

Form 3160-3
(March 2014)

OCB HOBBS
MAY 23 2018
RECEIVED

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. NMNM129267
1b. Type of Well: <input checked="" type="checkbox"/> Oil Well <input type="checkbox"/> Gas Well <input type="checkbox"/> Other <input checked="" type="checkbox"/> Single Zone <input type="checkbox"/> Multiple Zone		6. If Indian, Allottee or Tribe Name
2. Name of Operator CIMAREX ENERGY COMPANY (215099)		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. (317301) WEST GRAMA RIDGE 8-5 FED C 5H
3b. Phone No. (include area code) (432)620-1936		9. API Well No. 30-025-44842
4. Location of Well (Report location clearly and in accordance with any State requirements.) At surface SWSW / 457 FSL / 630 FWL / LAT 32.400228 / LONG -103.49855 At proposed prod. zone LOT 4 / 330 FNL / 660 FWL / LAT 32.427136 / LONG -103.49839		10. Field and Pool, or Exploratory (28832) BONE SPRING / GRAMA RIDGE BONE
14. Distance in miles and direction from nearest town or post office* 20 miles		11. Sec., T. R. M. or Blk. and Survey or Area SEC 8 / T22S / R34E / NMP
15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any) 457 feet	16. No. of acres in lease 1078.3	17. Spacing Unit dedicated to this well 32.046
18. Distance from proposed location* to nearest well, drilling, completed, 20 feet applied for, on this lease, ft.	19. Proposed Depth 11540 feet / 21542 feet	20. BLM/BIA Bond No. on file FED: NMB001188
21. Elevations (Show whether DF, KDB, RT, GL, etc.) 3523 feet	22. Approximate date work will start* 06/01/2018	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:

1. Well plat certified by a registered surveyor.
2. A Drilling Plan.
3. A Surface Use Plan (if the location is on National Forest System Lands, the SUPO must be filed with the appropriate Forest Service Office).
4. Bond to cover the operations unless covered by an existing bond on file (see Item 20 above).
5. Operator certification
6. 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 12/21/2017
Title Regulatory Analyst		
Approved by (Signature) (Electronic Submission)	Name (Printed/Typed) Cody Layton / Ph: (575)234-5959	Date 05/01/2018
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)

Rec OCP 05/23/18

APPROVED WITH CONDITIONS
Approval Date: 05/01/2018

K2
05/30/18

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: SWSW / 457 FSL / 630 FWL / TWSP: 22S / RANGE: 34E / SECTION: 8 / LAT: 32.400228 / LONG: -103.49855 (TVD: 0 feet, MD: 0 feet)
PPP: SWSW / 823 FSL / 660 FWL / TWSP: 22S / RANGE: 34E / SECTION: 5 / LAT: 32.3992194 / LONG: -103.4984528 (TVD: 11240 feet, MD: 11260 feet)
PPP: SWSW / 0 FSL / 660 FWL / TWSP: 22S / RANGE: 34E / SECTION: 5 / LAT: 32.4135528 / LONG: -103.498222 (TVD: 11540 feet, MD: 16600 feet)
BHL: LOT 4 / 330 FNL / 660 FWL / TWSP: 22S / RANGE: 34E / SECTION: 5 / LAT: 32.427136 / LONG: -103.49839 (TVD: 11540 feet, MD: 21542 feet)

BLM Point of Contact

Name: Katrina Ponder
Title: Geologist
Phone: 5752345969
Email: kponder@blm.gov

CONFIDENTIAL

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.

CONFIDENTIAL



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

Application Data Report

05/07/2018

APD ID: 10400025199

Submission Date: 12/21/2017

Highlighted data
reflects the most
recent changes

Operator Name: CIMAREX ENERGY COMPANY

Well Name: WEST GRAMA RIDGE 8-5 FED COM

Well Number: 5H

[Show Final Text](#)

Well Type: OIL WELL

Well Work Type: Drill

Section 1 - General

APD ID: 10400025199

Tie to previous NOS?

Submission Date: 12/21/2017

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: NMNM129267

Lease Acres: 1078.3

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

Section 2 - Well Information

Well in Master Development Plan? NO

Master Development Plan name:

Well in Master SUPO? NO

Master SUPO name:

Well in Master Drilling Plan? NO

Master Drilling Plan name:

Well Name: WEST GRAMA RIDGE 8-5 FED COM

Well Number: 5H

Well API Number:

Field/Pool or Exploratory? Field and Pool

Field Name: BONE SPRING

Pool Name: GRAMA RIDGE
BONE SPRING WEST

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

Operator Name: CIMAREX ENERGY COMPANY
Well Name: WEST GRAMA RIDGE 8-5 FED COM

Well Number: 5H

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: WEST Number: W2W2

GRAMA RIDGE 8-5 FED COM

Well Class: HORIZONTAL

Number of Legs: 1

Well Work Type: Drill

Well Type: OIL WELL

Describe Well Type:

Well sub-Type: EXPLORATORY (WILDCAT)

Describe sub-type:

Distance to town: 20 Miles

Distance to nearest well: 20 FT

Distance to lease line: 457 FT

Reservoir well spacing assigned acres Measurement: 32.046 Acres

Well plat: West_Grama_Ridge_8_5_Federal_Com_5H_C102_Plat_20180111111441.pdf

Well work start Date: 06/01/2018

Duration: 30 DAYS

Section 3 - Well Location Table

Survey Type: RECTANGULAR

Describe Survey Type:

Datum: NAD83

Vertical Datum: NAVD88

Survey number:

	NS-Foot	NS Indicator	EW-Foot	EW Indicator	Twsp	Range	Section	Aliquot/Lot/Tract	Latitude	Longitude	County	State	Meridian	Lease Type	Lease Number	Elevation	MD	TVD
SHL Leg #1	457	FSL	630	FWL	22S	34E	8	Aliquot SWS W	32.40022 8	- 103.4985 5	LEA	NEW MEXI CO	NEW MEXI CO	S	STATE	352 3	0	0
KOP Leg #1	858	FSL	660	FWL	22S	34E	8	Aliquot SWS W	32.40022 8	- 103.4985 5	LEA	NEW MEXI CO	NEW MEXI CO	S	STATE	- 754 0	110 78	110 63
PPP Leg #1	0	FSL	660	FWL	22S	34E	5	Aliquot SWS W	32.41355 28	- 103.4982 22	LEA	NEW MEXI CO	NEW MEXI CO	F	NMNM 129267	- 801 7	166 00	115 40



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

Drilling Plan Data Report

05/07/2018

APD ID: 10400025199

Submission Date: 12/21/2017

Highlighted data
reflects the most
recent changes

Operator Name: CIMAREX ENERGY COMPANY

Well Name: WEST GRAMA RIDGE 8-5 FED COM

Well Number: 5H

[Show Final Text](#)

Well Type: OIL 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	3525	1580	1580		USEABLE WATER	No
2	SALADO	1795	1730	1730		NONE	No
3	BASE OF SALT	-265	3790	3790		NONE	No
4	CAPITAN REEF	-765	4290	4290		NATURAL GAS,OIL	No
5	DELAWARE SAND	-1685	5210	5210		NATURAL GAS,OIL	No
6	BONE SPRING	-5155	8680	8680		NATURAL GAS,OIL	No
7	BONE SPRING 1ST	-6245	9770	9770		NATURAL GAS,OIL	No
8	BONE SPRING 2ND	-6755	10280	10280		NATURAL GAS,OIL	No
9	BONE SPRING 3RD	-7195	10720	10720		NATURAL GAS,OIL	Yes
10	WOLFCAMP	-8095	11620	11620		NATURAL GAS,OIL	No

Section 2 - Blowout Prevention

Pressure Rating (PSI): 2M

Rating Depth: 1630

Equipment: 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. 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: 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 3000 psi will be installed on the wellhead system and will be pressure tested to 250 psi low followed by a 3000 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

Operator Name: CIMAREX ENERGY COMPANY

Well Name: WEST GRAMA RIDGE 8-5 FED COM

Well Number: 5H

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 3000 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.

Choke Diagram Attachment:

West_Grama_Ridge_8_5_Federal_Com_5H_Choke_2M3M_20171221133816.pdf

BOP Diagram Attachment:

West_Grama_Ridge_8_5_Federal_Com_5H_BOP_2M_20171221133825.pdf

Pressure Rating (PSI): 3M

Rating Depth: 5190

Equipment: 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. 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: 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 3000 psi will be installed on the wellhead system and will be pressure tested to 250 psi low followed by a 3000 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 3000 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.

