

CMD :
OG5SECT

ONGARD
INQUIRE LAND BY SECTION

08/15/06 11:12:28
OGOEEM -TPEL
PAGE NO: 1

Sec : 13 Twp : 22S Rng : 25E Section Type : NORMAL

2 43.00 Federal owned	1 43.12 Federal owned	B 40.00 Federal owned	A 40.00 Federal owned
3 42.42 Federal owned	4 42.54 Federal owned	G 40.00 Federal owned	H 40.00 Federal owned A A
L 40.00 Fee owned A A	K 40.00 Fee owned	J 40.00 Federal owned	I 40.00 Federal owned
M 40.00 Fee owned	N 40.00 Fee owned A	O 40.00 Federal owned	P 40.00 Federal owned

UNITED
DEPARTMENT
BUREAU OF LAI

If earthen pits are used in
association with the drilling of this
well, an OCD pit permit must be
obtained prior to pit construction.

Dist. 2
REPLICATE
Instructions on
side 110

FORM APPROVED
OMB NO. 1004-0136
Expires: February 28, 1995

APPLICATION FOR PERMIT TO DRILL OR DEEPEN

1a. TYPE OF WORK DRILL ☒ DEEPEN ☐		6. IF INDIAN, ALLOTES OR TRIBE NAME	
1b. TYPE OF WELL OIL ☐ GAS ☒ WELL WELL OTHER ZONE ☒ MULTIPLE ☐ ZONE		7. UNIT AGREEMENT NAME Pending	
2. NAME OF OPERATOR Cimarex Energy Co. 215099 34788		8. FARM OR LEASE NAME, WELL NO. McGruder Hill 13 Federal No. 3	
3. ADDRESS AND TELEPHONE NO. P.O. Box 140907 Irving TX 75014 972-401-3111		9. API WELL NO. 30-015- 34778	
4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.) SHL: 2445' FSL & 260' FWL BHL: 1980' FNL & 1470' FWL 25 miles West and 4 miles South of Carlsbad, NM		10. FIELD AND POOL, OR WILDCAT Happy Valley; Morrow (Gas) 78060	
11. SEC. T., R., M., BLOCK AND SURVEY OR AREA Sec. 13 T22S R25E		12. COUNTY OR PARISH Eddy	
13. STATE NM		14. DISTANCE IN MILES AND DIRECTION FROM NEAREST CORNER POST TO PROPOSED LOCATION 25 miles West and 4 miles South of Carlsbad, NM	
15. DISTANCE FROM PROPOSED LOCATION TO NEAREST PROPERTY OR LEASE LINE, T.O. (Also to nearest drlg. unit line, if any) 260'		16. NO. OF ACRES IN LEASE 320	
17. NO. OF ACRES ASSIGNED TO THIS WELL 320		18. DISTANCE FROM PROPOSED LOCATION TO NEAREST WELL, DRILLING COMPLETED, OR APPLIED FOR, ON THIS LEASE, FT. 2169'	
19. PROPOSED DEPTH 11750'		20. ROTARY OR CABLE TOOLS Rotary	
21. ELEVATIONS (Show whether DF, RT, GR, etc.) 3438' GR		22. APPROX. DATE WORK WILL START 12-01-05	

PROPOSED CASING AND CEMENTING PROGRAM

SIZE OF HOLE	GRADE, SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
17-1/2" WITNESS	H-40 13 3/8"	48 #	650'	530 sx circulate
12-1/4"	J-55 9 5/8"	40 #	2200'	1200 sx circulate
7-7/8"	P-110 5 1/2"	17 #	12000'	2140 sx TOC 2700'

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 the 13 3/8" surface casing and BOP testing from Onshore Order No. 2, which states all casing strings below the conductor shall be pressure tested to .22 psi per foot or 1500#, whichever is greater, but not to exceed 70% of the manufacturer's stated maximum internal yield. During the running of the surface pipe and the drilling of the intermediate hole we do not anticipate any pressures greater than 1000#, and we are requesting a variance to test the 13 3/8" casing and BOP system to 1000# psi and use rig pumps instead of an independent service company.

IN ABOVE SPACE, DESCRIBE PROPOSED PROGRAM: If proposal is to deepen, give data on present productive zone and proposed new productive zone. If proposal is to drill or deepen directionally, give pertinent data on subsurface locations and measured and true vertical depths. Give blowout preventer program, if any.

SIGNED Zeno T. Amis TITLE Mgr. Ops. Admin DATE 11-29-05

PERMIT No. _____ APPROVAL DATE _____

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:

APPROVED BY /s/ Tony J. Herrell TITLE FIELD MANAGER DATE APR 11 2006

APPROVAL SUBJECT TO GENERAL REQUIREMENTS AND SPECIAL STIPULATIONS ATTACHED

*See Instructions On Reverse Side

APPROVAL FOR 1 YEAR

DISTRICT I

1625 N. FRENCH DR., MORRIS, NM 88240

DISTRICT II

1391 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 JUNE 10, 2003

Submit to Appropriate District Office

State Lease - 4 Copies

Fee Lease - 3 Copies

WELL LOCATION AND ACREAGE DEDICATION PLAT

XX AMENDED REPORT

API Number	Pool Code 78060	Pool Name Happy Valley; Morrow (Gas)
Property Code	Property Name McGRUDER 13 FEDERAL	Well Number 3
OGRID No. 215099	Operator Name CIMAREX ENERGY COMPANY	Elevation 3440'

Surface Location

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
L	13	22-S	25-E		2495	SOUTH	260	WEST	EDDY

Bottom Hole Location If Different From Surface

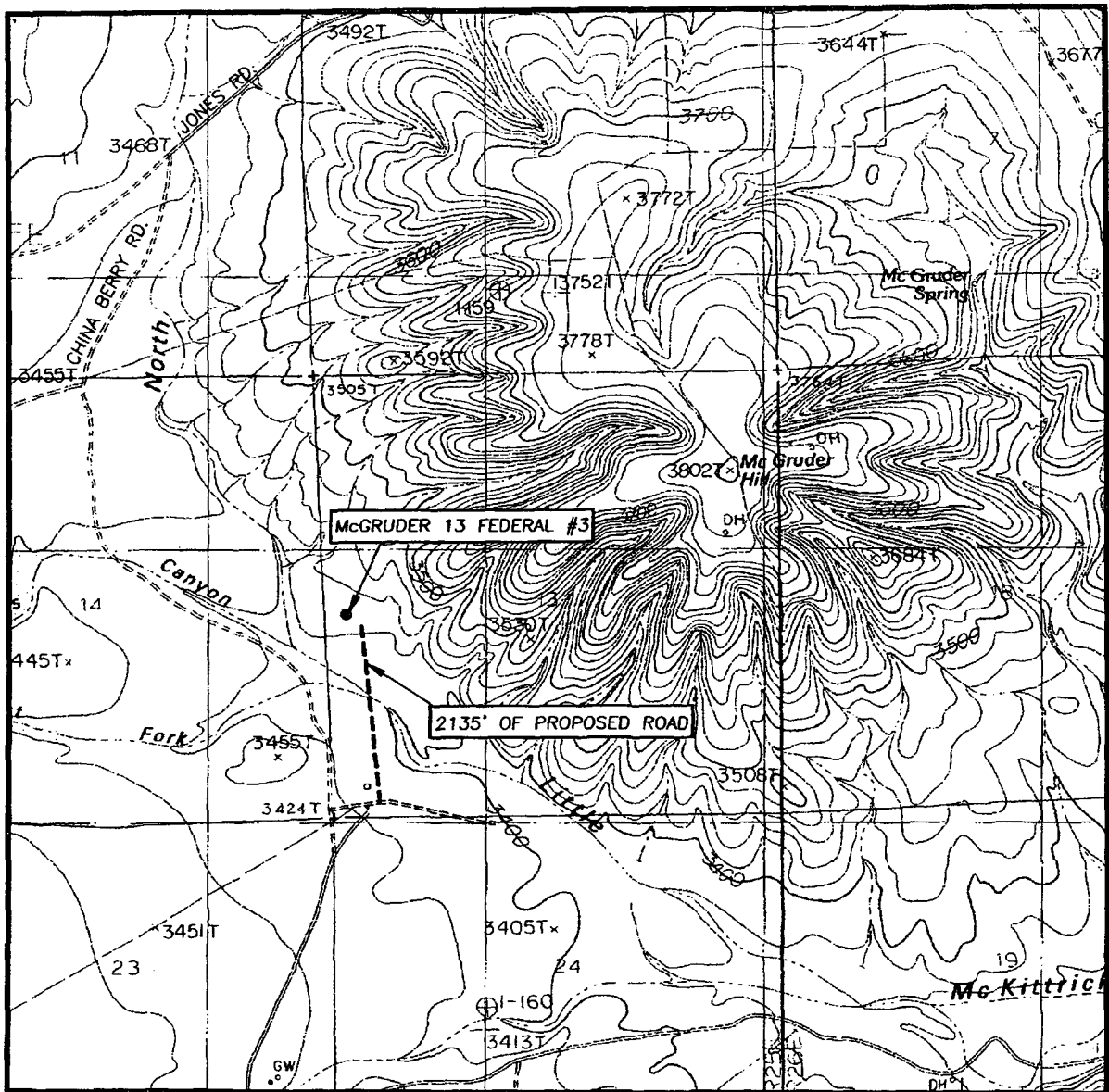
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
F	13	22-S	25-E		1980	NORTH	1470	WEST	EDDY

Dedicated Acres	Joint or Infill	Consolidation Code	Order No.
320	231.08		

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

NM-112898 NM-110339 BOTTOM HOLE Y=506847.9 N X=493891.7 E 1470' GR AZ = 54°00'41" H.DIST. = 1432.8 S.L. SEE DETAIL 280' 2495' 1777' 1924' 281' 1280' DETAIL 3433.2' 3461.9' 600' 3426.7' 3432.6' B.H. McGruder Hill 13 Fed Com #3 McGruder Hill 13 No. 1 State GEODEIC COORDINATES NAD 27 NME SURFACE LOCATION Y=506006.0 N X=492732.3 E LAT. = 32°23'28.04" N LONG. = 104°21'24.76" W	OPERATOR CERTIFICATION I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief. <i>Zeno Farris</i> Signature Zeno Farris Printed Name Mgr Operations Admin Title November 30, 2005 Date 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 supervision, and that the same is true and correct to the best of my belief. AUGUST 16, 2005 Date Surveyed <i>GARY E. FISHER</i> Signature GARY E. FISHER Professional Surveyor 8/23/05 8/23/05 Certificate No. GARY E. FISHER 12841
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LOCATION VERIFICATION MAP



SCALE: 1" = 2000'

CONTOUR INTERVAL:
CARLSBAD WEST, N.M. - 20'

SEC. 13 TWP. 22-S RGE. 25-E

Exhibit C

SURVEY N.M.P.M.

COUNTY EDDY

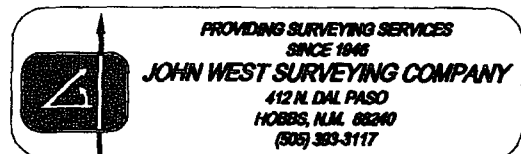
DESCRIPTION 2445' FSL & 260' FWL

ELEVATION 3438'

OPERATOR CIMAREX ENERGY COMPANY

LEASE McGRUDER 13 FEDERAL

U.S.G.S. TOPOGRAPHIC MAP
CARLSBAD WEST, N.M.



Cimarex Energy Co.
600 E. Las Colinas Blvd.
Suite 1100
Irving, Texas 75039
PHONE 972.401.0752
FAX 972.401.3110



STATEMENT ACCEPTING RESPONSIBILITY FOR OPERATIONS

Bureau of Land Management
2909 West Second Street
Roswell, New Mexico 88201
Attn: Ms. Linda Askwig

Cimarex Energy Co. accepts all applicable terms, conditions, stipulations and restrictions concerning operations conducted on the leased land, or portion thereof, as described below:

Lease No.: NM-112898 – W/2 NW/4 Sec 13-T22S-R25E, containing 80 acres
Lease No.: NM-110339 – E/2 NW/4 Sec 13-T22S-R25E, containing 80 acres
Lease No.: Fee – SW/4 Sec 13-T22S-R25E, containing 160 acres

County: Eddy County, New Mexico

Formation (S): Morrow

Bond Coverage: Nationwide BLM Bond

BLM Bond File No.: COB000011

Authorized Signature: Zeno Farris
Representing Cimarex Energy Co.

