OCD-HOBBS

ATS-07-533
EH-07-1337

SECRETARY'S POTASH

Form 3160-3
(April 2004)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

NORTHODOX LOCATION

FORM APPROVED
OMB No 1004-0137
Expires March 31, 2007

APPLICATION FOR PERMIT TO DRILL OR REENTER

1a Type of Work [X] DRILL [ ] REENTER	5 Lease Serial No NM-24165
	6 If Indian, Allotee or Tribe Name
	7 If Unit or CA Agreement, Name and No
1b Type of Well [X] Oil Well [ ] Gas Well [ ] Other [X] Single Zone [ ] Multiple Zone	8 Lease Name and Well No. <36918> Mescalero B 29 Federal No. 1
2 Name of Operator Cimarex Energy Co. of Colorado Capitan Controlled Water Basin <162683>	9 API Well No 30-025- 38677
3a Address PO Box 140907 Irving, TX 75014 3b Phone No *(include area code)* 972-401-3111	10 Field and Pool, or Exploratory Quail Ridge; Bone Spring, South
4 Location of Well *(Report location clearly and in accordance with any State requirements *)* At Surface ~~1140' FSL & 810' FWL~~ 330'FSL & 660'FWL At proposed prod Zone ~~1140' FSL & 810' FWL~~ C.L. 10/15/07	11 Sec , T. R. M or Blk. and Survey or Area Unit M 29-19S-34E
14 Distance in miles and direction from nearest town or post office* 32 miles West of Hobbs, NM	12 County or Parish Lea 13. State NM

15 Distance from proposed* location to nearest property or lease line, ft (Also to nearest drig unit line if any)	16 No of acres in lease	17 Spacing Unit dedicated to this well
810'	40	SWSW 40
18 Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft	19 Proposed Depth	20 BLM/BIA Bond No on File
N/A	10,400'	NM-2575
21 Elevations (Show whether DF, KDB, RT, GL, etc.)	22 Approximate date work will start*	23 Estimated duration
3664' GR	11/1/2007	20-25 days

24 Attachments

The following, completed in accordance with the requirements of Onshore Oil and Gas Order No 1, shall 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 shall 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 authorized officer.

25 Signature	Name *(Printed/Typed)*	Date
Zeno Farris	Zeno Farris	09.11.07

Title
Manager Operations Administration

Approved By *(Signature)*	Name (Printed/Typed)	Date
/s/ Linda S.C. Rundell	/s/ Linda S.C. Rundell	DEC 19 2007
Title STATE DIRECTOR	Office NM STATE OFFICE	

Application approval does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon
Conditions of approval, if any, are attached

APPROVAL FOR TWO YEARS

RECEIVED

Title 18 U S S 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

* *(Instructions on page 2)*

SEE ATTACHED FOR CONDITIONS OF APPROVAL

JAN - 3 2008

HOBBS OCD

APPROVAL SUBJECT TO GENERAL REQUIREMENTS AND SPECIAL STIPULATIONS ATTACHED

Form 3160-5
(November 1994)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

OCD-HOBBS

FORM APPROVED
OMB No. 1004-0135
Expires July 31, 1996

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill or to re-enter an abandoned well. Use form 3160-3 (APD) for such proposals.

SUBMIT IN TRIPLICATE - Other instructions on reverse side

5. Lease Serial No.
NM-24165

6. If Indian, Allottee or Tribe Name

7. If Unit or CA/Agreement, Name and/or No.

1. Type of Well
[X] Oil Well [ ] Gas Well [ ] Other

8. Well Name and No.
Mescalero B 29 Federal No. 1

2. Name of Operator
Cimarex Energy Co. of Colorado

9. API Well No.
30-025-

3a Address
PO Box 140907; Irving, TX 75014-0907

3b. Phone No. *(include area code)*
972-401-3111

10. Field and Pool, or Exploratory Area
Quail Ridge; Bone Spring, South

4. Location of Well *(Footage, Sec., T., R., M., or Survey Description)*
1140' FSL & 810' FWL
29-19S-34E

11. County or Parish, State
Lea County, NM

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

TYPE OF SUBMISSION	TYPE OF ACTION			
[X] Notice of Intent	[ ] Acidize	[ ] Deepen	[ ] Production (Start/Resume)	[ ] Water Shut-Off
	[X] Alter Casing	[ ] Fracture Treat	[ ] Reclamation	[ ] Well Integrity
[ ] Subsequent Report	[ ] Casing Repair	[ ] New Construction	[ ] Recomplete	[ ] Other
	[ ] Change Plans	[ ] Plug and Abandon	[ ] Temporarily Abandon	
[ ] Final Abandonment Notice	[ ] Convert to Injection	[ ] Plug Back	[ ] Water Disposal	

13. Describe Proposed or Completed Operation (clearly state all pertinent details, included estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recomplete horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports shall be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompletion in a new interval, a Form 3160-4 shall be filed once testing has been completed. Final Abandonment Notices shall be filed only after all requirements, including reclamation, have been completed, and the operator has determined that the site is ready for final inspection.)

Per Cody Layton's permission, Cimarex is moving the location of this well **FROM** 1140' FSL & 810' FWL **TO** 330' FSL & ~~810'~~ 660' FWL. Please see attached revised plats.

14. I hereby certify that the foregoing is true and correct

Name *(Printed/Typed)*	Title
Natalie Krueger	Reg Analyst 1
Signature: Natalie Krueger	Date: October 11, 2007

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved by /s/ Linda S.C. Rundell	Title STATE DIRECTOR	Date DEC 19 2007
Conditions of Approval, if any, are attached. Approval of this notice 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.	Office NM STATE OFFICE	

Title 18 U.S.C. Section 1001, makes it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

(Instructions on reverse)

DISTRICT I
1625 N. French Dr., Hobbs, NM 88240
DISTRICT II
1301 W. Grand Avenue, Artesia, NM 88210
DISTRICT III
1000 Rio Brazos Rd., Aztec, NM 87410
DISTRICT IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy, Minerals and Natural Resources Department

OIL CONSERVATION DIVISION

1220 South St. Francis Dr.
Santa Fe, New Mexico 87505

Form C-102
Revised October 12, 2005

Submit to Appropriate District Office
State Lease - 4 Copies
Fee Lease - 3 Copies

☒ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number	Pool Code	Pool Name
30-025-38677	50461 ✓	Quail Ridge; Bone Spring, South

Property Code	Property Name	Well Number
36918	MESCALERO "B-29" FEDERAL	1

OGRID No.	Operator Name	Elevation
162683	CIMAREX ENERGY CO. OF COLORADO	3659'

Surface Location

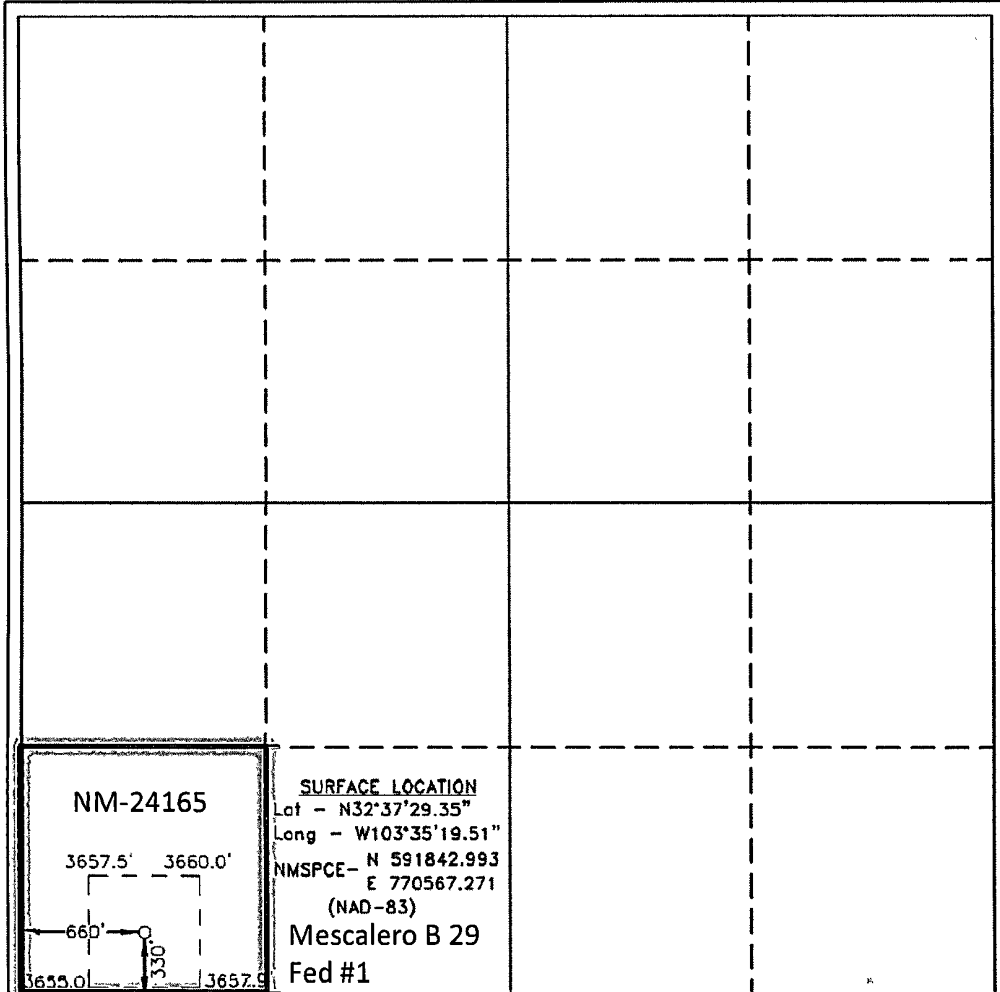
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
M	29	19 S	34 E		330	SOUTH	660	WEST	LEA

Bottom Hole Location If Different From Surface

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County

Dedicated Acres	Joint or Infill	Consolidation Code	Order No.
40 ✓			

NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION



OPERATOR CERTIFICATION

I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location pursuant to a contract with an owner of such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.

