ATS-08-457
EA-08-1286

SEP 17 2008
OCD-ARTESIA

OCD-ARTESIA

Form 3160-3
(April 2004)

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

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

UNORTHODOX LOCATION

1a. Type of Work: [X] DRILL [ ] REENTER	5. Lease Serial No. NM-97874
1b Type of Well: [X] Oil Well [ ] Gas Well [ ] Other [X] Single Zone [ ] Multiple Zone	6. If Indian, Allotee or Tribe Name
2. Name of Operator Cimarex Energy Co. of Colorado	7. If Unit or CA Agreement, Name and No. Pending
3a. Address PO Box 140907 Irving, TX 75014	3b Phone No. *(include area code)* 972-401-3111
4 Location of Well *(Report location clearly and in accordance with any State requirements.*)* At Surface ~~1980'~~ 2380' FSL & 330' FEL C.L. 08/26/08 At proposed prod. Zone 1980' FSL & 330' FWL *Horizontal Abo test*	8. Lease Name and Well No. Utah 21 Federal Com No. 2
	9. API Well No. 30-015- 36948
	10. Field and Pool, or Exploratory Abo ~~Wildcat~~ Paint Line Tank
	11. Sec., T. R. M. or Blk and Survey or Area 21-16S-29E
14 Distance in miles and direction from nearest town or post office* 2 miles NE of Loco Hills Roswell Controlled Water Basin	12. County or Parish Eddy / 13. State NM
15 Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line if any) 330	16. No of acres in lease 1491.18 / 17. Spacing Unit dedicated to this well N2S2 160
18 Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. N/A	19. Proposed Depth Pilot Hole 7500' MD 11514' TVD 7020' / 20. BLM/BIA Bond No. on File NM-2575
21. Elevations (Show whether DF, KDB, RT, GL, etc.) 3,659' GR	22. Approximate date work will start* 04.15.08 / 23. Estimated duration 25-30 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 Zeno Farris	Name *(Printed/Typed)* Zeno Farris	Date 03.17.08
Title Manager Operations Administration		
Approved By *(Signature)* /s/ Don Peterson	Name (Printed/Typed) /s/ Don Peterson	Date SEP 12 2008
Title FIELD MANAGER	Office CARLSBAD FIELD OFFICE	

Application approval does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.

Conditions of approval, if any, are attached.

Title 18 U.S.S Section 1001 and Title 43 U.S.C. Section 1 ... any department or agency of the United States any false, fictitious, or fraudulent statements or rep...

* *(Instructions on page 2)*

Pits must be registered, operated, maintained and closed per 19.15.17 [NMAC]

SEE ATTACHED FOR CONDITIONS OF APPROVAL

APPROVAL SUBJECT TO GENERAL REQUIREMENTS AND SPECIAL STIPULATIONS ATTACHED

JRH

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

X AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number	Pool Code	Pool Name
30-015-36948	97197 -	Abo ~~County~~ Lake Yark

Property Code	Property Name	Well Number
37338 -	UTAH "21" FEDERAL COM	2

OGRID No.	Operator Name	Elevation
162683	CIMAREX ENERGY CO. OF COLORADO	3663'

Surface Location

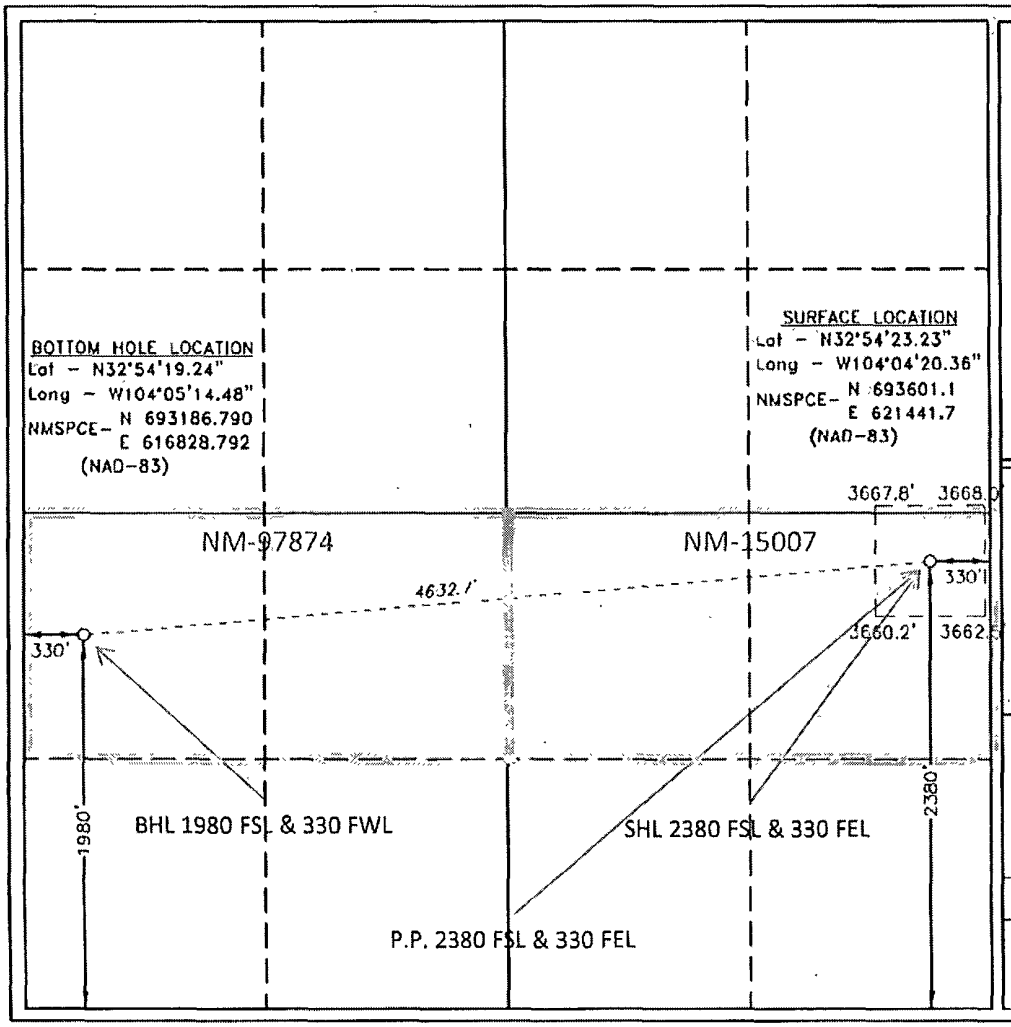
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
I	21	16 S	29 E		2380	SOUTH	330	EAST	EDDY

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
L	21	16 S	29 E		1980	SOUTH	330	WEST	EDDY

Dedicated Acres	Joint or Infill	Consolidation Code	Order No.
160		P	NSL Pending

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 10-14-08
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.

MAY 22, 2008
Date Surveyed

Signature & Seal of Professional Surveyor

GARY L. JONES NEW MEXICO 7977 REGISTERED PROFESSIONAL SURVEYOR

W.O.

Certificate No. Gary L. Jones 7977

BASIN SURVEYS

OCD-ARTESIA

Form 3160-5
(November 1994)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

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-97874

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: Utah 21 Federal Com No. 2

2 Name of Operator: Cimarex Energy Co. of Colorado

9 API Well No: 30-015-

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: Abo County line Dark

4 Location of Well *(Footage, Sec., T., R., M., or Survey Description)*
SHL 1980 FSL & 330 FEL 21-16S-29E
BHL 1980 FSL & 330 FWL 11-16S-29E

11 County or Parish, State: Eddy 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
	[ ] Alter Casing	[ ] Fracture Treat	[ ] Reclamation	[ ] Well Integrity
[ ] Subsequent Report	[ ] Casing Repair	[ ] New Construction	[ ] Recomplete	[X] Other Change surface and road location
	[X] 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, including 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.)

Due to Playa Cimarex has changed its proposed location for the Utah 21 Fed Com 2:

Old Location	New Location
SHL 1980 FSL & 330 FEL	SHL ***2380 FSL*** & 330 FEL
BHL 1980 FSL & 330 FWL	BHL 1980 FSL & 330 FWL
21-16S-29E	21-16S-29E

OIL C.I. 08/26/08

Please see attached revised plats, drilling plan, and directional survey

14 I hereby certify that the foregoing is true and correct

Name *(Printed/Typed)*: Scott Haynes

Title: Regulatory Analyst

Signature: Scott Haynes

Date: July 15, 2008

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved by: /s/ Don Peterson

Title: FIELD MANAGER

Date: SEP 12 2008

Office: CARLSBAD FIELD OFFICE

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.

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.

