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DEC 03 2010
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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

5. Lease Serial No.: LC-060329

6. If Indian, Allotee or Tribe Name:

1a. Type of Work: [X] DRILL [ ] REENTER

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

1b. Type of Well: [X] Oil Well [ ] Gas Well [ ] Other [X] Single Zone [ ] Multiple Zone

8. Lease Name and Well No.: HT Federal No. 1 (38399)

2. Name of Operator: Cimarex Energy Co. of Colorado (162683)

9. API Well No.: 30-025- 39974 (30-015-)

3a. Address: 600 N. Marienfeld St., Ste. 600; Midland, TX 79701

3b. Phone No. *(include area code)*: 432-571-7800

10. Field and Pool, or Exploratory: Maljamar; Yeso-West

4. Location of Well *(Report location clearly and in accordance with any State requirements.*)*

At Surface: 780 FSL & 575 FWL (M) At BHL: 330 FSL & 990 FWL

At proposed prod. Zone: 500 FSL & 835 FWL

11. Sec., T. R. M. or Blk. and Survey or Area: 18-17S-32E

14. Distance in miles and direction from nearest town or post office*

12. County or Parish: Lea

13. State: NM

15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line if any)	16. No of acres in lease	17. Spacing Unit dedicated to this well
575	323.76	SWSW 40.97
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft.	**19. Proposed Depth**	**20. BLM/BIA Bond No. on File**
	7028'	NM-2575
21. Elevations (Show whether DF, KDB, RT, GL, etc.)	**22. Approximate date work will start***	**23. Estimated duration**
3938' GR	11.01.10	20-25 days

The following, completed in accordance with the requirements of Onshore Oil and Gas Order No. 1, shall be attached to this form:

1. Well plat certified by a registered surveyor
2. A Drilling Plan
3. A Surface Use Plan (if the location is on National Forest System Lands, the SUPO shall be filed with the appropriate Forest Service Office).
4. Bond to cover the operations unless covered by an existing bond on file (see Item 20 above).
5. Operator Certification
6. Such other site specific information and/or plans as may be required by the authorized officer.

25. Signature	Name *(Printed/Typed)*	Date
Zeno Farris	Zeno Farris	9.02.10

Title: Manager Operations Administration

Approved By *(Signature)*	Name (Printed/Typed)	Date
/s/ Don Peterson	/s/ Don Peterson	DEC 01 2010
Title	**Office**	
FIELD MANAGER	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.

APPROVAL FOR TWO YEARS

Title 18 U.S.S. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious, or fraudulent statements or representations as to any matter within its jurisdiction.

* *(Instructions on page 2)*

Roswell Controlled Water Basin

KZ 12/8/10

SEE ATTACHED FOR
CONDITIONS OF APPROVAL

Approval Subject to General Requirements
& Special Stipulations Attached

DISTRICT I
625 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

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State of New Mexico
Energy, Minerals and Natural Resources Department

OIL CONSERVATION DIVISION

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

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Form C-102
Revised July 16, 2010

Submit one copy to appropriate District Office

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number	Pool Code	Pool Name
30-025-39974	44500	Maljamar; Yeso, West

Property Code	Property Name	Well Number
38399	HT FEDERAL	1

OGRID No.	Operator Name	Elevation
162683	CIMAREX ENERGY CO. OF COLORADO	3938'

Surface Location

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
M	18	17 S	32 E		780	SOUTH	575	WEST	LEA

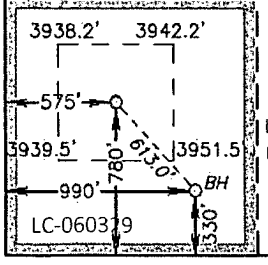
Bottom Hole Location If Different From Surface

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
M	18	17 S	32 E		330	SOUTH	990	WEST	LEA

Dedicated Acres	Joint or Infill	Consolidation Code	Order No.
40.97			

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

SURFACE LOCATION
Lat - N 32°49'46.461"
Long - W 103°48'45.444"
NMSPCE- N 665925.4
E 701282.1
(NAD-83)



PROPOSED BOTTOM HOLE LOCATION
Lat - N 32°49'42.003"
Long - W 103°48'40.576"
NMSPCE- N 665476.89
E 701699.70
(NAD-83)

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 or has a right to drill this well at this 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.

Zeno Farris 11/10/2010

Signature Date

Zeno Farris

Printed Name

zfarris@cimarex.com

Email Address

SURVEYOR CERTIFICATION

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

OCTOBER 14, 2010

Date Surveyed

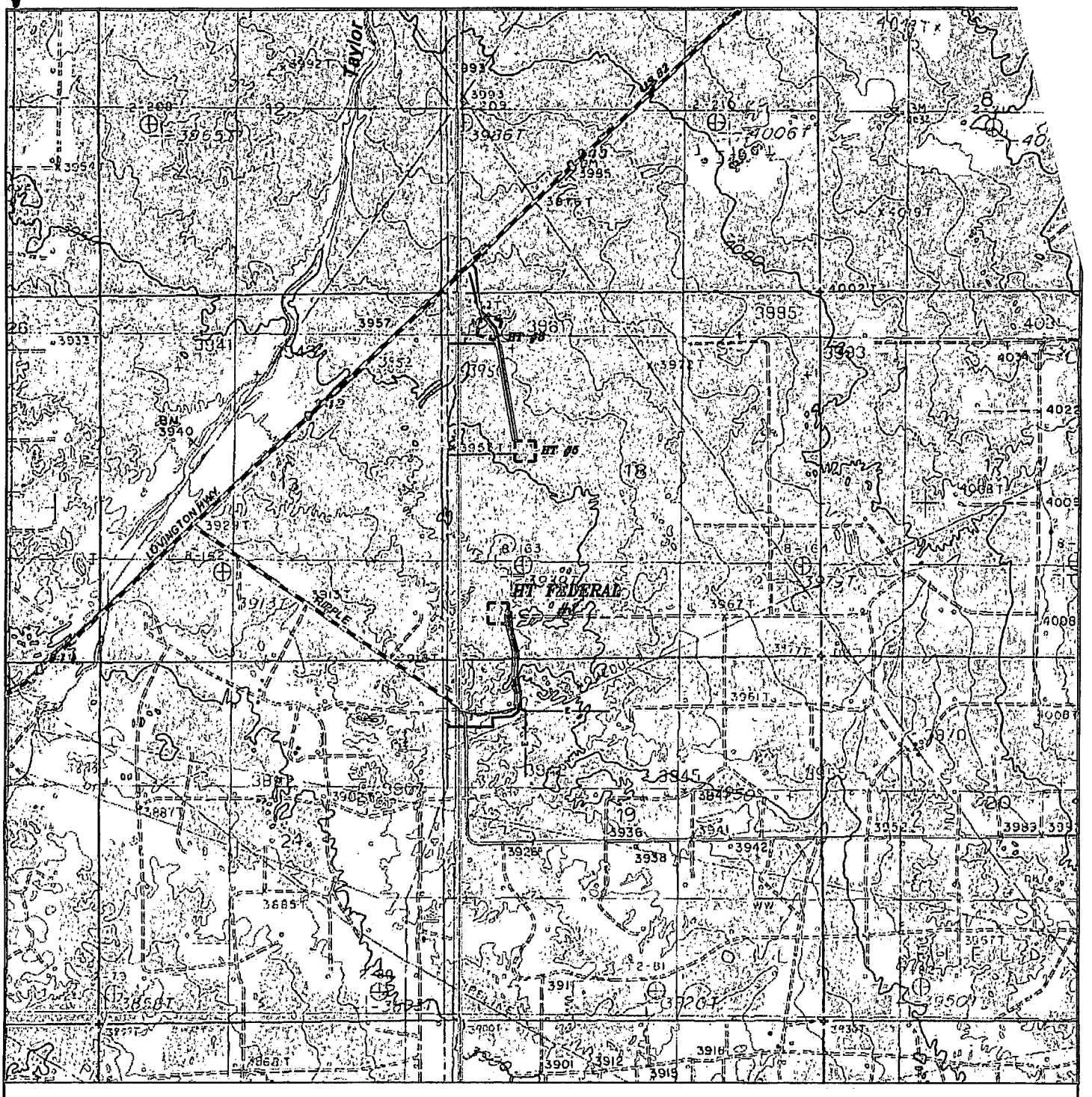
Signature & Seal of Professional Surveyor

GARY L. JONES NEW MEXICO 7977 REGISTERED PROFESSIONAL LAND SURVEYOR

W.O. No. 23575

Certificate No. Gary L. Jones 7977

BASIN SURVEYS 23575



– ROAD
– PIPELINE
– ELECTRIC LINE
– FLOWLINE

THE HT FEDERAL WELLS

Section 18, Township 17 South, Range 32 East, N.M.P.M., Lea County, New Mexico.

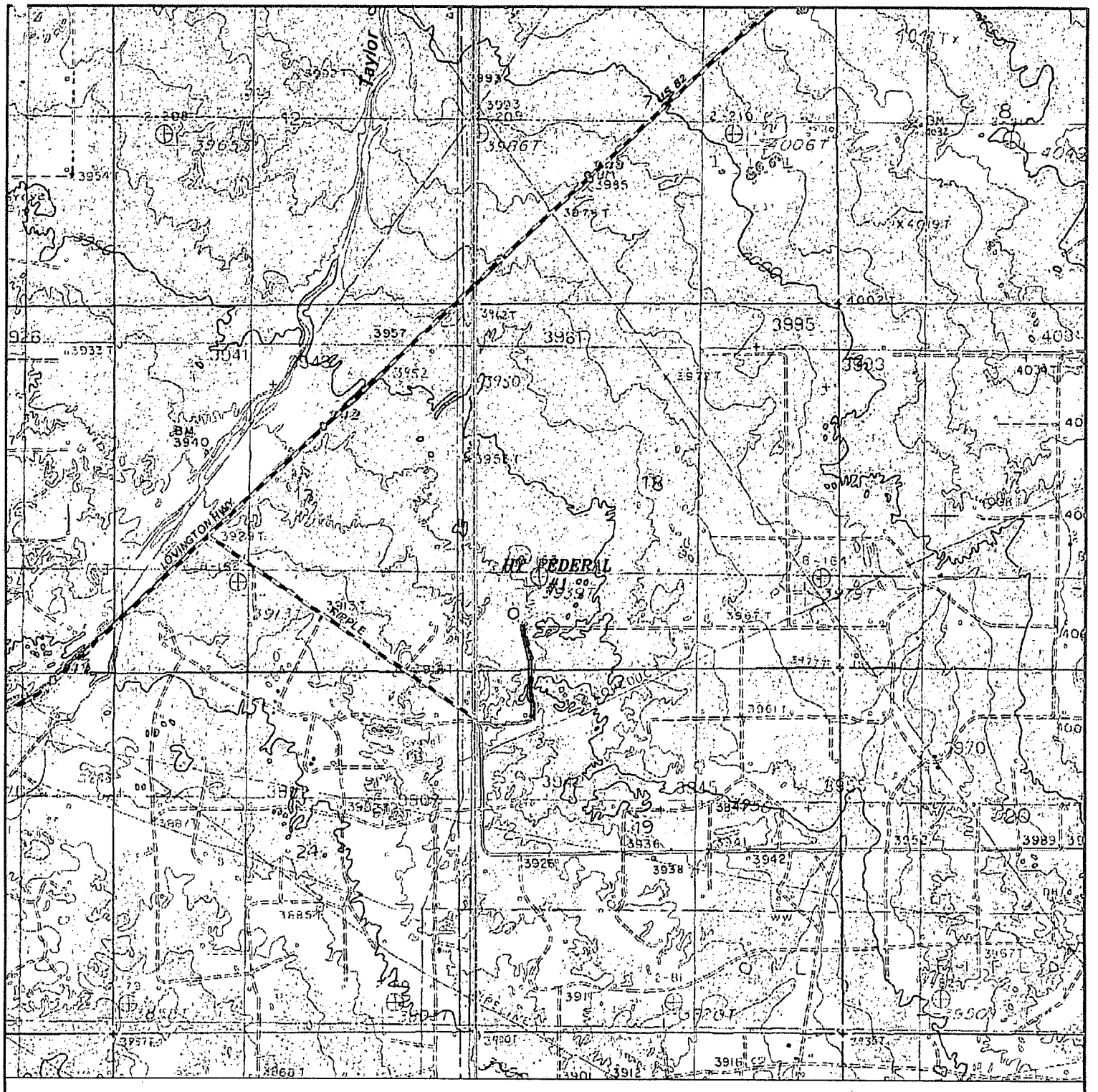
basin surveys
focused on excellence in the oilfield

P.O. Box 1786
1120 N. West County Rd.
Hobbs, New Mexico 88241
(575) 393-7316 – Office
(575) 392-2206 – Fax
basinsurveys.com

W.O. Number:	JMS 23576
Survey Date:	10-14-2010
Scale:	1" = 2000'
Date:	10-26-2010

N

CIMAREX ENERGY CO. OF COLORADO



HT FEDERAL #1
Located 780' FSL and 575' FWL
Section 18, Township 17 South, Range 32 East,
N.M.P.M., Lea County, New Mexico.