Name: Zeno Farris

Title: Manager, Operations Administration

Date: November 29, 2005

Application to Drill

Cimarex Energy Co.
McGruder Hill 13 Federal Com No. 3
Unit L Section 13
T22S - R25E 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: 2445' FSL & 260' FWL
BHL: 1980' FNL & 1450' FWL
- 2 Elevation above sea level: GR 3438'
- 3 Geologic name of surface formation: Quaternary 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: 12000'
- 6 Estimated tops of geological markers:

Capitan	573
Delaware	2119
Bone Spring	4510
Wolfcamp	8233
Cisco-Canyon	9074
Strawn	9648
Atoka	10037
Morrow	10433
- 7 Possible mineral bearing formation:

Strawn	Gas
Morrow	Gas
- 8 Casing program:

Hole Size	Interval	Casing OD	Weight	Thread	Collar	Grade
17 1/2"	0-650'	13 3/8"	48#	8-R	ST&C	H-40
12 1/4"	0-2200'	9 5/8"	40#	8-R	LT&C	J-55
7 7/8"	0-12050'	5 1/2"	17#	8-R	LT&C	P-110

Application to Drill

Cimarex Energy Co.
McGruder Hill 13 Federal Com No. 3
Unit L Section 13
T22S - R25E Eddy County, NM

9 Cementing & Setting Depth:

13 3/8"	Surface	Set 650' of 13 3/8" J-55 48# ST&C casing. Cement with 530 Sx. Of Class "C" cement + additives, circulate cement to surface.
9 5/8"	Intermediate	Set 2200' of 9 5/8" J-55 40# LT&C casing. Cement lead with 1000 Sx. Of Class POZ/C Cement + additives, tail with 200 Sx. Of Class "C" + additives, circulate cement to surface.
5 1/2"	Production	Set 12050' of 5 1/2" P-110 17# LT&C casing. Cement in two stages, first stage cement with 1020 Sx. of Class POZ/C Cement + additives. Second stage cement with 1120 Sx of Class "C" Estimated top of cement 2700'.

10 Pressure control Equipment:

Exhibit "E". A 13 3/8" 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 nipped up on the 9 5/8" casing and 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.

11 Proposed Mud Circulating System:

Depth	Mud Wt	Viscosity	Fluid Loss	Type Mud
0 - 650'	8.4 - 8.6	30 - 32	May lose circ.	Fresh water spud mud add paper to control seepage and high viscosity sweeps to clean hole.
650' - 2200'	9.7 - 10.0	28 - 29	May lose circ.	Brine water. <i>FRESH WATER</i> Add paper as needed to control seepage and add lime to control pH (9-10). Use high viscosity sweeps to clean hole.
2200' - 8300'	8.4 - 9.9	28 - 29	NC	Brine water. Paper for seepage. Lime for PH (9 - 9.5)
8300' - 10000'	8.45 - 8.9	28 - 29	NC	Cut brine. Caustic for pH control.
10000' - 12050'	8.9 - 9.7	29 - 45	NC	XCD Polymer mud system.

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.
McGruder Hill 13 Federal Com No. 3
Unit L Section 13
T22S - R25E Eddy County, NM

12 Testing, Logging and Coring Program:

- A. Mud logging program: One-man unit from 8000' 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 potential H2S hazard. An H2S 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 4000 PSI, estimated BHT 175.

14 Anticipated Starting Date and Duration of Operations:

Road and location construction will begin after BLM approval of APD. Anticipated spud date as soon as approved. Drilling expected to take 35 - 45 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. The Morrow pay will be perforated and stimulated. The well will be tested and potentialized as a gas well.

Surface Use Plan

Cimarex Energy Co.
McGruder Hill 13 Federal Com No. 3
Unit L Section 13
T22S - R25E Eddy County, NM

- 1 Existing Roads: Area maps, Exhibit "B" is a reproduction of Lea 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 intersection of Co Rd #429 (McKittrick Rd) and Co Rd #428 (China Berry Rd), go North on Co Rd #428 approx 0.8 miles. Turn right (East) and go approx 0.1 miles to a proposed road survey. Follow proposed road survey approx 0.4 miles North to this location.
- 2 PLANNED ACCESS ROADS: 2135' of proposed road will be constructed.
- 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"

Surface Use Plan

Cimarex Energy Co.
McGruder Hill 13 Federal Com No. 3
Unit L Section 13
T22S - R25E Eddy County, NM

- 4 If, on completion this well is a producer Gruy Petroleum Management Co. will furnish maps and/or plats showing on site facilities or off site facilities if needed. This will be accompanied with 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 disposed of in the reserve pit.
- 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 a 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. Remaining drilling fluids will be allowed to evaporate in the reserve pit until the pit is dry enough for breaking out. In the event that drilling fluids do not evaporate in a reasonable time they will be hauled off by transports and be disposed of at a state approved disposal facility. Later pits will be broken out to speed drying. Water produced during testing will be put in reserve pits. Any oil or condensate produced will be stored

8 ANCILLARY FACILITIES:

- A. No camps or airstrips to be constructed.

Surface Use Plan

Cimarex Energy Co.
McGruder Hill 13 Federal Com No. 3
Unit L Section 13
T22S - R25E Eddy County, NM

9 WELL SITE LAYOUT

- A. Exhibit "D" shows location and rig layout.
- B. This exhibit indicates proposed location of reserve and trash pits; and living facilities.
- C. Mud pits in the active circulating system will be steel pits and the reserve pit is proposed to be unlined, unless subsurface condition encountered during pit construction indicate that lining is needed for lateral containment of fluids.
- D. If needed, the reserve pit is to be lined with PVC or polyethylene line. The pit liner will be 6 mils thick. Pit liner will extend a minimum, 2'00" over the reserve pits dikes where the liner will be anchored down.
- E. The reserve pit will be fenced on three sides with four strands of barbed wire during drilling and completion phases. The fourth side will be fenced after all drilling operations have ceased. If the well is a producer, the reserve pit fence will be torn down. The reserve pit 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 reserve pit will start in a timely manner after all drilling operations cease. The type of reclamation will depend on whether the well is a producer

However, in either event, the reserve pit will be allowed to dry properly, and fluid removed and disposed of in accordance with Article 7.B as previously noted. The pit 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 recontoured to match the existing terrain. Topsoil will be spread to the extent possible. Revegetation will comply with BLM

Should the well be a producer, the previously noted procedures will apply to those areas which are not required for production facilities.

Surface Use Plan

Cimarex Energy Co.
McGruder Hill 13 Federal Com No. 3
Unit L Section 13
T22S - R25E Eddy County, NM

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 Laurie Joe Kincaid - 68 Chinaberry Road - Carlsbad, NM 88220. 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.

12 OPERATORS REPRESENTATIVE:

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

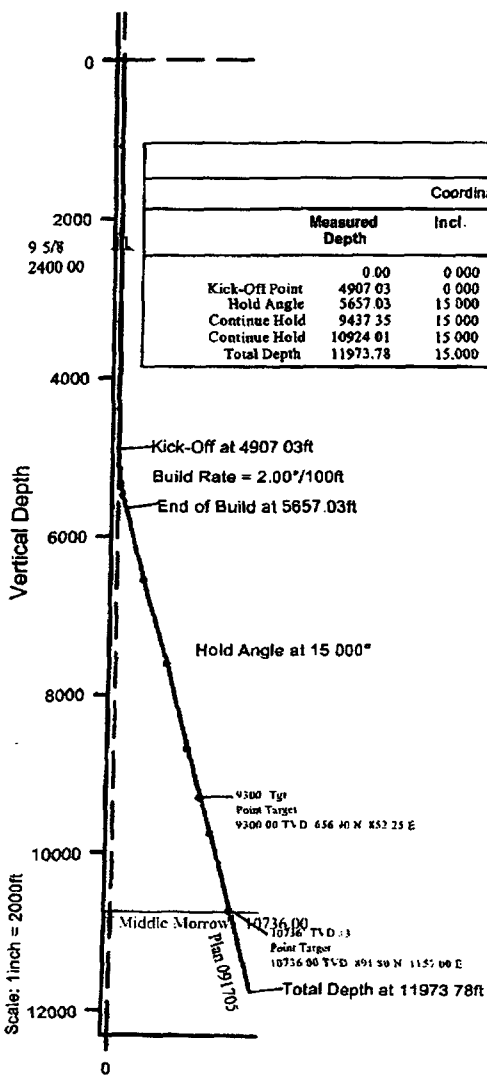
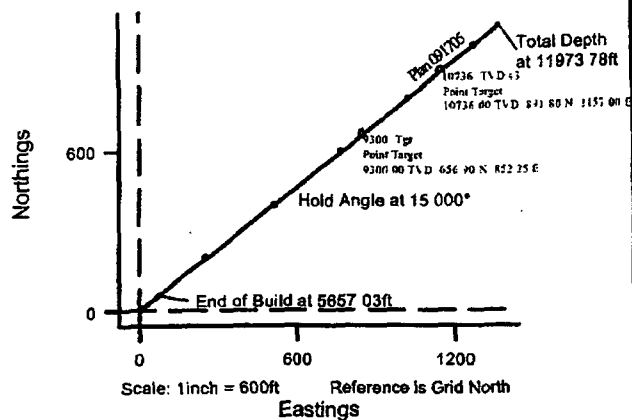
- 13 **CERTIFICATION:** I hereby certify that I, or persons under my direct supervision, have inspected the proposed drill site and access route; that I am familiar with the conditions which currently exist; that the statements made in this plan are to the best of my knowledge, true and correct; and that the work associated with the operations proposed herein will be performed by Gruy Petroleum Management Company 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

DATE: November 29, 2005

TITLE: Manager, Operations Administration

New Mexico
Eddy County
Sec. 13-T22S-R25E
McGruder 13 Fed #3
Plan 091705



Section Azimuth: 52.376° (Grid North)
Vertical Section

Plan 091705 Proposal Data

Coordinate System : NAD27 New Mexico State Planes, Eastern Zone

	Measured Depth	Incl.	Azim	Vertical Depth	Northings	Eastings	Vertical Section	Dogleg Rate
	0.00	0.000	0.000	0.00	0.00 N	0.00 E	0.00	
Kick-Off Point	4907.03	0.000	0.000	4907.03	0.00 N	0.00 E	0.00	0.00
Hold Angle	5657.03	15.000	52.376	5648.49	59.59 N	77.31 E	97.62	2.00
Continue Hold	9437.35	15.000	52.376	9300.00	656.90 N	852.25 E	1076.03	0.00
Continue Hold	10924.01	15.000	52.376	10736.00	891.80 N	1157.00 E	1460.81	0.00
Total Depth	11973.78	15.000	52.376	11750.00	1057.67 N	1372.20 E	1732.51	0.00

McGruder 13 Fed #3 Surface Location

RKB Elevation:	3458.00ft above Mean Sea Level
Ref SW Cor Sec 13:	2445.00 N 260.00 E
Ref Global Coordinates:	505956.10 N 492734.70 E
Ref. Geographical Coordinates:	32° 23' 27.5485" N, 104° 21' 24.7342" W

Plan 091705 Bottom Hole Location

Ref RKB(3438'+20"KB):	11750.00ft
Ref Structure:	11730.00ft
Ref Mean Sea Level:	8292.00ft
Ref. Wellhead:	1057.67 N 1372.20 E
Ref SW Cor Sec 13:	3502.67 N 1632.20 E
Ref Global Coordinates:	507013.77 N 494106.90 E
Ref. Geographical Coordinates:	32° 23' 38.0180" N, 104° 21' 08.7326" W



Cimarex Energy
New Mexico
Eddy County
Sec. 13-T22S-R25E
McGruder 13 Fed #3 - Plan 091705

Revised: 19 September, 2005

Haliburton Sperry-Drilling Proposal Report

20 September, 2005

Data Source: Mr. Zeno Farris
Surface Coordinates: 505956.10 N, 492734.70 E (32° 23' 27.5485" N, 104° 21' 24.7342" W)
Grid Coordinate System: NAD27 New Mexico State Planes, Eastern Zone

Surface Coordinates relative to Center of County: 39856.66 S, 7265.30 W (Grid)
Surface Coordinates relative to SW Cor Sec 13: 2445.00 N, 260.00 E (Grid)
Kelly Bushing Elevation: 3488.00ft above Mean Sea Level
Kelly Bushing Elevation: 20.00ft above Structure