Application to Drill
Cimarex Energy Co. of Colorado
Utah 21 Federal Com No. 2
Unit 1, Section 21
T16S-R29E, Eddy County, NM

Proposed drilling Plan

Drill 8 ¾" hole to 7500' (Pilot hole) and cement. Set whipstock plug @ 6790.' Mill window from 6775' to 6785.' Kick off 6 1/8" lateral @ 6780.' Drill 6 1/8" hole to MD 11531' and TVD 7020.' Install 4 ½" **Peak Completion Assembly**, 600' of BTC from TOL through the curve and LTC thereafter to TD. Lateral length 4632.' Strata-pak RSBP @ 6675' (TOL).

see COA

String	Hole size	Depth	Casing OD	Weight	Thread	Collar	Grade
Surface	17 ½"	0 to 340'	New 13 3/8	48 #	8-R	STC	H-40
Intermediate	12 ¼"	0 to 2500'	New 9 5/8"	40 #	8-R	LTC	J-55
Pilot Hole	8 ¾"	0 to 7500'	7"	26 #	8-R	LTC	P-110
Lateral	6 1/8"	6675' to MD 11531 TVD 7020'	4 ½"	11.6 #	8-R	LTC (800' BTC)	P-110

Planned Wellpath Report

Preliminary

BAKER HUGHES INTEQ

REFERENCE WELLPATH IDENTIFICATION

Operator	Cimarex Energy Co. of Colorado	Slot	No. 2H SHL
Area	Eddy County, NM	Well	No. 2H
Field	(Utah) Sec 21, T16S, R29E	Wellbore	No. 2H PWB
Facility	Utah 21 Fed Com No. 2H		

REPORT SETUP INFORMATION

Projection System	NAD83 / TM New Mexico State Planes, Eastern Zone (3001), US feet	Software System	WellArchitect® 2.0
North Reference	Grid	User	Victor Hernandez
Scale	0.999916	Report Generated	6/17/2008 at 3:24:49 PM
Convergence at slot	0.14° East	Database/Source file	WA_Midland/No._2H_PWB.xml

WELLPATH LOCATION

	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[USft]	Northing[USft]	Latitude	Longitude
Slot Location	0.00	0.00	621441.70	693601.10	32°54'23.232"N	104°04'20.362"W
Facility Reference Pt			621441.70	693601.10	32°54'23.232"N	104°04'20.362"W
Field Reference Pt			621441.70	693601.10	32°54'23.232"N	104°04'20.362"W

WELLPATH DATUM

Calculation method	Minimum curvature	Rig on No. 3H SHL (RT) to Facility Vertical Datum	18.00ft
Horizontal Reference Pt	Facility Center	Rig on No. 3H SHL (RT) to Mean Sea Level	3681.00ft
Vertical Reference Pt	Rig on No. 3H SHL (RT)	Facility Vertical Datum to Mud Line (Facility)	0.00ft
MD Reference Pt	Rig on No. 3H SHL (RT)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	264.87°

REFERENCE WELLPATH IDENTIFICATION

Operator	Cimarex Energy Co. of Colorado	Slot	No. 2H SHL
Area	Eddy County, NM	Well	No. 2H
Field	(Utah) Sec 21, T16S, R29E	Wellbore	No. 2H PWB
Facility	Utah 21 Fed Com No. 2H		

WELLPATH DATA (51 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	DLS [°/100ft]	Comments
0.00	0.000	264.868	0.00	0.00	0.00	0.00	0.00	Tie On
6790.00	0.000	264.868	6790.00	0.00	0.00	0.00	0.00	KOP
6890.00†	30.000	264.868	6885.49	25.59	-2.29	-25.48	30.00	
6990.00†	60.000	264.868	6955.40	95.49	-8.54	-95.11	30.00	
7088.32	89.497	264.868	6980.98	189.31	-16.93	-188.55	30.00	EOC
7090.00†	89.497	264.868	6980.99	190.99	-17.08	-190.22	0.00	
7190.00†	89.497	264.868	6981.87	290.98	-26.03	-289.82	0.00	
7290.00†	89.497	264.868	6982.75	390.98	-34.98	-389.41	0.00	
7390.00†	89.497	264.868	6983.63	490.97	-43.92	-489.01	0.00	
7490.00†	89.497	264.868	6984.51	590.97	-52.87	-588.60	0.00	
7590.00†	89.497	264.868	6985.38	690.97	-61.81	-688.20	0.00	
7690.00†	89.497	264.868	6986.26	790.96	-70.76	-787.79	0.00	
7790.00†	89.497	264.868	6987.14	890.96	-79.70	-887.39	0.00	
7890.00†	89.497	264.868	6988.02	990.96	-88.65	-986.98	0.00	
7990.00†	89.497	264.868	6988.90	1090.95	-97.59	-1086.58	0.00	
8090.00†	89.497	264.868	6989.78	1190.95	-106.54	-1186.17	0.00	
8190.00†	89.497	264.868	6990.65	1290.94	-115.48	-1285.77	0.00	
8290.00†	89.497	264.868	6991.53	1390.94	-124.43	-1385.36	0.00	
8390.00†	89.497	264.868	6992.41	1490.94	-133.37	-1484.96	0.00	
8490.00†	89.497	264.868	6993.29	1590.93	-142.32	-1584.55	0.00	
8590.00†	89.497	264.868	6994.17	1690.93	-151.26	-1684.15	0.00	
8690.00†	89.497	264.868	6995.05	1790.92	-160.21	-1783.74	0.00	
8790.00†	89.497	264.868	6995.92	1890.92	-169.15	-1883.34	0.00	
8890.00†	89.497	264.868	6996.80	1990.92	-178.10	-1982.93	0.00	
8990.00†	89.497	264.868	6997.68	2090.91	-187.04	-2082.53	0.00	
9090.00†	89.497	264.868	6998.56	2190.91	-195.99	-2182.13	0.00	
9190.00†	89.497	264.868	6999.44	2290.90	-204.93	-2281.72	0.00	
9290.00†	89.497	264.868	7000.32	2390.90	-213.88	-2381.32	0.00	
9390.00†	89.497	264.868	7001.19	2490.90	-222.82	-2480.91	0.00	
9490.00†	89.497	264.868	7002.07	2590.89	-231.77	-2580.51	0.00	

REFERENCE WELLPATH IDENTIFICATION

Operator	Cimarex Energy Co. of Colorado	Slot	No. 2H SHL
Area	Eddy County, NM	Well	No. 2H
Field	(Utah) Sec 21, T16S, R29E	Wellbore	No. 2H PWB
Facility	Utah 21 Fed Com No. 2H		

WELLPATH DATA (51 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	DLS [°/100ft]	Comments
9590.00†	89.497	264.868	7002.95	2690.89	-240.71	-2680.10	0.00	
9690.00†	89.497	264.868	7003.83	2790.89	-249.66	-2779.70	0.00	
9790.00†	89.497	264.868	7004.71	2890.88	-258.60	-2879.29	0.00	
9890.00†	89.497	264.868	7005.59	2990.88	-267.55	-2978.89	0.00	
9990.00†	89.497	264.868	7006.46	3090.87	-276.49	-3078.48	0.00	
10090.00†	89.497	264.868	7007.34	3190.87	-285.44	-3178.08	0.00	
10190.00†	89.497	264.868	7008.22	3290.87	-294.39	-3277.67	0.00	
10290.00†	89.497	264.868	7009.10	3390.86	-303.33	-3377.27	0.00	
10390.00†	89.497	264.868	7009.98	3490.86	-312.28	-3476.86	0.00	
10490.00†	89.497	264.868	7010.86	3590.85	-321.22	-3576.46	0.00	
10590.00†	89.497	264.868	7011.73	3690.85	-330.17	-3676.05	0.00	
10690.00†	89.497	264.868	7012.61	3790.85	-339.11	-3775.65	0.00	
10790.00†	89.497	264.868	7013.49	3890.84	-348.06	-3875.24	0.00	
10890.00†	89.497	264.868	7014.37	3990.84	-357.00	-3974.84	0.00	
10990.00†	89.497	264.868	7015.25	4090.84	-365.95	-4074.43	0.00	
11090.00†	89.497	264.868	7016.13	4190.83	-374.89	-4174.03	0.00	
11190.00†	89.497	264.868	7017.00	4290.83	-383.84	-4273.63	0.00	
11290.00†	89.497	264.868	7017.88	4390.82	-392.78	-4373.22	0.00	
11390.00†	89.497	264.868	7018.76	4490.82	-401.73	-4472.82	0.00	
11490.00†	89.497	264.868	7019.61	4590.82	-410.67	-4572.41	0.00	
11531.06	89.497	264.868	7020.00	4631.87	-414.35	-4613.30	0.00	No 3D BHL

REFERENCE WELLPATH IDENTIFICATION

Operator	Cimarex Energy Co. of Colorado	Slot	No. 2H SHL
Area	Eddy County, NM	Well	No. 2H
Field	(Utah) Sec 21, T16S, R29E	Wellbore	No. 2H PWB
Facility	Utah 21 Fed Com No. 2H		

TARGETS

Name	MD [ft]	TVD [ft]	North [ft]	East [ft]	Grid East [srv ft]	Grid North [srv ft]	Latitude	Longitude	Shape
1) No. 3H BHL	11531.06	7020.00	-414.35	-4613.30	**616828.79**	**693186.79**	32°54'19.242"N	104°05'14.483"W	point

SURVEY PROGRAM Ref Wellbore: No. 2H PWB Ref Wellpath: Preliminary

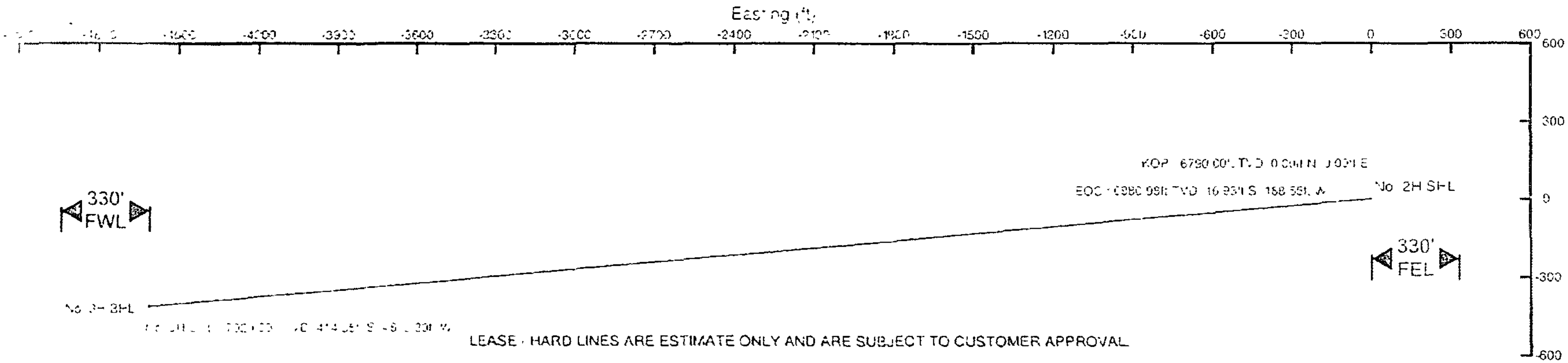
Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
18.00	11531.06	NaviTrak (Standard)		No. 2H PWB

