

# Carlsbad Field Office OCD Artesia

Form 3160-3  
(March 2012)

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

## APPLICATION FOR PERMIT TO DRILL OR REENTER

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

1a. Type of work: <input checked="" type="checkbox"/> DRILL <input type="checkbox"/> REENTER		5. Lease Serial No. NMNM117116
1b. Type of Well: <input type="checkbox"/> Oil Well <input checked="" 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
2. Name of Operator CIMAREX ENERGY COMPANY		7. If Unit or CA Agreement, Name and No.
3a. Address 202 S. Cheyenne Ave., Ste 1000 Tulsa OK 74		8. Lease Name and Well No. <b>40451</b> MEDWICK 32 FEDERAL COM 6H
3b. Phone No. (include area code) (432)620-1936		9. API Well No. <b>30-015-45063</b>
4. Location of Well (Report location clearly and in accordance with any State requirements.) At surface LAT 31.998822 / LONG -104.214208 At proposed prod. zone NENW / 330 FNL / 2020 FWL / LAT 32.019561 / LONG -104.214097		10. Field and Pool, or Exploratory PURPLE-SAGE WOLFCAMP GAS / PUF
11. Sec., T. R. M. or Blk. and Survey or Area OTHER		12. County or Parish CULBERSON
13. State TX		14. Distance in miles and direction from nearest town or post office* 24 miles
15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drg. unit line, if any) 405 feet	16. No. of acres in lease 1364.69	17. Spacing Unit dedicated to this well 223.13
18. Distance from proposed location* to nearest well, drilling, completed, 31 feet applied for, on this lease, ft.	19. Proposed Depth 9700 feet / 16983 feet	20. BLM/BIA Bond No. on file FED: NMB001188
21. Elevations (Show whether DF, KDB, RT, GL, etc.) 3208 feet	22. Approximate date work will start* 09/27/2017	23. Estimated duration 30 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 (Electronic Submission)	Name (Printed/Typed) Aricka Easterling / Ph: (918)560-7060	Date 03/23/2017
Title Regulatory Analyst		
Approved by (Signature) (Electronic Submission)	Name (Printed/Typed) Cody Layton / Ph: (575)234-5959	Date 06/18/2018
Title Supervisor Multiple Resources		
Office CARLSBAD		

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.

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)

RRC API  
Number  
42-109-33086

**APPROVED WITH CONDITIONS**  
Approval Date: 06/18/2018

RUP 6-29-18

NSP

BUREAU OF LAND MANAGEMENT  
ARTESIA DISTRICT

JUN 27 2018

RECEIVED

## INSTRUCTIONS

**GENERAL:** This form is designed for submitting proposals to perform certain well operations, as indicated on Federal and Indian lands and leases for action by appropriate Federal agencies, pursuant to applicable Federal laws and regulations. Any necessary special instructions concerning the use of this form and the number of copies to be submitted, particularly with regard to local, area, or regional procedures and practices, either are shown below or will be issued by, or may be obtained from local Federal offices.

**ITEM 1:** If the proposal is to redrill to the same reservoir at a different subsurface location or to a new reservoir, use this form with appropriate notations. Consult applicable Federal regulations concerning subsequent work proposals or reports on the well.

**ITEM 4:** Locations on Federal or Indian land should be described in accordance with Federal requirements. Consult local Federal offices for specific instructions.

**ITEM 14:** Needed only when location of well cannot readily be found by road from the land or lease description. A plat, or plats, separate or on the reverse side, showing the roads to, and the surveyed location of, the well, and any other required information, should be furnished when required by Federal agency offices.

**ITEMS 15 AND 18:** If well is to be, or has been directionally drilled, give distances for subsurface location of hole in any present or objective productive zone.

**ITEM 22:** Consult applicable Federal regulations, or appropriate officials, concerning approval of the proposal before operations are started.

## NOTICES

The Privacy Act of 1974 and regulation in 43 CFR 2.48(d) provide that you be furnished the following information in connection with information required by this application.

**AUTHORITY:** 30 U.S.C. 181 et seq., 25 U.S.C. 396; 43 CFR 3160

**PRINCIPAL PURPOSES:** The information will be used to: (1) process and evaluate your application for a permit to drill a new oil, gas, or service well or to reenter a plugged and abandoned well; and (2) document, for administrative use, information for the management, disposal and use of National Resource Lands and resources including (a) analyzing your proposal to discover and extract the Federal or Indian resources encountered; (b) reviewing procedures and equipment and the projected impact on the land involved; and (c) evaluating the effects of the proposed operation on the surface and subsurface water and other environmental impacts.

**ROUTINE USE:** Information from the record and/or the record will be transferred to appropriate Federal, State, and local or foreign agencies, when relevant to civil, criminal or regulatory investigations or prosecution, in connection with congressional inquiries and for regulatory responsibilities.

**EFFECT OF NOT PROVIDING INFORMATION:** Filing of this application and disclosure of the information is mandatory only if you elect to initiate a drilling or reentry operation on an oil and gas lease.

The Paperwork Reduction Act of 1995 requires us to inform you that:

The BLM collects this information to allow evaluation of the technical, safety, and environmental factors involved with drilling for oil and/or gas on Federal and Indian oil and gas leases. This information will be used to analyze and approve applications. Response to this request is mandatory only if the operator elects to initiate drilling or reentry operations on an oil and gas lease. The BLM would like you to know that you do not have to respond to this or any other Federal agency-sponsored information collection unless it displays a currently valid OMB control number.

**BURDEN HOURS STATEMENT:** Public reporting burden for this form is estimated to average 8 hours per response, including the time for reviewing instructions, gathering and maintaining data, and completing and reviewing the form. Direct comments regarding the burden estimate or any other aspect of this form to U.S. Department of the Interior, Bureau of Land Management (1004-0137), Bureau Information Collection Clearance Officer (WO-630), 1849 C Street, N.W., Mail Stop 401 LS, Washington, D.C. 20240.

## Additional Operator Remarks

### Location of Well

1. SHL: LAT: 31.998822 / LONG: -104.214208 ( TVD: 0 feet, MD: 0 feet )  
PPP: LAT: 31.9995 / LONG: -104.214047 ( TVD: 9573 feet, MD: 9670 feet )  
BHL: LAT: 32.019561 / LONG: -104.214097 ( TVD: 9700 feet, MD: 16983 feet )

### BLM Point of Contact

Name: Sipra Dahal  
Title: Legal Instruments Examiner  
Phone: 5752345983  
Email: sdahal@blm.gov

CONFIDENTIAL

Approval Date: 06/18/2018

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### **Review and Appeal Rights**

A person contesting a decision shall request a State Director review. This request must be filed within 20 working days of receipt of the Notice with the appropriate State Director (see 43 CFR 3165.3). The State Director review decision may be appealed to the Interior Board of Land Appeals, 801 North Quincy Street, Suite 300, Arlington, VA 22203 (see 43 CFR 3165.4). Contact the above listed Bureau of Land Management office for further information.

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JUN 27 2018

# PECOS DISTRICT DRILLING CONDITIONS OF APPROVAL

<b>OPERATOR'S NAME:</b>	Cimarex Energy Co	<b>RECEIVED</b>
<b>LEASE NO.:</b>	NM117116	
<b>WELL NAME &amp; NO.:</b>	Medwick 32 Federal Com – 6H	
<b>SURFACE HOLE FOOTAGE:</b>	0'S & 1972'/W	
<b>BOTTOM HOLE FOOTAGE:</b>	330'/N & 2020'/W, sec. 29	
<b>LOCATION:</b>	Sec. 32, T. 26 S, R. 27 E	
<b>COUNTY:</b>	Eddy County, New Mexico	

COA

H2S	<input type="radio"/> Yes	<input checked="" type="radio"/> No	
Potash	<input checked="" type="radio"/> None	<input type="radio"/> Secretary	<input type="radio"/> R-111-P
Cave/Karst Potential	<input type="radio"/> Low	<input type="radio"/> Medium	<input checked="" type="radio"/> High
Variance	<input type="radio"/> None	<input checked="" type="radio"/> Flex Hose	<input type="radio"/> Other
Wellhead	<input type="radio"/> Conventional	<input checked="" type="radio"/> Multibowl	<input type="radio"/> Both
Other	<input type="checkbox"/> 4 String Area	<input type="checkbox"/> Capitan Reef	<input type="checkbox"/> WIPP

## A. Hydrogen Sulfide

Hydrogen Sulfide (H<sub>2</sub>S) monitors shall be installed prior to drilling out the surface shoe. If H<sub>2</sub>S is detected in concentrations greater than 100 ppm, the Hydrogen Sulfide area shall meet Onshore Order 6 requirements, which includes equipment and personnel/public protection items. If Hydrogen Sulfide is encountered, provide measured values and formations to the BLM.

## B. CASING

1. The 13-3/8 inch surface casing shall be set at approximately 400 feet (a minimum of 25 feet into the Rustler Anhydrite and above the salt) and cemented to the surface. **Additional cement maybe required. Excess calculates to 10%.**
  - a. If cement does not circulate to the surface, the appropriate BLM office shall be notified and a temperature survey utilizing an electronic type temperature survey with surface log readout will be used or a cement bond log shall be run to verify the top of the cement. Temperature survey will be run a minimum of six hours after pumping cement and ideally between 8-10 hours after completing the cement job.
  - b. Wait on cement (WOC) time for a primary cement job will be a minimum of 8 hours or 500 pounds compressive strength, whichever is greater. (This is to include the lead cement).

- c. Wait on cement (WOC) time for a remedial job will be a minimum of 4 hours after bringing cement to surface or 500 pounds compressive strength, whichever is greater.
  - d. If cement falls back, remedial cementing will be done prior to drilling out that string.
2. The minimum required fill of cement behind the 9-5/8 inch intermediate casing is:
  - Cement to surface. If cement does not circulate see B.1.a, c-d above.Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry due to cave/karst or potash.
  - ❖ In High Cave/Karst Areas if cement does not circulate to surface on the first two casing strings, the cement on the 3rd casing string must come to surface.
3. The minimum required fill of cement behind the 7 inch production casing is:
  - Cement should tie-back at least 200 feet into previous casing string. Operator shall provide method of verification. **Additonal cement maybe required. Excess calculates to 22%.**
4. The minimum required fill of cement behind the 4-1/2 inch production liner is:
  - Cement should tie-back 100' into the previous casing. Operator shall provide method of verification. **Additonal cement maybe required. Excess calculates to 9%.**

### C. PRESSURE CONTROL

1. Variance approved to use flex line from BOP to choke manifold. Manufacturer's specification to be readily available. No external damage to flex line. Flex line to be installed as straight as possible (no hard bends).
2. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the surface casing shoe shall be **2000 (2M) psi.**
3. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the 9-5/8 inch intermediate casing shoe shall be **3000 (3M) psi.**
4. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the 7 inch intermediate casing shoe shall be **5000 (5M) psi.**

## GENERAL REQUIREMENTS

The BLM is to be notified in advance for a representative to witness:

- a. Spudding well (minimum of 24 hours)
- b. Setting and/or Cementing of all casing strings (minimum of 4 hours)
- c. BOPE tests (minimum of 4 hours)

☒ Chaves and Roosevelt Counties

Call the Roswell Field Office, 2909 West Second St., Roswell NM 88201.  
During office hours call (575) 627-0272.  
After office hours call (575)

☒ Eddy County

Call the Carlsbad Field Office, 620 East Greene St., Carlsbad, NM 88220,  
(575) 361-2822

☒ Lea County

Call the Hobbs Field Station, 414 West Taylor, Hobbs NM 88240, (575)  
393-3612

1. Unless the production casing has been run and cemented or the well has been properly plugged, the drilling rig shall not be removed from over the hole without prior approval.
  - a. In the event the operator has proposed to drill multiple wells utilizing a skid/walking rig. Operator shall secure the wellbore on the current well, after installing and testing the wellhead, by installing a blind flange of like pressure rating to the wellhead and a pressure gauge that can be monitored while drilling is performed on the other well(s).
  - b. When the operator proposes to set surface casing with Spudder Rig
    - Notify the BLM when moving in and removing the Spudder Rig.
    - Notify the BLM when moving in the 2<sup>nd</sup> Rig. Rig to be moved in within 90 days of notification that Spudder Rig has left the location.
    - BOP/BOPE test to be conducted per Onshore Oil and Gas Order No. 2 as soon as 2nd Rig is rigged up on well.
2. Floor controls are required for 3M or Greater systems. These controls will be on the rig floor, unobstructed, readily accessible to the driller and will be operational at all times during drilling and/or completion activities. Rig floor is defined as the area immediately around the rotary table; the area immediately above the substructure on which the draw works are located, this does not include the dog house or stairway area.

3. The record of the drilling rate along with the GR/N well log run from TD to surface (horizontal well – vertical portion of hole) shall be submitted to the BLM office as well as all other logs run on the borehole 30 days from completion. If available, a digital copy of the logs is to be submitted in addition to the paper copies. The Rustler top and top and bottom of Salt are to be recorded on the Completion Report.

#### A. CASING

1. Changes to the approved APD casing program need prior approval if the items substituted are of lesser grade or different casing size or are Non-API. The Operator can exchange the components of the proposal with that of superior strength (i.e. changing from J-55 to N-80, or from 36# to 40#). Changes to the approved cement program need prior approval if the altered cement plan has less volume or strength or if the changes are substantial (i.e. Multistage tool, ECP, etc.). The initial wellhead installed on the well will remain on the well with spools used as needed.
2. Wait on cement (WOC) for Potash Areas: After cementing but before commencing any tests, the casing string shall stand cemented under pressure until both of the following conditions have been met: 1) cement reaches a minimum compressive strength of 500 psi for all cement blends, 2) until cement has been in place at least 24 hours. WOC time will be recorded in the driller's log. The casing integrity test can be done (prior to the cement setting up) immediately after bumping the plug.
3. Wait on cement (WOC) for Water Basin: After cementing but before commencing any tests, the casing string shall stand cemented under pressure until both of the following conditions have been met: 1) cement reaches a minimum compressive strength of 500 psi at the shoe, 2) until cement has been in place at least 8 hours. WOC time will be recorded in the driller's log. See individual casing strings for details regarding lead cement slurry requirements. The casing integrity test can be done (prior to the cement setting up) immediately after bumping the plug.
4. Provide compressive strengths including hours to reach required 500 pounds compressive strength prior to cementing each casing string. Have well specific cement details onsite prior to pumping the cement for each casing string.
5. No pea gravel permitted for remedial or fall back remedial without prior authorization from the BLM engineer.
6. **On that portion of any well approved for a 5M BOPE system or greater, a pressure integrity test of each casing shoe shall be performed. Formation at the shoe shall be tested to a minimum of the mud weight equivalent anticipated to control the formation pressure to the next casing depth or at total depth of the well. This test shall be performed before drilling more than 20 feet of new hole.**

7. If hardband drill pipe is rotated inside casing, returns will be monitored for metal. If metal is found in samples, drill pipe will be pulled and rubber protectors which have a larger diameter than the tool joints of the drill pipe will be installed prior to continuing drilling operations.
8. Whenever a casing string is cemented in the R-111-P potash area, the NMOCD requirements shall be followed.

#### B. PRESSURE CONTROL

1. All blowout preventer (BOP) and related equipment (BOPE) shall comply with well control requirements as described in Onshore Oil and Gas Order No. 2 and API RP 53 Sec. 17.
2. If a variance is approved for a flexible hose to be installed from the BOP to the choke manifold, the following requirements apply: The flex line must meet the requirements of API 16C. Check condition of flexible line from BOP to choke manifold, replace if exterior is damaged or if line fails test. Line to be as straight as possible with no hard bends and is to be anchored according to Manufacturer's requirements. The flexible hose can be exchanged with a hose of equal size and equal or greater pressure rating. Anchor requirements, specification sheet and hydrostatic pressure test certification matching the hose in service, to be onsite for review. These documents shall be posted in the company man's trailer and on the rig floor.
3. 5M or higher system requires an HCR valve, remote kill line and annular to match. The remote kill line is to be installed prior to testing the system and tested to stack pressure.
4. **If the operator has proposed a multi-bowl wellhead assembly in the APD. The following requirements must be met:**
  - a. **Wellhead shall be installed by manufacturer's representatives, submit documentation with subsequent sundry.**
  - b. **If the welding is performed by a third party, the manufacturer's representative shall monitor the temperature to verify that it does not exceed the maximum temperature of the seal.**
  - c. **Manufacturer representative shall install the test plug for the initial BOP test.**
  - d. **If the cement does not circulate and one inch operations would have been possible with a standard wellhead, the well head shall be cut off, cementing operations performed and another wellhead installed.**
  - e. **Whenever any seal subject to test pressure is broken, all the tests in OOGO2.III.A.2.i must be followed.**
5. The appropriate BLM office shall be notified a minimum of 4 hours in advance for a representative to witness the tests.

- a. In a water basin, for all casing strings utilizing slips, these are to be set as soon as the crew and rig are ready and any fallback cement remediation has been done. The casing cut-off and BOP installation can be initiated four hours after installing the slips, which will be approximately six hours after bumping the plug. For those casing strings not using slips, the minimum wait time before cut-off is eight hours after bumping the plug. BOP/BOPE testing can begin after cut-off or once cement reaches 500 psi compressive strength (including lead when specified), whichever is greater. However, if the float does not hold, cut-off cannot be initiated until cement reaches 500 psi compressive strength (including lead when specified).
- b. In potash areas, for all casing strings utilizing slips, these are to be set as soon as the crew and rig are ready and any fallback cement remediation has been done. For all casing strings, casing cut-off and BOP installation can be initiated at twelve hours after bumping the plug. However, **no tests** shall commence until the cement has had a minimum of 24 hours setup time, except the casing pressure test can be initiated immediately after bumping the plug (only applies to single stage cement jobs).
- c. The tests shall be done by an independent service company utilizing a test plug. The results of the test shall be reported to the appropriate BLM office.
- d. The test shall be run on a 5000 psi chart for a 2-3M BOP/BOP, on a 10000 psi chart for a 5M BOP/BOPE and on a 15000 psi chart for a 10M BOP/BOPE. If a linear chart is used, it shall be a one hour chart. A circular chart shall have a maximum 2 hour clock. If a twelve hour or twenty-four hour chart is used, tester shall make a notation that it is run with a two hour clock.
- e. All tests are required to be recorded on a calibrated test chart. A copy of the BOP/BOPE test chart and a copy of independent service company test will be submitted to the appropriate BLM office.
- f. The BOP/BOPE test shall include a low pressure test from 250 to 300 psi. The test will be held for a minimum of 10 minutes. This test shall be performed prior to the test at full stack pressure.
- g. BOP/BOPE must be tested by an independent service company within 500 feet of the top of the Wolfcamp formation if the time between the setting of the intermediate casing and reaching this depth exceeds 20 days. This test does not exclude the test prior to drilling out the casing shoe as per Onshore Order No. 2.

### **C. DRILLING MUD**

Mud system monitoring equipment, with derrick floor indicators and visual and audio alarms, shall be operating before drilling into the Wolfcamp formation, and shall be used until production casing is run and cemented.

### **D. WASTE MATERIAL AND FLUIDS**

All waste (i.e. drilling fluids, trash, salts, chemicals, sewage, gray water, etc.) created as a result of drilling operations and completion operations shall be safely contained and disposed of properly at a waste disposal facility. No waste material or fluid shall be disposed of on the well location or surrounding area.

Porto-johns and trash containers will be on-location during fracturing operations or any other crew-intensive operations.

#### **Waste Minimization Plan (WMP)**

In the interest of resource development, submission of additional well gas capture development plan information is deferred but may be required by the BLM Authorized Officer at a later date.

**ZS 030218**

**1. Geological Formations**

TVD of target 9,700  
MD at TD 16,983

Pilot Hole TD N/A  
Deepest expected fresh water

Formation	Depth (TVD) from KB	Water/Mineral Bearing/Target Zone	Hazards
Rustler	0	N/A	
Salado	1261	N/A	
Castille	1706	N/A	
Bell Canyon	1957	N/A	
Cherry Canyon	2945	N/A	
Brushy Canyon	4022	N/A	
Brushy Canyon Lower	5317	N/A	
Bone Spring	5529	Hydrocarbons	
Bone Spring A Shale	5651	Hydrocarbons	
Bone Spring C Shale	6157	Hydrocarbons	
1st Bone Spring Ss	6478	Hydrocarbons	
2nd Bone Spring Ss	6942	Hydrocarbons	
2nd BS Ss Lower	7793	Hydrocarbons	
3rd Bone Spring Ss	8261	Hydrocarbons	
Wolfcamp	8602	Hydrocarbons	
Wolfcamp B	9209	Hydrocarbons	
Wolfcamp C	9337	Hydrocarbons	
Wolfcamp D	9482	Hydrocarbons	
Wolfcamp D Horz Target	9670	Hydrocarbons	
Wolfcamp E	10081	Hydrocarbons	

**2. Casing Program**

Hole Size	Casing Depth From	Casing Depth To	Casing Size	Weight (lb/ft)	Grade	Conn.	SF Collapse	SF Burst	SF Tension
17 1/2	0	400	13-3/8"	48.00	H-40/J-55 Hybrid	ST&C	4.04	9.45	16.77
12 1/4	0	1937	9-5/8"	36.00	J-55	LT&C	1.97	3.43	6.50
8 3/4	0	9151	7"	26.00	L-80	LT&C	1.26	1.69	2.03
8 3/4	9151	10249	7"	26.00	L-80	BT&C	1.19	1.60	42.31
6	9151	16983	4-1/2"	11.60	P-110	BT&C	1.16	1.63	57.63
BLM Minimum Safety Factor							1.125	1	1.6 Dry 1.8 Wet

TVD was used on all calculations.

All casing strings will be tested in accordance with Onshore Oil and Gas Order #2 III.B.1.h

	Y or N
Is casing new? If used, attach certification as required in Onshore Order #1	Y
Does casing meet API specifications? If no, attach casing specification sheet.	Y
Is premium or uncommon casing planned? If yes attach casing specification sheet.	N
Does the above casing design meet or exceed BLM's minimum standards? If not provide justification (loading assumptions, casing design criteria).	Y
Will the intermediate pipe be kept at a minimum 1/3 fluid filled to avoid approaching the collapse pressure rating of the casing?	N
Is well located within Capitan Reef?	N
If yes, does production casing cement tie back a minimum of 50' above the Reef?	N
Is well within the designated 4 string boundary.	N
Is well located in SOPA but not in R-111-P?	N
If yes, are the first 2 strings cemented to surface and 3rd string cement tied back 500' into previous casing?	N
Is well located in R-111-P and SOPA?	N
If yes, are the first three strings cemented to surface?	N
Is 2nd string set 100' to 600' below the base of salt?	N
Is well located in high Cave/Karst?	N
If yes, are there two strings cemented to surface?	N
(For 2 string wells) If yes, is there a contingency casing if lost circulation occurs?	N
Is well located in critical Cave/Karst?	N
If yes, are there three strings cemented to surface?	N

**3. Cementing Program**

Casing	# Sks	Wt. lb/gal	Yld ft3/sack	H2O gal/sk	500# Comp. Strength (hours)	Slurry Description
Surface	61	13.50	1.72	9.15	15.5	Lead: Class C + Bentonite
	195	14.80	1.34	6.32	9.5	Tail: Class C + LCM
Intermediate	368	12.90	1.88	9.65	12	Lead: 35:65 (Poz:C) + Salt + Bentonite
	113	14.80	1.34	6.32	9.5	Tail: Class C + LCM
Production	403	10.50	3.45	22.18	N/A	Lead: NeoCem
	140	14.20	1.30	5.86	14:30	Tail: 50:50 (Poz:H) + Salt + Bentonite + Fluid Loss + Dispersant + SMS
Completion System	497	14.20	1.30	5.86	14:30	Tail: 50:50 (Poz:H) + Salt + Bentonite + Fluid Loss + Dispersant + SMS

Casing String	TOC	% Excess
Surface	0	31
Intermediate	0	50
Production	1737	23
Completion System	10149	10

**4. Pressure Control Equipment**

A variance is requested for the use of a diverter on the surface casing. See attached for schematic.					
BOP installed and tested before drilling which hole?	Size	Min Required WP	Type		Tested To
12 1/4	13 5/8	2M	Annular	X	50% of working pressure
			Blind Ram		2M
			Pipe Ram		
			Double Ram	X	
			Other		
8 3/4	13 5/8	3M	Annular	X	50% of working pressure
			Blind Ram		3M
			Pipe Ram		
			Double Ram	X	
			Other		
6	13 5/8	5M	Annular	X	50% of working pressure
			Blind Ram		5M
			Pipe Ram		
			Double Ram	X	
			Other		

BOP/BOPE will be tested by an independent service company to 250 psi low and the high pressure indicated above per Onshore Order 2 requirements. The System may be upgraded to a higher pressure but still tested to the working pressure listed in the table above. If the system is upgraded all the components installed will be functional and tested.

Pipe rams will be operationally checked each 24 hour period. Blind rams will be operationally checked on each trip out of the hole. These checks will be noted on the daily tour sheets. Other accessories to the BOP equipment will include a Kelly cock and floor safety valve (inside BOP) and choke lines and choke manifold. See attached schematics.

X	Formation integrity test will be performed per Onshore Order #2. On Exploratory wells or on that portion of any well approved for a 5M BOPE system or greater, a pressure integrity test of each casing shoe shall be performed. Will be tested in accordance with Onshore Oil and Gas Order #2 IILB.1.i.
X	A variance is requested for the use of a flexible choke line from the BOP to Choke Manifold. See attached for specs and hydrostatic test chart.
N	Are anchors required by manufacturer?

**5. Mud Program**

Depth	Type	Weight (ppg)	Viscosity	Water Loss
0' to 400'	FW Spud Mud	8.30 - 8.80	30-32	N/C
400' to 1937'	Brine Water	9.70 - 10.20	30-32	N/C
1937' to 10249'	FW/Cut Brine	8.50 - 9.00	30-32	N/C
10249' to 16983'	OBM	12.50 - 13.00	50-70	N/C

Sufficient mud materials to maintain mud properties and meet minimum lost circulation and weight increase requirements will be kept on location at all times.

What will be used to monitor the loss or gain of fluid?	PVT/Pason/Visual Monitoring
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**6. Logging and Testing Procedures**

Logging, Coring and Testing	
X	Will run GR/CNL from TD to surface (horizontal well – vertical portion of hole). Stated logs run will be in the Completion Report and submitted to the BLM.
	No logs are planned based on well control or offset log information.
	Drill stem test?
	Coring?

Additional Logs Planned	Interval
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**7. Drilling Conditions**

Condition	
BH Pressure at deepest TVD	6557 psi
Abnormal Temperature	No

Hydrogen Sulfide (H2S) monitors will be installed prior to drilling out the surface shoe. If H2S is detected in concentrations greater than 100 ppm, the operator will comply with the provisions of Onshore Oil and Gas Order #6. If Hydrogen Sulfide is encountered, measured values and formations will be provided to the BLM.

X	H2S is present
X	H2S plan is attached

**8. Other Facets of Operation****9. Wellhead**

A multi-bowl wellhead system will be utilized.

After running the 13-3/8" surface casing, a 13 5/8" BOP/BOPE system with a minimum working pressure of 5000 psi will be installed on the wellhead system and will be pressure tested to 250 psi low followed by a 5000 psi test. Annular will be tested to 50% of working pressure. The pressure test will be repeated at least every 30 days, as per Onshore Order No. 2.

The multi-bowl wellhead will be installed by vendor's representative. A copy of the installation instructions has been sent to the BLM field office.

The wellhead will be installed by a third-party welder while being monitored by the wellhead vendor representative.

All BOP equipment will be tested utilizing a conventional test plug. Not a cup or J-packer type.

A solid steel body pack-off will be utilized after running and cementing the intermediate casing. After installation the pack-off and lower flange will be pressure tested to 5000 psi.

A solid steel body pack-off will be utilized after running and cementing the production casing. After installation the pack-off and lower flange will be pressure tested to 5000 psi.

The surface casing string will be tested as per Onshore Order No. 2 to at least 0.22 psi/ft or 1500 psi, whichever is greater.

The casing string utilizing steel body pack-off will be tested to 70% of casing burst.

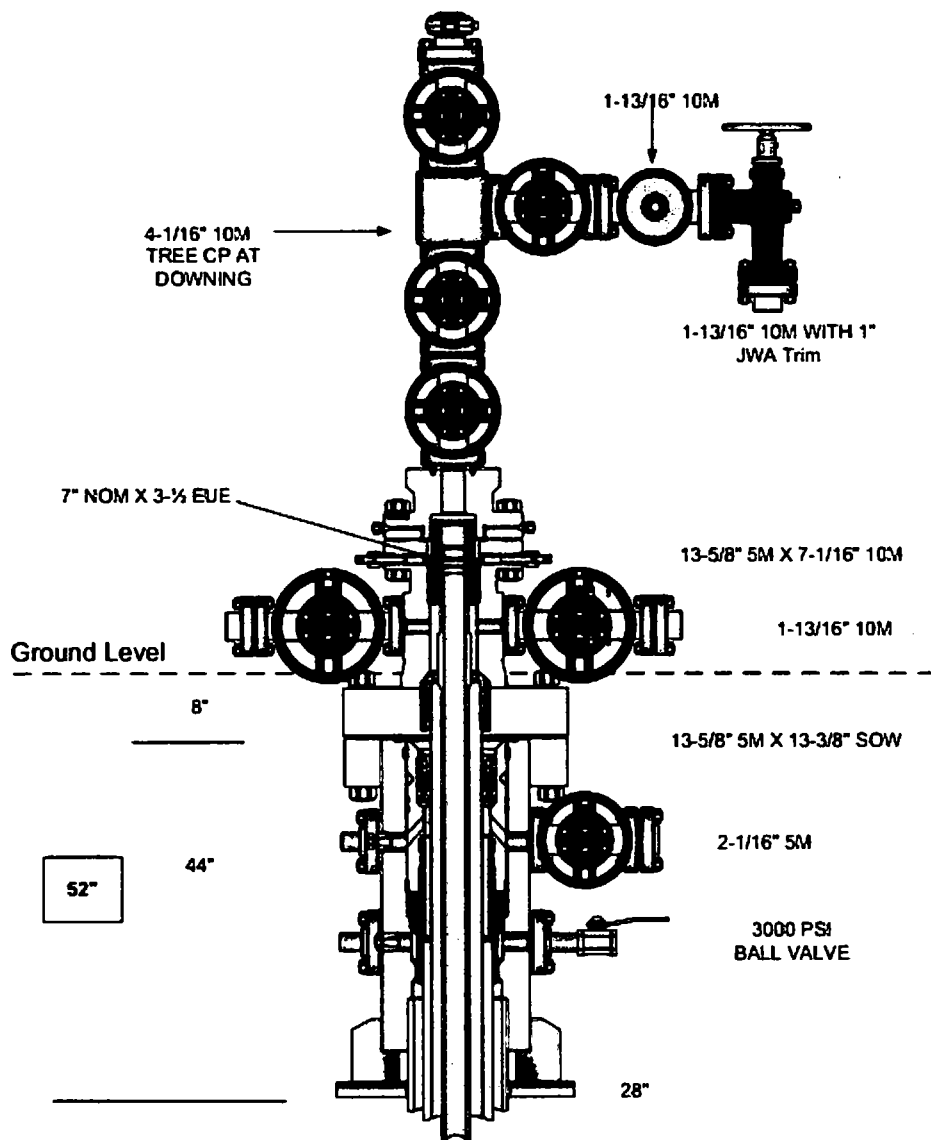
If well conditions dictate conventional slips will be set and BOPE will be tested to appropriate pressures based on permitted pressure requirements.



**Cactus Multi-Bowl Wellhead Steps:**

1. Drill 17.5" Hole to Surface TD.
2. Trip out of hole.
3. Run and cement 13-3/8" casing.
4. Weld on Cactus Multi-Bowl Wellhead per Manufacturer's procedure.
5. Test weld to 70% of 13-3/8" surface casing.
6. Manufacturer representative will install test plug
7. Test BOPE equipment to 3,000 psi per permitted test pressure for drilling below 9-5/8" intermediate shoe.
8. Install Wear Bushing
9. Drill to 9-5/8" casing shoe
10. Trip out of hole.
11. Remove Wear Bushing.
12. Run 9-5/8" casing and land 9-5/8" casing hanger.
13. Cement casing.
14. Washout stack. Run wash tool to clean hanger.
15. Run and Install Packoff.
16. Test Packoff Seals.
17. Run Wear Bushing.
18. TIH to float collar.
19. Test Casing per COA WOC times. (500 psi compressive strength and 8 hours, whichever is greater)
20. Drill to production hole TD.
21. Trip out of hole.
22. Run 7" Production Casing.
23. Cement 7" Casing.
24. N/D and Set 7" Casing Slips.
25. N/U and Test BOPs per COA requirements
26. Drill out 7" casing
27. Drill 6" hole
28. Run 4.5" Completion system (Liner).
29. Cement 4.5" Liner
30. L/D Drill Pipe, N/D and move rig.

**Note: We will not Test BOP's after welding on the Surface head until the 7" casing is ran and cemented unless we exceed the 30 day limit per Onshore Order #2.**



PREPARED ON 6-1-17

Approval Date: 06/18/2018

JUN 27 2018

RECEIVED

**PECOS DISTRICT  
SURFACE USE  
CONDITIONS OF APPROVAL**

OPERATOR'S NAME:	Cimarex Energy Co
LEASE NO.:	NM117116
WELL NAME & NO.:	Medwick 32 Federal Com – 6H
SURFACE HOLE FOOTAGE:	0'/S & 1972'/W
BOTTOM HOLE FOOTAGE:	330'/N & 2020'/W, sec. 29
LOCATION:	Section 32, T. 26 S., R. 27 E., NMPM
COUNTY:	Eddy County, New Mexico

**TABLE OF CONTENTS**

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.

- ☐ **General Provisions**
- ☐ **Permit Expiration**
- ☐ **Archaeology, Paleontology, and Historical Sites**
- ☐ **Noxious Weeds**
- ☒ **Special Requirements**
  - Cave/Karst
  - Watershed
- ☐ **Construction**
  - Notification
  - Topsoil
  - Closed Loop System
  - Federal Mineral Material Pits
  - Well Pads
  - Roads
- ☐ **Road Section Diagram**
- ☒ **Production (Post Drilling)**
  - Well Structures & Facilities
  - Pipelines
- ☐ **Interim Reclamation**
- ☐ **Final Abandonment & Reclamation**

## **I. GENERAL PROVISIONS**

The approval of the Application For Permit To Drill (APD) is in compliance with all applicable laws and regulations: 43 Code of Federal Regulations 3160, the lease terms, Onshore Oil and Gas Orders, Notices To Lessees, New Mexico Oil Conservation Division (NMOCD) Rules, National Historical Preservation Act As Amended, and instructions and orders of the Authorized Officer. Any request for a variance shall be submitted to the Authorized Officer on Form 3160-5, Sundry Notices and Report on Wells.

## **II. PERMIT EXPIRATION**

If the permit terminates prior to drilling and drilling cannot be commenced within 60 days after expiration, an operator is required to submit Form 3160-5, Sundry Notices and Reports on Wells, requesting surface reclamation requirements for any surface disturbance. However, if the operator will be able to initiate drilling within 60 days after the expiration of the permit, the operator must have set the conductor pipe in order to allow for an extension of 60 days beyond the expiration date of the APD. (Filing of a Sundry Notice is required for this 60 day extension.)

## **III. ARCHAEOLOGICAL, PALEONTOLOGY & HISTORICAL SITES**

Any cultural and/or paleontological resource discovered by the operator or by any person working on the operator's behalf shall immediately report such findings to the Authorized Officer. The operator is fully accountable for the actions of their contractors and subcontractors. The operator shall suspend all operations in the immediate area of such discovery until written authorization to proceed is issued by the Authorized Officer. An evaluation of the discovery shall be made by the Authorized Officer to determine the appropriate actions that shall be required to prevent the loss of significant cultural or scientific values of the discovery. The operator shall be held responsible for the cost of the proper mitigation measures that the Authorized Officer assesses after consultation with the operator on the evaluation and decisions of the discovery. Any unauthorized collection or disturbance of cultural or paleontological resources may result in a shutdown order by the Authorized Officer.

## **IV. NOXIOUS WEEDS**

The operator shall be held responsible if noxious weeds become established within the areas of operations. Weed control shall be required on the disturbed land where noxious weeds exist, which includes the roads, pads, associated pipeline corridor, and adjacent land affected by the establishment of weeds due to this action. The operator shall consult with the Authorized Officer for acceptable weed control methods, which include following EPA and BLM requirements and policies.

## **V. SPECIAL REQUIREMENT(S)**

### **Cave and Karst Conditions of Approval for APDs**

**\*\*** Depending on location, additional Drilling, Casing, and Cementing procedures may be required by engineering to protect critical karst groundwater recharge areas.

### **Cave/Karst Surface Mitigation**

The following stipulations will be applied to minimize impacts during construction, drilling and production.

#### **Construction:**

In the advent that any underground voids are opened up during construction activities, construction activities will be halted and the BLM will be notified immediately.

#### **No Blasting:**

No blasting will be utilized for pad construction. The pad will be constructed and leveled by adding the necessary fill and caliche.

#### **Pad Berming:**

The entire perimeter of the well pad will be bermed to prevent oil, salt, and other chemical contaminants from leaving the well pad.