Proposal Ref: pro9303

HALIBURTON
Sperry Drilling Services

HALLIBURTON

Sperry Drilling Services

Cimarex Energy
New Mexico
Eddy County**Proposal Report for Sec. 13-T22S-R25E - McGruder 13 Fed #3 - Plan 091705****Data Source: Mr. Zeno Farris****Revised: 19 September, 2005**

Measure Depth (ft)	Incl. Angle (Deg)	Drift Direction (Deg)	True Vertical Depth (ft)	Vertical Section (ft)	Local Coordinates N-S (ft)	E-W (ft)	Dogleg Severit (°/100ft)	Lease Calls FNL-FSL (ft)	FEL-FWL (ft)	Global Coordinates Grid Y (ft)	Grid X (ft)
0.00	0.000	0.000	0.00	0.00	0.00 N	0.00 E		2445.00 FSL	260.00 FWL	505956.10 N	492734.70 E
9 5/8" Casing											
2400.00	0.000	0.000	2400.00	0.00	0.00 N	0.00 E	0.00	2445.00 FSL	260.00 FWL	505956.10 N	492734.70 E
Kick-Off at 4907.03ft											
4907.03	0.000	0.000	4907.03	0.00	0.00 N	0.00 E	0.00	2445.00 FSL	260.00 FWL	505956.10 N	492734.70 E
5000.00	1.859	52.376	4989.98	1.51	0.92 N	1.19 E	2.00	2445.92 FSL	261.19 FWL	505957.02 N	492735.89 E
5100.00	3.859	52.376	5089.85	6.50	3.97 N	5.15 E	2.00	2448.97 FSL	265.15 FWL	505960.07 N	492738.85 E
5200.00	5.859	52.376	5199.49	14.97	9.14 N	11.85 E	2.00	2454.14 FSL	271.85 FWL	505965.24 N	492746.55 E
5300.00	7.859	52.376	5288.77	26.91	16.43 N	21.31 E	2.00	2461.43 FSL	281.31 FWL	505972.53 N	492756.01 E
5400.00	9.859	52.376	5397.57	42.31	25.83 N	33.51 E	2.00	2470.83 FSL	293.51 FWL	505981.93 N	492768.21 E
5500.00	11.859	52.376	5495.78	81.15	37.33 N	48.43 E	2.00	2482.33 FSL	308.43 FWL	505993.43 N	492783.13 E
5600.00	13.859	52.376	5593.26	83.40	50.92 N	68.06 E	2.00	2495.92 FSL	326.08 FWL	506007.02 N	492800.76 E
End of Build at 5657.03ft											
5657.03	15.000	52.376	5648.49	97.62	59.59 N	77.31 E	2.00	2504.59 FSL	337.31 FWL	506015.69 N	492812.01 E
5700.00	15.000	52.376	5690.00	108.74	66.38 N	86.12 E	0.00	2511.38 FSL	346.12 FWL	506022.48 N	492820.82 E
5800.00	15.000	52.376	5786.59	134.62	82.18 N	106.62 E	0.00	2527.18 FSL	366.62 FWL	506038.28 N	492841.32 E
5900.00	15.000	52.376	5883.18	160.50	97.98 N	127.12 E	0.00	2542.98 FSL	387.12 FWL	506054.08 N	492861.82 E
6000.00	15.000	52.376	5979.78	186.38	113.78 N	147.62 E	0.00	2556.78 FSL	407.62 FWL	506069.88 N	492882.32 E
6100.00	15.000	52.376	6076.37	212.26	129.58 N	168.12 E	0.00	2574.58 FSL	428.12 FWL	506085.68 N	492902.82 E
6200.00	15.000	52.376	6172.96	238.15	145.38 N	188.62 E	0.00	2590.38 FSL	448.62 FWL	506101.48 N	492923.32 E
6300.00	15.000	52.376	6269.55	264.03	161.18 N	209.12 E	0.00	2606.18 FSL	469.12 FWL	506117.28 N	492943.82 E
6400.00	15.000	52.376	6366.15	289.91	176.98 N	229.62 E	0.00	2621.98 FSL	489.62 FWL	506133.08 N	492964.32 E
6500.00	15.000	52.376	6462.74	315.79	192.79 N	250.12 E	0.00	2637.79 FSL	510.12 FWL	506148.88 N	492984.82 E

Measure Depth (ft)	Incl. Angle (Deg)	Drift Direction (Deg)	True Vertical Depth (ft)	Vertical Section (ft)	Local Coordinates N-S (ft)	E-W (ft)	Dogleg Severit (°/100ft)	Lease Calls FNL-FSL (ft)	FEL-FWL (ft)	Global Coordinates Grid Y (ft)	Grid X (ft)
6600.00	15.000	52.376	6559.33	341.67	208.59 N	270.62 E	0.00	2653.59 FSL	530.62 FWL	506164.69 N	493005.32 E
6700.00	15.000	52.376	6655.92	367.56	224.39 N	291.11 E	0.00	2669.39 FSL	551.11 FWL	506180.49 N	493025.81 E
6800.00	15.000	52.376	6752.52	393.44	240.19 N	311.61 E	0.00	2685.19 FSL	571.61 FWL	506196.29 N	493046.31 E
6900.00	15.000	52.376	6849.11	419.32	255.99 N	332.11 E	0.00	2700.99 FSL	592.11 FWL	506212.09 N	493066.81 E
7000.00	15.000	52.376	6945.70	445.20	271.79 N	352.61 E	0.00	2716.79 FSL	612.61 FWL	506227.89 N	493087.31 E
7100.00	15.000	52.376	7042.29	471.08	287.59 N	373.11 E	0.00	2732.59 FSL	633.11 FWL	506243.69 N	493107.81 E
7200.00	15.000	52.376	7138.89	496.96	303.39 N	393.61 E	0.00	2748.39 FSL	653.61 FWL	506259.49 N	493128.31 E
7300.00	15.000	52.376	7235.48	522.85	319.19 N	414.11 E	0.00	2764.19 FSL	674.11 FWL	506275.29 N	493148.81 E
7400.00	15.000	52.376	7332.07	548.73	334.99 N	434.61 E	0.00	2779.99 FSL	694.61 FWL	506291.09 N	493169.31 E
7500.00	15.000	52.376	7428.66	574.61	350.79 N	455.11 E	0.00	2795.79 FSL	715.11 FWL	506306.89 N	493189.81 E
7600.00	15.000	52.376	7525.26	600.49	366.59 N	475.61 E	0.00	2811.59 FSL	735.61 FWL	506322.69 N	493210.31 E
7700.00	15.000	52.376	7621.85	626.37	382.39 N	496.11 E	0.00	2827.39 FSL	756.11 FWL	506338.49 N	493230.81 E
7800.00	15.000	52.376	7718.44	652.26	398.19 N	516.61 E	0.00	2843.19 FSL	776.61 FWL	506354.29 N	493251.31 E
7900.00	15.000	52.376	7815.03	678.14	413.99 N	537.11 E	0.00	2858.99 FSL	797.11 FWL	506370.09 N	493271.81 E
8000.00	15.000	52.376	7911.63	704.02	429.79 N	557.60 E	0.00	2874.79 FSL	817.60 FWL	506385.89 N	493292.30 E
8100.00	15.000	52.376	8008.22	729.90	445.59 N	578.10 E	0.00	2890.59 FSL	838.10 FWL	506401.69 N	493312.80 E
8200.00	15.000	52.376	8104.81	755.78	461.39 N	598.60 E	0.00	2906.39 FSL	858.60 FWL	506417.49 N	493333.30 E
8300.00	15.000	52.376	8201.41	781.67	477.19 N	619.10 E	0.00	2922.19 FSL	879.10 FWL	506433.29 N	493353.80 E
8400.00	15.000	52.376	8298.00	807.55	492.99 N	639.60 E	0.00	2937.99 FSL	899.60 FWL	506449.09 N	493374.30 E
8500.00	15.000	52.376	8394.59	833.43	508.79 N	660.10 E	0.00	2953.79 FSL	920.10 FWL	506464.89 N	493394.80 E
8600.00	15.000	52.376	8491.18	859.31	524.59 N	680.60 E	0.00	2969.59 FSL	940.60 FWL	506480.69 N	493415.30 E
8700.00	15.000	52.376	8587.78	885.19	540.40 N	701.10 E	0.00	2985.40 FSL	961.10 FWL	506496.50 N	493435.80 E
8800.00	15.000	52.376	8684.37	911.08	556.20 N	721.60 E	0.00	3001.20 FSL	981.60 FWL	506512.30 N	493456.30 E
8900.00	15.000	52.376	8780.96	936.96	572.00 N	742.10 E	0.00	3017.00 FSL	1002.10 FWL	506528.10 N	493476.80 E
9000.00	15.000	52.376	8877.55	962.84	587.80 N	762.60 E	0.00	3032.80 FSL	1022.60 FWL	506543.90 N	493497.30 E
9100.00	15.000	52.376	8974.15	988.72	603.60 N	783.10 E	0.00	3048.60 FSL	1043.10 FWL	506559.70 N	493517.80 E
9200.00	15.000	52.376	9070.74	1014.60	619.40 N	803.60 E	0.00	3064.40 FSL	1063.60 FWL	506575.50 N	493538.30 E
9300.00	15.000	52.376	9167.33	1040.48	635.20 N	824.09 E	0.00	3080.20 FSL	1084.09 FWL	506591.30 N	493558.79 E
9400.00	15.000	52.376	9263.92	1066.37	651.00 N	844.59 E	0.00	3096.00 FSL	1104.59 FWL	506607.10 N	493579.29 E
Target - 9300' Tgt, Current Target											
9437.35	15.000	52.376	9300.00	1076.03	656.90 N	852.25 E	0.00	3101.90 FSL	1112.25 FWL	506613.00 N	493586.95 E
9500.00	15.000	52.376	9360.52	1092.25	666.80 N	865.09 E	0.00	3111.80 FSL	1125.09 FWL	506622.90 N	493599.79 E
9600.00	15.000	52.376	9457.11	1118.13	682.60 N	885.59 E	0.00	3127.60 FSL	1145.59 FWL	506638.70 N	493620.29 E
9700.00	15.000	52.376	9553.70	1144.01	698.40 N	906.09 E	0.00	3143.40 FSL	1168.09 FWL	506654.50 N	493640.79 E

