

Split Estate

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

OCD Artesia

ATS-13-62  
FORM APPROVED  
OMB No. 1004-0137  
Expires October 31, 2014

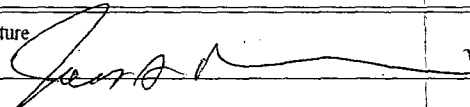
## APPLICATION FOR PERMIT TO DRILL OR REENTER

|                                                                                                                                                                                                                        |  |                                                                                                                                          |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|------------------------------------------------------------------------------------------------------------------------------------------|
| 1a. Type of work: <input checked="" type="checkbox"/> DRILL <input type="checkbox"/> REENTER                                                                                                                           |  | 5. Lease Serial No.<br>SHL: NM 34461; BHL: NM 030752                                                                                     |
| 1b. Type of Well: <input checked="" type="checkbox"/> Oil Well <input type="checkbox"/> Gas Well <input type="checkbox"/> Other <input checked="" type="checkbox"/> Single Zone <input type="checkbox"/> Multiple Zone |  | 6. If Indian, Allottee or Tribe Name<br>N/A                                                                                              |
| 2. Name of Operator MURCHISON OIL & GAS, INC.                                                                                                                                                                          |  | 7. If Unit or CA Agreement, Name and No.<br>N/A                                                                                          |
| 3a. Address 1100 MIRA VISTA BLVD.<br>PLANO, TX 75093                                                                                                                                                                   |  | 8. Lease Name and Well No.<br>WAR HORSE FED COM #1H                                                                                      |
| 3b. Phone No. (include area code)<br>972-931-0700                                                                                                                                                                      |  | 9. API Well No.<br>30-015-41013                                                                                                          |
| 4. Location of Well (Report location clearly and in accordance with any State requirements.)<br>At surface 350' FNL & 175' FEL<br>At proposed prod. zone 350' FNL & 330' FWL                                           |  | 10. Field and Pool, or Exploratory<br>PALMILLO: BONE SPRING NORTH<br>11. Sec., T. R. M. or Blk. and Survey or Area<br>SEC. 21, T18S R29E |
| 14. Distance in miles and direction from nearest town or post office*<br>Approximately 10 miles SW of Loco Hills Post Office                                                                                           |  | 12. County or Parish<br>EDDY                                                                                                             |
| 15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any)<br>BHL: 330' FWL SEC. 21 (NM 030752 LEASE LINE)                                                  |  | 13. State<br>NM                                                                                                                          |
| 16. No. of acres in lease<br>SHL: NM 34461 = 240 ac<br>BHL: NM 030752 = 680 ac<br>840                                                                                                                                  |  | 17. Spacing Unit dedicated to this well<br>160 ac                                                                                        |
| 18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft.<br>SEE 1-MILE RADIUS MAP                                                                                    |  | 20. BLM/BIA Bond No. on file<br>NM 2163                                                                                                  |
| 19. Proposed Depth<br>12,216' MD: 7,800' TVD<br>7789                                                                                                                                                                   |  | 21. Estimated duration<br>36 Days                                                                                                        |
| 21. Elevations (Show whether DF, KDB, RT, GL, etc.)<br>3496' GL                                                                                                                                                        |  | 22. Approximate date work will start*<br>11/25/2012                                                                                      |
| 23. Estimated duration<br>36 Days                                                                                                                                                                                      |  |                                                                                                                                          |

## 24. Attachments

The following, completed in accordance with the requirements of Onshore Oil and Gas Order No. 1, must be attached to this form:

- Well plat certified by a registered surveyor.
- A Drilling Plan.
- A Surface Use Plan (if the location is on National Forest System Lands, the SUPO must be filed with the appropriate Forest Service Office).
- Bond to cover the operations unless covered by an existing bond on file (see Item 20 above).
- Operator certification.
- Such other site specific information and/or plans as may be required by the BLM.

|                                                                                                      |                                     |                     |
|------------------------------------------------------------------------------------------------------|-------------------------------------|---------------------|
| 25. Signature<br> | Name (Printed/Typed)<br>JACK RANKIN | Date                |
| Title<br>VP OPERATIONS                                                                               |                                     |                     |
| Approved by (Signature)<br>Is/ Don Peterson                                                          | Name (Printed/Typed)                | Date<br>JAN 17 2013 |
| Title<br>FIELD MANAGER                                                                               | Office<br>CARLSBAD FIELD OFFICE     |                     |

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, are attached.

APPROVAL FOR TWO YEARS

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make 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.

(Continued on page 2)

\*(Instructions on page 2)

Capitan Controlled Water Basin

Approval Subject to General Requirements  
& Special Stipulations Attached

RECEIVED

JAN 23 2013

NMOCD ARTESIA

SEE ATTACHED FOR  
CONDITIONS OF APPROVAL

Santa Fe, NM 87505

☐ AMENDED REPORT

Phone: (505) 476-3460 Fax: (505) 476-3462

|                                         |                                                           |                                                        |
|-----------------------------------------|-----------------------------------------------------------|--------------------------------------------------------|
| <sup>1</sup> API Number<br>30-015-41013 | <sup>2</sup> Pool Code<br>49554                           | <sup>3</sup> Pool Name<br>Palmitto, Bone Spring, North |
| <sup>4</sup> Property Code<br>39654     | <sup>5</sup> Property Name<br>WAR HORSE FED COM #1H       | <sup>6</sup> Well Number<br>1H                         |
| <sup>7</sup> OGRID No.<br>15363         | <sup>8</sup> Operator Name<br>MURCHISON OIL AND GAS, INC. | <sup>9</sup> Elevation<br>3496.4                       |

|               |         |          |       |         |               |                  |               |                |        |
|---------------|---------|----------|-------|---------|---------------|------------------|---------------|----------------|--------|
| UL or lot no. | Section | Township | Range | Lot Idn | Feet from the | North/South line | Feet from the | East/West line | County |
| A             | 21      | 18 S     | 29 E  |         | 350           | NORTH            | 175           | EAST           | EDDY   |

|               |         |          |       |         |               |                  |               |                |        |
|---------------|---------|----------|-------|---------|---------------|------------------|---------------|----------------|--------|
| UL or lot no. | Section | Township | Range | Lot 1dn | Feet from the | North/South line | Feet from the | East/West line | County |
| D             | 21      | 18 S     | 29 E  |         | 350           | NORTH            | 330           | WEST           | EDDY   |

|                                      |                               |                                  |                                        |
|--------------------------------------|-------------------------------|----------------------------------|----------------------------------------|
| <sup>12</sup> Dedicated Acres<br>160 | <sup>13</sup> Joint or Infill | <sup>14</sup> Consolidation Code | <sup>15</sup> Order No.<br>17<br>12216 |
|--------------------------------------|-------------------------------|----------------------------------|----------------------------------------|

No allowable will be assigned to this completion until all interests have been consolidated or a non-standard unit has been approved by the division.

**WELL LOCATION**  
ELEV. = 3496.4'  
LAT. = 32°44'21.376"N (NAD83)  
LONG. = 104°04'18.315"W

**BOTTOM OF HOLE**  
LAT. = 32°44'21.337"N  
LONG. = 104°05'14.209"W

**NW CORNER SEC. 21**  
LAT. = 32°44'24.796"N  
LONG. = 104°05'18.073"W

**NE CORNER SEC. 21**  
LAT. = 32°44'24.840"N  
LONG. = 104°04'16.266"W

**W/4 CORNER SEC. 21**  
LAT. = 32°43'58.663"N  
LONG. = 104°05'18.064"W

**E/4 CORNER SEC. 21**  
LAT. = 32°43'58.744"N  
LONG. = 104°04'16.267"W

**SW CORNER SEC. 21**  
LAT. = 32°43'32.546"N  
LONG. = 104°05'17.999"W

**S/4 CORNER SEC. 21**  
LAT. = 32°43'32.570"N  
LONG. = 104°04'47.164"W

**SE CORNER SEC. 21**  
LAT. = 32°43'32.538"N  
LONG. = 104°04'16.284"W

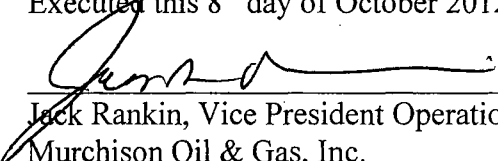
**Grid Dimensions:**  
Top: 2641.78 FT, 2638.42 FT  
Right: 2641.66 FT, 2640.05 FT  
Bottom: 2634.63 FT, 2638.55 FT

**Murchison Oil & Gas, Inc.**  
**War Horse Fed Com #1H**  
**SL: 350' FNL & 175' FEL, Lot A, Sec. 21, T18S, R29E**  
**BHL: 350' FNL & 330' FWL, Lot D, Sec. 21, T18S, R29E**  
**Eddy County, New Mexico**

**OPERATOR CERTIFICATION**

I hereby certify that I, or someone under my direct supervision, have inspected the drill site and access route proposed herein; that I am familiar with the conditions which currently exist; that I have full knowledge of state and Federal laws applicable to this operation; that the statements made in this APD package are, to the best of my knowledge, true and correct; and that the work associated with the operations proposed herein will be performed in conformity with this APD package and the terms and conditions under which it is approved. I also certify that I, or Murchison Oil & Gas, Inc., am responsible for the operations conducted under this application. These statements are subject to the provisions of 18 U.S.C. 1001 for the filing of false statements.

Executed this 8<sup>th</sup> day of October 2012.

  
Jack Rankin, Vice President Operations  
Murchison Oil & Gas, Inc.  
1100 Mira Vista Blvd.  
Plano, TX 75093  
972-931-0700 Office  
713-582-3859 Cell  
jrankin@jdmii.com

**Field Representatives:**

Anson Bouttee  
Dave Pace  
469-533-5092  
companyman1@jdmii.com

**Murchison Oil & Gas, Inc.  
Drilling Prognosis  
War Horse Fed Com #1H**

**Revision date: September 11, 2012**

Surface Location: 632,777.8usft N, 621,766.69usft E  
350' FNL, 175' FEL

Bottom Hole Target: 632,762.42usft N, 616,992.79usft E  
350' FNL, 330' FWL

Section 21, T-18-S; R-29-E  
Eddy County, New Mexico

Planned Total Depth: 7800' TVD /12216' MD

RKB: 3514.4' GL: 3496.4'

Preparer: Steve Morris

**Estimated Formation Tops (per geoprognosis with TVD's adjusted to actual KB):**

| <u>Formation</u>        | <u>TVD (ft)</u> | <u>Subsea (ft)</u> | <u>Thickness</u> | <u>Type</u> |
|-------------------------|-----------------|--------------------|------------------|-------------|
| Quaternary Alluvium*    | Surface         |                    |                  |             |
| Salt                    | 284.4           | -3230'             |                  |             |
| Salt Base               | 844             | -2670              |                  |             |
| Tansil                  | 884.4           | -2630'             |                  |             |
| Yates                   | 1024.4          | -2490'             |                  |             |
| Seven Rivers            | 1394.4          | -2120'             | 620'             | Hydrocarbon |
| Queen                   | 2034.4          | -1480'             |                  |             |
| Grayburg                | 2384.4          | -1130'             | 500'             | Hydrocarbon |
| San Andres              | 2864.4          | 650'               | 1050'            | Hydrocarbon |
| Bone Spring Lime**      | 3894.4          | 380'               |                  |             |
| First Bone Spring Sand  | 6564.4          | 3050'              | 200'             | Hydrocarbon |
| Second Bone Spring Sand | 7562.5          | 3995'              | 400'             | Hydrocarbon |

\*The Rustler formation is above the Salado (salt), however it is eroded this far west. Nobody reports any tops above the salt and nobody logs it, so the only information I have of it are a few wells with lithology reports. The most likely thing is Quaternary alluvium, consisting of red beds and sands.

\*\*The Bone Spring Lime pick is consistent with my own geological picks and with reported tops of the Bone Spring formation. We just have a very thick section of slope carbonates of Bone Spring time here.

### Pressure Control

A 13-5/8" 5M BOP and 5M choke manifold will be used. See attached schematics.

BOP test shall be conducted:

- A. when initially installed
- B. whenever any seal subject to test pressure is broken
- C. following related repairs
- D. at 30 day intervals

The BOP, choke, kill lines, Kelly cock, inside BOP, etc will be tested after nipple up on the 13 $\frac{3}{8}$ " Casing. The Pipe Rams, Blind Rams and Annular will be tested after running the 9 $\frac{5}{8}$ " casing. The kill lines and choke manifold will not be tested after the 9 $\frac{5}{8}$ " casing. The Pipe Rams, Blind Rams and Annular will be tested after running the 7" casing. The kill lines and choke manifold will not be tested after the 7" casing.

BOP, choke, kill lines, Kelly cock, inside BOP, etc. will be hydro tested to 5,000psi(high) and 250psi(low). The annular will be tested to 2500psi (high) and 250psi (low).

BOP will be function tested on each trip.

### Casing Program (minimum):

**\*All casing is new API casing.\***

| HOLE               | CASING             | WEIGHT     | GRADE | CONN | MD/RKB         | STAGE        |
|--------------------|--------------------|------------|-------|------|----------------|--------------|
|                    | 20"                | Structural | LP    | N/A  | 0' – 115'      | Conductor    |
| 16"                | 13 $\frac{3}{8}$ " | 54.5 ppf   | J-55  | ST&C | 0' – 280'      | Surface      |
| 12 $\frac{1}{4}$ " | 9 $\frac{5}{8}$ "  | 36.0 ppf   | J-55  | LT&C | 0' – 2884'     | Intermediate |
| 8 $\frac{3}{4}$ "  | 7"                 | 26.0 ppf   | P-110 | BT&C | 0' – 7562'     | Production   |
| 6 $\frac{1}{8}$ "  | 4 $\frac{1}{2}$ "  | 11.6 ppf   | P-110 | BT&C | 7412' – 12216' | Completion   |
| SIZE               | COLLAPSE           | SF         | BURST | SF   | TENSION(Klbs)  | SF           |
| 13 $\frac{3}{8}$ " | 1130               | 9.27       | 2730  | 5.73 | 514            | 33.9         |
| 9 $\frac{5}{8}$ "  | 2020               | 1.35       | 3520  | 2.53 | 453            | 4.36         |
| 7"                 | 6210               | 1.74       | 9950  | 2.56 | 693            | 3.5          |
| 4 $\frac{1}{2}$ "  | 7580               | 2.09       | 10690 | 2.14 | 385            | 2.7          |

## **Cement Program:**

### **13.375" Surface Casing**

Cement with 450sx - 14.8ppg – 1.35cuft/sk – 6.33gal/sk - Class C (Is an API cement intended for surface to a depth of 6000'. It is sulfate resistant and yields early compressive strengths.)