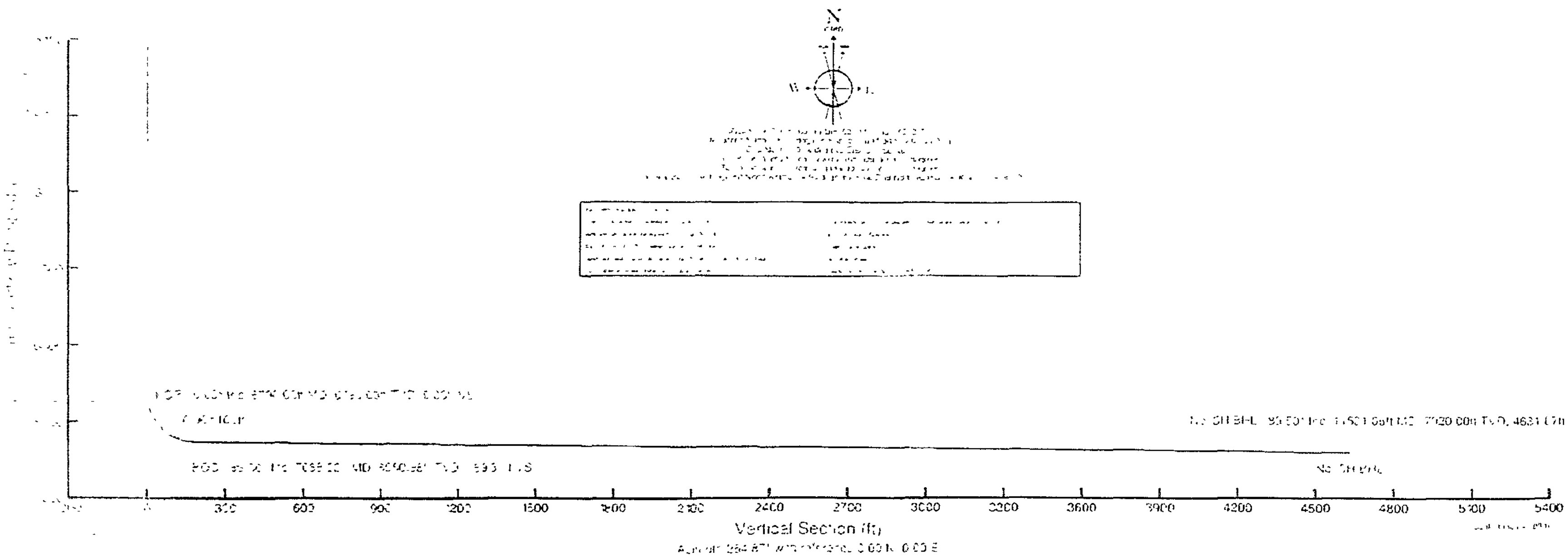
Cimarex Energy Co. of Colorado

Location: Eddy County, NM — Slot: No. 2H SHL
Field: [illegible] Sec 21, T16S, R29E — Well: No. 2H
Facility: [illegible] 21 Fed Com No. 2H — Wellbore: No. 2H PWB

Well Profile Data

Design Comment	MD (ft)	Inc (°)	Az (°)	TVD (ft)	Local N (ft)	Local E (ft)	DLS (°/100ft)	VS (ft)
Tie On	0.00	0.000	264.862	0.00	0.00	0.00	0.00	0.00
KOP	6790.00	0.000	264.862	6790.00	0.00	0.00	0.00	0.00
EOC	7088.32	89.497	264.862	6980.98	-15.93	-188.55	30.00	189.31
No. 3H BHL	11531.05	89.497	264.862	7020.00	-414.35	-4613.30	0.00	4631.87





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
30-015-	97197	Abo County Line Jack

Property Code	Property Name	Well Number
37338	UTAH "21" FEDERAL COM	2

OGRID No.	Operator Name	Elevation
162683	DEVON ENERGY CO OF COLORADO	3653'

Surface Location

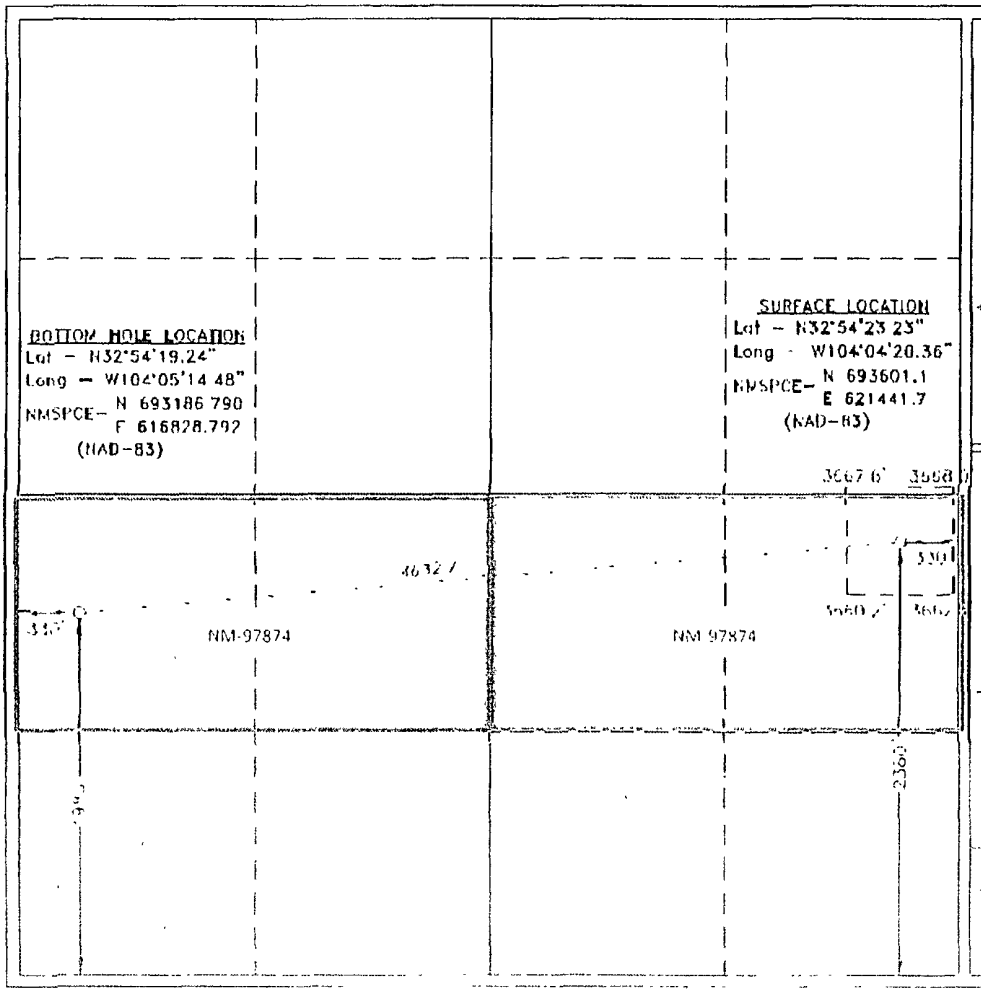
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
I	21	16 S	29 E		2320	SOUTH	330	EAST	EDDY

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
L	21	16 S	29 E		1980	SOUTH	330	WEST	EDDY

Dedicated Acres	Joint or Infill	Consolidation Code	Order No.
160		P	

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

Scott Haynes 6-13-08
Signature Date

Scott Haynes
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

MAY 22, 2008
Date Surveyed

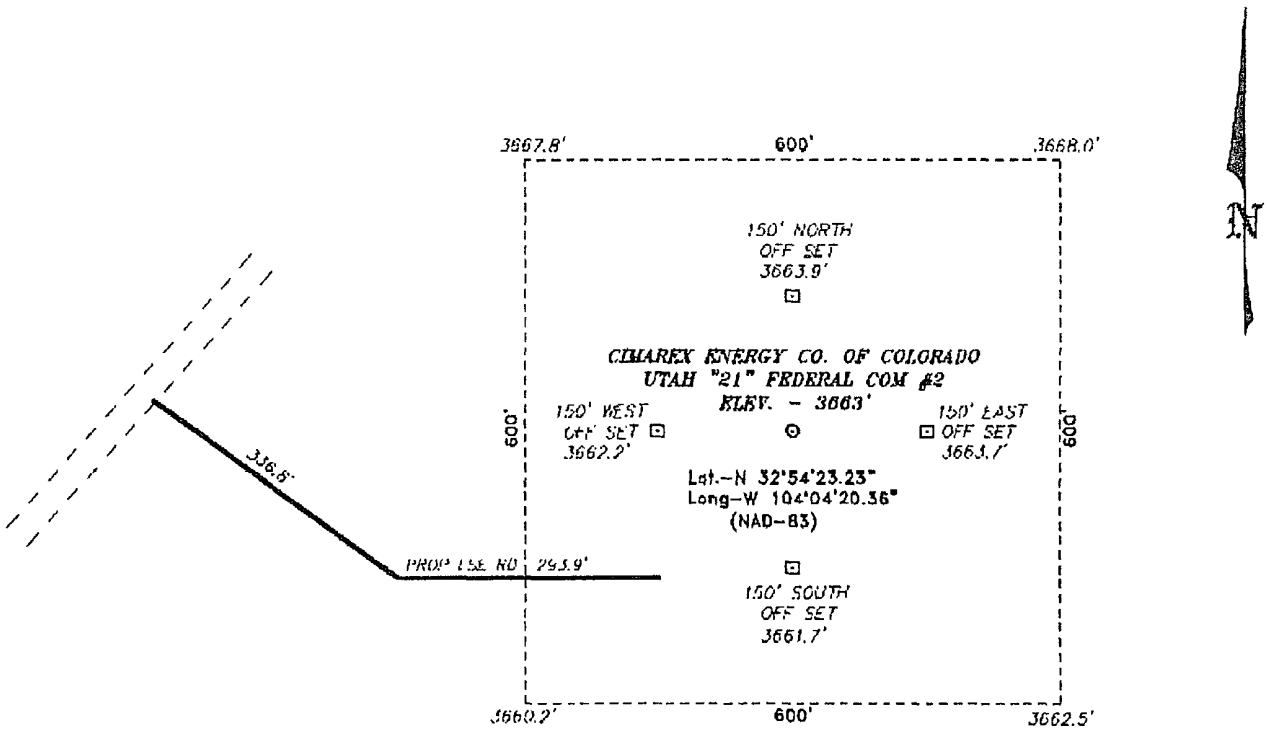
Signature & Seal of Professional Surveyor

