District I 1625 N. French Dr., Hobbs, NM 88240 District II 811 S. First St., Artesia, NM 88210 District III 1000 Rio Brazos Road, Aztec, NM 87410 District IV 1220 S. St. Francis Dr., Santa Fe, NM 87505

## State of New Mexico Energy, Minerals and Natural Resources Department

Submit Original to Appropriate District Office

Oil Conservation Division 1220 South St. Francis Dr. Santa Fe, NM 87505

NM OIL CONSERVATION ARTESIA DISTRICT

GAS CAPTURE PLAN

APR 25 2018

☐ Original

Date: 04/23/2018

Operator & OGRID No.: Marathon Oil Permian LLC. 372 RECEIVED

This Gas Capture Plan outlines actions to be taken by the Operator to reduce well/production facility flaring/venting for new completion (new drill, recomplete to new zone, re-frac) activity.

Note: Form C-129 must be submitted and approved prior to exceeding 60 days allowed by Rule (Subsection A of 19.15.18.12 NMAC).

# Well(s)/Production Facility - Name of facility

The well(s) that will be located at the production facility are shown in the table below

| Well Name                         | API              | Well Location<br>(ULSTR) | Footages              | Expected MCF/D | Flared or<br>Vented | Comments |
|-----------------------------------|------------------|--------------------------|-----------------------|----------------|---------------------|----------|
| Catapult Fee 23 26 1 WXY 3H       | 30-015-<br>44692 | O-36-T22S-R26E           | 337' FSL<br>1447' FEL | 1,894          | Flared              |          |
| Catapult Fee 23 26 1 WA 5H        | 30-015-<br>44691 | O-36-T22S-R26E           | 337' FSL<br>1417 FEL  | 1,894          | Flared              |          |
| Catapult Fee 23 26 1 TB 6H        | 30-015-<br>44689 | O-36-T22S-R26E           | 337' FSL<br>1387' FEL | 1,419          | Flared              |          |
| Catapult Fee 23 26 1 WXY<br>10H   | 30-015-<br>44690 | O-36-T22S-R26E           | 337' FSL<br>1357' FEL | 1,894          | Flared              |          |
| Airport State 22 26 36 WXY<br>10H |                  | P-36-T22S-R26E           | 337' FSL<br>1327' FEL | 1,894          | Flared              |          |

### Gathering System and Pipeline Notification

Well(s) will be connected to a production facility after flowback operations are complete, if gas transporter system is in place. The gas produced from production facility is dedicated to <u>Sendero</u> and will be connected to <u>Sendero</u>'s low pressure gathering system located in <u>Eddy</u> County, New Mexico. It will require approximately 1 mile of pipeline to connect the facility to low pressure gathering system. Marathon provides (periodically) to Sendero a drilling, completion and estimated first production date for wells that are scheduled to be drilled in the foreseeable future. In addition, Marathon and Sendero have periodic conference calls to discuss changes to drilling and completion schedules. Gas from these wells will be processed at Sendero's Processing Plant located in Sec. 31, Twn. 23S, Rng. 28E, Eddy County, New Mexico. The actual flow of the gas will be based on compression operating parameters and gathering

#### Flowback Strategy

After the fracture treatment/completion operations, well(s) will be produced to temporary production tanks and gas will be flared or vented. During flowback, the fluids and sand content will be monitored. When the produced fluids contain minimal sand, the wells will be turned to production facilities. Gas sales should start as soon as the wells start flowing through the production facilities, unless there are operational issues on Sendero's system at that time. Based on current information, it is Marathon's belief the system can take this gas upon completion of the well(s).

Safety requirements during cleanout operations from the use of underbalanced air cleanout systems may necessitate that sand and non-pipeline quality gas be vented and/or flared rather than sold on a temporary basis.

#### Alternatives to Reduce Flaring

Below are alternatives considered from a conceptual standpoint to reduce the amount of gas flared.

- Power Generation On lease
  - Only a portion of gas is consumed operating the generator, remainder of gas will be flared
- Compressed Natural Gas On lease
  - Gas flared would be minimal, but might be uneconomical to operate when gas volume declines
- NGL Removal On lease
  - Plants are expensive, residue gas is still flared, and uneconomical to operate when gas volume declines

**MarathonOil** Corporation

Marathon Oil **Eddy County, NM** Catapult-Airport Pad Cat WA #5H Prelim Plan A GL: 3217' + KB: 25' (Prec594)

US State Plane 1927 (Exact solution) NAD 1927 (NADCON CONUS) Clarke 1866 New Mexico East 3001 Mean Sea Level

RKB Elevation:

Well @ 3242.00usft (GL: 3217' + KB: 25' (Prec594))

|               |               |                       |                   |                      | 100 100 141            |      |
|---------------|---------------|-----------------------|-------------------|----------------------|------------------------|------|
| +N/-S<br>0.00 | +E/-W<br>0.00 | Northing<br>488120.20 | Easting 528283.43 | Latittude<br>32.3419 | Longitude<br>-104.2418 | Slot |

SECTION DETAILS

| Sec<br>1<br>2<br>3<br>4<br>5<br>6<br>7 | MD<br>0.00<br>2200.00<br>2700.00<br>2921.66<br>3421.66<br>8347.44<br>9254.47 | 0.00<br>0.00<br>10.00<br>10.00<br>0.00<br>0.00<br>90.70 | Azi<br>0.00<br>0.00<br>133.87<br>133.87<br>0.00<br>0.00<br>180.13 | TVD<br>0.00<br>2200.00<br>2697.47<br>2915.76<br>3413.22<br>8339.00<br>8911.91<br>8855.00 | +N/-S<br>0.00<br>0.00<br>-30.16<br>-56.84<br>-87.00<br>-87.00<br>-666.98<br>-5306.33 | +E/-W<br>0.00<br>0.00<br>31.38<br>59.12<br>90.50<br>90.50<br>89.18<br>78.62 | Dleg<br>0.00<br>0.00<br>2.00<br>0.00<br>2.00<br>0.00<br>10.00<br>0.00 | VSect<br>0.00<br>0.00<br>30.09<br>56.70<br>86.79<br>86.79<br>666.78<br>5306.14 |  |
|--|--|---|---|--|--|---|---|--|--|
| 7<br>8<br>9                            | 9254.47<br>13894.17<br>13939.17  | 90.70<br>90.70  | 180.13<br>180.13  |  | -5306.33<br>-5351.33   | 78.62<br>78.52  | 0.00  | 5306.14<br>5351.13   |  |
|  |  |   |   |  |  |   |   |  |  |

WELLBORE TARGET DETAILS (MAP CO-ORDINATES)

| Name<br>[CatWA#5H]FTP<br>[CatWA#5H]KOP<br>[CatWA#5H]LTP/BHL | 0.00 -6<br>8339.00 - | +N/-S +E/-W Northing<br>667.00 88.84 487453.20<br>87.00 90.50 488033.20<br>806.33 78.62 482813.87 | Easting<br>528372.27<br>528373.93<br>528362.05 |
|---|----------------------|---|--|
| [CatWA#5H]KOP   | 000000               | -07.00  |  |

**PRODIRECTIONAL** 

300 600 900 1200 1500 1800 2100 2400 -2100 -1800 -1500 -1200 -900 -600 -300 0 [CatWA#5H]KOP Air WXY#10H Start DLS 10.00 TFO 180.13 -300 [CatWA#5H]FTF Start 4639.71 hold at 9254.47 MD -600 -900 1200 1800 -2100 2400 -2700 ± 3000 -3300 usft/in) -3600 -3900 4800 Start 45.00 hold at 13894.17 MD [CatWA#5H]LTP/BHL -5100 -5400 TD at 13939.17 -5700 Cat T8 #6H Cat WXY #10H Cat WXY #3H

West(-)/East(+) (300 usft/in)

Target Line: 8920' TVD @ 0' VS: 90.7° INC

Start DLS 10.00 TFO 180 13

800 1200 1600 2000 2400

Vertical Section at 180.13° (400 usft/in)

Start Build 2.00

Start Drop -2.00

-400

800

1600

2000

2400

2800

3200

360

4000

5200

5600

6000 6400 6800

7200

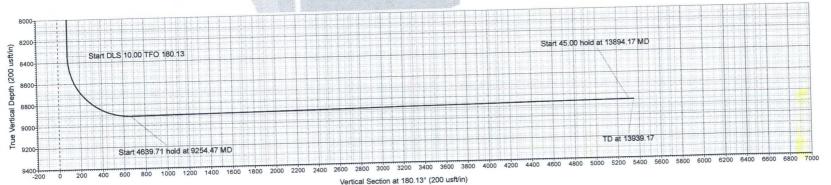
7600

8000

400 800 1200 1600 2000 2400

Start 221,66 hold at 2700,00 MD

Start 4925.78 hold at 3421.66 MD





Azimuths to Grid North True North: -0.05° Magnetic North: 7.32°

Magnetic Field Strength: 48010.3snT Dip Angle: 60.07\* Date: 4/17/2018 Model: HDGM

**Azimuth Corrections** 

Total Magnetic Corr. (M to G): 7.32° Declination (M to T): 7.37° East

36" x 48"