NM07260	N/A
11	O	33	21-S	24-E	Upper Penn	NM07260	N/A
12	G	33	21-S	24-E	Upper Penn	NM07260	N/A
Gas Com 13	L	29	21-S	24-E	Upper Penn	LC064391B	NM071145
Gas Com 3	F	29	21-S	24-E	Upper Penn	LC064391B	NM071145

Lease Name: **IB "32" State Lease**

Well No.	UL	Sec	TWP	RNG	Formation	State Lease #	COM
1-Y	M	32	21-S	24-E	Upper Penn	V-993-3	N/A

Production from the referenced wells is as follows:

WELL NO.	STATUS	BOPD	API °	MCFD
1	P&A-To be re-drilled			
2	Shut-In			
4	Shut-In		37.9	
6	Shut-In		40.7	
8	To be worked over		35.7	
9	To be worked over		40.7	
11	To be drilled			
12	To be worked over		40.6	
Gas Com 13	To be drilled			
Gas Com 3	Producing	0	61.6	2333
IB "32" State 1-Y	Producing	0	N/A	650

Note: Gravities shown were taken from past sales of liquid hydrocarbon production

The proposed operation is described in detail on the attached diagrams. Liquid hydrocarbon production will be measured using turbine meters. These meters will be proved on a regular schedule. A map is enclosed showing the lease numbers and location of all leases and wells that will contribute production

to the commingling/common storage facility. All unitized/communitized areas and producing zones/pools are also clearly illustrated. A schematic diagram is also attached which clearly identifies all equipment that will be utilized.

The Storage and Measuring facility will be located at ***UL "P", Sec. 19, T-21-S, R-24-E, Eddy County, New Mexico.*** There will be satellite facilities at each of the following locations:

NE Satellite - UL "M", Section 21, T-21-S, R-24-E, Eddy County, NM
E Satellite - UL "G", Section 28, T-21-S, R-24-E, Eddy County, NM
SE Satellite - UL "F", Section 33, T-21-S, R-24-E, Eddy County, NM
SW Satellite - UL "J", Section 32, T-21-S, R-24-E, Eddy County, NM

The BLM will be notified of any change in facility location.

Details of the proposed method for allocating production to contributing sources is as follows:

Indian Hills Unit Production=(Sum of LHC Readings from Indian Hills Unit wells) X Gross Consolidated Facility Production
(Sum of All LHC Readings)

Indian Hills Unit Gas Com Prod.=(Sum of LHC Readings from Gas Com wells) X Gross Consolidated Facility Production
(Sum of All LHC Readings)

IB "32" State Wells Production=(Sum of LHC Readings from IB "32"State wells) X Gross Consolidated Facility Production
(Sum of All LHC Readings)

The working interest owners have been notified of this proposal. The proposed commingling of production is in the interest of conservation and will not result in reduced royalty or improper measurement of production. The proposed commingling is necessary for continued operation of the above referenced Federal Lease.

We understand that the requested approval will not constitute the granting of any right-of-way or construction rights not granted by lease instrument and we will submit, within 30 days, an application for right-of-way to the BLM's Realty Section in your office, if we have not already done so.

Additional wells require additional commingling approvals.

Signature:

A. B. Schoffmann

Name: A. B. Schoffmann
Title: Indian Basin Asset Team Manager
January 15, 1998

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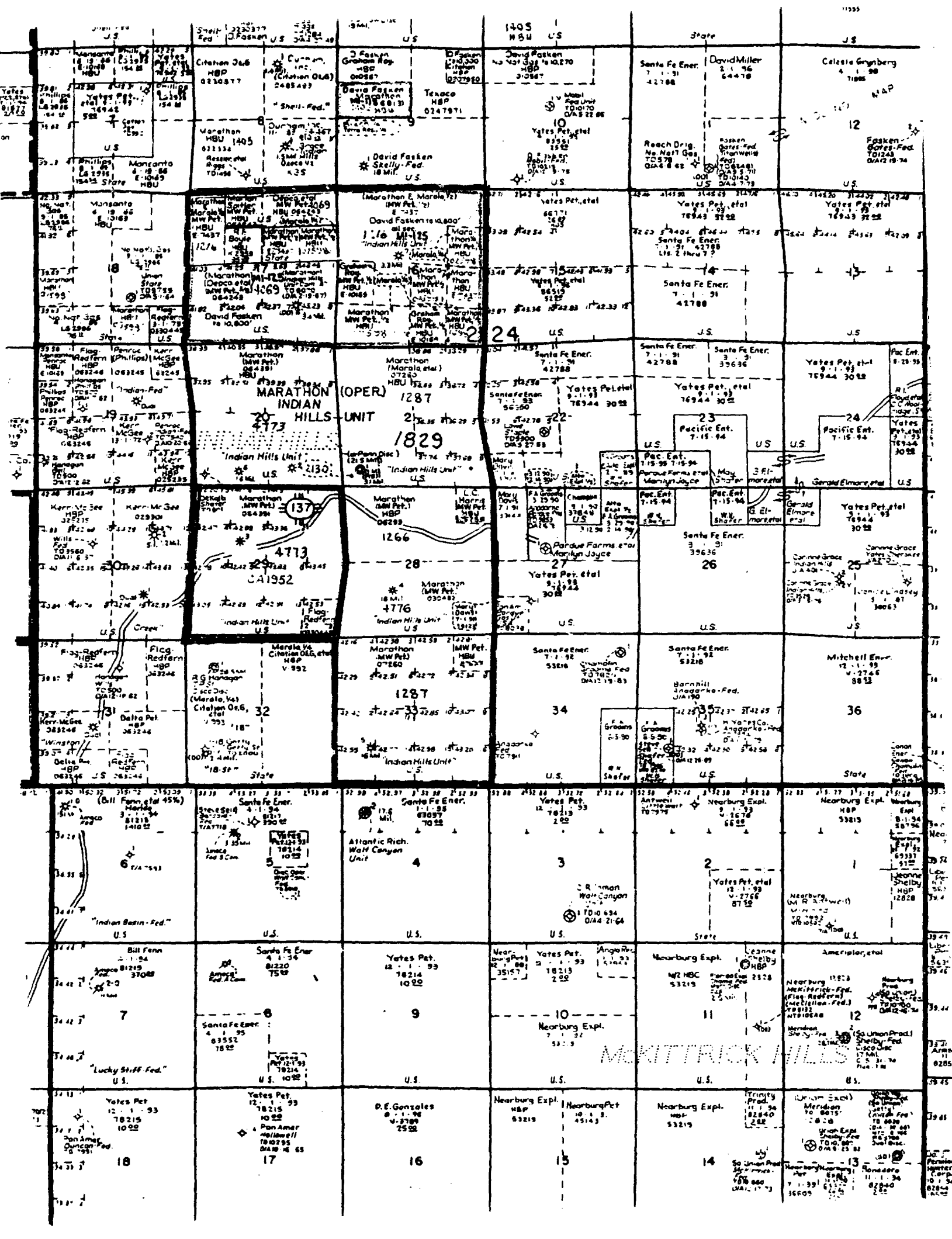
Attachments