GARY L. JONES
NEW MEXICO
7977
REGISTERED PROFESSIONAL LAND SURVEYOR

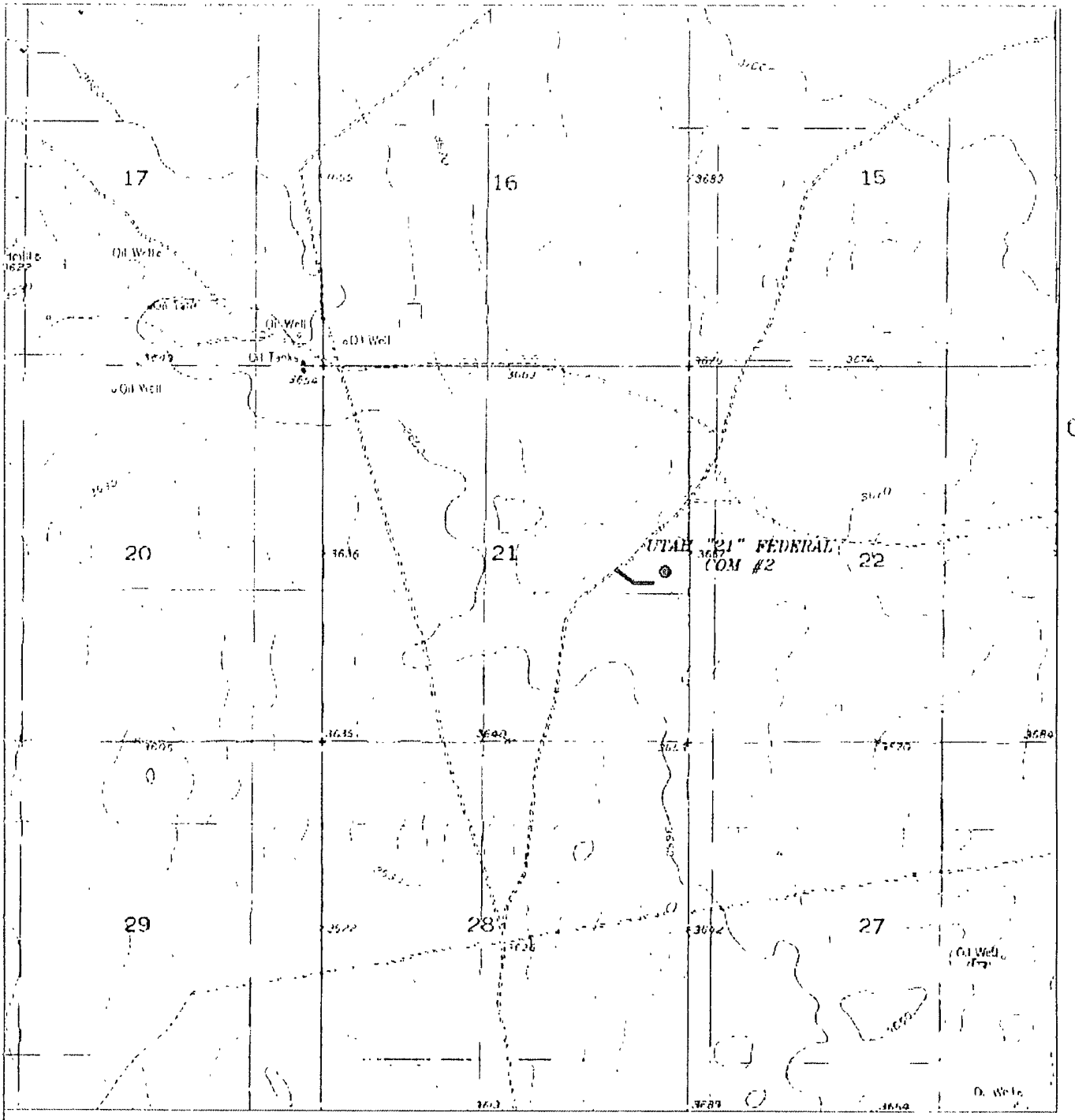
Certificate No. Gary L. Jones 7977

BASIN SURVEYS

SECTION 21, TOWNSHIP 16 SOUTH, RANGE 29 EAST, N.M.P.M.,
EDDY COUNTY, NEW MEXICO.



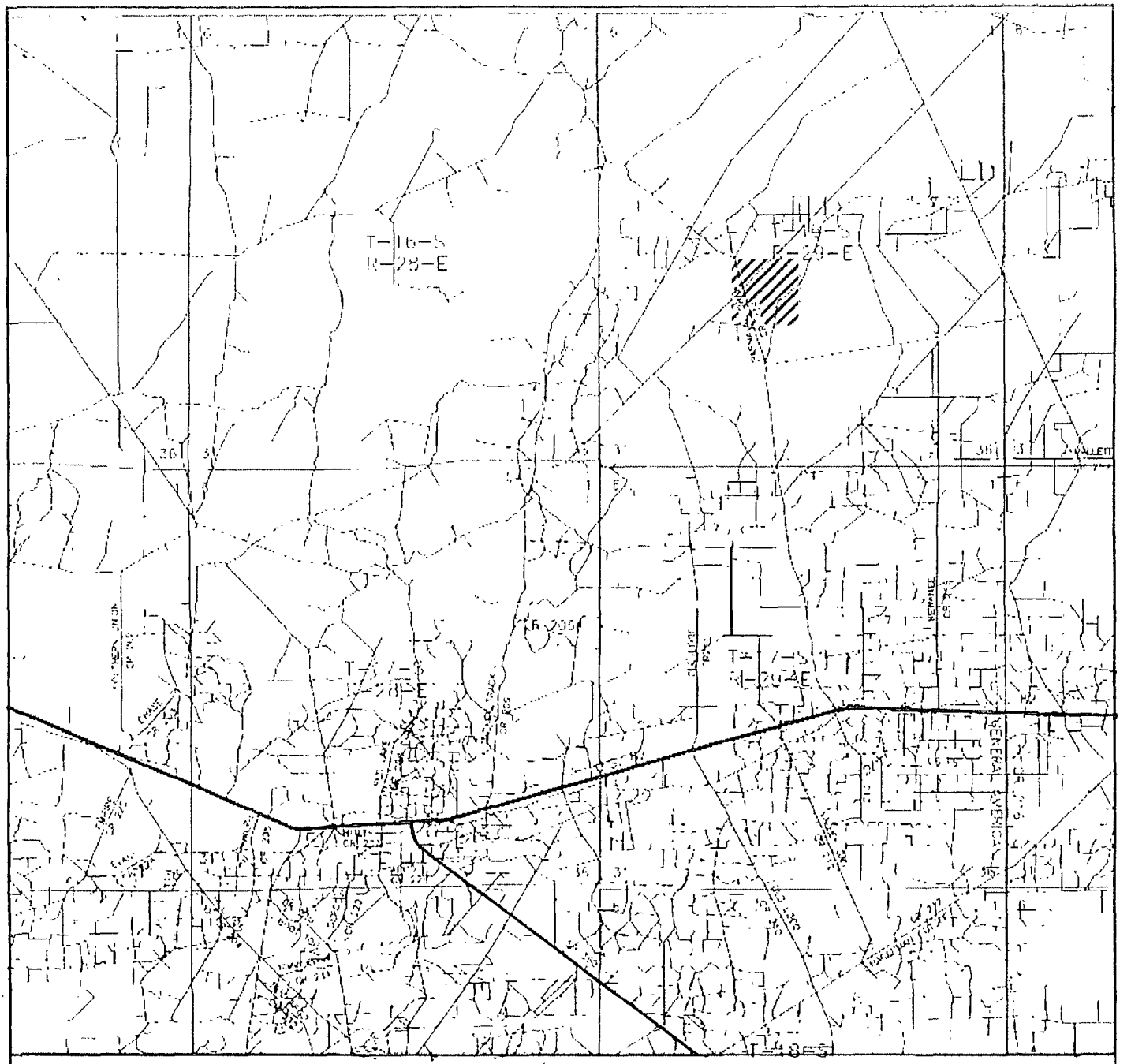
CIMAREX ENERGY CO. OF COLORADO



UTAH "21" FEDERAL COM #2
Located 2380' FSL and 330' FEL
Section 21, Township 16 South, Range 29 East,
N.M.P.M., Eddy County, New Mexico.