Choke Diagram Attachment:

West_Grama_Ridge_8_5_Federal_Com_5H_Choke_2M3M_20171221133855.pdf

BOP Diagram Attachment:

West_Grama_Ridge_8_5_Federal_Com_5H_BOP_3M_20171221133903.pdf

Operator Name: CIMAREX ENERGY COMPANY

Well Name: WEST GRAMA RIDGE 8-5 FED COM

Well Number: 5H

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	1630	0	1630	0	1630	1630	J-55	54.5	STC	1.52	3.67	BUOY	5.79	BUOY	5.79
2	INTERMEDIATE	12.25	9.625	NEW	API	N	0	5190	0	5190	0	5190	5190	J-55	40	LTC	1.26	1.43	BUOY	2.5	BUOY	2.5
3	PRODUCTION	8.75	5.5	NEW	API	N	0	11078	0	11078	0	11078	11078	L-80	17	LTC	1.21	1.49	BUOY	1.72	BUOY	1.72
4	PRODUCTION	8.75	5.5	NEW	API	N	11078	21542	11078	21542	11078	21542	10464	L-80	17	BUTT	1.16	1.43	BUOY	50.55	BUOY	50.55

Casing Attachments

Casing ID: 1 String Type: SURFACE

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

West_Grama_Ridge_8_5_Federal_Com_5H_Casing_Assumptions_20171221133954.pdf

Operator Name: CIMAREX ENERGY COMPANY

Well Name: WEST GRAMA RIDGE 8-5 FED COM

Well Number: 5H

Casing Attachments

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

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

West_Grama_Ridge_8_5_Federal_Com_5H_Casing_Assumptions_20171221134027.pdf

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

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

West_Grama_Ridge_8_5_Federal_Com_5H_Casing_Assumptions_20171221134102.pdf

Casing ID: 4 **String Type:** PRODUCTION

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

West_Grama_Ridge_8_5_Federal_Com_5H_Casing_Assumptions_20171221134201.pdf

Section 4 - Cement

Operator Name: CIMAREX ENERGY COMPANY

Well Name: WEST GRAMA RIDGE 8-5 FED COM

Well Number: 5H

String Type	Lead/Tail	Stage Tool Depth	Top MD	Bottom MD	Quantity(sx)	Yield	Density	Cu Ft	Excess%	Cement type	Additives
SURFACE	Lead		0	1630	790	1.72	13.5	1358	50	Class C	Bentonite
SURFACE	Tail		0	1630	212	1.34	14.8	283	25	Class C	LCM
INTERMEDIATE	Lead		0	5190	955	1.88	12.9	1794	50	35:65 (Poz:C)	Salt, Bentonite
INTERMEDIATE	Tail		0	5190	292	1.34	14.8	391	25	Class C	LCM
PRODUCTION	Lead		0	1107 8	526	3.64	10.3	1912	25	Tuned Light	LCM
PRODUCTION	Tail		0	1107 8	2237	1.3	14.2	2908	10	50:50 (Poz:H)	Salt, Bentonite, Fluid Loss, Dispersant, SMS
PRODUCTION	Lead		1107 8	2154 2	526	3.64	10.3	1912	25	Tuned Light	LCM
PRODUCTION	Tail		1107 8	2154 2	2237	1.3	14.2	2908	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	1630	SPUD MUD	8.3	8.8							

Operator Name: CIMAREX ENERGY COMPANY

Well Name: WEST GRAMA RIDGE 8-5 FED COM

Well Number: 5H

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
1630	5190	SALT SATURATED	9.7	10.2							
5190	2154 2	OTHER : FW/Cut Brine	8.5	9							

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: 5400

Anticipated Surface Pressure: 2861.2

Anticipated Bottom Hole Temperature(F): 184

Anticipated abnormal pressures, temperatures, or potential geologic hazards? YES

Describe:

Lost circulation may be encountered in the Delaware mountain group. Abnormal pressure as well as hole stability issues may be encountered in the Wolfcamp.

Contingency Plans geohazards description:

Lost circulation material will be available, as well as additional drilling fluid along with the fluid volume in the drilling rig pit system. Drilling fluid can be mixed on location or mixed in vendor mud plant and trucked to location if needed. Sufficient barite will be available to maintain appropriate mud weight for the Wolfcamp interval.

Contingency Plans geohazards attachment:

Hydrogen Sulfide drilling operations plan required? YES

Hydrogen sulfide drilling operations plan:

West_Grama_Ridge_8_5_Federal_Com_5H_H2S_Plan_20171221134711.pdf

Operator Name: CIMAREX ENERGY COMPANY

Well Name: WEST GRAMA RIDGE 8-5 FED COM

Well Number: 5H

Section 8 - Other Information

Proposed horizontal/directional/multi-lateral plan submission:

West_Grama_Ridge_8_5_Federal_Com_5H_Directional_Plan_20171221134725.pdf

Other proposed operations facets description:

Other proposed operations facets attachment:

West_Grama_Ridge_8_5_Federal_Com_5H_Anti_Collision_Report_20171221134739.pdf

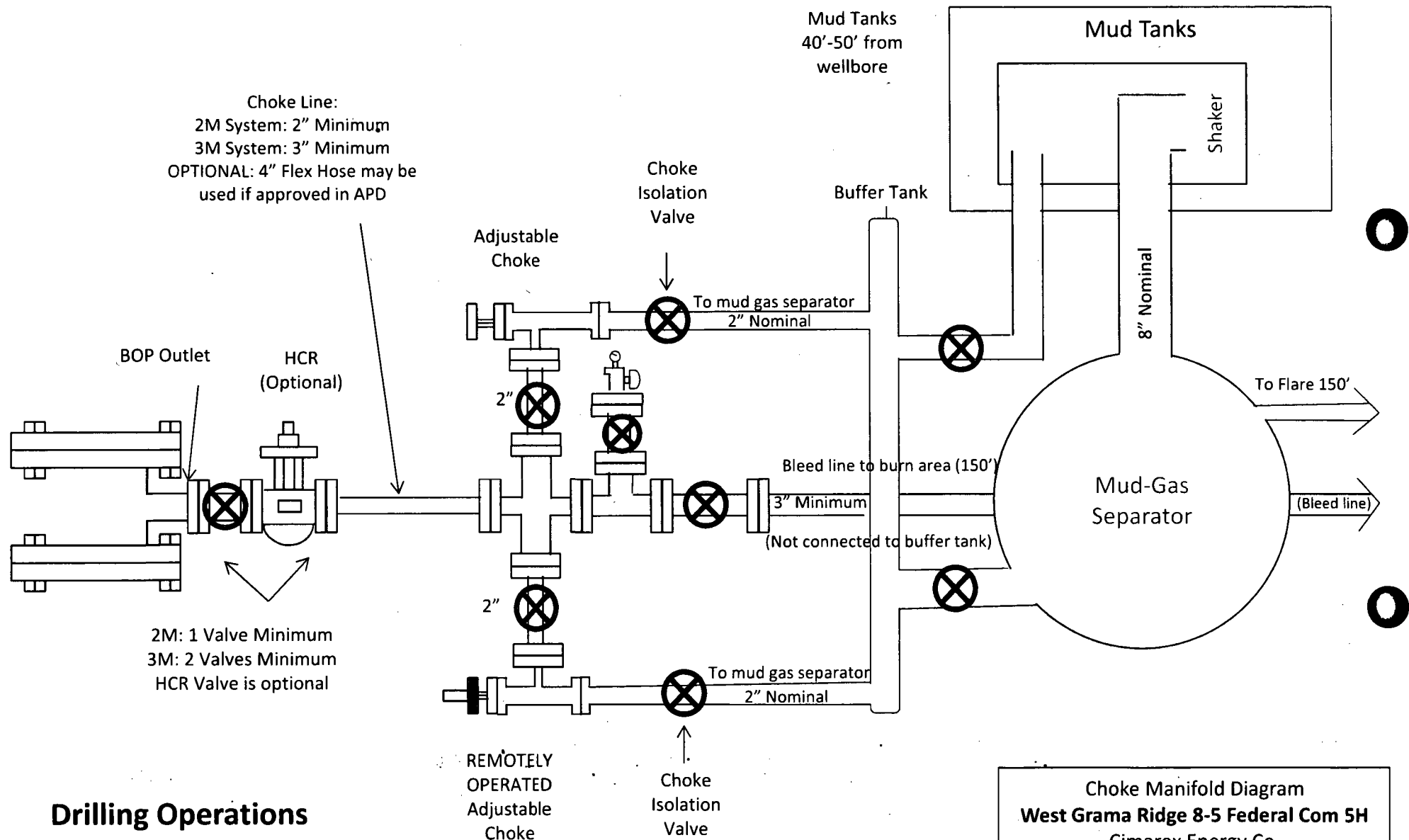
West_Grama_Ridge_8_5_Federal_Com_5H_Drilling_Plan_20171221134740.pdf