Natalie Krueger 10-11-07
Signature Date

Natalie Krueger
Printed Name

SURVEYOR CERTIFICATION

I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervison and that the same is true and correct to the best of my belief.

OCTOBER 10, 2007
Date Surveyed

Signature & Seal of Professional Surveyor

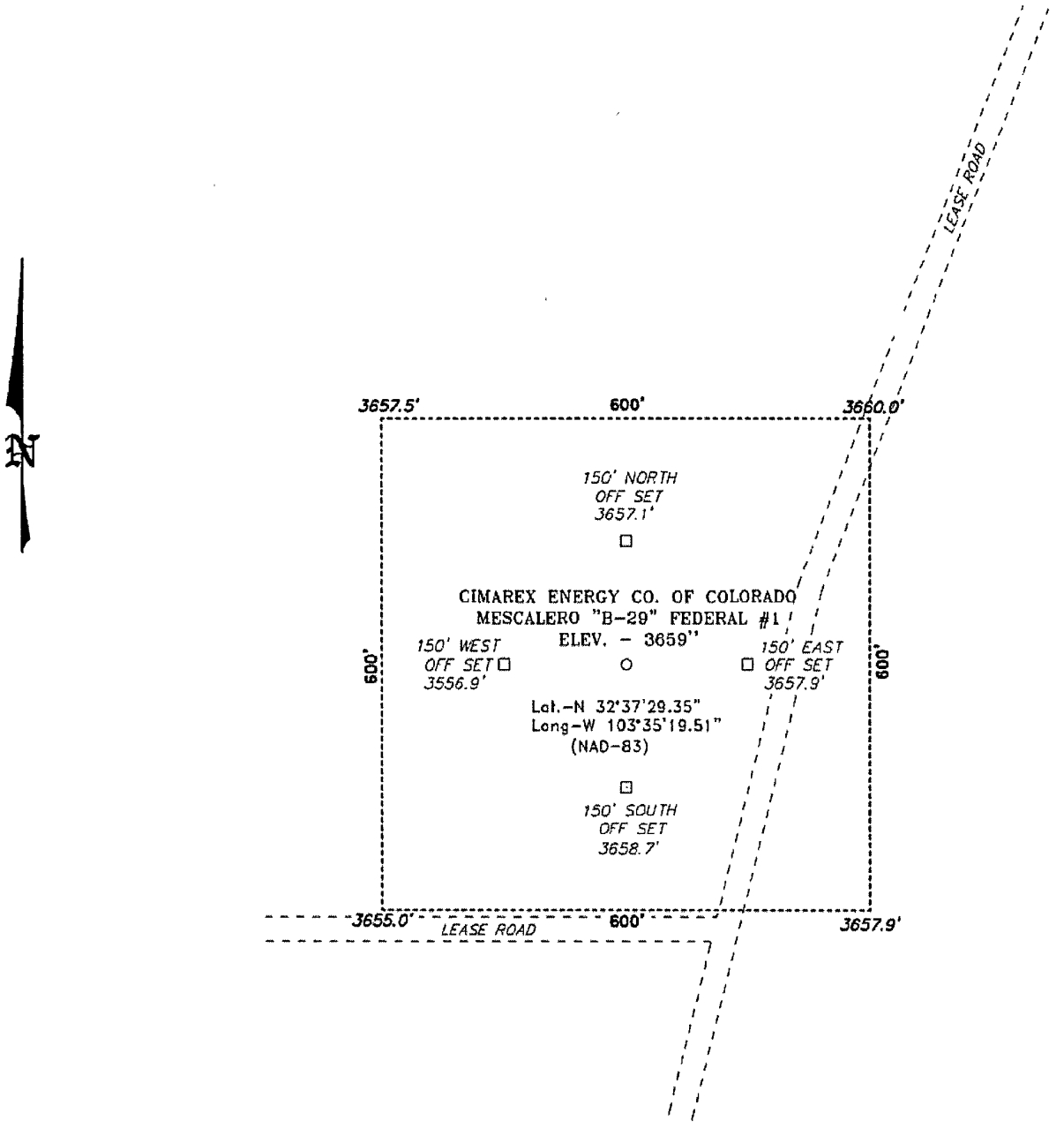
GARY L. JONES NEW MEXICO 7977 REGISTERED PROFESSIONAL SURVEYOR

W.O. No. 18660

Certificate No. Gary L. Jones 7977

BASIN SURVEYS

SECTION 29, TOWNSHIP 19 SOUTH, RANGE 34 EAST, N.M.P.M.,
LEA COUNTY, NEW MEXICO.



200 0 200 400 FEET

SCALE: 1" = 200'

Directions to Location:

FROM JUNCTION OF US HWY 62-180 AND CO. RD. 55 (SMITH RANCH), GO NORTHWEST 2.0 MILES TO LEASE ROAD, ON LEASE ROAD GO EAST 2.1 MILES TO LEASE ROAD, ON LEASE ROAD GO 0.3 MILES SOUTHEAST THENCE 0.8 MILES SOUTH TO THE 29 #1 LOCATION THENCE CONTINUE SOUTH 0.2 MILES TO PROPOSED LOCATION.

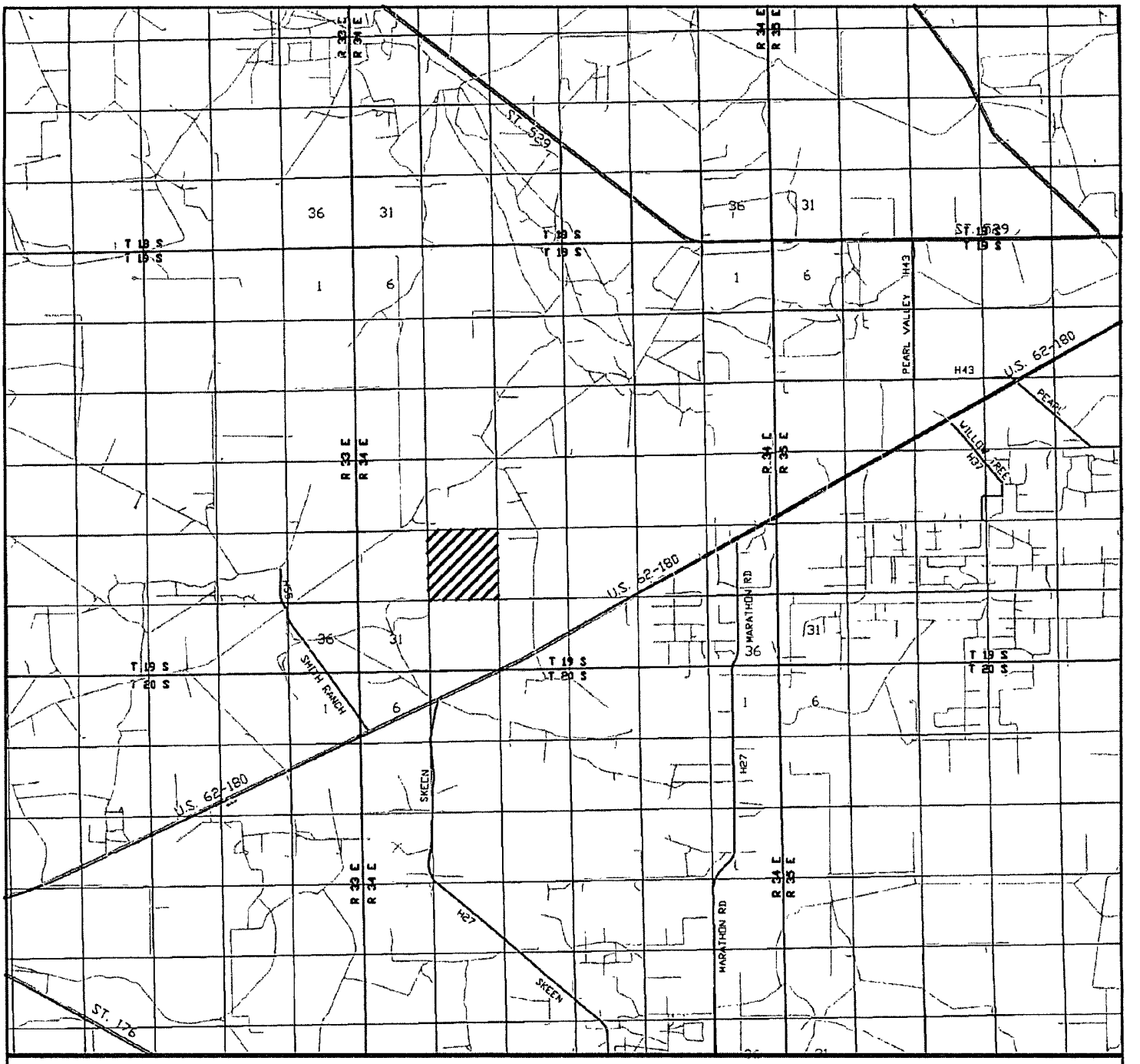
BASIN SURVEYS P.O. BOX 1786 -HOBBS, NEW MEXICO

CIMAREX ENERGY CO. OF COLORADO

REF: MESCALERO "B-29" FEDERAL #1 / WELL PAD TOPO

THE MESCALERO "B-29" FEDERAL #1 LOCATED 330' FROM THE SOUTH LINE AND 660' FROM THE WEST LINE OF SECTION 29, TOWNSHIP 19 SOUTH, RANGE 34 EAST, N.M.P.M., LEA COUNTY, NEW MEXICO.