MARATHON
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(OPER)
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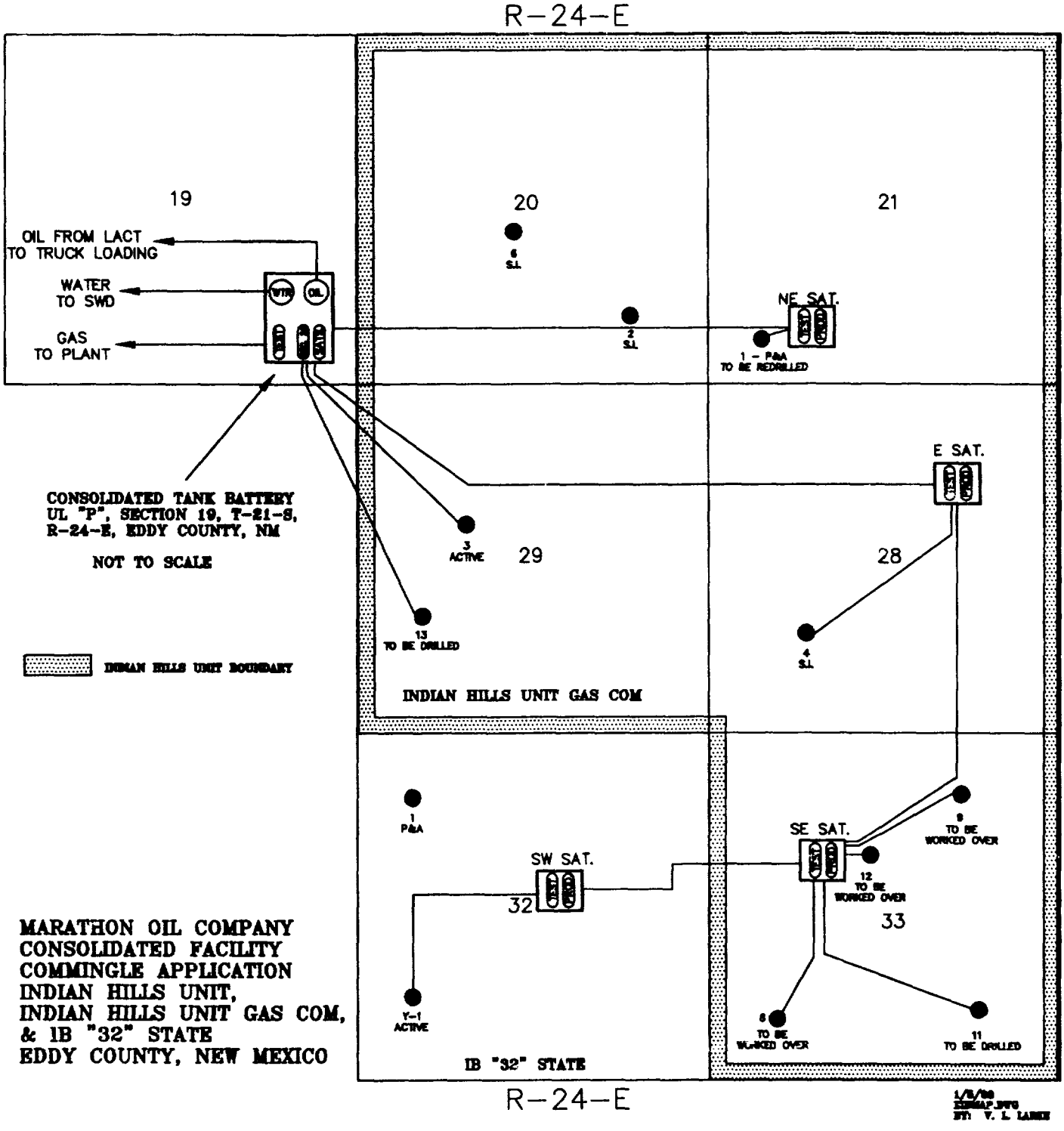
MCKITTRICK HILLS