C (+ 2% CACL2 (An accelerating additive used for slurries that require fast set times and early compressive strength) + 0.25# Cello-flake (Used as an LCM) + 0.25% R-38 (Is a powdered defoamer for all types of oil well cement.)

Cement with 100% excess – Circulate cement to surface. If cement does not circulate a 1" grout string will be used to perform a top job.

### **9.625" Intermediate Casing**

Cement with 550sx Lead – 12.8ppg – 1.92cuft/sk – 10.06gal/sk – Class C 35/65 (Is an API cement intended for surface to a depth of 6000'. It is sulfate resistant and yields early compressive strengths.) + 6% Bentonite + 0.3% C-16A (Is a non-retarding fluid loss additive with particular application in pozzolan slurries. It is highly effective at exceptionally low loadings (0.5% or below) in many slurry designs.) + 2# Star Seal (Is a loss circulation additive for severe loss circulation problems. It increases cement height and the ability to circulate cement through sloughed out formations. Typical loadings are 2#/sk to 5#/sk.) + 1% CACL2 (Is an accelerating additive used for slurries that require fast set times and early strength development) + 0.25% R-38 (Is a powdered defoamer for all types of oil well cement. Typical loadings are 0.25% to 0.5% BWOC.)+ 5% Salt (Salt is a multi purpose additive used as an accelerator from 1% to 6% BWOW, a bonding agent from 6% to 14%, a retarder from 14% to 26% BWOW. )

Cement with 225sx Tail – 14.8ppg – 1.33cuft/sk – 6.31 gal/sk – Class C (Is an API cement intended for surface to a depth of 6000'. It is sulfate resistant and yields early compressive strengths.)

+ 0.25% R-38 (Is a powdered defoamer for all types of oil well cement.)

Cement with 55% excess – Circulate cement to surface. If cement does not circulate a 1" grout string will be used to perform a top job.

### **7" Production Casing**

Cement with 625sx Lead – 11.9ppg – 2.38cuft/sk – 13.41gal/sk – Class H 50/50 (Is an API cement intended for use from surface to 8000 feet without any modifications. When used with accelerators or retarders class H can be used for different depths or temperatures.) + 10% Bentonite + .03% C-16A (Is a non-retarding fluid loss additive with particular application in pozzolan slurries. It is highly effective at exceptionally low loadings (0.5% or below) in many slurry designs.)+ 2# Star Seal (Is a loss circulation additive for severe loss circulation problems. It increases cement height and the ability to circulate cement through sloughed out formations. Typical loadings are 2#/sk to 5#/sk.) + 0.25% R-38 (Is a powdered defoamer for all types of oil well cement. Typical loadings are 0.25% to 0.5% BWOC.)+ 5% Salt

Cement with 225sx Tail – 15.6ppg – 1.18cuft/sk – 5.22 gal/sk – Class H (Is an API cement intended for use from surface to 8000 feet without any modifications. When used with accelerators or retarders class H can be used for different depths or temperatures.)+ 0.25% R-38 (Is a powdered defoamer for all types of oil well cement. Typical loadings are 0.25% to 0.5% BWOC.)

Cement with 55% excess – Circulate cement to surface. If cement does not circulate then a top squeeze job will be performed or perforate and squeeze. This will be discussed with the BLM at the time.

#### 4.5" Completion System

This will not be cemented. A hanger and packer will be set 150' inside the 7" casing. The completions will be a packer and sliding sleeve system(Baker Hughes Frac Point).

#### Mud Program:

| Depth (MD)                                             | Hole Size | MW      | PV    | YP    | WL    | pH       | Sol% |
|--------------------------------------------------------|-----------|---------|-------|-------|-------|----------|------|
| Spud with fresh water gel (36-40 visc) in suction pit. |           |         |       |       |       |          |      |
| 0'-280'                                                | 16"       | 8.3-9.0 | 10-12 | 12-15 | N/C   | 10-10.5  | <3   |
| Brine                                                  |           |         |       |       |       |          |      |
| 280'-2884'                                             | 12¼"      | 10      | 1-2   | 1-2   | N/C   | 10-10.5  | <1   |
| Cut Brine                                              |           |         |       |       |       |          |      |
| 2884'-7050'                                            | 8¾"       | 8.4-8.6 | 1     | 1     | N/C   | 10-10.5  | <1   |
| Cut Brine                                              |           |         |       |       |       |          |      |
| 7050'-7800'                                            | 8¾"       | 9.0-9.1 | 4-6   | 4-6   | 18-20 | 10-10.5  | <3   |
| Cut Brine                                              |           |         |       |       |       |          |      |
| 7800'-8346'                                            | 6⅞"       | 9.0-9.1 | 4-6   | 4-6   | 18-20 | 9.5-10.0 | <3   |
| Cut Brine                                              |           |         |       |       |       |          |      |
| 8346'-12216'                                           | 6⅞"       | 9.0-9.1 | 10-12 | 18-20 | 12-15 | 9.5-10.0 | <4   |

**Logging, Drill stem testing and Coring:** \* See COA  
2 man mud logging will start after surface casing has been set.

8.75" hole will have LWD (Gamma Ray). Logging will commence at KOP to section TD.

6.125" hole will have LWD (Gamma Ray). Logging will be for the whole 6.125" section.

No cores or DST's are planned for the well.

#### Bottom Hole:

Temperature is expected to be 126°F. The bottom hole pressure is expected to be 3375psi maximum.

#### Abnormal Conditions:

No abnormal conditions are expected. Temperature is expected to be normal. All zones are expected to be normal pressure. No lost circulation is expected.

**H2S:**

No H2S is expected. But there is the possibility of the presence of H2S. Attached is the H2S response plan.

**Directional:**

Directional survey plan and plot attached.

**DRILLING RECORDER:**

Rig up EDR & PVT prior to spud to record drilling times and other drilling parameters from surface to TD.



## **Murchison Oil and Gas**

**Mustang**

**Mustang Section 21**

**War Horse Federal Com #1H**

**War Horse Fed Com #1H**

**Plan: 120927 War Horse Federal Com 1H**

## **MOJO Standard Well Plan**

**28 September, 2012**



**MOJO**  
DIRECTIONAL CORPORATION

|           |                                 |                              |                                        |
|-----------|---------------------------------|------------------------------|----------------------------------------|
| Company:  | Murchison Oil and Gas           | Local Co-ordinate Reference: | Well: War Horse Federal Com #1H        |
| Project:  | Mustang                         | TVD Reference:               | WELL @ 3514.4usft (Original Well Elev) |
| Site:     | Mustang Section 21              | MD Reference:                | WELL @ 3514.4usft (Original Well Elev) |
| Well:     | War Horse Federal Com #1H       | North Reference:             | Grid                                   |
| Wellbore: | War Horse Fed Com #1H           | Survey Calculation Method:   | Minimum Curvature                      |
| Design:   | 120927 War Horse Federal Com 1H | Database:                    | EDM 5000.1 Single User Db              |

|             |                           |               |                             |
|-------------|---------------------------|---------------|-----------------------------|
| Project:    | Mustang                   |               |                             |
| Map System: | US State Plane 1983       | System Datum: | Mean Sea Level              |
| Geo Datum:  | North American Datum 1983 |               |                             |
| Map Zone:   | New Mexico Eastern Zone   |               | Using geodetic scale factor |

|                       |                    |                   |                  |
|-----------------------|--------------------|-------------------|------------------|
| Site:                 | Mustang Section 21 |                   |                  |
| Site Position:        |                    | Northing:         | 632,777.80 usft  |
| From:                 | Lat/Long           | Easting:          | 621,766.69 usft  |
| Position Uncertainty: | 1.0 usft           | Slot Radius:      | 16 "             |
|                       |                    | Latitude:         | 32° 44' 21.376 N |
|                       |                    | Longitude:        | 104° 4' 18.315 W |
|                       |                    | Grid Convergence: | 0.14 °           |

|                      |                           |          |                     |                 |               |                  |
|----------------------|---------------------------|----------|---------------------|-----------------|---------------|------------------|
| Well:                | War Horse Federal Com #1H |          |                     |                 |               |                  |
| Well Position        | +N/-S                     | 0.0 usft | Northing:           | 632,777.80 usft | Latitude:     | 32° 44' 21.376 N |
|                      | +E/-W                     | 0.0 usft | Easting:            | 621,766.69 usft | Longitude:    | 104° 4' 18.315 W |
| Position Uncertainty | 1.0 usft                  |          | Wellhead Elevation: | usft            | Ground Level: | 3,496.4 usft     |

|           |                       |             |                    |                  |                        |
|-----------|-----------------------|-------------|--------------------|------------------|------------------------|
| Wellbore  | War Horse Fed Com #1H |             |                    |                  |                        |
|           |                       |             |                    |                  |                        |
| Magnetics | Model Name            | Sample Date | Declination<br>(°) | Dip Angle<br>(°) | Field Strength<br>(nT) |
|           | IGRF2010              | 27/09/2012  | 7.70               | 60.55            | 48,742                 |

|                   |                                 |       |               |           |
|-------------------|---------------------------------|-------|---------------|-----------|
| Design:           | 120927 War Horse Federal Com 1H |       |               |           |
| Audit Notes:      |                                 |       |               |           |
| Version:          | Phase:                          | PLAN  | Tie On Depth: | 0.0       |
| Vertical Section: | Depth From (TVD)                | +N/-S | +E/-W         | Direction |
|                   | (USF)                           | (USF) | (USF)         | (°)       |
|                   | 0.0                             | 0.0   | 0.0           | 269.82    |

|                     |           |                                      |           |                |
|---------------------|-----------|--------------------------------------|-----------|----------------|
| Survey Tool Program | Date:     | 28/09/2012                           |           |                |
| From (usft)         | To (usft) | Survey (Wellbore)                    | Tool Name | Description    |
| 0.0                 | 12,215.7  | 120927 War Horse Federal Com 1H (War | MWD       | MWD - Standard |

|           |                                 |                              |                                        |
|-----------|---------------------------------|------------------------------|----------------------------------------|
| Company:  | Murchison Oil and Gas           | Local Co-ordinate Reference: | Well War Horse Federal Com #1H         |
| Project:  | Mustang                         | TVD Reference:               | WELL @ 3514.4usft (Original Well Elev) |
| Site:     | Mustang Section 21              | MD Reference:                | WELL @ 3514.4usft (Original Well Elev) |
| Well:     | War Horse Federal Com #1H       | North Reference:             | Grid                                   |
| Wellbore: | War Horse Fed Com #1H           | Survey Calculation Method:   | Minimum Curvature                      |
| Design:   | 120927 War Horse Federal Com 1H | Database:                    | EDM 5000.1 Single User Db              |

| Planned Survey                |            |                      |               |                 |               |              |                    |                  |                    |                   |
|-------------------------------|------------|----------------------|---------------|-----------------|---------------|--------------|--------------------|------------------|--------------------|-------------------|
| MD<br>(usft)                  | Inc<br>(°) | Azi (azimuth)<br>(°) | TVD<br>(usft) | TVDSE<br>(usft) | N/S<br>(usft) | FW<br>(usft) | DEg<br>(°/100usft) | V. Sec<br>(usft) | Northing<br>(usft) | Easting<br>(usft) |
| 0.0                           | 0.00       | 0.00                 | 0.0           | -3,514.4        | 0.0           | 0.0          | 0.00               | 0.0              | 632,777.80         | 621,766.69        |
| 100.0                         | 0.00       | 0.00                 | 100.0         | -3,414.4        | 0.0           | 0.0          | 0.00               | 0.0              | 632,777.80         | 621,766.69        |
| 115.0                         | 0.00       | 0.00                 | 115.0         | -3,399.4        | 0.0           | 0.0          | 0.00               | 0.0              | 632,777.80         | 621,766.69        |
| <b>20" Conductor</b>          |            |                      |               |                 |               |              |                    |                  |                    |                   |
| 200.0                         | 0.00       | 0.00                 | 200.0         | -3,314.4        | 0.0           | 0.0          | 0.00               | 0.0              | 632,777.80         | 621,766.69        |
| 280.0                         | 0.00       | 0.00                 | 280.0         | -3,234.4        | 0.0           | 0.0          | 0.00               | 0.0              | 632,777.80         | 621,766.69        |
| <b>13-3/8" Surface Casing</b> |            |                      |               |                 |               |              |                    |                  |                    |                   |
| 284.4                         | 0.00       | 0.00                 | 284.4         | -3,230.0        | 0.0           | 0.0          | 0.00               | 0.0              | 632,777.80         | 621,766.69        |
| <b>Salt</b>                   |            |                      |               |                 |               |              |                    |                  |                    |                   |
| 300.0                         | 0.00       | 0.00                 | 300.0         | -3,214.4        | 0.0           | 0.0          | 0.00               | 0.0              | 632,777.80         | 621,766.69        |
| 400.0                         | 0.00       | 0.00                 | 400.0         | -3,114.4        | 0.0           | 0.0          | 0.00               | 0.0              | 632,777.80         | 621,766.69        |
| 500.0                         | 0.00       | 0.00                 | 500.0         | -3,014.4        | 0.0           | 0.0          | 0.00               | 0.0              | 632,777.80         | 621,766.69        |
| 600.0                         | 0.00       | 0.00                 | 600.0         | -2,914.4        | 0.0           | 0.0          | 0.00               | 0.0              | 632,777.80         | 621,766.69        |
| 700.0                         | 0.00       | 0.00                 | 700.0         | -2,814.4        | 0.0           | 0.0          | 0.00               | 0.0              | 632,777.80         | 621,766.69        |
| 800.0                         | 0.00       | 0.00                 | 800.0         | -2,714.4        | 0.0           | 0.0          | 0.00               | 0.0              | 632,777.80         | 621,766.69        |
| 844.4                         | 0.00       | 0.00                 | 844.4         | -2,670.0        | 0.0           | 0.0          | 0.00               | 0.0              | 632,777.80         | 621,766.69        |
| <b>Salt Base</b>              |            |                      |               |                 |               |              |                    |                  |                    |                   |
| 884.4                         | 0.00       | 0.00                 | 884.4         | -2,630.0        | 0.0           | 0.0          | 0.00               | 0.0              | 632,777.80         | 621,766.69        |
| <b>Tansil</b>                 |            |                      |               |                 |               |              |                    |                  |                    |                   |
| 900.0                         | 0.00       | 0.00                 | 900.0         | -2,614.4        | 0.0           | 0.0          | 0.00               | 0.0              | 632,777.80         | 621,766.69        |
| 1,000.0                       | 0.00       | 0.00                 | 1,000.0       | -2,514.4        | 0.0           | 0.0          | 0.00               | 0.0              | 632,777.80         | 621,766.69        |
| 1,024.4                       | 0.00       | 0.00                 | 1,024.4       | -2,490.0        | 0.0           | 0.0          | 0.00               | 0.0              | 632,777.80         | 621,766.69        |
| <b>Yates</b>                  |            |                      |               |                 |               |              |                    |                  |                    |                   |
| 1,100.0                       | 0.00       | 0.00                 | 1,100.0       | -2,414.4        | 0.0           | 0.0          | 0.00               | 0.0              | 632,777.80         | 621,766.69        |
| 1,200.0                       | 0.00       | 0.00                 | 1,200.0       | -2,314.4        | 0.0           | 0.0          | 0.00               | 0.0              | 632,777.80         | 621,766.69        |
| 1,300.0                       | 0.00       | 0.00                 | 1,300.0       | -2,214.4        | 0.0           | 0.0          | 0.00               | 0.0              | 632,777.80         | 621,766.69        |
| 1,394.4                       | 0.00       | 0.00                 | 1,394.4       | -2,120.0        | 0.0           | 0.0          | 0.00               | 0.0              | 632,777.80         | 621,766.69        |
| <b>Seven Rivers</b>           |            |                      |               |                 |               |              |                    |                  |                    |                   |