W.O. Number: 18683	Drawn By: J. SMALL		
Date: 10-10-2007	Disk: JMS 18683W	Survey Date: 10-09-2007	Sheet 1 of 1 Sheets



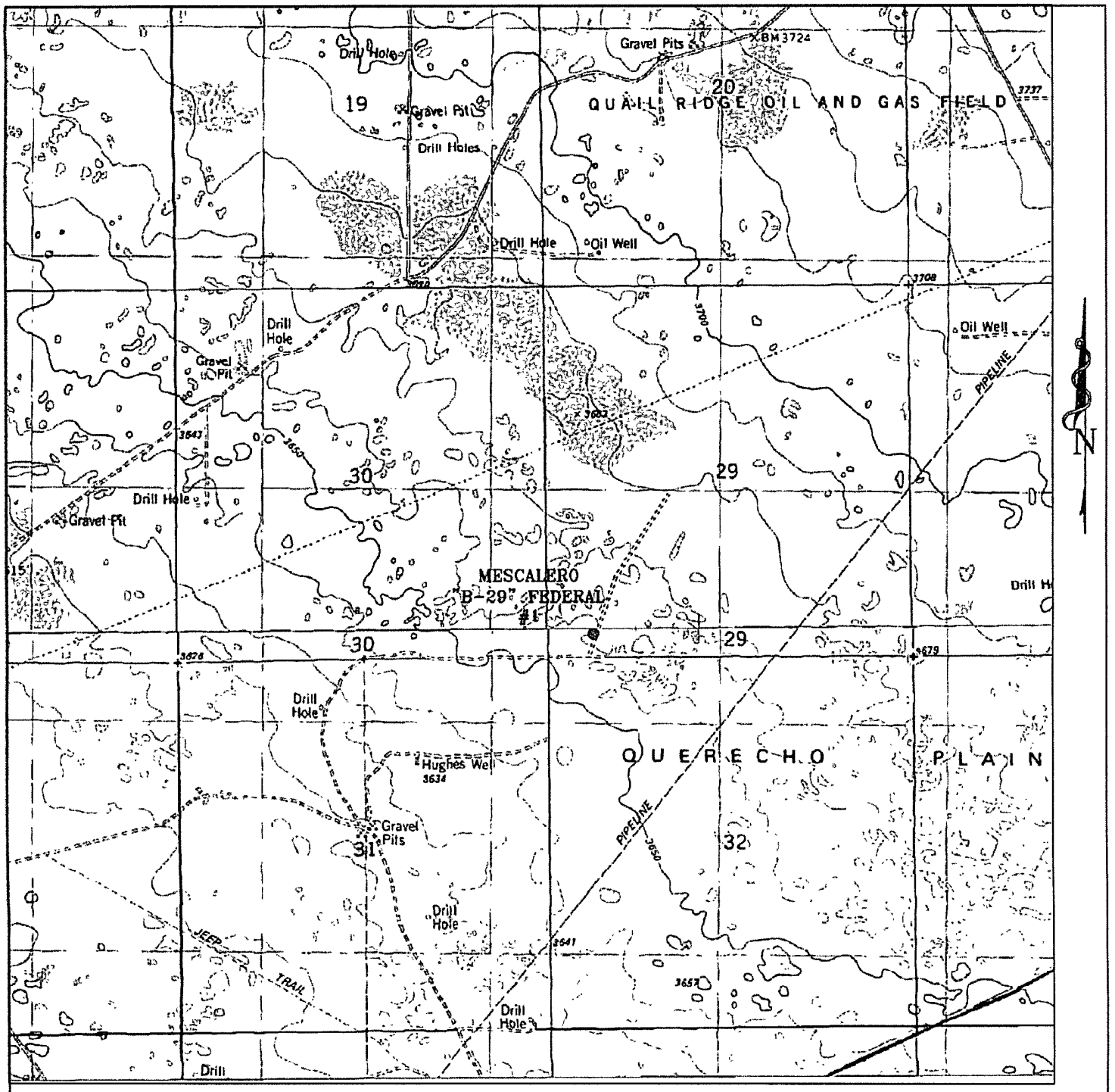
MESCALERO "B-29" FEDERAL #1
Located 330' FSL and 660' FWL
Section 29, Township 19 South, Range 34 East,
N.M.P.M., Lea County, New Mexico.

basin surveys
focused on excellence in the oilfield
P.O. Box 1786
1120 N. West County Rd.
Hobbs, New Mexico 88241
(505) 393-7316 - Office
(505) 392-3074 - Fax
basinsurveys.com

W.O. Number:	JMS 18683TR
Survey Date:	10-09-2007
Scale:	1" = 2 MILES
Date:	10-10-2007

CIMAREX ENERGY CO. OF COLORADO

Exhibit B



MESCALERO "B-29" FEDERAL #1
Located 330' FSL and 660' FWL
Section 29, Township 19 South, Range 34 East,
N.M.P.M., Lea County, New Mexico.

basin surveys
focused on excellence in the oilfield

P.O. Box 1786
1120 N. West County Rd.
Hobbs, New Mexico 88241
(505) 393-7316 - Office
(505) 392-3074 - Fax
basinsurveys.com

W.O. Number:	JMS 18683T
Survey Date:	10-09-2007
Scale:	1" = 2000'
Date:	10-10-2007

CIMAREX ENERGY CO. OF COLORADO

Exhibit C

Application to Drill
Cimarex Energy Co. of Colorado
Mescalero B 29 Federal No. 1
Unit M Section 29
T19S R34E Lea County, NM

In response to questions asked under Section II B of Bulletin NTL-6, the following information is provided for your consideration:

1 Location: SHL ~~1140'~~ 330' FSL & ~~810'~~ 660' FWL

2 Elevation above sea level: 3664' GR

3 Geologic name of surface formation: Quaternery Alluvium Deposits

4 Drilling tools and associated equipment: Conventional rotary drilling rig using fluid as a circulating medium for solids removal.

5 Proposed drilling depth: 10,400'

6 Estimated tops of geological markers:

Yates	3,320'
Capitan Reef	4,170'
Delaware	5,400'
Bone Spring	8,250'
FBSS	9,325'
SBSS	9,830'
TBSC	10,280'

7 Possible mineral bearing formation:
Bone Spring Oil Primary

8 Proposed Mud Circulating System:

Depth	Mud Wt	Visc	Fluid Loss	Type Mud
0' to ~~450'~~	8.4 - 8.6	30-32	May lose circ	Fresh water gel spud mud
~~450'~~ to 5,380'	8.4 - 8.6	28-29	May lose circ	Fresh water mud
5,380' to 10,400'	8.4 - 9.7	28-29	NC	Fresh water and brine, use hi-vis sweeps to keep hole clean

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. Mud system monitoring equipment with derrick floor indicators and visual/audio alarms shall be installed and operative prior to drilling into the Wolfcamp formation. This equipment will remain in use until production casing is run and cemented.

Application to Drill
Cimarex Energy Co. of Colorado
Mescalero B 29 Federal No. 1
Unit M Section 29
T19S R34E Lea County, NM

9 Casing & Cementing Program: See COA

Hole Size	Depth			Casing OD		Weight	Thread	Collar	Grade
17-1/2	0	to	~~450'~~	New	13-3/8	48#	8-R	STC	H-40
11	0	to	5,380'	New	8-5/8	32#	8-R	LTC	~~J-55~~ HCK-55 per cper. 11-21-07
7-7/8	0	to	10,400'	New	5-1/2	17#	8-R	LTC	N-80

10 Cementing & Setting Depth: See COA

13-3/8 **Surface** Set ~~450'~~ of 13-3/8 48# H-40 STC
Lead: 350 sx (120 bbl) 50/50 POZ-C + 6% D-20 + 3% S-1 + 5# D-24 + 0.125# D-130 (wt 12.6, yld 1.93)
Tail: 200 sx (47.4 bbl) Class C + 2% S-1 + 0.125# D-130 (wt 14.8, yld 1.33)

TOC Surface

8-5/8 **Intermediate** Set 5,380' of 8-5/8 32# J-55 LTC
Lead: 762 sx (336 bbl) 50/50 POZ-C + 5% D-44 (BWOW) + 10% D-20 + 5# D-24 + 0.125# D-130 + 0.2% D-46 (wt 11.9, yld 2.47)
Tail: 200 sx (47.4 bbl) Class C + 2% S-1 (wt 14.8, yld 1.34)