R-24-E
19
20
21
OIL FROM LACT
TO TRUCK LOADING
WATER
TO SWD
GAS
TO PLANT
WTR
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6
S.I.
2
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NE SAT.
1 - P&A
TO BE REDRILLED
CONSOLIDATED TANK BATTERY
UL "P", SECTION 19, T-21-S,
R-24-E, EDDY COUNTY, NM
NOT TO SCALE
INDIAN HILLS UNIT BOUNDARY
3
ACTIVE
29
28
E SAT.
13
TO BE DRILLED
4
S.I.
INDIAN HILLS UNIT GAS COM
T-21-S
1
P&A
SW SAT.
32
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9
TO BE
WORKED OVER
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WORKED OVER
33
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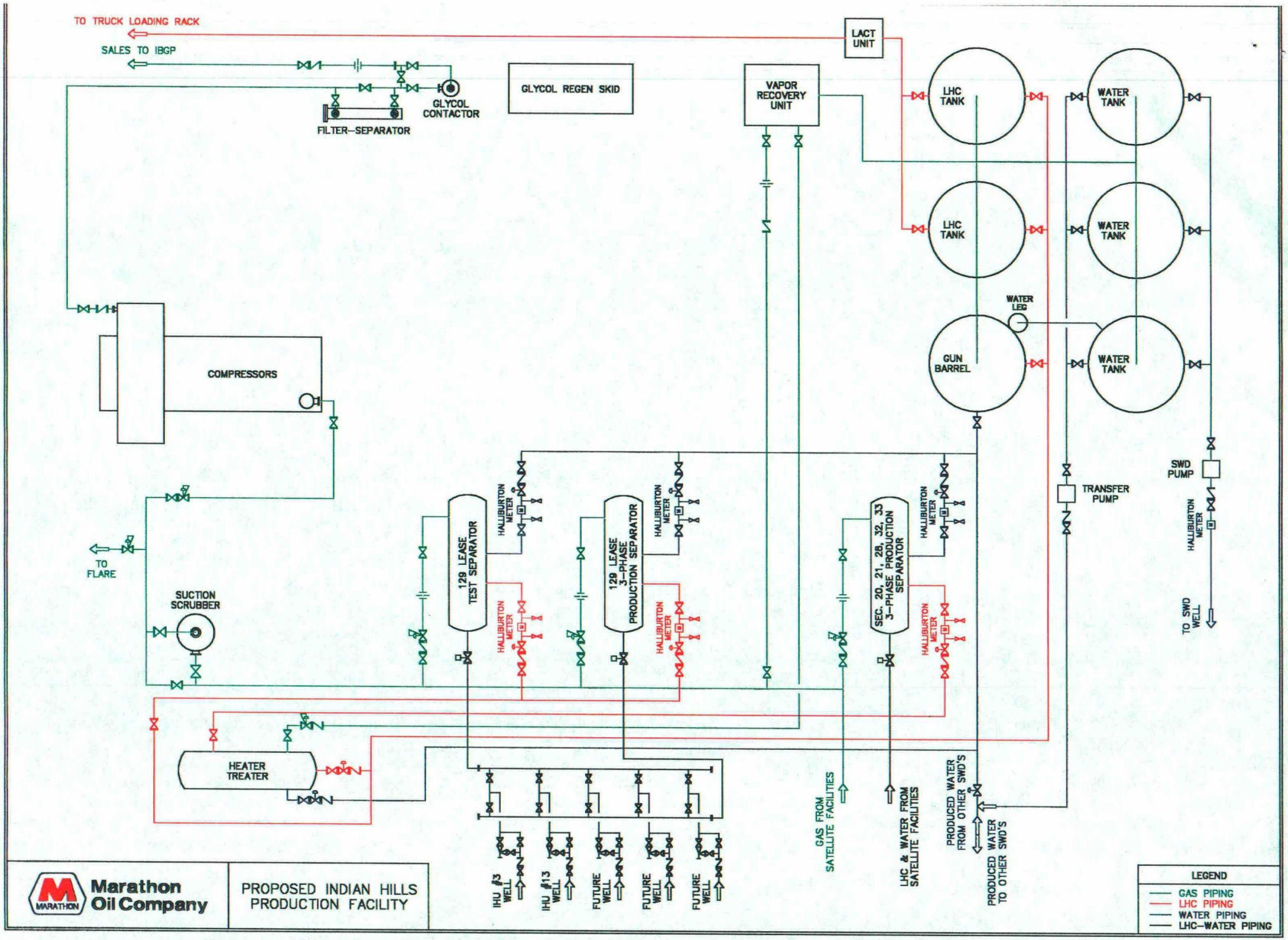
ACTIVE
8
TO BE
WORKED OVER
11
TO BE DRILLED
IB "32" STATE
MARATHON OIL COMPANY
CONSOLIDATED FACILITY
COMMINGLE APPLICATION
INDIAN HILLS UNIT,
INDIAN HILLS UNIT GAS COM,
& IB "32" STATE
EDDY COUNTY, NEW MEXICO
R-24-E



Marathon Oil Company

PROPOSED INDIAN HILLS PRODUCTION FACILITY

LEGEND
GAS PIPING
LHC PIPING
WATER PIPING
LHC-WATER PIPING
TO INDIAN HILLS PRODUCTION
FACILITY COMPRESSOR
SUCTION HEADER
TO LEASE PRODUCTION
SEPARATOR AT
INDIAN HILLS PRODUCTION
FACILITY
HALLIBURTON
METER
HALLIBURTON
METER
SATELLITE FACILITY
PRODUCTION SEPARATOR
HALLIBURTON
METER
HALLIBURTON
METER
SATELLITE FACILITY
TEST SEPARATOR
FUTURE
WELL
IHU #11
WELL
IHU #12
WELL
IHU #9
WELL
IHU #8
WELL
Marathon
Oil Company
PROPOSED TYPICAL
SATELLITE SEPARATION
FACILITY