Measure Depth (ft)	Incl. Angle (Deg)	Drift Direction (Deg)	True Vertical Depth	Vertical Section (ft)	Local Coordinates N-S (ft)	E-W (ft)	Dogleg Severit ('100ft)	Lease Calls FNL-FSL (ft)	FEL-FWL (ft)	Global Coordinates Grid Y (ft)	Grid X (ft)
9800.00	15.000	52.376	9650.29	1169.89	714.20 N	926.59 E	0.00	3159.20 FSL	1186.59 FWL	506670.30 N	493661.29 E
9900.00	15.000	52.376	9746.89	1196.78	730.00 N	947.09 E	0.00	3175.00 FSL	1207.09 FWL	506686.10 N	493681.79 E
10000.00	15.000	52.376	9843.48	1221.86	745.80 N	967.59 E	0.00	3190.80 FSL	1227.59 FWL	506701.90 N	493702.29 E
10100.00	15.000	52.376	9940.07	1247.54	761.60 N	988.09 E	0.00	3206.60 FSL	1248.09 FWL	506717.70 N	493722.79 E
10200.00	15.000	52.376	10036.66	1273.42	777.40 N	1008.59 E	0.00	3222.40 FSL	1268.59 FWL	506733.50 N	493743.29 E
10300.00	15.000	52.376	10133.26	1299.30	793.20 N	1029.09 E	0.00	3238.20 FSL	1289.09 FWL	506749.30 N	493763.79 E
10400.00	15.000	52.376	10229.85	1325.19	809.00 N	1049.59 E	0.00	3254.00 FSL	1309.59 FWL	506765.10 N	493784.29 E
10500.00	15.000	52.376	10326.44	1351.07	824.80 N	1070.09 E	0.00	3269.80 FSL	1330.09 FWL	506780.90 N	493804.79 E
10600.00	15.000	52.376	10423.03	1376.95	840.60 N	1090.58 E	0.00	3285.60 FSL	1350.59 FWL	506796.70 N	493825.28 E
10700.00	15.000	52.376	10519.63	1402.83	856.40 N	1111.08 E	0.00	3301.40 FSL	1371.08 FWL	506812.50 N	493845.78 E
10800.00	15.000	52.376	10616.22	1428.71	872.21 N	1131.58 E	0.00	3317.21 FSL	1391.58 FWL	506828.31 N	493866.28 E
10900.00	15.000	52.376	10712.81	1454.60	888.01 N	1152.08 E	0.00	3333.01 FSL	1412.08 FWL	506844.11 N	493886.78 E
T Middle Morrow, Target - 10736' TVD #3, Current Target											
10924.01	15.000	52.376	10736.00	1460.81	891.80 N	1157.00 E	0.00	3336.80 FSL	1417.00 FWL	508847.90 N	493891.70 E
11000.00	15.000	52.376	10809.40	1480.48	903.81 N	1172.58 E	0.00	3348.81 FSL	1432.58 FWL	508859.91 N	493907.28 E
11100.00	15.000	52.376	10906.00	1506.36	919.81 N	1193.08 E	0.00	3364.81 FSL	1453.08 FWL	508875.71 N	493927.78 E
11200.00	15.000	52.376	11002.59	1532.24	935.41 N	1213.58 E	0.00	3380.41 FSL	1473.58 FWL	508891.51 N	493948.28 E
11300.00	15.000	52.376	11099.18	1558.12	951.21 N	1234.08 E	0.00	3396.21 FSL	1494.08 FWL	508907.31 N	493968.78 E
11400.00	15.000	52.376	11195.78	1584.00	967.01 N	1254.58 E	0.00	3412.01 FSL	1514.58 FWL	508923.11 N	493989.28 E
11500.00	15.000	52.376	11292.37	1609.89	982.81 N	1275.08 E	0.00	3427.81 FSL	1535.08 FWL	508938.91 N	494009.78 E
11600.00	15.000	52.376	11388.96	1635.77	998.61 N	1295.58 E	0.00	3443.61 FSL	1555.58 FWL	508954.71 N	494030.28 E
11700.00	15.000	52.376	11485.55	1661.65	1014.41 N	1316.08 E	0.00	3459.41 FSL	1576.08 FWL	508970.51 N	494050.78 E
11800.00	15.000	52.376	11582.15	1687.53	1030.21 N	1336.58 E	0.00	3475.21 FSL	1596.58 FWL	508986.31 N	494071.28 E
11900.00	15.000	52.376	11678.74	1713.41	1046.01 N	1357.07 E	0.00	3491.01 FSL	1617.07 FWL	507002.11 N	494091.77 E
Total Depth at 11973.78ft, 8 3/4" Open Hole											
11973.78	15.000	52.376	11750.00	1732.51	1057.67 N	1372.20 E	0.00	3502.67 FSL	1632.20 FWL	507013.77 N	494106.90 E

All data is in Feet (US) unless otherwise stated. Directions and coordinates are relative to Grid North.
Vertical depths are relative to RKB(3438'+20'KB). Northings and Eastings are relative to Wellhead.

Based upon Minimum Curvature type calculations, at a Measured Depth of 11973.78ft.,
The Bottom Hole Displacement is 1732.51ft., in the Direction of 52.376° (Grid).

Proposal Report for Sec. 13-T22S-R25E - McGruder 13 Fed #3 - Plan 091705
Data Source: Mr. Zeno Farris
Revised: 19 September, 2005

Comments

Measured Depth (ft)	Station Coordinates			Comment
	TVD (ft)	Northings (ft)	Eastings (ft)	
4907.03	4907.03	0.00 N	0.00 E	Kick-Off at 4907.03ft
5657.03	5648.49	59.59 N	77.31 E	End of Build at 5657.03ft
11973.78	11750.00	1057.87 N	1372.20 E	Total Depth at 11973.78ft

Formation Tops

Formation Plane (Below Well Origin)			Profile Penetration Point		
Sub-Sea (ft)	Dip Angle	Up-Dip Dirm.	Measured Depth (ft)	Vertical Depth (ft)	Sub-Sea Depth (ft)
7278.00	0.000	0.000	10924.01	10738.00	7278.00
				891.80 N	1157.00 E
					T Middle Morrow

HALLIBURTON**Sperry Drilling Services****Cimarex Energy**
New Mexico
Eddy County**Proposal Report for Sec. 13-T22S-R25E - McGruder 13 Fed #3 - Plan 091705**
Data Source: Mr. Zeno Farris
Revised: 19 September, 2005**Casing details**

From Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	To Vertical Depth (ft)	Casing Detail
<Surface>	<Surface>	2400.00	2400.00	9 5/8" Casing
<Surface>	<Surface>	<Run-TD>	<Run-TD>	8 3/4" Open Hole

Targets associated with this wellpath

Target Name	Target Entry Coordinates				Target Shape	Target Type
	TVD (ft)	Northings (ft)	Eastings (ft)			
9300' Tgt	9300.00	656.90 N	852.25 E		Point	Current Target
	5842.00	508613.00 N	493586.95 E			
		32° 23' 34.0510" N	104° 21' 14.7960" W			
Mean Sea Level/Global Coordinates: Geographical Coordinates:						
10736' TVD #3	10736.00	891.80 N	1157.00 E		Point	Current Target
	7278.00	508647.90 N	493891.70 E			
		32° 23' 36.3762" N	104° 21' 11.2422" W			
Mean Sea Level/Global Coordinates: Geographical Coordinates:						

North Reference Sheet for Sec. 13-T22S-R25E - McGruder 13 Fed #3

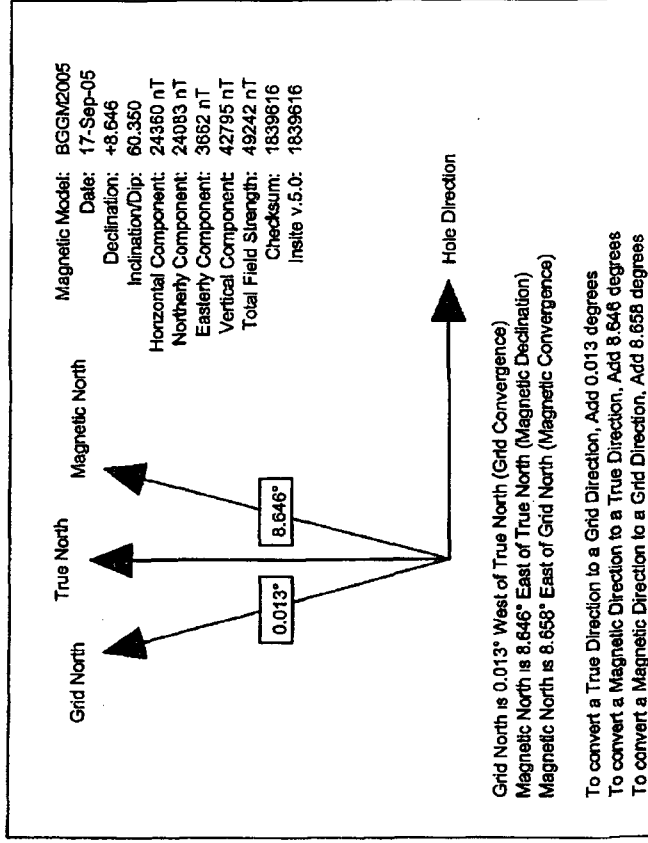
Coordinate System is NAD27 New Mexico State Planes, Eastern Zone, US Foot
Source: Snyder, J.P., 1987, Map Projections - A Working Manual

Datum is North American Datum of 1927 (US48, AK, HI, and Canada)

Spheroid is Clarke - 1886
Equatorial Radius: 6378206.400m.
Polar Radius: 6356583.800m.
Inverse Flattening: 294.978698213901

Projection method is Transverse Mercator or Gauss Kruger Projection
Central Meridian is -104.333°
Longitude Origin: 0.000°
Latitude Origin: 31.000°
False Easting: 152400.00m
False Northing: 0.00m
Scale Reduction: 0.99990909

Grid Coordinates of Well: 505956.10 N, 492734.70 E
Geographical Coordinates of Well: 32° 23' 27.5485" N, 104° 21' 24.7342" W
Surface Elevation of Well: 3458.00ft
Grid Convergence at Surface is -0.013°
Magnetic Convergence at Surface is -8.658° (17 September, 2005)



CONDITIONS OF APPROVAL - DRILLING

Operator's Name: CIMAREX ENERGY CO.
Well Name & No. 3 - MCGRUDER HILL 13 FEDERAL
Location: 2445' FSL & 260' FWL - SEC 13 - T22S - R25E - EDDY COUNTY (SHL)
1980' FNL & 1470' FWL - SEC 13 - T22S - R25E - EDDY COUNTY (BHL)
Lease: NM-110339

I. DRILLING OPERATIONS REQUIREMENTS:

1. The Bureau of Land Management (BLM) is to be notified at the Roswell Field Office, 2909 West Second St., Roswell NM 88201, (505) 627-0272 for wells in Chaves and Roosevelt Counties; the Carlsbad Field Office, 620 East Greene St., Carlsbad, NM 88220, (505) 234-5909 or (505) 361-2822 (After hours) - for wells in Eddy County; and the Hobbs Field Station, 414 West Taylor, Hobbs NM 88240, (505) 393-3612 for wells in Lea County, in sufficient time for a representative to witness:

A. Spudding

B. Cementing casing: 13-3/8 inch 9-5/8 inch 5-1/2 inch

C. BOP tests

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. Submit a Sundry Notice (Form 3160-5, one original and five copies) for each casing string, describing the casing and cementing operations. Include pertinent information such as; spud date, hole size, casing (size, weight, grade and thread type), cement (type, quantity and top), water zones and problems or hazards encountered. The Sundry shall be submitted within 15 days of completion of each casing string. The reports may be combined into the same Sundry if they fall within the same 15 day time frame.

4. The API No. assigned to the well by NMOCD shall be included on the subsequent report of setting the first casing string.

II. CASING:

1. The 13-3/8 inch surface casing shall be set at 650 feet below usable water and cement circulated to the surface. If cement does not circulate to the surface the appropriate BLM office shall be notified and a temperature survey or cement bond log shall be run to verify the top of the cement. Remedial cementing shall be completed prior to drilling out that string.

2. The minimum required fill of cement behind the 9-5/8 inch intermediate casing is circulate cement to the surface. Note: The intermediate hole to 2200 feet must be drilled with fresh water or fresh water mud due to deepest expected fresh water @ 1650 feet based on well log analysis of surrounding well(s).

3. The minimum required fill of cement behind the 5-1/2 inch production casing is cement shall extend upward a minimum of 500 feet above the uppermost hydrocarbon bearing interval.

III. PRESSURE CONTROL:

1. All BOP systems and related equipment shall comply with well control requirements as described in Onshore Oil and Gas Order No. 2. The BOP and related equipment shall be installed and operational before drilling below the 9-5/8 inch casing shoe and shall be tested as described in Onshore Order No. 2. Any equipment failing to test satisfactorily shall be repaired or replaced.

2. Minimum working pressure of the blowout preventer and related equipment (BOPE) required for drilling the surface and intermediate casing shall be 2000 psi. Minimum working pressure of the blowout preventer and related equipment (BOPE) required for drilling below the 9-5/8 inch casing shall be 5000 psi.

3. The appropriate BLM office shall be notified in sufficient time for a representative to witness the tests.

- **The requested variance is approved to test the 13-3/8" surface casing and BOP system to the reduced pressure of 1000 psi with the rig pumps.**
- The tests shall be done by an independent service company.
- The results of the test shall be reported to the appropriate BLM office.
- Testing fluid must be water or an appropriate clear liquid suitable for sub-freezing temperatures. Use of drilling mud for testing is not permitted since it can mask small leaks.
- Testing must be done in a safe workman-like manner. Hard line connections shall be required.
- BOPE must be tested prior to drilling into the Wolfcamp Formation by an independent service company.

IV. DRILLING MUD:

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

1. Recording pit level indicator to indicate volume gains and losses.
2. Mud measuring device for accurately determining the mud volumes necessary to fill the hole during trips.
3. Flow-sensor on the flow line to warn of abnormal mud returns from the well.