TOC Surface

5-1/2 **Production** Set 10,400' of 5-1/2 17# N-80 LTC
First Stage
Lead: 403 sx (179 bbl) 50/50 POZ-H + 10% D-20 + 0.125# D-130 + 2% D-167 + 2% D-65 + 2% D-13 + 5% D-44 (BWOW) + 2% D-46 (wt 11.9, yld 2.5)
Tail: 232 sx (58 bbl) PVL + 1.33% D-44 (BWOW) + .% D-167 + 2% D-65 + 3% D-13 (wt 13, yld 1.41) DV tool @ 6560'
Second Stage
Lead: 490 sx (218 bbl) 50/50 POZ-H + 10% D-20 + 0.125# D-130 + 0.2% D-167 + 0.2% D-65 + 0.2% D-13 + 5% D-44 (BWOW) + 0.2% D-46 (wt 11.9, yld 2.5)
Tail: 100 sx (21 bbl) Class H + 0.1% D-65 + 0.1% D-167 + 0.1% D-13 (wt 15.6, yld 1.18)

TOC 5,180' ← see COA

Fresh water will be protected by setting 13-3/8 casing at 450' and cementing to Surface
Hydrocarbon zones will be protected by setting 8-5/8 casing at 5,380' and cementing to Surface
and by setting 5-1/2 casing at 10,400' and cementing to 5,180

Cimarex uses the following minimum safety factors:

Burst	Collapse	Tension
1.125	1.0	1.80

Application to Drill
Cimarex Energy Co. of Colorado
Mescalero B 29 Federal No. 1
Unit M Section 29
T19S R34E Lea County, NM

11 Pressure control Equipment:

Exhibit "E-1" - Surface Casing - A 13 5/8" 3000 PSI working pressure B.O.P. consisting of a 3000# annular type preventer. A choke manifold and 120 gallon accumulator with floor and remote operating stations and auxiliary power system. A kelly cock 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. Annular preventor to be function-tested once per day. Annular preventor will be tested to 250 psi low and 2000 psi high.

Exhibit "E-2" - Intermediate & Production Casing - A 11" 5000 PSI working pressure B.O.P. consisting of one set of blind rams and one set of pipe rams and a 5000# hydril. A choke manifold and 120 gallon accumulator with floor and remote operating stations and auxiliary power system. Rotating head below 6000'. A kelly cock 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.

BOP unit will be hydraulically operated. Below intermediate casing shoe, BOP will be operated at least once a day while drilling and the blind rams will be operated when out of hole during trips. No abnormal pressure or temperature is expected while drilling. From the base of the surface pipe through the running of production casing, the well will be equipped with a 5000 psi BOP system.

The BOPs will be tested by an independent service company. Ram type BOPs to 250 psi low and 5000 psi high. Annular BOP 250 psi low and 3000 psi high.

12 Testing, Logging and Coring Program:

A. Mud logging program: 1 man unit from 5380' to TD
B. Electric logging program: CNL / LDT / CAL / GR, DLL / CAL / GR
C. No DSTs are planned at this time.

13 Potential Hazards:

No abnormal pressures or temperatures are expected. The area has a potiential H2S hazard.

Estimated BHP ~~2000 psi~~ 4000 Estimated BHT ~~135~~ 175

14 Road and location construction will begin after BLM approval of APD. Anticipated spud date as soon as approved.
Drilling expected to take 20-25 days
If production casing is run an additional 30 days will be required to complete and construct surface facilities.

15 Other Facets of Operations:

After running casing, cased hole gamma ray neutron collar logs will be run from total depth over possible pay intervals.
Bone Spring pay will be perforated and stimulated.
The proposed well will be tested and potentialed as **an oil well**

SR & A

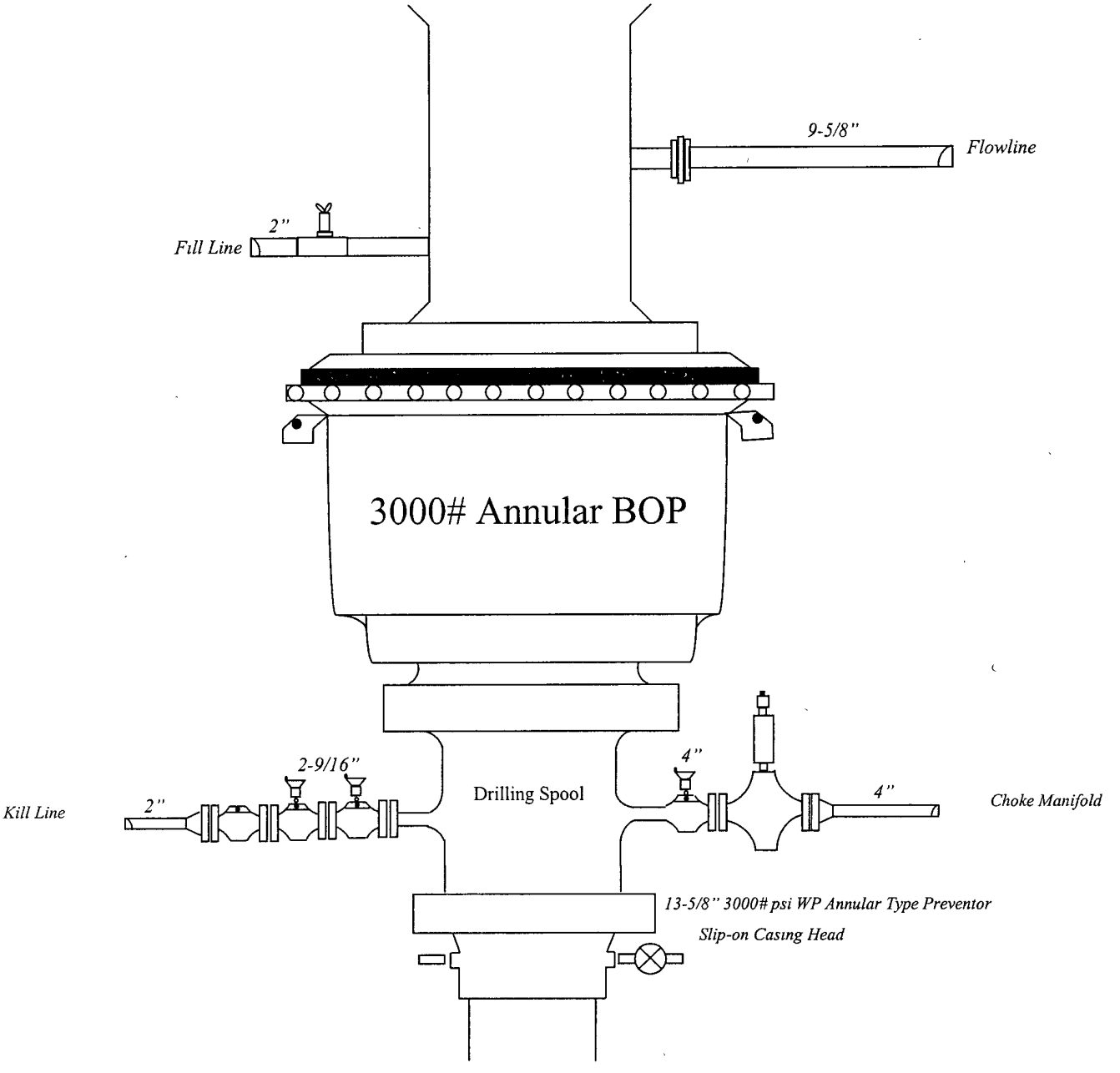


Exhibit E-1 – Surface Casing BOP
Mescalero B 29 Federal No. 1
Cimarex Energy Co. of Colorado
330' 29-19S-34E
~~1140'~~ FSL & ~~810'~~ 660' FWL
Lea County, NM