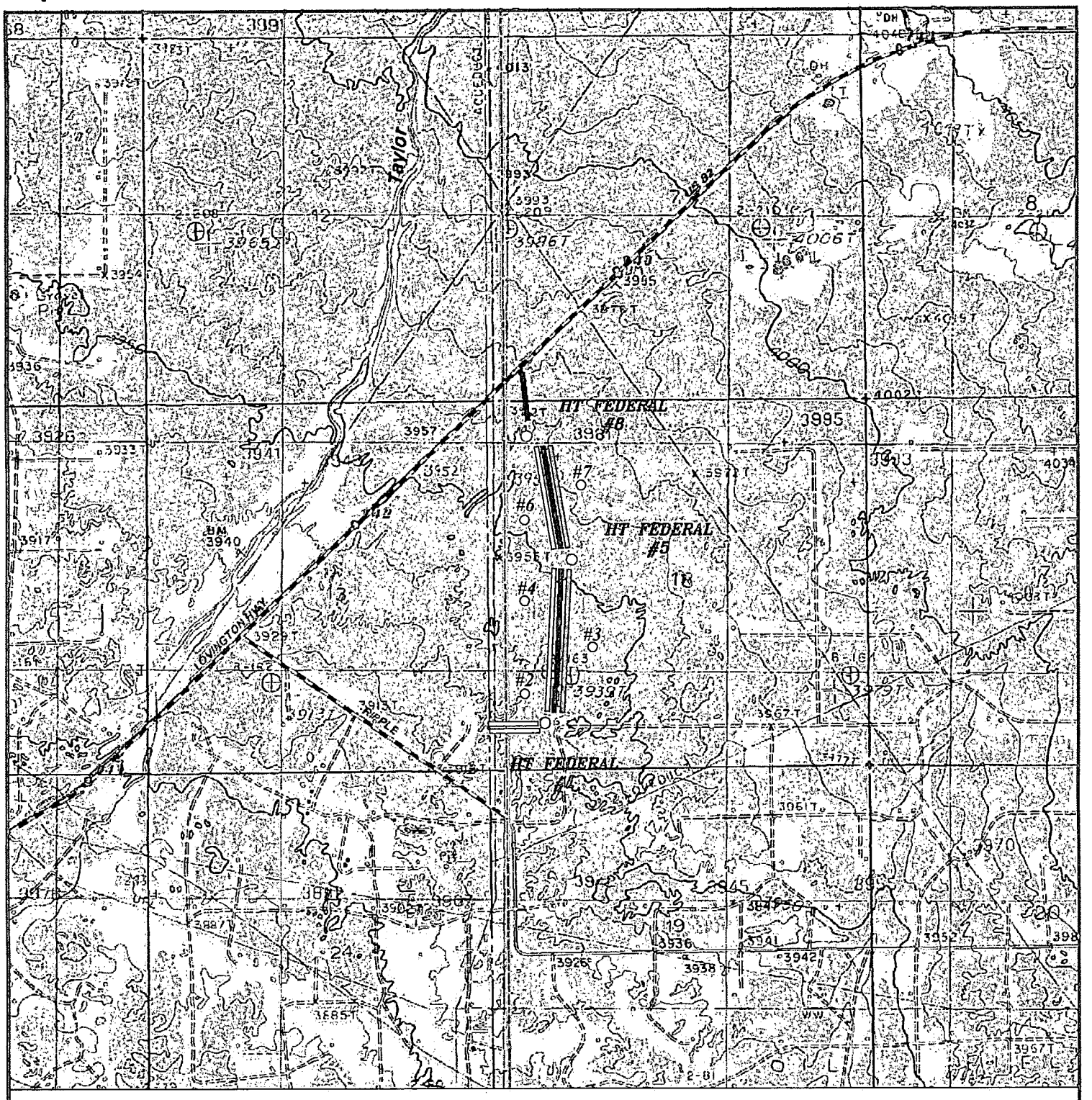
basin surveys
focused on excellence in the oilfield
P.O. Box 1786
1120 N. West County Rd.
Hobbs, New Mexico 88241
(575) 393-7316 – Office
(575) 392-2206 – Fax
basinsurveys.com

W.O. Number: BJN 23575
Survey Date: 10-13-2010
Scale: 1" = 2000'
Date: 10-20-2010

N

CIMAREX ENERGY CO. OF COLORADO

Exhibit C



HT Federal Plan of Development
W2W2 18-17S-32E

- DCP Pipeline
- CVE Electric Line
- SDR-7 Surface Flowline
- Proposed Access Road

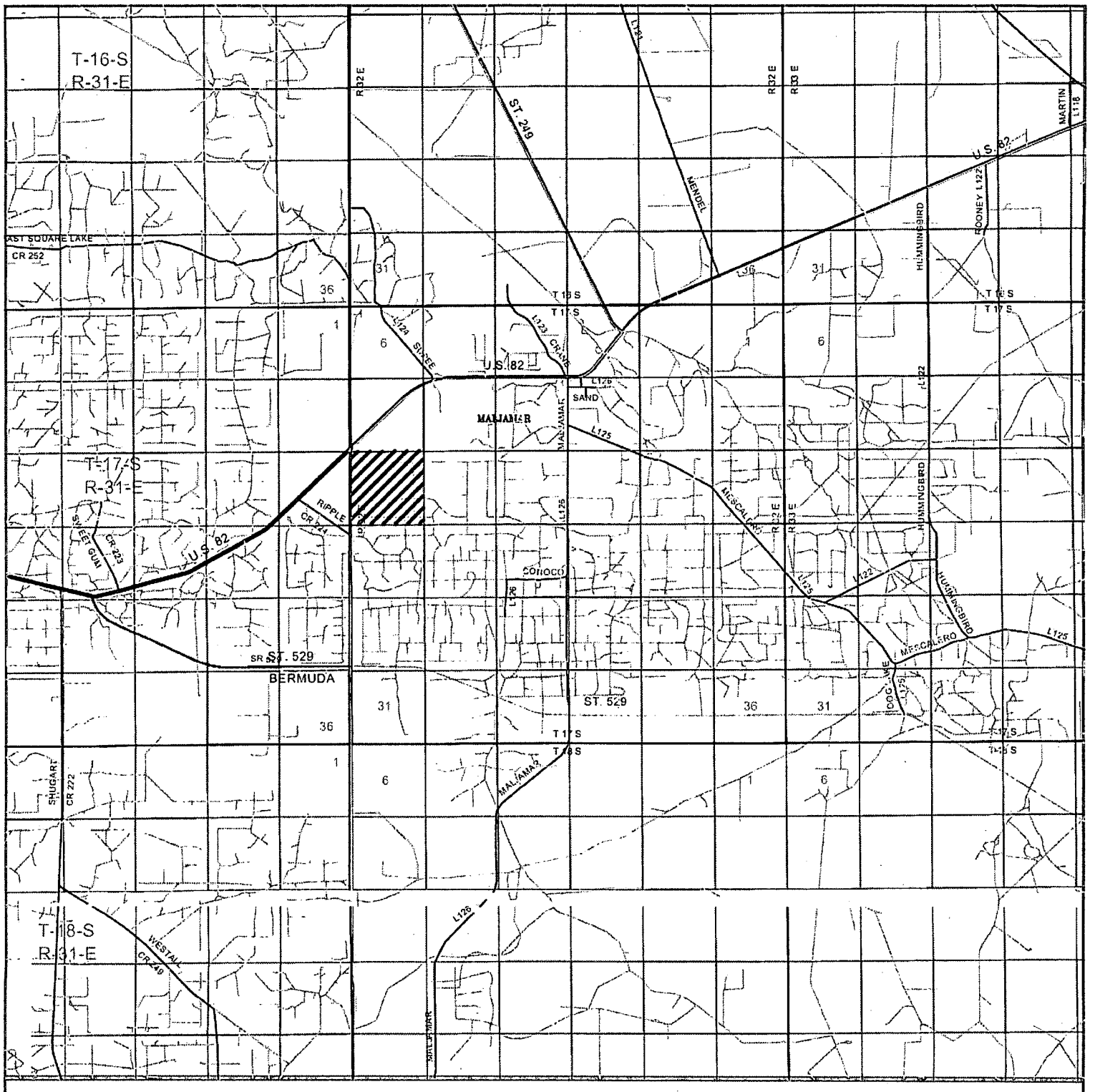
basin surveys
focused on excellence in the oilfield

P.O. Box 1786
1120 N. West County Rd.
Hobbs, New Mexico 88241
(575) 393-7316 - Office
(575) 392-2206 - Fax
basinsurveys.com

W.O. Number:	JMS 22883
Survey Date:	06-10-2010
Scale:	1" = 2000'
Date:	06-11-2010

N

CIMAREX ENERGY CO. OF COLORADO



HT FEDERAL #1
Located 780' FSL and 575' FWL
Section 18, Township 17 South, Range 32 East,
N.M.P.M., Lea County, New Mexico.

basin surveys
focused on excellence in the oilfield

P.O. Box 1786
1120 N. West County Rd.
Hobbs, New Mexico 88241
(575) 393-7316 – Office
(575) 392-2206 – Fax
basinsurveys.com

W.O. Number: BJN 23575
Survey Date: 10-13-2010
Scale: 1" = 2 Miles
Date: 10-20-2010