Basin Surveys

CIMAREX ENERGY CO. OF COLORADO



UTAH "21" FEDERAL COM #2
Located 2380' FSL and 330' FEL
Section 21, Township 16 South, Range 29 East,
N.M.P.M., Eddy 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: JW3 19792
Survey Date: 05-22-2008
Scale: 1" = 2 MILES
Date: 06-22-2008

CIMAREX ENERGY CO. OF COLORADO

Application to Drill
Cimarex Energy Co. of Colorado
Utah 21 Federal Com No. 2
Unit I, Section 21
T16S-R29E, Eddy 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 1980' FSL & 330' FEL
BHL 1980' FSL & 330' FWL

2 Elevation above sea level: 3,659 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: Pilot Hole 7500' MD 11514' TVD 7020'

6 Estimated tops of geological markers:

San Andres	2,400'
Abo Shale	5,800'
Lower Abo Dolomite	6,980'
Wolfcamp	7,090'

7 Possible mineral bearing formation:
Abo Oil

8 Proposed Mud Circulating System:

Depth			Mud Wt	Visc	Fluid Loss	Type Mud
0'	to	340'	8.4 - 8.6	28	NC	FW
340'	to	2500'	10.0	30-32	NC	Brine water
2500'	to	7500'	8.4 - 9.5	30-32	NC	FW, brine
6780'	to	MD 11514' TVD 7020'	9.0	28-32	May lose circ	Cut brine

See COA

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.

Proposed drilling Plan
Drill 8¾" hole to 7500' (pilot hole) and cement (see page 2 - Application to Drill). Set whipstock plug @ 6790.' Mill window from 6775' - 6785.' Kick off 6⅛" lateral @ 6780.' Drill 6⅛" hole to MD 11514' and TVD 7020.' Install 4½" Peak Completion Assembly, 600' of BTC from TOL through the curve and LTC thereafter to TD. Lateral length 4616.' Strata-Pak RSBP @ 6675' (TOL).

Revised Drilling Plan

Utah 21 Federal Com No. 2

Cimarex Energy Co. of Colorado

SHL 2380 FSL & 330 FEL

BHL 1980 FSL & 330 FWL

21-16S-29E

Eddy County, NM

Proposed drilling Plan

Drill 8¾" hole to 7500' (Pilot hole) and cement. Set whipstock plug @ 6790.' Mill window from 6775' to 6785.' Kick off 6⅛" lateral @ 6780.' Drill 6⅛" hole to MD 11531' and TVD 7020.' Install 4½" Peak Completion Assembly. 4½" BTC casing from TOL @ 6675' to EOC @ 7088' and 4½" LTC from 7088' to TD @ MD 11531' and TVD 7020.' Lateral length 4632' and liner length 4856.'

Casing ← See COA

Hole Size	Depth			Casing OD		Weight	Thread	Collar	Grade
17½"	0'	to	340'	New	13⅜"	48#	8-R	STC	H-40
12¼"	0'	to	2500'	New	9⅝"	40#	8-R	LTC	J-55
8¾"	0'	to	7500'	New	7"	26#	8-R	LTC	P-110
6⅛"	6675'	to	7088'	New	4½"	11.6#	8-R	BTC	P-110
6⅛"	7088'	to	11531'	New	4½"	11.6#	8-R	LTC	P-110

Cement ← See COAs

Surface
Lead: 125 sx Prelmium Plus + 1% $CaCl_2$ + 0.125# Poly-e-flake (wt 12.5, yld 1.97)
Tail: 220 sx Premium Plus + 2% $CaCl_2$ (wt 14.8, yld 1.35)
TOC Surface

Intermediate
Lead: 415 sks Interfill C + 0.125# Poly-E-Flake (wt 11.9, yld 2.45)
Tail: 215 sks Premium Plus + 1% $CaCl_2$ (wt 14.8, yld 1.34)
TOC Surface

Pilot Hole
Lead: 270 sx Interfill H + 0.1% HR-7 + 0.125# Poly-e-flake (wt 11.9, yld 2.49)
Tail: 170 sx Super H + 0.5% Halad-344 + 0.4% CFR-3 + 1# Salt + 5# Gilsonite + 0.125# Poly-e-flake + 0.35% HR-7 (wt 13.2, yld 1.61)
TOC 2300

Lateral
No cement needed.

Fresh water zones will be protected by setting 13⅜" casing at 340' and cementing to surface. Hydrocarbon zones will be protected by setting 9⅝" casing at 2500' and cementing to surface, and by setting 7" casing at 7500' and cementing to 2300.'

11 Pressure control Equipment:

Exhibit "E". 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# annular type preventer. 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. BOP will be nippled up and 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.

We are requesting a variance for testing the 13⅜" surface casing from Onshore Order No. 2, which states that all casing strings below the conductor shall be pressure tested to 0.22 psi per foot or 1500 psi, whichever is greater, but not to exceed 70% of the manufacturer's stated maximum internal yield. We are requesting to test the 13⅜" casing to 1000 psi using rig pumps. The BOP will be tested to 3000 psi by an independent service company.

12 Testing, Logging and Coring Program:

A. Mud logging 2 man unit from 5500' to TD
B. Electric logging program: CNL / LDT / CAL / GR, DLL / CAL / GR
C. No DSTs or cores are planned at this time.

13 Potential Hazards:

No abnormal pressures or temperatures are expected. The area has a potiential H_2S hazard. An H_2S drilling plan is attached. Adequate flare lines will be installed off the mud / gas separator where gas may be flared safely. All personnel will be familiar with all aspects of safe operation of equipment being used.

Estimated BHP **2300 psi** Estimated BHT **110°**

14 Road and location construction will begin after BLM approval of APD. Anticipated spud date as soon as approved.
Drilling expected to take 10-15 days
If production casing is run an additional 30 days will be required to complete and construct surface facilities.

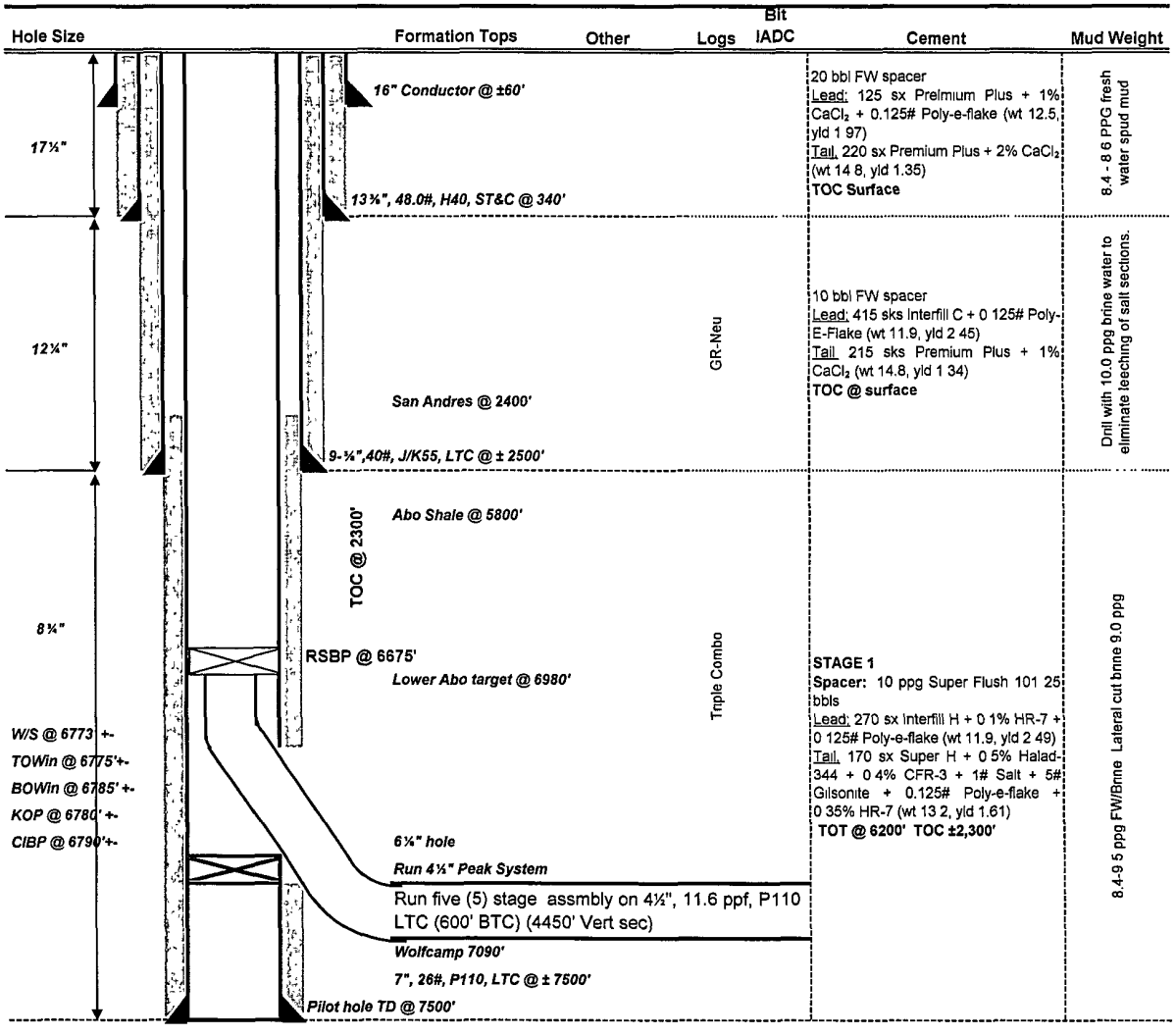
15 Other Facets of Operations:

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

DRILLING PROGNOSIS
Cimarex Energy Company

3/17/2008

Well:	**Utah 21 Fed #2H**	**Lse Serial #:**	
Location:	21-16S-29E	**Field:**	
County, State	**Eddy County, NM**	**Objective:**	
Surface Location:	1980 FS, 330 FE	**TVD/MD:**	7020 / 11519
Bottomhole Loc:	1980 FS, 330 FW	**Cementing:**	Halliburton
E-Mail:		**Mud:**	
Wellhead:		**Motors:**	
		OH Logs	Halliburton
		Rig:	Key 880
Xmas Tree		**Offset Wells:**	
Tubing:			
Superintendent:	**Dee Smith**		
Engineer:	**Mark Audas**		



NOTES:

Install wellhead on 13⅜" and NU BOP. Test this installation to 1000 psi w/ rig pump. Then after setting 9⅝" in slips and installing the csg spool, NU BOP (5M) w/ rotating head and test BOP to 5M w/ test unit. Test casing.