SR & A

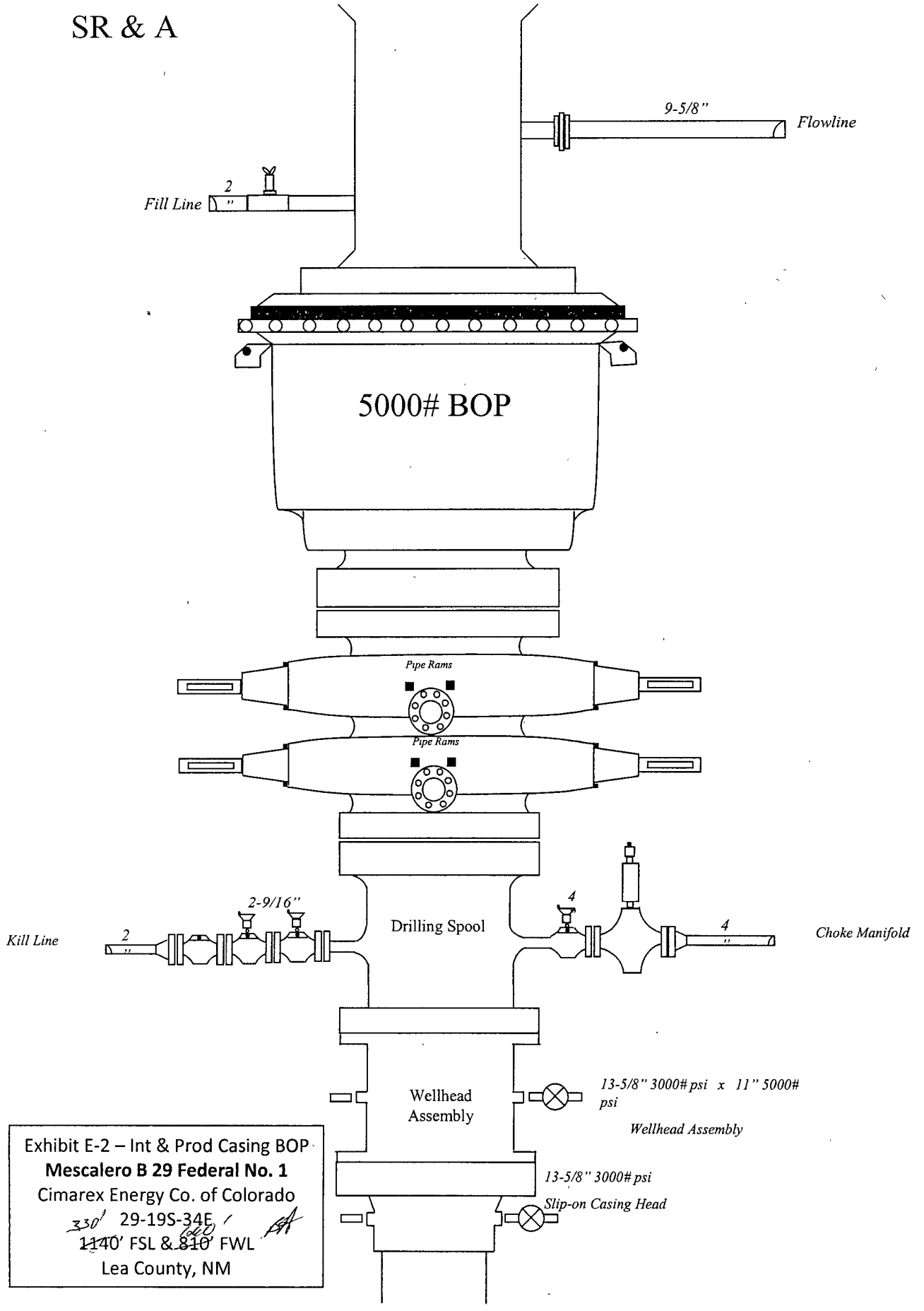


Exhibit E-2 – Int & Prod Casing BOP
Mescalero B 29 Federal No. 1
Cimarex Energy Co. of Colorado
330' 29-19S-34E
~~1140~~' FSL & ~~810~~ 660' FWL
Lea County, NM

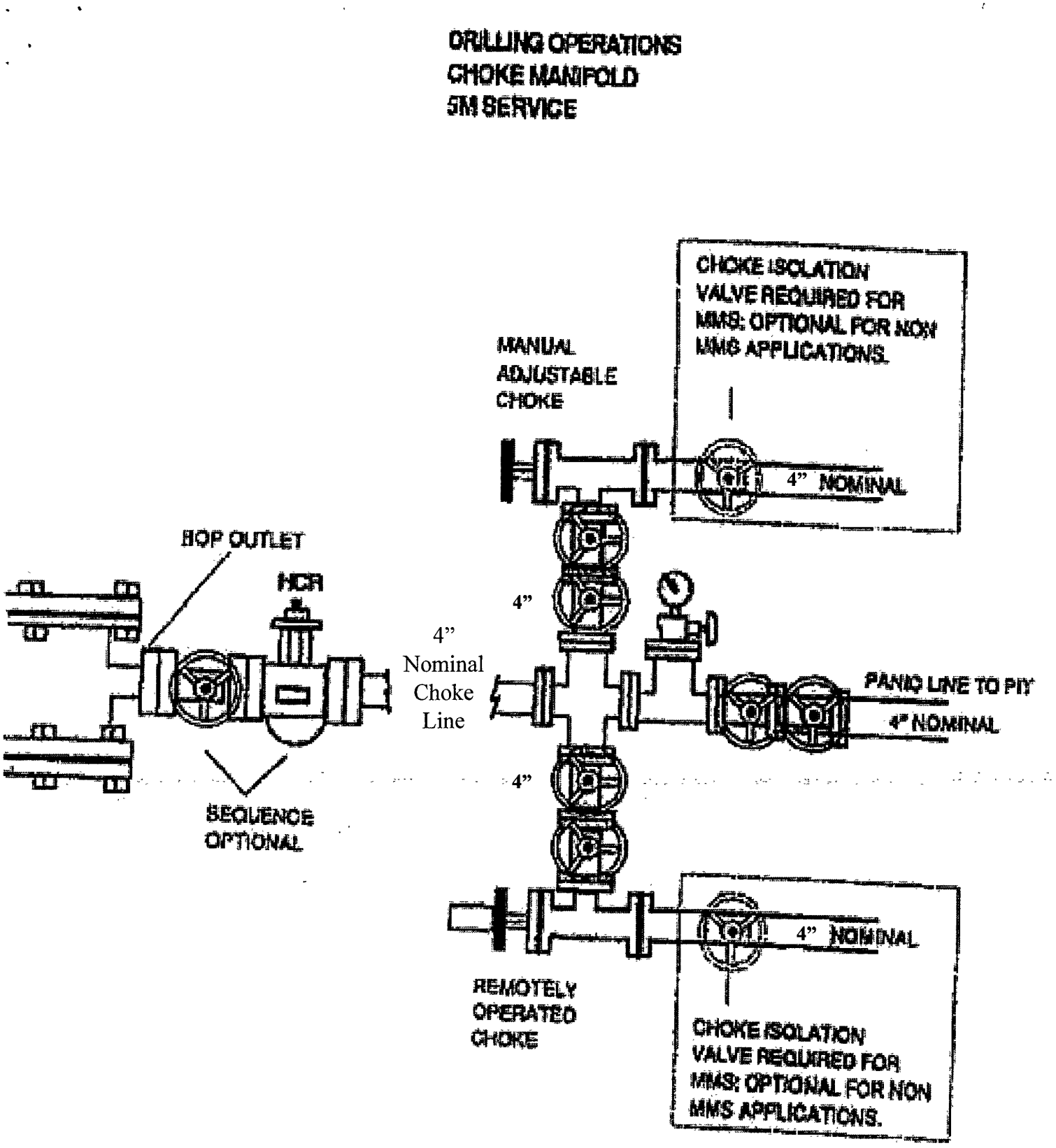
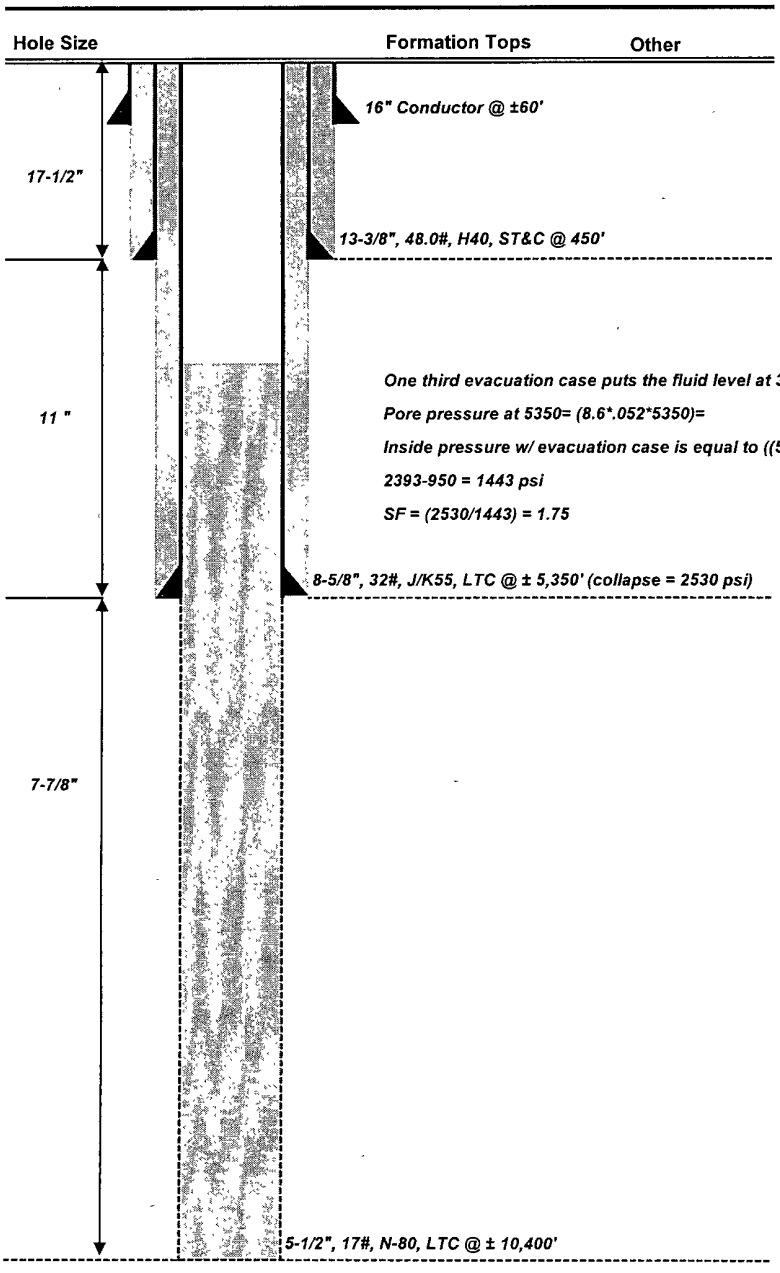