Dec. 5. 2005 5:05PM

No. 3267 P. 3

Form 3160-5
(November 1994)UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
OCD-ARTESIAFORM APPROVED
OMB No. 1004-0133
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-110339
1. Type of Well ☐ Oil Well ☒ Gas Well ☐ Other		6. If Indian, Alliance or Tribe Name
2. Name of Operator Cimarex Energy Co.		7. If Unit or CVA Agreement, Name and/or No. Pending
3a. Address P. O. Box 140907 Irving, TX 75014-0907		8. Well Name and No. McGruder Hill 13 Federal Com No. 3
3b. Phone No. (include area code) 972-401-3111		9. API Well No. -30-025-30-015-34350
4. Location of Well (Footage, Sec., T., R., M., or Survey Description) SHL: 2445' FSL & 260' FWL 13-22S-25E BHL: 1980' FNL & 1470' FWL 13-22S-25E		10. Field and Pool, or Exploratory Area Happy Valley; Morrow (Gas)
		11. County or Parish, State Eddy Co., NM

RECEIVED
DEC 12 2005
OCD-ARTESIA

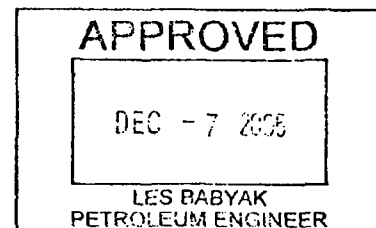
12. CHECK APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

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

13. Describe the 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 recompletes horizontally, give subsurface locations and measured and true vertical depths of all pertinent sections 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.)

Cimarex is changing the casing on the McGruder Hill 13 Federal Com No. 3 as follows per the authorization of John Simitz:

Intermediate casing Use 13-3/8" 48# H-40 ST&C to 2650' instead of to the permitted depth of 2200'



14. I hereby certify that the foregoing is true and correct Name (Printed/Typed) Natalie Krueger		Title Reg Tech
Signature <i>Natalie Krueger</i>		Date December 5, 2005
THIS SPACE FOR FEDERAL OR STATE OFFICE USE		
Approved by	Title	Date
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	
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)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

OCD-ARTESIA

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

1. Type of Well
☐ Oil Well ☒ Gas Well ☐ Other

2. Name of Operator
Cimarex Energy Co.

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

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

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)
SHL 2445' FSL & 260' FWL; BHL 1980' FNL & 1470' FWL
Section 13-T22S-R25E

5. Lease Serial No.

NM-110339

6. If Indian, Allottee or Tribe Name

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

Pending

8. Well Name and No.

McGruder Hill 13 Federal No. 3

9. API Well No.

30-015-34778

10. Field and Pool, or Exploratory Area

Happy Valley; Morrow (Gas)

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			
☐ Notice of Intent	☐ Acidize	☐ Deepen	☐ Production (Start/Resume)	☐ Water Shut-Off
☒ Subsequent Report	☐ Alter Casing	☐ Fracture Treat	☐ Reclamation	☐ Well Integrity
☐ Final Abandonment Notice	☐ Casing Repair	☐ New Construction	☐ Recomplete	☒ Other Set production casing
	☐ Change Plans	☐ Plug and Abandon	☐ Temporarily Abandon	
	☐ 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.)

01/01/06 Reached TD of 8-3/4" hole (11775').
01/04/06 Ran 5-1/2" 17# P-110 LTC casing to 11775'. Cemented first stage with 220 sx Interfill H - SBM (wt 11.9, yld 2.47) + HR-7 Gilsonite + 0.25# Bulk Flocele and tail of 700 sx Super H (wt 13.2, yld 1.61) + 5% LAP-1 + 0.25# D-Air 3000 + 0.4% CFR-3 + 5# Gilsonite + 0.25# Flocele.
Cemented second stage with lead of 900 sx Interfill C (wt 11.9, yld 2.45) + 0.25# Flocele and tail of 150 sc Premium Cemex (wt 15.6, yld 1.18). Circulated 197 sx to pit.
01/05/06 Released rig.
02/16/06 Pressure tested casing to 1000 psi for 30 minutes. Ran CBL and found TOC at 1780'.

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

Name (Printed/Typed)

Natalie Krueger

Signature

Title

Reg Analyst 1

Date

May 18, 2006

Approved by

DAVID E. LEAS

Title

Date

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

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)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

OCD-ARTESIA

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

RECEIVED
JUN - 1 2006
OCD-ARTESIA

1. Type of Well
☐ Oil Well ☒ Gas Well ☐ Other

2. Name of Operator
Cimarex Energy Co.

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

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

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)
SHL 2445' FSL & 260' FWL; BHL 1980' FNL & 1470' FWL
Section 13-T22S-R25E

5. Lease Serial No.

NM-110339

6. If Indian, Allottee or Tribe Name

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

Pending

8. Well Name and No.

McGruder Hill 13 Federal No. 3

9. API Well No.

30-015-34778

10. Field and Pool, or Exploratory Area

Happy Valley; Morrow (Gas)

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			
☐ Notice of Intent	☐ Acidize	☐ Deepen	☐ Production (Start/Resume)	☐ Water Shut-Off
☒ Subsequent Report	☐ Alter Casing	☐ Fracture Treat	☐ Reclamation	☐ Well Integrity
☐ Final Abandonment Notice	☐ Casing Repair	☐ New Construction	☐ Recomplete	☒ Other <u>Set surface & intermediate casing</u>
	☐ Change Plans	☐ Plug and Abandon	☐ Temporarily Abandon	
	☐ 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 recompleat 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 recompleat 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.)

12/01/05 Spudded 17-1/2" hole.

12/03/05 Ran 13-3/8" 48# H-40 STC casing to 653'. Cemented with lead of 400 sx + 2% CaCl + 4% Gel + 0.25# Flocele (wt 13.7, yld 1.68) and tail of 250 sx + 2% CaCl (wt 14.8, yld 1.35). Circulated 210 sx to surface. WOC 23 hours.

12/04/05 Pressure tested casing to 1000 psi for 30 minutes.

12/07/05 Reached TD of 12-1/4" hole (2638').

12/08/05 Ran 9-5/8" 40# J-55 LTC casing to 2638'. Cemented with lead of 760 sx Interfill C + 0.25# Flocele (wt 11.9, yld 2.45) and tail of 200 sx Premium Plus + 2% CaCl (wt 14.8, yld 1.35). Circulated 245 sx to surface. WOC 22.5 hours.

12/09/05 Pressure tested casing to 1000 psi for 30 minutes.

14. I hereby certify that the foregoing is true and correct
Name (Printed/Typed)

Natalie Krueger

Signature

Title

Reg Analyst 1

Date

May 18, 2006

ACCEPTED FOR RECORD THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved by

DAVID S. GLASS

Title

Date

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

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)

**UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT**

SUBMIT IN DUPLICATE*

(See other instructions on reverse side)

**FOR APPROVED
OMB NO. 1004-0137
Expires: December 31, 1991**

WELL COMPLETION OR RECOMPLETION REPORT AND LOG *

1a. TYPE OF WELL: OIL WELL ☐ GAS WELL ☒ DRY ☐ Other _____

b. TYPE OF COMPLETION: NEW WELL ☒ WORK OVER ☐ DEEP-EN ☐ PLUG BACK ☐ DIFF. REVR. ☐ Other _____

2. NAME OF OPERATOR

Cimarex Energy Co.

3. ADDRESS AND TELEPHONE NO.

P O Box 140907 Irving Tx. 75014-0907

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements)*

At surface 2445' FSL & 260' FWL

At top prod. interval reported below 2034' FNL & 1348' FWL

At total depth 1874' FNL & 1597' FWL

14. PERMIT NO. _____ **DATE ISSUED** _____

5. LEASE DESIGNATION AND SERIAL NO.

NM-110339

6. IF INDIAN, ALLOTTEE OR TRIBE NAME

7. UNIT AGREEMENT NAME

8. FARM OR LEASE NAME, WELL NO.

McGruder Hill 13 Federal No. 3

9. API WELL NO.

30-015-34778

10. FIELD AND POOL, OR WILDCAT

Happy Valley; Morrow (Gas)

11. SEC., T., R., M., OR BLOCK AND SURVEY OR AREA

Sec 13 T-22S- R-25E

12. COUNTY OR PARISH

Eddy

13. STATE

NM

15. DATE SPUDDED

12-01-05

16. DATE T.D. REACHED

01-01-06

17. DATE COMPL. (Ready to prod.)

03-31-06

18. ELEVATIONS (DF, RKB, RT, OR, ETC.)*

3440' GR

20. TOTAL DEPTH, MD & TVD

MD 11775' TVD 11488'

21. PLUG, BACK T.D., MD & TVD

MD 11676' TVD 11390'

22. IF MULTIPLE COMPL., HOW MANY*

1

23. INTERVALS DRILLED BY

Rotary

ROTARY TOOLS

All

CABLE TOOLS

24. PRODUCING INTERVAL(S), OF THIS COMPLETION—TOP, BOTTOM, NAME (MD AND TVD)*

MD Happy Valley; Morrow (Gas) 11028' - 11158'

TVD Happy Valley; Morrow (Gas) 10771' - 10888'

26. TYPE ELECTRIC AND OTHER LOGS RUN

Dual Spaced Neutron GRL, Dual Laterolog Micro-SFL, Cement Bond Log

28. CASING RECORD (Report all strings set in well)

CASING SIZE/GRADE	WEIGHT, LB./FT.	DEPTH SET (MD)	HOLE SIZE	TOP OF CEMENT, CEMENTING RECORD	AMOUNT PULLED
13-3/8" H-40	48 #	653'	17-1/2"	550 sx circ 210 sx	
9-5/8" J-55	36 #	2638'	12-1/4"	960 sx circ 245 sx	
5-1/2" P-110	17#	11775'	7-7/8"	1970 sx circ 197 sx TOC 1780'	

29. LINER RECORD

SIZE	TOP (MD)	BOTTOM (MD)	SACKS CEMENT*	SCREEN (MD)

30. TUBING RECORD

SIZE	DEPTH SET (MD)	PACKER SET (MD)
2 7/8"	10980'	10980'

31. PERFORATION RECORD (Interval, size and number)

11028' - 11158' 6 JSPF 270 holes

32. ACID, SHOT, FRACTURE, CEMENT SQUEEZE, ETC.

DEPTH INTERVAL (MD)	AMOUNT AND KIND OF MATERIAL USED
11028' - 11158'	430 tons CO2 foamed to 70-61 & 100000# Versaprop

33. PRODUCTION

DATE FIRST PRODUCTION		PRODUCTION METHOD (Flowing, gas lift, pumping—size and type of pump)				WELL STATUS (Producing or shut-in)	
03-31-06		Flowing				Producing	
DATE OF TEST	HOURS TESTED	CHOKER SIZE	PROD'N. FOR TEST PERIOD	OIL—BSL.	GAS—MCF.	WATER—BSL.	GAS-OIL RATIO
04-12-06	24 hours	wide open	→	0	1537	109	0
FLOW. TUBING PRESS.	CASING PRESSURE	CALCULATED 24-HOUR RATE	OIL—BSL.	GAS—MCF.	WATER—BSL.	OIL GRAVITY-API (CORR.)	
500	0	→					

34. DISPOSITION OF GAS (Sold, used for fuel, vented, etc.)

Sold

35. LIST OF ATTACHMENTS

Electric logs and Deviation Report

36. I hereby certify that the foregoing and attached information is complete and correct as determined from all available records

SIGNED

Natalie Kueper

TITLE

Reg Analyst I

DATE

06-20-06

*(See Instructions and Spaces for Additional Data on Reverse Side)

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.