- The compacted berm shall be constructed at a minimum of 12 inches high with impermeable mineral material (e.g. caliche).
- No water flow from the uphill side(s) of the pad shall be allowed to enter the well pad.
- The topsoil stockpile shall be located outside the bermed well pad.
- Topsoil, either from the well pad or surrounding area, shall not be used to construct the berm.
- No storm drains, tubing or openings shall be placed in the berm.
- If fluid collects within the bermed area, the fluid must be vacuumed into a safe container and disposed of properly at a state approved facility.
- The integrity of the berm shall be maintained around the surfaced pad throughout the life of the well and around the downsized pad after interim reclamation has been completed.
- Any access road entering the well pad shall be constructed so that the integrity of the berm height surrounding the well pad is not compromised. (Any access road crossing the berm cannot be lower than the berm height.)

#### **Tank Battery Liners and Berms:**

Tank battery locations and all facilities will be lined and bermed. A 20 mil permanent liner will be installed with a 4 oz. felt backing, or equivalent, to prevent tears or punctures. Tank battery berms must be large enough to contain 1 ½ times the content of the largest tank.

**Leak Detection System:**

A method of detecting leaks is required. The method could incorporate gauges to measure loss, siting valves and lines so they can be visually inspected, or installing electronic sensors to alarm when a leak is present. Leak detection plan will be submitted to BLM for approval.

**Automatic Shut-off Systems:**

Automatic shut off, check valves, or similar systems will be installed for pipelines and tanks to minimize the effects of catastrophic line failures used in production or drilling.

**Cave/Karst Subsurface Mitigation**

The following stipulations will be applied to protect cave/karst and ground water concerns:

**Rotary Drilling with Fresh Water:**

Fresh water will be used as a circulating medium in zones where caves or karst features are expected. SEE ALSO: Drilling COAs for this well.

**Directional Drilling:**

Kick off for directional drilling will occur at least 100 feet below the bottom of the cave occurrence zone. SEE ALSO: Drilling COAs for this well.

**Lost Circulation:**

ALL lost circulation zones from the surface to the base of the cave occurrence zone will be logged and reported in the drilling report.

Regardless of the type of drilling machinery used, if a void of four feet or more and circulation losses greater than 70 percent occur simultaneously while drilling in any cave-bearing zone, the BLM will be notified immediately by the operator. The BLM will assess the situation and work with the operator on corrective actions to resolve the problem.

**Abandonment Cementing:**

Upon well abandonment in high cave karst areas additional plugging conditions of approval may be required. The BLM will assess the situation and work with the operator to ensure proper plugging of the wellbore.

**Pressure Testing:**

Annual pressure monitoring will be performed by the operator on all casing annuli and reported in a sundry notice. If the test results indicated a casing failure has occurred, remedial action will be undertaken to correct the problem to the BLM's approval.

**Watershed**

- The entire well pad will be bermed to prevent oil, salt, and other chemical contaminants from leaving the well pad. Topsoil shall not be used to construct the berm. No water flow from the uphill side(s) of the pad shall be allowed to enter the

well pad. The berm shall be maintained through the life of the well and after interim reclamation has been completed.

- Any water erosion that may occur due to the construction of the well pad during the life of the well will be quickly corrected and proper measures will be taken to prevent future erosion.

## **VI. CONSTRUCTION**

### **A. NOTIFICATION**

The BLM shall administer compliance and monitor construction of the access road and well pad. Notify the Carlsbad Field Office at (575) 234-5909 at least 3 working days prior to commencing construction of the access road and/or well pad.

When construction operations are being conducted on this well, the operator shall have the approved APD and Conditions of Approval (COA) on the well site and they shall be made available upon request by the Authorized Officer.

### **B. TOPSOIL**

The operator shall strip the top portion of the soil (root zone) from the entire well pad area and stockpile the topsoil along the edge of the well pad as depicted in the APD. The root zone is typically six (6) inches in depth. All the stockpiled topsoil will be redistributed over the interim reclamation areas. Topsoil shall not be used for berming the pad or facilities. For final reclamation, the topsoil shall be spread over the entire pad area for seeding preparation.

Other subsoil (below six inches) stockpiles must be completely segregated from the topsoil stockpile. Large rocks or subsoil clods (not evident in the surrounding terrain) must be buried within the approved area for interim and final reclamation.

### **C. CLOSED LOOP SYSTEM**

Tanks are required for drilling operations: No Pits.

The operator shall properly dispose of drilling contents at an authorized disposal site.

### **D. FEDERAL MINERAL MATERIALS PIT**

Payment shall be made to the BLM prior to removal of any federal mineral materials. Call the Carlsbad Field Office at (575) 234-5972.

### **E. WELL PAD SURFACING**

Surfacing of the well pad is not required.

If the operator elects to surface the well pad, the surfacing material may be required to be removed at the time of reclamation. The well pad shall be constructed in a manner which creates the smallest possible surface disturbance, consistent with safety and operational needs.

### **F. EXCLOSURE FENCING (CELLARS & PITS)**

**Exclosure Fencing**

The operator will install and maintain exclosure fencing for all open well cellars to prevent access to public, livestock, and large forms of wildlife before and after drilling operations until the pit is free of fluids and the operator initiates backfilling. (For examples of exclosure fencing design, refer to BLM's Oil and Gas Gold Book, Exclosure Fence Illustrations, Figure 1, Page 18.)

**G. ON LEASE ACCESS ROADS****Road Width**

The access road shall have a driving surface that creates the smallest possible surface disturbance and does not exceed fourteen (14) feet in width. The maximum width of surface disturbance, when constructing the access road, shall not exceed twenty-five (25) feet.

**Surfacing**

Surfacing material is not required on the new access road driving surface. If the operator elects to surface the new access road or pad, the surfacing material may be required to be removed at the time of reclamation.

Where possible, no improvements should be made on the unsurfaced access road other than to remove vegetation as necessary, road irregularities, safety issues, or to fill low areas that may sustain standing water.

The Authorized Officer reserves the right to require surfacing of any portion of the access road at any time deemed necessary. Surfacing may be required in the event the road deteriorates, erodes, road traffic increases, or it is determined to be beneficial for future field development. The surfacing depth and type of material will be determined at the time of notification.

**Crowning**

Crowning shall be done on the access road driving surface. The road crown shall have a grade of approximately 2% (i.e., a 1" crown on a 14' wide road). The road shall conform to Figure 1; cross section and plans for typical road construction.

**Ditching**

Ditching shall be required on both sides of the road.

**Turnouts**

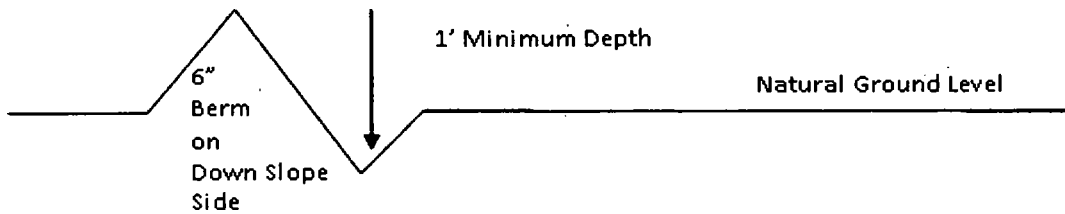
Vehicle turnouts shall be constructed on the road. Turnouts shall be intervisible with interval spacing distance less than 1000 feet. Turnouts shall conform to Figure 1; cross section and plans for typical road construction.

**Drainage**

Drainage control systems shall be constructed on the entire length of road (e.g. ditches, sidehill out sloping and insloping, lead-off ditches, culvert installation, and low water crossings).

A typical lead-off ditch has a minimum depth of 1 foot below and a berm of 6 inches above natural ground level. The berm shall be on the down-slope side of the lead-off ditch.

#### **Cross Section of a Typical Lead-off Ditch**



All lead-off ditches shall be graded to drain water with a 1 percent minimum to 3 percent maximum ditch slope. The spacing interval are variable for lead-off ditches and shall be determined according to the formula for spacing intervals of lead-off ditches, but may be amended depending upon existing soil types and centerline road slope (in %);

#### **Formula for Spacing Interval of Lead-off Ditches**

Example - On a 4% road slope that is 400 feet long, the water flow shall drain water into a lead-off ditch. Spacing interval shall be determined by the following formula:

$$400 \text{ foot road with } 4\% \text{ road slope: } \frac{400'}{4\%} + 100' = 200' \text{ lead-off ditch interval}$$

#### **Cattle guards**

An appropriately sized cattle guard sufficient to carry out the project shall be installed and maintained at fence/road crossings. Any existing cattle guards on the access road route shall be repaired or replaced if they are damaged or have deteriorated beyond practical use. The operator shall be responsible for the condition of the existing cattle guards that are in place and are utilized during lease operations.

#### **Fence Requirement**

Where entry is granted across a fence line, the fence shall be braced and tied off on both sides of the passageway prior to cutting. The operator shall notify the private surface landowner or the grazing allotment holder prior to crossing any fences.

#### **Public Access**

Public access on this road shall not be restricted by the operator without specific written approval granted by the Authorized Officer.

### Construction Steps

1. Salvage topsoil
2. Construct road

3. Redistribute topsoil
4. Revegetate slopes

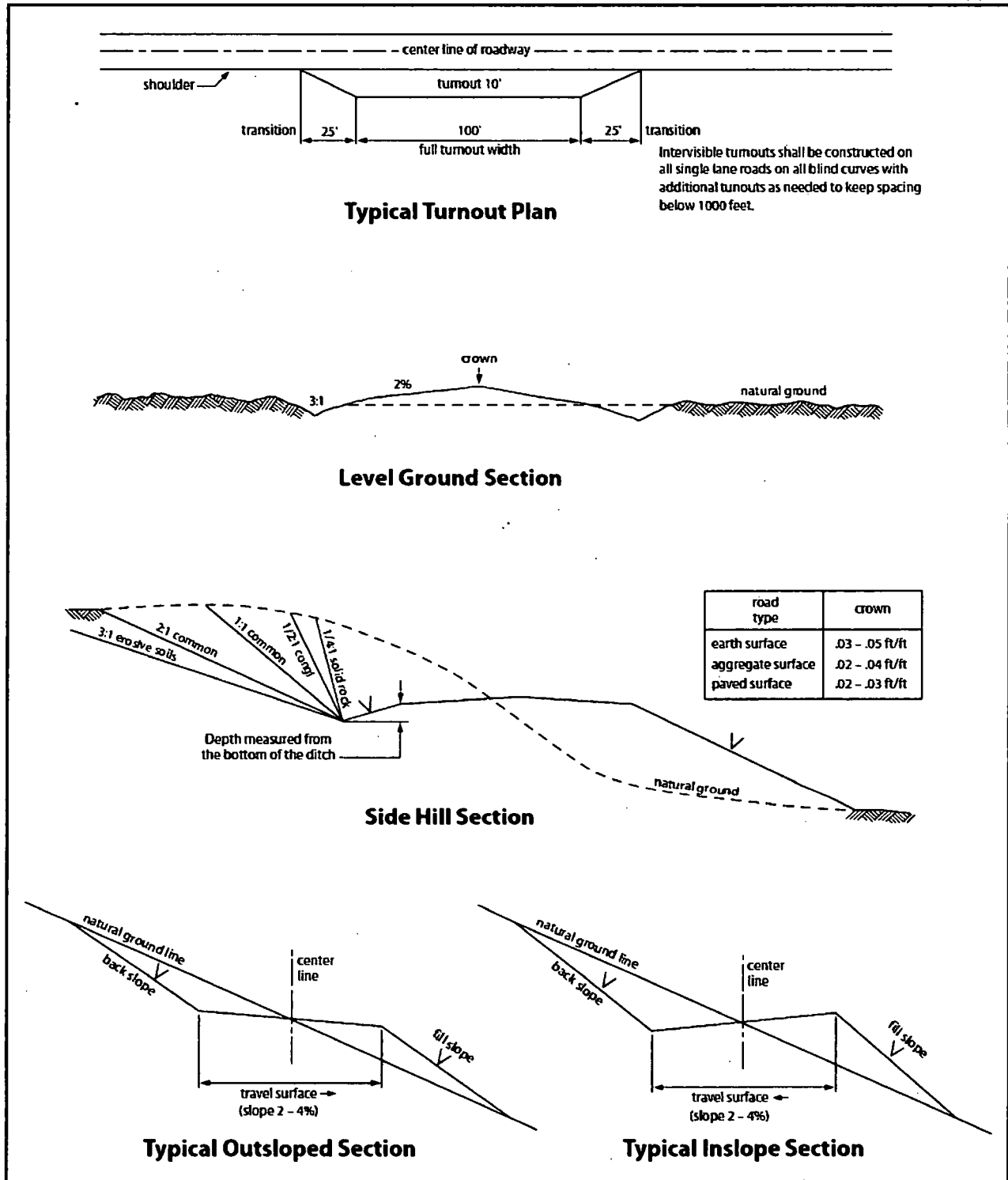


Figure 1. Cross-sections and plans for typical road sections representative of BLM resource or FS local and higher-class roads.

## **VII. PRODUCTION (POST DRILLING)**

### **A. WELL STRUCTURES & FACILITIES**

#### **Placement of Production Facilities**

Production facilities should be placed on the well pad to allow for maximum interim recontouring and revegetation of the well location.

#### **Exclosure Netting (Open-top Tanks)**

Immediately following active drilling or completion operations, the operator will take actions necessary to prevent wildlife and livestock access, including avian wildlife, to all open-topped tanks that contain or have the potential to contain salinity sufficient to cause harm to wildlife or livestock, hydrocarbons, or Resource Conservation and Recovery Act of 1976-exempt hazardous substances. At a minimum, the operator will net, screen, or cover open-topped tanks to exclude wildlife and livestock and prevent mortality. If the operator uses netting, the operator will cover and secure the open portion of the tank to prevent wildlife entry. The operator will net, screen, or cover the tanks until the operator removes the tanks from the location or the tanks no longer contain substances that could be harmful to wildlife or livestock. Use a maximum netting mesh size of 1 ½ inches. The netting must not be in contact with fluids and must not have holes or gaps.

#### **Chemical and Fuel Secondary Containment and Exclosure Screening**

The operator will prevent all hazardous, poisonous, flammable, and toxic substances from coming into contact with soil and water. At a minimum, the operator will install and maintain an impervious secondary containment system for any tank or barrel containing hazardous, poisonous, flammable, or toxic substances sufficient to contain the contents of the tank or barrel and any drips, leaks, and anticipated precipitation. The operator will dispose of fluids within the containment system that do not meet applicable state or U. S. Environmental Protection Agency livestock water standards in accordance with state law; the operator must not drain the fluids to the soil or ground. The operator will design, construct, and maintain all secondary containment systems to prevent wildlife and livestock exposure to harmful substances. At a minimum, the operator will install effective wildlife and livestock exclosure systems such as fencing, netting, expanded metal mesh, lids, and grate covers. Use a maximum netting mesh size of 1 ½ inches.

#### **Open-Vent Exhaust Stack Exclosures**

The operator will construct, modify, equip, and maintain all open-vent exhaust stacks on production equipment to prevent birds and bats from entering, and to discourage perching, roosting, and nesting. (*Recommended exclosure structures on open-vent exhaust stacks are in the shape of a cone.*) Production equipment includes, but may not be limited to, tanks, heater-treaters, separators, dehydrators, flare stacks, in-line units, and compressor mufflers.

#### **Containment Structures**

Proposed production facilities such as storage tanks and other vessels will have a secondary containment structure that is constructed to hold the capacity of 1.5 times the largest tank, plus freeboard to account for precipitation, unless more stringent protective requirements are deemed necessary.

#### **Painting Requirement**

All above-ground structures including meter housing that are not subject to safety requirements shall be painted a flat non-reflective paint color, **Shale Green** from the BLM Standard Environmental Color Chart (CC-001: June 2008).

### **B. PIPELINES**

#### **BURIED PIPELINE STIPULATIONS**

A copy of the application (Grant, APD, or Sundry Notice) and attachments, including conditions of approval, survey plat and/or map, will be on location during construction. BLM personnel may request to you a copy of your permit during construction to ensure compliance with all stipulations.

Holder agrees to comply with the following stipulations to the satisfaction of the Authorized Officer:

1. The Holder shall indemnify the United States against any liability for damage to life or property arising from the occupancy or use of public lands under this grant.
2. The Holder shall comply with all applicable Federal laws and regulations existing or hereafter enacted or promulgated. In any event, the holder shall comply with the Toxic Substances Control Act of 1976 as amended, 15 USC 2601 et seq. (1982) with regards to any toxic substances that are used, generated by or stored on the right-of-way or on facilities authorized under this right-of-way grant. (See 40 CFR Part 702-799 and especially, provisions on polychlorinated biphenyls, 40 CFR 761.1-761.193.) Additionally, any release of toxic substances (leaks, spills, etc.) in excess of the reportable quantity established by 40 CFR Part 117 shall be reported as required by the Comprehensive Environmental Response, Compensation, and Liability Act, section 102b. A copy of any report required or requested by any Federal agency or State government as a result of a reportable release or spill of any toxic substances shall be furnished to the authorized officer concurrent with the filing of the reports to the involved Federal agency or State government.
3. The holder agrees to indemnify the United States against any liability arising from the release of any hazardous substance or hazardous waste (as these terms are defined in the Comprehensive Environmental Response, Compensation and Liability Act of 1980, 42 U.S.C. 9601, et seq. or the Resource Conservation and Recovery Act, 42 U.S.C. 6901, et seq.) on the Right-of-Way (unless the release or threatened release is wholly unrelated to the Right-of-Way holder's activity on the Right-of-Way), or resulting from the activity of

the Right-of-Way holder on the Right-of-Way. This agreement applies without regard to whether a release is caused by the holder, its agent, or unrelated third parties.

4. If, during any phase of the construction, operation, maintenance, or termination of the pipeline, any oil or other pollutant should be discharged from the pipeline system, impacting Federal lands, the control and total removal, disposal, and cleaning up of such oil or other pollutant, wherever found, shall be the responsibility of holder, regardless of fault. Upon failure of holder to control, dispose of, or clean up such discharge on or affecting Federal lands, or to repair all damages resulting therefrom, on the Federal lands, the Authorized Officer may take such measures as he deems necessary to control and clean up the discharge and restore the area, including where appropriate, the aquatic environment and fish and wildlife habitats, at the full expense of the holder. Such action by the Authorized Officer shall not relieve holder of any responsibility as provided herein.

5. All construction and maintenance activity will be confined to the authorized right-of-way.

6. The pipeline will be buried with a minimum cover of 36 inches between the top of the pipe and ground level.

7. The maximum allowable disturbance for construction in this right-of-way will be 30 feet:

- Blading of vegetation within the right-of-way will be allowed: maximum width of blading operations will not exceed 20 feet. The trench is included in this area. (*Blading is defined as the complete removal of brush and ground vegetation.*)
- Clearing of brush species within the right-of-way will be allowed: maximum width of clearing operations will not exceed 30 feet. The trench and bladed area are included in this area. (*Clearing is defined as the removal of brush while leaving ground vegetation (grasses, weeds, etc.) intact. Clearing is best accomplished by holding the blade 4 to 6 inches above the ground surface.*)
- The remaining area of the right-of-way (if any) shall only be disturbed by compressing the vegetation. (*Compressing can be caused by vehicle tires, placement of equipment, etc.*)

8. The holder shall stockpile an adequate amount of topsoil where blading is allowed. The topsoil to be stripped is approximately 6 inches in depth. The topsoil will be segregated from other spoil piles from trench construction. The topsoil will be evenly distributed over the bladed area for the preparation of seeding.

9. The holder shall minimize disturbance to existing fences and other improvements on public lands. The holder is required to promptly repair improvements to at least their former state. Functional use of these improvements will be maintained at all times. The holder will contact the owner of any improvements prior to disturbing them. When necessary to pass through a fence line, the fence shall be braced on both sides of the passageway prior to cutting of the fence. No permanent gates will be allowed unless approved by the Authorized Officer.

10. Vegetation, soil, and rocks left as a result of construction or maintenance activity will be randomly scattered on this right-of-way and will not be left in rows, piles, or berms, unless otherwise approved by the Authorized Officer. The entire right-of-way shall be recontoured to match the surrounding landscape. The backfilled soil shall be compacted and a 6 inch berm will be left over the ditch line to allow for settling back to grade.

11. In those areas where erosion control structures are required to stabilize soil conditions, the holder will install such structures as are suitable for the specific soil conditions being encountered and which are in accordance with sound resource management practices.

12. The holder will reseed all disturbed areas. Seeding will be done according to the attached seeding requirements, using the following seed mix.

<input type="checkbox"/> seed mixture 1	<input type="checkbox"/> seed mixture 3
<input type="checkbox"/> seed mixture 2	<input checked="" type="checkbox"/> seed mixture 4
<input type="checkbox"/> seed mixture 2/LPC	<input type="checkbox"/> Aplomado Falcon Mixture

13. All above-ground structures not subject to safety requirements shall be painted by the holder to blend with the natural color of the landscape. The paint used shall be color which simulates "Standard Environmental Colors" – **Shale Green**, Munsell Soil Color No. 5Y 4/2.

14. The pipeline will be identified by signs at the point of origin and completion of the right-of-way and at all road crossings. At a minimum, signs will state the holder's name, BLM serial number, and the product being transported. All signs and information thereon will be posted in a permanent, conspicuous manner, and will be maintained in a legible condition for the life of the pipeline.

15. The holder shall not use the pipeline route as a road for purposes other than routine maintenance as determined necessary by the Authorized Officer in consultation with the holder before maintenance begins. The holder will take whatever steps are necessary to ensure that the pipeline route is not used as a roadway. As determined necessary during the life of the pipeline, the Authorized Officer may ask the holder to construct temporary deterrence structures.

16. Any cultural and/or paleontological resources (historic or prehistoric site or object) discovered by the holder, or any person working on his behalf, on public or Federal land shall be immediately reported to the Authorized Officer. Holder shall suspend all operations in the immediate area of such discovery until written authorization to proceed is issued by the Authorized Officer. An evaluation of the discovery will be made by the Authorized Officer to determine appropriate actions to prevent the loss of significant cultural or scientific values. The holder will be responsible for the cost of evaluation and any decision as to proper mitigation measures will be made by the Authorized Officer after consulting with the holder.

17. The operator shall be held responsible if noxious weeds become established within the areas of operations. Weed control shall be required on the disturbed land where noxious weeds exist, which includes associated roads, pipeline corridor and adjacent land affected by the establishment of weeds due to this action. The operator shall consult with the Authorized Officer for acceptable weed control methods, which include following EPA and BLM requirements and policies.

18. Escape Ramps - The operator will construct and maintain pipeline/utility trenches [that are not otherwise fenced, screened, or netted] to prevent livestock, wildlife, and humans from becoming entrapped. At a minimum, the operator will construct and maintain escape ramps, ladders, or other methods of avian and terrestrial wildlife escape in the trenches according to the following criteria:

- a. Any trench left open for eight (8) hours or less is not required to have escape ramps; however, before the trench is backfilled, the contractor/operator shall inspect the trench for wildlife, remove all trapped wildlife, and release them at least 100 yards from the trench.
- b. For trenches left open for eight (8) hours or more, earthen escape ramps (built at no more than a 30 degree slope and spaced no more than 500 feet apart) shall be placed in the trench.

## **VIII. INTERIM RECLAMATION**

During the life of the development, all disturbed areas not needed for active support of production operations should undergo interim reclamation in order to minimize the environmental impacts of development on other resources and uses.

Within six (6) months of well completion, operators should work with BLM surface management specialists (Jim Amos: 575-234-5909) to devise the best strategies to reduce the size of the location. Interim reclamation should allow for remedial well operations, as well as safe and efficient removal of oil and gas.

During reclamation, the removal of caliche is important to increasing the success of revegetating the site. Removed caliche that is free of contaminants may be used for road repairs, fire walls or for building other roads and locations. In order to operate the well or complete workover operations, it may be necessary to drive, park and operate on restored interim vegetation within the previously disturbed area. Disturbing revegetated areas for production or workover operations will be allowed. If there is significant disturbance and loss of vegetation, the area will need to be revegetated. Communicate with the appropriate BLM office for any exceptions/exemptions if needed.

All disturbed areas after they have been satisfactorily prepared need to be reseeded with the seed mixture provided below.

Upon completion of interim reclamation, the operator shall submit a Sundry Notices and Reports on Wells, Subsequent Report of Reclamation (Form 3160-5).

## **IX. FINAL ABANDONMENT & RECLAMATION**

At final abandonment, well locations, production facilities, and access roads must undergo "final" reclamation so that the character and productivity of the land are restored.

Earthwork for final reclamation must be completed within six (6) months of well plugging. All pads, pits, facility locations and roads must be reclaimed to a satisfactory revegetated, safe, and stable condition, unless an agreement is made with the landowner or BLM to keep the road and/or pad intact.

After all disturbed areas have been satisfactorily prepared, these areas need to be revegetated with the seed mixture provided below. Seeding should be accomplished by drilling on the contour whenever practical or by other approved methods. Seeding may need to be repeated until revegetation is successful, as determined by the BLM.

Operators shall contact a BLM surface protection specialist prior to surface abandonment operations for site specific objectives (Jim Amos: 575-234-5909).

#### Mixture 4, for Gypsum Sites

The holder shall seed all the disturbed areas with the seed mixture listed below. The seed mixture shall be planted in the amounts specified in pounds of pure live seed (PLS)\* per acre. There shall be no primary or secondary noxious weeds in the seed mixture. Seed will be tested and the viability testing of seed will be done in accordance with State law(s) and within nine (9) months prior to purchase. Commercial seed will be either certified or registered seed. The seed container will be tagged in accordance with State law(s) and available for inspection by the authorized officer.

Seed will be planted using a drill equipped with a depth regulator to ensure proper depth of planting where drilling is possible. The seed mixture will be evenly and uniformly planted over the disturbed area (smaller/heavier seeds have a tendency to drop the bottom of the drill and are planted first). The holder shall take appropriate measures to ensure this does not occur. Where drilling is not possible, seed will be broadcast and the area shall be raked or chained to cover the seed. When broadcasting the seed, the pounds per acre are to be doubled. The seeding will be repeated until a satisfactory stand is established as determined by the authorized officer. Evaluation of growth will not be made before completion of at least one full growing season after seeding.

Species to be planted in pounds of pure live seed\* per acre:

<u>Species</u>	<u>lb/acre</u>
Alkli Sacaton ( <i>Sporobolus airoides</i> )	1.5
DWS~ Four-wing saltbush ( <i>Atriplex canescens</i> )	8.0

~DWS: DeWinged Seed

\*Pounds of pure live seed:

Pounds of seed x percent purity x percent germination = pounds pure live seed



U.S. Department of the Interior  
BUREAU OF LAND MANAGEMENT

## Operator Certification Data Report

06/19/2018

### 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 the company I represent, 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.*

**NAME:** Aricka Easterling

**Signed on:** 03/22/2017

**Title:** Regulatory Analyst

**Street Address:** 202 S. Cheyenne Ave, Ste 1000

**City:** Tulsa

**State:** OK

**Zip:** 74103

**Phone:** (918)560-7060

**Email address:** aeasterling@cimarex.com

### Field Representative

**Representative Name:**

**Street Address:**

**City:**

**State:**

**Zip:**

**Phone:**

**Email address:**



APD ID: 10400012538

Submission Date: 03/23/2017

Operator Name: CIMAREX ENERGY COMPANY

Well Name: MEDWICK 32 FEDERAL COM

Well Number: 6H

Well Type: CONVENTIONAL GAS WELL

Well Work Type: Drill

Highlighted data  
reflects the most  
recent changes

[Show Final Text](#)

### Section 1 - General

APD ID: 10400012538

Tie to previous NOS? 10400005345 Submission Date: 03/23/2017

BLM Office: CARLSBAD

User: Aricka Easterling

Title: Regulatory Analyst

Federal/Indian APD: FED

Is the first lease penetrated for production Federal or Indian? FED

Lease number: NMNM117116

Lease Acres: 1364.69

Surface access agreement in place?

Allotted?

Reservation:

Agreement in place? NO

Federal or Indian agreement:

Agreement number:

Agreement name:

Keep application confidential? YES

Permitting Agent? NO

APD Operator: CIMAREX ENERGY COMPANY

Operator letter of designation:

### Operator Info

Operator Organization Name: CIMAREX ENERGY COMPANY

Operator Address: 202 S. Cheyenne Ave., Ste 1000

Zip: 74103

Operator PO Box:

Operator City: Tulsa

State: OK

Operator Phone: (432)620-1936

Operator Internet Address: [tstathem@cimarex.com](mailto:tstathem@cimarex.com)

### Section 2 - Well Information

Well in Master Development Plan? NO

Mater Development Plan name:

Well in Master SUPO? NO

Master SUPO name:

Well in Master Drilling Plan? NO

Master Drilling Plan name:

Well Name: MEDWICK 32 FEDERAL COM

Well Number: 6H

Well API Number:

Field/Pool or Exploratory? Field and Pool

Field Name: PURPLE-SAGE  
WOLFCAMP GAS

Pool Name: PURPLE SAGE  
WOLFCAMP GAS

Is the proposed well in an area containing other mineral resources? NATURAL GAS,OIL

**Operator Name:** CIMAREX ENERGY COMPANY

**Well Name:** MEDWICK 32 FEDERAL COM

**Well Number:** 6H

**Describe other minerals:**

**Is the proposed well in a Helium production area?** N

**Use Existing Well Pad?** NO

**New surface disturbance?**

**Type of Well Pad:** MULTIPLE WELL

**Multiple Well Pad Name:**  
MEDWICK 32 FEDERAL COM  
**Number of Legs:** 1

**Number:** 4H, 5H, 6H

**Well Class:** HORIZONTAL

**Well Work Type:** Drill

**Well Type:** CONVENTIONAL GAS WELL

**Describe Well Type:**

**Well sub-Type:** EXPLORATORY (WILDCAT)

**Describe sub-type:**

**Distance to town:** 24 Miles

**Distance to nearest well:** 31 FT

**Distance to lease line:** 405 FT

**Reservoir well spacing assigned acres Measurement:** 223.13 Acres

**Well plat:** Medwick\_32\_Fed\_Com\_6H\_C102\_Plat\_03-22-2017.pdf

Medwick\_32\_Fed\_Com\_6H\_Well\_Location\_Plat\_03-22-2017.pdf

Medwick\_32\_Fed\_Com\_6H\_Well\_location\_table\_03-22-2017.pdf

**Well work start Date:** 09/27/2017

**Duration:** 30 DAYS

### Section 3 - Well Location Table

**Survey Type:** OTHER

**Describe Survey Type:**

**Datum:** NAD83

**Vertical Datum:** NAVD88

**Survey number:**

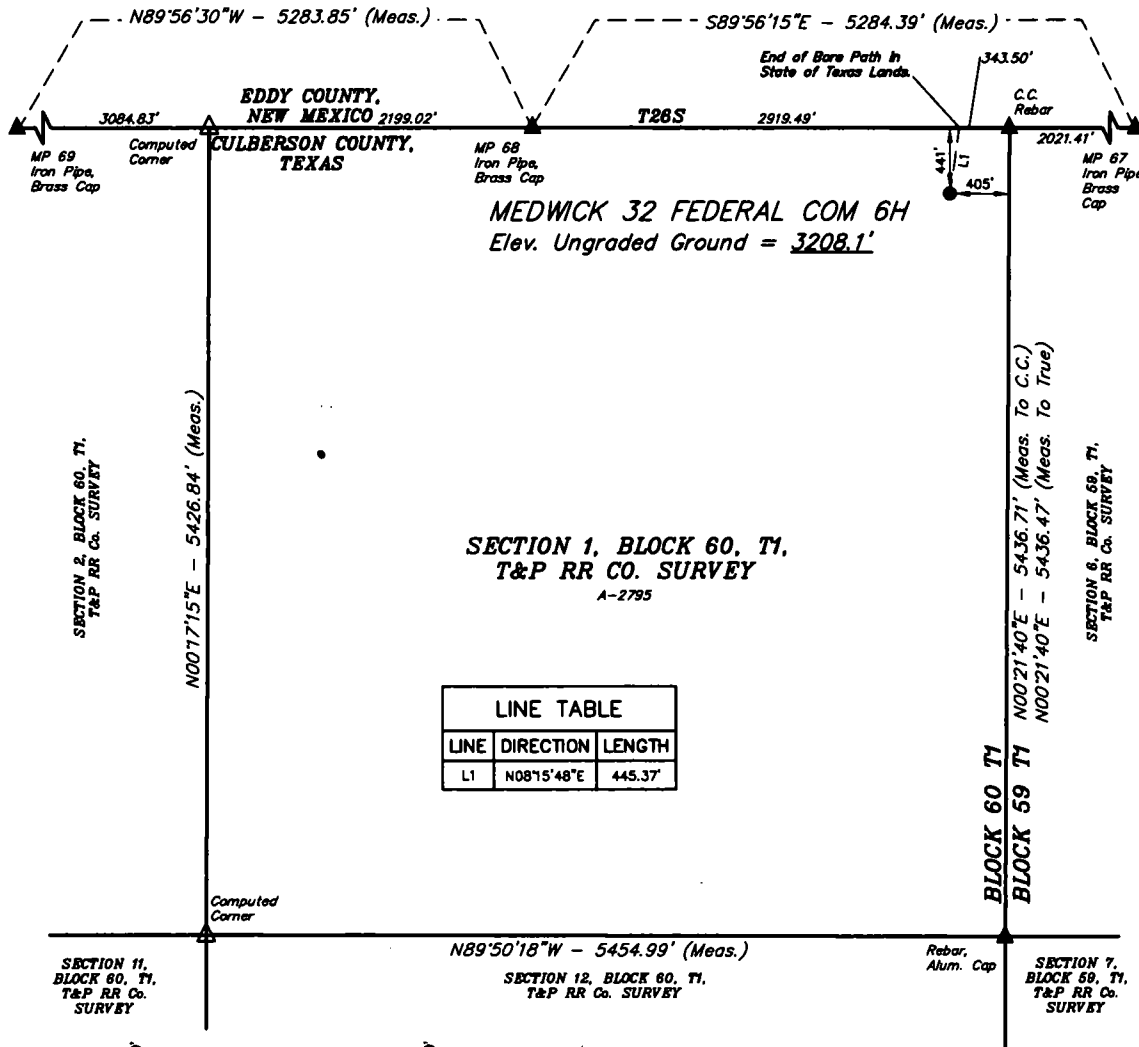
Well	Latitude	Longitude	County	State	Meridian	Lease Type	Lease Number	Elevation	MD	TVD
SHL Leg #1	31.998822	-104.214208	CULBERSO N	TEXAS	TEXAS MERIDIA N	FEE	FEE	3208	0	0

# LEGEND:

- = PROPOSED WELLHEAD
- ▲ = SECTION CORNERS LOCATED
- △ = SECTION CORNERS RE-ESTABLISHED (Not Set on Ground)

NAD 83 (SURFACE LOCATION)	SURVEY PERP.
LATITUDE = 31°59'55.76" (31.998822)	441' FNL
LONGITUDE = 104°12'51.15" (104.214208)	405' FEL
STATE PLANE NAD 83 (CENTRAL)	SURVEY
N: 10711733.54 E: 1093638.21	T&P RR Co.
NAD 27 (SURFACE LOCATION)	SURVEY.
LATITUDE = 31°59'55.32" (31.998700)	A-2795
LONGITUDE = 104°12'49.37" (104.213714)	
STATE PLANE NAD 27 (CENTRAL)	
N: 869154.80 E: 797180.30	

NAD 83 (POINT ON STATE LINE)	SURVEY PERP.
LATITUDE = 32°00'00.12" (32.000033)	0' FNL
LONGITUDE = 104°12'50.40" (104.214000)	344' FEL
STATE PLANE NAD 83 (CENTRAL)	SURVEY
N: 10712171.75 E: 1093717.46	T&P RR Co.
NAD 27 (POINT ON STATE LINE)	SURVEY.
LATITUDE = 31°59'59.68" (31.999911)	A-2795
LONGITUDE = 104°12'48.63" (104.213508)	
STATE PLANE NAD 27 (CENTRAL)	
N: 869593.00 E: 797259.56	

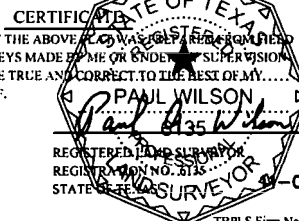


**NOTES:**

- Distances referenced on plat to section lines and lease lines are perpendicular.
- Basis of bearing is a G.P.S. observation (Vertical Control Datum: NAVD88)

**UELS, LLC**  
Regional Office \* 111 NE 3rd Street  
Seminole, TX 79360 \* (432) 955-6100  
Corporate Office \* 85 South 200 East  
Vernal, UT 84078 \* (435) 789-1017

THIS IS TO CERTIFY THAT THE ABOVE WAS A TRUE AND CORRECT COPY OF THE ORIGINAL NOTES OF ACTUAL SURVEYS MADE BY ME OR UNDER MY SUPERVISION AND THAT THE SAME ARE TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF.