N

CIMAREX ENERGY CO. OF COLORADO

Exhibit B

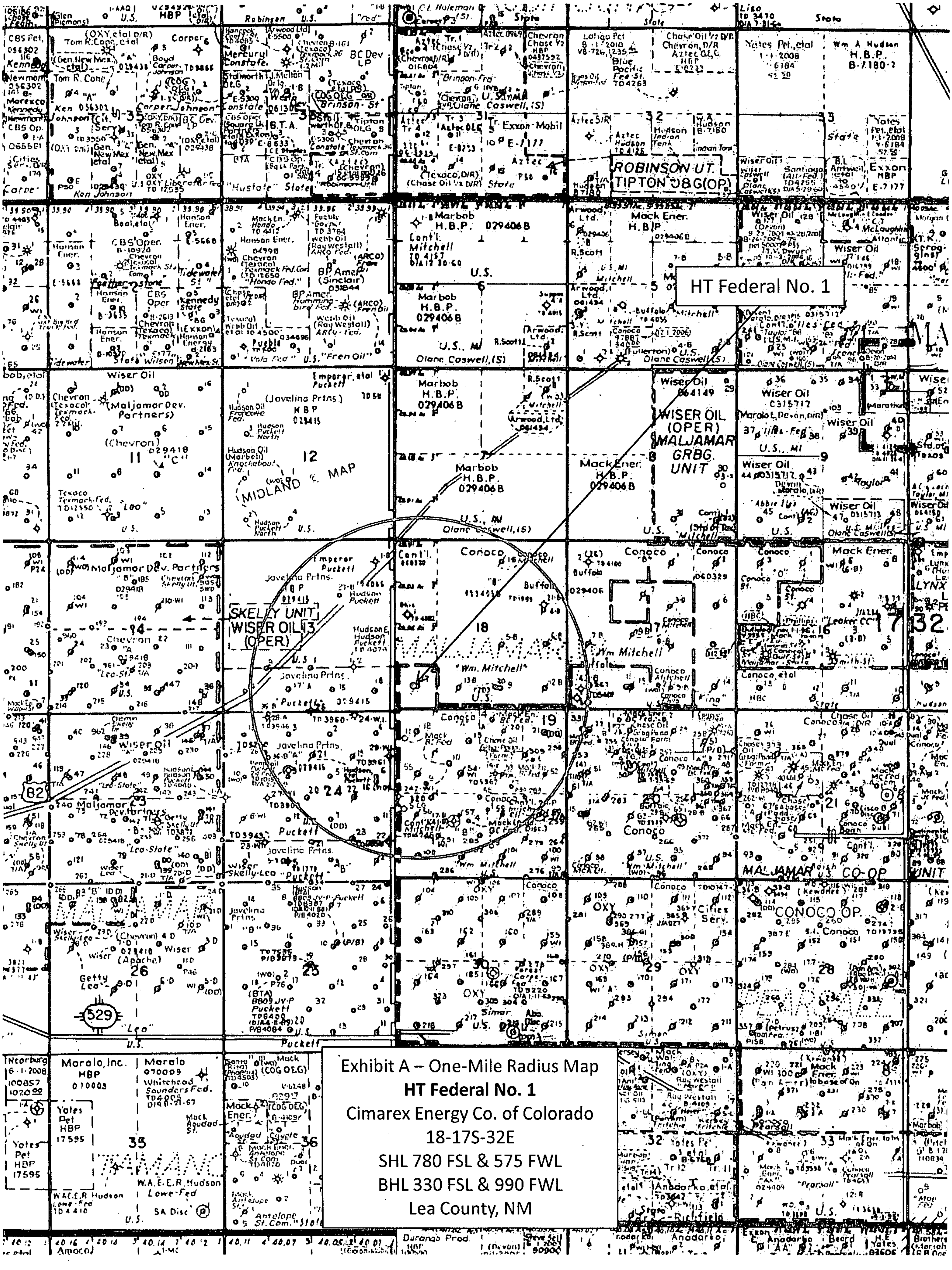
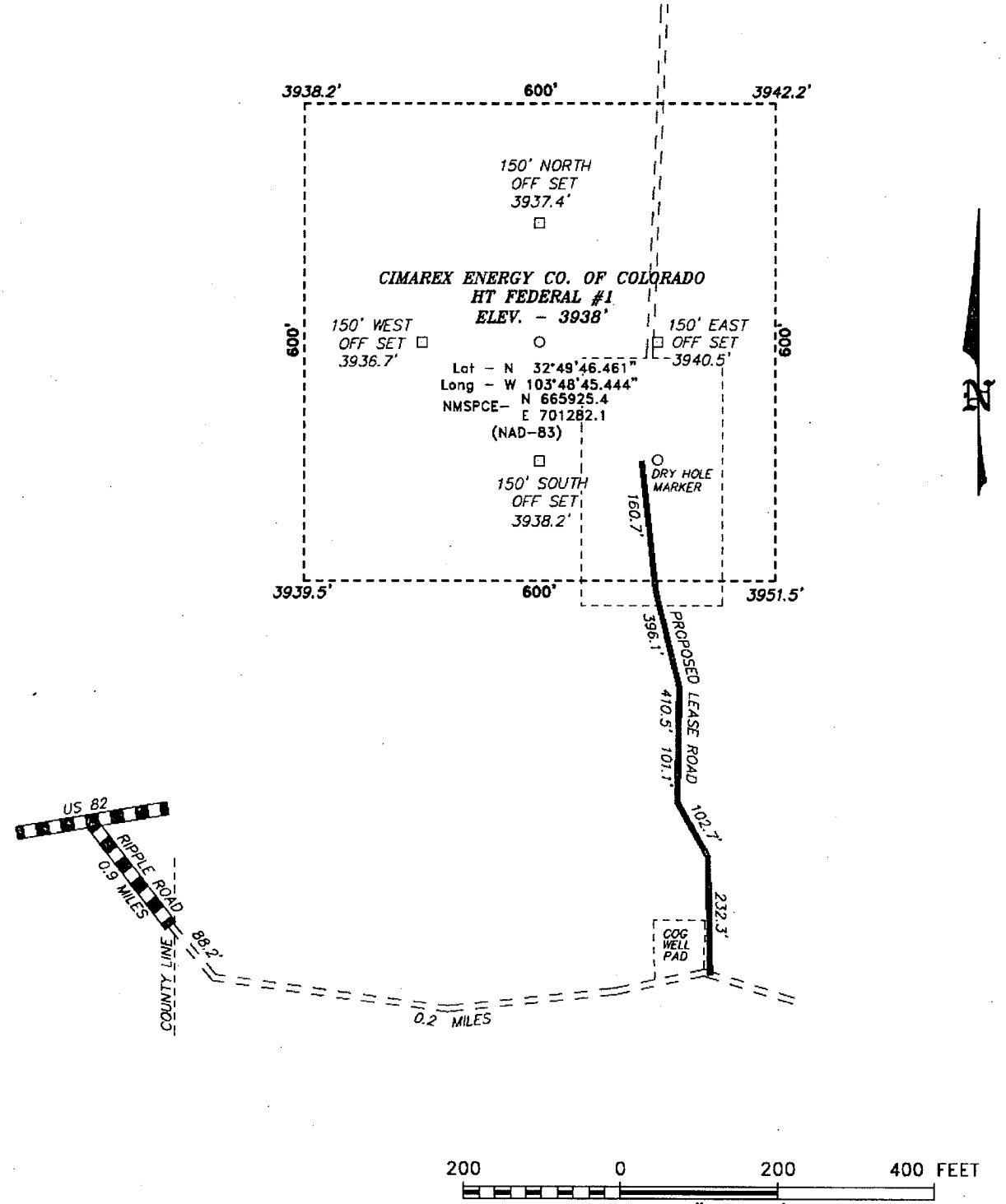


Exhibit A – One-Mile Radius Map
HT Federal No. 1
Cimarex Energy Co. of Colorado
18-17S-32E
SHL 780 FSL & 575 FWL
BHL 330 FSL & 990 FWL
Lea County, NM

SECTION 18, TOWNSHIP 17 SOUTH, RANGE 32 EAST, N.M.P.M.,
LEA COUNTY, NEW MEXICO.



200 0 200 400 FEET

SCALE: 1" = 200'

Directions to Location:

FROM THE JUNCTION OF US 82, TURN SOUTHEAST ON RIPPLE ROAD FOR 0.9 MILES, THEN EAST ON EXISTING LEASE ROAD FOR 0.2 MILES TO PROPOSED LEASE ROAD.

CIMAREX ENERGY CO. OF COLORADO

REF: HT FEDERAL #1 / WELL PAD TOPO

THE HT FEDERAL #1 LOCATED 780'

FROM THE SOUTH LINE AND 575' FROM THE WEST LINE OF

SECTION 18, TOWNSHIP 17 SOUTH, RANGE 32 EAST,

N.M.P.M., LEA COUNTY, NEW MEXICO.

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

W.O. Number: 23575	Drawn By: B. NIXON		
Date: 10-20-2010	Disk: BJN 23575	Survey Date: 10-13-2010	Sheet 1 of 1 Sheets

Exhibit C-1

Application to Drill
HT Federal No. 1
Cimarex Energy Co. of Colorado
Unit M, Section 18
T17S R32E, Lea County, NM

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

1 Location: SHL 780 FSL & 575 FWL
BHL 330 FSL & 990 FWL

2 Elevation above sea level: 3938' 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: 7,028'

6 Estimated tops of geological markers:

Yates	2025'
San Andres	3690'
Glorieta	5235'
Paddock	5290'
Blinebry	5875'
Tubb	6715'

7 Possible mineral bearing formation:

Paddock	Oil
Blinebry	Oil

8 Proposed Mud Circulating System: → See COA

Depth	Mud Wt	Visc	Fluid Loss	Type Mud
0' to ~~650'~~ 775	8.4 - 8.8	40-45	NC	FW
650' to ~~2100'~~ 1915	9.9 - 10.1	28-32	NC	Brine
2100' to 7028'	9.1	28-32	NC	Cut Brine

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.

Set surface and intermediate casing and drill through to 7⅞" KOP @ 2180.' Drill to TD 7028' MD, 7000 TVD.' Set and cement 5½" production casing.

Application to Drill
HT Federal No. 1
Cimarex Energy Co. of Colorado
Unit M, Section 18
T17S R32E, Lea County, NM

9 Casing Plan: * See COA

String	Hole Size	Depth			Casing OD		Weight	Thread	Collar	Grade
Surface	16"	0'	to	~~650'~~	New	11¾"	42#	8-R	STC	H-40
Intermediate	11"	0'	to	~~2100'~~	New	8⅝"	24#	8-R	STC	J-55
Production	7⅞"	0'	to	7028'	New	5½"	17#	8-R	LTC	J-55

10 Cementing:

Surface

Lead: 350 sx Class C + 4% D-20 + 1% S + 0.125 ppg D-130 + 4.0 pps D-42 (wt 12.9 ppg, yield 1.99)
Tail: 200 sx Class C + 1% S-1 + D42 + 0.125 pps D130 (wt 14.80, yield 1.34)
TOC Surface

Intermediate

Lead: 400 sx 50:50 Poz: Class "C" + 0.2% Defoamer (D046) + 5% D044 (Salt) +10% D020 (Extender Gel) + 1/8 pps Polyflake (D130) + 2 pps Gilsonite (D042) Mixed at 11.8 ppg, Yeild 2.57 cuft/sx, 15.061 gal/sx fresh water
Tail: 200 sx Class "C" + 1% S001 (CaCl2), Mixed at 14.8 ppg, 1.33 cuft/sx, 6.365 gal/sx fresh water
TOC Surface

Production

Lead: 500 sacks LiteCrete + 0.2% Defoamer (D046) + 0.6% Fluid Loss (D167) + 1 lb/sx Extender (D042) + 0.02% Retarder (D013) + 23 lbs/sx Silica (D178) + 40 lbs/sx Extender (D124) Mixed at 9.9 ppg. Yeild 2.35 cuft/sx, 8.6 gal/sx Fresh Water
Tail: 500 sacks PVL + 1.3% NaCl (D044) + 0.2% Fluid Loss (D167) + 0.2% Cement Retarder (D013) + 0.2% Dispersant (D065). Mixed at 13.0 ppg, Yeild 1.40 cuft/sx, 7.277 gal/sx Fresh Water
TOC 1900'

Fresh water zones will be protected by setting 11¾" casing at 650' and cementing to surface. Hydrocarbon zones will be protected by setting 8⅝" casing at 2100' and cementing to surface and by setting 5½" casing at 7028' and cementing to 1900.'

Collapse Factor	*Burst Factor*	*Tension Factor*
1.125	1.125	1.6

Application to Drill
HT Federal No. 1
Cimarex Energy Co. of Colorado
" Unit M, Section 18
" T17S R32E, Lea County, NM

11 Pressure control Equipment: → 13 5/8 3000# Per Exhibit E diagram

An ~~11¾~~" 3000 PSI working pressure B.O.P. consisting of a one set of blind rams and one set of pipe rams and a 3000 psi annular-type preventor. A choke manifold and 120 gallon accumulator with floor and remote operating stations and auxiliary power system. A kelly cock will be installed and maintained in operable condition and a drill string safety valve in the open position will be available on the rig floor. Test BOP equipment and choke manifold to 250 psi low and 3000 psi high and annular BOP to 250 psi low and 1500 psi high by an independent service company.