37. SUMMARY OF POROUS ZONES: (Show all important zones of porosity and contents thereof; cored intervals; and all drill-stem, tests, including depth interval tested, cushion used, flowing and shut-in pressures, and recoveries):

FORMATION	TOP	BOTTOM	DESCRIPTION, CONTENTS, ETC.	GEOLOGIC MARKERS		
				NAME	MEAS. DEPTH	TRUE VERT. DEPTH
				Delaware	2404'	2404'
				Bone Spring	4540'	4540'
				Wolfcamp	8276'	5582'
				Cisco-Canyon	9153'	9011'
				Strawn	9799'	9616'
				Atoka	10229'	10015'
				Morrow	10661'	10417'



CACTUS DRILLING COMPANY, L.L.C.
REPORT OF PROOF OF APPARENT DEVIATION
NEW MEXICO

OPERATOR CIMAREX ENERGY CO
600 EAST LAS COLINAS BLVD. STE 1100
IRVING, TX 75039

FIELD NAME _____

COUNTY/PARISH EDDY

WELL NAME & NO. MCGRUDER 13 FEDERAL #3

LEGAL SEC 13-22S-25E

MEASURED DEPTH (FT)	COURSE LENGTH (HUNDREDS OF FT)	ANGLE OF INCLINATION (DEGREES)	DISPLACEMENT PER HUNDRED FT (SINE OF ANGLE X 100)	COURSE DISPLACEMENT (FEET)	ACCUMULATIVE DISPLACEMENT (FEET)	REMARKS
15	0.15	0	0.1396	0.02	0.02	
625	6.10	1/3	0.5410	3.30	3.32	
1071	4.46	1 1/8	2.0419	9.11	12.43	
1525	4.54	5/7	1.2392	5.63	18.05	
2025	5.00	3/4	1.3264	6.63	24.69	
2394	3.69	1/2	0.9425	3.48	28.16	
3138	7.44	3/5	1.0472	7.79	35.95	
3685	5.47	1/3	0.5934	3.25	39.20	
4185	5.00	5/8	1.0821	5.41	44.61	
4869	4.84	1 4/5	3.1236	15.12	59.73	
5169	5.00	1 1/3	2.3385	11.69	71.42	
5464	2.95	1	1.7976	5.30	76.72	
5964	5.00	3/4	1.2741	6.37	83.10	

 **LESLIE N. KIDD**
Oklahoma County
Notary Public in and for
State of Oklahoma
Commission # 03003457 Expires 2/27/07

Leslie N. Kidd

DISTRICT I

1625 N. FRENCH DR., HOBBES, 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 JUNE 10, 2003

Submit to Appropriate District Office

State Lease - 4 Copies

Fee Lease - 3 Copies

WELL LOCATION AND ACREAGE DEDICATION PLAT

☐ AMENDED REPORT

API Number 30-015-34778	Pool Code	Pool Name Happy Valley; Morrow (Gas)
Property Code	Property Name McGRUDER 13 FEDERAL	Well Number 3
OGRID No. 215099	Operator Name CIMAREX ENERGY COMPANY	Elevation 3438'

Surface Location

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
L	13	22-S	25-E		2445	SOUTH	260	WEST	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
F	13	22-S	25-E		1874	NORTH	1597	WEST	EDDY
Dedicated Acres 331.08	Joint or Infill Y	Consolidation Code	Order No. 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

Lot 2-4300 Lot 1-4312 2034' 1874' Lot 3-4210 Lot 4-4219 1597' 1348' BHL Penetration Point Morrow McGruder Hill 13 Fed #3 260' S.L. SEE DETAIL 3429.5' 3461.5' 600' 600' 3425.4' 3430.2' 1777' 1924' 2445' BHL McGruder 13 Fed #1 ST GEODETIC COORDINATES NAD 27 NME SURFACE LOCATION Y=505956.1 N X=492734.7 E 1280' LAT.=32°23'27.55" N LONG.=104°21'24.73" W	OPERATOR CERTIFICATION I hereby certify the the information contained herein is true and complete to the best of my knowledge and belief. <i>Zeno Farris</i> Signature Zeno Farris Printed Name Mgr Operations Admin Title June 23, 2006 Date 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 supervision, and that the same is true and correct to the best of my belief. SEPTEMBER 7, 2005 Date Surveyed Signature & Seal of Professional Surveyor NEW MEXICO GARY EIDSON 05.11.1369C 12641
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Cimarex Energy Co., Inc.

**Eddy Co., New Mexico
McGruder 13 Federal #3
McGruder 13 Federal #3
Plan #1**

Survey: MWD Survey #1

Standard Survey Report

01 January, 2006





Black Viper Energy Services
Survey Report



Company:	Cimarex Energy Co., Inc.	Legal Coordinate Reference:	Well: McGruder 13 Federal #3
Project:	Eddy Co. New Mexico	PVD Reference:	WELL @ 0.00ft (Original Well Elev)
Site:	McGruder 13 Federal #3	MD Reference:	WELL @ 0.00ft (Original Well Elev)
Well:	McGruder 13 Federal #3	North Reference:	Grid
Wellbore:	Plan #1	Survey Calculation Method:	Minimum Curvature
Design:	Plan #1	Database:	EDM 2003.11 Single User Db

Project:	Eddy Co. New Mexico		
Map System:	US State Plane 1927 (Exact solution)	System Datum:	Ground Level
Geo Datum:	NAD 1927 (NADCON CONUS)		
Map Zone:	New Mexico East 3001		

Site: McGruder 13 Federal #3					
Site Position:		Northing:	505,956.10 ft	Latitude:	32° 23' 27.538" N
From:	Map	Easting:	492,734.70 ft	Longitude:	104° 21' 24.746" W
Position Uncertainty:	0.00 ft	Slot Radius:	"	Grid Convergence:	-0.01 °

McGruder 13 Federal #3						
Well Position	+N-S	0.00 ft	Northing:	505,956.10 ft	Latitude:	32° 23' 27.538" N
	+E-W	0.00 ft	Easting:	492,734.70 ft	Longitude:	104° 21' 24.746" W
Position Uncertainty	0.00 ft	Wellhead Elevation:	ft	Ground Level:	0.00 ft	

Wellbore:	Plan #1				
Method:	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Initial Station (ft)
	IGRF200510	12/31/2005	8.59	60.33	49,210

Design:	Plan #1				
Audit Notes:					
Version:	1.0	Phase:	ACTUAL	Tie On Depth:	6,131.00
Vertical Station:	Depth From (mvd)	N/S (R)	E/W (R)	Altitude	
	0.00	0.00	0.00	52.38	

Survey Point	Point Value	Point Name	Description
From	To	Survey Name	
100.00	6,131.00	Gyro Survey #1 (OH)	GM Gyro Multi-Shot
6,196.00	11,775.00	MWD Survey #1 (Plan #1)	MWD Standard MWD

Measured Depth (ft)	Inclination (°)	Vertical (ft)	Horizontal (ft)	N/S (ft)	E/W (ft)	Vertical Station (ft)	Depth Rate (ft/100ft)	Depth Rate (ft/100ft)	Depth Rate (ft/100ft)
6,131.00	0.54	347.15	6,130.22	30.93	-37.69	-10.97	0.00	0.00	0.00
6,196.00	0.70	10.40	6,195.21	31.62	-37.69	-10.55	0.45	0.25	35.77
First MWD Survey									
6,260.00	1.10	43.80	6,259.21	32.45	-37.19	-9.65	1.01	0.63	52.19
6,323.00	2.60	48.10	6,322.17	33.84	-35.71	-7.63	2.39	2.38	6.83
6,387.00	3.80	48.30	6,386.07	36.22	-33.05	-4.06	1.88	1.88	0.31
6,451.00	4.90	51.30	6,449.89	39.34	-29.33	0.78	1.75	1.72	4.69
6,514.00	5.20	51.20	6,512.64	42.81	-25.00	6.33	0.48	0.48	-0.16
6,578.00	6.70	52.20	6,576.29	46.92	-19.79	12.96	2.35	2.34	1.56
6,672.00	6.60	52.00	6,669.66	53.61	-11.20	23.85	0.11	-0.11	-0.21
6,737.00	8.10	53.40	6,734.13	58.64	-4.58	32.16	2.32	2.31	2.15
6,800.00	9.70	51.40	6,796.37	64.59	3.13	41.91	2.59	2.54	-3.17



Black Viper Energy Services Survey Report



Company:	Cimarex Energy Co. Inc.	Local Co-ordinate Reference:	Well: McGruder 13 Federal #3
Project:	Eddy Co. New Mexico	TVD Reference:	WELL @ 0.00ft (Original Well Elev)
Site:	McGruder 13 Federal #3	MD Reference:	WELL @ 0.00ft (Original Well Elev)
Well:	McGruder 13 Federal #3	North Reference:	Grid
Wellbore:	Plan #1	Survey Calculation Method:	Minimum Curvature
Design:	Plan #1	Database:	EDM 2003.11 Single User Db

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	N/S (ft)	E/W (ft)	Vertical Section (ft)	Diplog Rate (ft/100ft)	Build Rate (ft/100ft)	Tan Rate (ft/100ft)
6,863.00	11.70	51.30	6,858.27	71.90	12.26	53.60	3.17	3.17	-0.16
6,927.00	13.10	52.80	6,920.77	80.34	23.10	67.34	2.24	2.19	2.34
6,991.00	14.60	53.70	6,982.91	89.50	35.38	82.66	2.37	2.34	1.41
7,084.00	19.30	53.60	7,071.84	105.57	57.21	109.76	5.05	5.05	-0.11
7,149.00	18.90	54.20	7,133.27	118.10	74.40	131.02	0.69	-0.62	0.92
7,181.00	19.10	54.40	7,163.52	124.18	82.86	141.43	0.66	0.63	0.63
7,212.00	18.80	54.20	7,192.84	130.06	91.03	151.49	0.99	-0.97	-0.65
7,244.00	18.20	55.80	7,223.19	135.88	99.35	161.64	2.46	-1.88	5.00
7,276.00	18.60	56.40	7,253.55	141.52	107.73	171.72	1.38	1.25	1.88
7,308.00	19.20	56.60	7,283.83	147.24	116.37	182.05	1.89	1.88	0.63
7,339.00	20.10	54.60	7,313.02	153.13	124.97	192.46	3.62	2.90	-6.45
7,371.00	21.00	54.30	7,342.99	159.66	134.11	203.69	2.83	2.81	-0.94
7,403.00	21.50	54.10	7,372.81	166.44	143.52	215.28	1.58	1.56	-0.63
7,435.00	22.30	55.40	7,402.50	173.33	153.27	227.20	2.92	2.50	4.06
7,467.00	23.00	56.90	7,432.03	180.19	163.50	239.50	2.84	2.19	4.69
7,499.00	22.60	57.20	7,461.53	186.94	173.91	251.86	1.30	-1.25	0.94
7,530.00	22.30	57.80	7,490.18	193.30	183.89	263.65	1.22	-0.97	1.94
7,562.00	22.30	58.00	7,519.79	199.75	194.18	275.73	0.24	0.00	0.63
7,594.00	22.60	57.90	7,549.36	206.24	204.53	287.90	0.95	0.94	-0.31
7,626.00	22.70	57.40	7,578.90	212.83	214.94	300.17	0.68	0.31	-1.56
7,658.00	21.50	55.60	7,608.55	219.47	224.98	312.17	4.31	-3.75	-5.63
7,690.00	20.70	52.30	7,638.40	226.24	234.30	323.69	4.47	-2.50	-10.31
7,721.00	20.80	52.10	7,667.39	232.97	242.98	334.67	0.40	0.32	-0.65
7,753.00	20.40	54.30	7,697.34	239.72	251.99	345.92	2.72	-1.25	6.88
7,785.00	20.80	54.90	7,727.30	246.24	261.17	357.17	1.41	1.25	1.88
7,817.00	21.20	54.90	7,757.17	252.83	270.55	368.63	1.25	1.25	0.00
7,849.00	21.50	56.60	7,786.98	259.39	280.18	380.26	2.15	0.94	5.31
7,880.00	21.90	55.70	7,815.78	265.77	289.70	391.70	1.68	1.29	-2.90
7,912.00	21.50	55.40	7,845.51	272.47	299.45	403.51	1.30	-1.25	-0.94
7,944.00	21.20	55.50	7,875.32	279.07	309.05	415.14	0.94	-0.94	0.31
7,976.00	21.50	56.10	7,905.12	285.62	318.69	426.77	1.16	0.94	1.88
8,008.00	22.10	56.30	7,934.83	292.23	328.56	438.63	1.89	1.88	0.63
8,040.00	21.10	56.50	7,964.58	298.75	338.37	450.38	3.13	-3.13	0.63
8,071.00	20.70	56.50	7,993.54	304.86	347.59	461.41	1.29	-1.29	0.00
8,103.00	21.60	55.60	8,023.39	311.30	357.17	472.93	2.99	2.81	-2.81
8,135.00	22.20	54.90	8,053.08	318.11	366.98	484.85	2.04	1.88	-2.19
8,167.00	22.60	54.90	8,082.66	325.12	376.95	497.04	1.25	1.25	0.00
8,198.00	21.80	54.60	8,111.37	331.88	386.52	508.74	2.61	-2.58	-0.97
8,230.00	21.50	55.00	8,141.11	338.69	396.17	520.53	1.04	-0.94	1.25
8,262.00	21.80	54.40	8,170.85	345.51	405.80	532.33	1.17	0.94	-1.88
8,294.00	21.40	54.50	8,200.60	352.36	415.38	544.10	1.26	-1.25	0.31
8,326.00	20.10	54.90	8,230.53	358.91	424.64	555.43	4.09	-4.06	1.25
8,358.00	17.90	56.90	8,260.78	364.76	433.26	565.83	7.17	-6.88	6.25
8,389.00	17.40	57.90	8,290.32	369.82	441.17	575.19	1.89	-1.61	3.23
8,421.00	17.60	57.20	8,320.84	374.99	449.29	584.77	0.91	0.63	-2.19
8,458.00	17.80	56.10	8,356.09	381.17	458.69	595.99	1.05	0.54	-2.97
8,488.00	18.20	54.00	8,384.62	386.48	466.29	605.25	2.54	1.33	-7.00
8,520.00	17.90	52.10	8,415.05	392.44	474.21	615.16	2.06	-0.94	-5.94
8,552.00	17.10	52.00	8,445.57	398.36	481.80	624.79	2.50	-2.50	-0.31
8,583.00	17.30	50.90	8,475.18	404.07	488.97	633.95	1.23	0.65	-3.55
8,615.00	17.90	51.40	8,505.68	410.14	496.50	643.62	1.93	1.88	1.56
8,647.00	18.20	53.60	8,536.11	416.17	504.37	653.54	2.33	0.94	6.88
8,677.00	19.00	52.80	8,564.54	421.91	512.03	663.11	2.80	2.67	-2.67
8,709.00	19.40	52.30	8,594.76	428.30	520.38	673.63	1.35	1.25	-1.56



Black Viper Energy Services Survey Report



Company	Cimarex Energy Co. Inc.	Local Coordinate Reference	Well McGruder 13 Federal #3
Project	Eddy Co., New Mexico	TVD Reference	WELL @ 0.00ft (Original Well Elev)
Site	McGruder 13 Federal #3	MD Reference	WELL @ 0.00ft (Original Well Elev)
Well	McGruder 13 Federal #3	North Reference	Grid
Wellbore	Plan #1	Survey Calculation Method	Minimum Curvature
Design	Plan #1	Database	EDM 2003.11 Single User Db

Survey	Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	W.S. (ft)	ELW (ft)	Vertical Section (ft)	Depth Rate (ft/1000ft)	Build Rate (ft/1000ft)	Turn Rate (ft/1000ft)
	8,740.00	18.80	52.80	8,624.05	434.47	528.43	683.77	2.01	-1.94	1.61
	8,772.00	18.70	53.60	8,654.36	440.63	536.67	694.06	0.86	-0.31	2.50
	8,804.00	18.10	54.10	8,684.72	446.59	544.83	704.15	1.94	-1.88	1.56
	8,836.00	18.20	54.30	8,715.13	452.42	552.91	714.12	0.37	0.31	0.63
	8,868.00	19.00	52.90	8,745.46	458.48	561.12	724.32	2.86	2.50	-4.38
	8,900.00	19.50	50.30	8,775.67	465.04	569.39	734.87	3.10	1.56	-8.13
	8,932.00	20.80	47.40	8,805.71	472.29	577.68	745.87	5.12	4.06	-9.06
	8,964.00	21.80	46.20	8,835.52	480.25	586.15	757.43	3.41	3.13	-3.75
	8,996.00	22.20	46.70	8,865.19	488.51	594.84	769.36	1.38	1.25	1.56
	9,027.00	21.20	48.90	8,894.00	496.21	603.33	780.78	4.16	-3.23	7.10
	9,059.00	21.90	50.60	8,923.76	503.81	612.30	792.52	2.93	2.19	5.31
	9,091.00	21.80	52.10	8,953.46	511.24	621.60	804.43	1.77	-0.31	4.69
	9,123.00	21.90	54.40	8,983.16	518.37	631.14	816.33	2.69	0.31	7.19
	9,154.00	22.40	55.70	9,011.87	525.06	640.72	828.01	2.26	1.61	4.19
	9,186.00	22.10	55.70	9,041.49	531.89	650.73	840.11	0.94	-0.94	0.00
	9,218.00	21.00	56.00	9,071.25	538.49	660.46	851.84	3.45	-3.44	0.94
	9,250.00	19.80	56.50	9,101.25	544.69	669.73	862.97	3.79	-3.75	1.56
	9,282.00	19.30	58.60	9,131.40	550.43	678.76	873.63	2.69	-1.56	6.56
	9,314.00	19.10	59.20	9,161.62	555.87	687.77	884.08	0.88	-0.63	1.88
	9,346.00	19.10	56.50	9,191.86	561.44	696.64	894.51	2.76	0.00	-8.44
	9,377.00	18.50	53.10	9,221.21	567.19	704.80	904.48	4.03	-1.94	-10.97
	9,409.00	19.00	50.50	9,251.51	573.55	712.88	914.77	3.04	1.56	-8.13
	9,441.00	20.10	51.60	9,281.67	580.28	721.21	925.47	3.62	3.44	3.44
	9,473.00	20.00	53.00	9,311.73	586.99	729.89	936.44	1.53	-0.31	4.38
	9,504.00	19.20	54.60	9,340.93	593.14	738.28	946.84	3.11	-2.58	5.16
	9,535.00	19.70	55.50	9,370.16	599.05	746.74	957.15	1.88	1.61	2.90
	9,568.00	20.10	55.50	9,401.19	605.41	756.00	968.36	1.21	1.21	0.00
	9,600.00	20.90	53.40	9,431.16	611.93	765.11	979.56	3.40	2.50	-6.56
	9,632.00	20.90	53.90	9,461.06	618.69	774.30	990.97	0.56	0.00	1.56
	9,664.00	20.80	54.60	9,490.96	625.35	783.55	1,002.36	0.84	-0.31	2.19
	9,696.00	21.40	54.80	9,520.82	632.00	792.95	1,013.87	1.89	1.88	0.63
	9,728.00	22.30	54.40	9,550.52	638.90	802.66	1,025.77	2.85	2.81	-1.25
	9,759.00	22.20	56.00	9,579.21	645.60	812.29	1,037.49	1.98	-0.32	5.16
	9,790.00	21.80	57.40	9,607.95	651.98	822.00	1,049.07	2.13	-1.29	4.52
	9,822.00	21.80	56.50	9,637.67	658.46	831.96	1,060.91	1.04	0.00	-2.81
	9,852.00	22.60	57.00	9,665.44	664.67	841.44	1,072.22	2.74	2.67	1.67
	9,884.00	22.10	56.80	9,695.04	671.32	851.63	1,084.35	1.58	-1.56	-0.63
	9,916.00	21.30	57.70	9,724.77	677.72	861.58	1,096.14	2.71	-2.50	2.81
	9,948.00	21.40	57.30	9,754.57	683.98	871.41	1,107.74	0.55	0.31	-1.25
	9,980.00	22.10	55.20	9,784.30	690.57	881.26	1,119.57	3.27	2.19	-6.56
	10,012.00	22.50	53.80	9,813.90	697.62	891.15	1,131.70	2.08	1.25	-4.38
	10,044.00	22.50	54.30	9,843.47	704.81	901.06	1,143.94	0.60	0.00	1.56
	10,075.00	21.80	54.40	9,872.18	711.62	910.56	1,155.62	2.26	-2.26	0.32
	10,107.00	21.40	55.20	9,901.93	718.41	920.18	1,167.39	1.55	-1.25	2.50
	10,139.00	20.90	55.60	9,931.78	724.97	929.69	1,178.92	1.63	-1.56	1.25
	10,171.00	20.70	55.10	9,961.69	731.43	939.04	1,190.27	0.84	-0.63	-1.56
	10,202.00	21.90	54.30	9,990.57	737.94	948.22	1,201.52	3.98	3.87	-2.58
	10,233.00	22.50	55.10	10,019.27	744.71	957.78	1,213.22	2.17	1.94	2.58
	10,265.00	22.80	55.60	10,048.81	751.71	967.92	1,225.53	1.11	0.94	1.56
	10,296.00	21.90	56.60	10,077.48	758.29	977.71	1,237.29	3.15	-2.90	3.23
	10,328.00	21.10	57.50	10,107.25	764.67	987.55	1,248.98	2.70	-2.50	2.81
	10,360.00	20.20	56.30	10,137.19	770.83	997.00	1,260.23	3.11	-2.81	-3.75
	10,392.00	20.40	55.90	10,167.21	777.02	1,006.21	1,271.31	0.76	0.63	-1.25
	10,423.00	21.40	55.60	10,196.17	783.25	1,015.36	1,282.35	3.24	3.23	-0.97
	10,455.00	21.40	54.90	10,225.96	789.90	1,024.95	1,294.01	0.80	0.00	-2.19



Black Viper Energy Services
Survey Report



Company	Cimarex Energy Co., Inc.	Local Coordinate Reference	Well: McGruder 13 Federal #3
Project	Eddy Co., New Mexico	TVD Reference	WELL @ 0.00ft (Original Well Elev)
Site	McGruder 13 Federal #3	MD Reference	WELL @ 0.00ft (Original Well Elev)
Well	McGruder 13 Federal #3	North Reference	Grid
Wellbore	Plan #1	Survey Calculation Method	Minimum Curvature
Design	Plan #1	Database	EDM 2003.11 Single User Db

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	N/S (ft)	E/W (ft)	Vertical Section (ft)	Dogleg Rate (1/100ft)	Build Rate (1/100ft)	Turn Rate (1/100ft)
10,487.00	22.20	54.60	10,255.67	796.76	1,034.65	1,305.88	2.52	2.50	-0.94
10,519.00	22.50	57.10	10,285.27	803.59	1,044.72	1,318.03	3.11	0.94	7.81
10,551.00	21.40	57.10	10,314.95	810.09	1,054.77	1,329.95	3.44	-3.44	0.00
10,583.00	21.10	57.10	10,344.77	816.39	1,064.50	1,341.51	0.94	-0.94	0.00
10,615.00	21.10	55.90	10,374.63	822.74	1,074.11	1,353.00	1.35	0.00	-3.75
10,646.00	21.00	54.80	10,403.56	829.07	1,083.27	1,364.12	1.31	-0.32	-3.55
10,678.00	20.30	57.10	10,433.50	835.40	1,092.61	1,375.38	3.35	-2.19	7.19
10,709.00	20.10	56.80	10,462.60	841.23	1,101.59	1,386.05	0.73	-0.65	-0.97
10,742.00	20.10	55.60	10,493.59	847.54	1,111.01	1,397.36	1.25	0.00	-3.64
10,774.00	20.20	56.30	10,523.63	853.71	1,120.14	1,408.36	0.82	0.31	2.19
10,805.00	19.60	56.70	10,552.78	859.54	1,128.94	1,418.89	1.98	-1.94	1.29
10,837.00	19.40	55.00	10,582.94	865.53	1,137.78	1,429.55	1.88	-0.63	-5.31
10,893.00	18.80	53.40	10,635.86	876.25	1,152.64	1,447.86	1.42	-1.07	-2.86
10,924.00	18.60	52.90	10,665.22	882.21	1,160.60	1,457.80	0.83	-0.65	-1.61
10,956.00	18.60	53.50	10,695.55	888.32	1,168.77	1,468.01	0.60	0.00	1.88
10,988.00	18.40	53.30	10,725.90	894.38	1,176.92	1,478.16	0.66	-0.63	-0.63
11,020.00	18.60	53.20	10,756.24	900.45	1,185.06	1,488.31	0.63	0.63	-0.31
11,052.00	18.30	54.90	10,786.60	906.40	1,193.25	1,498.43	1.92	-0.94	5.31
11,083.00	17.90	54.20	10,816.06	911.98	1,201.10	1,508.06	1.47	-1.29	-2.26
11,115.00	18.00	56.10	10,846.51	917.62	1,209.19	1,517.91	1.86	0.31	5.94
11,147.00	18.20	53.70	10,876.92	923.33	1,217.32	1,527.84	2.41	0.63	-7.50
11,179.00	17.80	55.20	10,907.36	929.08	1,225.37	1,537.72	1.91	-1.25	4.69
11,211.00	17.50	56.90	10,937.85	934.50	1,233.42	1,547.40	1.86	-0.94	5.31
11,263.00	17.60	57.80	10,987.43	942.96	1,246.62	1,563.02	0.56	0.19	1.73
11,295.00	17.10	58.20	11,017.98	948.02	1,254.71	1,572.52	1.61	-1.56	1.25
11,327.00	17.00	57.40	11,048.57	953.02	1,262.65	1,581.86	0.80	-0.31	-2.50
11,359.00	16.20	58.00	11,079.24	957.90	1,270.38	1,590.96	2.56	-2.50	1.88
11,390.00	15.10	59.50	11,109.09	962.24	1,277.52	1,599.27	3.78	-3.55	4.84
11,422.00	14.00	60.50	11,140.06	966.27	1,284.48	1,607.24	3.53	-3.44	3.13
11,453.00	13.00	59.30	11,170.20	969.89	1,290.74	1,614.41	3.35	-3.23	-3.87
11,485.00	12.40	60.50	11,201.42	973.42	1,296.83	1,621.39	2.05	-1.88	3.75
11,517.00	12.30	58.20	11,232.68	976.91	1,302.72	1,628.18	1.57	-0.31	-7.19
11,549.00	11.50	57.40	11,263.99	980.42	1,308.30	1,634.75	2.55	-2.50	-2.50
11,581.00	10.30	59.10	11,295.41	983.61	1,313.44	1,640.77	3.88	-3.75	5.31
11,613.00	10.10	59.20	11,326.91	986.52	1,318.31	1,646.39	0.63	-0.63	0.31
11,645.00	8.40	55.10	11,358.49	989.29	1,322.64	1,651.51	5.69	-5.31	-12.81
11,677.00	7.70	74.50	11,390.18	991.20	1,326.62	1,655.84	8.72	-2.19	60.63
11,709.00	6.50	81.10	11,421.94	992.06	1,330.48	1,659.41	4.53	-3.75	20.63
Last MWVD Survey									
11,775.00	5.00	85.00	11,487.60	992.88	1,337.03	1,665.11	2.35	-2.27	5.91
Prof to Bit TD									



Black Viper Energy Services
Survey Report



Company	Cimarex Energy Co., Inc.	Local Co-ordinate Reference	Well: McGruder 13 Federal #3
Project	Eddy Co., New Mexico	TVD Reference	WELL @ 0.00ft (Original Well Elev)
Site	McGruder 13 Federal #3	MD Reference	WELL @ 0.00ft (Original Well Elev)
Well	McGruder 13 Federal #3	North Reference	Grid
Wellbore	Plan #1	Survey Calculation Method	Minimum Curvature
Design	Plan #1	Database	EDM 2003.11 Single User Db

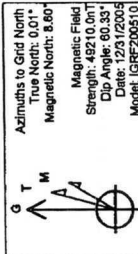
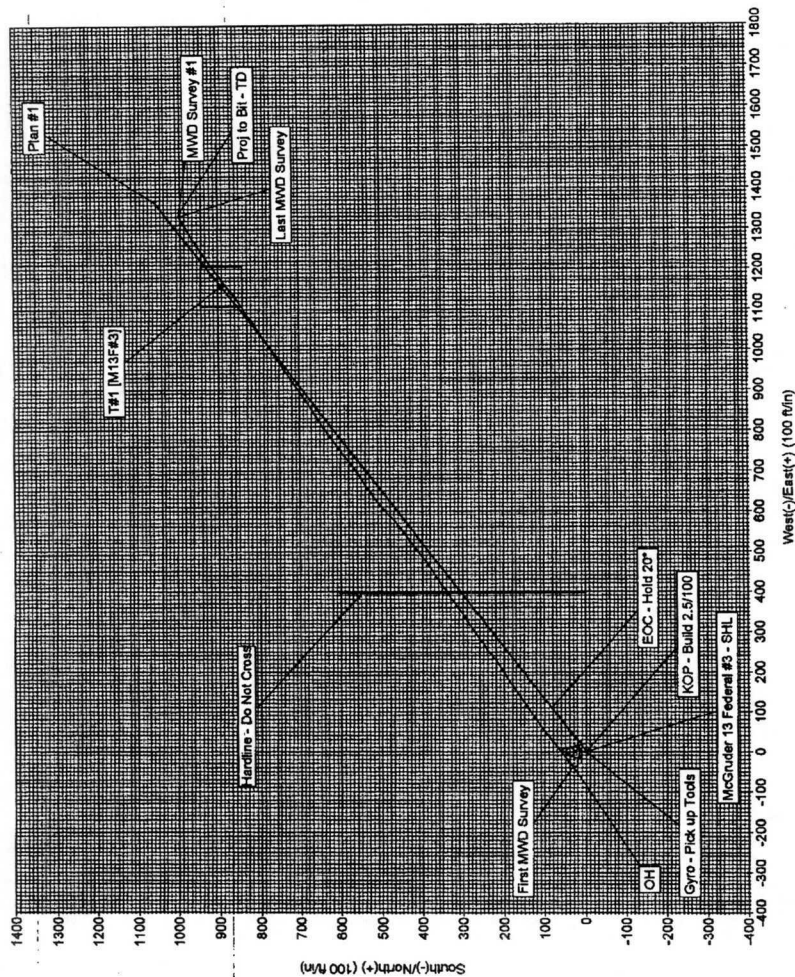
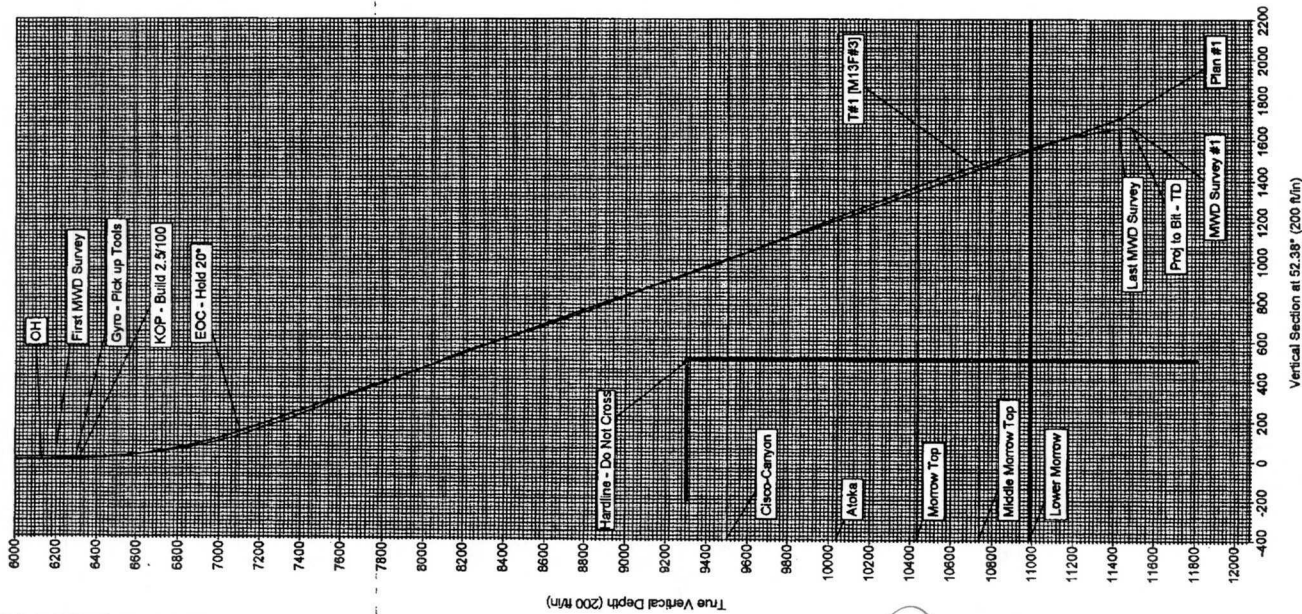
Targets										
Target Name	Offset	Target Dip Angle	Dip (D)	TVD	N/S	E/W	Northing	Easting	Latitude	Longitude
Shape	(ft)	(°)	(°)	(ft)	(°)	(°)	(ft)	(ft)		
T#1 [M3F#3]		0.00	0.00	10,736.00	891.80	1,157.00	506,847.90	493,891.70	32° 23' 36.366" N	104° 21' 11.254" W
- survey misses by 23.08ft @ 10998.65ft MD (10736.00 TVD, 89639 N, 11792 E)										
- Rectangle (sides W100.00 H100.00 D0.00)										

Survey Annotations					
Measured Depth	Vertical Depth	Local Coordinates		Comment	
(ft)	(ft)	N/S	E/W		
(ft)	(ft)	(°)	(°)		
6,196.00	6,195.21	31.62	-37.69	First MWD Survey	
11,709.00	11,421.94	992.06	1,330.48	Last MWD Survey	
11,775.00	11,487.60	992.88	1,337.03	Proj to Bit - TD	

Checked By: _____ Approved By: _____ Date: _____



Project: Eddy Co., New Mexico
 Site: McGruder 13 Federal #3
 Well: Wellbore: Plan #1
 Plan: Plan #1



Plan: Plan #1 (McGruder 13 Federal #3 Plan #1)
 Created By: John Hatzberg Date: 11/16/2005

ANNOTATIONS
 TVD
 6300.00 MD Annotation
 6318.35 Gyro - Pick up Tools
 7102.21 KOP - Build 2.5/100
 7118.36 EOC - Hold 20"

SECTION DETAILS									
Sec	MD	Inc	Azi	TVD	+N/S	+E/W	DLeg	TFace	VSec Target
1	6300.00	0.00	52.38	6300.00	0.00	0.00	0.00	0.00	0.00
2	6318.35	0.00	52.38	6318.35	0.00	0.00	0.00	0.00	0.00
3	7118.36	20.00	52.38	7102.21	84.38	109.47	2.50	52.38	138.21
4	10985.36	20.00	52.38	10736.00	881.80	1157.00	0.00	0.00	1450.81
5	11745.16	20.00	52.38	11450.00	1050.45	1362.83	0.00	0.00	1720.68

Vertical Section at 52.38° (200 ft/m)

10433

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 & Natural Resources

Form C-104
Revised June 10, 2003

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

JUN 26 2006

Submit to Appropriate District Office
5 Copies

UNRECORDED

☐ AMENDED REPORT

I. REQUEST FOR ALLOWABLE AND AUTHORIZATION TO TRANSPORT

¹ Operator name and Address Cimarex Energy Co. PO Box 140907 Irving, TX 75014		² OGRID Number 215099
		³ Reason for Filing Code/ Effective Date NW - 03-06
⁴ API Number 30 - 015-34778	⁵ Pool Name Happy Valley; Morrow (Gas)	⁶ Pool Code 78060
⁷ Property Code	⁸ Property Name McGruder Hill 13 Federal	⁹ Well Number 003

II. ¹⁰ Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South Line	Feet from the	East/West line	County
L	13	22S	25E		2445	South	260	West	Eddy

¹¹ Bottom Hole Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
F	13	22S	25E		1874	North	1597	East	Eddy
¹² Lse Code	¹³ Producing Method Code	¹⁴ Gas Connection Date	¹⁵ C-129 Permit Number	¹⁶ C-129 Effective Date	¹⁷ C-129 Expiration Date				
	F	03-31-06							

III. Oil and Gas Transporters

¹⁸ Transporter OGRID	¹⁹ Transporter Name and Address	²⁰ POD	²¹ O/G	²² POD ULSTR Location and Description
24650	ENTERPRISE FIELD SERVICES L.L.C. P O BOX 4503 Houston, TX 77210		G	Same as above

IV. Produced Water

²³ POD	²⁴ POD ULSTR Location and Description Same as above
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V. Well Completion Data

²⁵ Spud Date 12-01-05	²⁶ Ready Date 03-31-06	²⁷ TD MD 11775' TVD 11488'	²⁸ PBTD MD 11676' TVD 11390'	²⁹ Perforations 11028' - 11158'	³⁰ DHC, MC
³¹ Hole Size	³² Casing & Tubing Size	³³ Depth Set	³⁴ Sacks Cement		
17-1/2"	13-3/8" H-40	653'	650 sx circ 210 sx		
12-1/4"	9-5/8" J-55	2638'	960 sx circ 245 sx		
8-3/4"	5-1/2" P-110	11775'	1970 sx circ 197 sx TOC 1780'		
	2-7/8"	10980'			

VI. Well Test Data

³⁵ Date New Oil	³⁶ Gas Delivery Date 03-31-06	³⁷ Test Date 04-12-06	³⁸ Test Length 24 hrs	³⁹ Tbg. Pressure 500	⁴⁰ Csg. Pressure 0
⁴¹ Choke Size open	⁴² Oil 0	⁴³ Water 109	⁴⁴ Gas 1537	⁴⁵ AOF 1.594	⁴⁶ Test Method F

⁴⁷ I hereby certify that the rules of the Oil Conservation Division have been complied with and that the information given above is true and complete to the best of my knowledge and belief.

Signature: *Natalie Krueger*

Printed name: Natalie Krueger

Title: Reg Analyst I

E-mail Address: nkrueger@cimarex.com

Date: 6/23/2006

Phone: 469-420-2723

OIL CONSERVATION DIVISION

Approved by:

BRYAN G. ARANT
DISTRICT II GEOLOGIST

Title:

Approval Date:

JUN 26 2006