|           |                                 |                              |                                        |
|-----------|---------------------------------|------------------------------|----------------------------------------|
| Company:  | Murchison Oil and Gas           | Local Co-ordinate Reference: | Well: War Horse Federal Com #1H        |
| Project:  | Mustang                         | TVD Reference:               | WELL @ 3514.4usft (Original Well Elev) |
| Site:     | Mustang Section 21              | MD Reference:                | WELL @ 3514.4usft (Original Well Elev) |
| Well:     | War Horse Federal Com #1H       | North Reference:             | Grid                                   |
| Wellbore: | War Horse Fed Com #1H           | Survey Calculation Method:   | Minimum Curvature                      |
| Design:   | 120927 War Horse Federal Com 1H | Database:                    | EDM 5000.1 Single User Db              |

| Planned Survey                    |            |                      |               |                 |               |               |                |                  |                    |                   |  |
|-----------------------------------|------------|----------------------|---------------|-----------------|---------------|---------------|----------------|------------------|--------------------|-------------------|--|
| MD<br>(usft)                      | Inc<br>(°) | Azi (azimuth)<br>(°) | TVD<br>(usft) | TVBSS<br>(usft) | N/S<br>(usft) | E/W<br>(usft) | DBeg<br>(usft) | V. Sec<br>(usft) | Northing<br>(usft) | Easting<br>(usft) |  |
| 1,400.0                           | 0.00       | 0.00                 | 1,400.0       | -2,114.4        | 0.0           | 0.0           | 0.00           | 0.0              | 632,777.80         | 621,766.69        |  |
| 1,500.0                           | 0.00       | 0.00                 | 1,500.0       | -2,014.4        | 0.0           | 0.0           | 0.00           | 0.0              | 632,777.80         | 621,766.69        |  |
| 1,600.0                           | 0.00       | 0.00                 | 1,600.0       | -1,914.4        | 0.0           | 0.0           | 0.00           | 0.0              | 632,777.80         | 621,766.69        |  |
| 1,700.0                           | 0.00       | 0.00                 | 1,700.0       | -1,814.4        | 0.0           | 0.0           | 0.00           | 0.0              | 632,777.80         | 621,766.69        |  |
| 1,800.0                           | 0.00       | 0.00                 | 1,800.0       | -1,714.4        | 0.0           | 0.0           | 0.00           | 0.0              | 632,777.80         | 621,766.69        |  |
| 1,900.0                           | 0.00       | 0.00                 | 1,900.0       | -1,614.4        | 0.0           | 0.0           | 0.00           | 0.0              | 632,777.80         | 621,766.69        |  |
| 2,000.0                           | 0.00       | 0.00                 | 2,000.0       | -1,514.4        | 0.0           | 0.0           | 0.00           | 0.0              | 632,777.80         | 621,766.69        |  |
| 2,034.4                           | 0.00       | 0.00                 | 2,034.4       | -1,480.0        | 0.0           | 0.0           | 0.00           | 0.0              | 632,777.80         | 621,766.69        |  |
| <b>Queen</b>                      |            |                      |               |                 |               |               |                |                  |                    |                   |  |
| 2,100.0                           | 0.00       | 0.00                 | 2,100.0       | -1,414.4        | 0.0           | 0.0           | 0.00           | 0.0              | 632,777.80         | 621,766.69        |  |
| 2,200.0                           | 0.00       | 0.00                 | 2,200.0       | -1,314.4        | 0.0           | 0.0           | 0.00           | 0.0              | 632,777.80         | 621,766.69        |  |
| 2,300.0                           | 0.00       | 0.00                 | 2,300.0       | -1,214.4        | 0.0           | 0.0           | 0.00           | 0.0              | 632,777.80         | 621,766.69        |  |
| 2,384.4                           | 0.00       | 0.00                 | 2,384.4       | -1,130.0        | 0.0           | 0.0           | 0.00           | 0.0              | 632,777.80         | 621,766.69        |  |
| <b>Grayburg</b>                   |            |                      |               |                 |               |               |                |                  |                    |                   |  |
| 2,400.0                           | 0.00       | 0.00                 | 2,400.0       | -1,114.4        | 0.0           | 0.0           | 0.00           | 0.0              | 632,777.80         | 621,766.69        |  |
| 2,500.0                           | 0.00       | 0.00                 | 2,500.0       | -1,014.4        | 0.0           | 0.0           | 0.00           | 0.0              | 632,777.80         | 621,766.69        |  |
| 2,600.0                           | 0.00       | 0.00                 | 2,600.0       | -914.4          | 0.0           | 0.0           | 0.00           | 0.0              | 632,777.80         | 621,766.69        |  |
| 2,700.0                           | 0.00       | 0.00                 | 2,700.0       | -814.4          | 0.0           | 0.0           | 0.00           | 0.0              | 632,777.80         | 621,766.69        |  |
| 2,800.0                           | 0.00       | 0.00                 | 2,800.0       | -714.4          | 0.0           | 0.0           | 0.00           | 0.0              | 632,777.80         | 621,766.69        |  |
| 2,864.4                           | 0.00       | 0.00                 | 2,864.4       | -650.0          | 0.0           | 0.0           | 0.00           | 0.0              | 632,777.80         | 621,766.69        |  |
| <b>San Andres</b>                 |            |                      |               |                 |               |               |                |                  |                    |                   |  |
| 2,884.0                           | 0.00       | 0.00                 | 2,884.0       | -630.4          | 0.0           | 0.0           | 0.00           | 0.0              | 632,777.80         | 621,766.69        |  |
| <b>9 5/8" Intermediate Casing</b> |            |                      |               |                 |               |               |                |                  |                    |                   |  |
| 2,900.0                           | 0.00       | 0.00                 | 2,900.0       | -614.4          | 0.0           | 0.0           | 0.00           | 0.0              | 632,777.80         | 621,766.69        |  |
| 3,000.0                           | 0.00       | 0.00                 | 3,000.0       | -514.4          | 0.0           | 0.0           | 0.00           | 0.0              | 632,777.80         | 621,766.69        |  |
| 3,100.0                           | 0.00       | 0.00                 | 3,100.0       | -414.4          | 0.0           | 0.0           | 0.00           | 0.0              | 632,777.80         | 621,766.69        |  |
| 3,200.0                           | 0.00       | 0.00                 | 3,200.0       | -314.4          | 0.0           | 0.0           | 0.00           | 0.0              | 632,777.80         | 621,766.69        |  |
| 3,300.0                           | 0.00       | 0.00                 | 3,300.0       | -214.4          | 0.0           | 0.0           | 0.00           | 0.0              | 632,777.80         | 621,766.69        |  |

|           |                                 |                             |                                        |
|-----------|---------------------------------|-----------------------------|----------------------------------------|
| Company:  | Murchison Oil and Gas           | Local Coordinate Reference: | Well: War Horse Federal Com #1H        |
| Project:  | Mustang                         | TVD Reference:              | WELL @ 3514.4usft (Original Well Elev) |
| Site:     | Mustang Section 21              | MD Reference:               | WELL @ 3514.4usft (Original Well Elev) |
| Well:     | War Horse Federal Com #1H       | North Reference:            | Grid                                   |
| Wellbore: | War Horse Fed Com #1H           | Survey Calculation Method:  | Minimum Curvature                      |
| Design:   | 120927 War Horse Federal Com 1H | Database:                   | EDM 5000.1 Single User Db              |

| Planned Survey   |             |                      |               |                 |               |               |                     |                  |                    |                   |  |
|------------------|-------------|----------------------|---------------|-----------------|---------------|---------------|---------------------|------------------|--------------------|-------------------|--|
| MD<br>(usft)     | Incl<br>(°) | Azi (azimuth)<br>(°) | TVD<br>(usft) | TVDSS<br>(usft) | N/S<br>(usft) | E/W<br>(usft) | ED leg<br>(100usft) | V. Sec<br>(usft) | Northing<br>(usft) | Easting<br>(usft) |  |
| 3,400.0          | 0.00        | 0.00                 | 3,400.0       | -114.4          | 0.0           | 0.0           | 0.00                | 0.0              | 632,777.80         | 621,766.69        |  |
| 3,500.0          | 0.00        | 0.00                 | 3,500.0       | -14.4           | 0.0           | 0.0           | 0.00                | 0.0              | 632,777.80         | 621,766.69        |  |
| 3,600.0          | 0.00        | 0.00                 | 3,600.0       | 85.6            | 0.0           | 0.0           | 0.00                | 0.0              | 632,777.80         | 621,766.69        |  |
| 3,700.0          | 0.00        | 0.00                 | 3,700.0       | 185.6           | 0.0           | 0.0           | 0.00                | 0.0              | 632,777.80         | 621,766.69        |  |
| 3,800.0          | 0.00        | 0.00                 | 3,800.0       | 285.6           | 0.0           | 0.0           | 0.00                | 0.0              | 632,777.80         | 621,766.69        |  |
| 3,894.4          | 0.00        | 0.00                 | 3,894.4       | 380.0           | 0.0           | 0.0           | 0.00                | 0.0              | 632,777.80         | 621,766.69        |  |
| Bone Spring Lime |             |                      |               |                 |               |               |                     |                  |                    |                   |  |
| 3,900.0          | 0.00        | 0.00                 | 3,900.0       | 385.6           | 0.0           | 0.0           | 0.00                | 0.0              | 632,777.80         | 621,766.69        |  |
| 4,000.0          | 0.00        | 0.00                 | 4,000.0       | 485.6           | 0.0           | 0.0           | 0.00                | 0.0              | 632,777.80         | 621,766.69        |  |
| 4,100.0          | 0.00        | 0.00                 | 4,100.0       | 585.6           | 0.0           | 0.0           | 0.00                | 0.0              | 632,777.80         | 621,766.69        |  |
| 4,200.0          | 0.00        | 0.00                 | 4,200.0       | 685.6           | 0.0           | 0.0           | 0.00                | 0.0              | 632,777.80         | 621,766.69        |  |
| 4,300.0          | 0.00        | 0.00                 | 4,300.0       | 785.6           | 0.0           | 0.0           | 0.00                | 0.0              | 632,777.80         | 621,766.69        |  |
| 4,400.0          | 0.00        | 0.00                 | 4,400.0       | 885.6           | 0.0           | 0.0           | 0.00                | 0.0              | 632,777.80         | 621,766.69        |  |
| 4,500.0          | 0.00        | 0.00                 | 4,500.0       | 985.6           | 0.0           | 0.0           | 0.00                | 0.0              | 632,777.80         | 621,766.69        |  |
| 4,600.0          | 0.00        | 0.00                 | 4,600.0       | 1,085.6         | 0.0           | 0.0           | 0.00                | 0.0              | 632,777.80         | 621,766.69        |  |
| 4,700.0          | 0.00        | 0.00                 | 4,700.0       | 1,185.6         | 0.0           | 0.0           | 0.00                | 0.0              | 632,777.80         | 621,766.69        |  |
| 4,800.0          | 0.00        | 0.00                 | 4,800.0       | 1,285.6         | 0.0           | 0.0           | 0.00                | 0.0              | 632,777.80         | 621,766.69        |  |
| 4,900.0          | 0.00        | 0.00                 | 4,900.0       | 1,385.6         | 0.0           | 0.0           | 0.00                | 0.0              | 632,777.80         | 621,766.69        |  |
| 5,000.0          | 0.00        | 0.00                 | 5,000.0       | 1,485.6         | 0.0           | 0.0           | 0.00                | 0.0              | 632,777.80         | 621,766.69        |  |
| 5,100.0          | 0.00        | 0.00                 | 5,100.0       | 1,585.6         | 0.0           | 0.0           | 0.00                | 0.0              | 632,777.80         | 621,766.69        |  |
| 5,200.0          | 0.00        | 0.00                 | 5,200.0       | 1,685.6         | 0.0           | 0.0           | 0.00                | 0.0              | 632,777.80         | 621,766.69        |  |
| 5,300.0          | 0.00        | 0.00                 | 5,300.0       | 1,785.6         | 0.0           | 0.0           | 0.00                | 0.0              | 632,777.80         | 621,766.69        |  |
| 5,400.0          | 0.00        | 0.00                 | 5,400.0       | 1,885.6         | 0.0           | 0.0           | 0.00                | 0.0              | 632,777.80         | 621,766.69        |  |
| 5,500.0          | 0.00        | 0.00                 | 5,500.0       | 1,985.6         | 0.0           | 0.0           | 0.00                | 0.0              | 632,777.80         | 621,766.69        |  |
| 5,600.0          | 0.00        | 0.00                 | 5,600.0       | 2,085.6         | 0.0           | 0.0           | 0.00                | 0.0              | 632,777.80         | 621,766.69        |  |
| 5,700.0          | 0.00        | 0.00                 | 5,700.0       | 2,185.6         | 0.0           | 0.0           | 0.00                | 0.0              | 632,777.80         | 621,766.69        |  |
| 5,800.0          | 0.00        | 0.00                 | 5,800.0       | 2,285.6         | 0.0           | 0.0           | 0.00                | 0.0              | 632,777.80         | 621,766.69        |  |