West_Grama_Ridge_8_5_Federal_Com_5H_Flex_Hose_20171221134743.pdf

West_Grama_Ridge_8_5_Federal_Com_5H_Gas_Capture_Plan_20171221134744.pdf

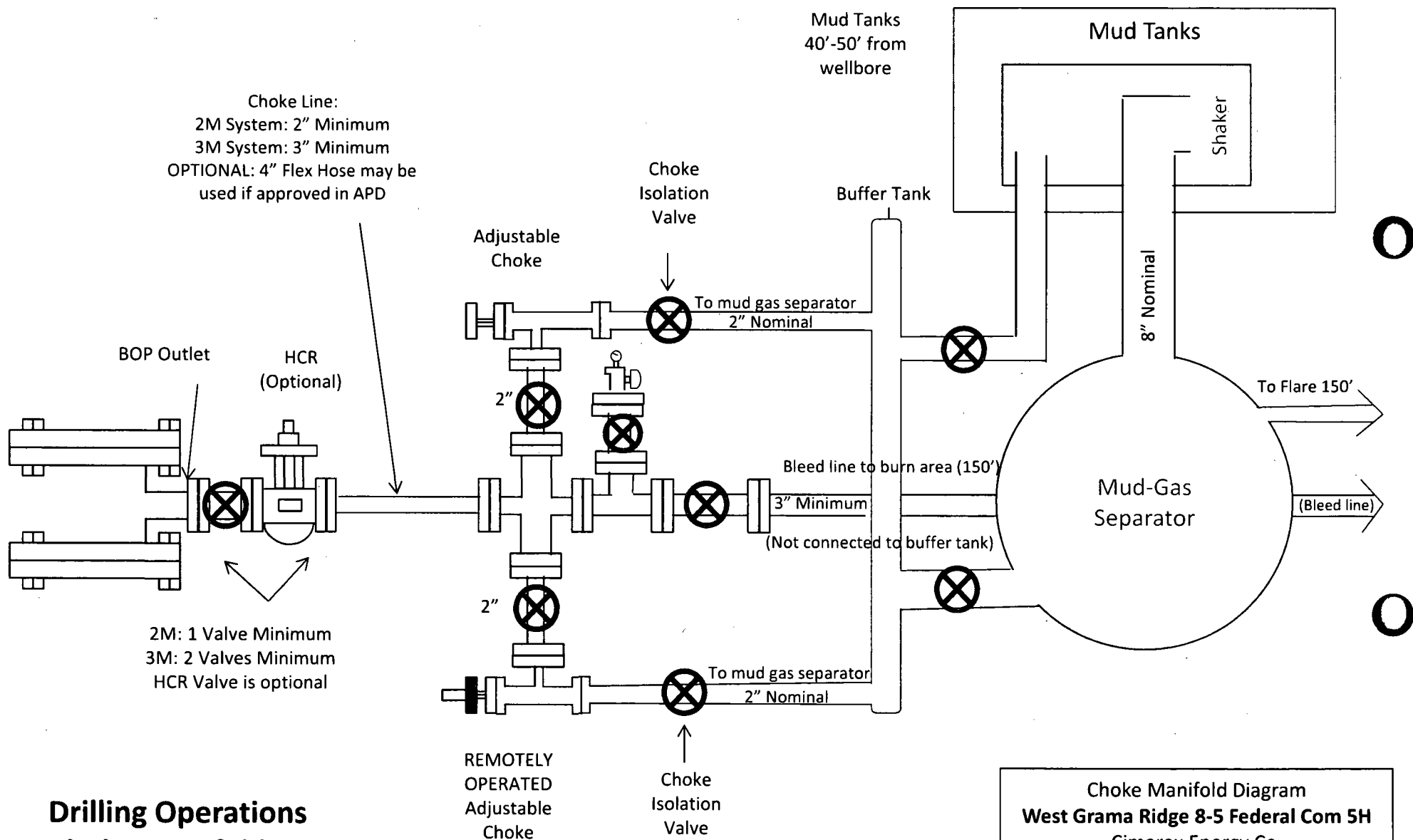
Other Variance attachment:

West_Grama_Ridge_8_5_Federal_Com_5H_Multibowl_Wellhead_Diagram_20180418074237.pdf



Drilling Operations Choke Manifold 2M/3M Service

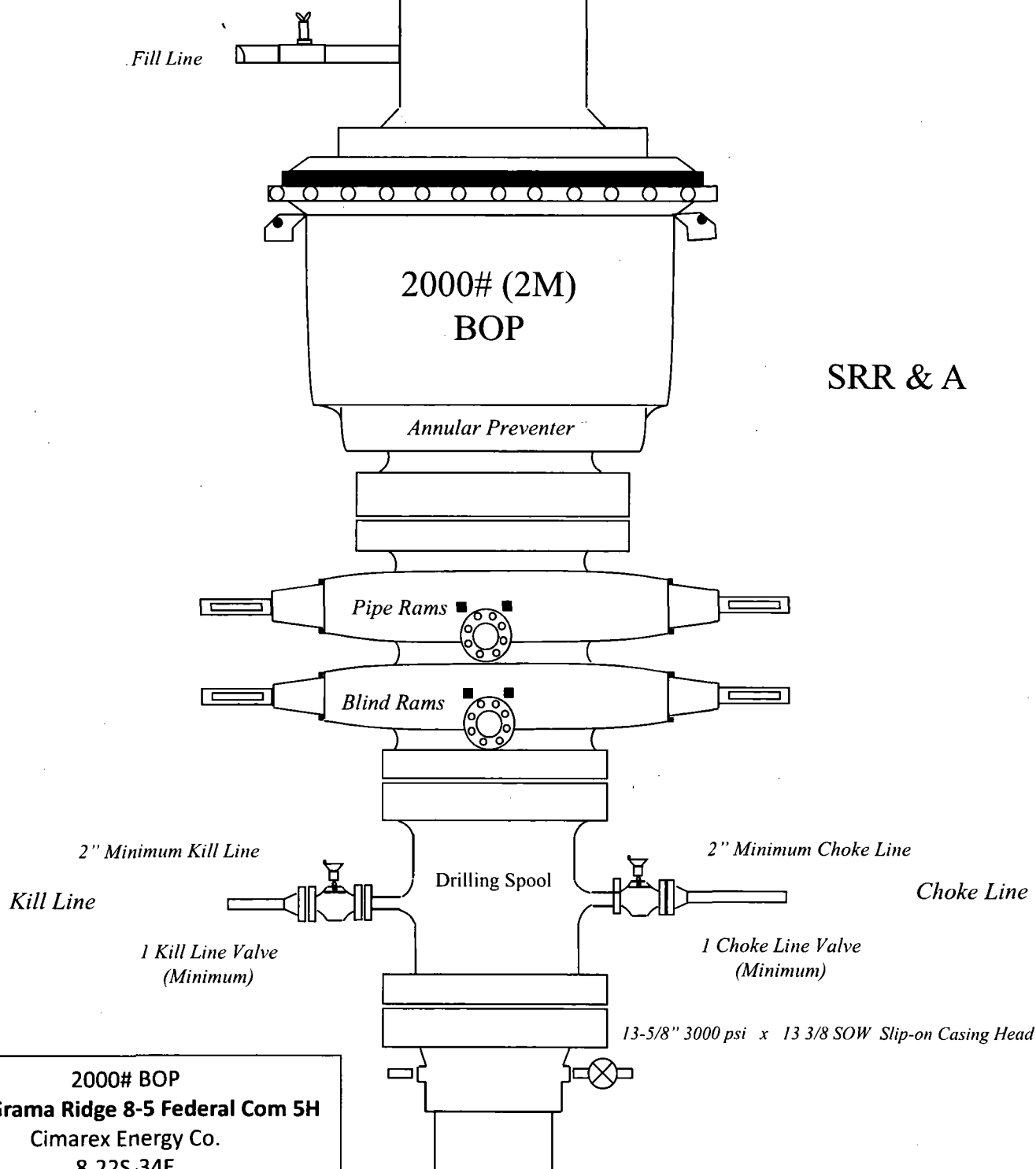
Choke Manifold Diagram
 West Grama Ridge 8-5 Federal Com 5H
 Cimarex Energy Co.
 8-22S-34E
 Lea County, NM



Drilling Operations Choke Manifold 2M/3M Service

Choke Manifold Diagram
 West Grama Ridge 8-5 Federal Com 5H
 Cimarex Energy Co.
 8-22S-34E
 Lea County, NM

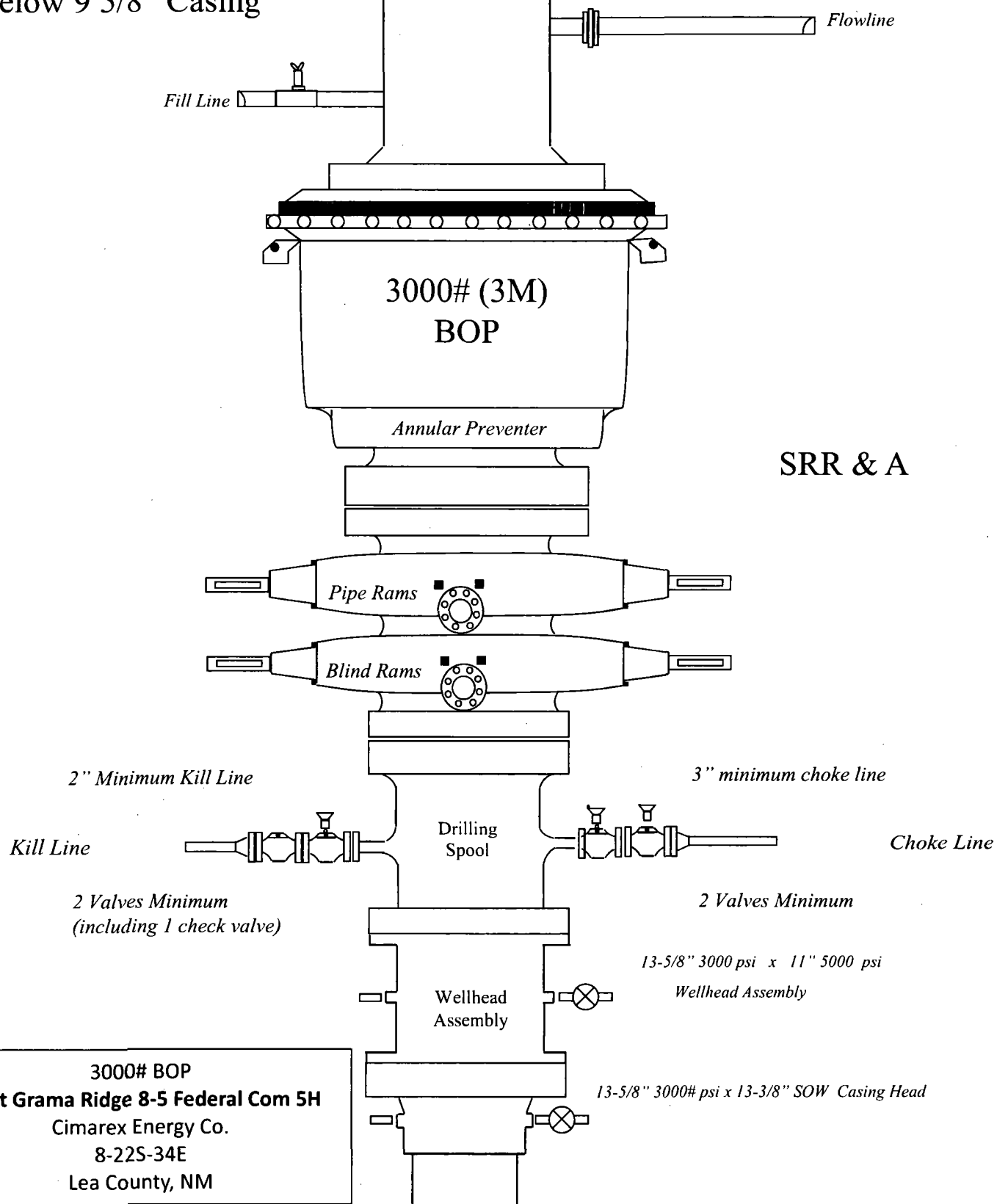
Drilling 12-1/4" hole
below 13 3/8" Casing