**CIMAREX ENERGY CO.**  
**MEDWICK 32 FEDERAL COM 6H**  
**441' FNL 405' FEL**  
**SECTION 1, BLOCK 60, T1, T&P RR Co. SURVEY**  
**CULBERSON COUNTY, TEXAS**

SURVEYED BY	J.A.V., G.M.	10-16-16	SCALE
DRAWN BY	C.D.	11-02-16	1" = 1000'

**WELL LOCATION PLAT**



# Medwick 32 Federal Com 6H

Cimarex Energy Co

Eddy Cty, NM

Copy <input type="checkbox"/>	State * NM Meridian * NEW MEXICO PRINCIPAL County * EDDY
Clear Copy <input checked="" type="checkbox"/>	Latitude * 31.9995 Longitude * -104.214047
	Elevation (MSL) -6365
	MD (ft.) * 9670 TVD (ft.) * 9573
PPP	Lease Type * FEDERAL
	Lease # * NMNM117116
Leg# 1-1	NS-Foot * 250 FSL EW-Foot * 2021 FWL
Add PPP	Twsp. * 26S Range * 27E Section * 32
	Aliquot Lot 3 Tract
	* Either Aliquot, Lot or Tract is required

Copy <input type="checkbox"/>	State * NM Meridian * NEW MEXICO PRINCIPAL County * EDDY
Clear Copy <input checked="" type="checkbox"/>	Latitude * 32.019561 Longitude * -104.214097
	Elevation (MSL) -13775
	MD (ft.) * 16983 TVD (ft.) * 16983
EXIT	Lease Type * FEDERAL
	Lease # * NMNM114350
Leg# 1	NS-Foot * 330 FNL EW-Foot * 2020 FWL
	Twsp. * 26S Range * 27E Section * 29
	Aliquot NENW Lot Tract
	* Either Aliquot, Lot or Tract is required

Copy <input type="checkbox"/>	State * NM Meridian * NEW MEXICO PRINCIPAL County * EDDY
Clear Copy <input checked="" type="checkbox"/>	Latitude * 32.019561 Longitude * -104.214097
	Elevation (MSL) -13775
	MD (ft.) * 16983 TVD (ft.) * 16983
BHL	Lease Type * FEDERAL
	Lease # * NMNM114350
Leg# 1	NS-Foot * 330 FNL EW-Foot * 2020 FWL
	Twsp. * 26S Range * 27E Section * 29
	Aliquot NENW Lot Tract
	* Either Aliquot, Lot or Tract is required



U.S. Department of the Interior  
BUREAU OF LAND MANAGEMENT

## Drilling Plan Data Report

06/19/2018

APD ID: 10400012538

Submission Date: 03/23/2017

Highlighted data  
reflects the most  
recent changes

Operator Name: CIMAREX ENERGY COMPANY

Well Name: MEDWICK 32 FEDERAL COM

Well Number: 6H

[Show Final Text](#)

Well Type: CONVENTIONAL GAS WELL

Well Work Type: Drill

### Section 1 - Geologic Formations

Formation ID	Formation Name	Elevation	True Vertical Depth	Measured Depth	Lithologies	Mineral Resources	Producing Formation
1	RUSTLER	3208	0	0		USEABLE WATER	No
2	SALADO	1947	1261	1261		NONE	No
3	CASTILE	1502	1706	1706		NONE	No
4	BELL CANYON	1251	1957	1957		NONE	No
5	CHERRY CANYON	263	2945	2945		NONE	No
6	BRUSHY CANYON	-814	4022	4022		NONE	No
7	BRUSHY CANYON LOWER	-2109	5317	5317		NONE	No
8	BONE SPRING	-2321	5529	5529		NATURAL GAS,OIL	No
9	BONE SPRING A ZONE	-2443	5651	5651		NATURAL GAS,OIL	No
10	BONE SPRING C ZONE	-2949	6157	6157		NATURAL GAS,OIL	No
11	BONE SPRING 1ST	-3270	6478	6478		NATURAL GAS,OIL	No
12	BONE SPRING 2ND	-3734	6942	6942		NATURAL GAS,OIL	No
13	BONE SPRING 3RD	-5053	8261	8261		NATURAL GAS,OIL	No
14	WOLFCAMP	-5394	8602	8602		NATURAL GAS,OIL	Yes

### Section 2 - Blowout Prevention

**Operator Name:** CIMAREX ENERGY COMPANY

**Well Name:** MEDWICK 32 FEDERAL COM

**Well Number:** 6H

**Pressure Rating (PSI):** 2M

**Rating Depth:** 400

**Equipment:** Exhibit "E-1". A BOP consisting of three rams, including one blind ram and two pipe rams and one annular preventer. An accumulator that meets the requirements in Onshore Order #2 for the pressure rating of the BOP stack. A rotating head may be installed as needed. A Kelly clock will be installed and maintained in operable condition and a drill string safety valve in the open position will be available on the rig floor.

**Requesting Variance?** YES

**Variance request:** Co-flex line between the BOP and choke manifold. Certification for proposed co-flex hose is attached (Please see Exhibit F, F-1, F-2, F-3). The hose is not required by the manufacturer to be anchored. In the event the specific hose is not available, one of equal or higher rating will be used. Variance to include Hammer Union connections on lines downstream of the buffer tank only.

**Testing Procedure:** BOP's will be tested by an independent service company. The ram preventers, choke manifold, and safety valves will be tested as follows: On the surface casing, pressure tests will be made to 250 psi low and 2000 psi high. On the intermediate casing, pressure tests will be made to 250 psi low and 3000 psi high. The Annular Preventer will be tested to 250 psi low and 1000 psi high on the surface casing and 250 psi low and 1500 psi high on the intermediate casing. The System may be upgraded to a higher pressure but still tested to the working pressures listed. If the system is upgraded all the components installed will be functional and tested.

**Choke Diagram Attachment:**

Medwick\_32\_Fed\_Com\_6H\_Choke\_2M3M\_03-22-2017.pdf

**BOP Diagram Attachment:**

Medwick\_32\_Fed\_Com\_6H\_BOP\_2M\_03-22-2017.pdf

---

**Pressure Rating (PSI):** 3M

**Rating Depth:** 1937

**Equipment:** Exhibit "E-1". A BOP consisting of three rams, including one blind ram and two pipe rams and one annular preventer. An accumulator that meets the requirements in Onshore Order #2 for the pressure rating of the BOP stack. A rotating head may be installed as needed. A Kelly clock will be installed and maintained in operable condition and a drill string safety valve in the open position will be available on the rig floor.

**Requesting Variance?** YES

**Variance request:** Co-flex line between the BOP and choke manifold. Certification for proposed co-flex hose is attached (Please see Exhibit F, F-1, F-2, F-3). The hose is not required by the manufacturer to be anchored. In the event the specific hose is not available, one of equal or higher rating will be used. Variance to include Hammer Union connections on lines downstream of the buffer tank only.

**Testing Procedure:** BOP's will be tested by an independent service company. The ram preventers, choke manifold, and safety valves will be tested as follows: On the surface casing, pressure tests will be made to 250 psi low and 2000 psi high. On the intermediate casing, pressure tests will be made to 250 psi low and 3000 psi high. The Annular Preventer will be tested to 250 psi low and 1000 psi high on the surface casing and 250 psi low and 1500 psi high on the intermediate casing. The System may be upgraded to a higher pressure but still tested to the working pressures listed. If the system is upgraded all the components installed will be functional and tested.

**Choke Diagram Attachment:**

Medwick\_32\_Fed\_Com\_6H\_Choke\_2M3M\_03-22-2017.pdf

**BOP Diagram Attachment:**

Medwick\_32\_Fed\_Com\_6H\_BOP\_3M\_03-22-2017.pdf

Operator Name: CIMAREX ENERGY COMPANY

Well Name: MEDWICK 32 FEDERAL COM

Well Number: 6H

Pressure Rating (PSI): 5M

Rating Depth: 10249

**Equipment:** Exhibit "E-1". A BOP consisting of three rams, including one blind ram and two pipe rams and one annular preventer. An accumulator that meets the requirements in Onshore Order #2 for the pressure rating of the BOP stack. A rotating head may be installed as needed. A Kelly clock will be installed and maintained in operable condition and a drill string safety valve in the open position will be available on the rig floor.

**Requesting Variance?** YES

**Variance request:** Co-flex line between the BOP and choke manifold. Certification for proposed co-flex hose is attached (Please see Exhibit F, F-1, F-2, F-3). The hose is not required by the manufacturer to be anchored. In the event the specific hose is not available, one of equal or higher rating will be used. Variance to include Hammer Union connections on lines downstream of the buffer tank only.

**Testing Procedure:** BOP's will be tested by an independent service company. The ram preventers, choke manifold, and safety valves will be tested as follows: On the surface casing, pressure tests will be made to 250 psi low and 2000 psi high. On the intermediate casing, pressure tests will be made to 250 psi low and 3000 psi high. On the Production casing, pressure tests will be made to 250 psi low and 5000 psi high. The Annular Preventer will be tested to 250 psi low and 1000 psi high on the surface casing, 250 psi low and 1500 psi high on the intermediate casing and 250 psi low and 2500 psi high on the production casing. The System may be upgraded to a higher pressure but still tested to the working pressures listed. If the system is upgraded all the components installed will be functional and tested.

**Choke Diagram Attachment:**

Medwick\_32\_Fed\_Com\_6H\_Choke\_5M\_03-22-2017.pdf

**BOP Diagram Attachment:**

Medwick\_32\_Fed\_Com\_6H\_BOP\_5M\_03-22-2017.pdf

### Section 3 - Casing

Casing ID	String Type	Hole Size	Csg Size	Condition	Standard	Tapered String	Top Set MD	Bottom Set MD	Top Set TVD	Bottom Set TVD	Top Set MSL	Bottom Set MSL	Calculated casing length MD	Grade	Weight	Joint Type	Collapse SF	Burst SF	Joint SF Type	Joint SF	Body SF Type	Body SF
1	SURFACE	17.5	13.375	NEW	API	N	0	400	0	400	-6492	-6892	400	OTHER	48	STC	4.04	9.45	BUOY	16.77	BUOY	16.77
2	INTERMEDIATE	12.25	9.625	NEW	API	N	0	1937	0	1937	-6492	-8429	1937	J-55	36	LTC	1.97	3.43	BUOY	6.5	BUOY	6.5
3	PRODUCTION	8.75	7.0	NEW	API	N	0	9151	0	9151	-6492	-15643	9151	L-80	26	LTC	1.26	1.69	BUOY	2.03	BUOY	2.03
4	PRODUCTION	8.75	7.0	NEW	API	N	9151	10249	9151	10249	-15643	-16741	1098	L-80	26	BUTT	1.19	1.6	BUOY	42.31	BUOY	42.31
5	COMPLETION SYSTEM	6	4.5	NEW	API	N	9151	16983	9151	16983	-15643	-23475	7832	P-110	11.6	BUTT	1.16	1.63	BUOY	57.63	BUOY	57.63

**Operator Name:** CIMAREX ENERGY COMPANY

**Well Name:** MEDWICK 32 FEDERAL COM

**Well Number:** 6H

---

**Casing Attachments**

---

**Casing ID:** 1      **String Type:** SURFACE

**Inspection Document:**

**Spec Document:**

**Tapered String Spec:**

**Casing Design Assumptions and Worksheet(s):**

- Medwick\_32\_Fed\_Com\_6H\_Casing\_Assumptions\_03-22-2017.pdf

---

**Casing ID:** 2      **String Type:** INTERMEDIATE

**Inspection Document:**

**Spec Document:**

**Tapered String Spec:**

**Casing Design Assumptions and Worksheet(s):**

- Medwick\_32\_Fed\_Com\_6H\_Casing\_Assumptions\_03-22-2017.pdf

---

**Casing ID:** 3      **String Type:** PRODUCTION

**Inspection Document:**

**Spec Document:**

**Tapered String Spec:**

**Casing Design Assumptions and Worksheet(s):**

- Medwick\_32\_Fed\_Com\_6H\_Casing\_Assumptions\_03-22-2017.pdf
-

Operator Name: CIMAREX ENERGY COMPANY

Well Name: MEDWICK 32 FEDERAL COM

Well Number: 6H

#### Casing Attachments

Casing ID: 4 String Type: PRODUCTION

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

Medwick\_32\_Fed\_Com\_6H\_Casing\_Assumptions\_03-22-2017.pdf

Casing ID: 5 String Type: COMPLETION SYSTEM

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

Medwick\_32\_Fed\_Com\_6H\_Casing\_Assumptions\_03-22-2017.pdf

#### Section 4 - Cement

String Type	Lead/Tail	Stage Tool Depth	Top MD	Bottom MD	Quantity(sx)	Yield	Density	Cu Ft	Excess%	Cement type	Additives
SURFACE	Lead		0	400	61	1.72	13.5	104	50	Class C	Bentonite
SURFACE	Tail		0	400	195	1.34	14.8	260	25	Class C	LCM
INTERMEDIATE	Lead		0	1937	368	1.88	12.9	691	50	35:65 (Poz:C)	Salt, Bentonite
INTERMEDIATE	Tail		0	1937	113	1.34	14.8	151	25	Class C	LCM
PRODUCTION	Lead		0	9151	225	6.18	9.2	1389	25	Class C	Extender, Salt, Strength Enhancement, LCM,

**Operator Name:** CIMAREX ENERGY COMPANY

**Well Name:** MEDWICK 32 FEDERAL COM

**Well Number:** 6H

String Type	Lead/Tail	Stage Tool Depth	Top MD	Bottom MD	Quantity(sx)	Yield	Density	Cu Ft	Excess%	Cement type	Additives
											Fluid Loss, Retarder
PRODUCTION	Tail		0	9151	140	1.3	14.2	182	10	50:50(Poz:H)	Salt, Bentonite, Fluid Loss, Dispersant, SMS
PRODUCTION	Lead		9151	10249	225	6.18	9.2	1389	25	Class C	Extender, Salt, Strength Enhancement, LCM, Fluid Loss, Retarder
PRODUCTION	Tail		9151	10249	140	1.3	14.2	182	10	50:50 (poz:H)	Salt, Bentonite, Fluid loss, Dispersant, SMS
COMPLETION SYSTEM	Lead		9151	16983	490	1.3	14.2	636	10	50:50 (Poz:H)	Salt, Bentonite, Fluid Loss, Dispersant, SMS

### Section 5 - Circulating Medium

**Mud System Type:** Closed

**Will an air or gas system be Used?** NO

**Description of the equipment for the circulating system in accordance with Onshore Order #2:**

**Diagram of the equipment for the circulating system in accordance with Onshore Order #2:**

**Describe what will be on location to control well or mitigate other conditions:** Sufficient mud materials will be kept on location at all times in order to combat lost circulation or unexpected kicks. In order to run DSTs, open hole logs, and casing, the viscosity and water loss may have to be adjusted in order to meet these needs.

**Describe the mud monitoring system utilized:** PVT/Pason/Visual Monitoring

### Circulating Medium Table

Top Depth	Bottom Depth	Mud Type	Min Weight (lbs/gal)	Max Weight (lbs/gal)	Density (lbs/cu ft)	Gel Strength (lbs/100 sqft)	PH	Viscosity (CP)	Salinity (ppm)	Filtration (cc)	Additional Characteristics
0	400	SPUD MUD	8.3	8.8							
400	1937	SALT SATURATED	9.7	10.2							

**Operator Name:** CIMAREX ENERGY COMPANY

**Well Name:** MEDWICK 32 FEDERAL COM

**Well Number:** 6H

Top Depth	Bottom Depth	Mud Type	Min Weight (lbs/gal)	Max Weight (lbs/gal)	Density (lbs/cu ft)	Gel Strength (lbs/100 sqft)	PH	Viscosity (CP)	Salinity (ppm)	Filtration (cc)	Additional Characteristics
1937	1024 9	OTHER : FW/Cut Brine	8.5	9							
1024 9	1698 3	OIL-BASED MUD	12.5	13							

### Section 6 - Test, Logging, Coring

**List of production tests including testing procedures, equipment and safety measures:**

No DST Planned

**List of open and cased hole logs run in the well:**

CNL,DS,GR

**Coring operation description for the well:**

N/A

### Section 7 - Pressure

**Anticipated Bottom Hole Pressure:** 4430

**Anticipated Surface Pressure:** 693.73

**Anticipated Bottom Hole Temperature(F):** 167

**Anticipated abnormal pressures, temperatures, or potential geologic hazards?** NO

**Describe:**

**Contingency Plans geohazards description:**

**Contingency Plans geohazards attachment:**

**Hydrogen Sulfide drilling operations plan required?** YES

**Hydrogen sulfide drilling operations plan:**

Medwick\_32\_Fed\_Com\_6H\_H2S\_Plan\_03-22-2017.pdf

**Operator Name:** CIMAREX ENERGY COMPANY

**Well Name:** MEDWICK 32 FEDERAL COM

**Well Number:** 6H

## **Section 8 - Other Information**

**Proposed horizontal/directional/multi-lateral plan submission:**

Medwick\_32\_Fed\_Com\_6H\_Directional\_Prelim\_03-22-2017.pdf

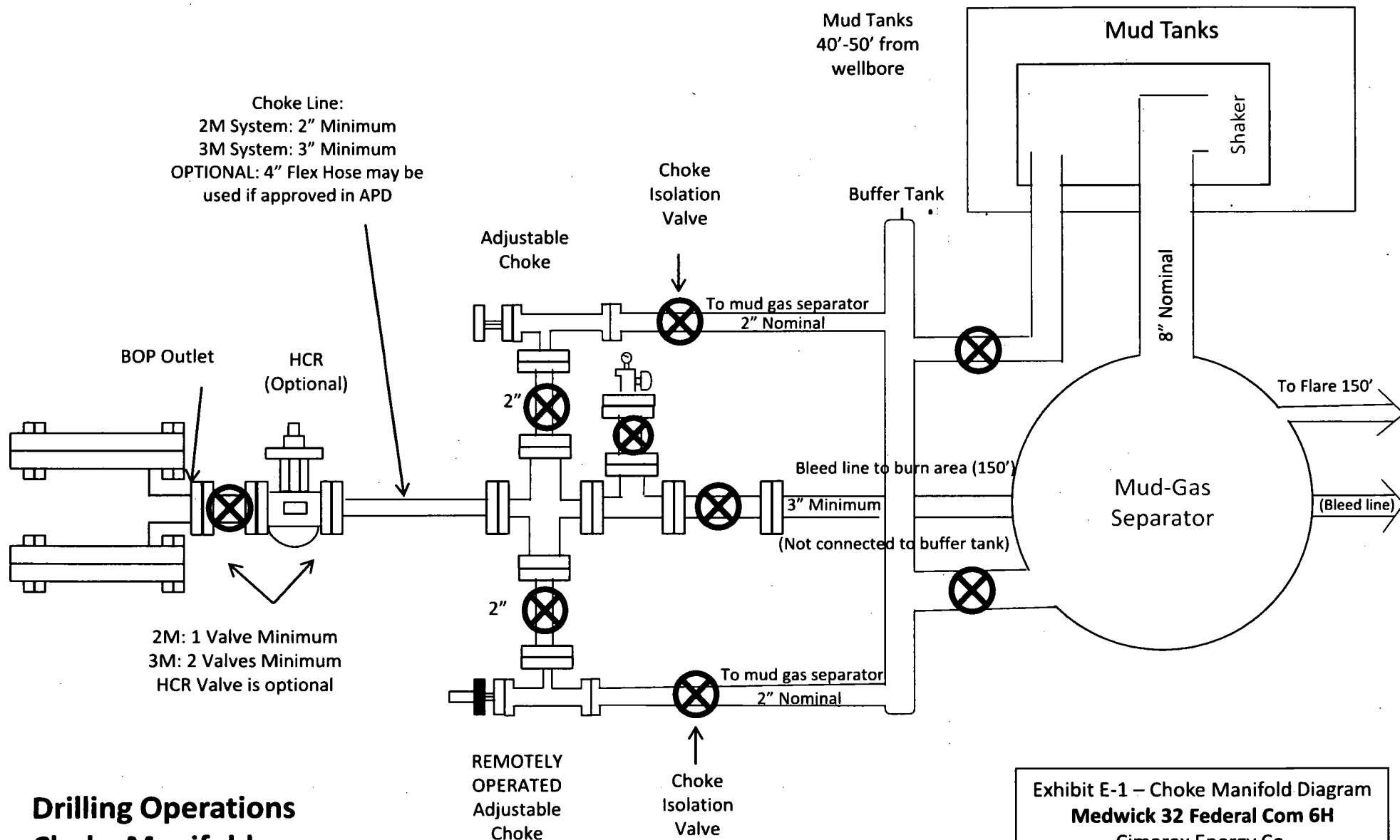
**Other proposed operations facets description:**

**Other proposed operations facets attachment:**

Medwick\_32\_Fed\_Com\_6H\_Drilling\_Plan\_08-23-2017.pdf

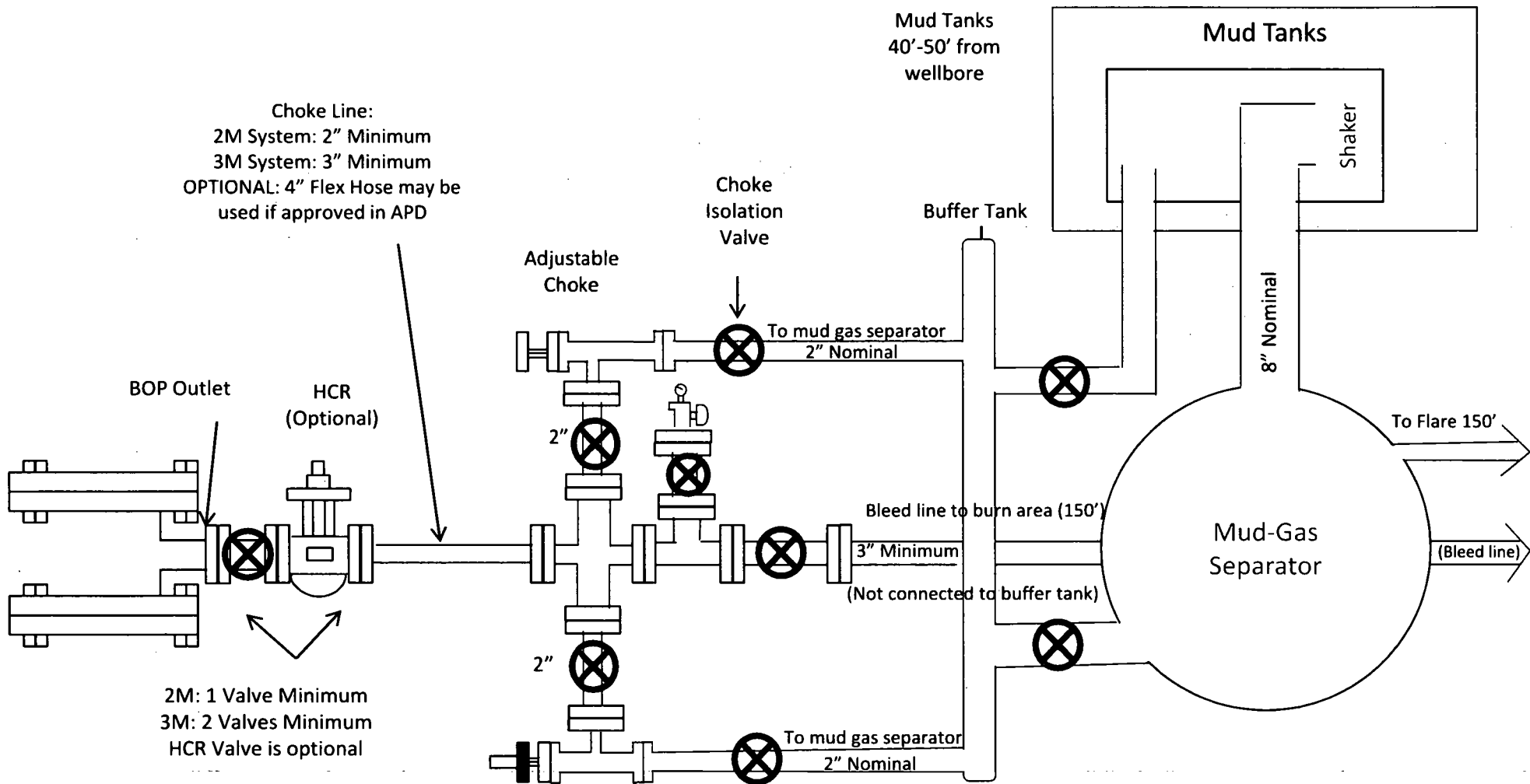
**Other Variance attachment:**

Medwick\_32\_Fed\_Com\_6H\_Flex\_Hose\_03-22-2017.pdf



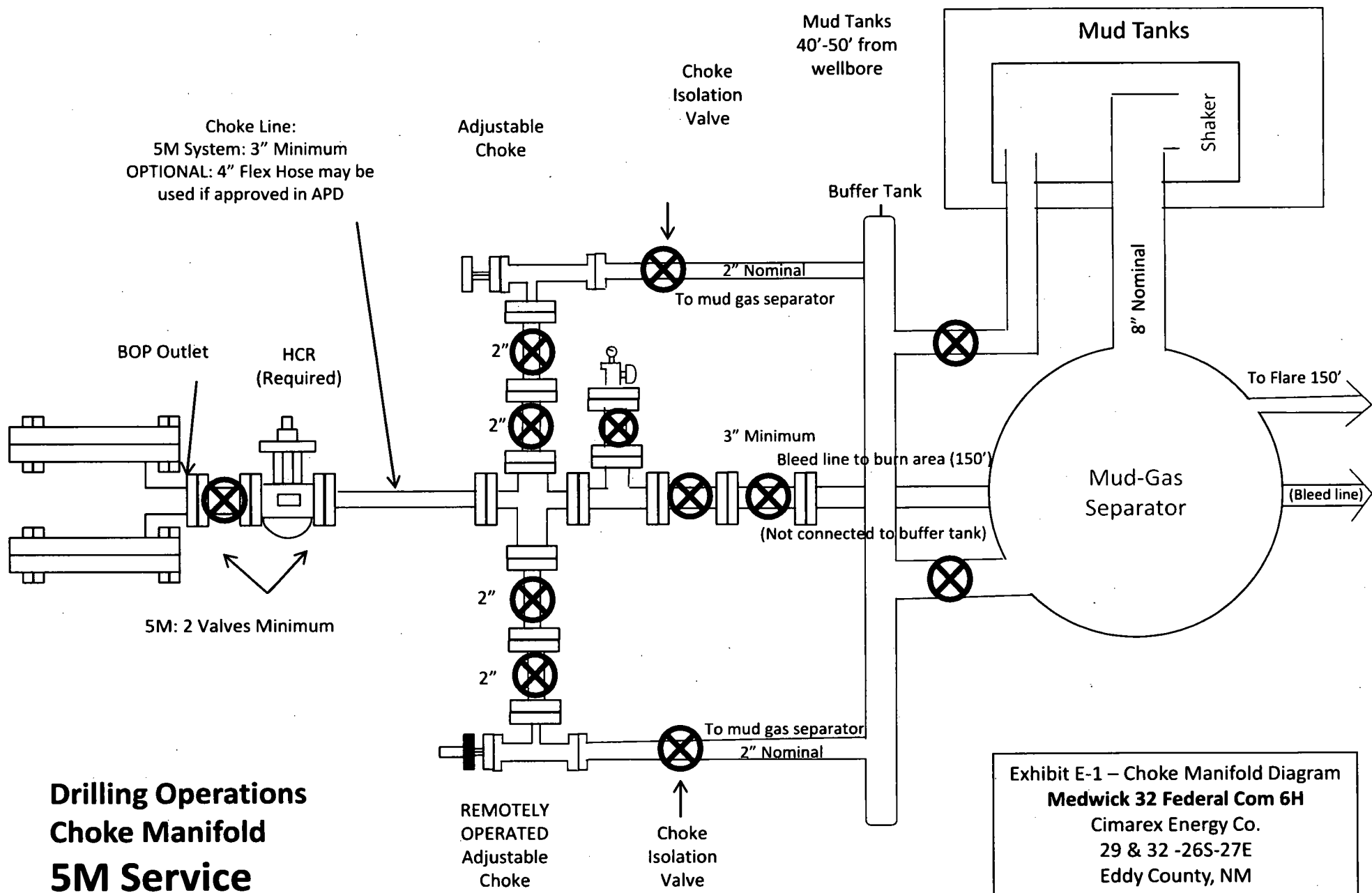
# **Drilling Operations** **Choke Manifold** **2M/3M Service**

**Exhibit E-1 – Choke Manifold Diagram**  
**Medwick 32 Federal Com 6H**  
 Cimarex Energy Co.  
 29 & 32 -26S-27E  
 Eddy County, NM



# **Drilling Operations** **Choke Manifold** **2M/3M Service**

Exhibit E-1 – Choke Manifold Diagram  
**Medwick 32 Federal Com 6H**  
 Cimarex Energy Co.  
 29 & 32 -26S-27E  
 Eddy County, NM



# **Drilling Operations** **Choke Manifold** **5M Service**

Drilling 12-1/4" hole  
below 13 3/8" Casing

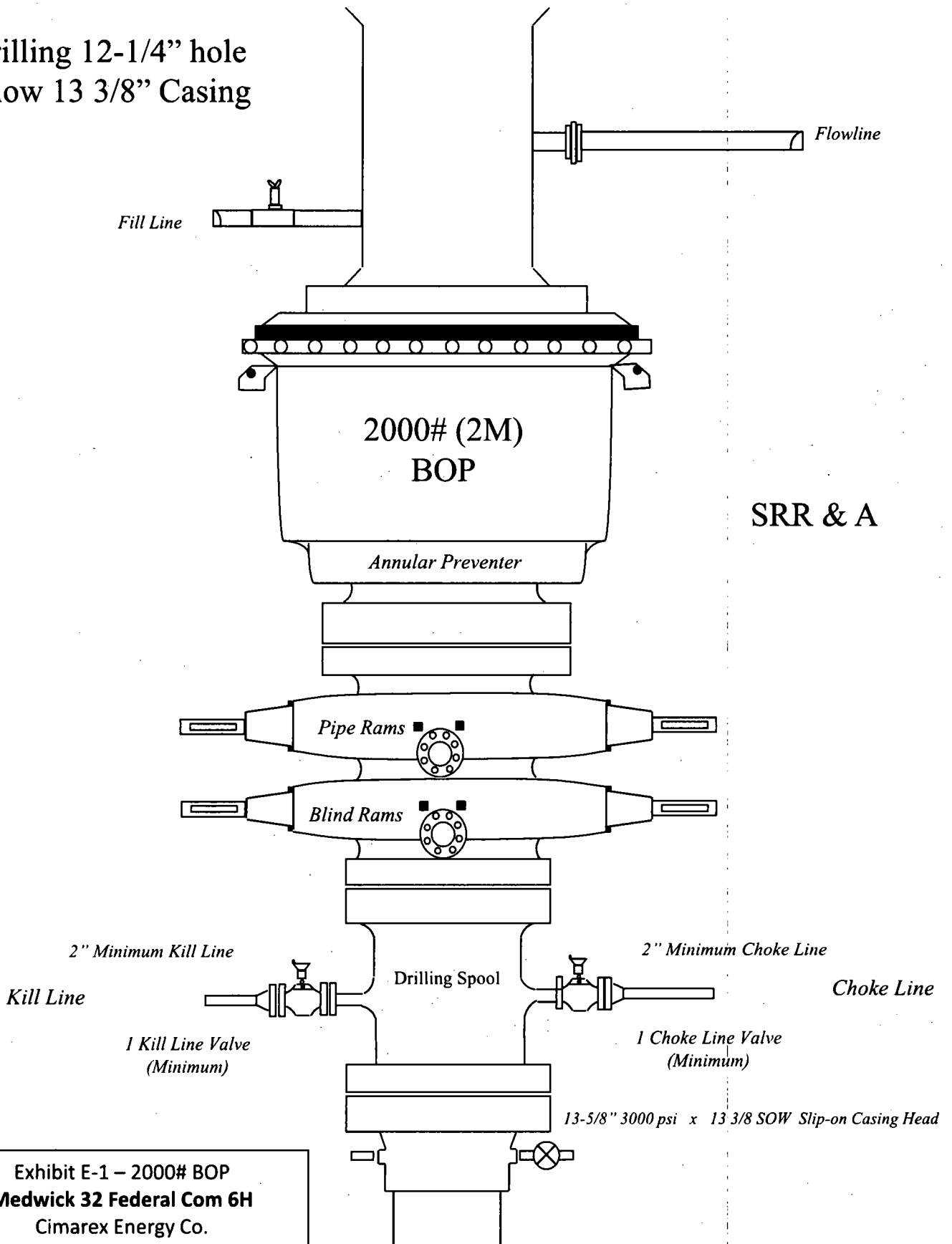


Exhibit E-1 – 2000# BOP  
Medwick 32 Federal Com 6H  
Cimarex Energy Co.  
29 & 32 -26S-27E  
Eddy County, NM

Drilling 8-3/4" hole  
below 9 5/8" Casing

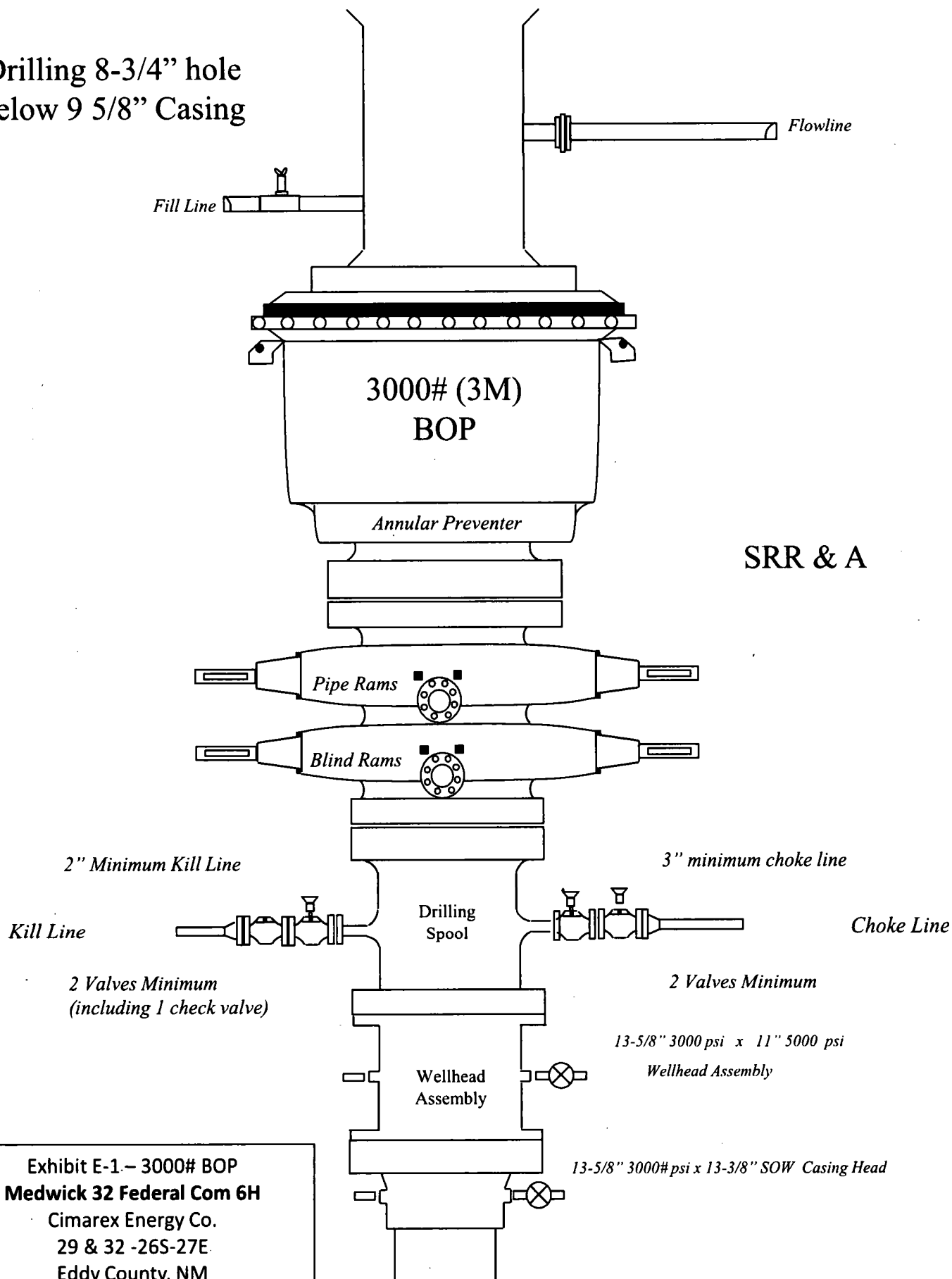
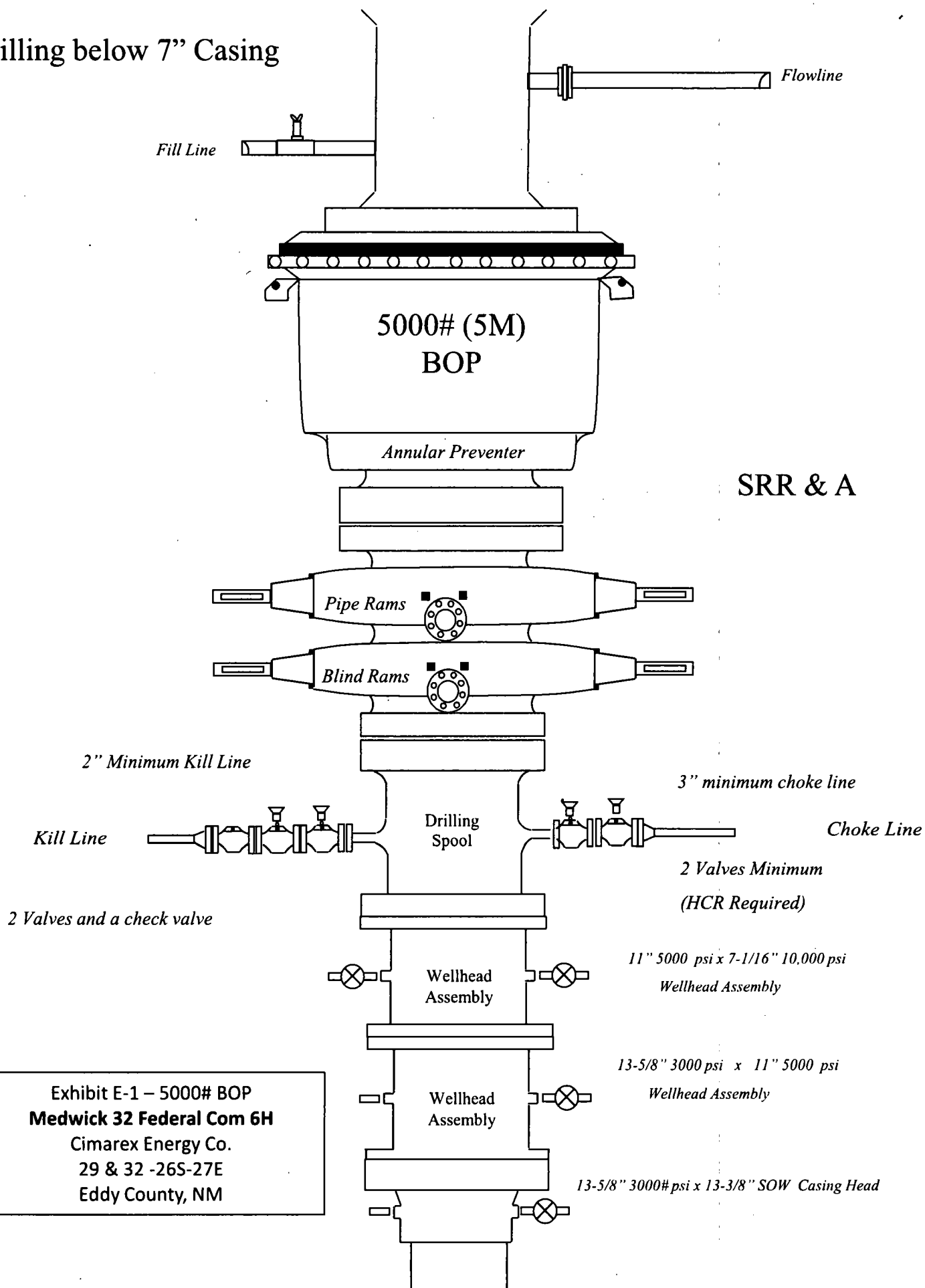