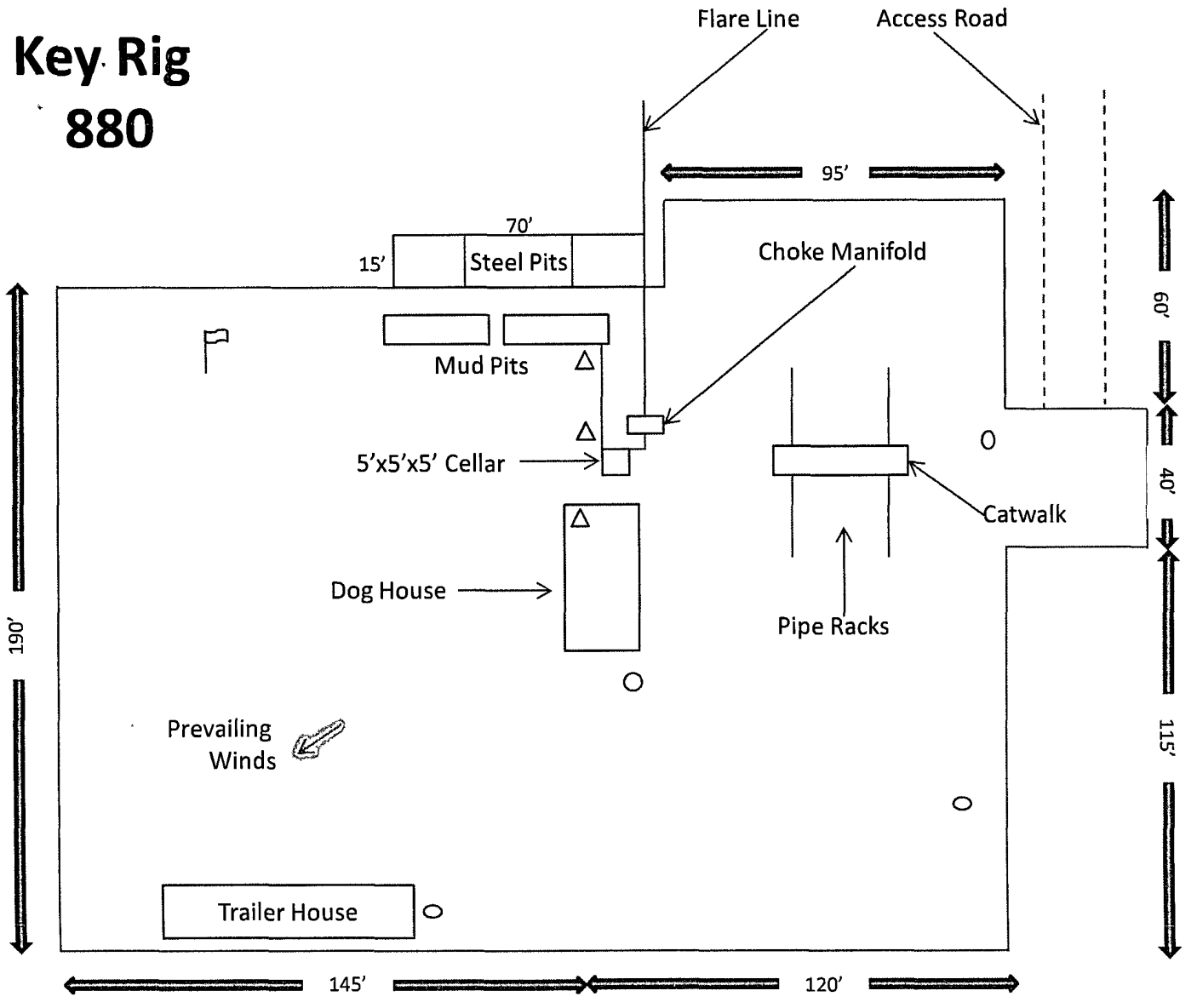
Cement volumes for surface csg include a 100% excess in the open hole section. If drilling conditions deem necessary, fluid caliper hole and adjust volumes.

Cement volumes for intermediate csg include a 70% excess in the open hole section. If drilling conditions deem necessary, fluid caliper hole and adjust volumes.

Cement volumes for production csg include a 25% excess in the open hole section. Adjust volumes after caliper + 25% excess.

ALL INVOICES ARE TO SHOW CIMAREX ENERGY AS OPERATOR AND USE CIMAREX ACCOUNTING CODES.

Key Rig 880



Wind Direction Indicators (wind sock or streamers)

△ H2S Monitors (alarms at bell nipple and shale shaker)

○ Briefing Areas

○ Remote BOP Closing Unit

Exhibit D – Rig Diagram
Utah 21 Federal Com No. 2
Cimarex Energy Co. of Colorado
21-16S-29E
SHL 1980' FSL & 330' FEL
BHL 1980' FSL & 330' FWL
Eddy County, NM

SR & A

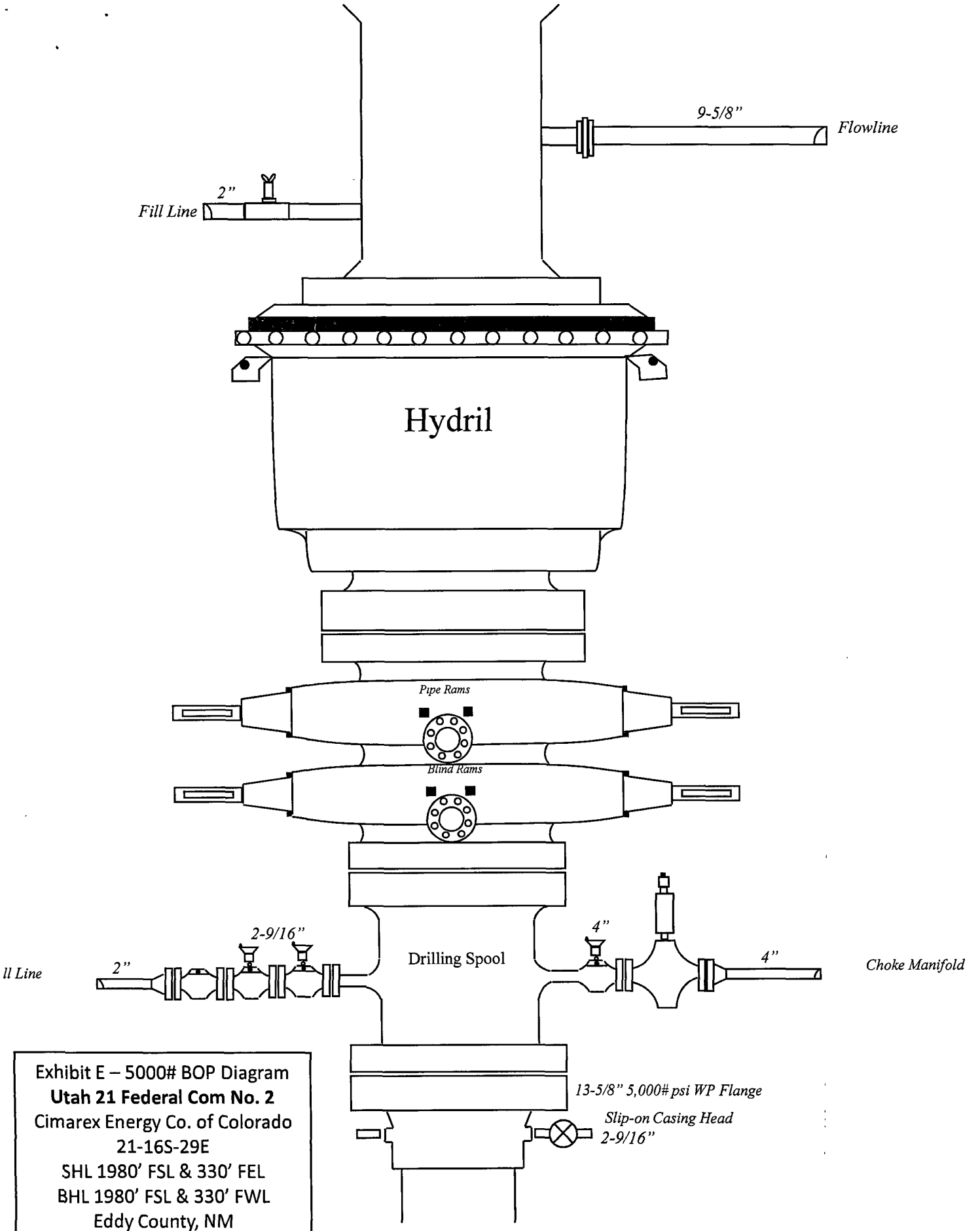


Exhibit E – 5000# BOP Diagram
Utah 21 Federal Com No. 2
Cimarex Energy Co. of Colorado
21-16S-29E
SHL 1980' FSL & 330' FEL
BHL 1980' FSL & 330' FWL
Eddy County, NM