|           |                                 |                              |                                        |
|-----------|---------------------------------|------------------------------|----------------------------------------|
| Company:  | Murchison Oil and Gas           | Local Co-ordinate Reference: | Well: War Horse Federal Com #1H        |
| Project:  | Mustang                         | TVD Reference:               | WELL @ 3514.4usft (Original Well Elev) |
| Site:     | Mustang Section 21              | MD Reference:                | WELL @ 3514.4usft (Original Well Elev) |
| Well:     | War Horse Federal Com #1H       | North Reference:             | Grid                                   |
| Wellbore: | War Horse Fed Com #1H           | Survey Calculation Method:   | Minimum Curvature                      |
| Design:   | 120927 War Horse Federal Com 1H | Database:                    | EDM 5000.1 Single User Db              |

| Planned Survey                 |             |                      |               |                 |               |               |                      |                  |                    |                   |
|--------------------------------|-------------|----------------------|---------------|-----------------|---------------|---------------|----------------------|------------------|--------------------|-------------------|
| MD<br>(usft)                   | Incl<br>(°) | Azi (azimuth)<br>(°) | TVD<br>(usft) | TVDSS<br>(usft) | N/S<br>(usft) | E/W<br>(usft) | D Leg<br>(@1000usft) | V- Sec<br>(usft) | Northing<br>(usft) | Easting<br>(usft) |
| 5,900.0                        | 0.00        | 0.00                 | 5,900.0       | 2,385.6         | 0.0           | 0.0           | 0.00                 | 0.0              | 632,777.80         | 621,766.69        |
| 6,000.0                        | 0.00        | 0.00                 | 6,000.0       | 2,485.6         | 0.0           | 0.0           | 0.00                 | 0.0              | 632,777.80         | 621,766.69        |
| 6,100.0                        | 0.00        | 0.00                 | 6,100.0       | 2,585.6         | 0.0           | 0.0           | 0.00                 | 0.0              | 632,777.80         | 621,766.69        |
| 6,200.0                        | 0.00        | 0.00                 | 6,200.0       | 2,685.6         | 0.0           | 0.0           | 0.00                 | 0.0              | 632,777.80         | 621,766.69        |
| 6,300.0                        | 0.00        | 0.00                 | 6,300.0       | 2,785.6         | 0.0           | 0.0           | 0.00                 | 0.0              | 632,777.80         | 621,766.69        |
| 6,400.0                        | 0.00        | 0.00                 | 6,400.0       | 2,885.6         | 0.0           | 0.0           | 0.00                 | 0.0              | 632,777.80         | 621,766.69        |
| 6,500.0                        | 0.00        | 0.00                 | 6,500.0       | 2,985.6         | 0.0           | 0.0           | 0.00                 | 0.0              | 632,777.80         | 621,766.69        |
| 6,564.4                        | 0.00        | 0.00                 | 6,564.4       | 3,050.0         | 0.0           | 0.0           | 0.00                 | 0.0              | 632,777.80         | 621,766.69        |
| <b>1st Bone Spring</b>         |             |                      |               |                 |               |               |                      |                  |                    |                   |
| 6,600.0                        | 0.00        | 0.00                 | 6,600.0       | 3,085.6         | 0.0           | 0.0           | 0.00                 | 0.0              | 632,777.80         | 621,766.69        |
| 6,700.0                        | 0.00        | 0.00                 | 6,700.0       | 3,185.6         | 0.0           | 0.0           | 0.00                 | 0.0              | 632,777.80         | 621,766.69        |
| 6,800.0                        | 0.00        | 0.00                 | 6,800.0       | 3,285.6         | 0.0           | 0.0           | 0.00                 | 0.0              | 632,777.80         | 621,766.69        |
| 6,900.0                        | 0.00        | 0.00                 | 6,900.0       | 3,385.6         | 0.0           | 0.0           | 0.00                 | 0.0              | 632,777.80         | 621,766.69        |
| 7,000.0                        | 0.00        | 0.00                 | 7,000.0       | 3,485.6         | 0.0           | 0.0           | 0.00                 | 0.0              | 632,777.80         | 621,766.69        |
| 7,050.0                        | 0.00        | 0.00                 | 7,050.0       | 3,535.6         | 0.0           | 0.0           | 0.00                 | 0.0              | 632,777.80         | 621,766.69        |
| <b>Start Build 9.00</b>        |             |                      |               |                 |               |               |                      |                  |                    |                   |
| 7,100.0                        | 4.50        | 269.81               | 7,099.9       | 3,585.5         | 0.0           | -2.0          | 9.00                 | 2.0              | 632,777.79         | 621,764.73        |
| 7,150.0                        | 9.00        | 269.81               | 7,149.6       | 3,635.2         | 0.0           | -7.8          | 9.00                 | 7.8              | 632,777.78         | 621,758.86        |
| <b>Start DLS 8.94 TFO 0.00</b> |             |                      |               |                 |               |               |                      |                  |                    |                   |
| 7,200.0                        | 13.47       | 269.81               | 7,198.6       | 3,684.2         | -0.1          | -17.6         | 8.94                 | 17.6             | 632,777.74         | 621,749.12        |
| 7,250.0                        | 17.94       | 269.81               | 7,246.7       | 3,732.3         | -0.1          | -31.1         | 8.94                 | 31.1             | 632,777.70         | 621,735.59        |
| 7,300.0                        | 22.41       | 269.81               | 7,293.7       | 3,779.3         | -0.2          | -48.3         | 8.94                 | 48.4             | 632,777.64         | 621,718.35        |
| 7,350.0                        | 26.88       | 269.81               | 7,339.1       | 3,824.7         | -0.2          | -69.2         | 8.94                 | 69.2             | 632,777.57         | 621,697.50        |
| 7,400.0                        | 31.35       | 269.81               | 7,382.8       | 3,868.4         | -0.3          | -93.5         | 8.94                 | 93.5             | 632,777.49         | 621,673.18        |
| 7,450.0                        | 35.82       | 269.81               | 7,424.4       | 3,910.0         | -0.4          | -121.2        | 8.94                 | 121.2            | 632,777.40         | 621,645.53        |
| 7,500.0                        | 40.29       | 269.81               | 7,463.8       | 3,949.4         | -0.5          | -152.0        | 8.94                 | 152.0            | 632,777.30         | 621,614.72        |
| 7,550.0                        | 44.76       | 269.81               | 7,500.6       | 3,986.2         | -0.6          | -185.8        | 8.94                 | 185.8            | 632,777.19         | 621,580.93        |

|           |                                 |                             |                                        |
|-----------|---------------------------------|-----------------------------|----------------------------------------|
| Company:  | Murchison Oil and Gas           | Local Coordinate Reference: | Well: War Horse Federal Com #1H        |
| Project:  | Mustang                         | TVD Reference:              | WELL @ 3514.4usft (Original Well Elev) |
| Site:     | Mustang Section 21              | MD Reference:               | WELL @ 3514.4usft (Original Well Elev) |
| Well:     | War Horse Federal Com #1H       | North Reference:            | Grid                                   |
| Wellbore: | War Horse Fed Com #1H           | Survey Calculation Method:  | Minimum Curvature                      |
| Design:   | 120927 War Horse Federal Com 1H | Database:                   | EDM 5000.1 Single User Db              |

| Planned Survey          |            |                      |               |                 |               |               |                      |                  |                    |                   |  |
|-------------------------|------------|----------------------|---------------|-----------------|---------------|---------------|----------------------|------------------|--------------------|-------------------|--|
| MD<br>(usft)            | Inc<br>(°) | Azi (azimuth)<br>(°) | TVD<br>(usft) | TVDSS<br>(usft) | N/S<br>(usft) | E/W<br>(usft) | D Leg<br>(°/100usft) | N. Sec<br>(usft) | Northing<br>(usft) | Easting<br>(usft) |  |
| 7,562.0                 | 45.84      | 269.81               | 7,509.0       | 3,994.6         | -0.6          | -194.3        | 8.94                 | 194.3            | 632,777.16         | 621,572.40        |  |
| 7" Production Casing    |            |                      |               |                 |               |               |                      |                  |                    |                   |  |
| 7,562.5                 | 45.88      | 269.81               | 7,509.4       | 3,995.0         | -0.6          | -194.7        | 8.94                 | 194.7            | 632,777.16         | 621,572.03        |  |
| 2nd Bone Spring         |            |                      |               |                 |               |               |                      |                  |                    |                   |  |
| 7,575.0                 | 47.00      | 269.81               | 7,518.0       | 4,003.6         | -0.7          | -203.7        | 8.94                 | 203.7            | 632,777.13         | 621,562.98        |  |
| Start DLS 5.50 TFO 0.00 |            |                      |               |                 |               |               |                      |                  |                    |                   |  |
| 7,600.0                 | 48.38      | 269.81               | 7,534.8       | 4,020.4         | -0.7          | -222.2        | 5.50                 | 222.2            | 632,777.06         | 621,544.50        |  |
| 7,700.0                 | 53.88      | 269.81               | 7,597.6       | 4,083.2         | -1.0          | -300.0        | 5.50                 | 300.0            | 632,776.81         | 621,466.68        |  |
| 7,775.0                 | 58.00      | 269.81               | 7,639.6       | 4,125.2         | -1.2          | -362.2        | 5.50                 | 362.2            | 632,776.60         | 621,404.57        |  |
| Start Build 5.84        |            |                      |               |                 |               |               |                      |                  |                    |                   |  |
| 7,800.0                 | 59.46      | 269.81               | 7,652.5       | 4,138.1         | -1.3          | -383.5        | 5.84                 | 383.5            | 632,776.53         | 621,383.21        |  |
| 7,850.0                 | 62.38      | 269.81               | 7,676.8       | 4,162.4         | -1.4          | -427.2        | 5.84                 | 427.2            | 632,776.38         | 621,339.52        |  |
| 7,900.0                 | 65.30      | 269.81               | 7,698.9       | 4,184.5         | -1.6          | -472.1        | 5.84                 | 472.1            | 632,776.24         | 621,294.65        |  |
| 7,950.0                 | 68.21      | 269.81               | 7,718.6       | 4,204.2         | -1.7          | -518.0        | 5.84                 | 518.0            | 632,776.08         | 621,248.72        |  |
| 8,000.0                 | 71.13      | 269.81               | 7,736.0       | 4,221.6         | -1.9          | -564.9        | 5.84                 | 564.9            | 632,775.93         | 621,201.84        |  |
| 8,050.0                 | 74.05      | 269.81               | 7,750.9       | 4,236.5         | -2.0          | -612.6        | 5.84                 | 612.6            | 632,775.77         | 621,154.14        |  |
| 8,100.0                 | 76.97      | 269.81               | 7,763.5       | 4,249.1         | -2.2          | -661.0        | 5.84                 | 661.0            | 632,775.61         | 621,105.74        |  |
| 8,150.0                 | 79.89      | 269.81               | 7,773.5       | 4,259.1         | -2.4          | -710.0        | 5.84                 | 710.0            | 632,775.45         | 621,056.77        |  |
| 8,200.0                 | 82.81      | 269.81               | 7,781.0       | 4,266.6         | -2.5          | -759.4        | 5.84                 | 759.4            | 632,775.28         | 621,007.35        |  |
| 8,250.0                 | 85.72      | 269.81               | 7,786.0       | 4,271.6         | -2.7          | -809.2        | 5.84                 | 809.2            | 632,775.12         | 620,957.61        |  |
| 8,300.0                 | 88.64      | 269.81               | 7,788.5       | 4,274.1         | -2.8          | -859.1        | 5.84                 | 859.1            | 632,774.95         | 620,907.68        |  |
| 8,346.4                 | 91.35      | 269.81               | 7,788.5       | 4,274.1         | -3.0          | -905.5        | 5.84                 | 905.5            | 632,774.80         | 620,861.28        |  |
| 8,394.5                 | 91.40      | 269.81               | 7,787.3       | 4,272.9         | -3.2          | -953.5        | 0.10                 | 953.6            | 632,774.64         | 620,813.23        |  |
| 8,400.0                 | 91.40      | 269.81               | 7,787.2       | 4,272.8         | -3.2          | -959.1        | 0.00                 | 959.1            | 632,774.62         | 620,807.70        |  |
| 8,500.0                 | 91.40      | 269.81               | 7,784.7       | 4,270.3         | -3.5          | -1,059.0      | 0.00                 | 1,059.0          | 632,774.30         | 620,707.74        |  |
| 8,600.0                 | 91.40      | 269.81               | 7,782.3       | 4,267.9         | -3.8          | -1,159.0      | 0.00                 | 1,159.0          | 632,773.97         | 620,607.78        |  |
| 8,700.0                 | 91.40      | 269.81               | 7,779.9       | 4,265.5         | -4.2          | -1,259.0      | 0.00                 | 1,259.0          | 632,773.65         | 620,507.82        |  |
| 8,800.0                 | 91.40      | 269.81               | 7,777.4       | 4,263.0         | -4.5          | -1,358.9      | 0.00                 | 1,359.0          | 632,773.32         | 620,407.86        |  |