SRR & A

2000# BOP
West Grama Ridge 8-5 Federal Com 5H
Cimarex Energy Co.
8-22S-34E
Lea County, NM

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



West Grama Ridge 8-5 Federal Com 5H

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	1630	13-3/8"	54.50	J-55	ST&C	1.52	3.67	5.79
12 1/4	0	5190	9-5/8"	40.00	J-55	LT&C	1.26	1.43	2.50
8 3/4	0	11078	5-1/2"	17.00	L-80	LT&C	1.21	1.49	1.72
8 3/4	11078	21542	5-1/2"	17.00	L-80	BT&C	1.16	1.43	50.55
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

West Grama Ridge 8-5 Federal Com 5H

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	1630	13-3/8"	54.50	J-55	ST&C	1.52	3.67	5.79
12 1/4	0	5190	9-5/8"	40.00	J-55	LT&C	1.26	1.43	2.50
8 3/4	0	11078	5-1/2"	17.00	L-80	LT&C	1.21	1.49	1.72
8 3/4	11078	21542	5-1/2"	17.00	L-80	BT&C	1.16	1.43	50.55
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

West Grama Ridge 8-5 Federal Com 5H

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	1630	13-3/8"	54.50	J-55	ST&C	1.52	3.67	5.79
12 1/4	0	5190	9-5/8"	40.00	J-55	LT&C	1.26	1.43	2.50
8 3/4	0	11078	5-1/2"	17.00	L-80	LT&C	1.21	1.49	1.72
8 3/4	11078	21542	5-1/2"	17.00	L-80	BT&C	1.16	1.43	50.55
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?	Y
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

5. Mud Program

Depth	Type	Weight (ppg)	Viscosity	Water Loss
0' to 1630'	FW Spud Mud	8.30 - 8.80	30-32	N/C
1630' to 5190'	Brine Water	9.70 - 10.20	30-32	N/C
5190' to 21542'	FW/Cut Brine	8.50 - 9.00	30-32	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	5400 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 3000 psi will be installed on the wellhead system and will be pressure tested to 250 psi low followed by a 3000 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.

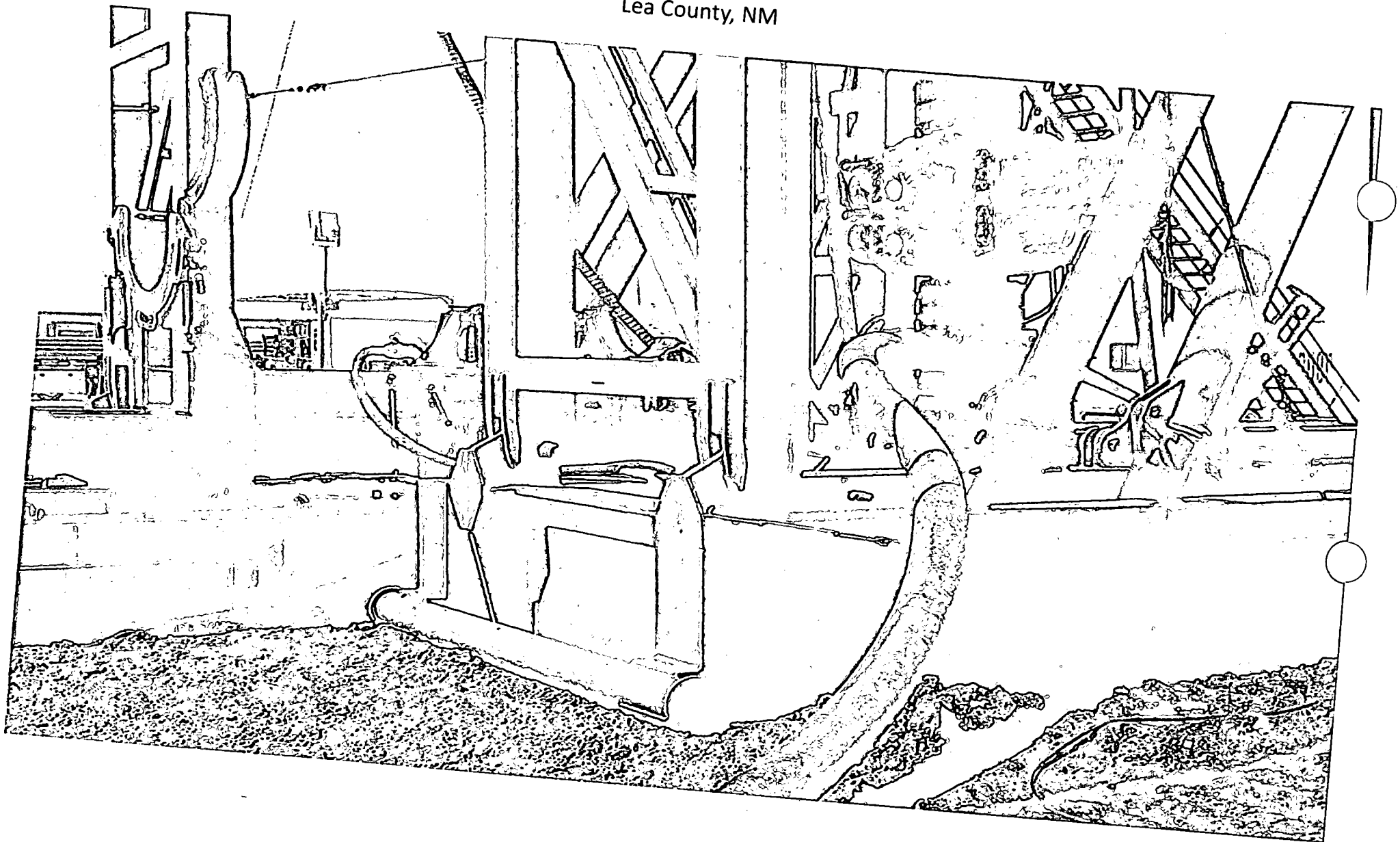
A solid steel body pack-off will be utilized after running and cementing the intermediate casing. After installation the pack-off and lower flange will be pressure tested to 3000 psi.

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.

Co-Flex Hose
West Grama Ridge 8-5 Federal Com 5H
Cimarex Energy Co.
8-22S-34E
Lea County, NM



Co-Flex Hose Hydrostatic Test
West Grama Ridge 8-5 Federal Com 5H
Cimarex Energy Co.
8-22S-34E



Midwest Hose & Specialty, Inc.

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



Midwest Hose
& Specialty, Inc.

Internal Hydrostatic Test Graph

March 3, 2011

Customer: Houston

Pick Ticket #: 94260

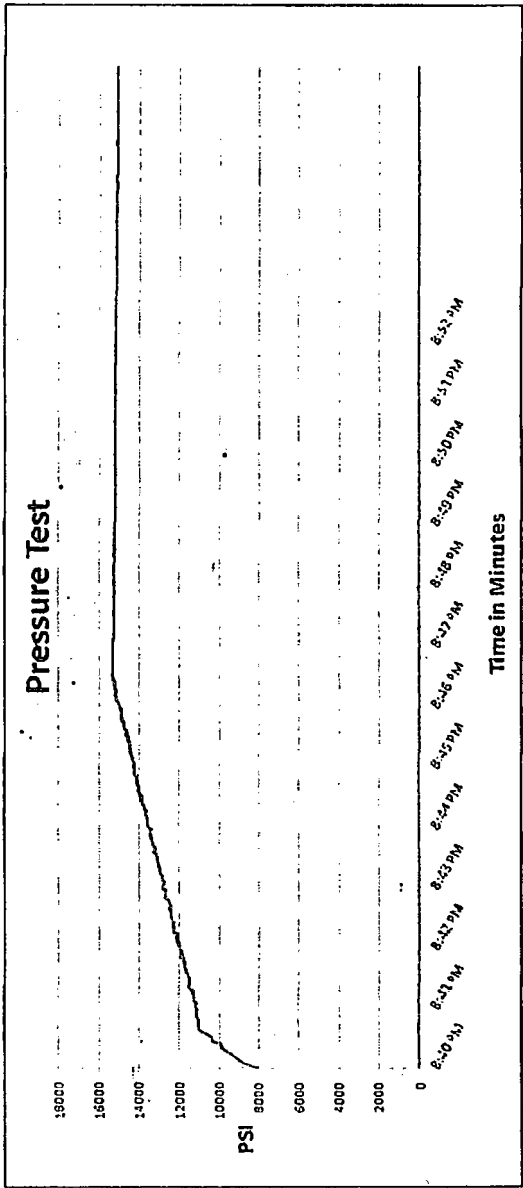
Hose Specifications

Hose Type: C&K
I.D.: 4"
Working Pressure: 10000 PSI
Length: 45'
O.D.: 6.09"
Burst Pressure: Standard Safety Multiplier Applies