Exhibit E1 – Choke Manifold
Mescalero B 29 Federal No. 1
Cimarex Energy Co. of Colorado
29-19S-34E
~~1140' FSL & 810' FWL~~ 330' FSL & 660' FWL
Lea County, NM

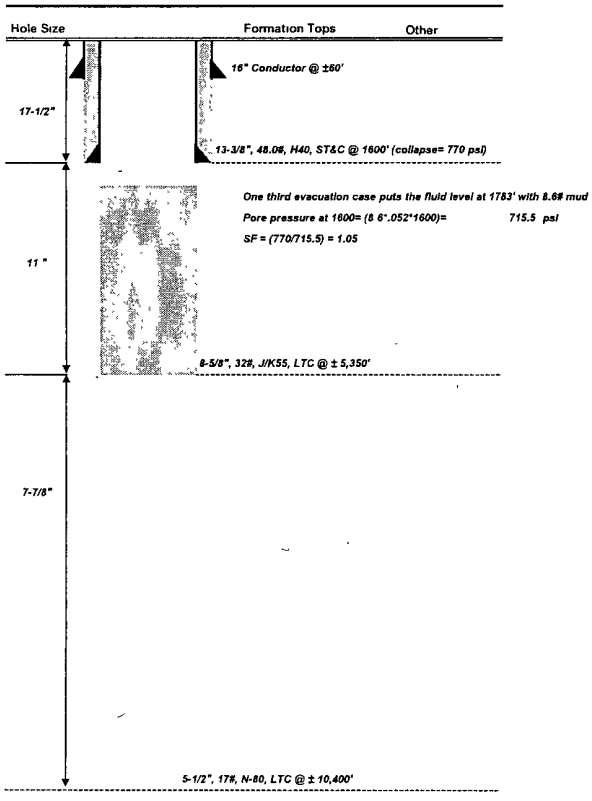
DRILLING PROGNOSIS
Cimarex Energy Company

###

Well:	**Mescalero B 29 Fed #1**	**Lse Serial #:**	
Location:	Sec 29, T19S, R34E	**Field:**	Quail Ridge
County, State	**Lea County, NM**	**Objective:**	Bone Springs
Surface Location:	660' FSL 660' FWL	**TVD/MD:**	10,400
Bottomhole Loc:	(same)	**Cementing:**	Halliburton
E-Mail:		**Mud:**	MI
Wellhead:		**Motors:**	
		OH Logs	Halliburton
		Rig:	Pat Rig 80
Xmas Tree	5M tree 2 9/16"	**Offset Wells:**	
Tubing:	2 7/8" L80 EUE		
Superintendent:	**Jim Evans**		
Engineer:	**Ryan Braxton**		



Well	Mescalero B 29 Fed #1	Lse Serial #.	
Location	Sec 29, T19S, R34E	Field.	Quail Ridge
County, State	Lea County, NM	Objective	Bone Springs
Surface Location	660' FSL 660' FWL	TVD/MD.	10,400
Bottomhole Loc	(same)	Cementing:	Halliburton
E-Mail.		Mud	MI
Wellhead:		Motors	
		OH Logs	Halliburton
		Rig	Pat Rig 80
Xmas Tree	5M tree 2 9/16"	Offset Wells:	
Tubing	2 7/8" L80 EUE		
Superintendent	Jim Evans		
Engineer	Ryan Braxton		



Outside	Inside	ft3/ft
17-1/2	13-3/8 48#	0.6946
13-3/8 48#		0.8817
13-3/8 48#	8 5/8" 32#	0.476
11"	8 5/8" 32#	0.2542
8 5/8" 32#		0.3422
8 5/8" 32#	5-1/2" 17#	0.1772
7 7/8"	5-1/2" 17#	0.1733
5-1/2" 17#		0.1305

Surface		TD		450				
	Lead		Excess				sacks	
		264		1	366.7488			
			yield		1.98		185.2267	
	Tail	186		1	258.3912			
			yield		1.34		220.4646	
	Shoe	42		0	37.0314			

Int		TD		3500	CP		450		
	Lead		Excess			yield		sacks	Total
		450		0	214.2		2.45	87.42857	
		2467		0.7	1066.089		2.45	435.1385	523
	Tail								
		583		0.7	251.9376		1.33	189.4268	
	Shoe	42		0	14.3724		1.33	10.80632	200

Prod		TD		10775	CP		3500	TOC	3000	TOT	8000
	Lead		Excess			yield		sacks	Total		
		500		0	88.6		2.45	36.16327			
		4500		0.25	974.8125		2.45	397.8827	434		
	Tail										
		2775		0.25	601.1344		1.67	359.9607			
	Shoe	82		0	10.701		1.67	6.407784	366		

Hydrogen Sulfide Drilling Operations Plan
Cimarex Energy Co. of Colorado
Mescalero B 29 Federal No. 1
Unit M Section 29
T19S R34E Lea County, NM

1 All Company and Contract personnel admitted on location must be trained by a qualified H2S safety instructor to the following:
   A. Characteristics of H2S
   B. Physical effects and hazards
   C. Proper use of safety equipment and life support systems.
   D. Principle and operation of H2S detectors, warning system and briefing areas.
   E. Evacuation procedure, routes and first aid.
   F. Proper use of 30 minute pressure demand air pack.

2 H2S Detection and Alarm Systems
   A. H2S detectors and audio alarm system to be located at bell nipple, end of flow line (mud pit) and on derrick floor or doghouse.

3 Windsock and/or wind streamers
   A. Windsock at mudpit area should be high enough to be visible.
   B. Windsock at briefing area 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 (H2S present in dangerous concentration). Only emergency personnel admitted to location.

5 Well control equipment
   A. See exhibit "E"

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 are planned at this time.

8 Drilling contractor supervisor will be required to be familiar with the effects H2S has on tubular goods and other mechanical equipment.

9 If H2S is encountered, mud system will be altered if necessary to maintain control of formation. A mud gas seperator will be brought into service along with H2S scavengers if necessary.

Surface Use Plan
Cimarex Energy Co. of Colorado
Mescalero B 29 Federal No. 1
Unit M Section 29
T19S R34E Lea County, NM

1 Existing Roads: Area maps, Exhibit "B" is a reproduction of Eddy Co. General Highway Map. Exhibit "C" is a reproduction of a USGS Topographic Map, showing existing roads and proposed roads. All existing roads will be maintained in a condition equal to or better than current conditions. Any new roads will be constructed to BLM specifications.

A. Exhibit "A" shows the proposed well site as staked.

B. From the junction of US Hwy 62-180 and Co Rd 55 (Smith Ranch Rd), go Northwest 2.0 miles to lease road. On lease road, go East 2.1 miles to lease road. On lease road, go Southeast 0.3 miles and thence 0.8 miles South to the Mescalero 29 Federal No. 1 location. Thence continue South 0.1 miles to proposed location.

2 Planned Access Roads: No new lease roads will be constructed.

3 Location od Existing Wells in a One-Mile Radius - Exhibit A

A. Water wells - None known

B. Disposal wells - None known

C. Drilling wells - None known

D. Producing wells - As shown on Exhibit "A"

E. Abandoned wells - As shown on Exhibit "A"

4 If on completion this well is a producer, Cimarex Energy Co. of Colorado will furnish maps and/or plats showing on site facilities or off site facilities if needed. This will be accompanied by a Sundry Notice.

5 Location and Type of Water Supply
Water will be purchased locally from a commercial source and trucked over the access roads or piped in flexible lines laid on top of the ground.

6 Source of Construction Material
If possible, construction will be obtained from the excavation of drill site. If additional material is needed, it will be purchased from a local source and transported over the access route as shown on Exhibit "C".

7 Methods of Handling Waste Material

A. Drill cuttings will be seperated by a series of solids removal equipment and hauled to the cuttings drying area and then disposed of in the cuttings burial cell.

B. All trash, junk and other waste material will be contained in trash cages or bins to prevent scattering. When the job is completed all contents will be removed and disposed of in an approved sanitary land fill.

C. Salts remaining after completion of well will be picked up by supplier including broken sacks.

D. Sewage from living quarters will drain into holding tanks and be cleaned out periodically. A Porta-John will be provided for the rig crews. This equipment will be properly maintained during the drilling operations and removed upon completion of the well.

E. Drilling fluids will be contained in steel pits in a closed circulating system. Fluids will be cleaned and reused. Water produced during testing will be contained in the steel pits and disposed of at a state approved disposal facility. Any oil or condensate produced will be stored in test tanks until sold and hauled from the site.

8 Ancillary Facilities

A. No camps or airstrips to be constructed.

9 Well Site Layout

A. Exhibit "D" shows location and rig layout.
B. This exhibit indicates proposed location of the 100' X 100' cuttings drying area.
C. Mud pits in the closed circulating system will be steel pits and the cuttings drying area will be surrounded by a 2' X 2' ring levee and a 2' earthen berm. A 12 mil liner will cover the cuttings drying area and extend a minimum of 2' over the earthen berm where it will be anchored down. A pump off system will pump any accumulated fluids in the ring levee to the rig holding tanks to be cleaned and reused.
D. After drying cuttings will be disposed of in a 50' X 50' cuttings burial cell. The bottom will be lined with a 12 mil liner. Drill cuttings will be hauled from the cuttings drying area and encapsulated in a 12 mil liner. The 12 mil liner will be folded over the cuttings and capped with a 20 mil membrane cap. The cell will be filled with 3' to 4' of top soil and leveled and contoured to conform to the original surrounding area.
E. If the well is a producer, the cuttings burial area and those areas of the location not essential to production facilities will be reclaimed and seeded per BLM requirements.