|           |                                 |                             |                                        |
|-----------|---------------------------------|-----------------------------|----------------------------------------|
| Company:  | Murchison Oil and Gas           | Local Coordinate Reference: | Well: War Horse Federal Com #1H        |
| Project:  | Mustang                         | TVD Reference:              | WELL @ 3514.4usft (Original Well Elev) |
| Site:     | Mustang Section 21              | MD Reference:               | WELL @ 3514.4usft (Original Well Elev) |
| Well:     | War Horse Federal Com #1H       | North Reference:            | Grid                                   |
| Wellbore: | War Horse Fed Com #1H           | Survey Calculation Method:  | Minimum Curvature                      |
| Design:   | 120927 War Horse Federal Com 1H | Database:                   | EDM 5000.1 Single User Db              |

| Planned Survey |            |                      |               |                 |               |              |                   |                  |                 |                |  |
|----------------|------------|----------------------|---------------|-----------------|---------------|--------------|-------------------|------------------|-----------------|----------------|--|
| MD<br>(usft)   | Inc<br>(°) | Azi (azimuth)<br>(°) | TVD<br>(usft) | TVDSS<br>(usft) | N/S<br>(usft) | EW<br>(usft) | DLeg<br>(100usft) | V. Sec<br>(usft) | North<br>(usft) | East<br>(usft) |  |
| 8,900.0        | 91.40      | 269.81               | 7,775.0       | 4,260.6         | -4.8          | -1,458.9     | 0.00              | 1,458.9          | 632,773.00      | 620,307.90     |  |
| 9,000.0        | 91.40      | 269.81               | 7,772.5       | 4,258.1         | -5.1          | -1,558.9     | 0.00              | 1,558.9          | 632,772.68      | 620,207.94     |  |
| 9,100.0        | 91.40      | 269.81               | 7,770.1       | 4,255.7         | -5.4          | -1,658.9     | 0.00              | 1,658.9          | 632,772.35      | 620,107.97     |  |
| 9,200.0        | 91.40      | 269.81               | 7,767.7       | 4,253.3         | -5.8          | -1,758.8     | 0.00              | 1,758.8          | 632,772.03      | 620,008.01     |  |
| 9,300.0        | 91.40      | 269.81               | 7,765.2       | 4,250.8         | -6.1          | -1,858.8     | 0.00              | 1,858.8          | 632,771.71      | 619,908.05     |  |
| 9,400.0        | 91.40      | 269.82               | 7,762.8       | 4,248.4         | -6.4          | -1,958.8     | 0.00              | 1,958.8          | 632,771.38      | 619,808.09     |  |
| 9,500.0        | 91.40      | 269.82               | 7,760.3       | 4,245.9         | -6.7          | -2,058.7     | 0.00              | 2,058.7          | 632,771.06      | 619,708.13     |  |
| 9,600.0        | 91.40      | 269.82               | 7,757.9       | 4,243.5         | -7.1          | -2,158.7     | 0.00              | 2,158.7          | 632,770.74      | 619,608.17     |  |
| 9,700.0        | 91.40      | 269.82               | 7,755.5       | 4,241.1         | -7.4          | -2,258.7     | 0.00              | 2,258.7          | 632,770.42      | 619,508.21     |  |
| 9,800.0        | 91.40      | 269.82               | 7,753.0       | 4,238.6         | -7.7          | -2,358.6     | 0.00              | 2,358.7          | 632,770.10      | 619,408.25     |  |
| 9,900.0        | 91.40      | 269.82               | 7,750.6       | 4,236.2         | -8.0          | -2,458.6     | 0.00              | 2,458.6          | 632,769.77      | 619,308.28     |  |
| 10,000.0       | 91.40      | 269.82               | 7,748.1       | 4,233.7         | -8.3          | -2,558.6     | 0.00              | 2,558.6          | 632,769.45      | 619,208.32     |  |
| 10,100.0       | 91.40      | 269.82               | 7,745.7       | 4,231.3         | -8.7          | -2,658.6     | 0.00              | 2,658.6          | 632,769.13      | 619,108.36     |  |
| 10,200.0       | 91.40      | 269.82               | 7,743.2       | 4,228.8         | -9.0          | -2,758.5     | 0.00              | 2,758.5          | 632,768.81      | 619,008.40     |  |
| 10,300.0       | 91.40      | 269.82               | 7,740.8       | 4,226.4         | -9.3          | -2,858.5     | 0.00              | 2,858.5          | 632,768.49      | 618,908.44     |  |
| 10,400.0       | 91.40      | 269.82               | 7,738.4       | 4,224.0         | -9.6          | -2,958.5     | 0.00              | 2,958.5          | 632,768.17      | 618,808.48     |  |
| 10,500.0       | 91.40      | 269.82               | 7,735.9       | 4,221.5         | -9.9          | -3,058.4     | 0.00              | 3,058.4          | 632,767.85      | 618,708.52     |  |
| 10,600.0       | 91.40      | 269.82               | 7,733.5       | 4,219.1         | -10.3         | -3,158.4     | 0.00              | 3,158.4          | 632,767.54      | 618,608.55     |  |
| 10,700.0       | 91.40      | 269.82               | 7,731.0       | 4,216.6         | -10.6         | -3,258.4     | 0.00              | 3,258.4          | 632,767.22      | 618,508.59     |  |
| 10,800.0       | 91.40      | 269.82               | 7,728.6       | 4,214.2         | -10.9         | -3,358.3     | 0.00              | 3,358.4          | 632,766.90      | 618,408.63     |  |
| 10,900.0       | 91.40      | 269.82               | 7,726.2       | 4,211.8         | -11.2         | -3,458.3     | 0.00              | 3,458.3          | 632,766.58      | 618,308.67     |  |
| 11,000.0       | 91.40      | 269.82               | 7,723.7       | 4,209.3         | -11.5         | -3,558.3     | 0.00              | 3,558.3          | 632,766.26      | 618,208.71     |  |
| 11,100.0       | 91.40      | 269.82               | 7,721.3       | 4,206.9         | -11.9         | -3,658.3     | 0.00              | 3,658.3          | 632,765.94      | 618,108.75     |  |
| 11,200.0       | 91.40      | 269.82               | 7,718.8       | 4,204.4         | -12.2         | -3,758.2     | 0.00              | 3,758.2          | 632,765.63      | 618,008.79     |  |
| 11,300.0       | 91.40      | 269.82               | 7,716.4       | 4,202.0         | -12.5         | -3,858.2     | 0.00              | 3,858.2          | 632,765.31      | 617,908.83     |  |
| 11,400.0       | 91.40      | 269.82               | 7,713.9       | 4,199.5         | -12.8         | -3,958.2     | 0.00              | 3,958.2          | 632,764.99      | 617,808.86     |  |
| 11,500.0       | 91.40      | 269.82               | 7,711.5       | 4,197.1         | -13.1         | -4,058.1     | 0.00              | 4,058.1          | 632,764.68      | 617,708.90     |  |



|           |                                 |                              |                                        |
|-----------|---------------------------------|------------------------------|----------------------------------------|
| Company:  | Murchison Oil and Gas           | Local Co-ordinate Reference: | Well: War Horse Federal Com #1H        |
| Project:  | Mustang                         | TVD Reference:               | WELL @ 3514.4usft (Original Well Elev) |
| Site:     | Mustang Section 21              | MD Reference:                | WELL @ 3514.4usft (Original Well Elev) |
| Well:     | War Horse Federal Com #1H       | North Reference:             | Grid                                   |
| Wellbore: | War Horse Fed Com #1H           | Survey Calculation Method:   | Minimum Curvature                      |
| Design:   | 120927 War Horse Federal Com 1H | Database:                    | EDM 5000.1 Single User Db              |

| Planned Survey        |            |                      |               |                 |               |              |                   |                 |                    |                   |
|-----------------------|------------|----------------------|---------------|-----------------|---------------|--------------|-------------------|-----------------|--------------------|-------------------|
| MD<br>(usft)          | Inc<br>(°) | Azi (azimuth)<br>(°) | TVD<br>(usft) | TVDSS<br>(usft) | N/S<br>(usft) | EW<br>(usft) | DLeg<br>(100usft) | V Sec<br>(usft) | Northing<br>(usft) | Easting<br>(usft) |
| 11,600.0              | 91.40      | 269.82               | 7,709.1       | 4,194.7         | -13.4         | -4,158.1     | 0.00              | 4,158.1         | 632,764.36         | 617,608.94        |
| 11,700.0              | 91.40      | 269.82               | 7,706.6       | 4,192.2         | -13.8         | -4,258.1     | 0.00              | 4,258.1         | 632,764.05         | 617,508.98        |
| 11,800.0              | 91.40      | 269.82               | 7,704.2       | 4,189.8         | -14.1         | -4,358.0     | 0.00              | 4,358.1         | 632,763.73         | 617,409.02        |
| 11,900.0              | 91.40      | 269.82               | 7,701.7       | 4,187.3         | -14.4         | -4,458.0     | 0.00              | 4,458.0         | 632,763.42         | 617,309.06        |
| 12,000.0              | 91.40      | 269.82               | 7,699.3       | 4,184.9         | -14.7         | -4,558.0     | 0.00              | 4,558.0         | 632,763.10         | 617,209.10        |
| 12,100.0              | 91.40      | 269.82               | 7,696.8       | 4,182.4         | -15.0         | -4,657.9     | 0.00              | 4,658.0         | 632,762.79         | 617,109.13        |
| 12,200.0              | 91.40      | 269.82               | 7,694.4       | 4,180.0         | -15.3         | -4,757.9     | 0.00              | 4,757.9         | 632,762.47         | 617,009.17        |
| 12,216.0              | 91.40      | 269.82               | 7,694.0       | 4,179.6         | -15.4         | -4,773.9     | 0.00              | 4,773.9         | 632,762.42         | 616,993.19        |
| <b>TD at 12216.40</b> |            |                      |               |                 |               |              |                   |                 |                    |                   |
| 12,216.4              | 91.40      | 269.82               | 7,694.0       | 4,179.6         | -15.4         | -4,774.3     | 0.01              | 4,774.3         | 632,762.42         | 616,992.79        |

| Casing Points               |                             |                            |                           |                         |  |
|-----------------------------|-----------------------------|----------------------------|---------------------------|-------------------------|--|
| Measured<br>Depth<br>(usft) | Vertical<br>Depth<br>(usft) | Name                       | Casing<br>Diameter<br>(") | Hole<br>Diameter<br>(") |  |
| 280.0                       | 280.0                       | 13-3/8" Surface Casing     | 13-3/8                    | 16                      |  |
| 7,562.0                     | 7,509.0                     | 7" Production Casing       | 7                         | 8-3/4                   |  |
| 12,216.4                    | 7,694.0                     | 4 1/2" Lower Completion    | 4-1/2                     | 6-1/8                   |  |
| 2,884.0                     | 2,884.0                     | 9 5/8" Intermediate Casing | 9-5/8                     | 12-1/4                  |  |
| 115.0                       | 115.0                       | 20" Conductor              | 20                        | 21                      |  |

|           |                                 |                             |                                        |
|-----------|---------------------------------|-----------------------------|----------------------------------------|
| Company:  | Murchison Oil and Gas           | Local Coordinate Reference: | Well: War Horse Federal Com #1H        |
| Project:  | Mustang                         | TVD Reference:              | WELL @ 3514.4usft (Original Well Elev) |
| Site:     | Mustang Section 21              | MD Reference:               | WELL @ 3514.4usft (Original Well Elev) |
| Well:     | War Horse Federal Com #1H       | North Reference:            | Grid                                   |
| Wellbore: | War Horse Fed Com #1H           | Survey Calculation Method:  | Minimum Curvature                      |
| Design:   | 120927 War Horse Federal Com 1H | Database:                   | EDM 5000.1 Single User Db              |

| Formations            |                       |                  |                  |         |               |  |
|-----------------------|-----------------------|------------------|------------------|---------|---------------|--|
| Measured Depth (usft) | Vertical Depth (usft) | Name             | Thickness (usft) | Dip (°) | Dip Direction |  |
| 844.4                 | 844.4                 | Salt Base        |                  | 0.00    |               |  |
| 2,864.4               | 2,864.4               | San Andres       |                  | 0.00    |               |  |
| 1,394.4               | 1,394.4               | Seven Rivers     |                  | 0.00    |               |  |
| 6,564.4               | 6,564.4               | 1st Bone Spring  |                  | 0.00    |               |  |
| 2,384.4               | 2,384.4               | Grayburg         |                  | 0.00    |               |  |
| 7,562.5               | 7,509.4               | 2nd Bone Spring  |                  | 0.00    |               |  |
| 1,024.4               | 1,024.4               | Yates            |                  | 0.00    |               |  |
| 2,034.4               | 2,034.4               | Queen            |                  | 0.00    |               |  |
| 284.4                 | 284.4                 | Salt             |                  | 0.00    |               |  |
| 3,894.4               | 3,894.4               | Bone Spring Lime |                  | 0.00    |               |  |
| 884.4                 | 884.4                 | Tensil           |                  | 0.00    |               |  |

| Plan Annotations      |                       |                          |                         |  |
|-----------------------|-----------------------|--------------------------|-------------------------|--|
| Measured Depth (usft) | Vertical Depth (usft) | Local Coordinates (usft) | Comment                 |  |
| 7,050.0               | 7,050.0               | 0.0                      | Start Build 9.00        |  |
| 7,150.0               | 7,149.6               | 0.0                      | Start DLS 8.94 TFO 0.00 |  |
| 7,575.0               | 7,518.0               | -0.7                     | Start DLS 5.50 TFO 0.00 |  |
| 7,775.0               | 7,639.6               | -1.2                     | Start Build 5.84        |  |
| 12,216.0              | 7,694.0               | -15.4                    | TD at 12216.0           |  |