Exhibit E-1.- 3000# BOP  
Medwick 32 Federal Com 6H  
Cimarex Energy Co.  
29 & 32 -26S-27E  
Eddy County, NM

# Drilling below 7" Casing



## Medwick 32 Federal Com 6H

### Casing Assumptions

#### Casing Program

Hole Size	Casing Depth From	Casing Depth To	Casing Size	Weight (lb/ft)	Grade	Conn.	SF Collapse	SF Burst	SF Tension
17 1/2	0	400	13-3/8"	48.00	H-40/J-55 Hybrid	ST&C	4.04	9.45	16.77
12 1/4	0	1937	9-5/8"	36.00	J-55	LT&C	1.97	3.43	6.50
8 3/4	0	9151	7"	26.00	L-80	LT&C	1.26	1.69	2.03
8 3/4	9151	10249	7"	26.00	L-80	BT&C	1.19	1.60	42.31
6	9151	16983	4-1/2"	11.60	P-110	BT&C	1.16	1.63	57.63
BLM Minimum Safety Factor							1.125	1	1.6 Dry 1.8 Wet

All casing strings will be tested in accordance with Onshore Oil and Gas Order #2 III.B.1.h

## Medwick 32 Federal Com 6H

### Casing Assumptions

#### Casing Program

Hole Size	Casing Depth From	Casing Depth To	Casing Size	Weight (lb/ft)	Grade	Conn.	SF Collapse	SF Burst	SF Tension
17 1/2	0	400	13-3/8"	48.00	H-40/J-55 Hybrid	ST&C	4.04	9.45	16.77
12 1/4	0	1937	9-5/8"	36.00	J-55	LT&C	1.97	3.43	6.50
8 3/4	0	9151	7"	26.00	L-80	LT&C	1.26	1.69	2.03
8 3/4	9151	10249	7"	26.00	L-80	BT&C	1.19	1.60	42.31
6	9151	16983	4-1/2"	11.60	P-110	BT&C	1.16	1.63	57.63
BLM Minimum Safety Factor							1.125	1	1.6 Dry 1.8 Wet

All casing strings will be tested in accordance with Onshore Oil and Gas Order #2 III.B.1.h

## Medwick 32 Federal Com 6H

### Casing Assumptions

#### Casing Program

Hole Size	Casing Depth From	Casing Depth To	Casing Size	Weight (lb/ft)	Grade	Conn.	SF Collapse	SF Burst	SF Tension
17 1/2	0	400	13-3/8"	48.00	H-40/J-55 Hybrid	ST&C	4.04	9.45	16.77
12 1/4	0	1937	9-5/8"	36.00	J-55	LT&C	1.97	3.43	6.50
8 3/4	0	9151	7"	26.00	L-80	LT&C	1.26	1.69	2.03
8 3/4	9151	10249	7"	26.00	L-80	BT&C	1.19	1.60	42.31
6	9151	16983	4-1/2"	11.60	P-110	BT&C	1.16	1.63	57.63
BLM Minimum Safety Factor							1.125	1	1.6 Dry 1.8 Wet

All casing strings will be tested in accordance with Onshore Oil and Gas Order #2 III.B.1.h

## Medwick 32 Federal Com 6H

### Casing Assumptions

#### Casing Program

Hole Size	Casing Depth From	Casing Depth To	Casing Size	Weight (lb/ft)	Grade	Conn.	SF Collapse	SF Burst	SF Tension
17 1/2	0	400	13-3/8"	48.00	H-40/J-55 Hybrid	ST&C	4.04	9.45	16.77
12 1/4	0	1937	9-5/8"	36.00	J-55	LT&C	1.97	3.43	6.50
8 3/4	0	9151	7"	26.00	L-80	LT&C	1.26	1.69	2.03
8 3/4	9151	10249	7"	26.00	L-80	BT&C	1.19	1.60	42.31
6	9151	16983	4-1/2"	11.60	P-110	BT&C	1.16	1.63	57.63
BLM Minimum Safety Factor							1.125	1	1.6 Dry 1.8 Wet

All casing strings will be tested in accordance with Onshore Oil and Gas Order #2 III.B.1.h

## Medwick 32 Federal Com 6H

### Casing Assumptions

#### Casing Program

Hole Size	Casing Depth From	Casing Depth To	Casing Size	Weight (lb/ft)	Grade	Conn.	SF Collapse	SF Burst	SF Tension
17 1/2	0	400	13-3/8"	48.00	H-40/J-55 Hybrid	ST&C	4.04	9.45	16.77
12 1/4	0	1937	9-5/8"	36.00	J-55	LT&C	1.97	3.43	6.50
8 3/4	0	9151	7"	26.00	L-80	LT&C	1.26	1.69	2.03
8 3/4	9151	10249	7"	26.00	L-80	BT&C	1.19	1.60	42.31
6	9151	16983	4-1/2"	11.60	P-110	BT&C	1.16	1.63	57.63
BLM Minimum Safety Factor							1.125	1	1.6 Dry 1.8 Wet

All casing strings will be tested in accordance with Onshore Oil and Gas Order #2 III.B.1.h

1 All Company and Contract personnel admitted on location must be trained by a qualified H<sub>2</sub>S safety instructor to the following:

- A. Characteristics of H<sub>2</sub>S
- B. Physical effects and hazards
- C. Principal and operation of H<sub>2</sub>S detectors, warning system and briefing areas.
- D. Evacuation procedure, routes and first aid.
- E. Proper use of safety equipment & life support systems
- F. Essential personnel meeting Medical Evaluation criteria will receive additional training on the proper use of 30 minute pressure demand air packs.

H<sub>2</sub>S Detection and Alarm Systems:

- A. H<sub>2</sub>S sensors/detectors to be located on the drilling rig floor, in the base of the sub structure/cellar area, on the mud pits in the shale shaker area. Additional H<sub>2</sub>S detectors may be placed as deemed necessary.
- B. An audio alarm system will be installed on the derrick floor and in the top doghouse.

3 Windsock and/or wind streamers:

- A. Windsock at mudpit area should be high enough to be visible.
- B. Windsock on the rig floor and / or top doghouse should be high enough to be visible.

4 Condition Flags and Signs

- A. Warning sign on access road to location.
- B. Flags to be displayed on sign at entrance to location. Green flag indicates normal safe condition. Yellow flag indicates potential pressure and danger. Red flag indicates danger (H<sub>2</sub>S present in dangerous concentration). Only H<sub>2</sub>S trained and certified personnel admitted to location.

5 Well control equipment:

- A. See exhibit "E-1"

6 Communication:

- A. While working under masks chalkboards will be used for communication.
- B. Hand signals will be used where chalk board is inappropriate.
- C. Two way radio will be used to communicate off location in case of emergency help is required. In most cases cellular telephones will be available at most drilling foreman's trailer or living quarters.

7 Drillstem Testing:

No DSTs or cores are planned at this time.

- 8 Drilling contractor supervisor will be required to be familiar with the effects H<sub>2</sub>S has on tubular goods and other mechanical equipment.
- 9 If H<sub>2</sub>S is encountered, mud system will be altered if necessary to maintain control of formation. A mud gas separator will be brought into service along with H<sub>2</sub>S scavengers if necessary.

H<sub>2</sub>S Contingency Plan  
**Medwick 32 Federal Com 6H**  
Cimarex Energy Co.  
UL: 3, Sec. 32, 26S, 27E  
Eddy Co., NM

**Emergency Procedures**

In the event of a release of gas containing H<sub>2</sub>S, the first responder(s) must:

- « Isolate the area and prevent entry by other persons into the 100 ppm ROE.
- « Evacuate any public places encompassed by the 100 ppm ROE.
- « Be equipped with H<sub>2</sub>S monitors and air packs in order to control the release.
- « Use the "buddy system" to ensure no injuries occur during the 432-620-1975
- « Take precautions to avoid personal injury during this operation.
- « Contact operator and/or local officials to aid in operation. See list of phone numbers attached.
- « Have received training in the:
  - Detection of H<sub>2</sub>S, and
  - Measures for protection against the gas,
  - Equipment used for protection and emergency response.

**Ignition of Gas Source**

Should control of the well be considered lost and ignition considered, take care to protect against exposure to Sulfur Dioxide (SO<sub>2</sub>). Intentional ignition must be coordinated with the NMOCD and local officials. Additionally, the NM State Police may become involved. NM State Police shall be the Incident Command on scene of any major release. Take care to protect downwind whenever there is an ignition of the gas.

**Characteristics of H<sub>2</sub>S and SO<sub>2</sub>**

Please see attached International Chemical Safety Cards.

**Contacting Authorities**

Cimarex Energy Co. of Colorado's personnel must liaise with local and state agencies to ensure a proper response to a major release. Additionally, the OCD must be notified of the release as soon as possible but no later than 4 hours. Agencies will ask for information such as type and volume of release, wind direction, location of release, etc. Be prepared with all information available including directions to site. The following call list of essential and potential responders has been prepared for use during a release. Cimarex Energy Co. of Colorado's response must be in coordination with the State of New Mexico's "Hazardous Materials Emergency Response Plan" (HMER).

H<sub>2</sub>S Contingency Plan Emergency Contacts

**Medwick 32 Federal Com 6H**

Cimarex Energy Co.

UL: 3, Sec. 32, 26S, 27E

Eddy Co., NM

<b>Company Office</b>			
Cimarex Energy Co. of Colorado		800-969-4789	
Co. Office and After-Hours Menu			
<b>Key Personnel</b>			
<b>Name</b>	<b>Title</b>	<b>Office</b>	<b>Mobile</b>
Larry Seigrist	Drilling Manager	432-620-1934	580-243-8485
Charlie Pritchard	Drilling Superintendent	432-620-1975	432-238-7084
Roy Shirley	Construction Superintendent		432-634-2136
<b>Artesia</b>			
Ambulance		911	
State Police		575-746-2703	
City Police		575-746-2703	
Sheriff's Office		575-746-9888	
<b>Fire Department</b>		<b>575-746-2701</b>	
Local Emergency Planning Committee		575-746-2122	
New Mexico Oil Conservation Division		575-748-1283	
<b>Carlsbad</b>			
Ambulance		911	
State Police		575-885-3137	
City Police		575-885-2111	
Sheriff's Office		575-887-7551	
<b>Fire Department</b>		<b>575-887-3798</b>	
Local Emergency Planning Committee		575-887-6544	
US Bureau of Land Management		575-887-6544	
<b>Santa Fe</b>			
New Mexico Emergency Response Commission (Santa Fe)		505-476-9600	
New Mexico Emergency Response Commission (Santa Fe) 24 Hrs		505-827-9126	
New Mexico State Emergency Operations Center		505-476-9635	
<b>National</b>			
National Emergency Response Center (Washington, D.C.)		800-424-8802	
<b>Medical</b>			
Flight for Life - 4000 24th St.; Lubbock, TX		806-743-9911	
Aerocare - R3, Box 49F; Lubbock, TX		806-747-8923	
Med Flight Air Amb - 2301 Yale Blvd S.E., #D3; Albuquerque, NM		505-842-4433	
SB Air Med Service - 2505 Clark Carr Loop S.E.; Albuquerque, NM		505-842-4949	
<b>Other</b>			
Boots & Coots IWC		800-256-9688	or 281-931-8884
Cudd Pressure Control		432-699-0139	or 432-563-3356
Halliburton		575-746-2757	
B.J. Services		575-746-3569	

# Cimarex Medwick 32 Federal Com #6H Rev0 RM 11Nov16 Proposal

## Geodetic Report

(Non-Def Plan)



**Report Date:** February 21, 2017 - 03:32 PM  
**Client:** Cimarex  
**Field:** NM Eddy County (NAD 83)  
**Structure / Slot:** Cimarex Medwick 32 Federal Com #6H / Cimarex Medwick 32 Federal Com #6H  
**Well:** Cimarex Medwick 32 Federal Com #6H  
**Borehole:** Original Borehole  
**UWI / API#:** Unknown / Unknown  
**Survey Name:** Cimarex Medwick 32 Federal Com #6H Rev0 RM 11Nov16  
**Survey Date:** November 11, 2016  
**Tort / AHD / DDI / ERD Ratio:** 93.906 ° / 7555.330 ft / 6.094 / 0.779  
**Coordinate Reference System:** NAD83 New Mexico State Plane, Eastern Zone, US Feet  
**Location Lat / Long:** N 31° 59' 55.75588", W 104° 12' 51.14631"  
**Location Grid N/E Y/X:** N 363331.020 ftUS, E 578265.630 ftUS  
**CRS Grid Convergence Angle:** 0.0631 °  
**Grid Scale Factor:** 0.99991065  
**Version / Patch:** 2.10.254.0

**Survey / DLS Computation:** Minimum Curvature / Lubinski  
**Vertical Section Azimuth:** 0.196 ° (Grid North)  
**Vertical Section Origin:** 0.000 ft, 0.000 ft  
**TVD Reference Datum:** RKB  
**TVD Reference Elevation:** 3232.100 ft above MSL  
**Seabed / Ground Elevation:** 3208.100 ft above MSL  
**Magnetic Declination:** 7.425 °  
**Total Gravity Field Strength:** 998.4315mgn (9.80665 Based)  
**Gravity Model:** GARM  
**Total Magnetic Field Strength:** 47990.301 nT  
**Magnetic Dip Angle:** 59.690 °  
**Declination Date:** February 21, 2017  
**Magnetic Declination Model:** HDGM 2016  
**North Reference:** Grid North  
**Grid Convergence Used:** 0.0631 °  
**Total Corr Mag North->Grid North:** 7.3617 °  
**Local Coord Referenced To:** Structure Reference Point

Comments	MD (ft)	Incl (°)	Azim Grid (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	DLS (°/100ft)	Northing (ftUS)	Easting (ftUS)	Latitude (N/S ° ' ")	Longitude (E/W ° ' ")
Tie-In SHL [0' FSL, 1972' FWL]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	N/A	363331.02	578265.63	N 31 59 55.76 W 104 12 51.15	
	100.00	0.00	11.20	100.00	0.00	0.00	0.00	0.00	363331.02	578265.63	N 31 59 55.76 W 104 12 51.15	
	200.00	0.00	11.20	200.00	0.00	0.00	0.00	0.00	363331.02	578265.63	N 31 59 55.76 W 104 12 51.15	
	300.00	0.00	11.20	300.00	0.00	0.00	0.00	0.00	363331.02	578265.63	N 31 59 55.76 W 104 12 51.15	
	400.00	0.00	11.20	400.00	0.00	0.00	0.00	0.00	363331.02	578265.63	N 31 59 55.76 W 104 12 51.15	
	500.00	0.00	11.20	500.00	0.00	0.00	0.00	0.00	363331.02	578265.63	N 31 59 55.76 W 104 12 51.15	
	600.00	0.00	11.20	600.00	0.00	0.00	0.00	0.00	363331.02	578265.63	N 31 59 55.76 W 104 12 51.15	
	700.00	0.00	11.20	700.00	0.00	0.00	0.00	0.00	363331.02	578265.63	N 31 59 55.76 W 104 12 51.15	
	800.00	0.00	11.20	800.00	0.00	0.00	0.00	0.00	363331.02	578265.63	N 31 59 55.76 W 104 12 51.15	
	900.00	0.00	11.20	900.00	0.00	0.00	0.00	0.00	363331.02	578265.63	N 31 59 55.76 W 104 12 51.15	
	1000.00	0.00	11.20	1000.00	0.00	0.00	0.00	0.00	363331.02	578265.63	N 31 59 55.76 W 104 12 51.15	
	1100.00	0.00	11.20	1100.00	0.00	0.00	0.00	0.00	363331.02	578265.63	N 31 59 55.76 W 104 12 51.15	
	1200.00	0.00	11.20	1200.00	0.00	0.00	0.00	0.00	363331.02	578265.63	N 31 59 55.76 W 104 12 51.15	
	1300.00	0.00	11.20	1300.00	0.00	0.00	0.00	0.00	363331.02	578265.63	N 31 59 55.76 W 104 12 51.15	
	1400.00	0.00	11.20	1400.00	0.00	0.00	0.00	0.00	363331.02	578265.63	N 31 59 55.76 W 104 12 51.15	
	1500.00	0.00	11.20	1500.00	0.00	0.00	0.00	0.00	363331.02	578265.63	N 31 59 55.76 W 104 12 51.15	
	1600.00	0.00	11.20	1600.00	0.00	0.00	0.00	0.00	363331.02	578265.63	N 31 59 55.76 W 104 12 51.15	
	1700.00	0.00	11.20	1700.00	0.00	0.00	0.00	0.00	363331.02	578265.63	N 31 59 55.76 W 104 12 51.15	
	1800.00	0.00	11.20	1800.00	0.00	0.00	0.00	0.00	363331.02	578265.63	N 31 59 55.76 W 104 12 51.15	
	1900.00	0.00	11.20	1900.00	0.00	0.00	0.00	0.00	363331.02	578265.63	N 31 59 55.76 W 104 12 51.15	
	2000.00	0.00	11.20	2000.00	0.00	0.00	0.00	0.00	363331.02	578265.63	N 31 59 55.76 W 104 12 51.15	
	2100.00	0.00	11.20	2100.00	0.00	0.00	0.00	0.00	363331.02	578265.63	N 31 59 55.76 W 104 12 51.15	
	2200.00	0.00	11.20	2200.00	0.00	0.00	0.00	0.00	363331.02	578265.63	N 31 59 55.76 W 104 12 51.15	
	2300.00	0.00	11.20	2300.00	0.00	0.00	0.00	0.00	363331.02	578265.63	N 31 59 55.76 W 104 12 51.15	
	2400.00	0.00	11.20	2400.00	0.00	0.00	0.00	0.00	363331.02	578265.63	N 31 59 55.76 W 104 12 51.15	

3/22/2017 1:19 PM Page 2 of 4

Comments	MD (ft)	Incl (°)	Azim Grid (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	DLS (°/100ft)	Northing (RUS)	Easting (RUS)	Latitude (N/S ° ' ")	Longitude (E/W ° ' ")
	8400.00	0.00	11.20	8400.00	0.00	0.00	0.00	0.00	363331.02	578265.63	N 31 59 55.76 W 104 12 51.15	
	8500.00	0.00	11.20	8500.00	0.00	0.00	0.00	0.00	363331.02	578265.63	N 31 59 55.76 W 104 12 51.15	
	8600.00	0.00	11.20	8600.00	0.00	0.00	0.00	0.00	363331.02	578265.63	N 31 59 55.76 W 104 12 51.15	
	8700.00	0.00	11.20	8700.00	0.00	0.00	0.00	0.00	363331.02	578265.63	N 31 59 55.76 W 104 12 51.15	
	8800.00	0.00	11.20	8800.00	0.00	0.00	0.00	0.00	363331.02	578265.63	N 31 59 55.76 W 104 12 51.15	
	8900.00	0.00	11.20	8900.00	0.00	0.00	0.00	0.00	363331.02	578265.63	N 31 59 55.76 W 104 12 51.15	
	9000.00	0.00	11.20	9000.00	0.00	0.00	0.00	0.00	363331.02	578265.63	N 31 59 55.76 W 104 12 51.15	
	9100.00	0.00	11.20	9100.00	0.00	0.00	0.00	0.00	363331.02	578265.63	N 31 59 55.76 W 104 12 51.15	
KOP - Build 12"/100' DLS	9151.19	0.00	11.20	9151.19	0.00	0.00	0.00	0.00	363331.02	578265.63	N 31 59 55.76 W 104 12 51.15	
	9200.00	5.86	11.20	9199.92	2.45	2.45	0.48	12.00	363333.46	578266.11	N 31 59 55.78 W 104 12 51.14	
	9300.00	17.86	11.20	9297.60	22.58	22.56	4.47	12.00	363353.58	578270.10	N 31 59 55.98 W 104 12 51.09	
	9400.00	29.86	11.20	9388.89	62.21	62.17	12.31	12.00	363393.18	578277.94	N 31 59 56.37 W 104 12 51.00	
	9500.00	41.86	11.20	9469.79	119.60	119.52	23.67	12.00	363450.53	578289.29	N 31 59 56.94 W 104 12 50.87	
	9600.00	53.86	11.20	9536.77	192.26	192.13	38.04	12.00	363523.13	578303.67	N 31 59 57.66 W 104 12 50.70	
Waikanae D How Target	9670.00	53.86	11.20	9536.77	192.26	192.13	38.04	12.00	363523.13	578303.67	N 31 59 57.66 W 104 12 50.70	
	9700.00	65.86	11.20	9586.89	276.99	276.80	54.81	12.00	363607.80	578320.43	N 31 59 58.49 W 104 12 50.51	
Align to Target - Build 4"/100' DLS	9776.19	75.00	11.20	9612.39	347.38	347.15	68.74	12.00	363678.14	578334.36	N 31 59 59.19 W 104 12 50.34	
	9800.00	75.73	10.57	9618.40	370.02	369.77	73.09	4.00	363700.76	578338.71	N 31 59 59.41 W 104 12 50.29	
	9900.00	78.84	7.98	9640.41	466.32	466.02	88.80	4.00	363797.00	578354.42	N 32 0 0.37 W 104 12 50.11	
	10000.00	81.96	5.45	9657.09	564.27	563.93	100.32	4.00	363894.90	578365.94	N 32 0 1.34 W 104 12 49.97	
	10100.00	85.10	2.95	9668.36	663.37	663.00	107.59	4.00	363993.96	578373.21	N 32 0 2.32 W 104 12 49.89	
	10200.00	88.25	0.48	9674.16	763.14	762.77	110.58	4.00	364093.72	578376.20	N 32 0 3.30 W 104 12 49.85	
Landing Point	10243.35	89.79	359.28	9675.19	863.13	862.76	109.84	0.00	364193.70	578378.10	N 32 0 3.79 W 104 12 49.85	
	10300.00	89.79	359.28	9675.56	963.11	962.75	108.58	0.00	364293.68	578374.20	N 32 0 5.28 W 104 12 49.87	
	10400.00	89.79	359.28	9675.93	1063.10	1062.74	107.32	0.00	364393.66	578372.94	N 32 0 6.27 W 104 12 49.89	
	10500.00	89.79	359.28	9676.30	1163.09	1162.73	106.07	0.00	364493.64	578371.69	N 32 0 7.26 W 104 12 49.90	
	10600.00	89.79	359.28	9676.67	1263.07	1262.72	104.81	0.00	364593.63	578370.43	N 32 0 8.25 W 104 12 49.91	
	10700.00	89.79	359.28	9677.04	1363.06	1362.71	103.55	0.00	364693.61	578369.17	N 32 0 9.24 W 104 12 49.93	
	10800.00	89.79	359.28	9677.42	1463.04	1462.70	102.29	0.00	364793.59	578367.91	N 32 0 10.23 W 104 12 49.94	
	10900.00	89.79	359.28	9677.79	1563.03	1562.70	101.04	0.00	364893.57	578366.66	N 32 0 11.22 W 104 12 49.95	
	11000.00	89.79	359.28	9678.16	1663.02	1662.69	99.78	0.00	364993.55	578365.40	N 32 0 12.21 W 104 12 49.97	
	11100.00	89.79	359.28	9678.53	1763.00	1762.68	98.52	0.00	365093.54	578364.14	N 32 0 13.20 W 104 12 49.98	
	11200.00	89.79	359.28	9678.90	1862.99	1862.67	97.26	0.00	365193.52	578362.88	N 32 0 14.19 W 104 12 49.99	
	11300.00	89.79	359.28	9679.27	1962.98	1962.66	96.00	0.00	365293.50	578361.63	N 32 0 15.18 W 104 12 50.01	
	11400.00	89.79	359.28	9679.64	2062.96	2062.65	94.75	0.00	365393.48	578360.37	N 32 0 16.17 W 104 12 50.02	
	11500.00	89.79	359.28	9680.01	2162.95	2162.64	93.49	0.00	365493.47	578359.11	N 32 0 17.16 W 104 12 50.03	
	11600.00	89.79	359.28	9680.39	2262.94	2262.63	92.23	0.00	365593.45	578357.85	N 32 0 18.14 W 104 12 50.05	
	11700.00	89.79	359.28	9680.76	2362.92	2362.63	90.97	0.00	365693.43	578356.60	N 32 0 19.13 W 104 12 50.06	
	11800.00	89.79	359.28	9681.13	2462.91	2462.62	89.72	0.00	365793.41	578355.34	N 32 0 20.12 W 104 12 50.07	
	11900.00	89.79	359.28	9681.50	2562.90	2562.61	88.46	0.00	365893.39	578354.08	N 32 0 21.11 W 104 12 50.09	
	12000.00	89.79	359.28	9681.87	2662.88	2662.60	87.20	0.00	365993.38	578352.82	N 32 0 22.10 W 104 12 50.10	
	12100.00	89.79	359.28	9682.24	2762.87	2762.59	85.94	0.00	366093.36	578351.56	N 32 0 23.09 W 104 12 50.11	
	12200.00	89.79	359.28	9682.61	2862.86	2862.58	84.68	0.00	366193.34	578350.31	N 32 0 24.08 W 104 12 50.13	
	12300.00	89.79	359.28	9682.98	2962.84	2962.57	83.43	0.00	366293.32	578349.05	N 32 0 25.07 W 104 12 50.14	
	12400.00	89.79	359.28	9683.36	3062.83	3062.57	82.17	0.00	366393.31	578347.79	N 32 0 26.06 W 104 12 50.15	
	12500.00	89.79	359.28	9683.73	3162.82	3162.56	80.91	0.00	366493.29	578346.53	N 32 0 27.05 W 104 12 50.17	
	12600.00	89.79	359.28	9684.10	3262.80	3262.55	79.65	0.00	366593.27	578345.28	N 32 0 28.04 W 104 12 50.18	
	12700.00	89.79	359.28	9684.47	3362.79	3362.54	78.40	0.00	366693.25	578344.02	N 32 0 29.03 W 104 12 50.19	
	12800.00	89.79	359.28	9684.84	3462.78	3462.53	77.14	0.00	366793.24	578342.76	N 32 0 30.02 W 104 12 50.21	
	12900.00	89.79	359.28	9685.21	3562.76	3562.52	75.88	0.00	366893.22	578341.50	N 32 0 31.01 W 104 12 50.22	
	13000.00	89.79	359.28	9685.58	3662.75	3662.51	74.62	0.00	366993.20	578340.25	N 32 0 32.00 W 104 12 50.23	
	13100.00	89.79	359.28	9685.95	3762.73	3762.51	73.37	0.00	367093.18	578338.99	N 32 0 32.99 W 104 12 50.25	
	13200.00	89.79	359.28	9686.33	3862.72	3862.50	72.11	0.00	367193.16	578337.73	N 32 0 33.98 W 104 12 50.26	
	13300.00	89.79	359.28	9686.70	3962.71	3962.49	70.85	0.00	367293.15	578336.47	N 32 0 34.97 W 104 12 50.27	
	13400.00	89.79	359.28									

Comments	MD (ft)	Incl (°)	Azim Grid (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	DLS (°/100ft)	Northing (ftUS)	Easting (ftUS)	Latitude (N/S ° ' ")	Longitude (E/W ° ' ")
	13500.00	89.79	359.28	9687.07	4062.69	4062.48	69.59	0.00	367393.13	578335.22	N 32 0 35.96 W 104 12 50.29	
	13600.00	89.79	359.28	9687.44	4162.68	4162.47	68.33	0.00	367493.11	578333.96	N 32 0 36.94 W 104 12 50.30	
	13700.00	89.79	359.28	9687.81	4262.67	4262.46	67.08	0.00	367593.09	578332.70	N 32 0 37.93 W 104 12 50.31	
	13800.00	89.79	359.28	9688.18	4362.65	4362.45	65.82	0.00	367693.08	578331.44	N 32 0 38.92 W 104 12 50.33	
	13900.00	89.79	359.28	9688.55	4462.64	4462.45	64.56	0.00	367793.06	578330.19	N 32 0 39.91 W 104 12 50.34	
	14000.00	89.79	359.28	9688.92	4562.63	4562.44	63.30	0.00	367893.04	578328.93	N 32 0 40.90 W 104 12 50.35	
	14100.00	89.79	359.28	9689.30	4662.61	4662.43	62.05	0.00	367993.02	578327.67	N 32 0 41.89 W 104 12 50.37	
	14200.00	89.79	359.28	9689.67	4762.60	4762.42	60.79	0.00	368093.00	578326.41	N 32 0 42.88 W 104 12 50.38	
	14300.00	89.79	359.28	9690.04	4862.59	4862.41	59.53	0.00	368192.99	578325.15	N 32 0 43.87 W 104 12 50.39	
	14400.00	89.79	359.28	9690.41	4962.57	4962.40	58.27	0.00	368292.97	578323.90	N 32 0 44.86 W 104 12 50.41	
	14500.00	89.79	359.28	9690.78	5062.56	5062.39	57.01	0.00	368392.95	578322.64	N 32 0 45.85 W 104 12 50.42	
	14600.00	89.79	359.28	9691.15	5162.55	5162.39	55.76	0.00	368492.93	578321.38	N 32 0 46.84 W 104 12 50.43	
	14700.00	89.79	359.28	9691.52	5262.53	5262.38	54.50	0.00	368592.92	578320.12	N 32 0 47.83 W 104 12 50.45	
	14800.00	89.79	359.28	9691.89	5362.52	5362.37	53.24	0.00	368692.90	578318.87	N 32 0 48.82 W 104 12 50.46	
	14900.00	89.79	359.28	9692.27	5462.51	5462.36	51.98	0.00	368792.88	578317.61	N 32 0 49.81 W 104 12 50.47	
	15000.00	89.79	359.28	9692.64	5562.49	5562.35	50.73	0.00	368892.86	578316.35	N 32 0 50.80 W 104 12 50.49	
	15100.00	89.79	359.28	9693.01	5662.48	5662.34	49.47	0.00	368992.85	578315.09	N 32 0 51.79 W 104 12 50.50	
	15200.00	89.79	359.28	9693.38	5762.46	5762.33	48.21	0.00	369092.83	578313.84	N 32 0 52.78 W 104 12 50.51	
	15300.00	89.79	359.28	9693.75	5862.45	5862.33	46.95	0.00	369192.81	578312.58	N 32 0 53.77 W 104 12 50.53	
	15400.00	89.79	359.28	9694.12	5962.44	5962.32	45.69	0.00	369292.79	578311.32	N 32 0 54.76 W 104 12 50.54	
	15500.00	89.79	359.28	9694.49	6062.42	6062.31	44.44	0.00	369392.77	578310.06	N 32 0 55.74 W 104 12 50.55	
	15600.00	89.79	359.28	9694.86	6162.41	6162.30	43.18	0.00	369492.76	578308.81	N 32 0 56.73 W 104 12 50.57	
	15700.00	89.79	359.28	9695.24	6262.40	6262.29	41.92	0.00	369592.74	578307.55	N 32 0 57.72 W 104 12 50.58	
	15800.00	89.79	359.28	9695.61	6362.38	6362.28	40.66	0.00	369692.72	578306.29	N 32 0 58.71 W 104 12 50.59	
	15900.00	89.79	359.28	9695.98	6462.37	6462.27	39.41	0.00	369792.70	578305.03	N 32 0 59.70 W 104 12 50.61	
	16000.00	89.79	359.28	9696.35	6562.36	6562.27	38.15	0.00	369892.69	578303.77	N 32 1 0.69 W 104 12 50.62	
	16100.00	89.79	359.28	9696.72	6662.34	6662.26	36.89	0.00	369992.67	578302.52	N 32 1 1.68 W 104 12 50.63	
	16200.00	89.79	359.28	9697.09	6762.33	6762.25	35.63	0.00	370092.65	578301.26	N 32 1 2.67 W 104 12 50.65	
	16300.00	89.79	359.28	9697.46	6862.32	6862.24	34.37	0.00	370192.63	578300.00	N 32 1 3.66 W 104 12 50.66	
	16400.00	89.79	359.28	9697.83	6962.30	6962.23	33.12	0.00	370292.61	578298.74	N 32 1 4.65 W 104 12 50.67	
	16500.00	89.79	359.28	9698.21	7062.29	7062.22	31.86	0.00	370392.60	578297.49	N 32 1 5.64 W 104 12 50.69	
	16600.00	89.79	359.28	9698.58	7162.28	7162.21	30.60	0.00	370492.58	578296.23	N 32 1 6.63 W 104 12 50.70	
	16700.00	89.79	359.28	9698.95	7262.26	7262.20	29.34	0.00	370592.56	578294.97	N 32 1 7.62 W 104 12 50.71	
	16800.00	89.79	359.28	9699.32	7362.25	7362.20	28.09	0.00	370692.54	578293.71	N 32 1 8.61 W 104 12 50.73	
	16900.00	89.79	359.28	9699.69	7462.24	7462.19	26.83	0.00	370792.53	578292.46	N 32 1 9.60 W 104 12 50.74	

Cimarex  
Medwick 32  
Federal Com  
#6H - BHL [330'  
FNL, 2020'  
FWL]

16983.17 89.79 359.28 9700.00 7545.39 7545.35 25.78 0.00 370875.68 578291.41 N 32 1 10.42 W 104 12 50.75

Survey Type: Non-Def Plan

Survey Error Model: ISCWSA Rev 0 \*\*\* 3-D 95.000% Confidence 2.7955 sigma  
Survey Program:

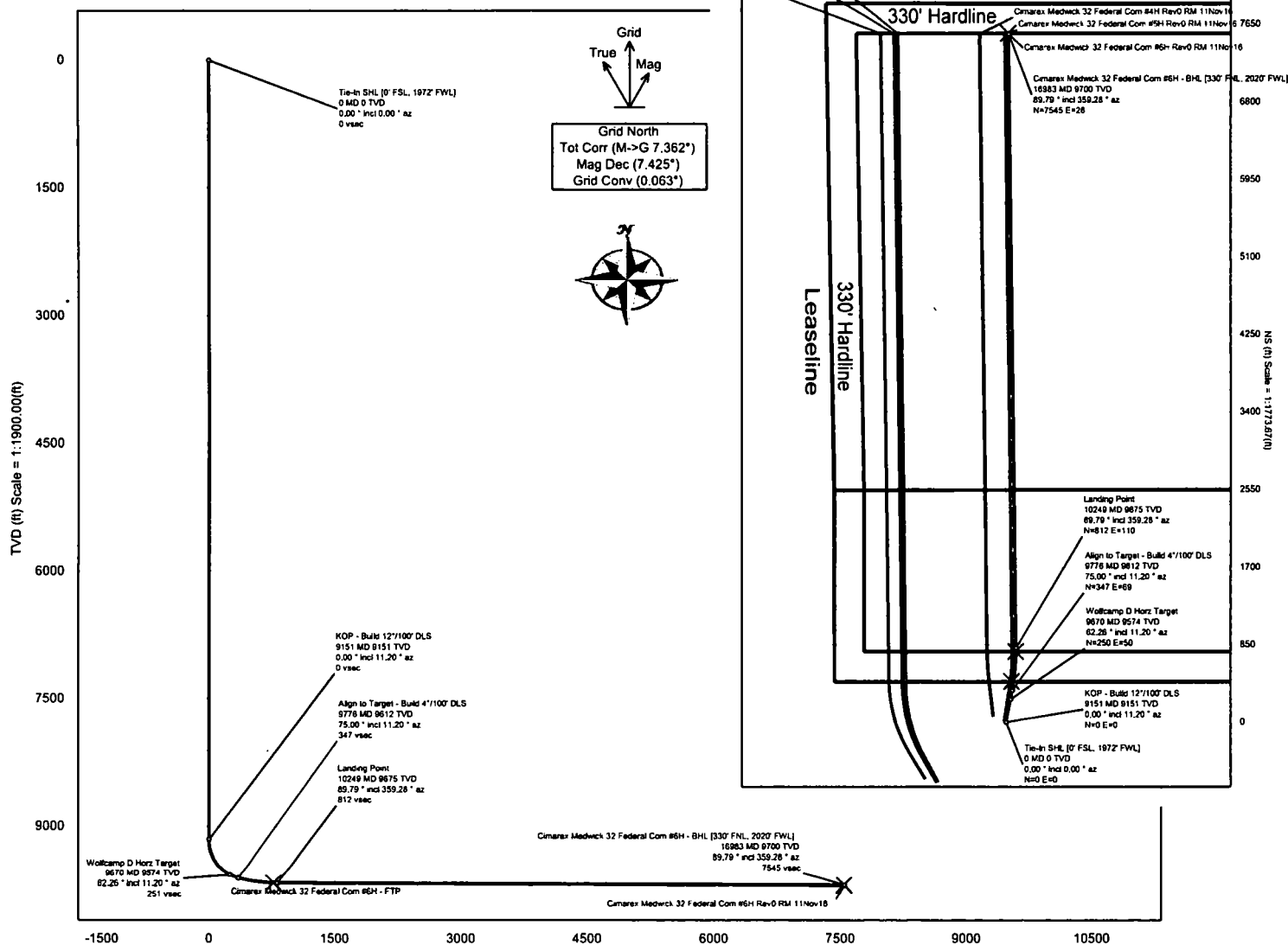
Description	Part	MD From (ft)	MD To (ft)	EOU Freq (ft)	Hole Size (in)	Casing Diameter (in)	Expected Max Inclination (deg)	Survey Tool Type	Borehole / Survey
	1	0.000	24.000	1/100.000	30.000	30.000		NAL_MWD_PLUS_0.5_DEG- Depth Only	Original Borehole / Cimarex Medwick 32 Federal Com #6H Rev0 RM 11Nov16
	1	24.000	16983.169	1/100.000	30.000	30.000		NAL_MWD_PLUS_0.5_DEG	Original Borehole / Cimarex Medwick 32 Federal Com #6H

<b>Borehole:</b>	<b>Well:</b>	<b>Field:</b>	<b>Structure:</b>
Original Borehole	Cimarex Medwick 32 Federal Com #6H	NM Eddy County (NAD 83)	Cimarex Medwick 32 Federal Com #6H

<b>Gravity &amp; Magnetic Parameters</b>	<b>Surface Location</b>	<b>NAD83 New Mexico State Plane, Eastern Zone, US Feet</b>	<b>Miscellaneous</b>
Model: HGSN 2015 Mag Dec: 7.421° FB: 47996.361mT Gravity FB: 998.432mgals (2.99853 Based)	Date: 21-Feb-2017 Lat: N 31° 59' 55.78" Long: W 104° 12' 51.18"	Northing: 363331.638015 Easting: 878255.638015 Grid Conv: 8.89311° Scale Fact: 0.99991963	Ref: Cimarex Medwick 32 Federal Com #6H TVD Ref: 1048.3232.18 above MSL Plan: Cimarex Medwick 32 Federal Com #6H Rev0 RM 11Nov16

Cimarex Medwick 32 Federal Com #3H Rev0 RM 10Nov16  
Cimarex Medwick 32 Federal Com #2H Rev0 RM 10Nov16  
Cimarex Medwick 32 Federal Com #1H Rev0 RM 10Nov16

EW (ft) Scale = 1:1773.67(ft)



Vertical Section (ft) Azim = 0.196° Scale = 1:1900.00(ft) Origin = 0N/-S, 0E/-W

## Critical Points

Critical Point	MD	INCL	AZIM	TVD	VSEC	N(+)/S(-)	E(+)/W(-)	DLS
Tie-In SHL [0' FSL, 1972' FWL]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
KOP - Build 12°/100' DLS	9151.19	0.00	11.20	9151.19	0.00	0.00	0.00	0.00
Wolfcamp D Horiz Target	9670.00	62.26	11.20	9573.77	250.51	250.34	49.57	12.00
Align to Target - Build 4°/100' DLS	9776.19	75.00	11.20	9612.39	347.38	347.15	68.74	12.00
Landing Point	10248.85	89.79	359.28	9675.00	811.98	811.61	110.48	4.00
Cimarex Medwick 32 Federal Com #6H - BHL [330' FNL, 2020' FWL]	16983.17	89.79	359.28	9700.00	7545.39	7545.35	25.78	0.00

**1. Geological Formations**

TVD of target 9,700  
MD at TD 16,983

Pilot Hole TD N/A  
Deepest expected fresh water

Formation	Depth (TVD) from KB	Water/Mineral Bearing/Target Zone	Hazards
Rustler	0	N/A	
Salado	1261	N/A	
Castille	1706	N/A	
Bell Canyon	1957	N/A	
Cherry Canyon	2945	N/A	
Brushy Canyon	4022	N/A	
Brushy Canyon Lower	5317	N/A	
Bone Spring	5529	Hydrocarbons	
Bone Spring A Shale	5651	Hydrocarbons	
Bone Spring C Shale	6157	Hydrocarbons	
1st Bone Spring Ss	6478	Hydrocarbons	
2nd Bone Spring Ss	6942	Hydrocarbons	
2nd BS Ss Lower	7793	Hydrocarbons	
3rd Bone Spring Ss	8261	Hydrocarbons	
Wolfcamp	8602	Hydrocarbons	
Wolfcamp B	9209	Hydrocarbons	
Wolfcamp C	9337	Hydrocarbons	
Wolfcamp D	9482	Hydrocarbons	
Wolfcamp D Horz Target	9670	Hydrocarbons	
Wolfcamp E	10081	Hydrocarbons	

**2. Casing Program**

Hole Size	Casing Depth From	Casing Depth To	Casing Size	Weight (lb/ft)	Grade	Conn.	SF Collapse	SF Burst	SF Tension
17 1/2	0	400	13-3/8"	48.00	H-40/J-55 Hybrid	ST&C	4.04	9.45	16.77
12 1/4	0	1937	9-5/8"	36.00	J-55	LT&C	1.97	3.43	6.50
8 3/4	0	9151	7"	26.00	L-80	LT&C	1.26	1.69	2.03
8 3/4	9151	10249	7"	26.00	L-80	BT&C	1.19	1.60	42.31
6	9151	16983	4-1/2"	11.60	P-110	BT&C	1.16	1.63	57.63
BLM Minimum Safety Factor							1.125	1	1.6 Dry 1.8 Wet

All casing strings will be tested in accordance with Onshore Oil and Gas Order #2 III.B.1.h

	Y or N
Is casing new? If used, attach certification as required in Onshore Order #1	Y
Does casing meet API specifications? If no, attach casing specification sheet.	Y
Is premium or uncommon casing planned? If yes attach casing specification sheet.	N
Does the above casing design meet or exceed BLM's minimum standards? If not provide justification (loading assumptions, casing design criteria).	Y
Will the intermediate pipe be kept at a minimum 1/3 fluid filled to avoid approaching the collapse pressure rating of the casing?	N
Is well located within Capitan Reef?	N
If yes, does production casing cement tie back a minimum of 50' above the Reef?	N
Is well within the designated 4 string boundary.	N
Is well located in SOPA but not in R-111-P?	N
If yes, are the first 2 strings cemented to surface and 3rd string cement tied back 500' into previous casing?	N
Is well located in R-111-P and SOPA?	N
If yes, are the first three strings cemented to surface?	N
Is 2nd string set 100' to 600' below the base of salt?	N
Is well located in high Cave/Karst?	N
If yes, are there two strings cemented to surface?	N
(For 2 string wells) If yes, is there a contingency casing if lost circulation occurs?	N
Is well located in critical Cave/Karst?	N
If yes, are there three strings cemented to surface?	N

**3. Cementing Program**

Casing	# Sks	Wt. lb/gal	Yld ft <sup>3</sup> /sack	H <sub>2</sub> O gal/sk	500# Comp. Strength (hours)	Slurry Description
Surface	61	13.50	1.72	9.15	15.5	Lead: Class C + Bentonite
	195	14.80	1.34	6.32	9.5	Tail: Class C + LCM
Intermediate	368	12.90	1.88	9.65	12	Lead: 35:65 (Poz:C) + Salt + Bentonite
	113	14.80	1.34	6.32	9.5	Tail: Class C + LCM
Production	225	9.20	6.18	28.80		Lead: Class C + Extender + Salt + Strength Enhancement + LCM + Fluid Loss + Retarder
	140	14.20	1.30	5.86	14:30	Tail: 50:50 (Poz:H) + Salt + Bentonite + Fluid Loss + Dispersant + SMS
Completion System	497	14.20	1.30	5.86	14:30	Tail: 50:50 (Poz:H) + Salt + Bentonite + Fluid Loss + Dispersant + SMS

Casing String	TOC	% Excess
Surface	0	31
Intermediate	0	44
Production	1737	23
Completion System	10149	10

**4. Pressure Control Equipment**

A variance is requested for the use of a diverter on the surface casing. See attached for schematic.					
BOP installed and tested before drilling which hole?	Size	Min Required WP	Type		Tested To
12 1/4	13 5/8	2M	Annular	X	50% of working pressure
			Blind Ram		2M
			Pipe Ram		
			Double Ram	X	
			Other		
8 3/4	13 5/8	3M	Annular	X	50% of working pressure
			Blind Ram		3M
			Pipe Ram		
			Double Ram	X	
			Other		
6	13 5/8	5M	Annular	X	50% of working pressure
			Blind Ram		5M
			Pipe Ram		
			Double Ram	X	
			Other		

BOP/BOPE will be tested by an independent service company to 250 psi low and the high pressure indicated above per Onshore Order 2 requirements. The System may be upgraded to a higher pressure but still tested to the working pressure listed in the table above. If the system is upgraded all the components installed will be functional and tested.

Pipe rams will be operationally checked each 24 hour period. Blind rams will be operationally checked on each trip out of the hole. These checks will be noted on the daily tour sheets. Other accessories to the BOP equipment will include a Kelly cock and floor safety valve (inside BOP) and choke lines and choke manifold. See attached schematics.

X	Formation integrity test will be performed per Onshore Order #2. On Exploratory wells or on that portion of any well approved for a 5M BOPE system or greater, a pressure integrity test of each casing shoe shall be performed. Will be tested in accordance with Onshore Oil and Gas Order #2 III.B.1.i.
X	A variance is requested for the use of a flexible choke line from the BOP to Choke Manifold. See attached for specs and hydrostatic test chart.
N	Are anchors required by manufacturer?

**5. Mud Program**

Depth	Type	Weight (ppg)	Viscosity	Water Loss
0' to 400'	FW Spud Mud	8.30 - 8.80	28	N/C
400' to 1937'	Brine Water	9.70 - 10.20	30-32	N/C
1937' to 10249'	FW/Cut Brine	8.50 - 9.00	30-32	N/C
10249' to 16983'	Oil Based Mud	12.50 - 13.00	50-70	N/C

Sufficient mud materials to maintain mud properties and meet minimum lost circulation and weight increase requirements will be kept on location at all times.

What will be used to monitor the loss or gain of fluid?	PVT/Pason/Visual Monitoring
---	-----------------------------

**6. Logging and Testing Procedures**

Logging, Coring and Testing	
X	Will run GR/CNL from TD to surface (horizontal well – vertical portion of hole). Stated logs run will be in the Completion Report and submitted to the BLM.
	No logs are planned based on well control or offset log information.
	Drill stem test?
	Coring?

Additional Logs Planned	Interval
-------------------------	----------

**7. Drilling Conditions**

Condition	
BH Pressure at deepest TVD	6557 psi
Abnormal Temperature	No

Hydrogen Sulfide (H<sub>2</sub>S) monitors will be installed prior to drilling out the surface shoe. If H<sub>2</sub>S is detected in concentrations greater than 100 ppm, the operator will comply with the provisions of Onshore Oil and Gas Order #6. If Hydrogen Sulfide is encountered, measured values and formations will be provided to the BLM.

X	H <sub>2</sub> S is present
X	H <sub>2</sub> S plan is attached

**8. Other Facets of Operation**

Exhibit F – Co-Flex Hose  
**Medwick 32 Federal Com 6H**

Cimarex Energy Co.  
29 & 32 -26S-27E  
Eddy County, NM

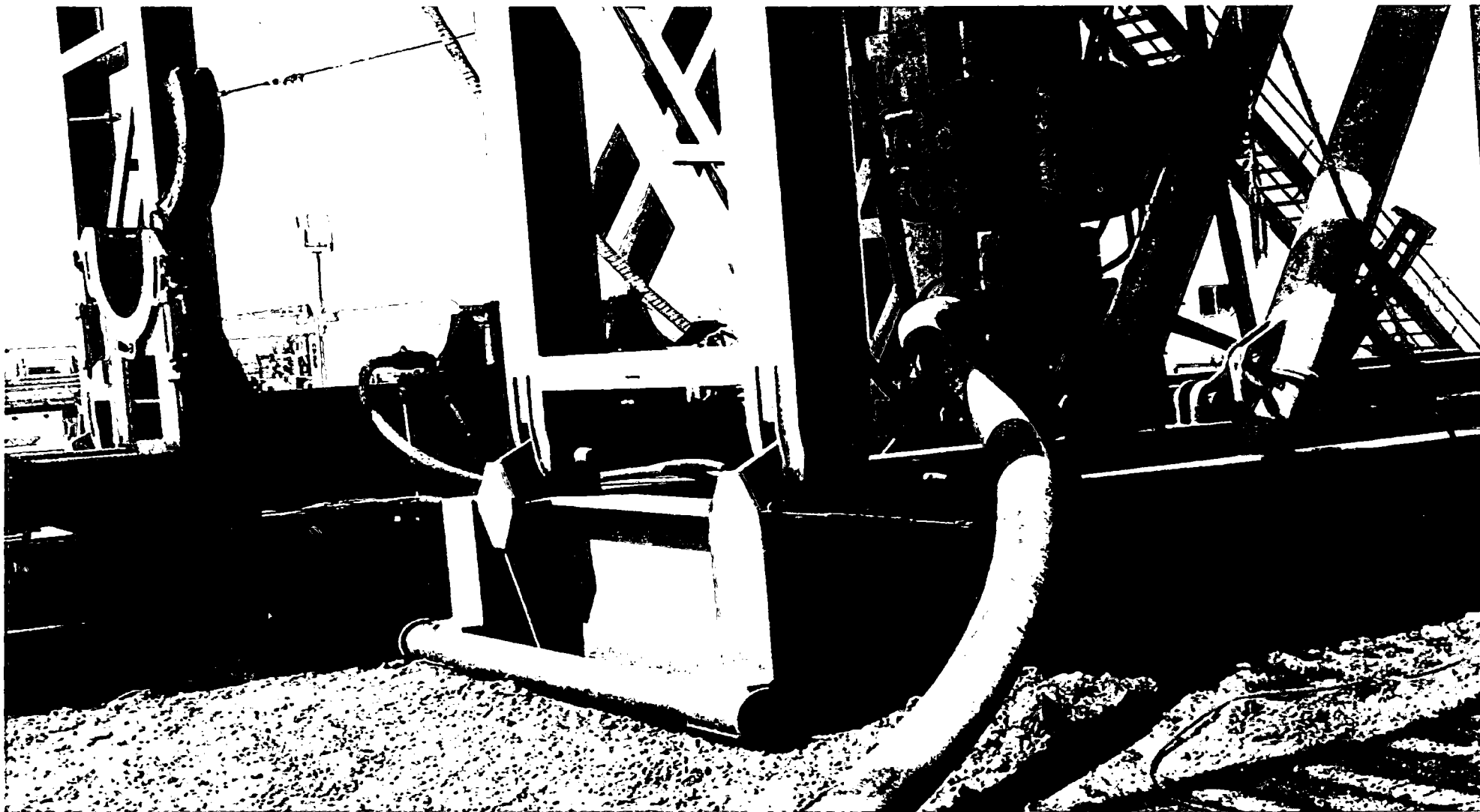


Exhibit F-1 – Co-Flex Hose Hydrostatic Test

Medwick 32 Federal Com 6H

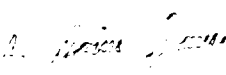
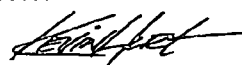
Cimarex Energy Co.

29 & 32 -26S-27E

Eddy County, NM



## Midwest Hose & Specialty, Inc.

INTERNAL HYDROSTATIC TEST REPORT			
Customer: <b>Oderco Inc</b>		P.O. Number: <b>odyd-271</b>	
HOSE SPECIFICATIONS			
Type: <b>Stainless Steel Armor Choke &amp; Kill Hose</b>		Hose Length: <b>45'ft.</b>	
I.D. <b>4 INCHES</b>		O.D. <b>9 INCHES</b>	
WORKING PRESSURE <b>10,000 PSI</b>	TEST PRESSURE <b>15,000 PSI</b>		BURST PRESSURE <b>0 PSI</b>
COUPLINGS			
Stem Part No. <b>OKC OKC</b>		Ferrule No. <b>OKC OKC</b>	
Type of Coupling: <b>Swage-It</b>			
PROCEDURE			
<i>Hose assembly pressure tested with water at ambient temperature.</i>			
TIME HELD AT TEST PRESSURE <b>15 MIN.</b>		ACTUAL BURST PRESSURE: <b>0 PSI</b>	
Hose Assembly Serial Number: <b>79793</b>		Hose Serial Number: <b>OKC</b>	
Comments:			
Date: <b>3/8/2011</b>	Tested: 		Approved: 



Midwest Hose  
& Specialty, Inc.

## Internal Hydrostatic Test Graph

Customer: Houston

Pick Ticket #: 94260

### Hose Specifications

Hose Type  
C&K  
I.D.  
4"  
Working Pressure  
1000 PSI

Length  
45'  
O.D.  
6.09"

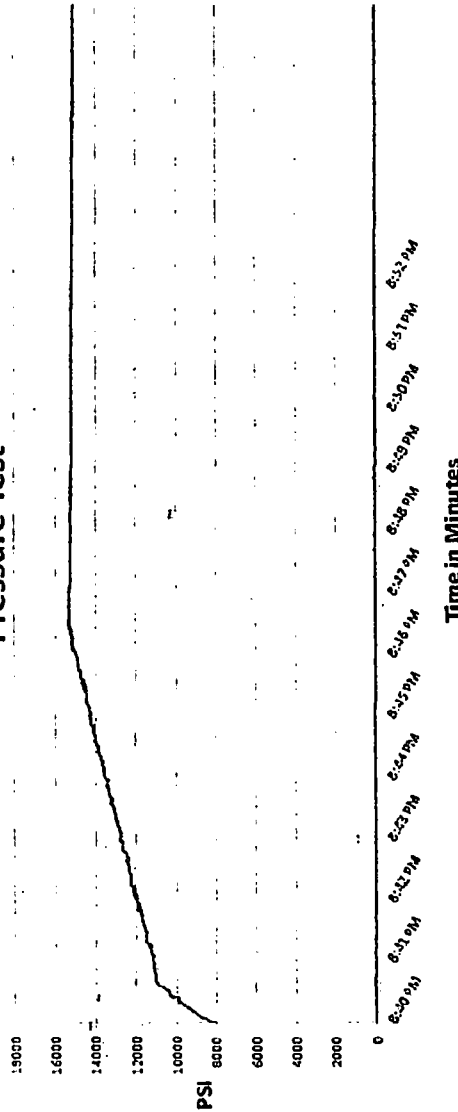
Burst Pressure  
Measured Safety Factor Applies

### Verification

Type of Fittings  
41/1610K  
Die Size  
6.39"  
Hose Serial #  
5544

Coupling Method  
Swage  
Final O.D.  
6.25"  
Hose Assembly Serial #  
79793

### Pressure Test



Test Pressure  
15000 PSI

Time Held at Test Pressure  
11 Minutes

Actual Burst Pressure

Peak Pressure  
15483 PSI

Comments: Hose assembly pressure tested with water at ambient temperature.

Tested By: Zac Mcconnell

Approved By: Kim Thomas

*[Signature]*

*[Signature]*

Exhibit F-1 – Co-Flex Hose Hydrostatic Test  
Medwick 32 Federal Com 6H  
Cimarex Energy Co.  
29 & 32 -26S-27E  
Eddy County, NM

March 3, 2011

Exhibit F-2 - Co-Flex Hose  
Medwick 32 Federal Com 6H  
Cimarex Energy Co.  
29 & 32 -26S-27E  
Eddy County, NM



## Midwest Hose & Specialty, Inc.

Certificate of Conformity	
Customer:	PO
DEM	ODYD-271
SPECIFICATIONS	
Sales Order	Dated:
79793	3/8/2011
<p>We hereby certify that the material supplied for the referenced purchase order to be true according to the requirements of the purchase order and current industry standards</p> <p>Supplier: Midwest Hose &amp; Specialty, Inc. 10640 Tanner Road Houston, Texas 77041</p>	
Comments:	
Approved:	Date:
<i>David Garcia</i>	3/8/2011



Exhibit F -3- Co-Flex Hose  
Medwick 32 Federal Com 6H  
Cimarex Energy Co.  
29 & 32 -26S-27E  
Eddy County, NM

## Specification Sheet Choke & Kill Hose

The Midwest Hose & Specialty Choke & Kill hose is manufactured with only premium components. The reinforcement cables, inner liner and cover are made of the highest quality material to handle the tough drilling applications of today's industry. The end connections are available with API flanges, API male threads, hubs, hammer unions or other special fittings upon request. Hose assembly is manufactured to API 7K. This assembly is wrapped with fire resistant vermiculite coated fiberglass insulation, rated at 2000 degrees with stainless steel armor cover.

<b>Working Pressure:</b>	5,000 or 10,000 psi working pressure
<b>Test Pressure:</b>	10,000 or 15,000 psi test pressure
<b>Reinforcement:</b>	Multiple steel cables
<b>Cover:</b>	Stainless Steel Armor
<b>Inner Tube:</b>	Petroleum resistant, Abrasion resistant
<b>End Fitting:</b>	API flanges, API male threads, threaded or butt weld hammer unions, unbolt and other special connections
<b>Maximum Length:</b>	110 Feet
<b>ID:</b>	2-1/2", 3", 3-1/2", 4"
<b>Operating Temperature:</b>	-22 deg F to +180 deg F (-30 deg C to +82 deg C)



U.S. Department of the Interior  
BUREAU OF LAND MANAGEMENT

## SUPO Data Report

06/19/2018

APD ID: 10400012538

Submission Date: 03/23/2017

Operator Name: CIMAREX ENERGY COMPANY

Well Name: MEDWICK 32 FEDERAL COM

Well Number: 6H

Well Type: CONVENTIONAL GAS WELL

Well Work Type: Drill

Highlighted data  
reflects the most  
recent changes

[Show Final Text](#)

### Section 1 - Existing Roads

Will existing roads be used? NO

### Section 2 - New or Reconstructed Access Roads

Will new roads be needed? YES

New Road Map:

Medwick\_32\_Fed\_Com\_6H\_Road\_ROW\_03-22-2017.pdf

New road type: COLLECTOR

Length: 126.96 Feet

Width (ft.): 30

Max slope (%): 2

Max grade (%): 6

Army Corp of Engineers (ACOE) permit required? NO

ACOE Permit Number(s):

New road travel width: 15

**New road access erosion control:** The side slopes of any drainage channels or swales that are crossed will be re-contoured to original grade and compacted and mulched as necessary to avoid erosion. Where steeper slopes cannot be avoided, water bars or silt fence will be constructed, mulch/rip-rap applied, or other measures employed as necessary to control erosion. Hay bales, straw wattles or silt fence may also be installed to control erosion as needed. All disturbed areas will be seeded with a mix appropriate for the area unless specified otherwise by the landowner.

**New road access plan or profile prepared?** NO

**New road access plan attachment:**

**Access road engineering design?** NO

**Access road engineering design attachment:**

**Access surfacing type:** GRAVEL

**Access topsoil source:** ONSITE

**Operator Name:** CIMAREX ENERGY COMPANY

**Well Name:** MEDWICK 32 FEDERAL COM

**Well Number:** 6H

**Access surfacing type description:**

**Access onsite topsoil source depth:** 6

**Offsite topsoil source description:**

**Onsite topsoil removal process:** Push off and stockpile alongside the location.

**Access other construction information:** The operator will prevent and abate fugitive dust as needed, whether created by vehicular traffic, equipment operations or other events.

**Access miscellaneous information:**

**Number of access turnouts:**

**Access turnout map:**

### Drainage Control

**New road drainage crossing:** CULVERT, LOW WATER

**Drainage Control comments:** To control and prevent potentially contaminated precipitation from leaving the pad site, a perimeter berm and settlement pond will be installed. Contaminated water will be removed from pond, stored in waste tanks, and disposed of at a state approved facility. Standing water or puddles will not be allowed. Drainage ditches would be established and maintained on the pad and along access roads to divert water away from operations. Natural drainage areas disturbed during construction would be re-contoured to near original condition prior to construction. Erosion Control Best Management Practices would be used where necessary and consist of seeding, fiber rolls, water bars, silt fences, and temporary diversion dikes. Areas disturbed during construction that are no longer needed for operations would be obliterated, re-contoured to near original condition prior to construction. Erosion Control Best Management Practices would be used where necessary and consist of seeding, fiber rolls, water bars, silt fences, and temporary diversion dikes. Areas disturbed during construction that are no longer needed for operations would be obliterated, re-contoured, and reclaimed to near original condition to re-establish natural drainage.

**Road Drainage Control Structures (DCS) description:** n/a

**Road Drainage Control Structures (DCS) attachment:**

### Access Additional Attachments

**Additional Attachment(s):**

### Section 3 - Location of Existing Wells

**Existing Wells Map?** YES

**Attach Well map:**

Medwick\_32\_Fed\_Com\_6H\_Mile\_Radius\_Existing\_Wells\_03-22-2017.pdf

**Existing Wells description:**

### Section 4 - Location of Existing and/or Proposed Production Facilities

**Submit or defer a Proposed Production Facilities plan?** SUBMIT

**Production Facilities description:**

**Production Facilities map:**

**Operator Name:** CIMAREX ENERGY COMPANY

**Well Name:** MEDWICK 32 FEDERAL COM

**Well Number:** 6H

Medwick\_32\_Fed\_Com\_Battery\_pad\_plats\_03-22-2017.pdf

## Section 5 - Location and Types of Water Supply

### Water Source Table

**Water source use type:** INTERMEDIATE/PRODUCTION CASING,  
SURFACE CASING

**Water source type:** MUNICIPAL

**Describe type:**

**Source latitude:**

**Source longitude:**

**Source datum:**

**Water source permit type:** WATER RIGHT

**Permit Number:**

**Source land ownership:** STATE

**Water source transport method:** PIPELINE,TRUCKING

**Source transportation land ownership:** STATE

**Water source volume (barrels):** 5000

**Source volume (acre-feet):** 0.6444655

**Source volume (gal):** 210000

**Water source and transportation map:**

Medwick\_32\_Fed\_Com\_6H\_Drlg\_Water\_Route\_03-22-2017.pdf

**Water source comments:**

**New water well?** NO

### New Water Well Info

**Well latitude:**

**Well Longitude:**

**Well datum:**

**Well target aquifer:**

**Est. depth to top of aquifer(ft):**

**Est thickness of aquifer:**

**Aquifer comments:**

**Aquifer documentation:**

**Well depth (ft):**

**Well casing type:**

**Well casing outside diameter (in.):**

**Well casing inside diameter (in.):**

**New water well casing?**

**Used casing source:**

**Drilling method:**

**Drill material:**

**Grout material:**

**Grout depth:**

**Casing length (ft.):**

**Casing top depth (ft.):**

**Well Production type:**

**Completion Method:**

**Operator Name:** CIMAREX ENERGY COMPANY

**Well Name:** MEDWICK 32 FEDERAL COM

**Well Number:** 6H

**Water well additional information:**

**State appropriation permit:**

**Additional information attachment:**

## Section 6 - Construction Materials

Construction Materials description: The drilling and testing operations will be conducted on a watered and compacted native soil grade. Soft spots will be covered with scoria, free of large rocks (3" diameter). Upon completion at a commercial producer the location will be covered with scoria, free of large rocks (3" dia.) from an existing privately owned gravel pit. A balliche pit located in Sec 13, Blk 60 T11, T&P RR Co Stry of Sec 1, Blk 60 T3, T&P RR Co Levy will provide construction material.

**Construction Materials source location attachment:**

## Section 7 - Methods for Handling Waste

**Waste type:** DRILLING

**Waste content description:** Drilling Fluids, drill cuttings, water and other waste produced from the well during drilling operations.

**Amount of waste:** 15000 barrels

**Waste disposal frequency :** Daily

**Safe containment description:** n/a

**Safe containmant attachment:**

**Waste disposal type:** HAUL TO COMMERCIAL FACILITY **Disposal location ownership:** COMMERCIAL

**Disposal type description:**

**Disposal location description:** Haul to R360 commercial Disposal

**Waste type:** GARBAGE

**Waste content description:** Garbage and trash produced during drilling and completion operations

**Amount of waste:** 32500 pounds

**Waste disposal frequency :** Weekly

**Safe containment description:** n/a

**Safe containmant attachment:**

**Waste disposal type:** HAUL TO COMMERCIAL FACILITY **Disposal location ownership:** COMMERCIAL

**Disposal type description:**

**Disposal location description:** Windmill Spraying Service hauls trash to Lea County Landfill

## Reserve Pit

**Reserve Pit being used?** NO

**Operator Name:** CIMAREX ENERGY COMPANY

**Well Name:** MEDWICK 32 FEDERAL COM

**Well Number:** 6H

**Temporary disposal of produced water into reserve pit?**

**Reserve pit length (ft.)**

**Reserve pit width (ft.)**

**Reserve pit depth (ft.)**

**Reserve pit volume (cu. yd.)**

**Is at least 50% of the reserve pit in cut?**

**Reserve pit liner**

**Reserve pit liner specifications and installation description**

### Cuttings Area

**Cuttings Area being used?** NO

**Are you storing cuttings on location?** NO

**Description of cuttings location**

**Cuttings area length (ft.)**

**Cuttings area width (ft.)**

**Cuttings area depth (ft.)**

**Cuttings area volume (cu. yd.)**

**Is at least 50% of the cuttings area in cut?**

**WCuttings area liner**

**Cuttings area liner specifications and installation description**

### Section 8 - Ancillary Facilities

**Are you requesting any Ancillary Facilities?:** NO

**Ancillary Facilities attachment:**

**Comments:**

### Section 9 - Well Site Layout

**Well Site Layout Diagram:**

Medwick\_32\_Fed\_Com\_6H\_Wellsite\_layout\_03-22-2017.pdf

**Comments:**

**Operator Name:** CIMAREX ENERGY COMPANY

**Well Name:** MEDWICK 32 FEDERAL COM

**Well Number:** 6H

## Section 10 - Plans for Surface Reclamation

**Type of disturbance:** New Surface Disturbance

**Multiple Well Pad Name:** MEDWICK 32 FEDERAL COM

**Multiple Well Pad Number:** 4H, 5H, 6H

### Recontouring attachment:

**Drainage/Erosion control construction:** To control and prevent potentially contaminated precipitation from leaving the pad site, a perimeter berm and settlement pond will be installed. Contaminated water will be removed from pond, stored in waste tanks, and disposed of at a state approved facility. Standing water or puddles will not be allowed. Drainage ditches would be established and maintained on the pad and along access roads to divert water away from operations. Natural drainage areas disturbed during construction would be re-contoured to near original condition prior to construction. Erosion Control Best Management Practices would be used where necessary and consist of seeding, fiber rolls, water bars, silt fences, and temporary diversion dikes. Areas disturbed during construction that are no longer needed for operations would be obliterated, re-contoured to near original condition prior to construction. Erosion Control Best Management Practices would be used where necessary and consist of seeding, fiber rolls, water bars, silt fences, and temporary diversion dikes. Areas disturbed during construction that are no longer needed for operations would be obliterated, re-contoured, and reclaimed to near original condition to re-establish natural drainage.

**Drainage/Erosion control reclamation:** All disturbed and re-contoured areas would be reseeded according to specifications. Approved seed mixtures would be certified weed free and consist of grasses, forbs, or shrubs similar to the surrounding area. Compacted soil areas may need to be obliterated and reclaimed to near natural conditions by re-contouring all slopes to facilitate and re-establish natural drainage.

**Wellpad long term disturbance (acres):** 6.226

**Wellpad short term disturbance (acres):** 6.226

**Access road long term disturbance (acres):** 0.087

**Access road short term disturbance (acres):** 0.087

**Pipeline long term disturbance (acres):** 1.469697

**Pipeline short term disturbance (acres):** 1.0909091

**Other long term disturbance (acres):** 0

**Other short term disturbance (acres):** 0

**Total long term disturbance:** 7.782697

**Total short term disturbance:** 7.403909

### Disturbance Comments:

**Reconstruction method:** After well plugging, all disturbed areas would be returned to the original contour or a contour that blends with the surrounding landform including roads unless the surface owner requests that they be left intact. In consultation with the surface owners it will be determined if any gravel or similar materials used to reinforce an area are to be removed, buried, or left in place during final reclamation. Salvaged topsoil, if any, would be re-spread evenly over the surfaces to be re-vegetated. As necessary, the soil surface would be prepared to provide a seedbed for re-establishment of desirable vegetation. Site preparation may include gouging, scarifying, dozer track-walking, mulching, or fertilizing. Reclamation, Re-vegetation, and Drainage: All disturbed and recontoured areas would be reseeded using techniques outlined under Phase I and II of this plan or as specified by the land owner. Approved seed mixtures would be certified weed free and consist of grasses, forbs, or shrubs similar to the surrounding area. Compacted soil areas may need to be obliterated and reclaimed to near natural conditions by re-contouring all slopes to facilitate and re-establish natural drainage. **Topsoil redistribution:** Salvaged topsoil, if any, would be re-spread evenly over the surfaces to be re-vegetated.

**Soil treatment:** As necessary, the soil surface would be prepared to provide a seedbed for re-establishment of desirable vegetation. Site preparation may include gouging, scarifying, dozer track-walking, mulching or fertilizing.

**Existing Vegetation at the well pad:**

**Existing Vegetation at the well pad attachment:**

**Existing Vegetation Community at the road:**

**Operator Name:** CIMAREX ENERGY COMPANY

**Well Name:** MEDWICK 32 FEDERAL COM

**Well Number:** 6H

**Existing Vegetation Community at the road attachment:**

**Existing Vegetation Community at the pipeline:**

**Existing Vegetation Community at the pipeline attachment:**

**Existing Vegetation Community at other disturbances:**

**Existing Vegetation Community at other disturbances attachment:**

**Non native seed used?** NO

**Non native seed description:**

**Seedling transplant description:**

**Will seedlings be transplanted for this project?** NO

**Seedling transplant description attachment:**

**Will seed be harvested for use in site reclamation?** NO

**Seed harvest description:**

**Seed harvest description attachment:**

### Seed Management

#### Seed Table

**Seed type:**

**Seed source:**

**Seed name:**

**Source name:**

**Source address:**

**Source phone:**

**Seed cultivar:**

**Seed use location:**

**PLS pounds per acre:**

**Proposed seeding season:**

#### Seed Summary

**Total pounds/Acre:**

Seed Type	Pounds/Acre
-----------	-------------

**Seed reclamation attachment:**

#### Operator Contact/Responsible Official Contact Info

**First Name:**

**Last Name:**

**Operator Name:** CIMAREX ENERGY COMPANY

**Well Name:** MEDWICK 32 FEDERAL COM

**Well Number:** 6H

**Phone:**

**Email:**

**Seedbed prep:**

**Seed BMP:**

**Seed method:**

**Existing invasive species?** NO

**Existing invasive species treatment description:**

**Existing invasive species treatment attachment:**

**Weed treatment plan description:** N/A

**Weed treatment plan attachment:**

**Monitoring plan description:** N/A

**Monitoring plan attachment:**

**Success standards:** N/A

**Pit closure description:** N/A

**Pit closure attachment:**

## **Section 11 - Surface Ownership**

**Disturbance type:** WELL PAD

**Describe:**

**Surface Owner:** PRIVATE OWNERSHIP

**Other surface owner description:**

**BIA Local Office:**

**BOR Local Office:**

**COE Local Office:**

**DOD Local Office:**

**NPS Local Office:**

**State Local Office:**

**Military Local Office:**

**USFWS Local Office:**

**Other Local Office:**

**USFS Region:**

**USFS Forest/Grassland:**

**USFS Ranger District:**

**Operator Name:** CIMAREX ENERGY COMPANY

**Well Name:** MEDWICK 32 FEDERAL COM

**Well Number:** 6H

**Fee Owner:** Bill Patterson

**Phone:** (817)577-1131

**Surface use plan certification:** NO

**Surface use plan certification document:**

**Surface access agreement or bond:** Agreement

**Surface Access Agreement Need description:** Please be advised that Cimarex Energy Co. has an agreement with the surface owner concerning entry and surface restoration after completion of drilling operations at the above described well.

**Surface Access Bond BLM or Forest Service:**

**BLM Surface Access Bond number:**

**USFS Surface access bond number:**

**Fee Owner Address:** 6851 NE Loop 820, Suite 200 North  
Richland Hills, TX 76180

**Email:**

## Section 12 - Other Information

**Right of Way needed?** YES

**Use APD as ROW?** YES

**ROW Type(s):** 281001 ROW - ROADS, 288100 ROW - O&G Pipeline, 288101 ROW - O&G Facility Sites, 289001 ROW - O&G Well Pad, Other

## ROW Applications

**SUPO/Additional Information:** SHL: 441 FNL & 405 FNL Sec 1 Block 60 T1, T&P RR Co, Culberson County, TX PHL: 330 FNL & 2020 FWLINENW Sec 26-26S-27E Lot G, Eddy County, NM

**Use a previously conducted onsite?** YES

**Previous Onsite information:** Onsite with BLM & (Cimarex) Barry Hunt on Sept 19, 2016. Locations were moved 125 ft. east due to fill to the west and drainage area at southwest corner. V-Door North. Top soil south. 150' x 75' cuttings pit on east side. 500' x 480' pad (180' west, 310' south, 300' east, 190' north). Interim reclamation: All sides. Construct a ditch and berm around southwest corner to ensure run-off diverting around pad and into surrounding drainage. Gas lift/Production pipeline lateral off northwest corner, north, to tie into line from Pad #1, that will run to new proposed Medwick 32 off-site battery. Access road off northeast corner to tie-into road from pad #1 running back to #7 well.

## Other SUPO Attachment

Medwick\_32\_Fed\_Com\_6H\_Flowline\_ROW\_03-22-2017.pdf

Medwick\_32\_Fed\_Com\_6H\_Land\_agmt\_03-22-2017.pdf

Medwick\_32\_Fed\_Com\_6H\_Public\_Access\_Road\_03-22-2017.pdf

Medwick\_32\_Fed\_Com\_6H\_Road\_Description\_03-22-2017.pdf

Medwick\_32\_Fed\_Com\_6H\_Temp\_Fresh\_Water\_Route\_03-22-2017.pdf

Medwick\_32\_Fed\_Com\_6H\_SUPO\_03-22-2017.pdf

**Operator Name:** CIMAREX ENERGY COMPANY

**Well Name:** MEDWICK 32 FEDERAL COM

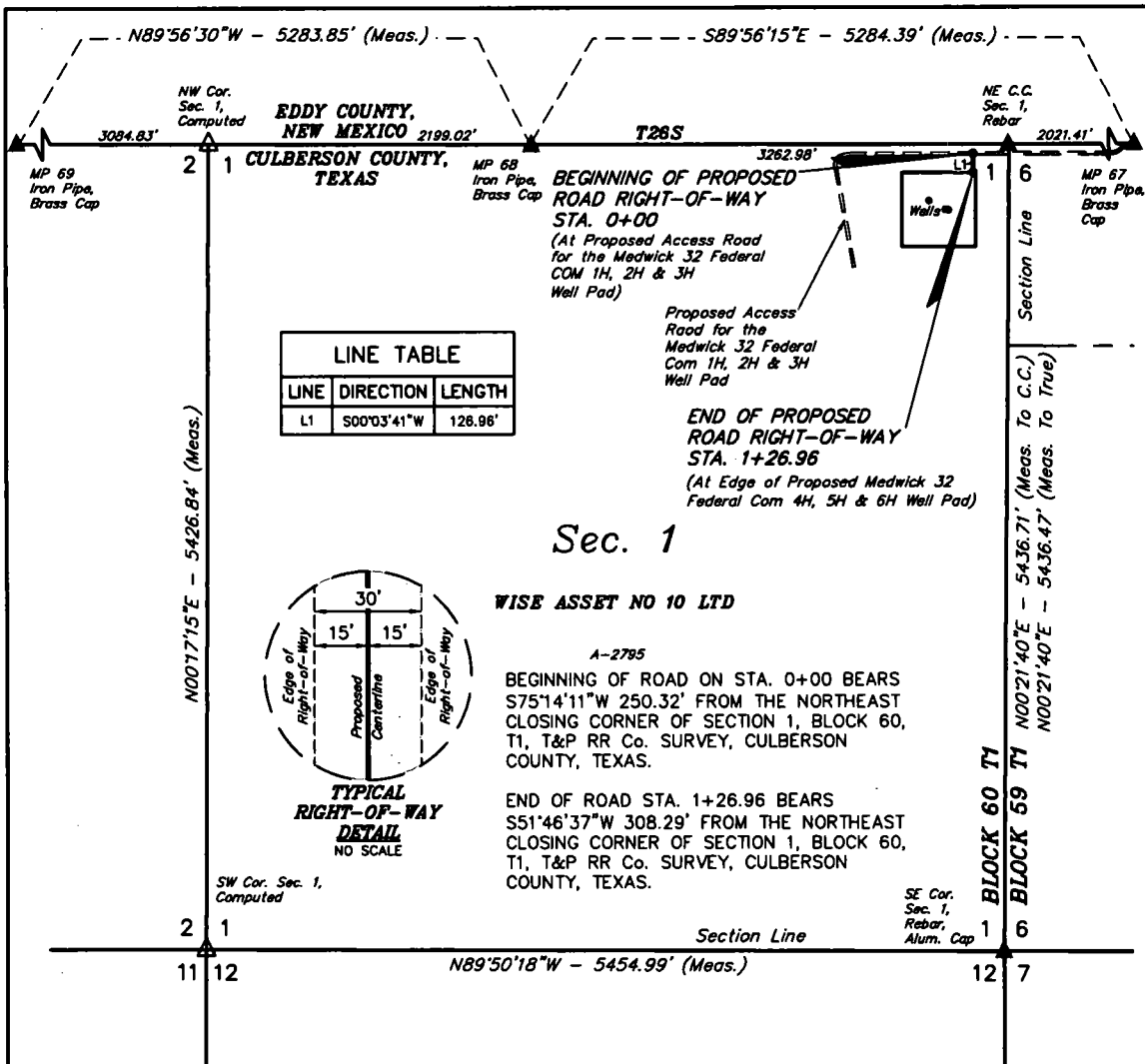
**Well Number:** 6H

Medwick\_32\_Fed\_Com\_6H\_Interim\_Reclamation\_08-23-2017.pdf



<b>SURVEYED BY</b>	J.A.V., G.M.	10-16-16	<b>SCALE</b>
<b>DRAWN BY</b>	J.L.G.	10-31-16	1 : 12,000

**ACCESS ROAD MAP      EXHIBIT C-1**



### ROAD RIGHT-OF-WAY DESCRIPTION

A 30' WIDE RIGHT-OF-WAY 15' ON EACH SIDE OF THE FOLLOWING DESCRIBED CENTERLINE.

BEGINNING AT A POINT IN SECTION 1, BLOCK 60, T1, T&P RR Co. SURVEY, CULBERSON COUNTY, TEXAS, WHICH BEARS S75°14'11"W 250.32' FROM THE NORTHEAST CLOSING CORNER OF SAID SECTION 1, THENCE S00°03'41"W 126.96' TO A POINT IN SAID SECTION 1, WHICH BEARS S51°46'37"W 308.29' FROM THE NORTHEAST CLOSING CORNER OF SAID SECTION 1. THE SIDE LINES OF SAID DESCRIBED RIGHT-OF-WAY BEING SHORTENED OR ELONGATED TO MEET THE GRANTOR'S PROPERTY LINES. BASIS OF BEARINGS IS A G.P.S. OBSERVATION. CONTAINS 0.087 ACRES MORE OR LESS.

1000'			
500'			
0			
1000'			

ACREAGE / LENGTH TABLE			
OWNERSHIP	FEET	RODS	ACRES
WISE ASSET NO 10 LTD	126.96	7.69	0.087

- ▲ = SECTION CORNERS LOCATED.  
△ = SECTION CORNERS RE-ESTABLISHED.  
(Not Set on Ground.)

#### NOTES:

- The maximum grade of existing ground for the proposed access road is ±2.7%.
- Basis of bearing is a G.P.S. observation (Vertical Control Datum: NAVD88)



**UELS, LLC**  
Corporate Office \* 85 South 200 East  
Vernal, UT 84078 \* (435) 789-1017

**CERTIFICATE**

THIS IS TO CERTIFY THAT THE ABOVE IS A TRUE AND CORRECT COPY OF THE ORIGINAL NOTES OF ACTUAL SURVEYS MADE BY ME OR UNDER MY SUPERVISION AND THAT THE SAME ARE TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF.

**PAUL WILSON**  
REGISTERED PROFESSIONAL SURVEYOR  
STATE OF TEXAS  
07-16

FILE: T40211 Sheet 1 of 2

**CIMAREX ENERGY CO.**

**MEDWICK 32 FEDERAL COM 4H, 5H & 6H  
SECTION 1, BLOCK 60, T1, T&P RR Co. SURVEY  
CULBERSON COUNTY, TEXAS**

SURVEYED BY	J.A.V., G.M.	10-16-16	SCALE
DRAWN BY	C.D.	11-02-16	1" = 1000'
ACCESS ROAD R-O-W		EXHIBIT C-2	

MEDWICK 32 FEDERAL COM 4H, 5H & 6H ACCESS ROAD R-O-W			
SECTION CORNER	SECTION CORNER DESC.	LATITUDE (NAD 83)	LONGITUDE (NAD 83)
"MILE MARKER" 67	3" IRON PIPE w/BRASS CAP	N 32°00'00.09"	W 104°12'22.95"
"MILE MARKER" 68	IRON PIPE w/BRASS CAP	N 32°00'00.14"	W 104°13'24.30"
"MILE MARKER" 69	IRON PIPE w/BRASS CAP	N 32°00'00.18"	W 104°14'25.65"
NW COR. SEC. 1-BLOCK 60-T1-T&P RR Co. SURVEY	CALCULATED	N 32°00'00.16"	W 104°13'49.83"
NE COR. SEC. 1-BLOCK 60-T1-T&P RR Co. SURVEY	CALCULATED	N 32°00'00.11"	W 104°12'46.42"
SE COR. SEC. 1-BLOCK 60-T1-T&P RR Co. SURVEY	1/2" REBAR w/BRASS CAP	N 31°59'06.33"	W 104°12'46.80"
SW COR. SEC. 1-BLOCK 60-T1-T&P RR Co. SURVEY	CALCULATED	N 31°59'06.46"	W 104°13'50.13"

MEDWICK 32 FEDERAL COM 4H, 5H & 6H ACCESS ROAD R-O-W			
NUMBER	STATION	LATITUDE (NAD 83)	LONGITUDE (NAD 83)
BEGIN	0+00	N 31°59'59.48"	W 104°12'49.23"
END	1+26.96	N 31°59'58.23"	W 104°12'49.23"

FILE: T40211

Sheet 2 of 2



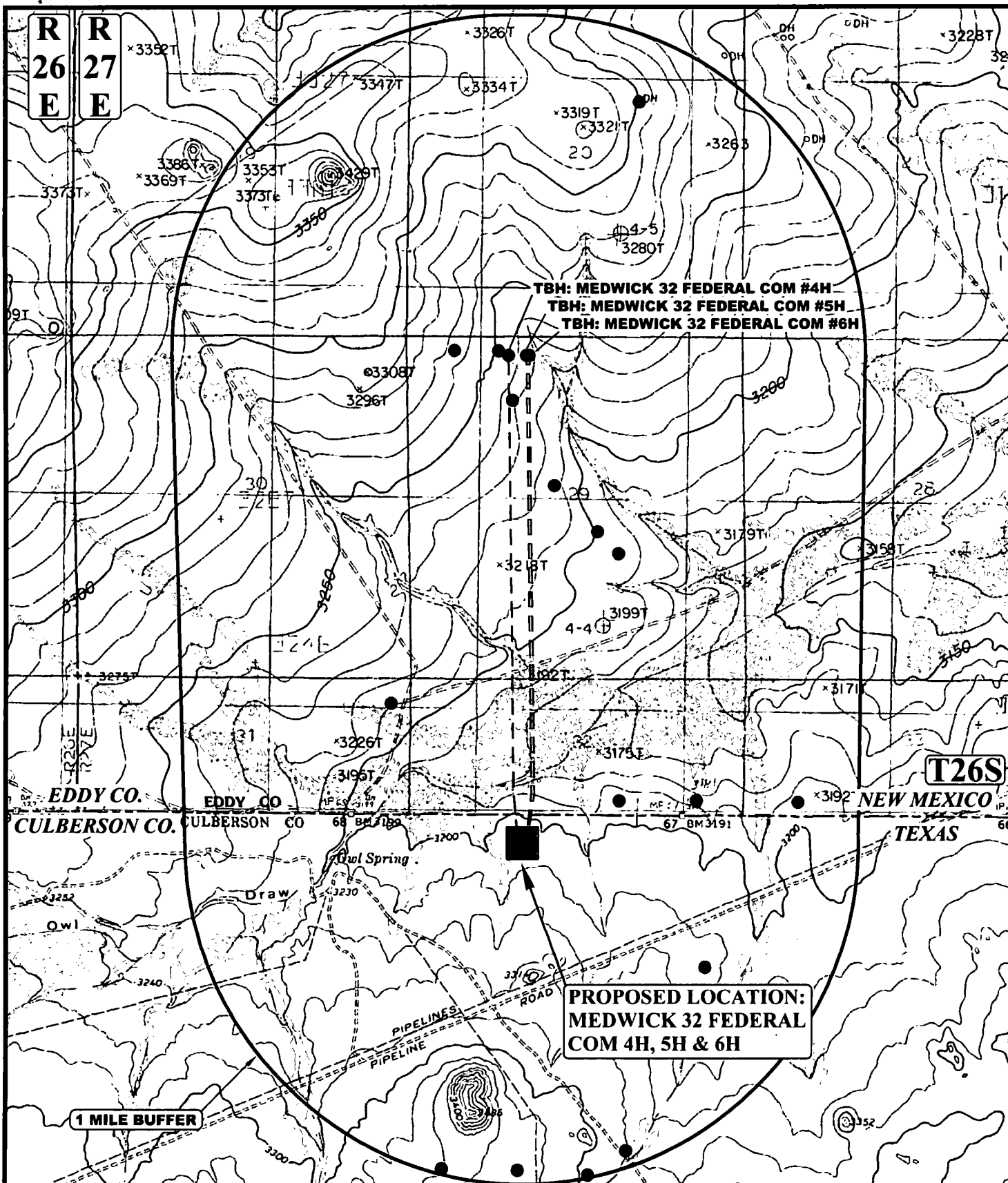
**UELS, LLC**  
Corporate Office • 85 South 200 East  
Vernal, UT 84078 • (435) 789-1017



**CIMAREX ENERGY CO.**

**MEDWICK 32 FEDERAL COM 4H, 5H & 6H  
SECTION 1, BLOCK 60, T1, T&P RR Co. SURVEY  
CULBERSON COUNTY, TEXAS**

SURVEYED BY	J.A.V., G.M.	10-16-16	SCALE
DRAWN BY	C.D.	11-02-16	1" = 1000'
<b>ACCESS ROAD R-O-W</b>		<b>EXHIBIT C-2</b>	



**LEGEND:**

- EXISTING WELLS



**UELS, LLC**  
 Corporate Office \* 85 South 200 East  
 Vernal, UT 84078 \* (435) 789-1017

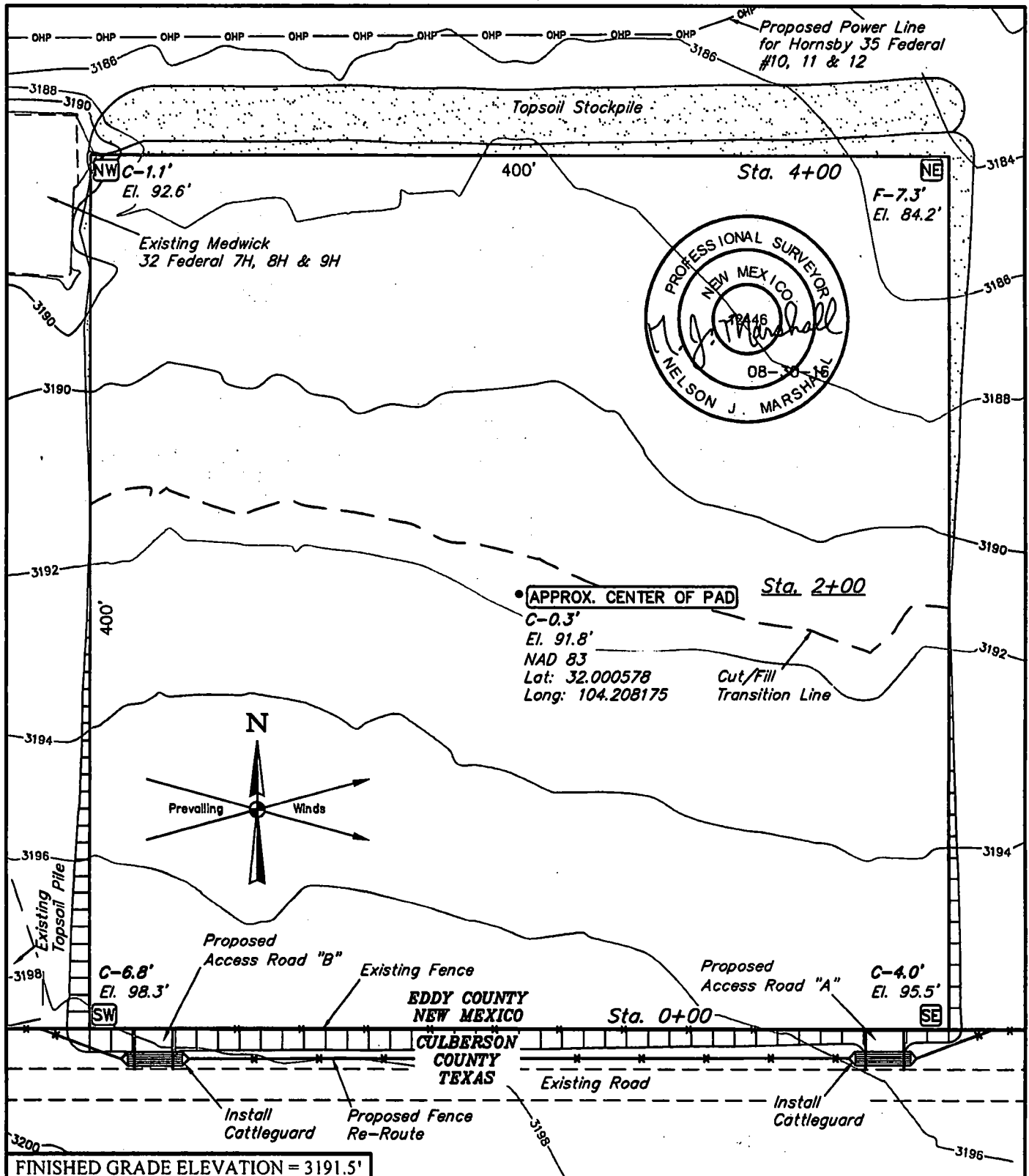


**CIMAREX ENERGY CO.**

**MEDWICK 32 FEDERAL COM 4H, 5H & 6H**  
 SECTION 1, BLOCK 60, T1, T&P RR CO. SURVEY  
 CULBERSON COUNTY, TEXAS

SURVEYED BY	J.A.V., G.M.	10-16-16	SCALE
DRAWN BY	J.L.G.	10-31-16	1 : 24,000

**ONE MILE RADIUS MAP EXHIBIT A**



#### NOTES:

- Contours shown at 2' intervals.
- Cut/Fill slopes 1 1/2:1 (Typ. except where noted)
- Underground utilities shown on this sheet are for visualization purposes only, actual locations to be determined prior to construction.

#### CIMAREX ENERGY CO.

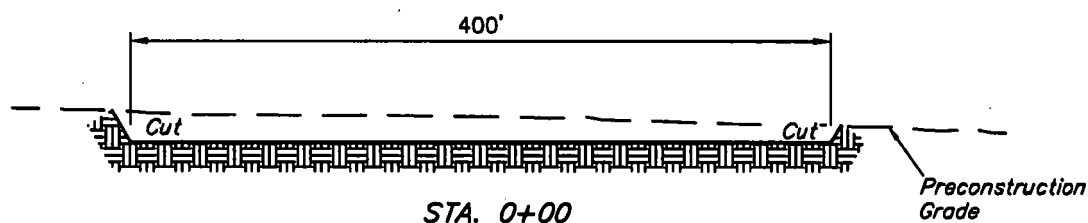
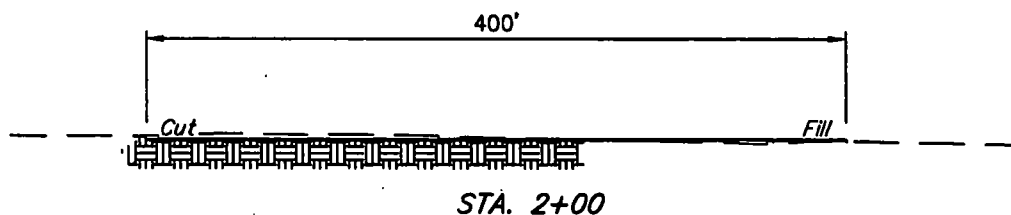
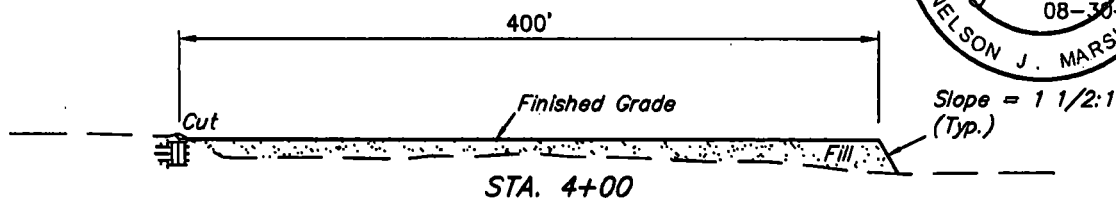
MEDWICK 32 TANK BATTERY  
LOT 2, SECTION 32, T26S, R27E, N.M.P.M.  
EDDY COUNTY, NEW MEXICO



UELS, LLC  
Corporate Office \* 85 South 200 East  
Vernal, UT 84078 \* (435) 789-1017

SURVEYED BY	C.J., J.J.	08-17-16	SCALE
DRAWN BY	S.S.	08-24-16	1" = 60'
LOCATION LAYOUT		EXHIBIT D	

1" = 40'  
X-Section  
Scale  
1" = 100'



APPROXIMATE EARTHWORK QUANTITIES	
(4") TOPSOIL STRIPPING	2,090 Cu. Yds.
REMAINING LOCATION	8,280 Cu. Yds.
<b>TOTAL CUT</b>	<b>10,370 Cu. Yds.</b>
<b>FILL</b>	<b>8,280 Cu. Yds.</b>
EXCESS MATERIAL	2,090 Cu. Yds.
TOPSOIL	2,090 Cu. Yds.
EXCESS UNBALANCE (After Interim Rehabilitation)	0 Cu. Yds.

APPROXIMATE SURFACE DISTURBANCE AREAS		
	DISTANCE	ACRES
WELL SITE DISTURBANCE	NA	±4.123
30' WIDE ACCESS ROAD "A" R-O-W DISTURBANCE	±15.90'	±0.011
30' WIDE ACCESS ROAD "B" R-O-W DISTURBANCE	±16.14'	±0.011
30' WIDE SWD PIPELINE R-O-W DISTURBANCE	±295.85'	±0.204
30' WIDE POWER LINE R-O-W DISTURBANCE	±55.08'	±0.038
<b>TOTAL SURFACE USE AREA</b>		<b>±4.387</b>

#### NOTES:

- Fill quantity includes 5% for compaction.
- Cut/Fill slopes 1 1/2:1 (Typ. except where noted)

#### CIMAREX ENERGY CO.

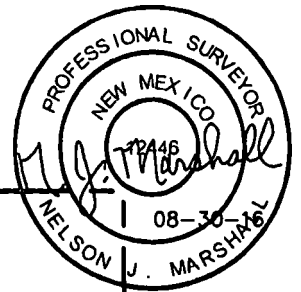
MEDWICK 32 TANK BATTERY  
LOT 2, SECTION 32, T26S, R27E, N.M.P.M.  
EDDY COUNTY, NEW MEXICO



UELS, LLC  
Corporate Office \* 85 South 200 East  
Vernal, UT 84078 \* (435) 789-1017

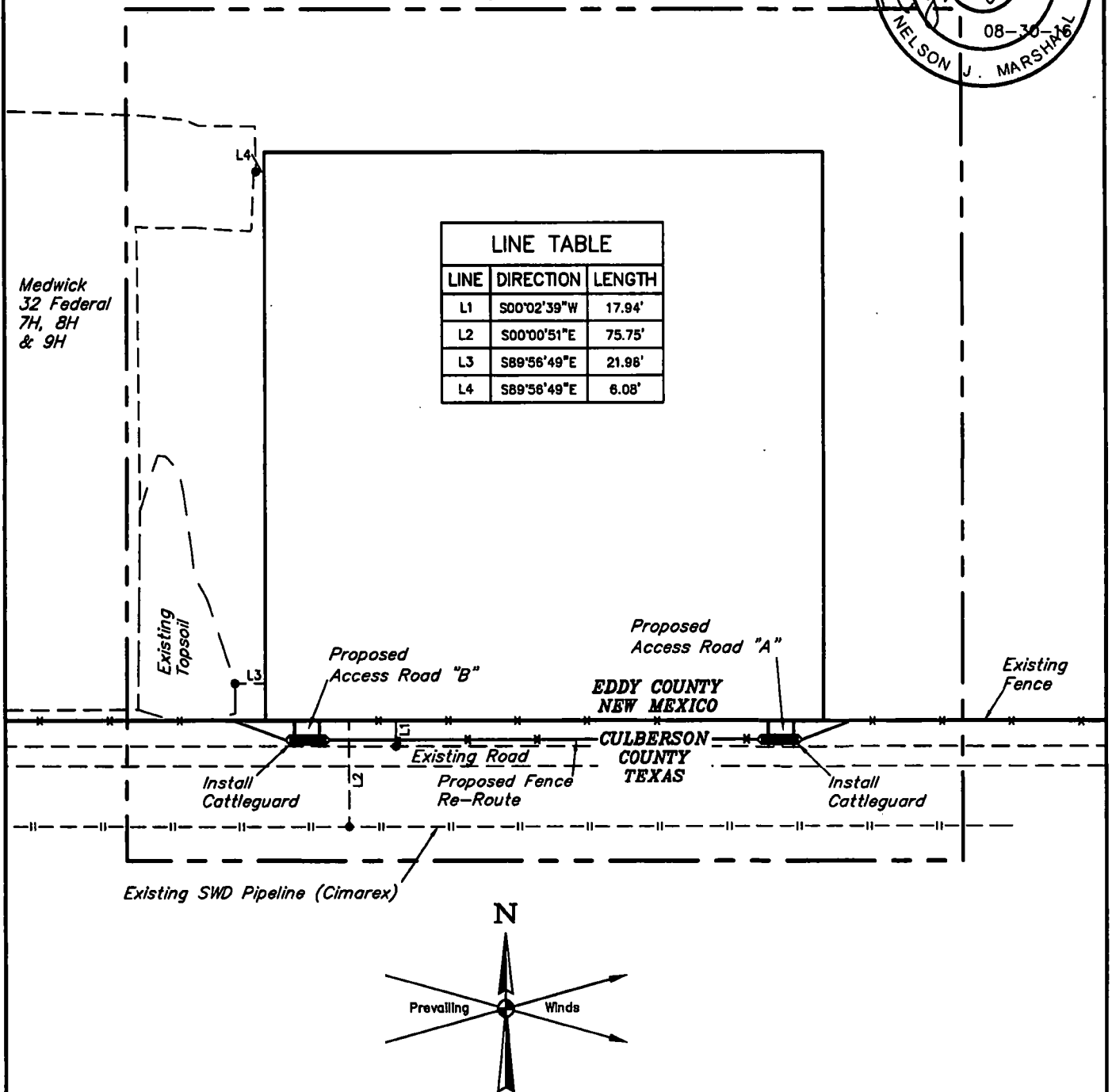
SURVEYED BY	C.J., J.J.	08-17-16	SCALE
DRAWN BY	S.S.	08-24-16	AS SHOWN
<b>TYPICAL CROSS SECTIONS EXHIBIT D</b>			

600' X 600'  
Archaeological Survey  
Boundary



Medwick  
32 Federal  
7H, 8H  
& 9H

LINE TABLE		
LINE	DIRECTION	LENGTH
L1	S00°02'39"W	17.94'
L2	S00°00'51"E	75.75'
L3	S89°56'49"E	21.98'
L4	S89°56'49"E	6.08'



**NOTES:**

**CIMAREX ENERGY CO.**

**MEDWICK 32 TANK BATTERY  
LOT 2, SECTION 32, T26S, R27E, N.M.P.M.  
EDDY COUNTY, NEW MEXICO**



**UELS, LLC**  
Corporate Office \* 85 South 200 East  
Vernal, UT 84078 \* (435) 789-1017

SURVEYED BY	C.J., J.J.	08-17-16	SCALE
DRAWN BY	S.S.	08-24-16	1" = 100'
ARCHAEOLOGICAL SURVEY BOUNDARY <b>EXHIBIT D</b>			

U

Legend

Medwick 32 Fed Com 4-6H

Pecos Hwy

Alcatraz

Water Sales

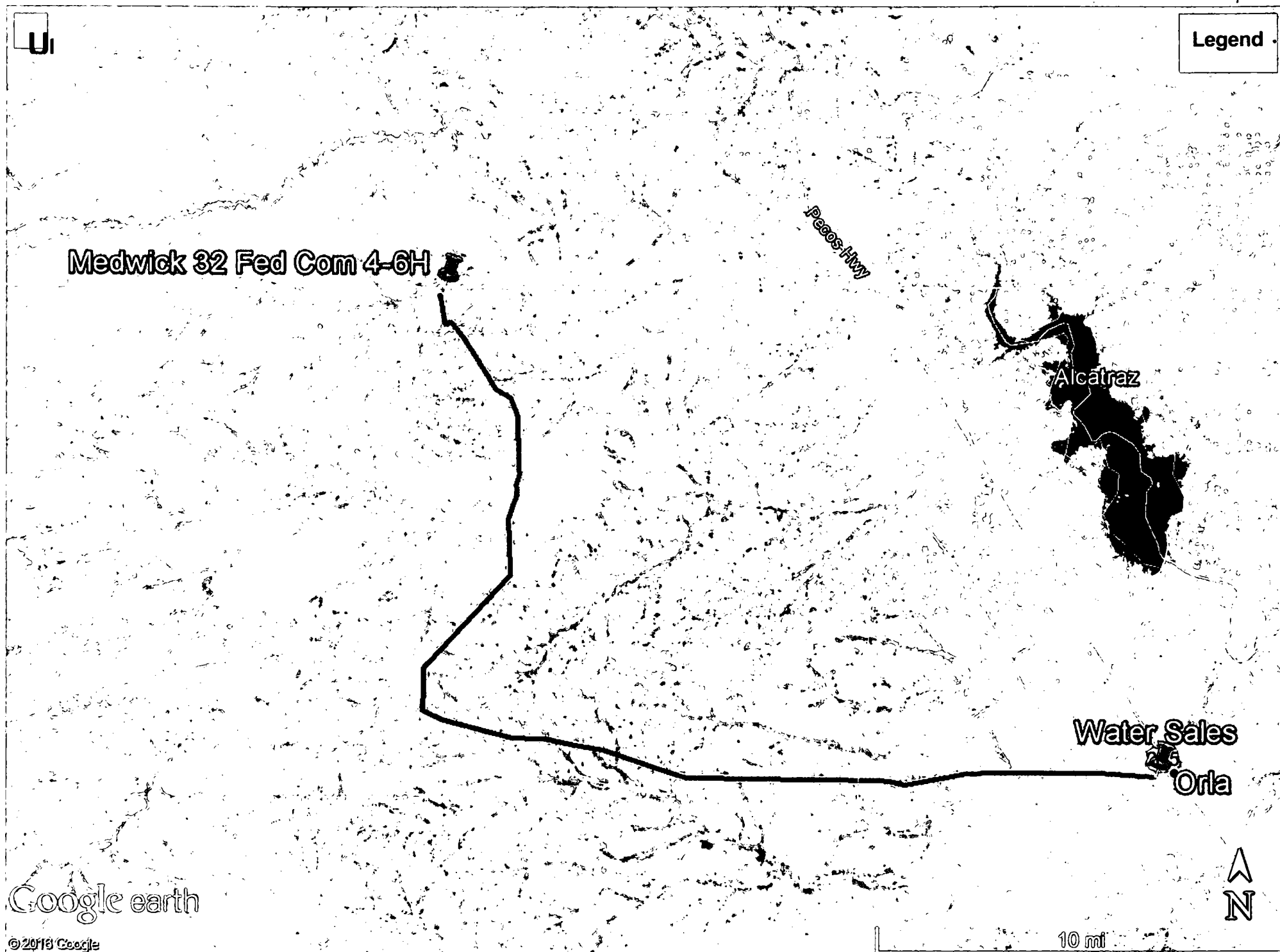
Orla

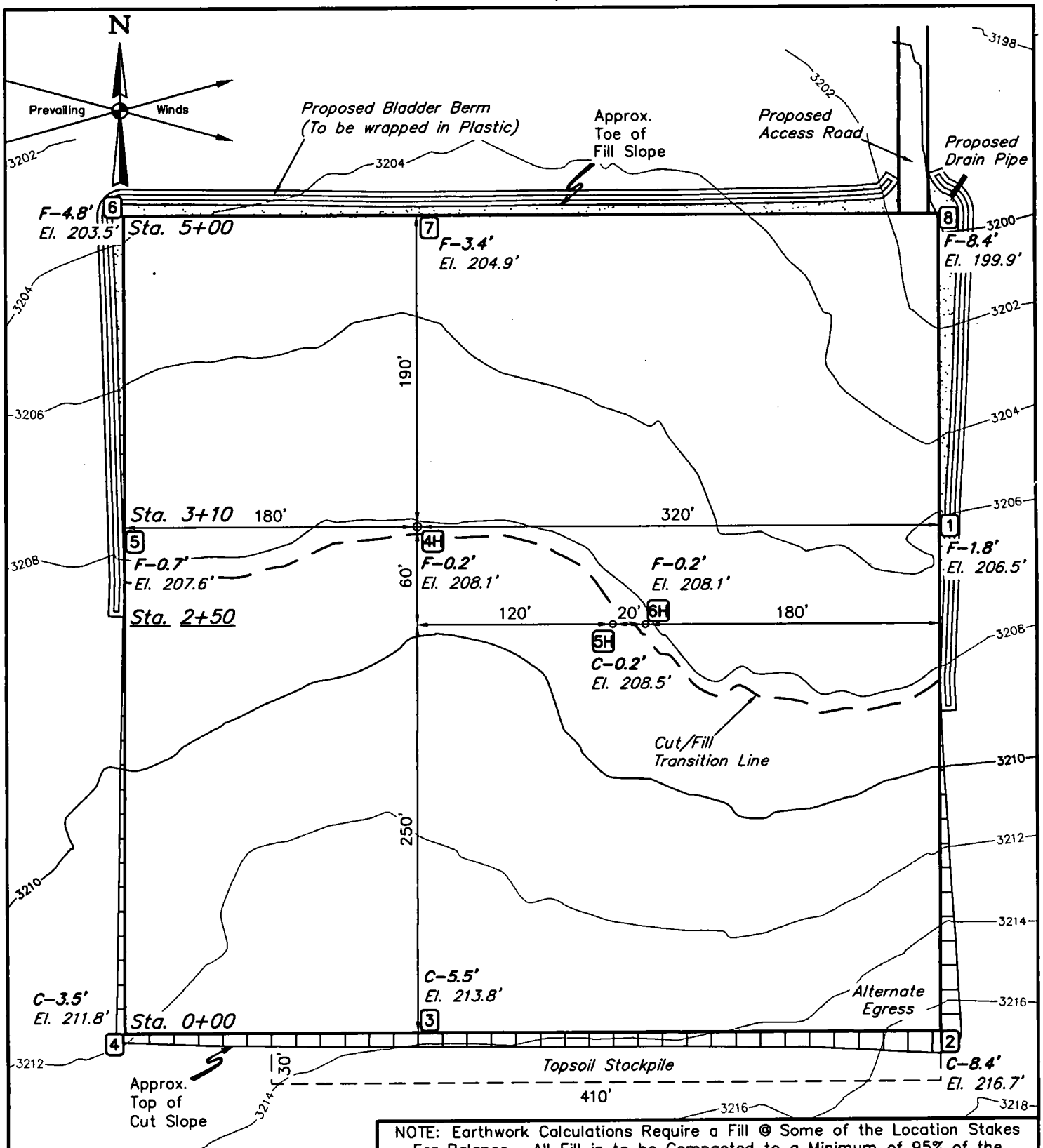
Google earth

© 2013 Google

10 mi

N





**FINISHED GRADE ELEVATION = 3208.3'**

**NOTES:**

- Contours shown at 2' intervals.
- Cut/Fill slopes 1 1/2:1 (Typ. except where noted).
- The final position of the Proposed Drain Pipe will be determined during construction.
- Underground utilities shown on this sheet are for visualization purposes only, actual locations to be determined prior to construction.

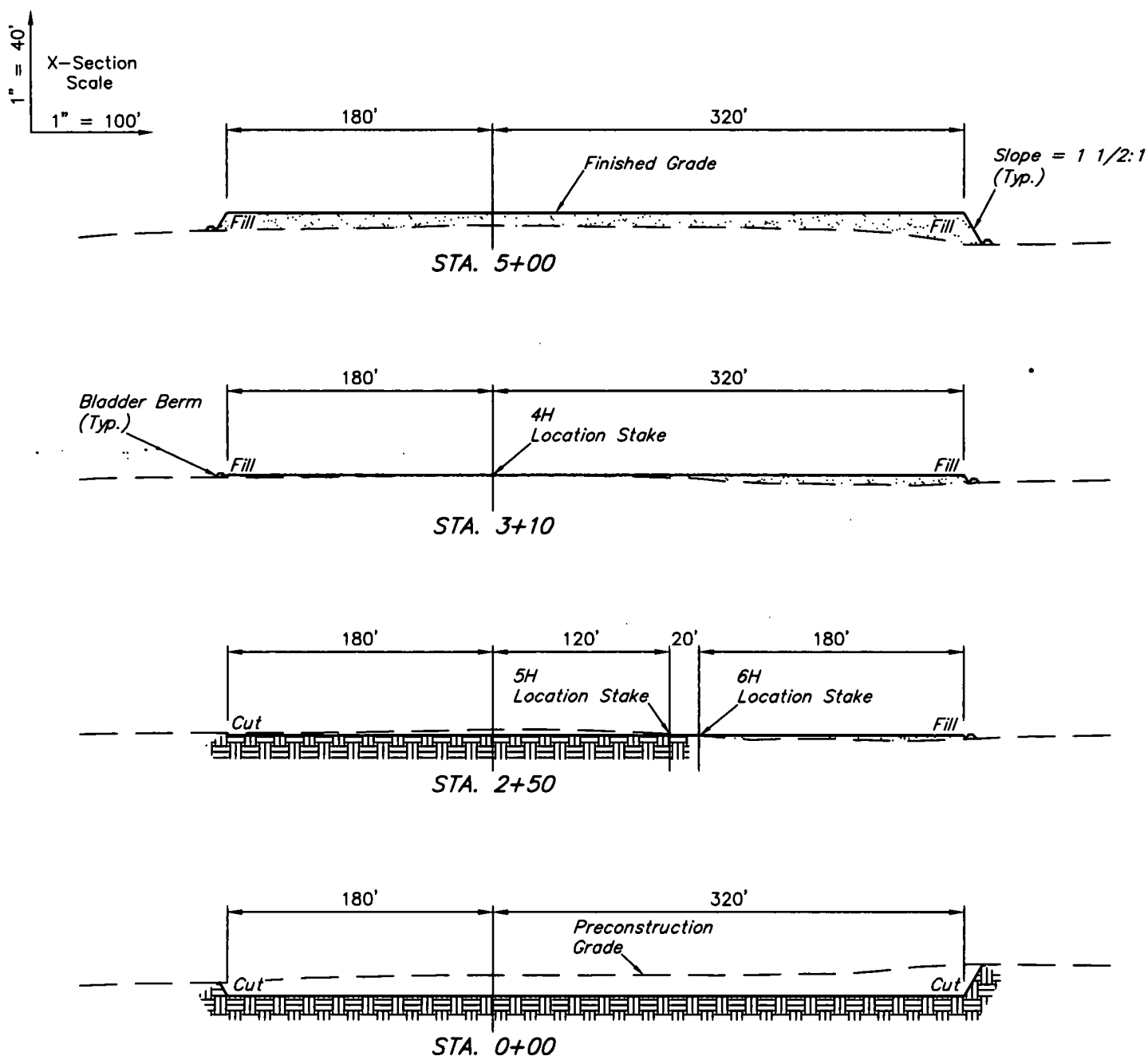
**CIMAREX ENERGY CO.**

**MEDWICK 32 FEDERAL COM 4H, 5H & 6H  
SECTION 1, BLOCK 60, T1, T&P RR Co. SURVEY  
CULBERSON COUNTY, TEXAS**

SURVEYED BY	J.A.V., G.M.	10-16-16	SCALE
DRAWN BY	C.D.	11-02-16	1" = 80'
<b>LOCATION LAYOUT</b>		<b>EXHIBIT D</b>	



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APPROXIMATE EARTHWORK QUANTITIES	
(3") TOPSOIL STRIPPING	2,430 Cu. Yds.
REMAINING LOCATION	13,010 Cu. Yds.
<b>TOTAL CUT</b>	<b>15,440 Cu. Yds.</b>
<b>FILL</b>	<b>13,010 Cu. Yds.</b>
EXCESS MATERIAL	2,430 Cu. Yds.
TOPSOIL & PIT BACKFILL	2,430 Cu. Yds.
<b>EXCESS UNBALANCE</b> (After Interim Rehabilitation)	<b>0 Cu. Yds.</b>

APPROXIMATE SURFACE DISTURBANCE AREAS		
	DISTANCE	ACRES
WELL SITE DISTURBANCE	NA	±6.226
30' WIDE ACCESS ROAD R-O-W DISTURBANCE	±126.96'	±0.087
30' WIDE PRODUCTION FLOW LINE R-O-W DISTURBANCE	±2,133.95'	±1.470
<b>TOTAL SURFACE USE AREA</b>		<b>±7.783</b>

#### NOTES:

- Fill quantity includes 5% for compaction.
- Cut/Fill slopes 1 1/2:1 (Typ. except where noted)
- Bladder Berm volumes are not included in earthwork quantities.

#### CIMAREX ENERGY CO.

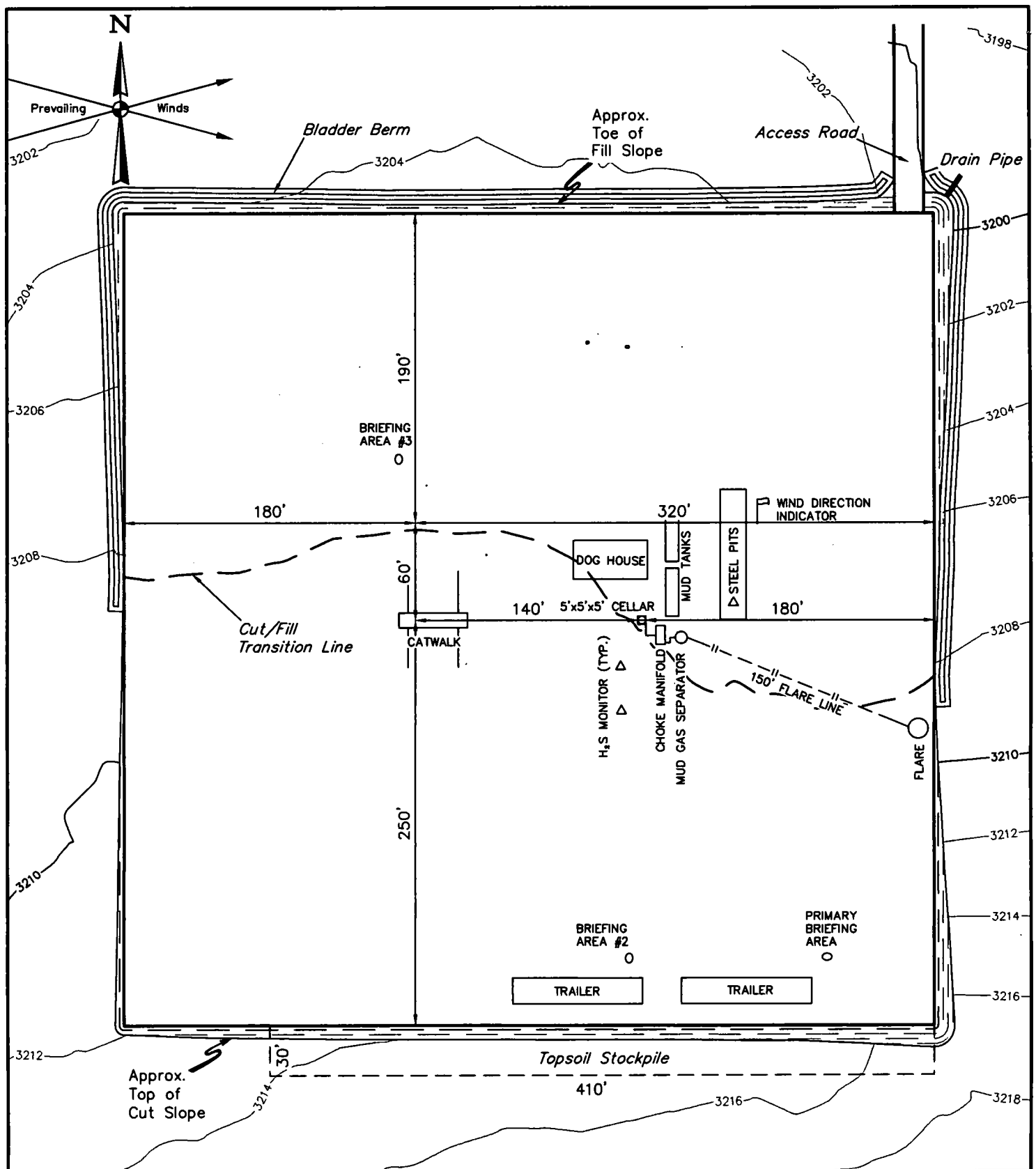
**MEDWICK 32 FEDERAL COM 4H, 5H & 6H  
SECTION 1, BLOCK 60, T1, T&P RR Co. SURVEY  
CULBERSON COUNTY, TEXAS**

SURVEYED BY	J.A.V., G.M.	10-16-16	SCALE
DRAWN BY	C.D.	11-02-16	AS SHOWN

**TYPICAL CROSS SECTIONS EXHIBIT D**



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Corporate Office \* 85 South 200 East  
Vernal, UT 84078 \* (435) 789-1017



**NOTES:**

- Contours shown at 2' intervals.

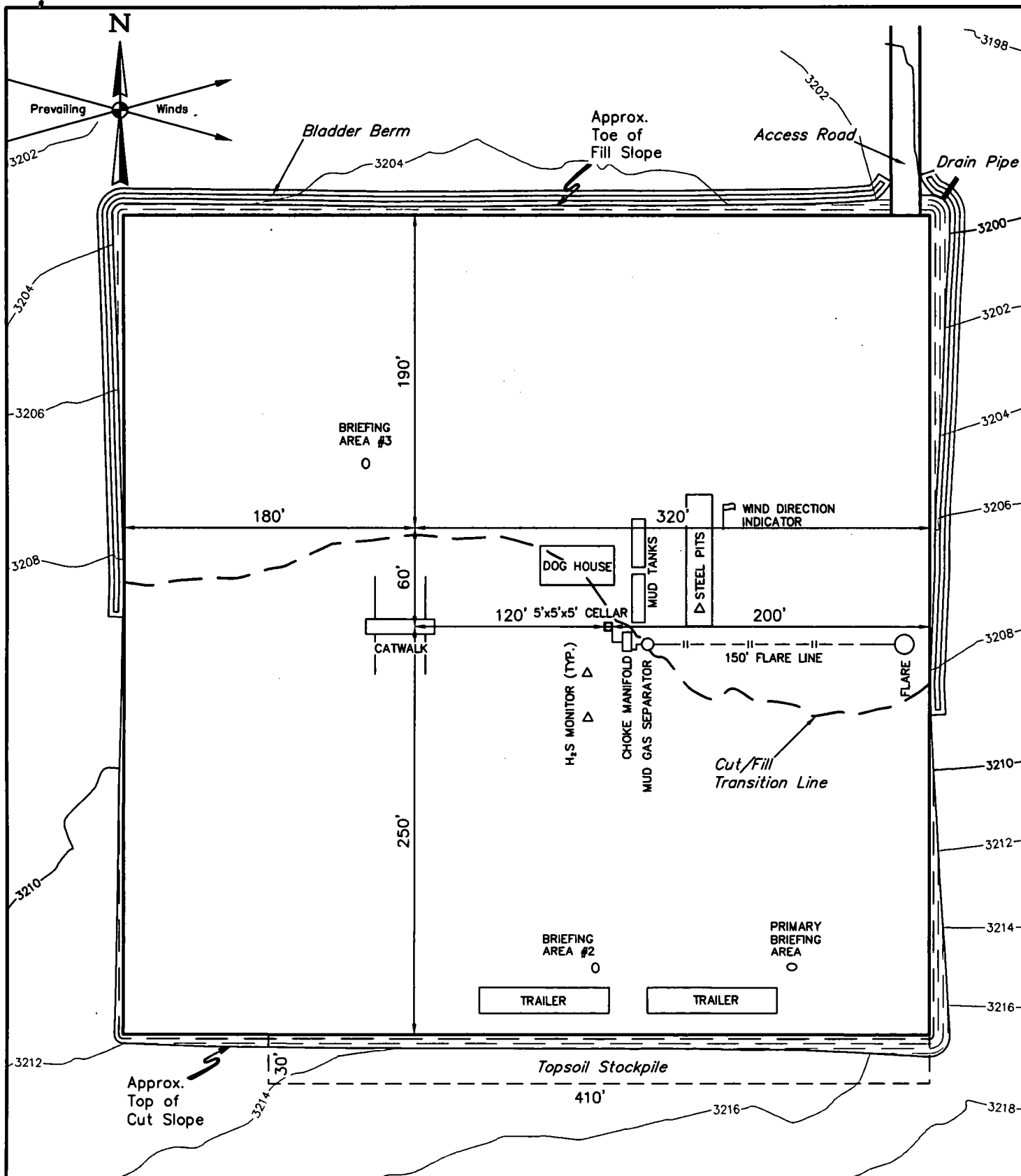
**CIMAREX ENERGY CO.**

**MEDWICK 32 FEDERAL COM 6H  
SECTION 1, BLOCK 60, T1, T&P RR Co. SURVEY  
CULBERSON COUNTY, TEXAS**



**UELS, LLC**  
Corporate Office \* 85 South 200 East  
Vernal, UT 84078 \* (435) 789-1017

SURVEYED BY	J.A.V., G.M.	10-16-16	SCALE
DRAWN BY	C.D.	11-02-16	1" = 80'
<b>TYPICAL RIG LAYOUT</b>		<b>EXHIBIT D</b>	



**NOTES:**

- Contours shown at 2' intervals.

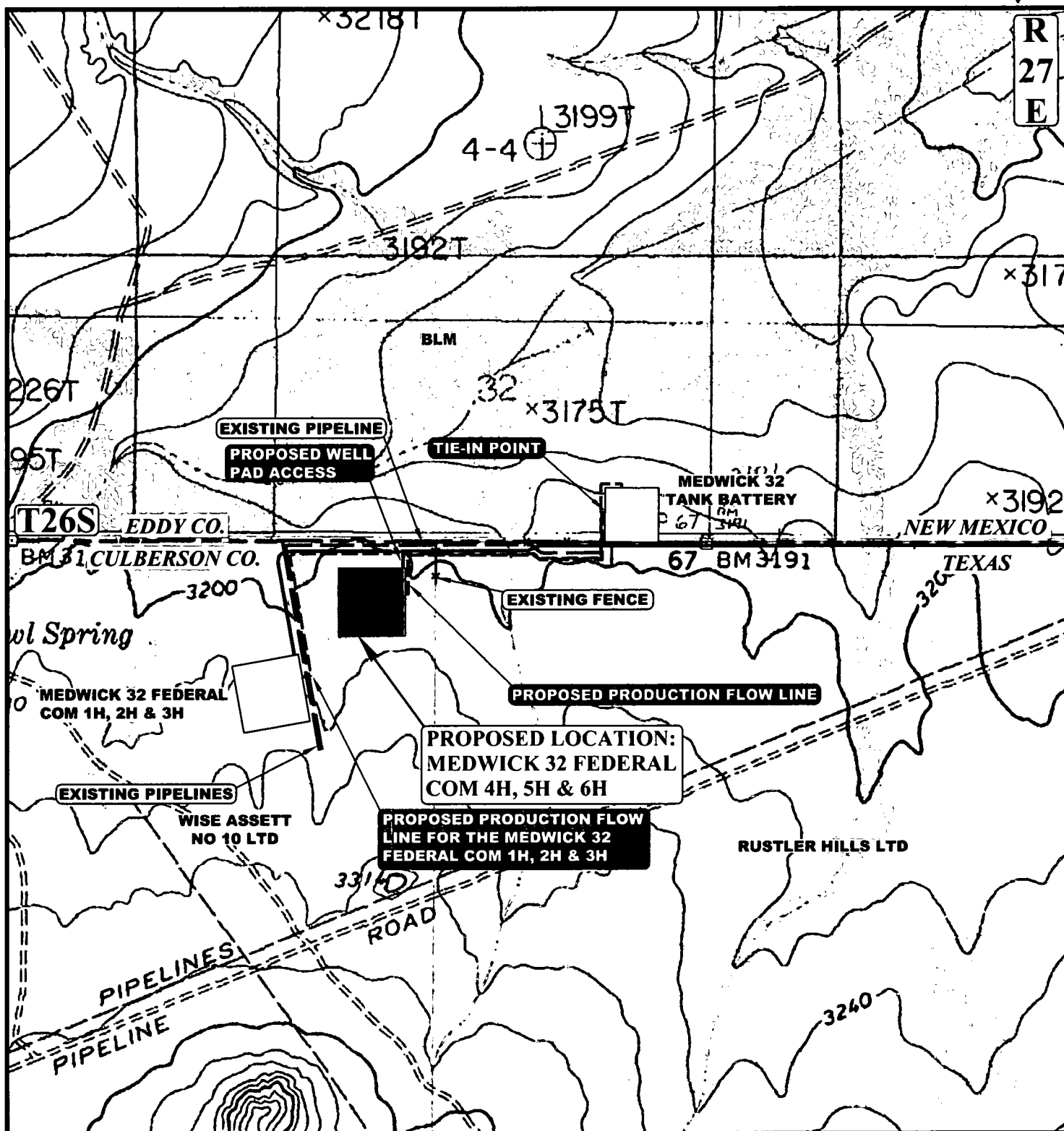
**CIMAREX ENERGY CO.**

**MEDWICK 32 FEDERAL COM 5H  
SECTION 1, BLOCK 60, T1, T&P RR Co. SURVEY  
CULBERSON COUNTY, TEXAS**

SURVEYED BY	J.A.V., G.M.	10-16-16	SCALE
DRAWN BY	C.D.	11-02-16	1" = 80'
<b>TYPICAL RIG LAYOUT</b>			<b>EXHIBIT D</b>



**UELS, LLC**  
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**APPROXIMATE TOTAL FLOW LINE DISTANCE = 2,134' +/-**

NOTE: PARCEL DATA SHOWN HAS BEEN OBTAINED FROM VARIOUS SOURCES AND SHOULD BE USED FOR MAPPING, GRAPHIC AND PLANNING PURPOSES ONLY. NO WARRANTY IS MADE BY UTAH ENGINEERING AND LAND SURVEYING (UELS) FOR ACCURACY OF THE PARCEL DATA.

**LEGEND:**

	EXISTING ROAD
	EXISTING PIPELINE
	PROPOSED FLOW LINE
	PROPOSED WELL PAD ACCESS
	PROPOSED FLOW LINE (SERVICING OTHER WELLS)



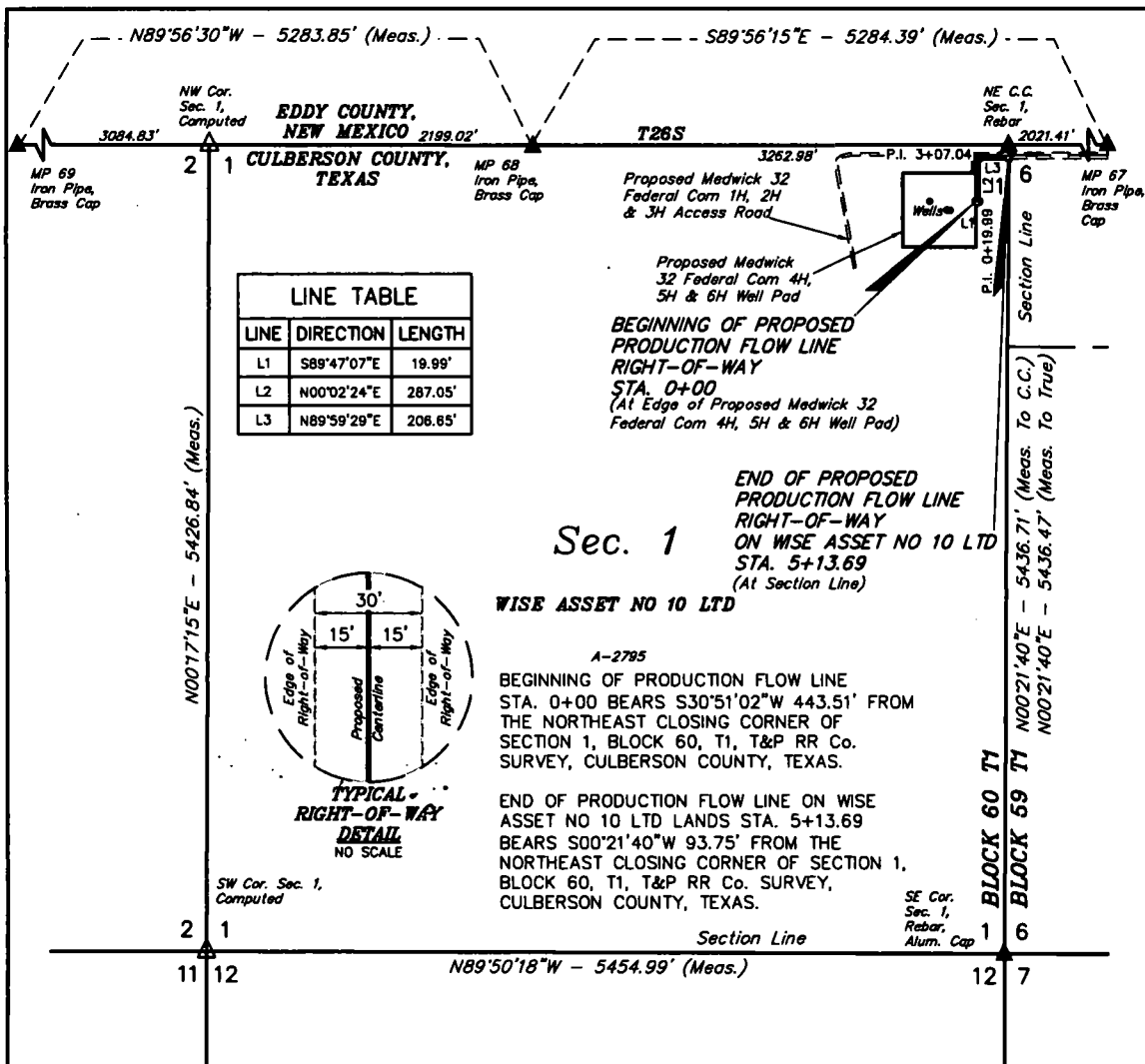
**CIMAREX ENERGY CO.**

**MEDWICK 32 FEDERAL COM 4H, 5H & 6H  
SECTION 1, BLOCK 60, T1, T&P RR CO. SURVEY  
CULBERSON COUNTY, TEXAS**

<b>SURVEYED BY</b>	J.A.V., G.M.	10-16-16	<b>SCALE</b>
<b>DRAWN BY</b>	J.L.G.	10-31-16	1" = 12,000'
<b>PRODUCTION FLOW LINE MAP EXHIBIT G-1</b>			



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### PRODUCTION FLOW LINE RIGHT-OF-WAY DESCRIPTION ON WISE ASSET NO 10 LTD LANDS

A 30' WIDE RIGHT-OF-WAY 15' ON EACH SIDE OF THE FOLLOWING DESCRIBED CENTERLINE.

BEGINNING AT A POINT IN SECTION 1, BLOCK 60, T1, T&P RR Co. SURVEY, CULBERSON COUNTY, TEXAS, WHICH BEARS S30°51'02\"/>

ACREAGE / LENGTH TABLE			
OWNERSHIP	FEET	RODS	ACRES
WISE ASSET NO 10 LTD	513.69	31.13	0.354

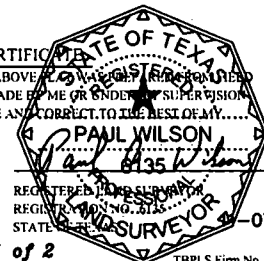
- ▲ = SECTION CORNERS LOCATED.  
△ = SECTION CORNERS RE-ESTABLISHED.  
(Not Set on Ground.)

NOTES:  
• Basis of bearing is a G.P.S. observation (Vertical Control Datum: NAVD88)



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Corporate Office \* 85 South 200 East  
Vernal, UT 84078 \* (435) 789-1017

CERTIFICATE OF THE STATE OF TEXAS  
THIS IS TO CERTIFY THAT THE ABOVE DESCRIBED SECTION 1, BLOCK 60, T1, T&P RR Co. SURVEY, CULBERSON COUNTY, TEXAS, WAS SURVEYED AND THE NOTES OF ACTUAL SURVEYS MADE BY ME OR UNDER MY SUPERVISION, AND THAT THE SAME ARE TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF.



FILE: T40212-A Sheet 1 of 2

TRPLS Firm No. 10193884

CIMAREX ENERGY CO.

MEDWICK 32 FEDERAL COM 4H, 5H & 6H  
SECTION 1, BLOCK 60, T1, T&P RR Co. SURVEY  
CULBERSON COUNTY, TEXAS

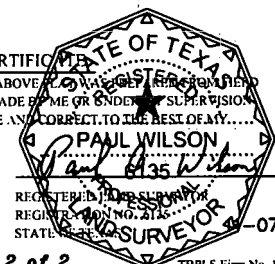
SURVEYED BY	J.A.V., G.M.	10-16-16	SCALE
DRAWN BY	C.D.	11-02-16	1" = 1000'

PRODUCTION FLOW LINE R-O-W EXHIBIT G-1

MEDWICK 32 FEDERAL COM 4H, 5H & 6H PRODUCTION FLOW LINE R-O-W			
SECTION CORNER	SECTION CORNER DESC.	LATITUDE (NAD 83)	LONGITUDE (NAD 83)
"MILE MARKER" 67	3" IRON PIPE w/BRASS CAP	N 32°00'00.09"	W 104°12'22.95"
"MILE MARKER" 68	IRON PIPE w/BRASS CAP	N 32°00'00.14"	W 104°13'24.30"
"MILE MARKER" 69	IRON PIPE w/BRASS CAP	N 32°00'00.18"	W 104°14'25.65"
NW COR. SEC. 1-BLOCK 60-T1-T&P RR Co. SURVEY	CALCULATED	N 32°00'00.16"	W 104°13'49.83"
NE COR. SEC. 1-BLOCK 60-T1-T&P RR Co. SURVEY	CALCULATED	N 32°00'00.11"	W 104°12'46.42"
SE COR. SEC. 1-BLOCK 60-T1-T&P RR Co. SURVEY	1/2" REBAR w/BRASS CAP	N 31°59'06.33"	W 104°12'46.80"
SW COR. SEC. 1-BLOCK 60-T1-T&P RR Co. SURVEY	CALCULATED	N 31°59'06.46"	W 104°13'50.13"

MEDWICK 32 FEDERAL COM 4H, 5H & 6H PRODUCTION FLOW LINE R-O-W			
NUMBER	STATION	LATITUDE (NAD 83)	LONGITUDE (NAD 83)
BEGIN	0+00	N 31°59'56.35"	W 104°12'49.06"
1	0+19.99	N 31°59'56.35"	W 104°12'48.82"
2	3+07.04	N 31°59'59.19"	W 104°12'48.82"
END	5+13.69	N 31°59'59.19"	W 104°12'46.42"

CERTIFICATE OF TEXAS  
THIS IS TO CERTIFY THAT THE ABOVE NOTES OF ACTUAL SURVEYS MADE BY ME OR UNDER MY SUPERVISION AND THAT THE SAME ARE TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF.



FILE: T40212-A Sheet 2 of 2

TBPLS Firm No. 10193884

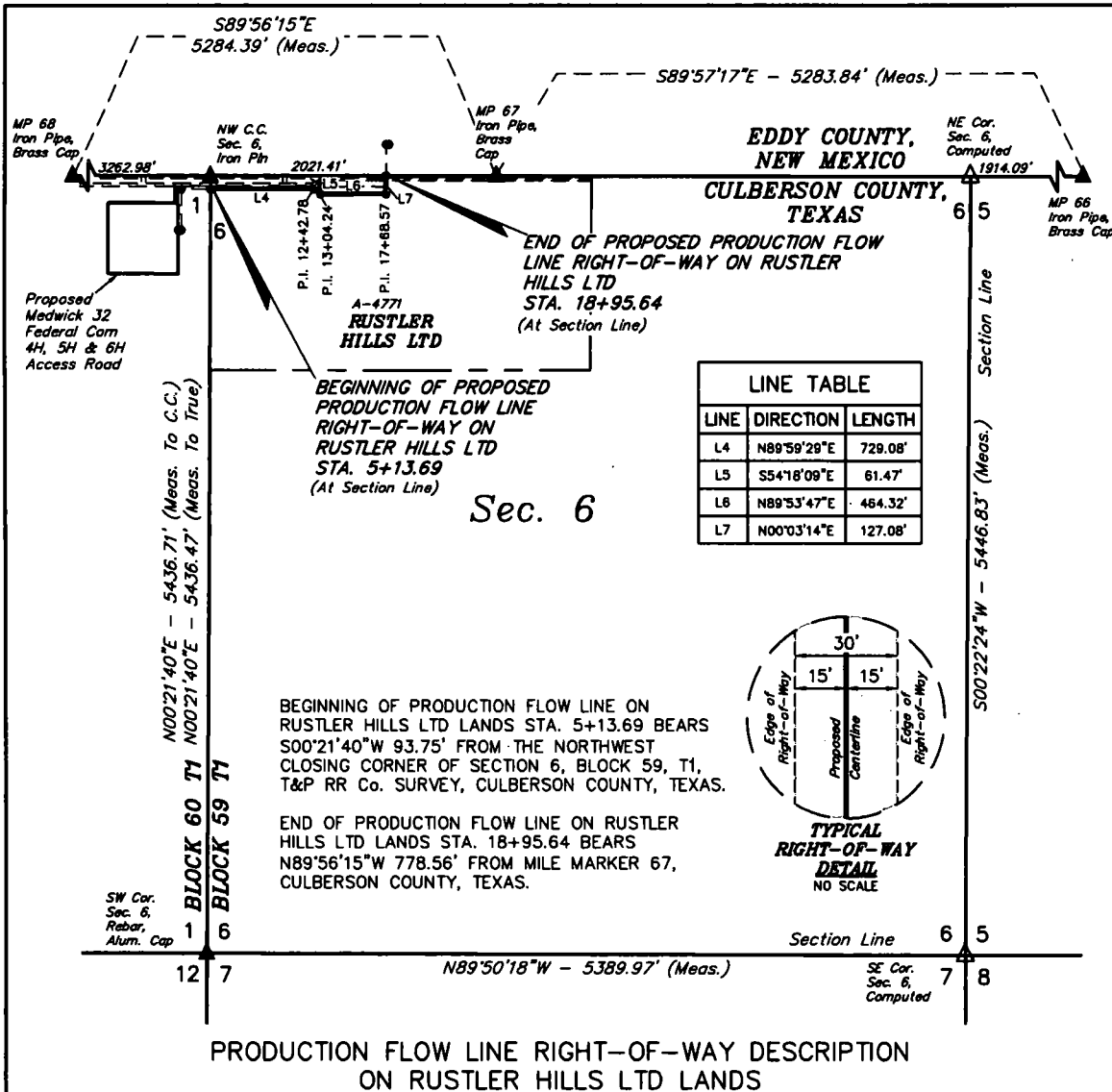


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**CIMAREX ENERGY CO.**  
MEDWICK 32 FEDERAL COM 4H, 5H & 6H  
SECTION 1, BLOCK 60, T1, T&P RR Co. SURVEY  
CULBERSON COUNTY, TEXAS

SURVEYED BY	J.A.V., G.M.	10-16-16	SCALE
DRAWN BY	C.D.	11-02-16	1" = 1000'
PRODUCTION FLOW LINE R-O-W EXHIBIT G-1			



A 30' WIDE RIGHT-OF-WAY 15' ON EACH SIDE OF THE FOLLOWING DESCRIBED CENTERLINE.

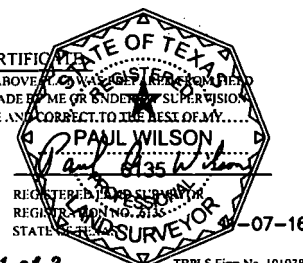
BEGINNING AT A POINT ON THE WEST LINE OF SECTION 6, BLOCK 59, T1, T&P RR Co. SURVEY, CULBERSON COUNTY, TEXAS, WHICH BEARS S00°21'40"W 93.75' FROM THE NORTHWEST CLOSING CORNER OF SAID SECTION 6, THENCE N89°59'29"E 729.08'; THENCE S54°18'09"E 61.47'; THENCE N89°53'47"E 464.32'; THENCE N00°03'14"E 127.08' TO A POINT ON THE NORTH LINE OF SAID SECTION 6, WHICH BEARS N89°56'15"W 778.56' FROM MILE MARKER 67. THE SIDE LINES OF SAID DESCRIBED RIGHT-OF-WAY BEING SHORTENED OR ELONGATED TO MEET THE GRANTOR'S PROPERTY LINES. BASIS OF BEARINGS IS A G.P.S. OBSERVATION. CONTAINS 0.952 ACRES MORE OR LESS.

ACREAGE / LENGTH TABLE			
OWNERSHIP	FEET	RODS	ACRES
RUSTLER HILLS LTD	1381.95	83.75	0.952

- ▲ = SECTION CORNERS LOCATED.  
 △ = SECTION CORNERS RE-ESTABLISHED.  
 (Not Set on Ground.)

NOTES:  
 • Basis of bearing is a G.P.S. observation (Vertical Control Datum: NAVD88)

CERTIFICATE OF THE STATE OF TEXAS  
 THIS IS TO CERTIFY THAT THE ABOVE DESCRIBED NOTES OF ACTUAL SURVEYS MADE BY ME OR UNDER MY SUPERVISION AND THAT THE SAME ARE TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF.



FILE: T40212-B

Sheet 1 of 2

TBPLS Firm No. 10193884

N

CIMAREX ENERGY CO.

MEDWICK 32 FEDERAL COM 4H, 5H & 6H  
 SECTION 6, BLOCK 59, T1, T&P RR Co. SURVEY  
 CULBERSON COUNTY, TEXAS

SURVEYED BY	J.A.V., G.M.	10-16-16	SCALE
DRAWN BY	C.D.	11-02-16	1" = 1000'

PRODUCTION FLOW LINE R-O-W EXHIBIT G-1

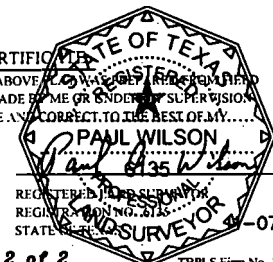


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MEDWICK 32 FEDERAL COM 4H, 5H & 6H PRODUCTION FLOW LINE R-O-W			
SECTION CORNER	SECTION CORNER DESC.	LATITUDE (NAD 83)	LONGITUDE (NAD 83)
"MILE MARKER" 66	3" IRON PIPE w/BRASS CAP	N 32°00'00.06"	W 104°11'21.60"
"MILE MARKER" 67	3" IRON PIPE w/BRASS CAP	N 32°00'00.09"	W 104°12'22.95"
"MILE MARKER" 68	IRON PIPE w/BRASS CAP	N 32°00'00.14"	W 104°13'24.30"
NW COR. SEC. 6-BLOCK 59-T1-T&P RR Co. SURVEY	CALCULATED	N 32°00'00.11"	W 104°12'46.42"
NE COR. SEC. 6-BLOCK 59-T1-T&P RR Co. SURVEY	CALCULATED	N 32°00'00.07"	W 104°11'43.82"
SE COR. SEC. 6-BLOCK 59-T1-T&P RR Co. SURVEY	CALCULATED	N 31°59'06.18"	W 104°11'44.23"
SW COR. SEC. 6-BLOCK 59-T1-T&P RR Co. SURVEY	1/2" REBAR w/BRASS CAP	N 31°59'06.33"	W 104°12'46.80"

MEDWICK 32 FEDERAL COM 4H, 5H & 6H PRODUCTION FLOW LINE R-O-W			
NUMBER	STATION	LATITUDE (NAD 83)	LONGITUDE (NAD 83)
BEGIN	5+13.69	N 31°59'59.19"	W 104°12'46.42"
4	12+42.78	N 31°59'59.19"	W 104°12'37.96"
5	13+04.24	N 31°59'58.84"	W 104°12'37.38"
6	17+68.57	N 31°59'58.84"	W 104°12'31.99"
END	18+95.64	N 32°00'00.10"	W 104°12'31.99"

CERTIFICATE OF THE STATE OF TEXAS  
 THIS IS TO CERTIFY THAT THE ABOVE IS A TRUE AND CORRECT COPY OF THE NOTES OF ACTUAL SURVEYS MADE BY ME OR UNDER MY SUPERVISION  
 AND THAT THE SAME ARE TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF.



FILE: T40212-B

Sheet 2 of 2

TBPLS Firm No. 10193884



UELS, LLC  
 Corporate Office \* 85 South 200 East  
 Vernal, UT 84078 \* (435) 789-1017

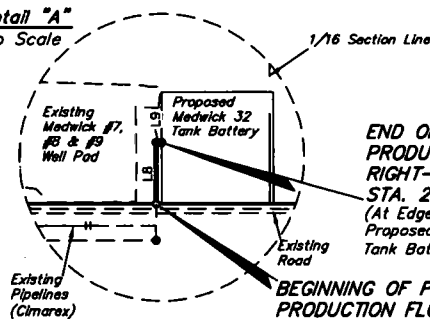


**CIMAREX ENERGY CO.**  
 MEDWICK 32 FEDERAL COM 4H, 5H & 6H  
 SECTION 6, BLOCK 59, T1, T&P RR Co. SURVEY  
 CULBERSON COUNTY, TEXAS

SURVEYED BY	J.A.V., G.M.	10-16-16	SCALE
DRAWN BY	C.D.	11-02-16	1" = 1000'
PRODUCTION FLOW LINE R-O-W EXHIBIT G-1			

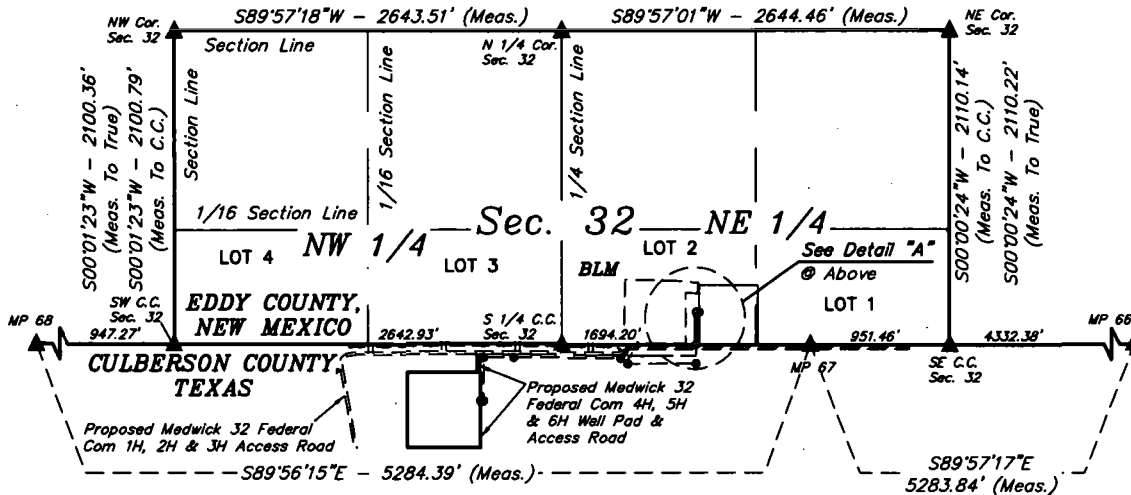
LINE TABLE		
LINE	DIRECTION	LENGTH
L8	N00°03'14"E	218.31'
L9	S89°47'49"E	20.00'

Detail "A"  
No Scale



END OF PROPOSED  
PRODUCTION FLOW LINE  
RIGHT-OF-WAY  
STA. 21+33.95  
(At Edge of the  
Proposed Medwick 32  
Tank Battery)

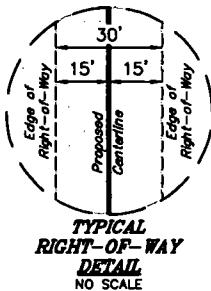
BEGINNING OF PROPOSED  
PRODUCTION FLOW LINE  
RIGHT-OF-WAY ON BLM LANDS  
STA. 18+95.64  
(At Section Line)



### PRODUCTION FLOW LINE RIGHT-OF-WAY DESCRIPTION ON BLM LANDS

A 30' WIDE RIGHT-OF-WAY 15' ON EACH SIDE OF THE FOLLOWING DESCRIBED CENTERLINE.

BEGINNING AT A POINT ON THE SOUTH LINE OF LOT 2 OF SECTION 32, T26S, R27E, N.M.P.M., WHICH BEARS N89°56'15"W 778.56' FROM MILE MARKER 67, THENCE N00°03'14"E 218.31'; THENCE S89°47'49"E 20.00' TO A POINT IN LOT 2 OF SAID SECTION 32, WHICH BEARS N73°53'09"W 789.36' FROM MILE MARKER 67. THE SIDE LINES OF SAID DESCRIBED RIGHT-OF-WAY BEING SHORTENED OR ELONGATED TO MEET THE GRANTOR'S PROPERTY LINES. BASIS OF BEARINGS IS A G.P.S. OBSERVATION. CONTAINS 0.164 ACRES MORE OR LESS.



BEGINNING OF PRODUCTION FLOW LINE ON  
BLM LANDS STA. 18+95.64 BEARS  
N89°56'15"W 778.56' FROM MILE MARKER 67.

END OF PRODUCTION FLOW LINE ON BLM  
LANDS STA. 21+33.95 BEARS N73°53'09"W  
789.36' FROM MILE MARKER 67.

ACREAGE / LENGTH TABLE			
OWNERSHIP	FEET	RODS	ACRES
BLM	238.31	14.44	0.164

▲ = SECTION CORNERS LOCATED.

FILE: 51179 Sheet 1 of 2

NOTES:  
• Basis of bearing is a G.P.S. observation (Vertical Control Datum: NAVD88)

N

CIMAREX ENERGY CO.

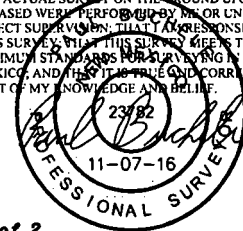
MEDWICK 32 FEDERAL COM 4H, 5H & 6H  
SECTION 32, T26S, R27E, N.M.P.M.  
EDDY COUNTY, NEW MEXICO

SURVEYED BY	J.A.V., G.M.	10-16-16	SCALE
DRAWN BY	C.D.	11-02-16	1" = 1000'
PRODUCTION FLOW LINE R-O-W EXHIBIT G-1			

**UINTAH**  
ENGINEERING & LAND SURVEYING

UELS, LLC  
Corporate Office • 85 South 200 East  
Vernal, UT 84078 • (435) 789-1017

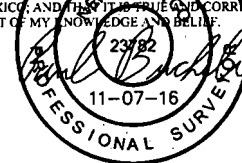
CERTIFICATE  
THIS IS TO CERTIFY THAT THIS EASEMENT PLAT AND  
THE ACTUAL SURVEY ON THE GROUND UPON WHICH IT  
IS BASED WERE PERFORMED BY ME OR UNDER MY  
DIRECT SUPERVISION, THAT I AM RESPONSIBLE FOR  
THIS SURVEY, THAT THIS SURVEY MEETS THE  
MINIMUM STANDARDS FOR A SURVEYING NEW  
MEXICO, AND THAT IT IS TRUE AND CORRECT TO THE  
BEST OF MY KNOWLEDGE AND BELIEF.



MEDWICK 32 FEDERAL COM 4H, 5H & 6H PRODUCTION FLOW LINE R-O-W			
SECTION CORNER	SECTION CORNER DESC.	LATITUDE (NAD 83)	LONGITUDE (NAD 83)
"MILE MARKER" 66	3" IRON PIPE w/BRASS CAP	N 32°00'00.06"	W 104°11'21.60"
"MILE MARKER" 67	3" IRON PIPE w/BRASS CAP	N 32°00'00.09"	W 104°12'22.95"
"MILE MARKER" 68	IRON PIPE w/BRASS CAP	N 32°00'00.14"	W 104°13'24.30"
NW COR. SEC. 32-T26S-R27E	2" IRON PIPE w/BRASS CAP	N 32°00'20.91"	W 104°13'13.30"
N 1/4 COR. SEC. 32-T26S-R27E	1" IRON PIPE w/BRASS CAP	N 32°00'20.94"	W 104°12'42.60"
NE COR. SEC. 32-T26S-R27E	2" IRON PIPE w/BRASS CAP	N 32°00'20.97"	W 104°12'11.90"
SE COR. SEC. 32-T26S-R27E	CALCULATED	N 32°00'00.09"	W 104°12'11.90"
S 1/4 COR. SEC. 32-T26S-R27E	CALCULATED	N 32°00'00.11"	W 104°12'42.62"
SW COR. SEC. 32-T26S-R27E	CALCULATED	N 32°00'00.13"	W 104°13'13.30"

MEDWICK 32 FEDERAL COM 4H, 5H & 6H PRODUCTION FLOW LINE R-O-W			
NUMBER	STATION	LATITUDE (NAD 83)	LONGITUDE (NAD 83)
BEGIN	18+95.64	N 32°00'00.10"	W 104°12'31.99"
8	21+13.95	N 32°00'02.26"	W 104°12'31.98"
END	21+33.95	N 32°00'02.26"	W 104°12'31.75"

CERTIFICATE  
THIS IS TO CERTIFY THAT THIS EASEMENT PLAT AND THE ACTUAL SURVEY ON THE GROUND UPON WHICH IT IS BASED WERE PERFORMED BY ME OR UNDER MY DIRECT SUPERVISION. THAT I AM RESPONSIBLE FOR THIS SURVEY. THAT THIS SURVEY MEETS THE MINIMUM STANDARDS FOR SURVEYING IN NEW MEXICO, AND THAT IT IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF.



FILE: 51179

Sheet 2 of 2



**UELS, LLC**  
Corporate Office \* 85 South 200 East  
Vernal, UT 84078 \* (435) 789-1017



**CIMAREX ENERGY CO.**

**MEDWICK 32 FEDERAL COM 4H, 5H & 6H  
SECTION 32, T26S, R27E, N.M.P.M.  
EDDY COUNTY, NEW MEXICO**

SURVEYED BY	J.A.V., G.M.	10-16-16	SCALE
DRAWN BY	C.D.	11-02-16	1" = 1000'
<b>PRODUCTION FLOW LINE R-O-W EXHIBIT G-1</b>			

## Operator - Land Owner Agreement

Company: Cimarex Energy Co.

Proposed Well: Medwick 32 Federal Com # 1H, 2H, 3H, 4H, 5H, 6H

Federal Lease Number: NMNM114350 & NMNM117116

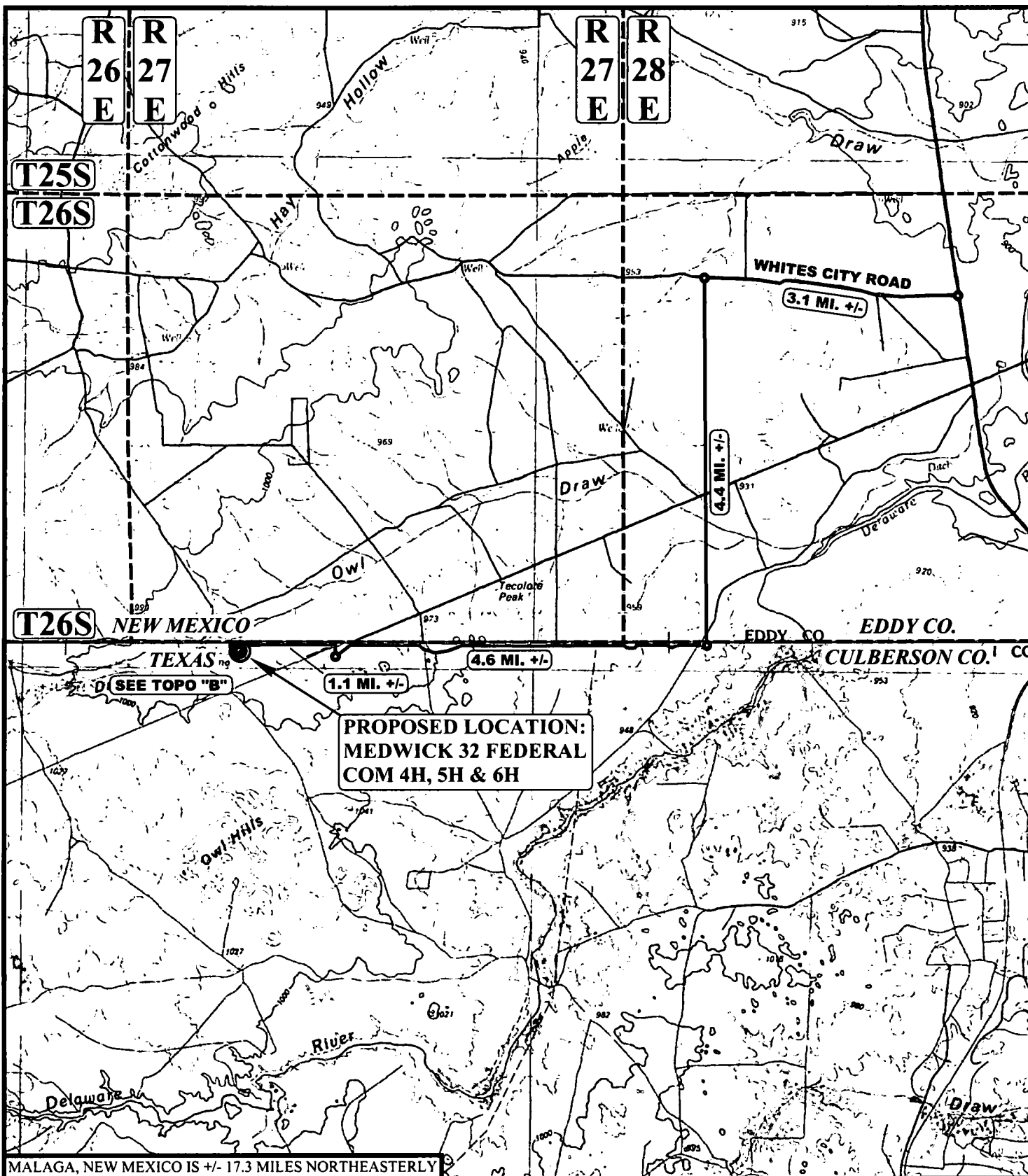
Please be advised that Cimarex Energy Co. has an agreement with the surface owner, listed below, concerning entry and surface restoration after completion of drilling operations at the above described well.

**Bill Patterson**  
**6851 NE Loop 852, Suite 200**  
**North Richland Hills, TX 76180**  
**(817) 577-1131**

After abandonment of the well, all pits will be filled and levelled and all equipment and trash will be removed from the well site. No other requirements were made concerning restoration of the well site.

3/1/17  
Date

Aricka Easterling  
Signature Aricka Easterling



**UELS, LLC**  
Corporate Office \* 85 South 200 East  
Vernal, UT 84078 \* (435) 789-1017

SURVEYED BY	J.A.V., G.M.	10-16-16	SCALE
DRAWN BY	J.L.G.	10-31-16	1 : 100,000
<b>PUBLIC ACCESS ROAD MAP</b>			<b>EXHIBIT B</b>

BEGINNING AT THE JUNCTION OF PECOS HIGHWAY AND WHITES CITY ROAD (LOCATED IN THE NW 1/4 OF SECTION 11, T26S, R28E, N.M.P.M.), PROCEED IN A WESTERLY DIRECTION APPROXIMATELY 3.1 MILES TO THE JUNCTION OF THIS ROAD AND AN EXISTING ROAD TO THE SOUTH; TURN LEFT AND PROCEED IN A SOUTHERLY DIRECTION APPROXIMATELY 4.4 MILES TO THE JUNCTION OF THIS ROAD AND AN EXISTING ROAD TO THE WEST; TURN RIGHT AND PROCEED IN A WESTERLY DIRECTION APPROXIMATELY 4.6 MILES TO THE JUNCTION OF THIS ROAD AND AN EXISTING ROAD TO THE NORTH; TURN RIGHT AND PROCEED IN A NORTHERLY, THEN WESTERLY DIRECTION APPROXIMATELY 1.1 MILES TO THE BEGINNING OF THE PROPOSED ACCESS ROAD FOR THE MEDWICK 32 FEDERAL COM 1H, 2H & 3H TO THE WEST; FOLLOW ROAD FLAGS IN A WESTERLY DIRECTION APPROXIMATELY 1,033' TO THE BEGINNING OF THE PROPOSED ACCESS ROAD TO THE SOUTH; FOLLOW ROAD FLAGS IN A SOUTHERLY DIRECTION APPROXIMATELY 127' TO THE PROPOSED LOCATION.

TOTAL DISTANCE FROM THE JUNCTION OF PECOS HIGHWAY AND WHITES CITY ROAD (LOCATED IN THE NW 1/4 SECTION 11, T26S, R28E, N.M.P.M.) TO THE PROPOSED WELL LOCATION IS APPROXIMATELY 13.4 MILES.

**CIMAREX ENERGY CO.**

**MEDWICK 32 FEDERAL COM 4H, 5H & 6H  
SECTION 1, BLOCK 60, T1, T&P RR CO. SURVEY  
CULBERSON COUNTY, TEXAS**

<b>SURVEYED BY</b>	J.A.V., G.M.	10-16-16	
<b>DRAWN BY</b>	J.L.G.	10-31-16	

**ROAD DESCRIPTION**



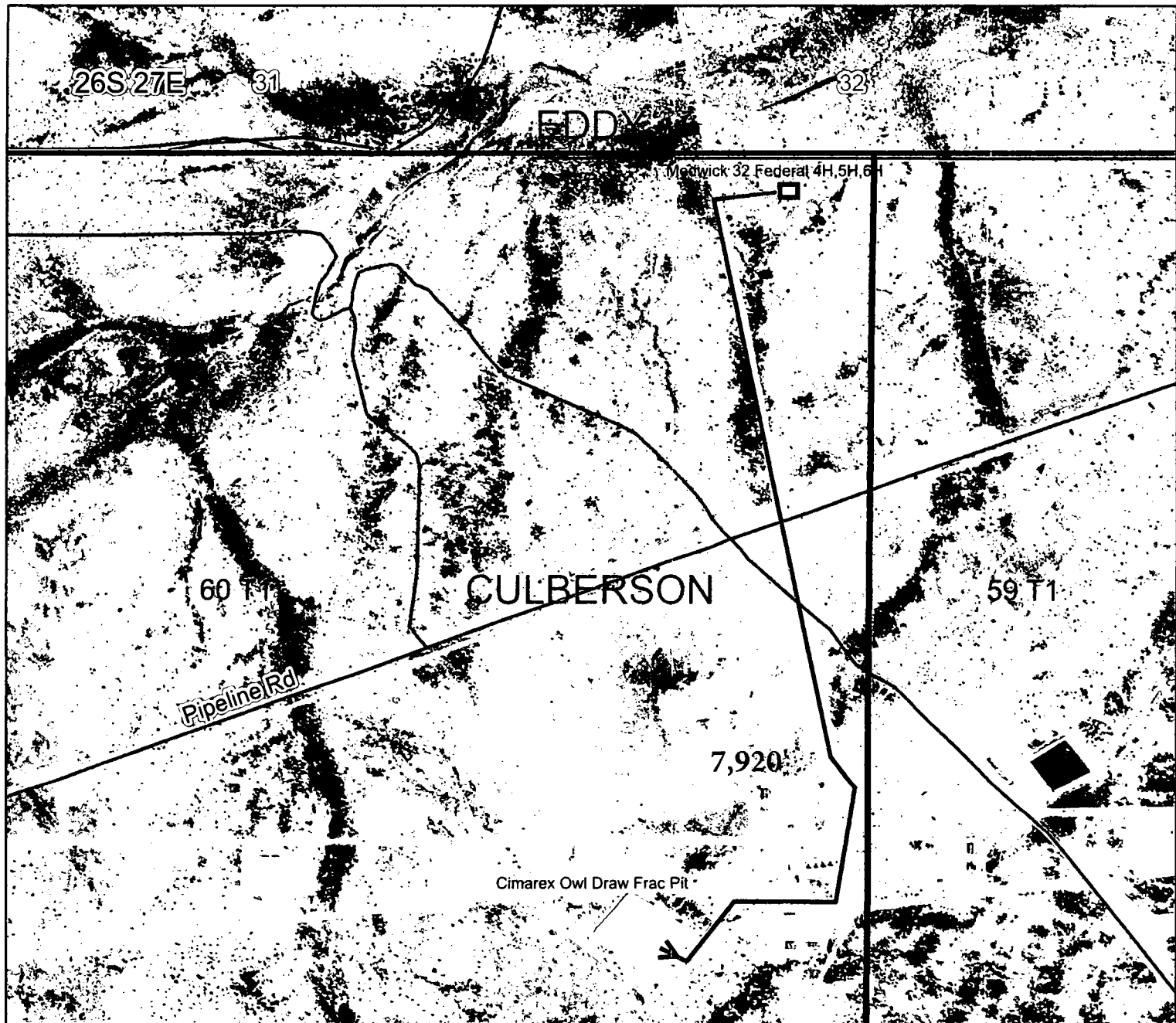
**UELS, LLC**

Corporate Office \* 85 South 200 East  
Vernal, UT 84078 \* (435) 789-1017

# Medwick 32 Federal 4H,5H,6H to Owl Frac Pit

Temporary Fresh Water Pipeline Route  
Eddy County, NM

Exhibit J



0 0.125 0.25 0.5 0.75 1 Miles



Surface Use Plan  
**Medwick 32 Federal ( #6H**  
Cimarex Energy Co.  
UL: 3, Sec. 32, 26S, 27E  
Eddy Co., NM

The following surface use plan of operations will be followed and carried out once the APD is approved. No other disturbance will be created other than what is submitted in this surface use plan without approval. If any other disturbance is needed after the APD is approved, a BLM approved sundry notice or right of way application will be submitted for approval prior to any new surface disturbance.

**1. Existing Roads:**

- Please see Exhibit B and C-1 for existing access road planned to be used to access the proposed project.
- Cimarex Energy will improve or maintain existing roads in a condition the same as or better than before the operations began. Cimarex Energy will repair pot holes, etc. All existing structures on the entire access route such as cattle guards, other range improvement projects, culverts, etc. will be properly repaired or replaced if they are damaged or have deteriorated beyond practical use.
- Cimarex Energy will prevent and abate fugitive dust as needed, whether created by vehicular traffic, equipment operations, or other events.
- Cimarex Energy will obtain written BLM approval prior to the application of surfactants, binding agents, or other dust suppression chemicals on the roadways.
- The maximum width of the driving surface will be 15'. The road will be crowned and ditched with a 2% slope from the tip of the crown to the edge of the driving surface. The ditches will be 1' deep with 3:1 slopes. The driving surface will be made of 6" rolled and compacted caliche.
- Existing access road route to the proposed project is depicted on the public access point map if applicable. Improvements to the driving surface will be done where necessary. No new surface disturbance will be done, unless otherwise noted in the New or Reconstructed Access Roads section of the surface use plan.

Beginning at the junction of Pecos Highway and Whites City Road (located in the NW ¼ of Section 11, T26S, R28E, N.M.P.M), proceed in a Westerly direction approximately 3.1 miles to the junction of this road and an existing road to the South; Turn left and proceed in a Southerly direction approximately 4.4 miles to the junction of this road and an existing road to the West; Turn Right and proceed in a Westerly direction approximately 4.6 miles to the junction of this road and an existing road to the North; turn Right and proceed in a Northerly, then westerly direction approximately 1.1 miles to the beginning of the proposed access road for the Medwick 32 Federal Com 1H, 2H, 3H to the west; Follow road flags in a westerly direction approximately 1,033' to the beginning of the proposed access road to the south; follow road flags in a southerly direction approximately 127' to the proposed location.

**2. New or Reconstructed Access Roads:**

- A new road will be constructed for this project.
- Cimarex Energy plans to construct 126.96' of off-lease access road to service the well. The new proposed access road will be built in Texas as an extension of existing road.
- The maximum width of the driving surface will be 15'. The road will be crowned and ditched with a 2% slope from the tip of the crown to the edge of the driving surface. The ditches will be 1' deep with 3:1 slopes. The driving surface will be made of 6" rolled and compacted caliche.
- Proposed and existing access road route to the proposed wellsite is depicted on Exhibit C-2. Improvements to the driving surface will be done where necessary. No new surface disturbance will be done without prior approval from the BLM.
- The operator will prevent and abate fugitive dust as needed, whether created by vehicular traffic, equipment operations, or other events.

**3. Well Radius Map**

Please see Exhibit A for wells within one mile of the proposed well SHL and BHL.

**4. Proposed or Existing Production Facilities:**

- If on completion this well is a producer, a tank battery will be used and the necessary production equipment will be installed and production will be sent to the Medwick 32 Federal Com Off Pad Battery.
- Allocation will be based on well test. Route is off lease, please see Exhibit G-1. Any changes to on lease route will be submitted via sundry notice. If route is off lease, a right of way will be submitted to the BLM for approval.

**5. Gas Pipeline**

- No pipeline proposed.

## **6. Flowlines**

- Cimarex Energy plans to construct off lease flowlines to service the well.
- Specifications of line: One 4" HP steel for oil, gas, and water production. One 4" HP steel for gas lift.
- Both lines will be buried 10'-20' South of the access road.
- Length of Gas Lift Line: 2134'
- Length of Flowlines: 2134'
- MAOP: 1500 psi.
- Anticipated working pressure: Flowlines: 200-300 psi, Gas lift: 1100 psi

## **7. Salt Water Disposal**

- No pipeline proposed.

## **8. Electric Lines**

- No new electric lines are planned.

## **9. Water**

- Cimarex Energy A temporary surface fresh water pipeline(s) will be utilized for this project.
- The surface pipeline(s) will follow the road from a frac pit to the well.
- Cimarex plans to lay the fresh water surface pipeline(s) prior to commencement of the stimulation job.
- Fresh water will be purchased from a 3<sup>rd</sup> party
- See Exhibit J for proposed route
- Specification of line: 10" lay-flat surface pipeline
- Length: 7920'
- Operating pressure: <140 psi

## **10. Construction Material**

If possible, native caliche will be obtained from the excavation of drill site. The primary way of obtaining caliche will be by "turning over" the location. This means caliche will be obtained from the actual well site. A caliche permit will be obtained from BLM prior to pushing up any caliche. 2400 cu yds is the max amount of caliche needed for pad and roads. Amount will vary for each pad. The procedure below has been approved by BLM personnel:

- The top 6 inches of topsoil is pushed off and stockpiled along the side of the location.
- An approximate 120' x 120' area is used within the proposed well site to remove caliche.
- Subsoil is removed and piled alongside the 120' by 120' area within the pad site.
- When caliche is found, material will be stockpiled within the pad site to build the location and road.
- Then subsoil is pushed back in the hole and caliche is spread accordingly across entire location and road.
- Once well is drilled, the stockpiled top soil will be used for interim reclamation and spread along areas where caliche is picked up and the location size is reduced. Neither caliche nor subsoil will be stockpiled outside of the well pad. Topsoil will be stockpiled along the edge of the pad as depicted in Exhibit D – Rig Layout Diagram.

In the event that no caliche is found onsite, caliche will be hauled in from BLM-approved caliche pit.

## **11. Methods of Handling Waste**

- Drilling fluids, produced oil, and water from the well during drilling and completion operations will be stored safely and disposed of properly in a NMOCD approved disposal facility.
- Garbage and trash produced during drilling and completion operations will be collected in a trash container and disposed of properly at a state approved disposal facility. All trash on and around well site will be collected for disposal.
- Human waste and grey water will be properly contained and disposed of properly at a state approved disposal site.
- After drilling and completion operations, trash, chemicals, salts, frac sand and other waste will be removed and disposed of properly at a state approved disposal site.
- The well will be drilled utilizing a closed loop system. Drill cuttings will be properly disposed of into steel tanks and taken to an NMOCD approved disposal facility.

Surface Use Plan  
**Medwick 32 Federal Com #6H**  
Cimarex Energy Co.  
UL: 3, Sec. 32, 26S, 27E  
Eddy Co., NM

**12. Ancillary Facilities:**

No camps or airstrips to be constructed.

**13. Well Site Layout:**

- Exhibit D: Rig Layout
- Exhibit D-2: Well Site layout plat
- Mud pits in the closed circulation system will be steel pits and the cuttings will be stored in steel containment pits.
- Cuttings will be stored in steel pits until they are hauled to a state-approved disposal facility.
- If the well is a producer, those areas of the location not essential to production facilities will be reclaimed and seeded per BLM requirements. Exhibit D-1: Interim Reclamation Diagram.

**14. Interim and Final Reclamation**

- Rehabilitation of the location will start in a timely manner after all drilling operations cease. The type of reclamation will depend on whether the well is a producer or a dry hole.
- In areas planned for interim and final reclamation, surfacing materials will be removed and returned to a mineral pit or recycled to repair or build roads and well pads.
- Drainage systems, if any, will be reshaped to the original configuration with provisions made to alleviate erosion. These may need to be modified in certain circumstances to prevent inundation of the location's pad and surface facilities. After the area has been shaped and contoured, topsoil from the spoil pile will be placed over the disturbed area to the extent possible. Revegetation procedures will comply with BLM standards.
- If the well is a dry hole, the pad and road area will be re-contoured to match the existing terrain. Topsoil will be spread to the extent possible. Revegetation will comply with BLM standards.
- Should the well be a producer, those areas of the location not essential to production facilities and operations will be reclaimed and seeded per BLM requirements. Exhibit D-1 illustrates the proposed Interim Reclamation.

**15. Surface Ownership:**

- The wellsite is on surface owned by Bill Patterson, 6851 NE Loop 852, Suite 200, North Richland Hills, TX 76180, 817-577-1131.
- A copy of Surface Use Agreement has been given to the surface owner.
- The land is used mainly for farming, cattle ranching, recreational use, and oil and gas production.

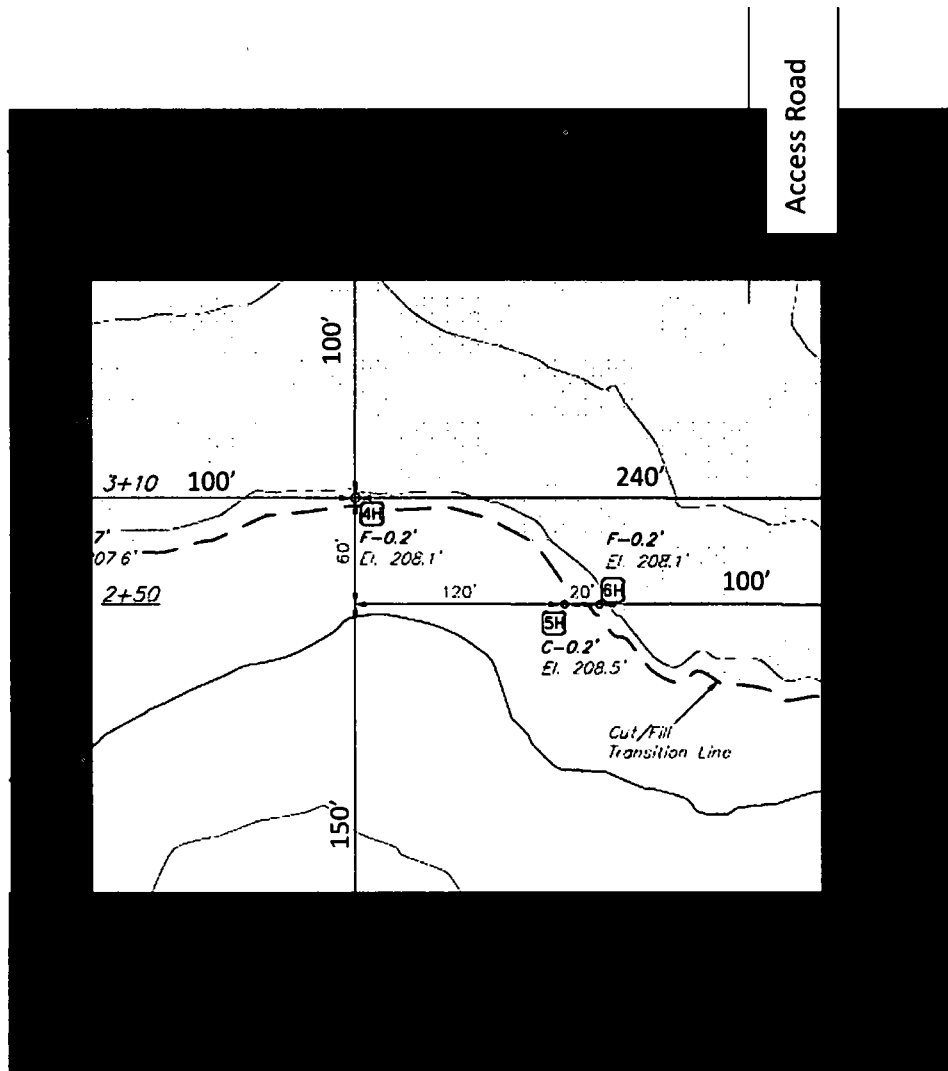
**16. Other Information:**

- Topography consists of a sloping plane with loose tan sands. Vegetation is mainly yucca, mesquite and shin oak.
- Archeological survey will be conducted for the well pad/location and proposed road and the arch report will be filed with the BLM.
- There are no known dwellings within 1½ miles of this location.

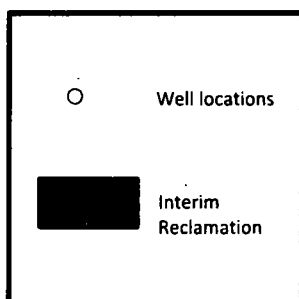
**17. On Site Notes and Information:**

Onsite with BLM & (Cimarex) Barry Hunt on Sept 19, 2016. Locations were moved 125 ft. east due to fill to the west and drainage area at southwest corner. V-Door North. Top soil south. 150' x 75' cuttings pit on east side. 500' x 480' pad (180' west, 310' south, 300' east, 190' north). Interim reclamation: All sides. Construct a ditch and berm around southwest corner to ensure run-off diverting around pad and into surrounding drainage. Gas lift/Production pipeline lateral off northwest corner, north, to tie into line from Pad #1, that will run to new proposed Medwick 32 off-site battery. Access road off northeast corner to tie-into road from pad #1 running back to #7 well.

Surface Use Plan  
**Medwick 32 Federal Com #6H**  
Cimarex Energy Co.  
UL: 3, Sec. 32, 26S, 27E  
Eddy Co., NM



Pad will be reclaimed after cessation of drilling operations.  
Please see Surface Use Plan for pad reclamation plans.



N



Exhibit D-1  
Interim Reclamation Diagram  
**Medwick 32 Federal Com 4H, 5H, 6H**  
Cimarex Energy Co.  
Sec 1, BLK 60-T1, T&P Survey  
Culberson Cty, TX



U.S. Department of the Interior  
BUREAU OF LAND MANAGEMENT

**PWD Data Report**

06/19/2018

## Section 1 - General

Would you like to address long-term produced water disposal? NO

## Section 2 - Lined Pits

Would you like to utilize Lined Pit PWD options? NO

Produced Water Disposal (PWD) Location:

PWD surface owner:

PWD disturbance (acres):

Lined pit PWD on or off channel:

Lined pit PWD discharge volume (bbl/day):

Lined pit specifications:

Pit liner description:

Pit liner manufacturers information:

Precipitated solids disposal:

Describe precipitated solids disposal:

Precipitated solids disposal permit:

Lined pit precipitated solids disposal schedule:

Lined pit precipitated solids disposal schedule attachment:

Lined pit reclamation description:

Lined pit reclamation attachment:

Leak detection system description:

Leak detection system attachment:

Lined pit Monitor description:

Lined pit Monitor attachment:

Lined pit: do you have a reclamation bond for the pit?

Is the reclamation bond a rider under the BLM bond?

Lined pit bond number:

Lined pit bond amount:

Additional bond information attachment:

### **Section 3 - Unlined Pits**

Would you like to utilize Unlined Pit PWD options? NO

Produced Water Disposal (PWD) Location:

PWD surface owner:

PWD disturbance (acres):

Unlined pit PWD on or off channel:

Unlined pit PWD discharge volume (bbl/day):

Unlined pit specifications:

Precipitated solids disposal:

Describe precipitated solids disposal:

Precipitated solids disposal permit:

Unlined pit precipitated solids disposal schedule:

Unlined pit precipitated solids disposal schedule attachment:

Unlined pit reclamation description:

Unlined pit reclamation attachment:

Unlined pit Monitor description:

Unlined pit Monitor attachment:

Do you propose to put the produced water to beneficial use?

Beneficial use user confirmation:

Estimated depth of the shallowest aquifer (feet):

Does the produced water have an annual average Total Dissolved Solids (TDS) concentration equal to or less than that of the existing water to be protected?

TDS lab results:

Geologic and hydrologic evidence:

State authorization:

Unlined Produced Water Pit Estimated percolation:

Unlined pit: do you have a reclamation bond for the pit?

Is the reclamation bond a rider under the BLM bond?

Unlined pit bond number:

Unlined pit bond amount:

Additional bond information attachment:

### **Section 4 - Injection**

Would you like to utilize Injection PWD options? NO

Produced Water Disposal (PWD) Location:

PWD surface owner:

PWD disturbance (acres):

Injection PWD discharge volume (bbl/day):

Injection well mineral owner:

**Injection well type:**

**Injection well number:**

**Assigned injection well API number?**

**Injection well new surface disturbance (acres):**

**Minerals protection information:**

**Mineral protection attachment:**

**Underground Injection Control (UIC) Permit?**

**UIC Permit attachment:**

**Injection well name:**

**Injection well API number:**

### **Section 5 - Surface Discharge**

**Would you like to utilize Surface Discharge PWD options? NO**

**Produced Water Disposal (PWD) Location:**

**PWD surface owner:**

**PWD disturbance (acres):**

**Surface discharge PWD discharge volume (bbl/day):**

**Surface Discharge NPDES Permit?**

**Surface Discharge NPDES Permit attachment:**

**Surface Discharge site facilities information:**

**Surface discharge site facilities map:**

### **Section 6 - Other**

**Would you like to utilize Other PWD options? NO**

**Produced Water Disposal (PWD) Location:**

**PWD surface owner:**

**PWD disturbance (acres):**

**Other PWD discharge volume (bbl/day):**

**Other PWD type description:**

**Other PWD type attachment:**

**Have other regulatory requirements been met?**

**Other regulatory requirements attachment:**



**U.S. Department of the Interior  
BUREAU OF LAND MANAGEMENT**

## **Bond Info Data Report**

06/19/2018

### **Bond Information**

**Federal/Indian APD: FED**

**BLM Bond number: NMB001188**

**BIA Bond number:**

**Do you have a reclamation bond? NO**

**Is the reclamation bond a rider under the BLM bond?**

**Is the reclamation bond BLM or Forest Service?**

**BLM reclamation bond number:**

**Forest Service reclamation bond number:**

**Forest Service reclamation bond attachment:**

**Reclamation bond number:**

**Reclamation bond amount:**

**Reclamation bond rider amount:**

**Additional reclamation bond information attachment:**