BOP unit will be hydraulically operated. Below intermediate casing shoe, BOP will be operated at least once a day while drilling and the blind rams will be operated when out of hole during trips. No abnormal pressure or temperature is expected while drilling. From the base of the surface pipe through the running of production casing, the well will be equipped with a 3000 psi BOP system.

BOPS will be tested by an independent service company to 250 psi low and 3000 psi high. Hydril will be tested to 250 psi low and 1500 psi high.

12 Testing, Logging and Coring Program: * SEE COA

A. Mud logging No mud logging program.
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 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 **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.
Blinebry pay will be perforated and stimulated.
The proposed well will be tested and potentialed as **an oil well.**

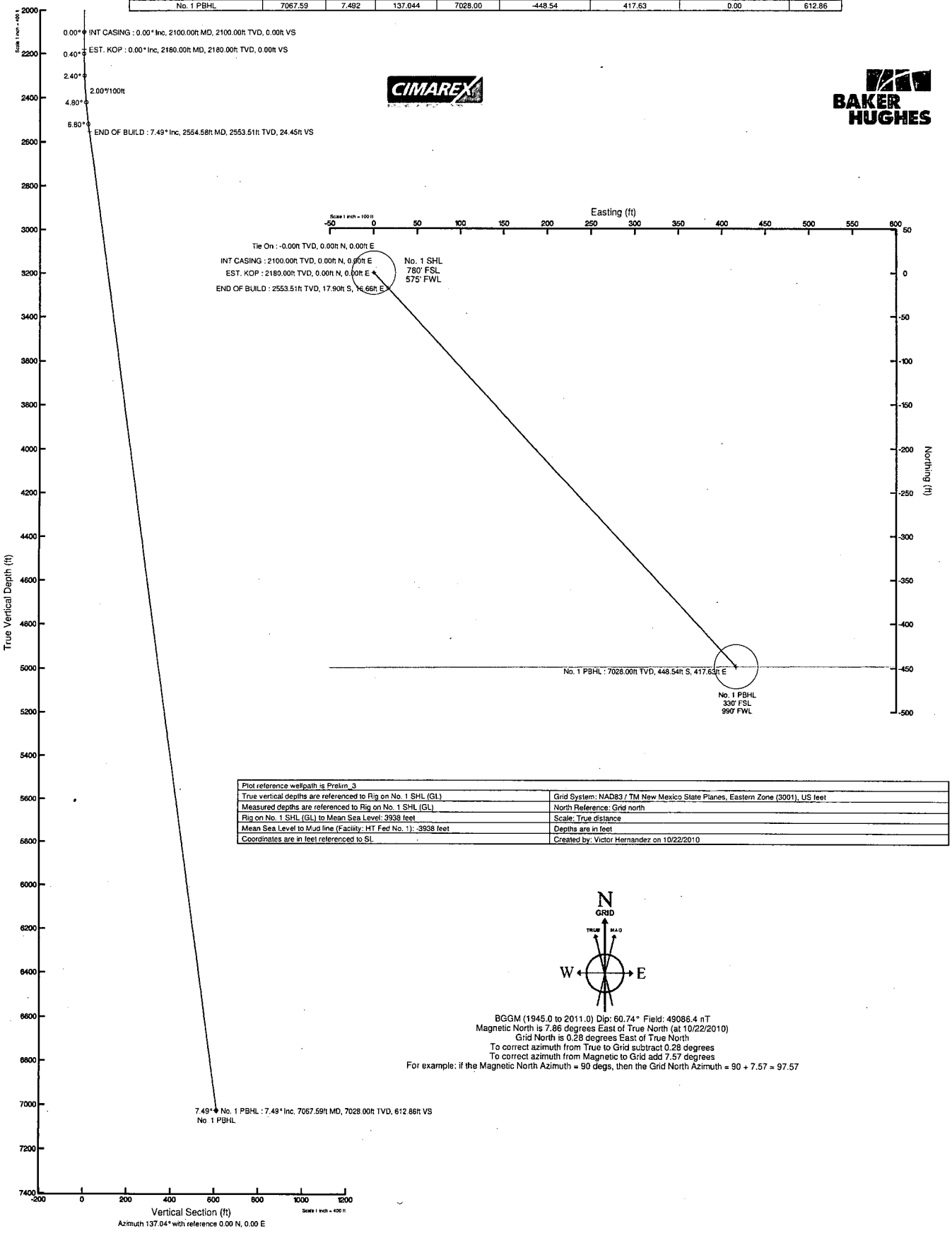
Cimarex Energy Co.

Location: Lea County, NM
Field: (HT) Sec 18, T17S, R32E
Facility: HT Fed No. 1

Slot: No. 1 SHL
Well: No. 1
Wellbore: No. 1 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	137.044	0.00	0.00	0.00	0.00	0.00
INT CASING	2100.00	0.000	137.044	2100.00	0.00	0.00	0.00	0.00
EST. KOP	2180.00	0.000	137.044	2180.00	0.00	0.00	0.00	0.00
END OF BUILD	2554.58	7.492	137.044	2553.51	-17.90	16.66	2.00	24.45
No. 1 PBHL	7067.59	7.492	137.044	7028.00	-448.54	417.63	0.00	612.86



Plot reference wellpath is Prelim_3	
True vertical depths are referenced to Rig on No. 1 SHL (GL)	Grid System: NAD83 / TM New Mexico State Planes, Eastern Zone (3001), US feet
Measured depths are referenced to Rig on No. 1 SHL (GL)	North Reference: Grid north
Rig on No. 1 SHL (GL) to Mean Sea Level: 3938 feet	Scale: True distance
Mean Sea Level to Mud line (Facility: HT Fed No. 1): -3938 feet	Depths are in feet
Coordinates are in feet referenced to SL	Created by: Victor Hernandez on 10/22/2010

BGGM (1945.0 to 2011.0) Dip: 60.74° Field: 49086.4 nT
Magnetic North is 7.86 degrees East of True North (at 10/22/2010)
Grid North is 0.28 degrees East of True North
To correct azimuth from True to Grid subtract 0.28 degrees
To correct azimuth from Magnetic to Grid add 7.57 degrees
For example: if the Magnetic North Azimuth = 90 degs, then the Grid North Azimuth = 90 + 7.57 = 97.57

Planned Wellpath Report

Prelim_3

REFERENCE WELLPATH IDENTIFICATION			
Operator	**Cimarex Energy Co.**	Slot	**No. 1 SHL**
Area	**Lea County, NM**	Well	**No. 1**
Field	**(HT) Sec 18, T17S, R32E**	Wellbore	**No. 1 PWB**
Facility	**HT Fed No. 1**		

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	**0.999938**	Report Generated	**10/22/2010** at **4:04:10 PM**
Convergence at slot	**0.28° East**	Database/Source file	**WA_Midland/No._1_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**	701282.10	665925.40	32°49'46.461"N	103°48'45.444"W
Facility Reference Pt			**701282.10**	**665925.40**	32°49'46.461"N	103°48'45.444"W
Field Reference Pt			**701281.80**	**665775.50**	32°49'44.978"N	103°48'45.456"W

WELLPATH DATUM			
Calculation method	**Minimum curvature**	Rig on No. 1 SHL (GL) to GL	**0.00ft**
Horizontal Reference Pt	**SL**	Rig on No. 1 SHL (GL) to Mean Sea Level	**3938.00ft**
Vertical Reference Pt	**Rig on No. 1 SHL (GL)**	GL to Mud Line (Facility)	**0.00ft**
MD Reference Pt	**Rig on No. 1 SHL (GL)**	Section Origin	**N 0.00, E 0.00 ft**
Field Vertical Reference	**Mean Sea Level**	Section Azimuth	**137.04°**

Planned Wellpath Report

Prelim_3

REFERENCE WELLPATH IDENTIFICATION			
Operator	**Cimarex Energy Co.**	Slot	**No. 1 SHL**
Area	**Lea County, NM**	Well	**No. 1**
Field	**(HT) Sec 18, T17S, R32E**	Wellbore	**No. 1 PWB**
Facility	**HT Fed No. 1**		

WELLPATH DATA (74 stations) **† = interpolated/extrapolated station**

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [srv ft]	Grid North [srv ft]	Latitude	Longitude	DLS [°/100ft]	Comments
0.00	0.000	137.044	0.00	0.00	0.00	0.00	701282.10	665925.40	32°49'46.461"N	103°48'45.444"W	0.00	Tie On
100.00†	0.000	137.044	100.00	0.00	0.00	0.00	701282.10	665925.40	32°49'46.461"N	103°48'45.444"W	0.00	
200.00†	0.000	137.044	200.00	0.00	0.00	0.00	701282.10	665925.40	32°49'46.461"N	103°48'45.444"W	0.00	
300.00†	0.000	137.044	300.00	0.00	0.00	0.00	701282.10	665925.40	32°49'46.461"N	103°48'45.444"W	0.00	
400.00†	0.000	137.044	400.00	0.00	0.00	0.00	701282.10	665925.40	32°49'46.461"N	103°48'45.444"W	0.00	
500.00†	0.000	137.044	500.00	0.00	0.00	0.00	701282.10	665925.40	32°49'46.461"N	103°48'45.444"W	0.00	
600.00†	0.000	137.044	600.00	0.00	0.00	0.00	701282.10	665925.40	32°49'46.461"N	103°48'45.444"W	0.00	
700.00†	0.000	137.044	700.00	0.00	0.00	0.00	701282.10	665925.40	32°49'46.461"N	103°48'45.444"W	0.00	
800.00†	0.000	137.044	800.00	0.00	0.00	0.00	701282.10	665925.40	32°49'46.461"N	103°48'45.444"W	0.00	
900.00†	0.000	137.044	900.00	0.00	0.00	0.00	701282.10	665925.40	32°49'46.461"N	103°48'45.444"W	0.00	
1000.00†	0.000	137.044	1000.00	0.00	0.00	0.00	701282.10	665925.40	32°49'46.461"N	103°48'45.444"W	0.00	
1100.00†	0.000	137.044	1100.00	0.00	0.00	0.00	701282.10	665925.40	32°49'46.461"N	103°48'45.444"W	0.00	
1200.00†	0.000	137.044	1200.00	0.00	0.00	0.00	701282.10	665925.40	32°49'46.461"N	103°48'45.444"W	0.00	
1300.00†	0.000	137.044	1300.00	0.00	0.00	0.00	701282.10	665925.40	32°49'46.461"N	103°48'45.444"W	0.00	
1400.00†	0.000	137.044	1400.00	0.00	0.00	0.00	701282.10	665925.40	32°49'46.461"N	103°48'45.444"W	0.00	
1500.00†	0.000	137.044	1500.00	0.00	0.00	0.00	701282.10	665925.40	32°49'46.461"N	103°48'45.444"W	0.00	
1600.00†	0.000	137.044	1600.00	0.00	0.00	0.00	701282.10	665925.40	32°49'46.461"N	103°48'45.444"W	0.00	
1700.00†	0.000	137.044	1700.00	0.00	0.00	0.00	701282.10	665925.40	32°49'46.461"N	103°48'45.444"W	0.00	
1800.00†	0.000	137.044	1800.00	0.00	0.00	0.00	701282.10	665925.40	32°49'46.461"N	103°48'45.444"W	0.00	
1900.00†	0.000	137.044	1900.00	0.00	0.00	0.00	701282.10	665925.40	32°49'46.461"N	103°48'45.444"W	0.00	
2000.00†	0.000	137.044	2000.00	0.00	0.00	0.00	701282.10	665925.40	32°49'46.461"N	103°48'45.444"W	0.00	
2100.00	0.000	137.044	2100.00	0.00	0.00	0.00	701282.10	665925.40	32°49'46.461"N	103°48'45.444"W	0.00	INT CASING
2180.00	0.000	137.044	2180.00	0.00	0.00	0.00	701282.10	665925.40	32°49'46.461"N	103°48'45.444"W	0.00	EST. KOP
2200.00†	0.400	137.044	2200.00	0.07	-0.05	0.05	701282.15	665925.35	32°49'46.461"N	103°48'45.443"W	2.00	
2300.00†	2.400	137.044	2299.96	2.51	-1.84	1.71	701283.81	665923.56	32°49'46.443"N	103°48'45.424"W	2.00	
2400.00†	4.400	137.044	2399.78	8.44	-6.18	5.75	701287.85	665919.22	32°49'46.400"N	103°48'45.377"W	2.00	
2500.00†	6.400	137.044	2499.33	17.85	-13.07	12.17	701294.27	665912.33	32°49'46.331"N	103°48'45.302"W	2.00	
2554.58	7.492	137.044	2553.51	24.45	-17.90	16.66	701298.76	665907.50	32°49'46.283"N	103°48'45.250"W	2.00	END OF BUILD
2600.00†	7.492	137.044	2598.55	30.38	-22.23	20.70	701302.80	665903.17	32°49'46.240"N	103°48'45.203"W	0.00	
2700.00†	7.492	137.044	2697.69	43.41	-31.77	29.58	701311.68	665893.63	32°49'46.145"N	103°48'45.099"W	0.00	