10 Plans for Restoration of Surface

Rehabilitation of the location and cuttings burial cell 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.

However, in either event, the drill cuttings will be allowed to dry properly, and fluid removed and disposed of in accordance with Article 7.B as previously noted. The cuttings burial area will then be leveled and contoured to conform to the original and surrounding area. 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 recountoured 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, the previously noted procedures will apply to those areas which are not required for production facilities.

11 Other Information

A. Topography consists of a sloping plane with loose tan sands. Vegetation is mainly yucca, mesquite and shin oak.

B. The wellsite is on surface owned by Department of the Interior, Bureau of Land Management. The land is used mainly for farming, cattle ranching, recreational use, and oil and gas production.

C. An Archaeological survey will be conducted on the location and proposed roads, and this report will be filed with the Bureau of Land Management in the Carlsbad BLM office.

D. There are no know dwellings within 1 1/2 miles of this location.

Operator Certification Statement
Cimarex Energy Co. of Colorado
Mescalero B 29 Federal No. 1
Unit M Section 29
T19S R34E Lea County, NM

Operator's Representative

Cimarex Energy Co. of Colorado
P.O. Box 140907
Irving, TX 75014
Office Phone: (972) 443-6489
Zeno Farris

CERTIFICATION: I hereby certify that the statements and plans made in this APD are, to the best of my knowledge, true and correct; and that the work associated with the operations proposed herein will be performed by Cimarex Energy Co. of Colorado and/or its contractors/subcontractors and is in conformity with this plan and the terms and conditions under which it is approved. This statement is subject to the provision of U.S.C. 1001 for the filing of a false statement.

NAME: Zeno Farris
Zeno Farris

DATE: September 11, 2007

TITLE: Manager Operations Administration

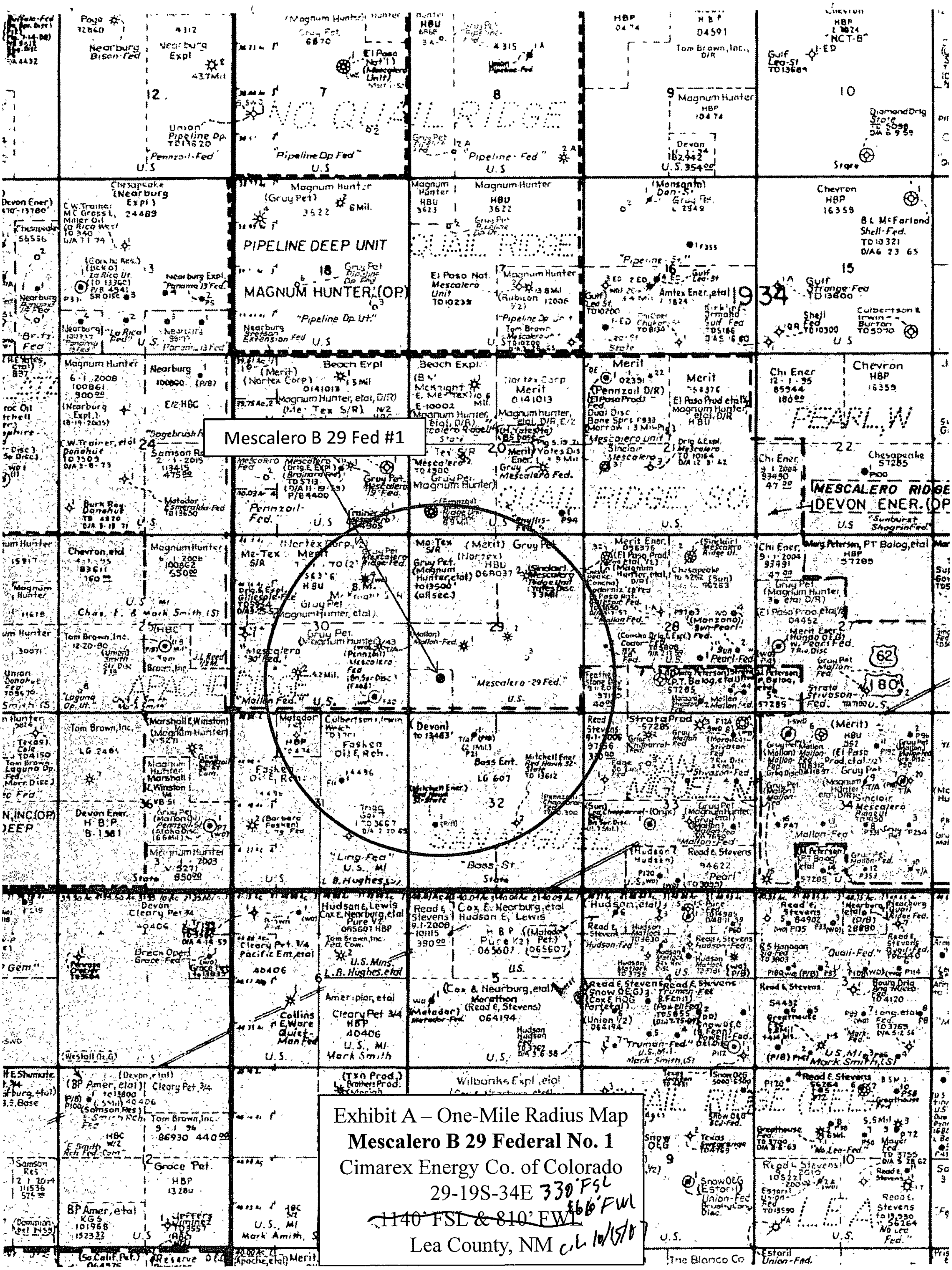


Exhibit A – One-Mile Radius Map
Mescalero B 29 Federal No. 1
Cimarex Energy Co. of Colorado
29-19S-34E 330' FSL 660' FWL
~~1140' FSL & 810' FWL~~
Lea County, NM c.L 10/15/07

PECOS DISTRICT
CONDITIONS OF APPROVAL

OPERATOR'S NAME:	CIMAREX ENERGY CO. OF COLORADO
LEASE NO.:	NM24165
WELL NAME & NO.:	MESCALERO B 29 FEDERAL NO. 1
SURFACE HOLE FOOTAGE:	330' FSL & 660' FWL
BOTTOM HOLE FOOTAGE	Same
LOCATION:	Section 29, T. 19 S., R 34 E., NMPM
COUNTY:	Lea 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.

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)

Mitigation Measures: The mitigation measures include the special drilling stipulations, and the Lesser Prairie Chicken timing stipulations.
Timing Limitation Stipulation/Condition of Approval for Lesser Prairie Chicken: Oil and gas activities including 3-D geophysical exploration, and drilling will not be allowed in Lesser prairie chicken habitat during the period from March 15 through June 15 annually. During that period, other activities that produce noise or involve human activity, such as the maintenance of oil and gas facilities, geophysical exploration other than 3-D operations, and pipeline, road, and well pad construction, will be allowed except between 3:00 am and 9:00 am. The 3:00 am to 9:00 am restriction will not apply to normal, around-the-clock operations, such as venting, flaring, or pumping, which do not require a human presence during this period. Additionally, no new drilling will be allowed within up to 200 meters of leks known at the time of permitting. Normal vehicle use on existing roads will not be restricted. Exhaust noise from pump jack engines must be muffled or otherwise controlled so as not to exceed 75 db measured at 30 ft. from the source of the noise.

Mescalero B 29 Federal # 1: Cuttings Burial Cell and Drying Pad West V-Door North

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 (505) 234-5972 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 stockpile the topsoil of the well pad The topsoil shall not be used to backfill the reserve pit and will be used for interim and final reclamation.

C. RESERVE PITS

The reserve pit shall be constructed and closed in accordance with the NMOCD rules.

Cuttings Burial Cell and Drying Pad West V-Door North

The reserve pit shall be constructed, so that upon completion of drilling operations, the dried pit contents shall be buried a minimum depth of three feet below ground level. Should the pit content level not meet the three foot minimum depth requirement, the excess contents shall be removed until the required minimum depth of three feet below ground level has been met. The operator shall properly dispose of the excess contents at an authorized disposal site.

The reserve pit shall be constructed and maintained so that runoff water from outside the location is not allowed to enter the pit. The berms surrounding the entire perimeter of the pit shall extend a minimum of two (2) feet above ground level. At no time will standing fluids in the pit be allowed to rise above ground level.

The reserve pit shall be fenced on three (3) sides during drilling operations. The fourth side shall be fenced immediately upon rig release.

D. FEDERAL MINERAL MATERIALS PIT

If the operator elects to surface the access road and/or well pad, mineral materials extracted during construction of the reserve pit may be used for surfacing the well pad and access road and other facilities on the lease.

Payment shall be made to the BLM prior to removal of any additional federal mineral materials from any site other than the reserve pit. Call the
Carlsbad Field Office at (505) 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. 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 thirty (30) 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.