DRILLING OPERATIONS
CHOKE MANIFOLD
5M SERVICE

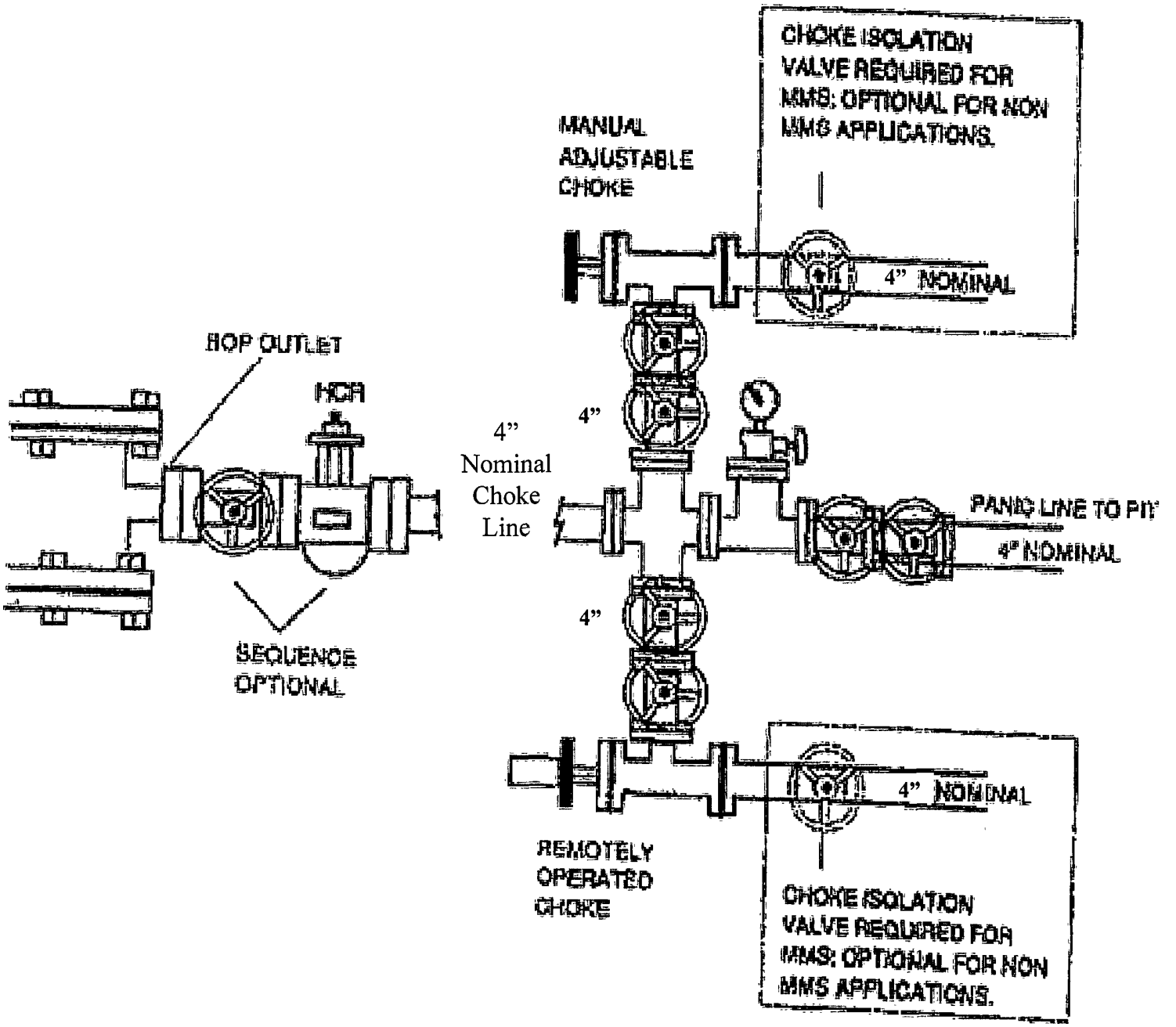


Exhibit E-1 – Choke Manifold Diagram
Utah 21 Federal Com No. 2
Cimarex Energy Co. of Colorado
21-16S-29E
SHL 1980' FSL & 330' FEL
BHL 1980' FSL & 330' FWL
Eddy County, NM

Hydrogen Sulfide Drilling Operations Plan
Cimarex Energy Co. of Colorado
Utah 21 Federal Com No. 2
Unit I, Section 21
T16S-R29E, Eddy County, NM

1 All Company and Contract personnel admitted on location must be trained by a qualified H_2S safety instructor to the following:
   A. Characteristics of H_2S
   B. Physical effects and hazards
   C. Proper use of safety equipment and life support systems.
   D. Principle and operation of H_2S detectors, warning system and briefing areas.
   E. Evacuation procedure, routes and first aid.
   F. Proper use of 30 minute pressure demand air pack.

2 H_2S Detection and Alarm Systems:
   A. H_2S 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 (H_2S 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 or cores are planned at this time.

8 Drilling contractor supervisor will be required to be familiar with the effects H_2S has on tubular goods and other mechanical equipment.

9 If H_2S 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 H_2S scavengers if necessary.

Surface Use Plan
Cimarex Energy Co. of Colorado
Utah 21 Federal Com No. 2
Unit I, Section 21
T16S-R29E, Eddy 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 82 and Barnival Rd, go North for approx 5.0 miles to lease road. On lease road, go Northeast for 0.7 miles to proposed lease road.

2 Planned Access Roads: 767.5' of on-lease access road is proposed.

3 Location of 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 stored in steel containment pits and then hauled to a state-approved disposal facility.

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.

C. Mud pits in the closed circulating system will be steel pits and the cuttings will be stored in steel containment pits.

D. Cuttings will be stored in steel pits until they are hauled to a state-approved disposal facility.

E. If the well is a producer, 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 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.

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.

Operator Certification Statement
Cimarex Energy Co. of Colorado
Utah 21 Federal Com No. 2
Unit I, Section 21
T16S-R29E, Eddy County, NM

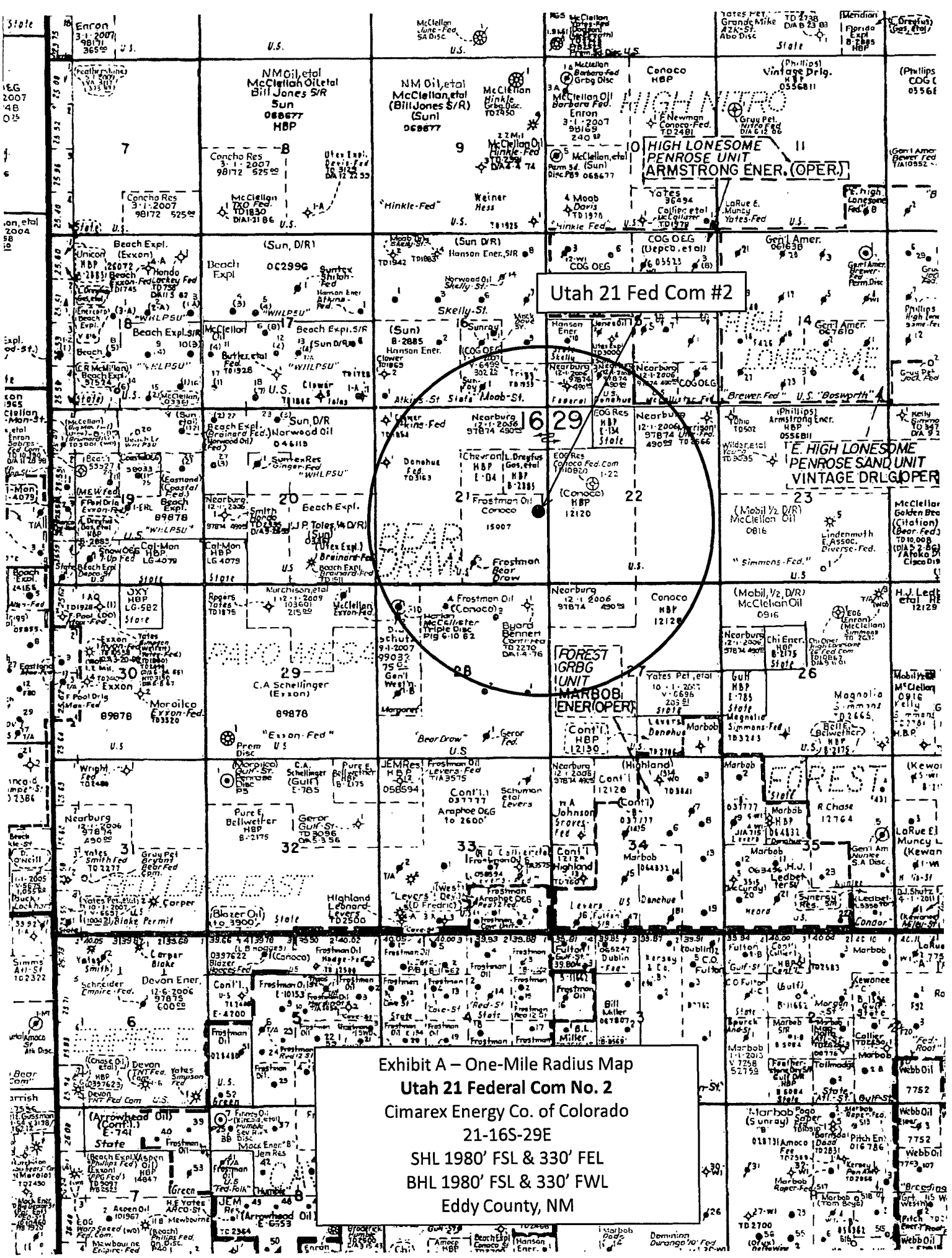
Operator's Representative
Cimarex Energy Co. of Colorado
P.O. Box 140907
Irving, TX 75014
Office Phone: (972) 443-6489
Zeno Farris

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: March 17, 2008

TITLE: Manager Operations Administration


Utah 21 Fed Com #2
Exhibit A – One-Mile Radius Map
Utah 21 Federal Com No. 2
Cimarex Energy Co. of Colorado
21-16S-29E
SHL 1980' FSL & 330' FEL
BHL 1980' FSL & 330' FWL
Eddy County, NM

PECOS DISTRICT
CONDITIONS OF APPROVAL

OPERATOR'S NAME:	Cimarex Energy Co
LEASE NO.:	NM-97874
WELL NAME & NO.:	2-Utah 21 Federal Com
SURFACE HOLE FOOTAGE:	2380' FSL & 330' FEL
BOTTOM HOLE FOOTAGE	1980' FSL & 330' FWL
LOCATION:	Section 21, T. 16 S., R 29 E., NMPM
COUNTY:	Eddy County, New Mexico

TABLE OF CONTENTS

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

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 Pecos District Conditions of Approval, and the standard stipulation for permanent resource roads. The location also needs to have a berm placed around the entire location to prevent any spills or leaks from being deposited in the nearby playa.