Planned Wellpath Report

Prelim_3

REFERENCE WELLPATH IDENTIFICATION			
Operator	**Cimarex Energy Co.**	Slot	**No. 1 SHL**
Area	**Lea County, NM**	Well	**No. 1**
Field	**(HT) Sec 18, T17S, R32E**	Wellbore	**No. 1 PWB**
Facility	**HT Fed No. 1**		

WELLPATH DATA (74 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [srv ft]	Grid North [srv ft]	Latitude	Longitude	DLS [°/100ft]	Comments
2800.00†	7.492	137.044	2796.84	56.45	-41.32	38.47	701320.57	665884.09	32°49'46.050"N	103°48'44.996"W	0.00	
2900.00†	7.492	137.044	2895.99	69.49	-50.86	47.35	701329.45	665874.55	32°49'45.956"N	103°48'44.892"W	0.00	
3000.00†	7.492	137.044	2995.13	82.53	-60.40	56.24	701338.33	665865.00	32°49'45.861"N	103°48'44.788"W	0.00	
3100.00†	7.492	137.044	3094.28	95.57	-69.94	65.12	701347.22	665855.46	32°49'45.766"N	103°48'44.685"W	0.00	
3200.00†	7.492	137.044	3193.42	108.60	-79.48	74.01	701356.10	665845.92	32°49'45.671"N	103°48'44.581"W	0.00	
3300.00†	7.492	137.044	3292.57	121.64	-89.03	82.89	701364.99	665836.38	32°49'45.576"N	103°48'44.478"W	0.00	
3400.00†	7.492	137.044	3391.72	134.68	-98.57	91.78	701373.87	665826.84	32°49'45.481"N	103°48'44.374"W	0.00	
3500.00†	7.492	137.044	3490.86	147.72	-108.11	100.66	701382.75	665817.30	32°49'45.386"N	103°48'44.271"W	0.00	
3600.00†	7.492	137.044	3590.01	160.76	-117.65	109.55	701391.64	665807.75	32°49'45.292"N	103°48'44.167"W	0.00	
3700.00†	7.492	137.044	3689.16	173.79	-127.20	118.43	701400.52	665798.21	32°49'45.197"N	103°48'44.063"W	0.00	
3800.00†	7.492	137.044	3788.30	186.83	-136.74	127.31	701409.41	665788.67	32°49'45.102"N	103°48'43.960"W	0.00	
3900.00†	7.492	137.044	3887.45	199.87	-146.28	136.20	701418.29	665779.13	32°49'45.007"N	103°48'43.856"W	0.00	
4000.00†	7.492	137.044	3986.60	212.91	-155.82	145.08	701427.17	665769.59	32°49'44.912"N	103°48'43.753"W	0.00	
4100.00†	7.492	137.044	4085.74	225.95	-165.36	153.97	701436.06	665760.05	32°49'44.817"N	103°48'43.649"W	0.00	
4200.00†	7.492	137.044	4184.89	238.98	-174.91	162.85	701444.94	665750.50	32°49'44.723"N	103°48'43.546"W	0.00	
4300.00†	7.492	137.044	4284.03	252.02	-184.45	171.74	701453.83	665740.96	32°49'44.628"N	103°48'43.442"W	0.00	
4400.00†	7.492	137.044	4383.18	265.06	-193.99	180.62	701462.71	665731.42	32°49'44.533"N	103°48'43.338"W	0.00	
4500.00†	7.492	137.044	4482.33	278.10	-203.53	189.51	701471.59	665721.88	32°49'44.438"N	103°48'43.235"W	0.00	
4600.00†	7.492	137.044	4581.47	291.14	-213.08	198.39	701480.48	665712.34	32°49'44.343"N	103°48'43.131"W	0.00	
4700.00†	7.492	137.044	4680.62	304.17	-222.62	207.28	701489.36	665702.80	32°49'44.248"N	103°48'43.028"W	0.00	
4800.00†	7.492	137.044	4779.77	317.21	-232.16	216.16	701498.25	665693.25	32°49'44.153"N	103°48'42.924"W	0.00	
4900.00†	7.492	137.044	4878.91	330.25	-241.70	225.04	701507.13	665683.71	32°49'44.059"N	103°48'42.821"W	0.00	
5000.00†	7.492	137.044	4978.06	343.29	-251.24	233.93	701516.01	665674.17	32°49'43.964"N	103°48'42.717"W	0.00	
5100.00†	7.492	137.044	5077.21	356.33	-260.79	242.81	701524.90	665664.63	32°49'43.869"N	103°48'42.614"W	0.00	
5200.00†	7.492	137.044	5176.35	369.36	-270.33	251.70	701533.78	665655.09	32°49'43.774"N	103°48'42.510"W	0.00	
5300.00†	7.492	137.044	5275.50	382.40	-279.87	260.58	701542.67	665645.55	32°49'43.679"N	103°48'42.406"W	0.00	
5400.00†	7.492	137.044	5374.65	395.44	-289.41	269.47	701551.55	665636.00	32°49'43.584"N	103°48'42.303"W	0.00	
5500.00†	7.492	137.044	5473.79	408.48	-298.96	278.35	701560.43	665626.46	32°49'43.490"N	103°48'42.199"W	0.00	
5600.00†	7.492	137.044	5572.94	421.52	-308.50	287.24	701569.32	665616.92	32°49'43.395"N	103°48'42.096"W	0.00	
5700.00†	7.492	137.044	5672.08	434.55	-318.04	296.12	701578.20	665607.38	32°49'43.300"N	103°48'41.992"W	0.00	

Planned Wellpath Report

Prelim_3

REFERENCE WELLPATH IDENTIFICATION			
Operator	**Cimarex Energy Co.**	Slot	**No. 1 SHL**
Area	**Lea County, NM**	Well	**No. 1**
Field	**(HT) Sec 18, T17S, R32E**	Wellbore	**No. 1 PWB**
Facility	**HT Fed No. 1**		

WELLPATH DATA (74 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [srv ft]	Grid North [srv ft]	Latitude	Longitude	DLS [°/100ft]	Comments
5800.00†	7.492	137.044	5771.23	447.59	-327.58	305.01	701587.09	665597.84	32°49'43.205"N	103°48'41.889"W	0.00	
5900.00†	7.492	137.044	5870.38	460.63	-337.12	313.89	701595.97	665588.30	32°49'43.110"N	103°48'41.785"W	0.00	
6000.00†	7.492	137.044	5969.52	473.67	-346.67	322.78	701604.86	665578.76	32°49'43.015"N	103°48'41.681"W	0.00	
6100.00†	7.492	137.044	6068.67	486.71	-356.21	331.66	701613.74	665569.21	32°49'42.920"N	103°48'41.578"W	0.00	
6200.00†	7.492	137.044	6167.82	499.74	-365.75	340.54	701622.62	665559.67	32°49'42.826"N	103°48'41.474"W	0.00	
6300.00†	7.492	137.044	6266.96	512.78	-375.29	349.43	701631.51	665550.13	32°49'42.731"N	103°48'41.371"W	0.00	
6400.00†	7.492	137.044	6366.11	525.82	-384.84	358.31	701640.39	665540.59	32°49'42.636"N	103°48'41.267"W	0.00	
6500.00†	7.492	137.044	6465.26	538.86	-394.38	367.20	701649.28	665531.05	32°49'42.541"N	103°48'41.164"W	0.00	
6600.00†	7.492	137.044	6564.40	551.90	-403.92	376.08	701658.16	665521.51	32°49'42.446"N	103°48'41.060"W	0.00	
6700.00†	7.492	137.044	6663.55	564.93	-413.46	384.97	701667.04	665511.96	32°49'42.351"N	103°48'40.956"W	0.00	
6800.00†	7.492	137.044	6762.69	577.97	-423.00	393.85	701675.93	665502.42	32°49'42.257"N	103°48'40.853"W	0.00	
6900.00†	7.492	137.044	6861.84	591.01	-432.55	402.74	701684.81	665492.88	32°49'42.162"N	103°48'40.749"W	0.00	
7000.00†	7.492	137.044	6960.99	604.05	-442.09	411.62	701693.70	665483.34	32°49'42.067"N	103°48'40.646"W	0.00	
7067.59	7.492	137.044	7028.00	612.86	-448.54	417.63	701699.70	665476.89	32°49'42.003"N	103°48'40.576"W	0.00	No. 1 PBHL

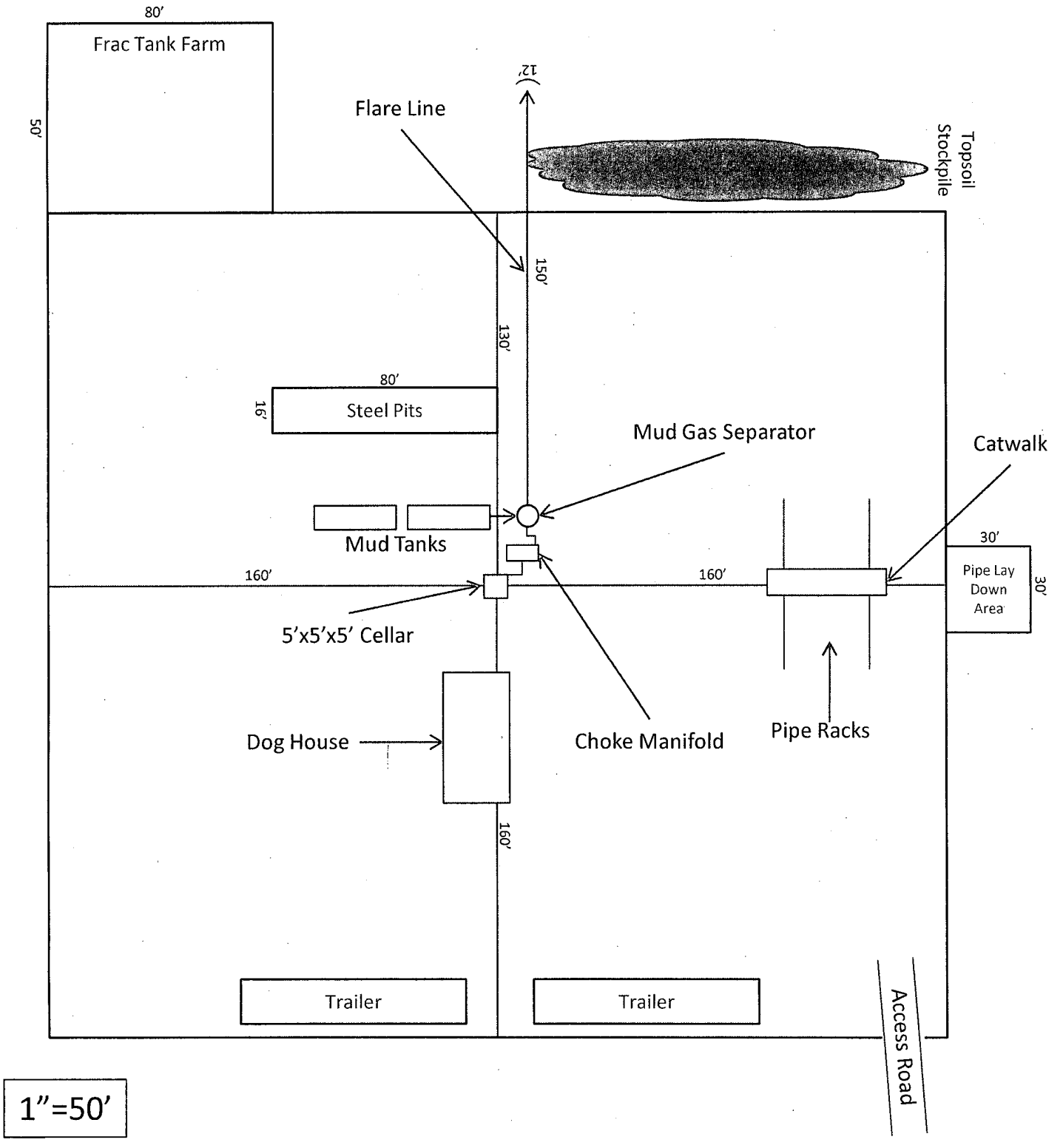
TARGETS

Name	MD [ft]	TVD [ft]	North [ft]	East [ft]	Grid East [srv ft]	Grid North [srv ft]	Latitude	Longitude	Shape
1) No. 1 PBHL	7067.59	7028.00	-448.54	417.63	**701699.70**	**665476.89**	32°49'42.003"N	103°48'40.576"W	point