Checked By: \_\_\_\_\_ Approved By: \_\_\_\_\_ Date: \_\_\_\_\_

CASING DETAILS

| TVD    | MD      | Name                       | Size   |
|--------|---------|----------------------------|--------|
| 115.0  | 115.0   | 20" Conductor Casing       | 20     |
| 280.0  | 280.0   | 13 3/8" Surface Casing     | 13-3/8 |
| 2884.0 | 2884.0  | 9 5/8" Intermediate Casing | 9-5/8  |
| 7509.0 | 7562.0  | 7" Production Casing       | 7      |
| 7694.0 | 12216.4 | 4 1/2" Production Casing   | 4-1/2  |

REFERENCE INFORMATION

Co-ordinate (N/E) Reference: Well War Horse Federal Com #1H, Grid North  
Vertical (TVD) Reference: WELL @ 3514.4ust (Original Well Elev)  
Section (VS) Reference: Slot - (0.0N, 0.0E)  
Measured Depth Reference: WELL @ 3514.4ust (Original Well Elev)  
Calculation Method: Minimum Curvature

FORMATION TOP DETAILS

| TVDPath | MDPath | Formation        | DipAngle | DipDir |
|---------|--------|------------------|----------|--------|
| 284.4   | 284.4  | Salt             | 0.00     |        |
| 844.4   | 844.4  | Salt Base        | 0.00     |        |
| 884.4   | 884.4  | Tansil           | 0.00     |        |
| 1024.4  | 1024.4 | Yates            | 0.00     |        |
| 1394.4  | 1394.4 | Seven Rivers     | 0.00     |        |
| 2034.4  | 2034.4 | Queen            | 0.00     |        |
| 2384.4  | 2384.4 | Grayburg         | 0.00     |        |
| 2864.4  | 2864.4 | San Andres       | 0.00     |        |
| 3894.4  | 3894.4 | Bone Spring Lime | 0.00     |        |
| 6564.4  | 6564.4 | 1st Bone Spring  | 0.00     |        |
| 7509.4  | 7562.5 | 2nd Bone Spring  | 0.00     |        |

ANNOTATIONS

| TVD    | MD      | Inc   | Azi    | +N/-S | +E/-W   | Vsect  | Departure | Annotation              |
|--------|---------|-------|--------|-------|---------|--------|-----------|-------------------------|
| 7050.0 | 7050.0  | 0.00  | 0.00   | 0.0   | 0.0     | 0.0    | 0.0       | Start Build 9.00        |
| 7148.6 | 7150.0  | 9.00  | 269.81 | 0.0   | -7.8    | 7.8    | 7.8       | Start DLS 8.94 TFO 0.00 |
| 7516.0 | 7575.0  | 47.00 | 269.81 | -0.7  | -203.7  | 203.7  | 203.7     | Start DLS 5.50 TFO 0.00 |
| 7636.6 | 7775.0  | 58.00 | 269.81 | -1.2  | -362.2  | 362.2  | 362.2     | Start Build 5.84        |
| 7694.0 | 12216.0 | 91.40 | 269.82 | -15.4 | -4773.9 | 4773.9 | 4773.9    | TD at 12216.0           |

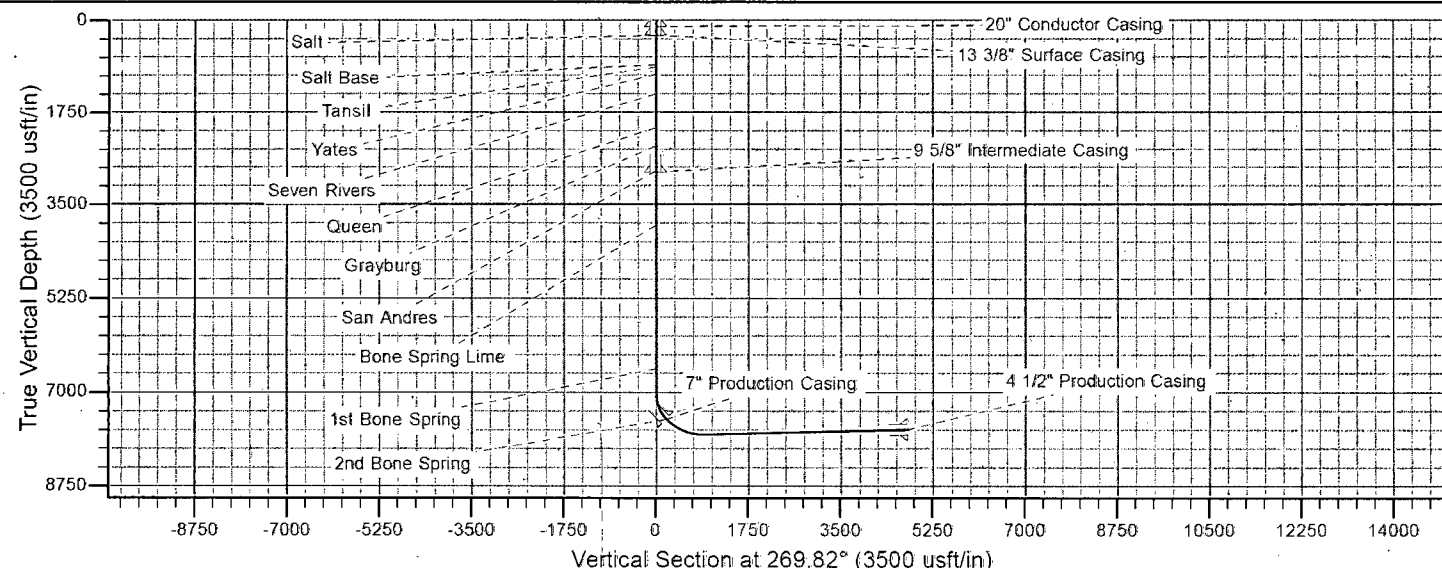
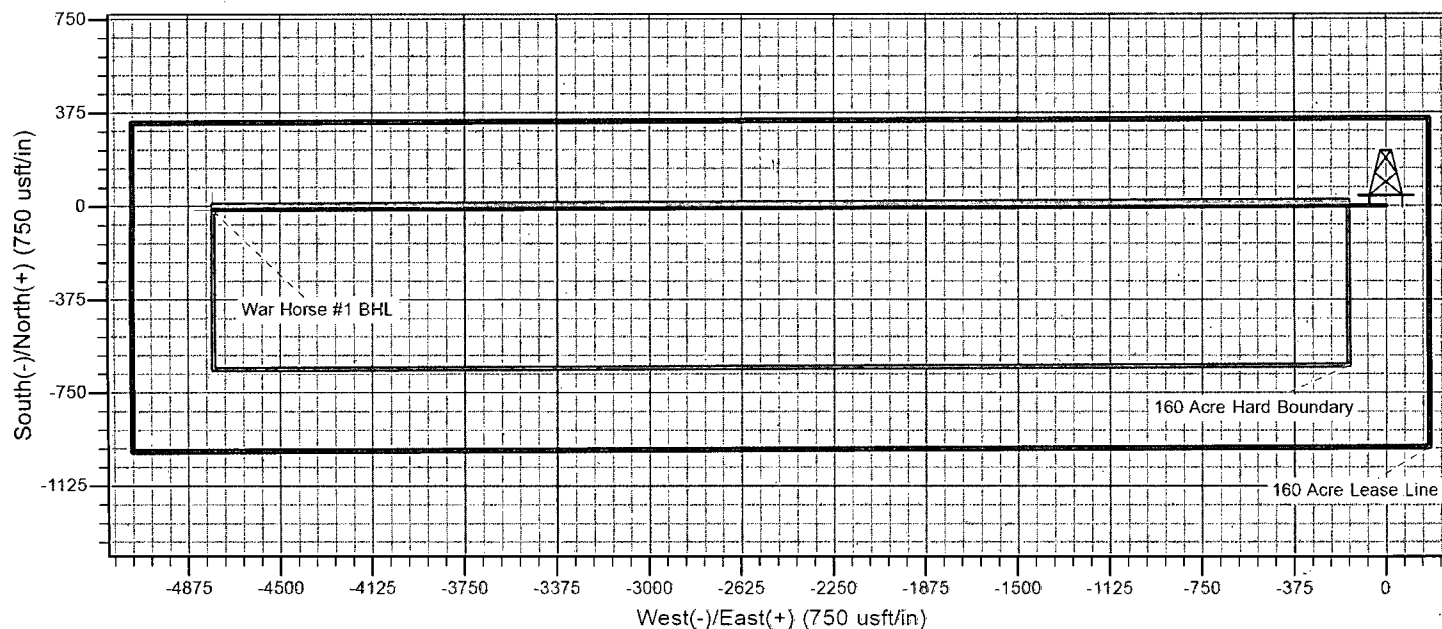
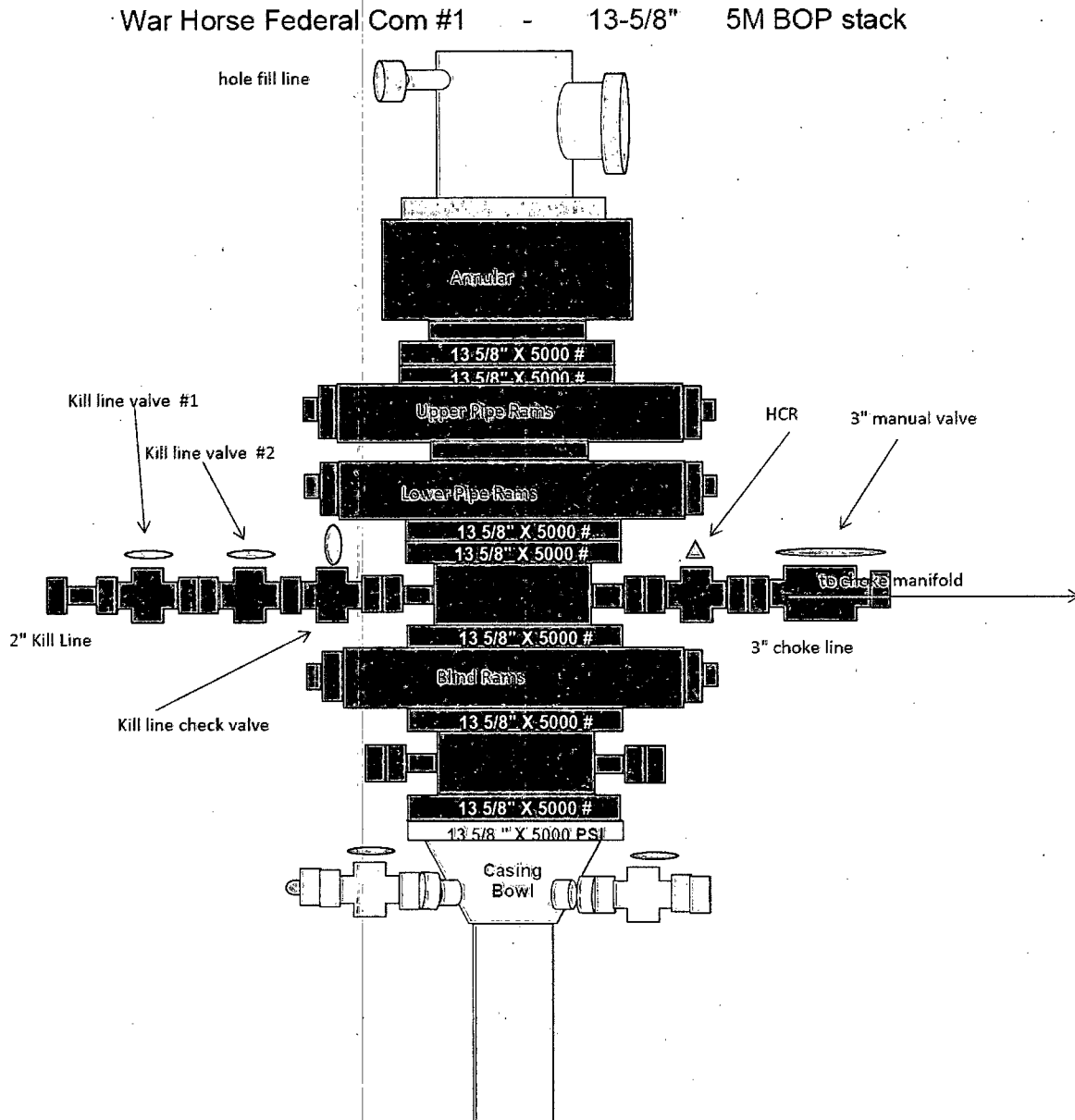
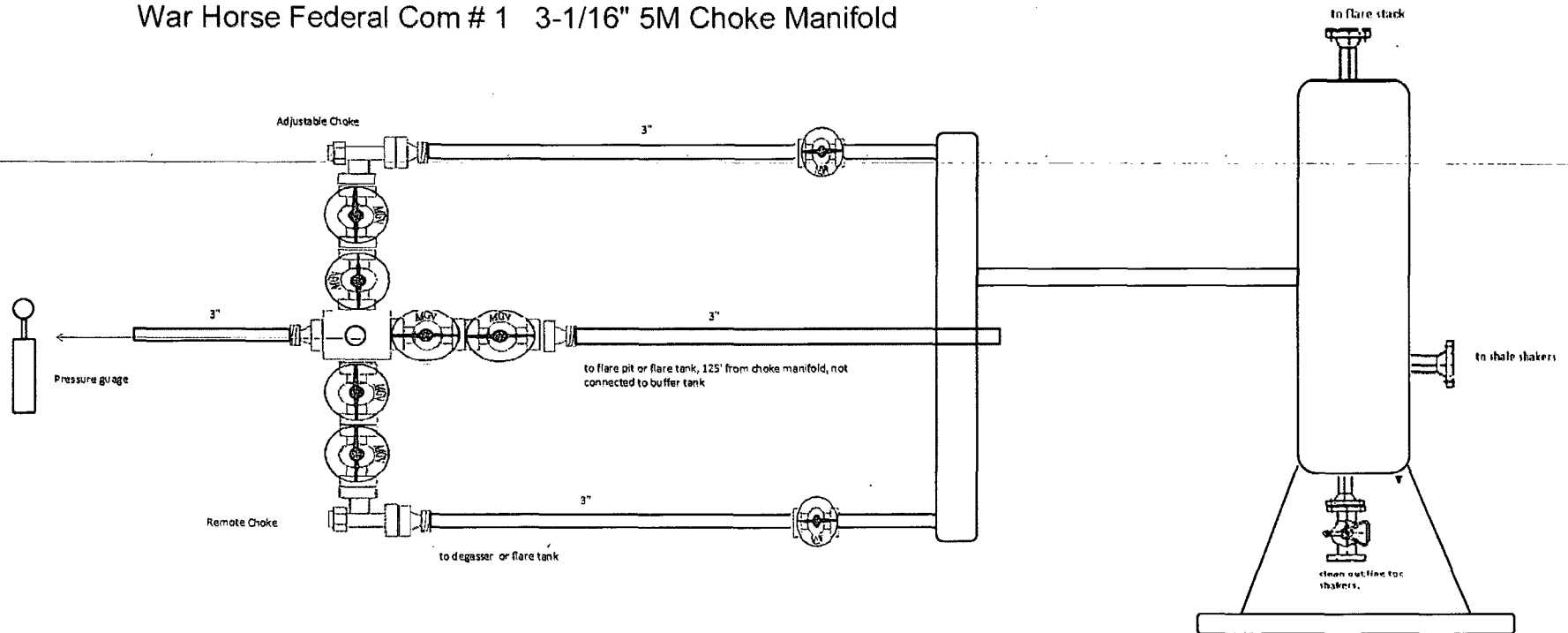