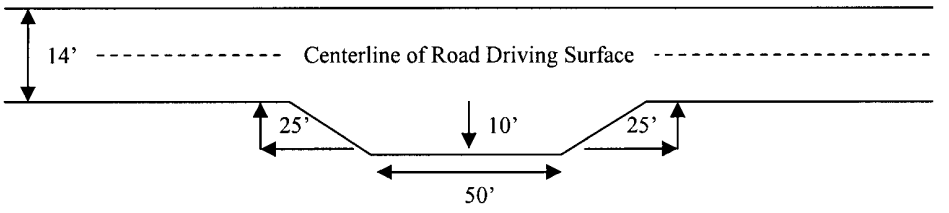
Ditching

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 be constructed on all blind curves. Turnouts shall conform to the following diagram:

Standard Turnout – Plan View

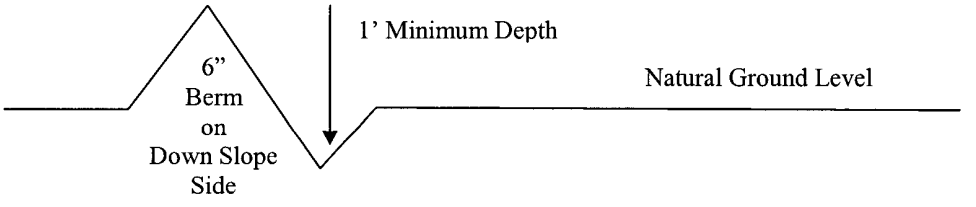


Drainage

Drainage control systems shall be constructed on the entire length of road (e.g. ditches, sidehill outsloping 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:

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

Culvert Installations
Appropriately sized culvert(s) shall be installed at the deep waterway channel flow crossing.

Cattleguards
An appropriately sized cattleguard(s) sufficient to carry out the project shall be installed and maintained at fence crossing(s).

Any existing cattleguard(s) on the access road 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 cattleguard(s) that are in place and are utilized during lease operations.

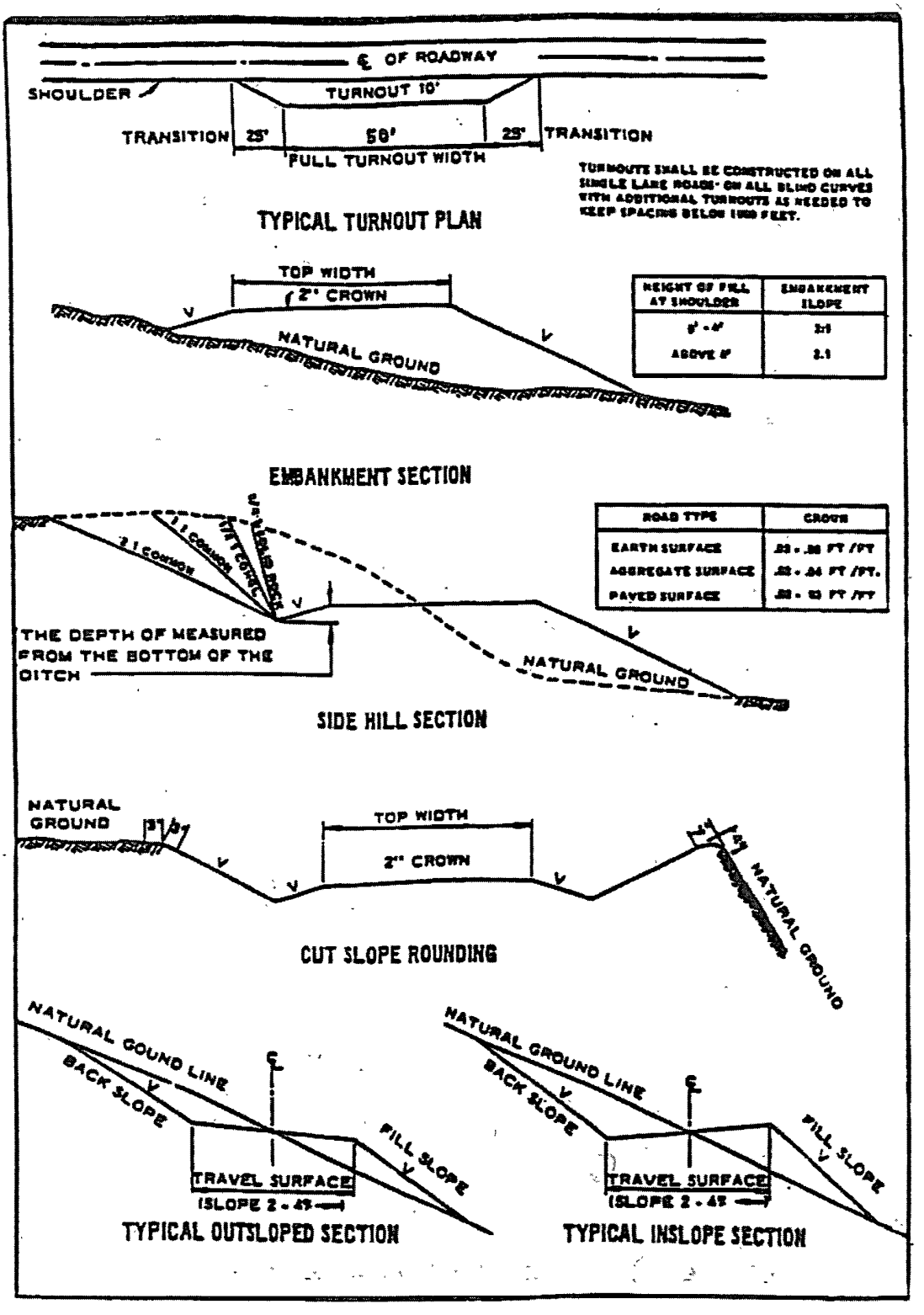
A gate shall be constructed and fastened securely to H-braces.

Fence Requirement
Where entry is required 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 fence(s).

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

Figure 1 – Cross Sections and Plans For Typical Road Sections



VII. DRILLING

A. DRILLING OPERATIONS REQUIREMENTS

The BLM is to be notified a minimum of 4 hours in advance for a representative to witness:

a. Spudding well
b. Setting and/or Cementing of all casing strings
c. BOPE tests

☒ **Lea County**
Call the Hobbs Field Station, 414 West Taylor, Hobbs NM 88240,
(505) 393-3612

1. A Hydrogen Sulfide (H2S) Drilling Plan should be activated 500 feet prior to drilling into the **Yates** formation. **Hydrogen Sulfide has been reported in sections 28 and 29 measuring 500-700 ppm and 300-7000 ppm in STVs.**

2. 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.

3. 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.

B. CASING

1. The **13-3/8** inch surface casing shall be set **a minimum of 25 feet into the Rustler Anhydrite at approximately 1600** feet and cemented to the surface. **Additional cement will be required.**

    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 a surface log readout will be used or a cement bond log shall be run to verify the top of the cement.

    b. Wait on cement (WOC) time for a primary cement job will be a minimum 18 hours for a water basin, 24 hours in the potash area, 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 action will be done prior to drilling out that string.

Possible lost circulation and water flows in the Capitan Reef if encountered.

2. The minimum required fill of cement behind the **8-5/8** inch intermediate casing is:

   ☒ Cement to surface. If cement does not circulate see B.1.a-d above.

3. The minimum required fill of cement behind the **5-1/2** inch production casing is:

   ☒ Cement should tie-back at least 500 feet into previous casing string **due to Secretary's Potash**. Operator shall provide method of verification. **First stage to circulate.**

4. 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.

C. 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. The appropriate BLM office shall be notified a minimum of 4 hours in advance for a representative to witness the tests.

   a. The tests shall be done by an independent service company.

   b. The results of the test shall be reported to the appropriate BLM office.

   c. 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.

   d. 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 if test is done with a test plug and 30 minutes without a test plug.

Engineer on call phone (after hours): **Carlsbad: (575) 706-2779**

WWI 100907

VIII. 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.

Containment Structures
The containment structure shall be constructed to hold the capacity of the entire contents of the largest tank, plus 24 hour production, unless more stringent protective requirements are deemed necessary by the Authorized Officer.

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, Munsell Soil Color Chart # 5Y 4/2

VRM Facility Requirement

B. PIPELINES

C. ELECTRIC LINES

IX. INTERIM RECLAMATION & RESERVE PIT CLOSURE

A. INTERIM RECLAMATION

If the well is a producer, interim reclamation shall be conducted on the well site in accordance with the orders of the Authorized Officer. The operator shall submit a Sundry Notices and Reports on Wells (Notice of Intent), Form 3160-5, prior to conducting 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.

At the time reserve pits are to be reclaimed, operators should work with BLM surface management specialists to devise the best strategies to reduce the size of the location. Any reductions 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 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.

B. RESERVE PIT CLOSURE

The reserve pit, when dried and closed, shall be recontoured, all trash removed, and reseeded as follows:

Seed Mixture 2, for Sandy Sites

The holder shall seed all 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 see 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:

Species	lb/acre
Sand dropseed (Sporobolus cryptandrus)	1.0
Sand love grass (Eragrostis trichodes)	1.0
Plains bristlegrass (Setaria macrostachya)	2.0

*Pounds of pure live seed:

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

(Insert Seed Mixture Here)

X. FINAL ABANDONMENT & REHABILITATION REQUIREMENTS

Upon abandonment of the well and/or when the access road is no longer in service the Authorized Officer shall issue instructions and/or orders for surface reclamation and restoration of all disturbed areas.

On private surface/federal mineral estate land the reclamation procedures on the road and well pad shall be accomplished in accordance with the private surface land owner agreement.