SURVEY PROGRAM Ref Wellbore: No. 1 PWB Ref Wellpath: Prelim_3

Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
0.00	7067.59	NaviTrak (Standard)		No. 1 PWB

Silver Oak #3



1"=50'

N

Exhibit D – Rig Diagram
HT Federal No. 1
Cimarex Energy Co. of Colorado
18-17S-32E
SHL 780 FSL & 575 FWL
BHL 330 FSL & 990 FWL
Lea County, NM

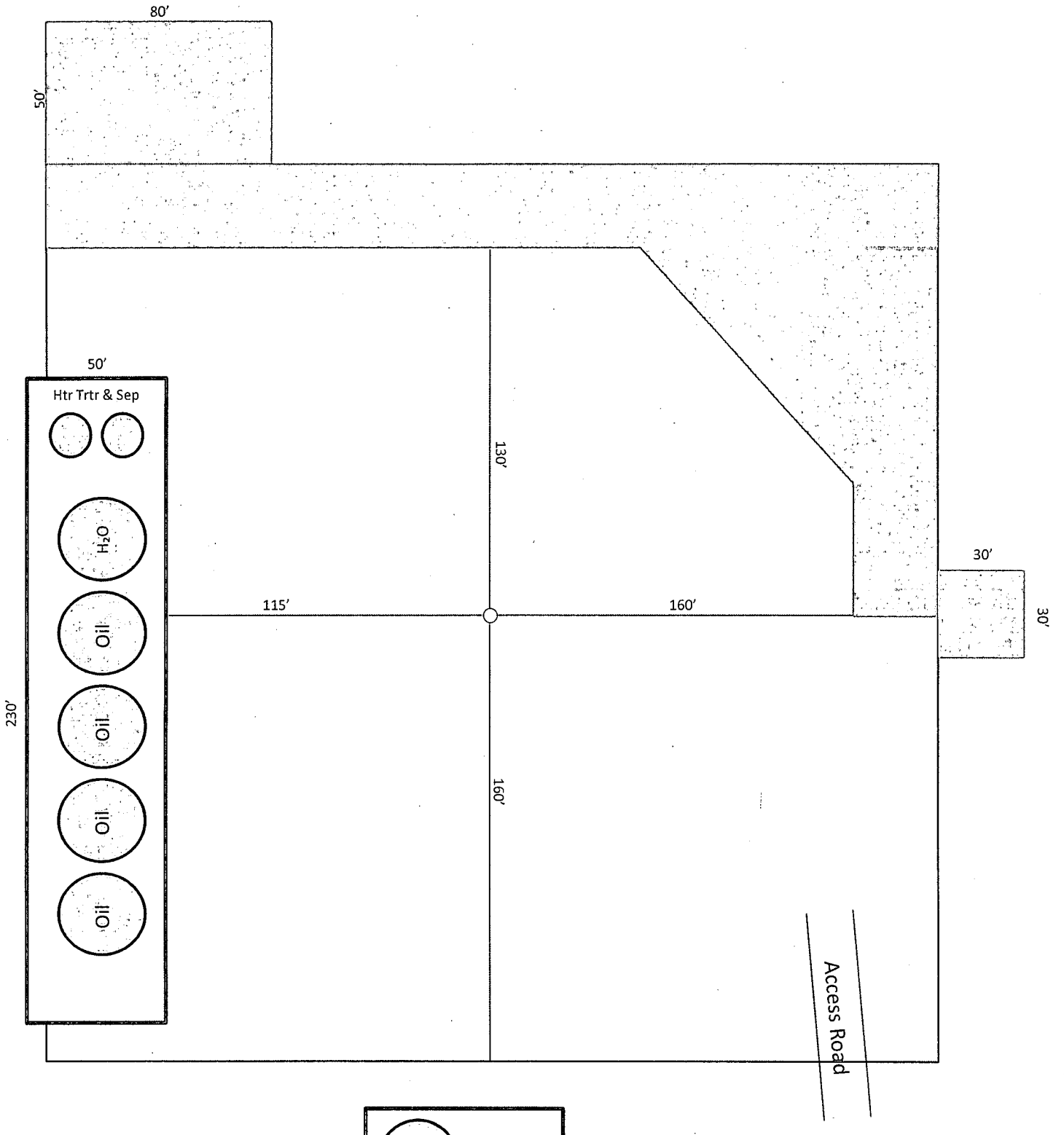
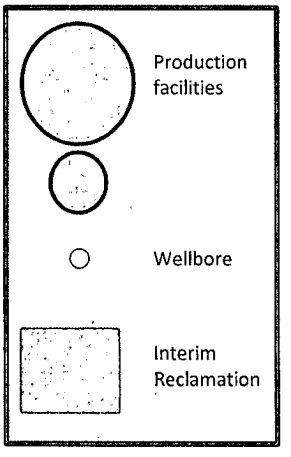


Exhibit D-1
HT Federal No. 1
Cimarex Energy Co. of Colorado
18-17S-32E
SHL 780 FSL & 575 FWL
BHL 330 FSL & 990 FWL
Lea County, NM



1"=50'

SR & A

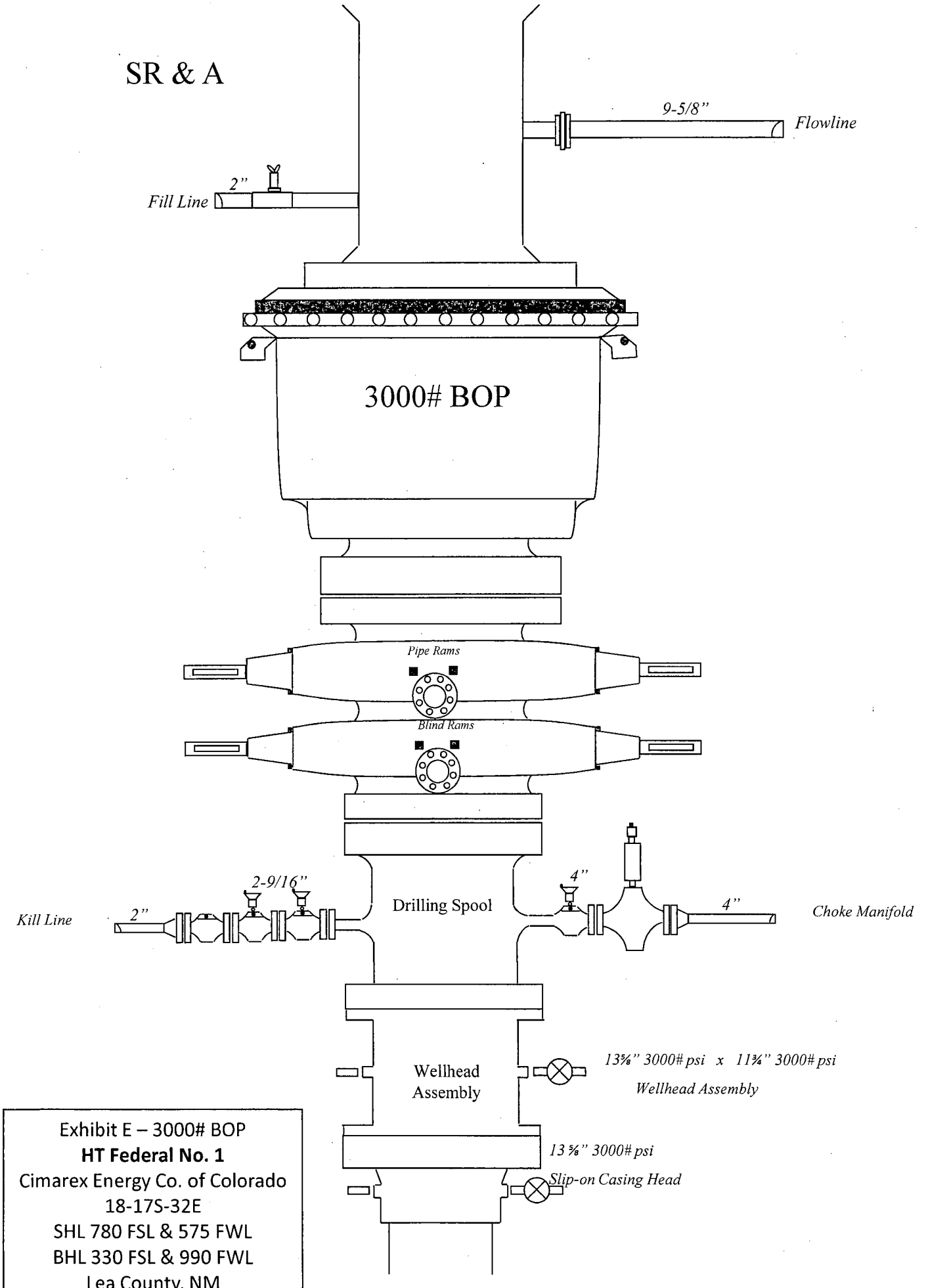
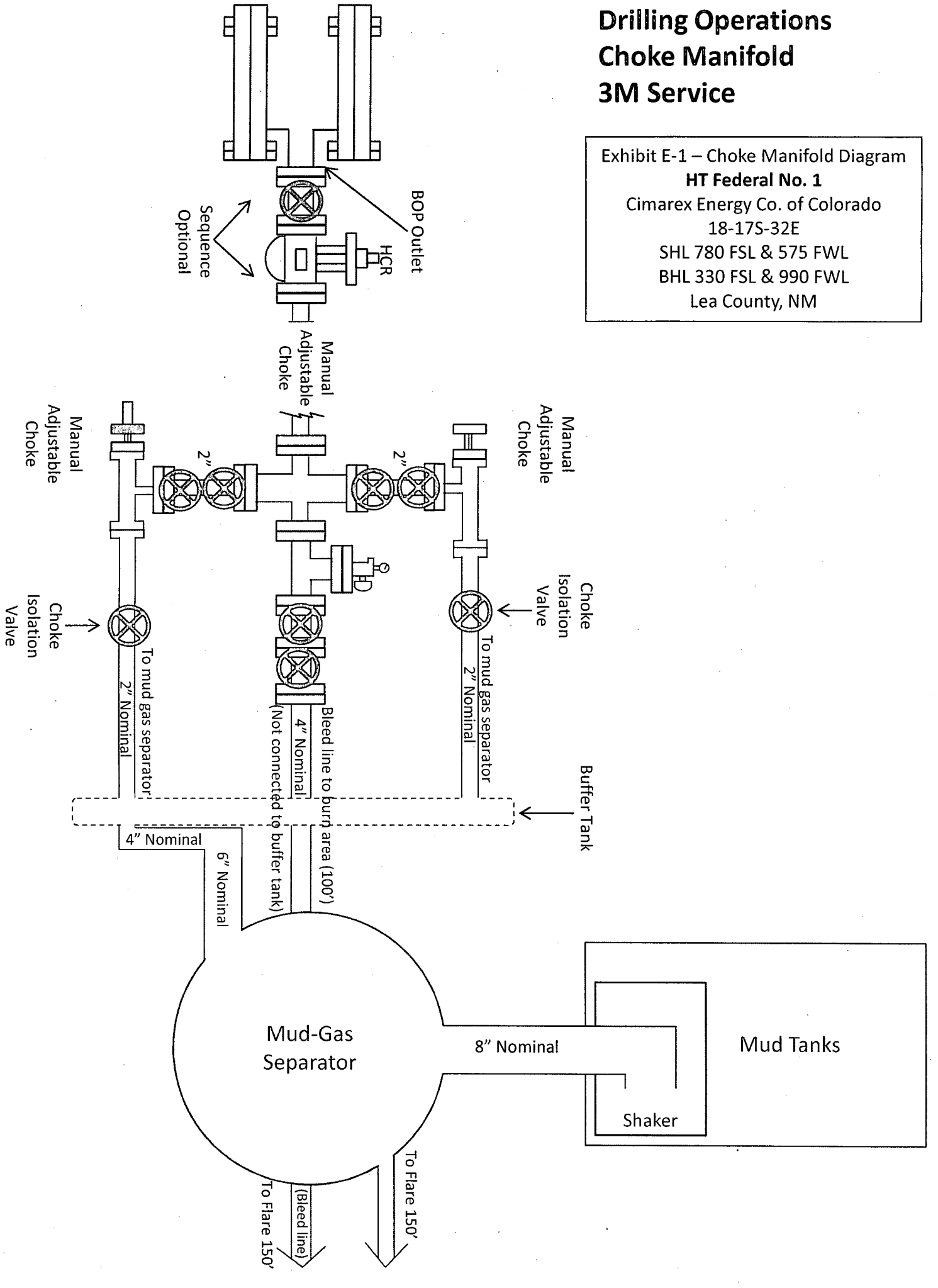