EXHIBIT G-1

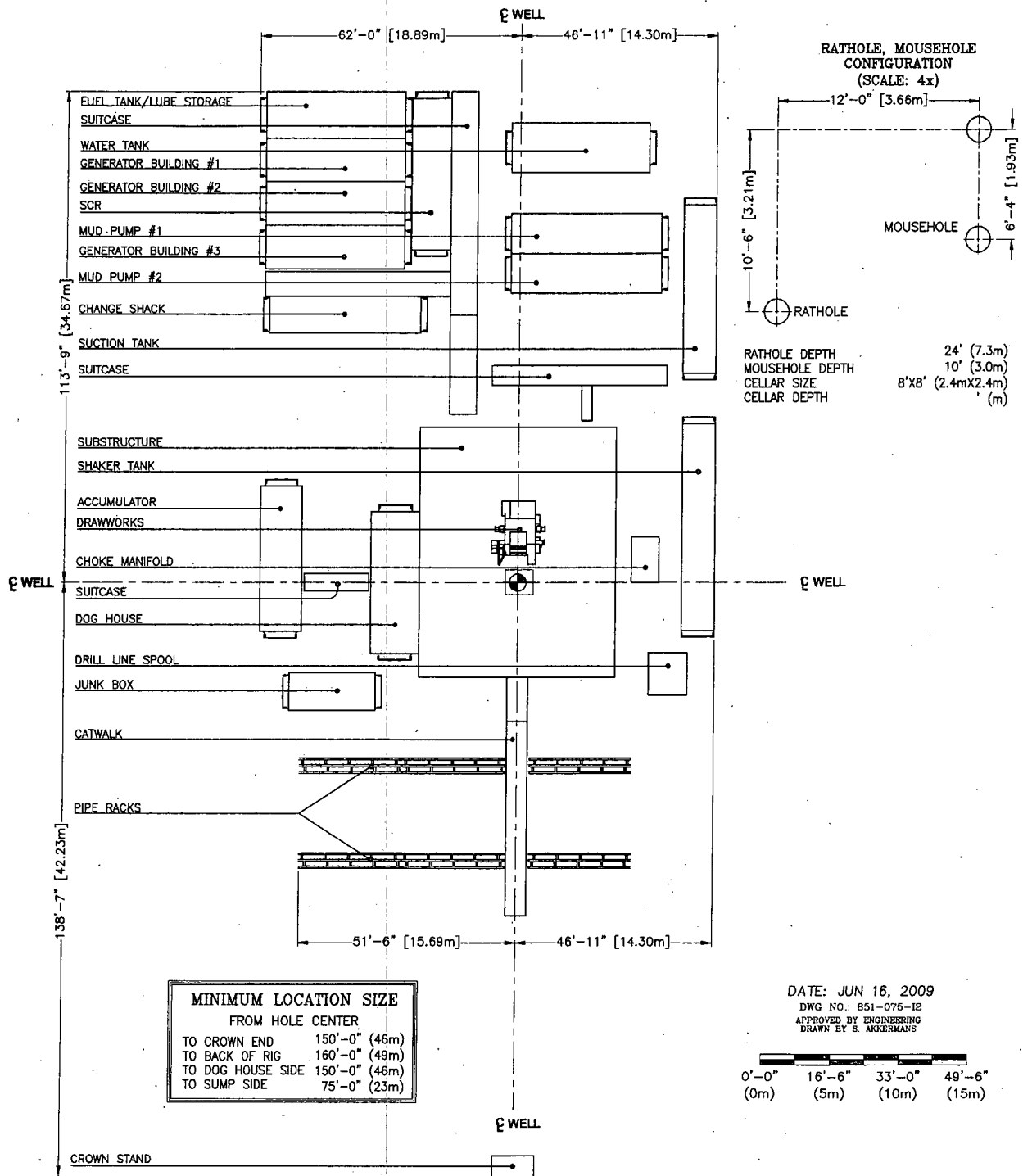


# War Horse Federal Com # 1 3-1/16" 5M Choke Manifold



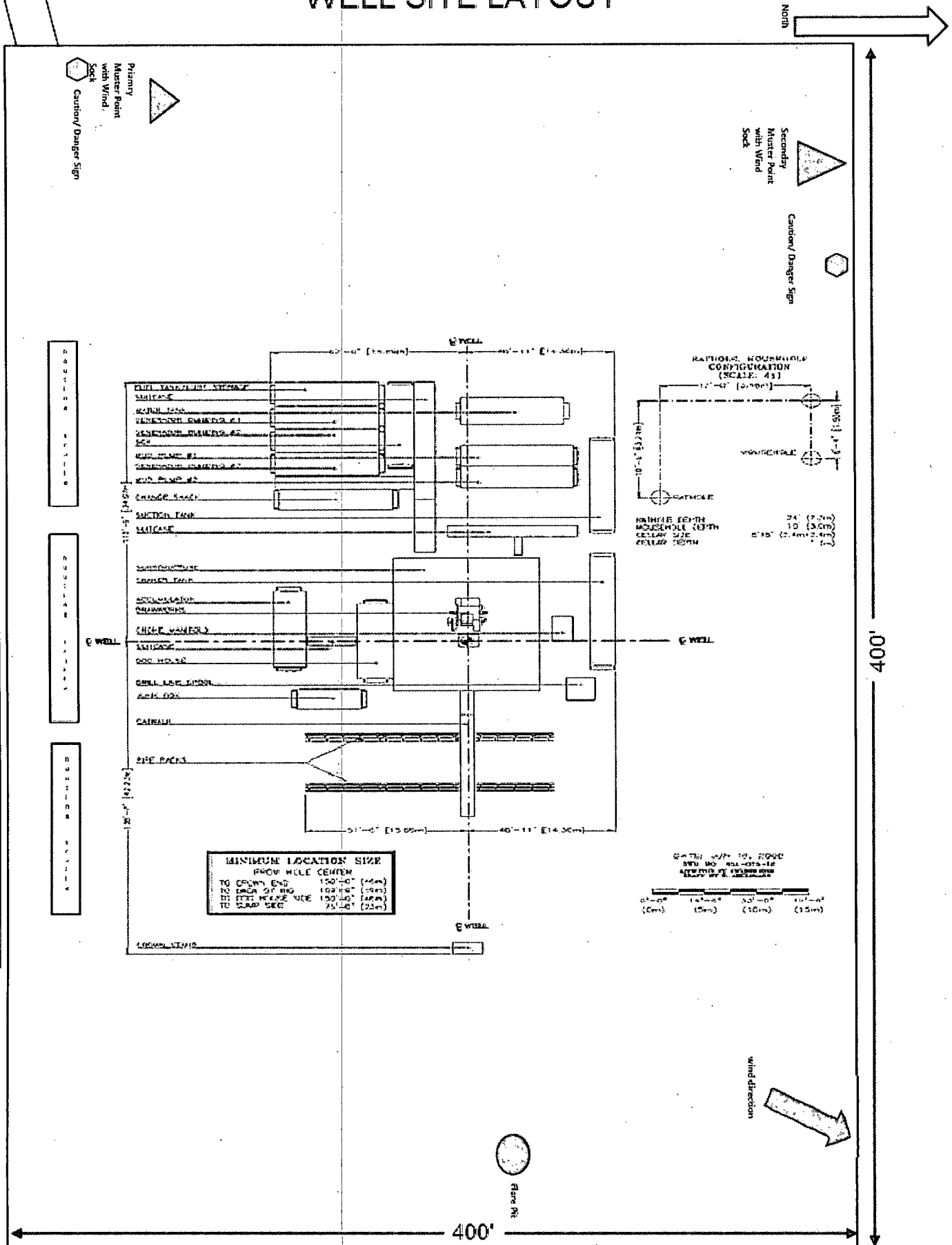
# RIG LAYOUT

# RIG 075TE

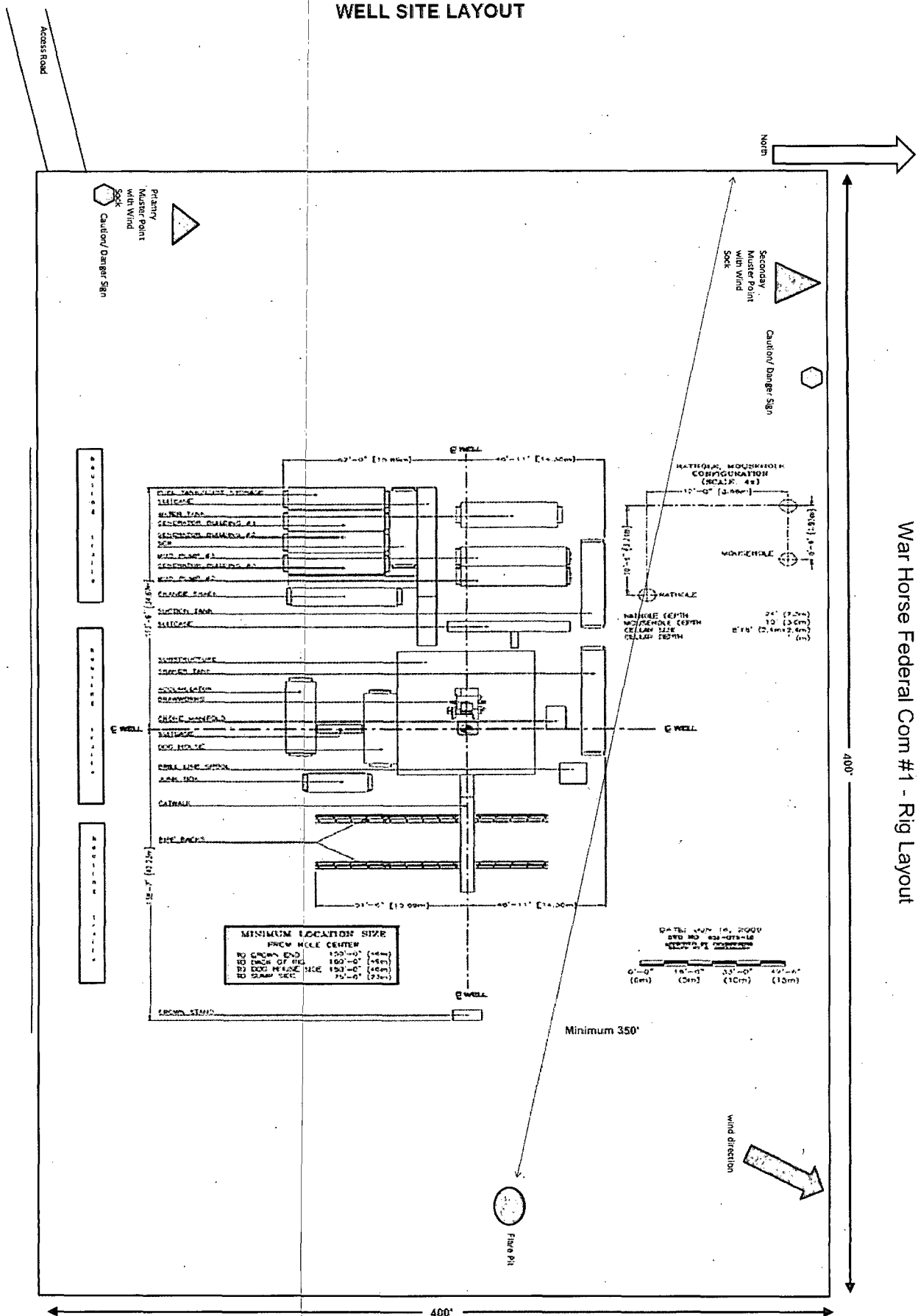


## PRECISION DRILLING

# EXHIBIT E WAR HORSE FED COM #1 WELL SITE LAYOUT



# War Horse Federal Com #1 - Rig Layout





**Murchison Oil & Gas, Inc.**  
**Hydrogen Sulfide Drilling Operation Plan**  
**War Horse Fed Com #1H**  
**Sec. 21, T18S, R29E, Eddy County, NM**

- I. Hydrogen Sulfide Training:** All personnel, whether regularly assigned, contracted, or employed on an unscheduled basis, will receive training from a qualified instructor in the following areas prior to commencing drilling operations on this well:
- a. The hazards and characteristics of hydrogen sulfide (H<sub>2</sub>S)
  - b. The proper use and maintenance of personal protective equipment and life support systems.
  - c. The proper use of H<sub>2</sub>S detectors, alarms, warning systems, briefing areas, evacuation procedures, and prevailing winds.
  - d. The proper techniques for first aid and rescue procedures.

In addition, supervisory personnel will be trained in the following areas:

- e. The effects of H<sub>2</sub>S on metal components. If high tensile tubular are to be used, personnel will be trained in their special maintenance requirements.
- f. Corrective action and shut-in procedures when drilling or reworking a well and blowout prevention and well control procedures.
- g. The contents and requirements of H<sub>2</sub>S Drilling Operations Plan and Public Protection Plan.