Verification

Type of Fittings: 41/1610K
Die Size: 6.38"
Hose Serial #: 5544
Coupling Method: Swage
Final O.D.: 6.25"
Hose Assembly Serial #: 79793

Co-Flex Hose Hydrostatic Test
West Grama Ridge 8-5 Federal Com 5H
Cimarex Energy Co.
8-22S-34E
Lea County, NM



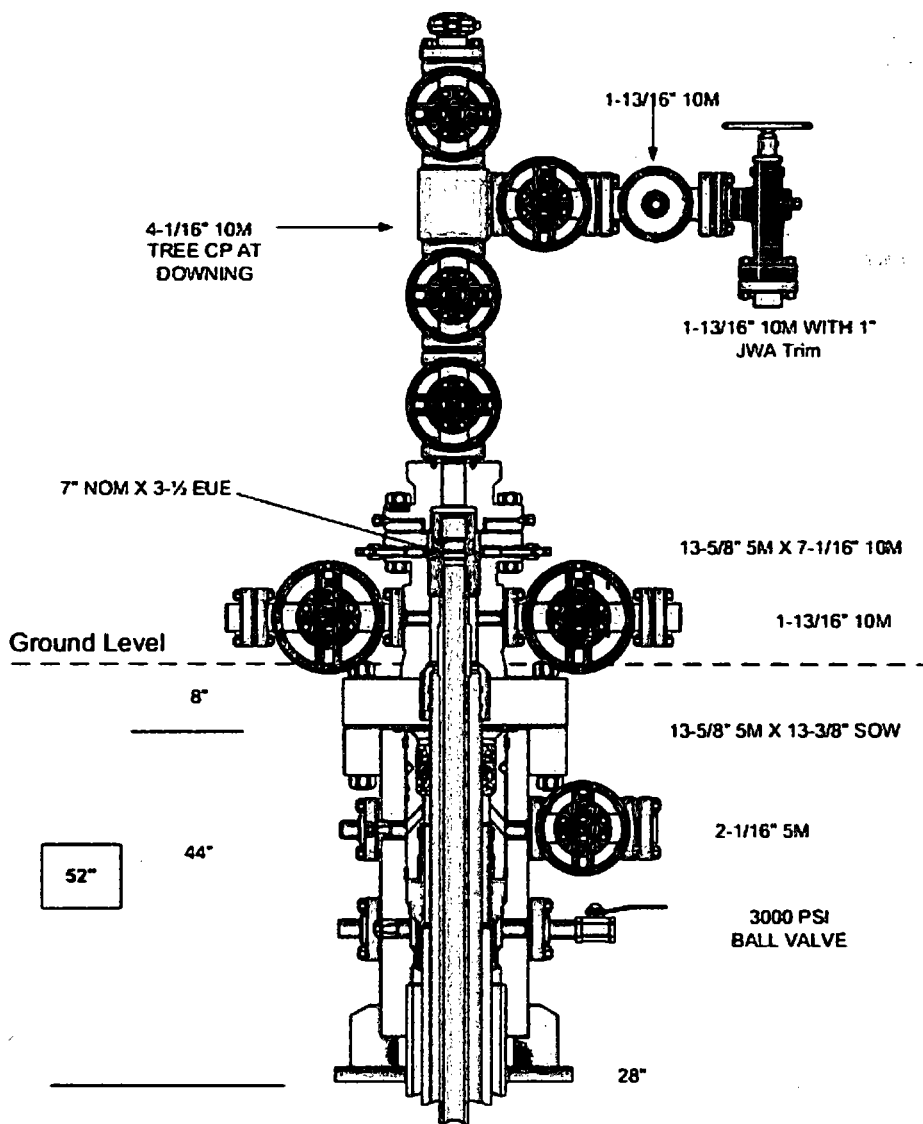
Co-Flex Hose
West Grama Ridge 8-5 Federal Com 5H
Cimarex Energy Co.
8-22S-34E
Lea County, NM



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 & Specialty, Inc. 10640 Tanner Road Houston, Texas 77041</p>		
Comments:		
Approved:		Date:
<i>James Garcia</i>		3/8/2011



PREPARED ON 6-1-17



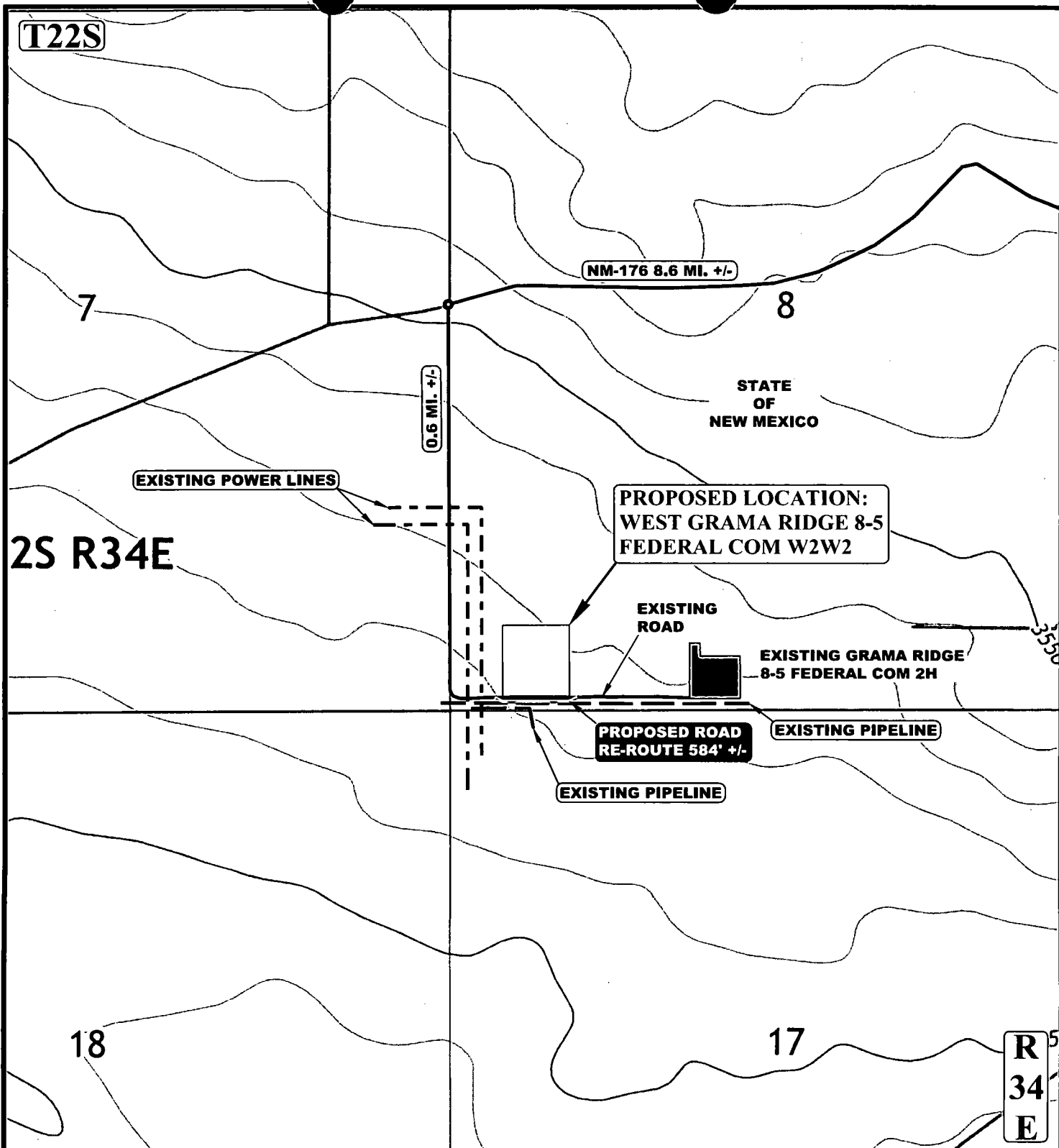
Midwest Hose
& Specialty, Inc.

Co-Flex Hose
West Grama Ridge 8-5 Federal Com 5H
Cimarex Energy Co.
8-22S-34E
Lea 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.

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



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 UINTAH ENGINEERING AND LAND SURVEYING (UELS) FOR ACCURACY OF THE PARCEL DATA.

LEGEND:

- EXISTING ROAD
- - - - EXISTING PIPELINE
- - - - EXISTING POWER LINE



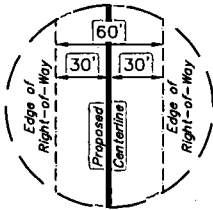
UELS, LLC
Corporate Office * 85 South 200 East
Vernal, UT 84078 * (435) 789-1017



CIMAREX ENERGY CO.