Utah 21 Federal Com. # 2: Closed Loop V- Door East

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. Closed Loop System

Utah 21 Federal Com. # 2: Closed Loop V- Door East

Tanks are required for drilling operations: No Pits.

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

D. FEDERAL MINERAL MATERIALS PIT

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.

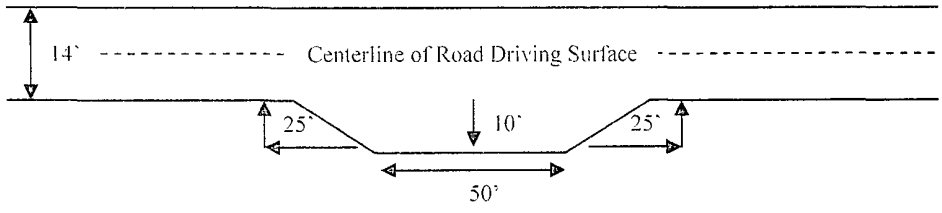
The Authorized Officer reserves the right to require surfacing of any portion of the access road at any time deemed necessary. Surfacing may be required in the event the road deteriorates, erodes, road traffic increases, or it is determined to be beneficial for future field development. The surfacing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

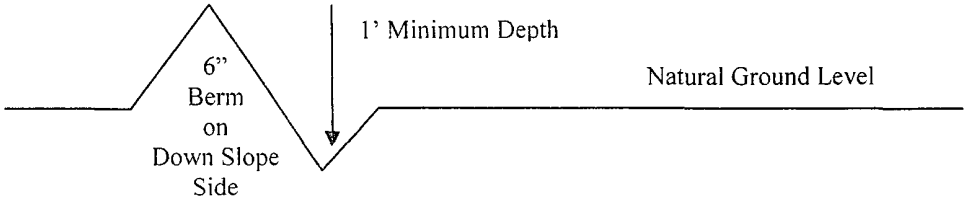


Drainage

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:

400 foot road with 4% road slope: $\frac{400'}{4\%} + 100' = 200'$ 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.

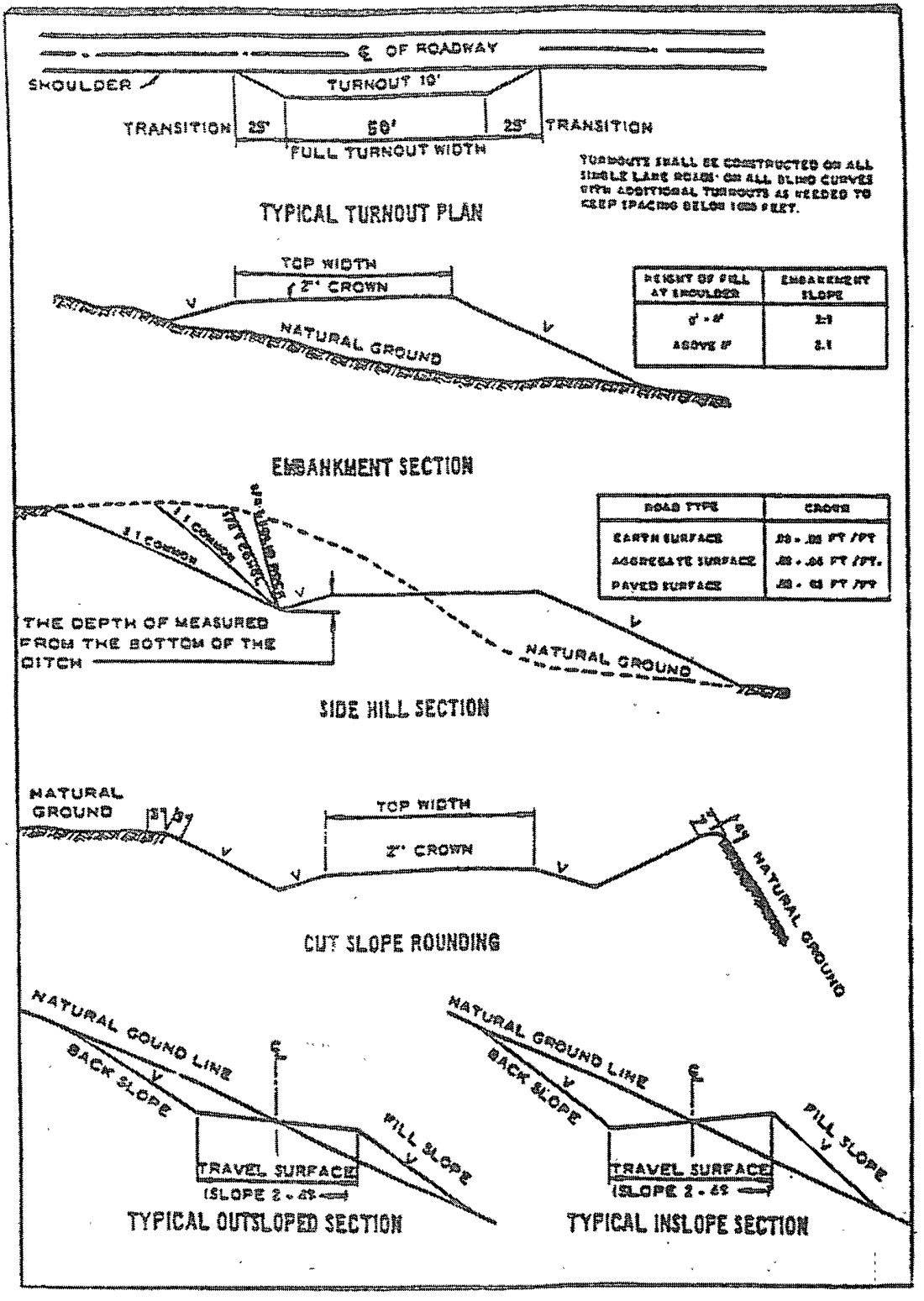
A gate shall be constructed and fastened securely to H-braces.

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

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

1. **Although Hydrogen Sulfide has not been reported in this section, it is always a potential hazard. It has been reported in Section 12. The Operator states there is potential for encountering Hydrogen Sulfide and has attached a Hydrogen Sulfide (H2S) Operations Drilling Plan. If Hydrogen Sulfide is encountered please report measured amounts and formations to the BLM.**

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

Changes to the approved APD casing and cement program require submitting a sundry and receiving approval prior to work. Failure to obtain approval prior to work will result in an Incident of Non-Compliance being issued.

Centralizers required on surface casing per Onshore Order 2.III.B.1.f.

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 for all casing strings. Provide compressive strengths including hours to reach required 500 pounds compressive strength prior to cementing each casing string. See individual casing strings for details regarding lead cement slurry requirements.

No pea gravel permitted for remedial or fall back remedial without prior authorization from the BLM engineer.

Possible lost circulation in the Grayburg and San Andres Formations
Possible high pressure gas bursts from the Wolfcamp Formation – applicable to pilot hole

1. The 13-3/8 inch surface casing shall be set at **approximately 340 feet and above the salt** and cemented to the surface. **If the salt is encountered at a depth less than 340 feet, surface casing should be set 25 feet above the top of the salt and the operator should then switch over to drilling with brine.**

    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 is to include the lead cement slurry.

    c. Wait on cement (WOC) time for a remedial job will be a minimum of 4 hours after bringing cement to surface or 500 pounds compressive strength, whichever is greater.

    d. If cement falls back, remedial cementing will be done prior to drilling out that string.

2. The minimum required fill of cement behind the 9-5/8 inch intermediate casing is:

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

Formation below the 9-5/8" shoe to be tested according to Onshore Order 2.III.B.1.i.

3. The minimum required fill of cement behind the 7 inch production casing is:

    ☒ Cement should tie-back at least **200** feet into previous casing string. **Operator shall provide method of verification. Additional cement may be required to reach required tie-back.**

Formation below the kick off point to be tested according to Onshore Order 2.III.B.1.i.

Tag cement at bottom of pilot hole and report on subsequent report.
NOTE: Pilot hole will require proper plug when well is plugged.

4. The minimum required fill of cement behind the 4-1/2 inch production casing is:

   ☒ Not required as operator is using Peak Iso-Pak liner. **Seal on Peak Systems Iso-Pack liner is to be tested per Onshore Oil and Gas Order 2.III.B.1.b. Please call BLM for witness of seal test.**

5. 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.

   e. A variance to test only the surface casing to the reduced pressure of **1000** psi with the rig pumps is approved. **The BOP will be tested to 3000 psi by an independent service company.**

D. DRILL STEM TEST

If drill stem tests are performed, Onshore Order 2.III.D shall be followed.

WWI 9/09/08

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

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.

The 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.

Seed Mixture 4, for Gypsum 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 seed mixture will be evenly and uniformly planted over the disturbed area (smaller/heavier seeds have a tendency to drop the bottom of the drill and are planted first). The holder shall take appropriate measures to ensure this does not occur. Where drilling is not possible, seed will be broadcast and the area shall be raked or chained to cover the seed. When broadcasting the seed, the pounds per acre are to be doubled. The seeding will be repeated until a satisfactory stand is established as determined by the authorized officer. Evaluation of growth will not be made before completion of at least one full growing season after seeding.

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

Species	lb/acre
Alkali Sacaton (Sporobolus airoides)	1.0
DWS⊆ Four-wing saltbush (Atriplex canescens)	5.0

⊆DWS: DeWinged Seed

*Pounds of pure live seed:

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

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.