There will be an initial training session just prior to encountering a known or probable H<sub>2</sub>S zone (within 3 days or 500 feet) and weekly H<sub>2</sub>S and well control drills for all personnel in each crew. The initial training session shall include a review of the site specific H<sub>2</sub>S Drilling Operations Plan and Public Protection Plan. The concentrations of H<sub>2</sub>S of wells in this area from surface to TD are low enough that a contingency plan is not required.

- II. H<sub>2</sub>S Safety Equipment and Systems:** All H<sub>2</sub>S safety equipment and systems will be installed, tested, and operational when drilling reaches a depth of 500 feet above, or three days prior to penetrating the first zone containing or reasonably expected to contain H<sub>2</sub>S.

**a. Well Control Equipment:**

- i. Flare line.
- ii. Choke manifold.
- iii. A 13-5/8" 5M BOP stack with an Annular, Upper Pipe Ram, Lower Pipe Ram and Blind/Shear Ram will be installed prior to drilling out the first cement plug.
- iv. Auxiliary equipment including, if applicable, annular preventer and rotating head.
- v. Mud/Gas Separator

**b. Protective Equipment for Essential Personnel:**

- i. Rescue Packs (SCBA) – 1 unit shall be placed at each breathing area, 2 shall be stored in the safety trailer.

- ii. Work / Escape Packs – 4 packs shall be stored on the rig floor with sufficient air hose not to restrict work activity.
- iii. Emergency Escape Packs – 4 packs shall be stored in the doghouse for emergency evacuation.

**c. H2S Detection and Monitoring Equipment:**

- i. The stationary detector with three (3) sensors will be placed in the upper dog house if equipped, set to visually alarm @ 10 ppm and audible alarm @ 15 ppm. Calibrate a minimum of every 30 days or as needed. The three sensors will be placed in the following places: (Gas sample tubes will be stored in the safety trailer):
  - 1. Rig Floor
  - 2. Bell Nipple
  - 3. End of flow line or where well bore fluid is being discharged

**d. Visual Warning Systems:**

- i. Wind direction indicator as shown on well site diagram.
- ii. Caution/Danger signs shall be posted on roads providing direct access to location. Signs will be high visibility yellow with black lettering of sufficient size to be readable at a reasonable distance from the immediate location. Bilingual signs will be used, when appropriate.
- iii. A Colored Condition flag will be on display reflecting the condition at the site at that time.

**e. Mud Program:**

- i. The mud program has been designated to minimize the volume of H2S circulated to surface. Proper mud weight, safe drilling practices, and the use of H2S scavengers will minimize hazards when penetrating H2S bearing zones.

**f. Metallurgy:**

- i. All drill strings, casings, tubing, wellhead, blowout preventer, drilling spool, kill lines, choke manifold and lines, and valves shall be suitable for H2S service.
- ii. All elastomers used for packing and seals shall be H2S trim.

**g. Communication:**

- i. Hand-held radio communication and cell phones.
- ii. Land line (telephone) communication at Office.

**h. Secondary Egress:**

- i. From northwest corner proceed over berm and through field to main access road. Secondary egress is a minimum of 350' from flare pit.

**III. Well Testing:** There will be no drill stem testing.

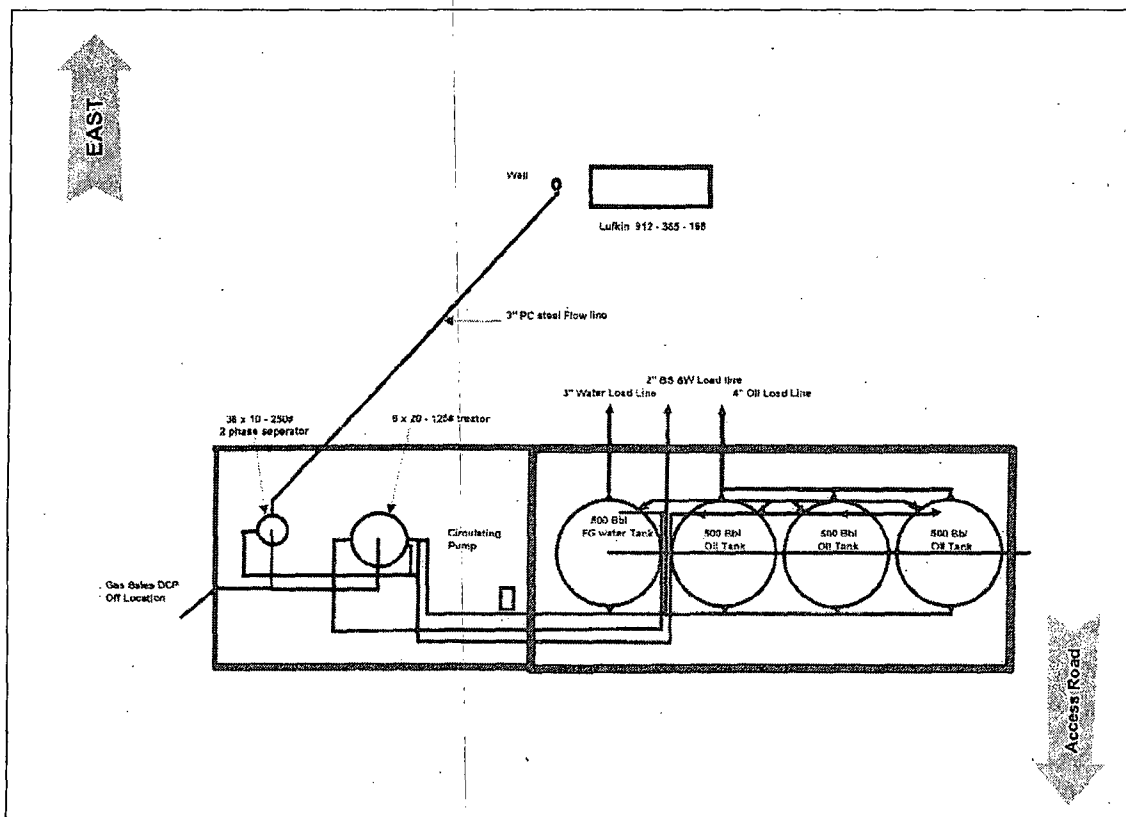
**IV. Emergency Call List:**

|             | <u>Office</u> | <u>Cell</u>  | <u>Home</u>  |
|-------------|---------------|--------------|--------------|
| Jack Rankin | 972-931-0700  | 713-582-3859 | 281-894-7065 |
| Greg Boans  | 575-628-3932  | 575-706-0667 | 575-887-9181 |

**V. Emergency Response Numbers, Eddy County:**

|                                                |              |
|------------------------------------------------|--------------|
| State Police                                   | 888-442-6677 |
| Eddy County Sheriff - Carlsbad                 | 575-746-9888 |
| Eddy County Emergency Management - Carlsbad    | 575-887-7551 |
| State Emergency Response Center (SERC)         | 505-476-9635 |
| Artesia Police / Fire / Ambulance Department   | 575-746-5000 |
| New Mexico Oil Conservation Division - Artesia | 575-748-1283 |
| Callaway Safety Equipment, Inc.                | 575-392-2973 |

Exhibit F-1  
Production Facility Layout  
War Horse Fed Com #1H



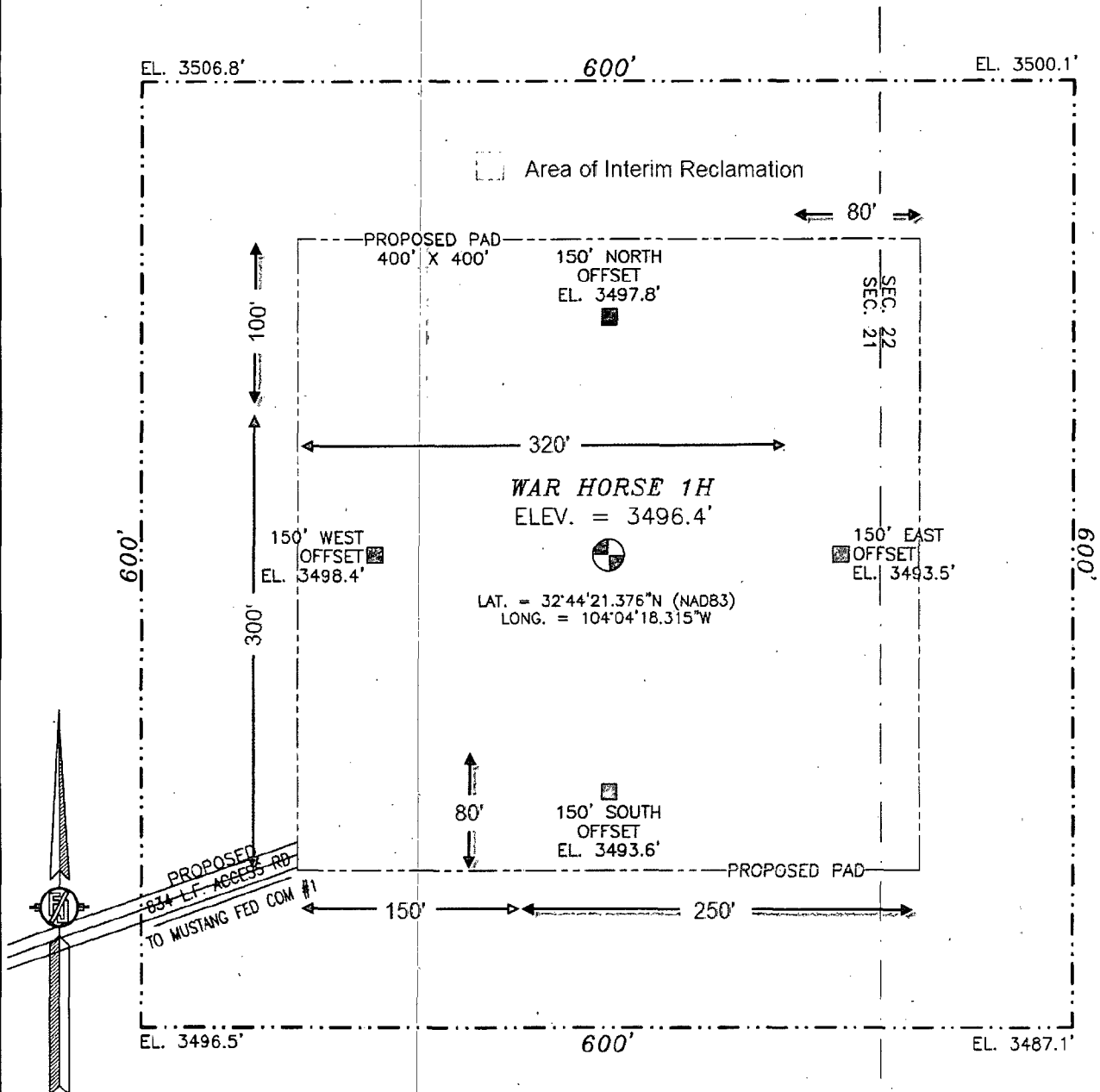
Containment Area: Fiberglass container around tanks (Vol. =  $40' \times 100' \times 2.89' = 2,064$  bbls)

Tank Pad: Tanks set within fiberglass containment

Leak Detection: Leak detection float w/alarm inside fiberglass container; level control alarms on all tanks

EXHIBIT F-2  
AREA OF INTERIM RECLAMATION

SECTION 21, TOWNSHIP 18 SOUTH, RANGE 29 EAST, N.M.P.M.  
EDDY COUNTY, STATE OF NEW MEXICO



0 10 50 100 200

SCALE 1" = 100'

DIRECTIONS TO LOCATION

FROM THE INTERSECTION OF CR 217 (HAGERMAN CUTOFF) AND SR 360 (BLUESTEM) GO SOUTH ON SR 360 1.3 MILES TO CALICHE LEASE ROAD WITH A CATTLE GUARD ON LEFT GO EAST 0.15 MILES TO CALICHE LEASE ROAD ON RIGHT GO EAST 0.2 MILES TO EXIST. PAD FOR MUSTANG FED. COM #1 SITE IS ABOUT 600 FT EAST FROM NE CORNER OF PAD.

MURCHISON OIL & GAS, INC.

**WAR HORSE 1H**

LOCATED 350 FT. FROM THE NORTH LINE  
AND 175 FT. FROM THE EAST LINE OF  
SECTION 21, TOWNSHIP 18 SOUTH,  
RANGE 29 EAST, N.M.P.M.  
EDDY COUNTY, STATE OF NEW MEXICO

SURVEY NO. 1243A

MADRON SURVEYING, INC. 301 SOUTH CANAL (575) 234-3341 CARLSBAD, NEW MEXICO

SEPTEMBER 24, 2012

## PECOS DISTRICT CONDITIONS OF APPROVAL

|                       |                                    |
|-----------------------|------------------------------------|
| OPERATOR'S NAME:      | Murchison Oil & Gas                |
| LEASE NO.:            | NM030752                           |
| WELL NAME & NO.:      | 1H War Horse Fed Com               |
| SURFACE HOLE FOOTAGE: | 350'/ FNL & 175'/ FEL              |
| BOTTOM HOLE FOOTAGE:  | 350'/ FNL & 330'/ FWL              |
| LOCATION:             | Section 21, T.18 S., R.29 E., NMPM |
| COUNTY:               | Eddy County, New Mexico            |

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Standard Conditions of Approval (COA) apply to this APD. If any deviations to these standards exist or special COAs are required, the section with the deviation or requirement will be checked below.

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- ☐ **Permit Expiration**
- ☐ **Archaeology, Paleontology, and Historical Sites**
- ☐ **Noxious Weeds**
- ☒ **Special Requirements**
  - Communitization Agreement
- ☐ **Construction**
  - Notification
  - Topsoil
  - Closed Loop System
  - Federal Mineral Material Pits
  - Well Pads
  - Roads
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  - Waste Material and Fluids
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  - Pipelines
  - Electric Lines
- ☐ **Interim Reclamation**
- ☐ **Final Abandonment & Reclamation**