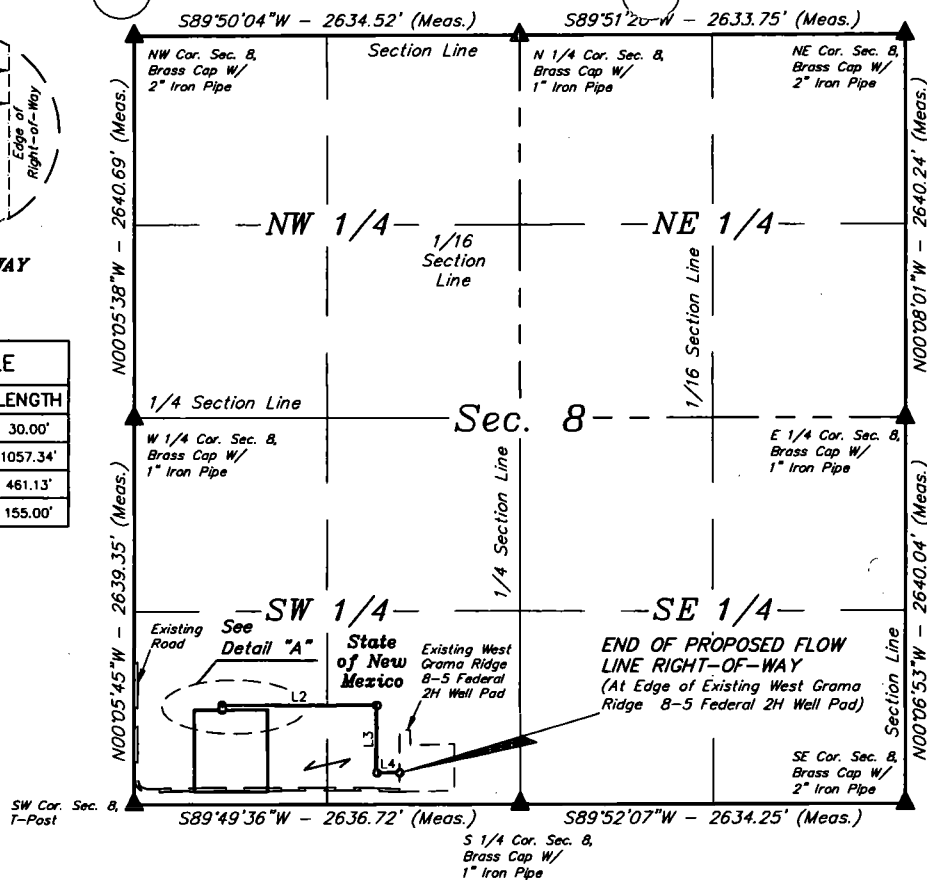
WEST GRAMA RIDGE 8-5 FEDERAL COM W2W2
SW 1/4 SW 1/4, SECTION 8, T22S, R34E, N.M.P.M.
LEA COUNTY, NEW MEXICO

SURVEYED BY	S.R., R.D.	10-17-17	SCALE
DRAWN BY	R.T.	10-24-17	1 : 12,000
NEW ROAD MAP			EXHIBIT D

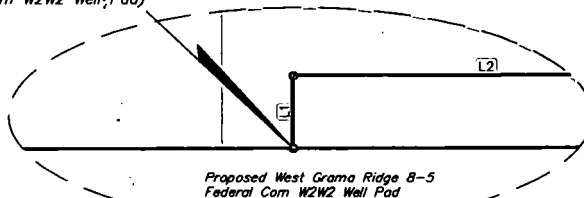


**TYPICAL
RIGHT-OF-WAY
DETAIL**
NO SCALE

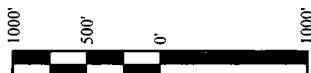
LINE TABLE		
LINE	DIRECTION	LENGTH
L1	N00°14'15"W	30.00'
L2	N89°49'13"E	1057.34'
L3	S00°07'03"E	461.13'
L4	N89°53'17"E	155.00'



**BEGINNING OF
PROPOSED FLOW
LINE RIGHT-OF-WAY**
(At Edge of Proposed West
Grama Ridge 8-5 Federal
Com W2W2 Well Pad)



Detail "A"
No Scale



ACREAGE / LENGTH TABLE				
	OWNERSHIP	FEET	RODS	ACRES
SEC. 8 (SW 1/4 SW 1/4)	STATE	748.57	45.37	1.031
SEC. 8 (SE 1/4 SW 1/4)	STATE	954.90	57.87	1.315
TOTAL		1703.47	103.24	2.346

▲ = SECTION CORNERS LOCATED.

NOTES:

Basis of Bearings is a Transverse Mercator Projection with a Central Meridian of W103°53'00"



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



FILE: 62361-A1

Sheet 1 of 2

CIMAREX ENERGY CO.

**WEST GRAMA RIDGE 8-5 FEDERAL COM W2W2
SECTION 8, T22S, R34E, N.M.P.M.
LEA COUNTY, NEW MEXICO**

SURVEYED BY	S.R., R.D.	10-17-17	SCALE
DRAWN BY	S.F.	10-27-17	1" = 1000'
FLOW LINE & GAS LIFT ROW EXHIBIT M & N			

FLOW LINE RIGHT-OF-WAY DESCRIPTION

A 60' WIDE RIGHT-OF-WAY 30' ON EACH SIDE OF THE FOLLOWING DESCRIBED CENTERLINE.

BEGINNING AT A POINT IN THE SW 1/4 SW 1/4 OF SECTION 8, T22S, R34E, N.M.P.M., WHICH BEARS N42°41'34"E 882.87' FROM THE SOUTHWEST CORNER OF SAID SECTION 8, THENCE N00°14'15"W 30.00'; THENCE N89°49'13"E 1057.34'; THENCE S00°07'03"E 461.13'; THENCE N89°53'17"E 155.00' TO A POINT IN THE SE 1/4 SW 1/4 OF SAID SECTION 8, WHICH BEARS N75°29'38"W 852.07' FROM THE SOUTH 1/4 CORNER OF SAID SECTION 8. 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 TRANSVERSE MERCATOR PROJECTION WITH A CENTRAL MERIDIAN OF W103°53'00". CONTAINS 2.346 ACRES MORE OR LESS.

WEST GRAMA RIDGE 8-5 FEDERAL COM W2W2			
SECTION CORNER	DESCRIPTION	LATITUDE (NAD 83)	LONGITUDE (NAD 83)
NW COR. SEC. 8, T22S, R34E	BRASS CAP WITH 2" IRON PIPE	N 32°24'48.54"	W 103°30'02.02"
N 1/4 COR. SEC. 8, T22S, R34E	BRASS CAP WITH 1" IRON PIPE	N 32°24'48.52"	W 103°29'31.29"
NE COR. SEC. 8, T22S, R34E	BRASS CAP WITH 2" IRON PIPE	N 32°24'48.49"	W 103°29'00.57"
E 1/4 COR. SEC. 8, T22S, R34E	BRASS CAP WITH 1" IRON PIPE	N 32°24'22.37"	W 103°29'00.62"
SE COR. SEC. 8, T22S, R34E	BRASS CAP WITH 2" IRON PIPE	N 32°23'56.25"	W 103°29'00.67"
S 1/4 COR. SEC. 8, T22S, R34E	BRASS CAP WITH 1" IRON PIPE	N 32°23'56.28"	W 103°29'31.39"
SW COR. SEC. 8, T22S, R34E	T-POST	N 32°23'56.30"	W 103°30'02.14"
W 1/4 COR. SEC. 8, T22S, R34E	BRASS CAP WITH 1" IRON PIPE	N 32°24'22.41"	W 103°30'02.08"

WEST GRAMA RIDGE 8-5 FEDERAL COM W2W2 FLOW LINE			
NUMBER	STATION	LATITUDE (NAD 83)	LONGITUDE (NAD 83)
BEGIN	0+00	N 32°24'02.70"	W 103°29'55.13"
1	0+30.00	N 32°24'03.00"	W 103°29'55.13"
2	10+87.34	N 32°24'02.99"	W 103°29'42.80"
3	15+48.47	N 32°23'58.43"	W 103°29'42.81"
END	17+03.47	N 32°23'58.43"	W 103°29'41.00"

BEGINNING OF FLOW LINE BEARS N42°41'34"E 882.87' FROM THE SOUTHWEST CORNER OF SECTION 8, T22S, R34E, N.M.P.M.

END OF FLOW LINE BEARS N75°29'38"W 852.07' FROM THE SOUTH 1/4 CORNER OF SECTION 8, T22S, R34E, N.M.P.M.