Exhibit E – 3000# BOP
HT Federal No. 1
Cimarex Energy Co. of Colorado
18-17S-32E
SHL 780 FSL & 575 FWL
BHL 330 FSL & 990 FWL
Lea County, NM

Drilling Operations
Choke Manifold
3M Service

Exhibit E-1 – Choke Manifold Diagram
HT Federal No. 1
Cimarex Energy Co. of Colorado
18-17S-32E
SHL 780 FSL & 575 FWL
BHL 330 FSL & 990 FWL
Lea County, NM



Hydrogen Sulfide Drilling Operations Plan
HT Federal No. 1
Cimarex Energy Co. of Colorado
Unit M, Section 18
T17S R32E, Lea 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.

Emergency Procedures

In the event of a release of gas containing H_2S, the first responder(s) must:

- ★ Isolate the area and prevent entry by other persons into the 100 ppm ROE.
- ★ Evacuate any public places encompassed by the 100 ppm ROE.
- ★ Be equipped with H_2S monitors and air packs in order to control the release.
- ★ Use the "buddy system" to ensure no injuries occur during the response.
- ★ Take precautions to avoid personal injury during this operation.
- ★ Contact operator and/or local officials to aid in operation. See list of phone numbers attached.
- ★ Have received training in the:
  - ♦ Detection of H_2S, and
  - ♦ Measures for protection against the gas,
  - ♦ Equipment used for protection and emergency response.

Ignition of Gas Source

Should control of the well be considered lost and ignition considered, take care to protect against exposure to Sulfur Dioxide (SO_2). Intentional ignition must be coordinated with the NMOCD and local officials. Additionally, the NM State Police may become involved. NM State Police shall be the Incident Command on scene of any major release. Take care to protect downwind whenever there is an ignition of the gas.

Characteristics of H_2S and SO_2

Common Name	Chemical Formula	Specific Gravity	Threshold Limit	Hazardous Limit	Lethal Concentration
Hydrogen Sulfide	H_2S	1.189 Air=1	10 ppm	100 ppm/hr	600 ppm
Sulfur Dioxide	SO_2	2.21 Air=1	2 ppm	N/A	1000 ppm

Contacting Authorities

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

H_2S Contingency Plan Emergency Contacts
HT Federal No. 1
Cimarex Energy Co. of Colorado
Unit M, Section 18
T17S R32E, Lea County, NM

Company Office

Cimarex Energy Co. of Colorado	800-969-4789
Co. Office and After-Hours Menu	

Key Personnel

Name	Title	Office	Mobile
Doug Park	Drilling Manager	432-620-1934	972-333-1407
Dee Smith	Drilling Super	432-620-1933	972-882-1010
Jim Evans	Drilling Super	432-620-1929	972-465-0564
Roy Shirley	Field Super		432-634-2136

Artesia	
Ambulance	911
State Police	575-746-2703
City Police	575-746-2703
Sheriff's Office	575-746-9888
Fire Department	**575-746-2701**
Local Emergency Planning Committee	575-746-2122
New Mexico Oil Conservation Division	575-748-1283

Carlsbad	
Ambulance	911
State Police	575-885-3137
City Police	575-885-2111
Sheriff's Office	575-887-7551
Fire Department	**575-887-3798**
Local Emergency Planning Committee	575-887-6544
US Bureau of Land Management	575-887-6544

Santa Fe	
New Mexico Emergency Response Commission (Santa Fe)	505-476-9600
New Mexico Emergency Response Commission (Santa Fe) 24 Hrs	505-827-9126
New Mexico State Emergency Operations Center	505-476-9635

National	
National Emergency Response Center (Washington, D.C.)	800-424-8802

Medical	
Flight for Life - 4000 24th St.; Lubbock, TX	806-743-9911
Aerocare - R3, Box 49F; Lubbock, TX	806-747-8923
Med Flight Air Amb - 2301 Yale Blvd S.E., #D3; Albuquerque, NM	505-842-4433
SB Air Med Service - 2505 Clark Carr Loop S.E.; Albuquerque, NM	505-842-4949

Other			
Boots & Coots IWC	800-256-9688	or	281-931-8884
Cudd Pressure Control	432-699-0139	or	432-563-3356
Halliburton	575-746-2757		
B.J. Services	575-746-3569		

Surface Use Plan
HT Federal No. 1
Cimarex Energy Co. of Colorado
Unit M, Section 18
T17S R32E, Lea County, NM

1. Existing Roads: Area maps, Exhibit "A" shows the proposed well site as staked. Exhibit "B" is a reproduction of Eddy Co. General Highway Map. Exhibit "C" is a reproduction of a USGS Topographic Map, and Exhibit "C-1" is a well site layout map, showing proposed road to location and existing road.
   A. The maximum width of the driving surface will be 15.' The road will be crowned and ditched with a 2% slope from the tip of the crown to the edge of the driving surface. The ditches will be 1' deep with 3:1 slopes. The driving surface will be made of 6" rolled and compacted caliche.
   B. From the junction of Hwy 82 and Ripple, go Southeasterly on Ripple for 0.9 miles to lease road. On lease road, go East 0.2 miles to proposed lease road.

2. Planned Access Roads: 1403.4.2' of reconstructed access road is proposed. A ROW will be obtained for the off-lease portion in 19-17S-32E.

3. Planned Pipelines and Electric Lines: A DCP pipeline ROW and CVE e-line ROW are pending as shown on attached POD topo.

4. 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 Exhibits "A"
   E. Abandoned wells - As shown on Exhibits "A"

5. Location of Proposed Production Facilities:
   If on completion this well is a producer, a tank battery will be used and the necessary production equipment will be installed at the wellsite. See production facilities layout diagram. Any changes to the facilities or off-site facilities will be accompanied by a Sundry Notice.

6. Location and Type of Water Supply:
   Water will be purchased locally from a commercial source and trucked over the access roads.

7. Source of Construction Material:
   If possible, native caliche will be obtained from the excavation of drill site. Topsoil will be pushed back from the drill site and existing caliche will be ripped and compacted. Then topsoil will be stockpiled on location as depicted on Exhibit "D" (rig layout). If additional material is needed, it will be purchased from a BLM-approved pit as near as possible to the well

8. 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 and hauled to a waste disposal facility. 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.

9. Ancillary Facilities:
   A. No camps or airstrips to be constructed.

10. 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.

11. 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, those areas of the location not essential toproduction facilities and operations will be reclaimed and seeded per BLM requirements. Please see Production Facilities Layout Diagram, exhibit D-1.

12. Other Information
   A. Topography consists of a sloping plane with loose tan sands. Vegetation is mainly yucca, mesquite and shin oak.
   B. The wellsite is on surface owned by Department of the Interior, Bureau of Land Management. The land is used mainly for farming, cattle ranching, recreational use, and oil and gas production.
   C. In lieu of an archaeological survey report, Cimarex will be submitting an MOA application for this well pad and access road since they are within the MOA boundary.
   D. There are no know dwellings within 1½ miles of this location.

Operator Certification Statement
HT Federal No. 1
Cimarex Energy Co. of Colorado
Unit M, Section 18
T17S R32E, Lea County, NM

Operator's Representative
Cimarex Energy Co. of Colorado
600 N. Marienfeld St., Ste. 600
Midland, TX 79701
Office Phone: (432) 571-7800
Zeno Farris

CERTIFICATION: I hereby certify that I, or someone under my direct supervision, have inspected the drill site and access route proposed herein; that I am familiar with the conditions which currently exist; that I have full knowledge of state and Federal laws applicable to this operation; that the statements made in this APD package are, to the best of my knowledge, true and correct; and that the work associated with the operations proposed herein will be performed in conformity with this APD package and the terms and conditions under which it is approved. I also certify that I, or the company I represent, am responsible for the operations conducted under this application. These statements are subject to the provisions of 18 U.S.C. 1001 for the filing of false statements.

Executed this 2nd day of September, 2010

NAME: Zeno Farris
Zeno Farris

TITLE: Manager Operations Administration

ADDRESS: 600 N. Marienfeld St., Ste. 600
Midland, TX 79701

TELEPHONE: (432) 620-1938

EMAIL: zfarris@cimarex.com

Field Representative: Same as above

PECOS DISTRICT
CONDITIONS OF APPROVAL

OPERATOR'S NAME:	Cimarex Energy
LEASE NO.:	LC060329
WELL NAME & NO.:	1 HT Federal
SURFACE HOLE FOOTAGE:	0780' FSL & 0575' FWL
BOTTOM HOLE FOOTAGE	0330' FSL & 0990' FWL
LOCATION:	Section 18, T. 17 S., R 32 E., NMPM
COUNTY:	Lea County, New Mexico

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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.