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: 62361-A2

Sheet 2 of 2

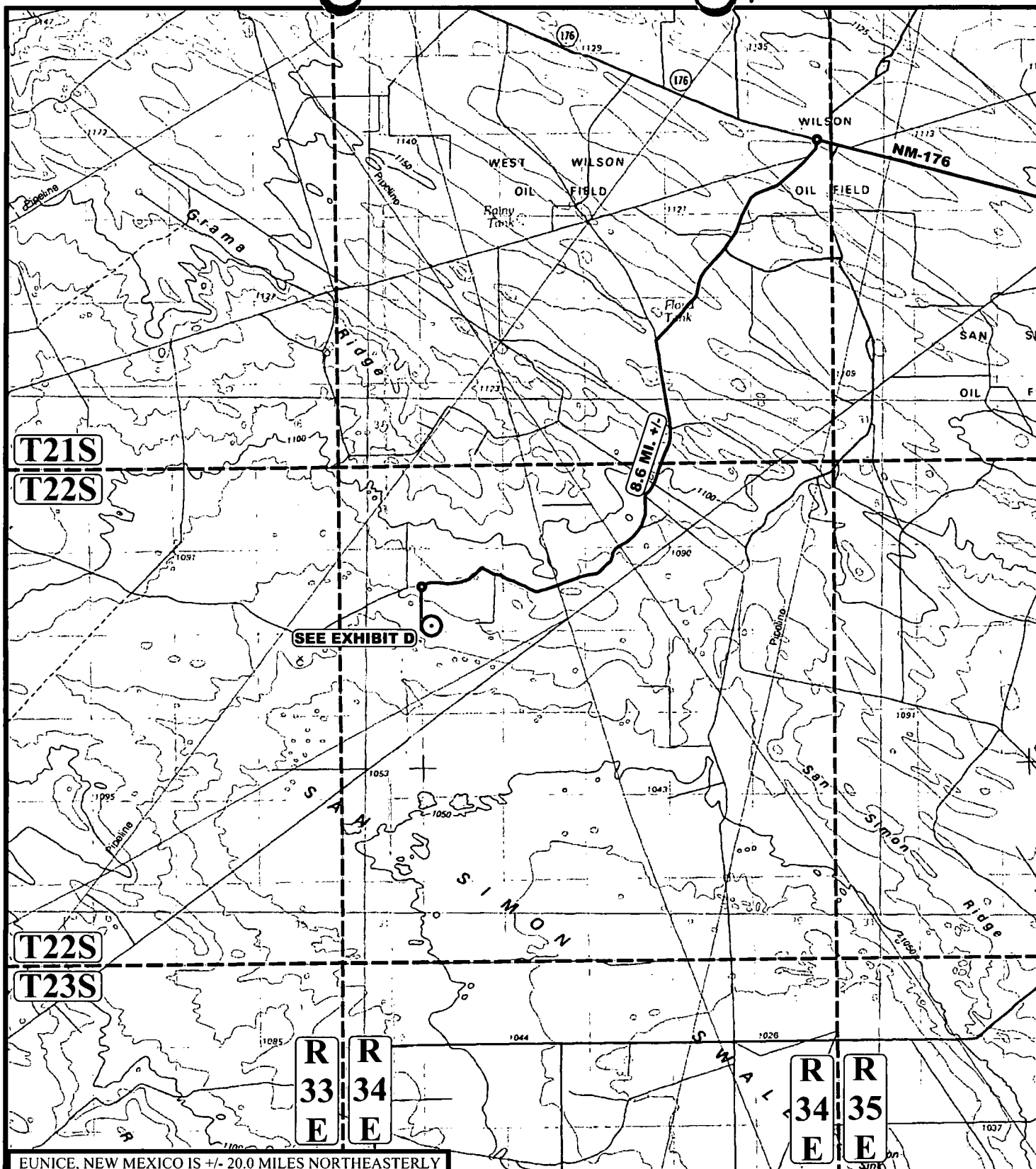
CIMAREX ENERGY CO.

WEST GRAMA RIDGE 8-5 FEDERAL COM W2W2
SECTION 8, T22S, R34E, N.M.P.M.
LEA COUNTY, NEW MEXICO



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

SURVEYED BY	S.R., R.D.	10-17-17	SCALE
DRAWN BY	S.F.	10-27-17	N/A
FLOW LINE & GAS LIFT ROW EXHIBIT M & N			



EUNICE, NEW MEXICO IS +/- 20.0 MILES NORTHEASTERLY

LEGEND:

○ PROPOSED LOCATION



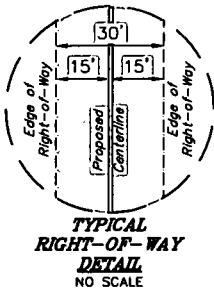
UELS, LLC
Corporate Office * 85 South 200 East
Vernal, UT 84078 * (435) 789-1017



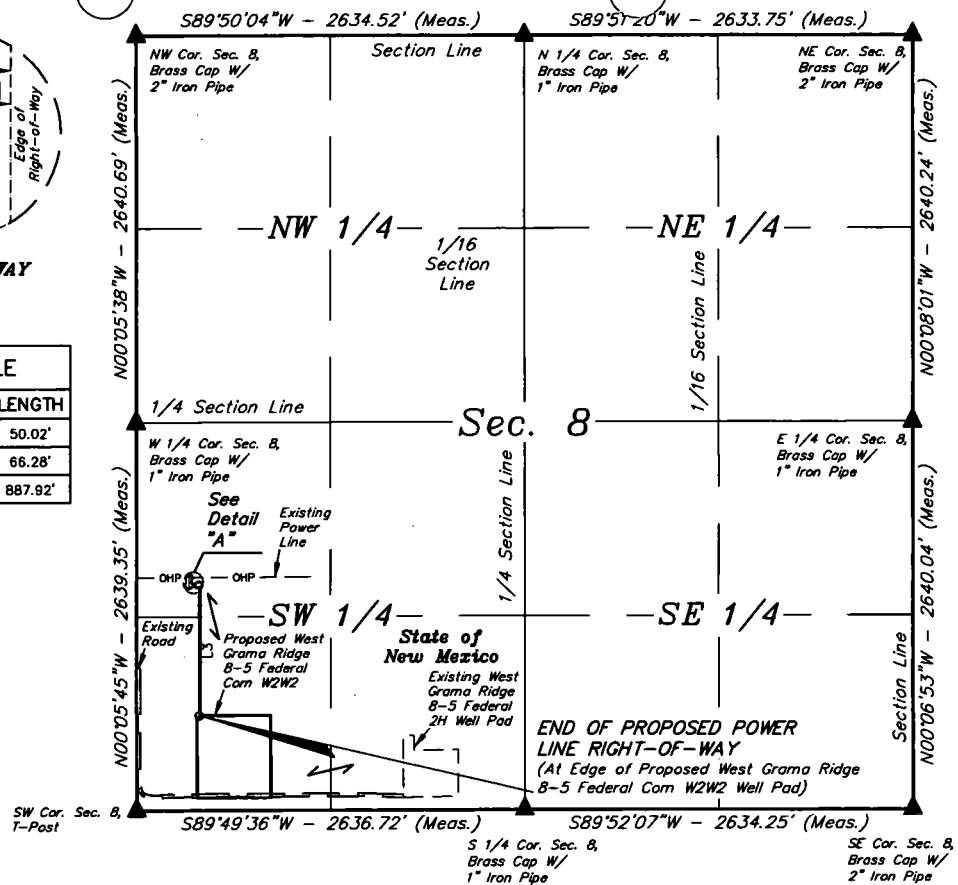
CIMAREX ENERGY CO.

**WEST GRAMA RIDGE 8-5 FEDERAL COM W2W2
SW 1/4 SW 1/4, SECTION 8, T22S, R34E, N.M.P.M.
LEA COUNTY, NEW MEXICO**

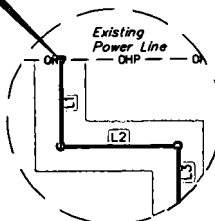
SURVEYED BY	S.R., R.D.	10-17-17	SCALE
DRAWN BY	R.T.	10-24-17	1:100,000
PUBLIC ACCESS ROAD MAP EXHIBIT B			



LINE TABLE		
LINE	DIRECTION	LENGTH
L1	S00°23'56"E	50.02'
L2	N89°35'48"E	66.28'
L3	S00°12'24"E	887.92'



BEGINNING OF PROPOSED
POWER LINE RIGHT-OF-WAY
(At Existing Power Line)



ACREAGE / LENGTH TABLE			
	OWNERSHIP	FEET	RODS
SEC. 8 (NW 1/4 SW 1/4)	STATE	331.58	20.10
SEC. 8 (SW 1/4 SW 1/4)	STATE	672.64	40.77
TOTAL		1004.22	60.86

▲ = SECTION CORNERS LOCATED.

NOTES:

Basis of Bearings is a Transverse Mercator Projection with a Central Meridian of W103°53'00"



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



FILE: 62362-A1

CIMAREX ENERGY CO.

WEST GRAMA RIDGE 8-5 FEDERAL CORN W2W2
SECTION 8, T22S, R34E, N.M.P.M.
LEA COUNTY, NEW MEXICO

SURVEYED BY	S.R., R.D.	10-17-17	SCALE
DRAWN BY	S.F.	10-27-17	1" = 1000'
POWER LINE R-O-W		EXHIBIT I	

CERTIFICATE
THIS IS TO CERTIFY THAT THIS EASEMENT PLAT AND THE ACTUAL SURVEY ON THE GROUND UPON WHICH IT IS BASED WERE PERFORMED BY 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.



Sheet 1 of 2

POWER LINE RIGHT-OF-WAY DESCRIPTION

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

BEGINNING AT A POINT IN THE NW 1/4 SW 1/4 OF SECTION 8, T22S, R34E, N.M.P.M., WHICH BEARS S18°46'27"E 1112.82' FROM THE WEST 1/4 CORNER OF SAID SECTION 8, THENCE S00°23'56"E 50.02'; THENCE N89°35'48"E 66.28'; THENCE S00°12'24"E 887.92' TO A POINT IN THE SW 1/4 SW 1/4 OF SAID SECTION 8, WHICH BEARS N33°09'36"E 774.37' FROM THE SOUTHWEST CORNER OF SAID SECTION 8. 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 TRANSVERSE MERCATOR PROJECTION WITH A CENTRAL MERIDIAN OF W103°53'00". CONTAINS 0.692 ACRES MORE OR LESS.