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☐ **Archaeology, Paleontology, and Historical Sites**
☐ **Noxious Weeds**
☒ **Special Requirements**
- Lesser Prairie-Chicken Timing Stipulations
- Ground-level Abandoned Well Marker

☒ **Construction**
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- V-Door Direction - West
- Topsoil
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- Federal Mineral Material Pits
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- Road - 1,403.4'

☐ **Road Section Diagram**
☒ **Drilling**
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- Casing/Mud Requirements
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- Waste Material and Fluids

☐ **Production (Post Drilling)**
☐ **Interim Reclamation**
☐ **Final Abandonment & Reclamation**

I. GENERAL PROVISIONS

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

II. PERMIT EXPIRATION

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

III. ARCHAEOLOGICAL, PALEONTOLOGY & HISTORICAL SITES

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

IV. NOXIOUS WEEDS

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

V. SPECIAL REQUIREMENT(S)

Timing Limitation Stipulation / Condition of Approval for lesser prairie-chicken: Oil and gas activities including 3-D geophysical exploration, and drilling will not be allowed in lesser prairie-chicken habitat during the period from March 1st through June 15th annually. During that period, other activities that produce noise or involve human activity, such as the maintenance of oil and gas facilities, pipeline, road, and well pad construction, will be allowed except between 3:00 am and 9:00 am. The 3:00 am to 9:00 am restriction will not apply to normal, around-the-clock operations, such as venting, flaring, or pumping, which do not require a human presence during this period. Additionally, no new drilling will be allowed within up to 200 meters of leks known at the time of permitting. Normal vehicle use on existing roads will not be restricted. Exhaust noise from pump jack engines must be muffled or otherwise controlled so as not to exceed 75 db measured at 30 feet from the source of the noise.

Ground-level Abandoned Well Marker to avoid raptor perching: Upon the plugging and subsequent abandonment of the well, the well marker will be installed at ground level on a plate containing the pertinent information for the plugged well. For more installation details, contact the Carlsbad Field Office at 575-234-5972.

VI. CONSTRUCTION

A. NOTIFICATION

The BLM shall administer compliance and monitor construction of the access road and well pad. Notify the Hobbs Field Station at (575) 393-3612 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. V-DOOR DIRECTION: __West____

C. TOPSOIL

The operator shall stockpile the topsoil in a low profile manner in order to prevent wind/water erosion of the topsoil. The topsoil will be used for interim and final reclamation.

There is no measurable soil on this well pad to stockpile. No topsoil stockpile is required.

D. CLOSED LOOP SYSTEM

Tanks are required for drilling operations: No Pits.

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

E. FEDERAL MINERAL MATERIALS PIT

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

F. 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.

G. ON LEASE ACCESS ROADS

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

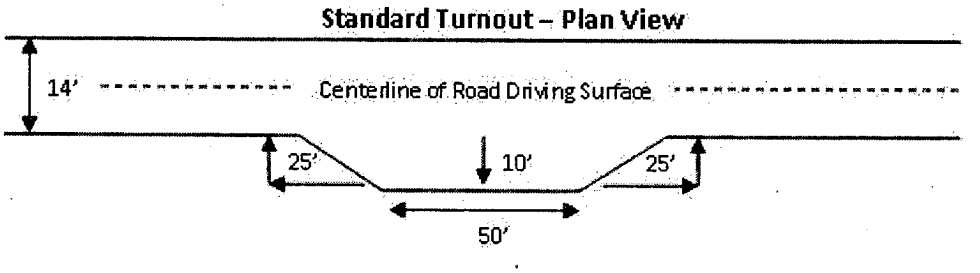
Where possible, no improvements should be made on the unsurfaced access road other than to remove vegetation as necessary, road irregularities, safety issues, or to fill low areas that may sustain standing water.

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.

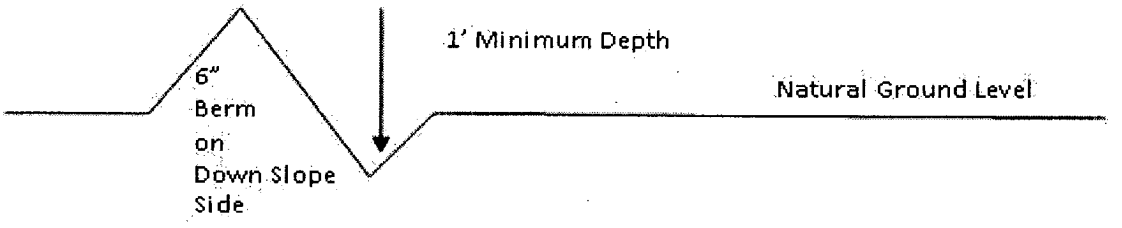
Turnouts
Vehicle turnouts shall be constructed on the road. Turnouts shall be intervisible with interval spacing distance less than 1000 feet. Turnouts shall be constructed on all blind curves. Turnouts shall conform to the following diagram:



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.

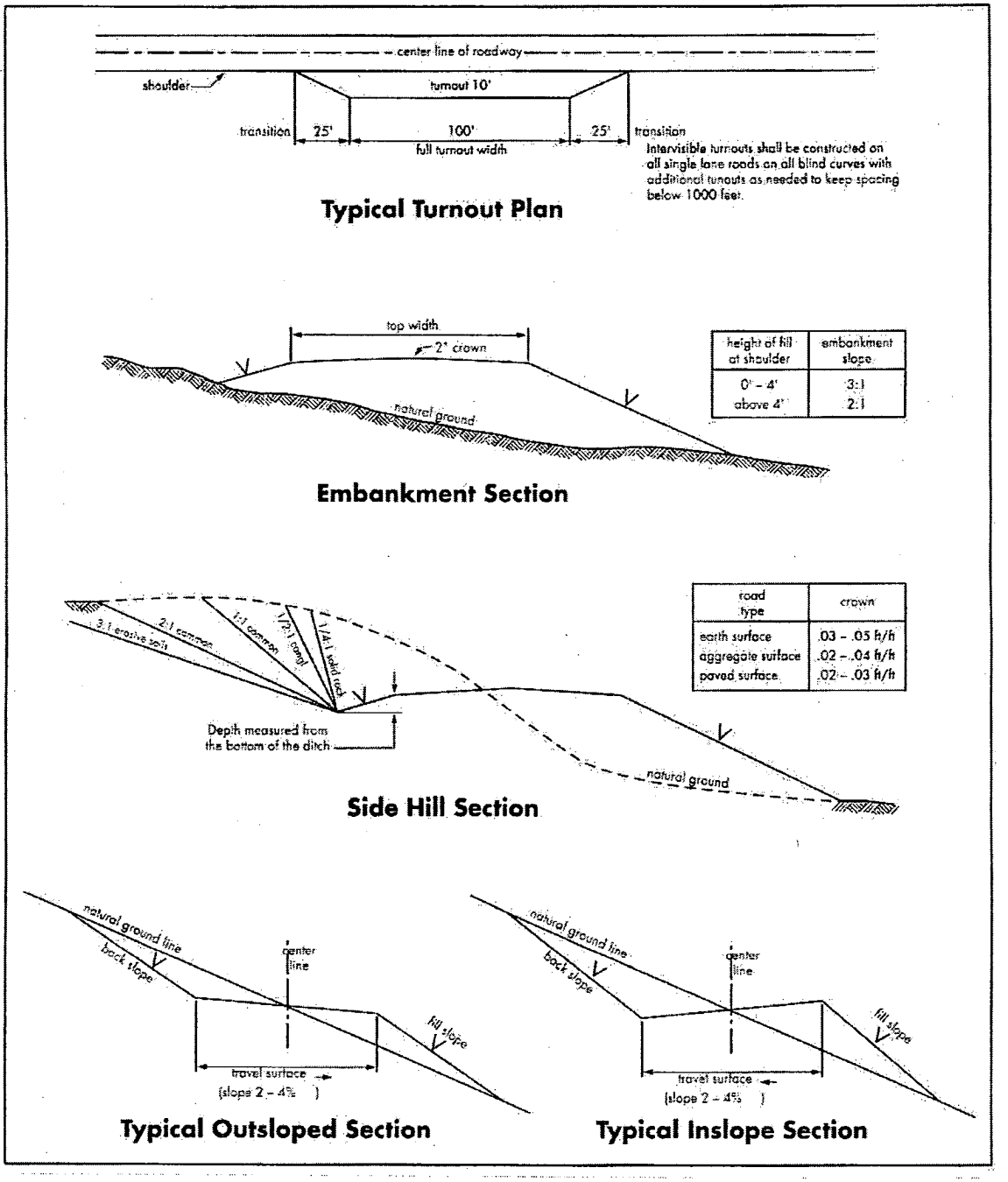
A gate shall be constructed and fastened securely to H-braces.

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

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

1. A Hydrogen Sulfide (H2S) Drilling Plan should be activated 500 feet prior to drilling into the **Grayburg** formation. **As a result, the Hydrogen Sulfide area must meet Onshore Order 6 requirements, which includes equipment and personnel/public protection items. If Hydrogen Sulfide is encountered, please provide measured values 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. **If the drilling rig is removed without approval – an Incident of Non-Compliance will be written and will be a "Major" violation.**

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.

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

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 prior to drilling out 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. DURING THIS WOC TIME, NO DRILL PIPE, ETC. SHALL BE RUN IN THE HOLE. 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 water and brine flows in the Salado and Artesia Groups.

1. The **11-3/4** inch surface casing shall be set at approximately **775** feet (a minimum of 25 feet into the Magenta Dolomite member of the Rustler). If salt is encountered, set casing at least 25 feet above the salt and cemented to the surface. **Freshwater mud to be used to setting depth.**

    a. If cement does not circulate to the surface, the appropriate BLM office shall be notified and a temperature survey utilizing an electronic type temperature survey with surface log readout will be used or a cement bond log shall be run to verify the top of the cement. Temperature survey will be run a minimum of six hours after pumping cement and ideally between 8-10 hours after completing the cement job.

    b. Wait on cement (WOC) time for a primary cement job 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 **8-5/8** inch intermediate casing, which shall be set at approximately **1915** feet in the Tansill formation, is:

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

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

   ☒ Cement should tie-back at least **200** feet into previous casing string. Operator shall provide method of verification.

4. If hardband drill pipe is rotated inside casing, returns will be monitored for metal. If metal is found in samples, drill pipe will be pulled and rubber protectors which have a larger diameter than the tool joints of the drill pipe will be installed prior to continuing drilling operations.

C. PRESSURE CONTROL

1. All blowout preventer (BOP) and related equipment (BOPE) shall comply with well control requirements as described in Onshore Oil and Gas Order No. 2 and API RP 53 Sec. 17.

2. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the surface casing shoe shall be **3000 (3M)** psi.

   a. **For surface casing only:** If the BOP/BOPE is to be tested against casing, the wait on cement (WOC) time for that casing is to be met (see WOC statement at start of casing section). Independent service company required.

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

   a. In a water basin, for all casing strings utilizing slips, these are to be set as soon as the crew and rig are ready and any fallback cement remediation has been done. The casing cut-off and BOP installation can be initiated four hours after installing the slips, which will be approximately six hours after bumping the plug. For those casing strings not using slips or where the float does not hold, the minimum wait time before cut-off is eight hours after bumping the plug or when the cement reaches 500 psi compressive strength (including lead when specified), whichever is greater. BOP/BOPE testing can begin after the above conditions are satisfied.

   b. The tests shall be done by an independent service company utilizing a test plug **not a cup or J-packer**. The operator also has the option of utilizing an independent tester to test without a plug (i.e. against the casing) pursuant to Onshore Order 2 with the pressure not to exceed 70% of the burst rating for the casing. Any test against the casing must meet the WOC time for water basin (18 hours) or potash (24 hours) prior to initiating the test.

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

d. 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.**

e. 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.

D. DRILL STEM TEST

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

E. WASTE MATERIAL AND FLUIDS

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

EGF 113010

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

IX. INTERIM RECLAMATION

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

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

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

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

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

X. FINAL ABANDONMENT & RECLAMATION

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

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

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

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

Ground-level Abandoned Well Marker to avoid raptor perching: Upon the plugging and subsequent abandonment of the well, the well marker will be installed at ground level on a plate containing the pertinent information for the plugged well.

Seed Mixture for LPC Sand/Shinnery 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
Plains Bristlegrass	5lbs/A
Sand Bluestem	5lbs/A
Little Bluestem	3lbs/A
Big Bluestem	6lbs/A
Plains Coreopsis	2lbs/A
Sand Dropseed	1lbs/A
**Four-winged Saltbush	5lbs/A

* This can be used around well pads and other areas where caliche cannot be removed.

*Pounds of pure live seed:

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