WEST GRAMA RIDGE 8-5 FEDERAL COM W2W2			
SECTION CORNER	DESCRIPTION	LATITUDE (NAD 83)	LONGITUDE (NAD 83)
NW COR. SEC. 8, T22S, R34E	BRASS CAP WITH 2" IRON PIPE	N 32°24'48.54"	W 103°30'02.02"
N 1/4 COR. SEC. 8, T22S, R34E	BRASS CAP WITH 1" IRON PIPE	N 32°24'48.49"	W 103°29'00.57"
NE COR. SEC. 8, T22S, R34E	BRASS CAP WITH 2" IRON PIPE	N 32°24'22.37"	W 103°29'00.62"
E 1/4 COR. SEC. 8, T22S, R34E	BRASS CAP WITH 1" IRON PIPE	N 32°23'56.25"	W 103°29'00.67"
SE COR. SEC. 8, T22S, R34E	BRASS CAP WITH 2" IRON PIPE	N 32°23'56.28"	W 103°29'31.39"
S 1/4 COR. SEC. 8, T22S, R34E	BRASS CAP WITH 1" IRON PIPE	N 32°23'56.30"	W 103°30'02.14"
SW COR. SEC. 8, T22S, R34E	T-POST	N 32°24'22.41"	W 103°30'02.08"
W 1/4 COR. SEC. 8, T22S, R34E	BRASS CAP WITH 1" IRON PIPE	N 32°24'48.52"	W 103°29'31.29"

WEST GRAMA RIDGE 8-5 FEDERAL COM W2W2 POWER LINE			
NUMBER	STATION	LATITUDE (NAD 83)	LONGITUDE (NAD 83)
BEGIN	0+00	N 32°24'11.98"	W 103°29'57.95"
1	0+50.02	N 32°24'11.48"	W 103°29'57.94"
2	1+16.31	N 32°24'11.48"	W 103°29'57.17"
END	10+04.22	N 32°24'02.70"	W 103°29'57.17"

BEGINNING OF POWER LINE BEARS
S18°46'27"E 1112.82' FROM THE WEST 1/4
CORNER OF SECTION 8, T22S, R34E, N.M.P.M.

END OF POWER LINE BEARS N33°09'36"E
774.37' FROM THE SOUTHWEST CORNER OF
SECTION 8, T22S, R34E, N.M.P.M.

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, EQUALLY CORRECT TO THE
BEST OF MY KNOWLEDGE AND BELIEF.



FILE: 62362-A2

Sheet 2 of 2

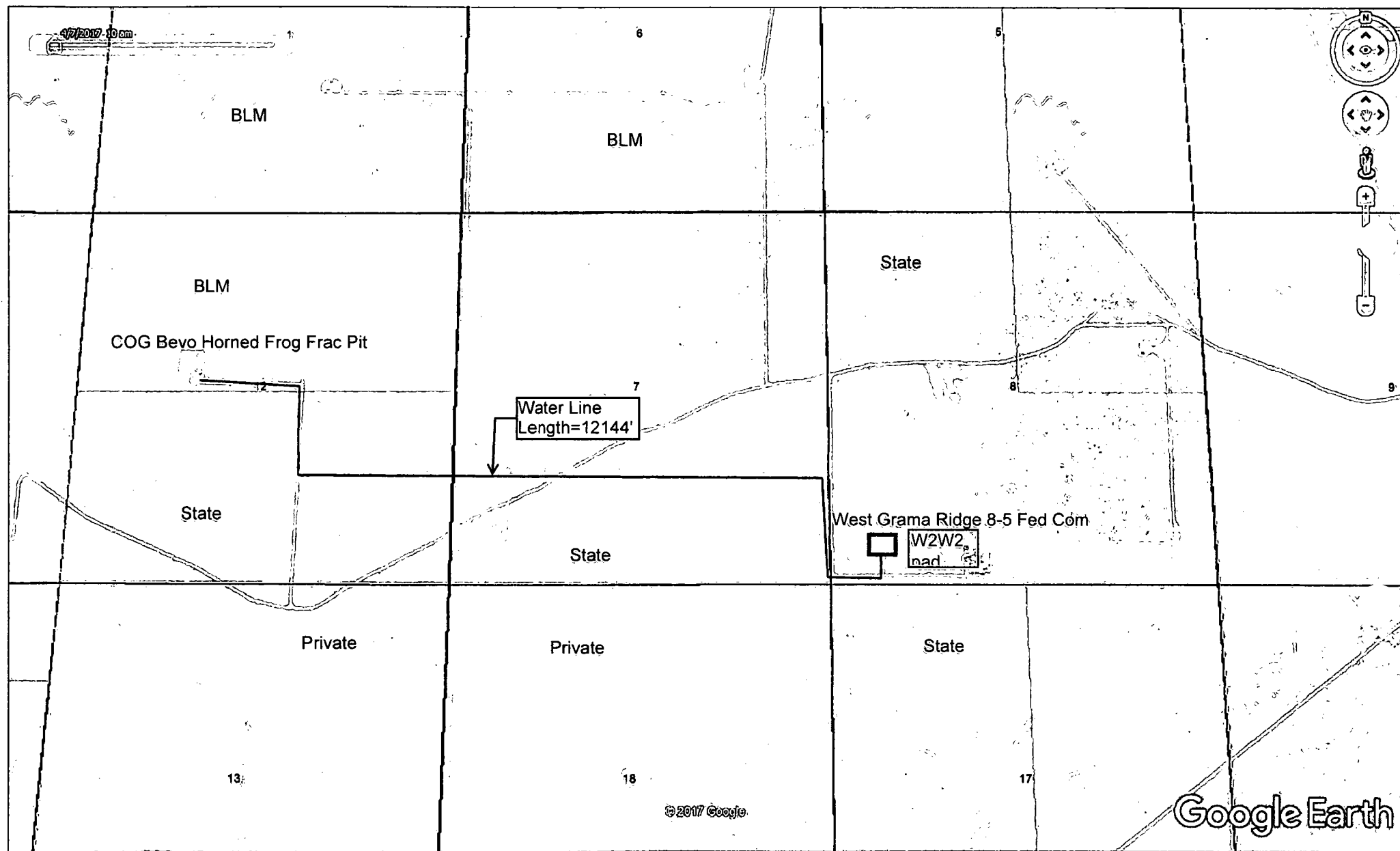
CIMAREX ENERGY CO.

WEST GRAMA RIDGE 8-5 FEDERAL COM W2W2
SECTION 8, T22S, R34E, N.M.P.M.
LEA COUNTY, NEW MEXICO



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

SURVEYED BY	S.R., R.D.	10-17-17	SCALE
DRAWN BY	S.F.	10-27-17	N/A
POWER LINE R-O-W		EXHIBIT I	



— 10" Layflat Water Line



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

PWD Data Report

05/07/2018

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:

BEGINNING AT THE INTERSECTION OF NM-176 AND AN EXISTING ROAD TO THE SOUTH (LOCATED AT NAD 83 LATITUDE 32.4845° AND LONGITUDE W 103.4177°) PROCEED IN A SOUTHERLY, THEN SOUTHWESTERLY, THEN SOUTHEASTERLY, THEN SOUTHWESTERLY, THEN NORTHWESTERLY, THEN WESTERLY, THEN SOUTHERLY DIRECTION APPROXIMATELY 8.6 MILES TO THE JUNCTION OF THIS ROAD AND AN EXISTING ROAD TO THE SOUTH; TURN LEFT AND PROCEED IN A SOUTHERLY THEN EASTERLY DIRECTION APPROXIMATELY 0.6 MILES TO THE PROPOSED LOCATION.

TOTAL DISTANCE FROM THE INTERSECTION OF NM-176 AND AN EXISTING ROAD TO THE SOUTH (LOCATED AT NAD 83 LATITUDE 32.4845° AND LONGITUDE W 103.4177°) TO THE PROPOSED WELL LOCATION IS APPROXIMATELY 9.2 MILES.

CIMAREX ENERGY CO.

**WEST GRAMA RIDGE 8-5 FEDERAL COM W2W2
SW 1/4 SW 1/4, SECTION 8, T22S, R34E, N.M.P.M.
LEA COUNTY, NEW MEXICO**

SURVEYED BY	S.R., R.D.	10-17-17	
DRAWN BY	R.T.	10-24-17	
ROAD DESCRIPTION			EXHIBIT A



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

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

05/07/2018

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:

Operator Name: CIMAREX ENERGY COMPANY

Well Name: WEST GRAMA RIDGE 8-5 FED COM

Well Number: 5H

	NS-Foot	NS Indicator	EW-Foot	EW Indicator	Twsp	Range	Section	Aliquot/Lot/Tract	Latitude	Longitude	County	State	Meridian	Lease Type	Lease Number	Elevation	MD	TVD
PPP Leg #1	823	FSL	660	FWL	22S	34E	5	Aliquot SWS W	32.39921 94	- 103.4984 528	LEA	NEW MEXI CO	FIRS T PRIN	S	STATE	- 771 7	112 60	112 40
EXIT Leg #1	330	FNL	660	FWL	22S	34E	5	Lot 4	32.42713 6	- 103.4983 9	LEA	NEW MEXI CO	NEW MEXI CO	F	NMNM 129267	- 801 7	215 42	115 40
BHL Leg #1	330	FNL	660	FWL	22S	34E	5	Lot 4	32.42713 6	- 103.4983 9	LEA	NEW MEXI CO	NEW MEXI CO	F	NMNM 129267	- 801 7	215 42	115 40



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

Operator Certification Data Report

05/07/2018

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: 12/21/2017

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: