-915

OCD Artesia

Form 3160-3
(April 2004)

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

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

5. Lease Serial No: SHL NM-33953 BHL LC-063622

6. If Indian, Allotee or Tribe Name:

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

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

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

8. Lease Name and Well No.: Penny Pincher Federal Com No. 2H (37988)

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

9. API Well No: 30-015- 39450

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: Hackberry; Bone Spring (29345)

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

At Surface: 330 FNL & 1980 FWL (C)

At proposed prod Zone: 330 FSL & 1980 FWL — Horizontal Bone Spring test

11. Sec., T R. M or Blk and Survey or Area: 21-19S-31E

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

12. County or Parish: Eddy

13 State: NM

| 15 Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line if any) | 16. No of acres in lease | 17. Spacing Unit dedicated to this well |
|---|---|---|
| 330' | NM-33953 - 200 acres<br>LC-063622 - 1080 acres | E2W2 160 acres |
| **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** |
| 660' | MD 13452 TVD 8981 | NM-2575 |
| **21. Elevations (Show whether DF, KDB, RT, GL, etc )** | **22. Approximate date work will start*** | **23. Estimated duration** |
| 3482' GR ✓ | 10.15.11 | 25-30 days |

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24. Attachments

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

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

| 25. Signature | Name (Printed/Typed) | Date |
|---|---|---|
| Zeno Farris | Zeno Farris | 08.09.11 |

Title: Manager Operations Administration

| Approved By (Signature) | Name (Printed/Typed) | Date |
|---|---|---|
| /s/ Don Peterson | | SEP 09 2011 |
| **Title** CARLSBAD FIELD OFFICE | **Office** FIELD MANAGER | |

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)

Capitan Controlled Water Basin

KA 09/26/11

SEE ATTACHED FOR
CONDITIONS OF APPROVAL

Approval Subject to General Requirements
& Special Stipulations Attached

Application to Drill
**Penny Pincher Federal Com No. 2**
Cimarex Energy Co. of Colorado
Unit C, Section 21
T19S-R31E, 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 330 FNL & 1980 FWL
BHL 330 FSL & 1980 FWL

2 Elevation above sea level: 3482' 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: MD 13452 TVD 8981

6 Estimated tops of geological markers:

| | | | |
|---|---|---|---|
| Rustler | 475' | Capitan Dolomite | 4188' |
| Top Salt | 930' | Bell Canyon | 4290' |
| Tansill | 2335' | Bone Spring | 6872' |
| Yates | 2346' | FBSS | 7755' |
| 7 Rivers | 2590' | SBSS | 8640' |

7 Possible mineral bearing formation:

| | |
|---|---|
| Delaware | Oil |
| Bone Spring | Oil |

8 Proposed Mud Circulating System:

| Depth | Mud Wt | Visc | Fluid Loss | Type Mud |
|---|---|---|---|---|
| 0' to ~~505~~ 550' | 8.4 - 8.6 | 28 | NC | FW spud mud |
| ~~550'~~ to ~~2525~~ 2600' | 10.0 | 30-32 | NC | Brine |
| ~~2600'~~ to 4200' | ~~10.0~~ | 30-32 | NC | ~~Brine~~ FW |
| 4200' to 13452' | 8.4 - 9.0 | 30-32 | NC | 2% KCL |

Sufficient mud materials will be kept on location at all times in order to combat lost circulation or unexpected kicks. In order to run DSTs, open hole logs, and casing, the viscosity and water loss may have to be adjusted in order to meet these needs.

Proposed drilling Plan
After setting surface 1 & 2 and intermediate casing, drill 8¾" hole to KOP @ 8715 and drill to TD @ 13452. Run 5½" 17# P110 LTC from 0-13452 and cement as shown on following page.

9 Casing & Cementing Program:

| String | Hole Size | Depth | | | Casing OD | | Weight | Collar | Grade |
|---|---|---|---|---|---|---|---|---|---|
| See COA *Surface 1* | 26" | 0' | to | 505 ~~550'~~ | New | 20" | 94# | STC | H-40 |
| *Surface 2* | 17½" | 0' | to | 2125 ~~2600'~~ | New | 13⅜" | 61# | BTC | J-55 |
| *Intermediate* | 12¼" | 0' | to | 4200' | New | 9⅝" | 36# | LTC | J-55 |
| *Production* | 8¾" | 0' | to | 13452' | New | 5½" | 17# | LTC | P-110 |

10 Cementing:

**Surface 1** Lead: 1345SKS Halcem C + 2% CaCl 14.2ppg, 1.34yield, 100% excess
**TOC Surface**

**Surface 2** Lead: 2385SKS EconoCem + 5% salt + 5 lbm gilsonite 13.5ppg, 1.75yield, 100% Excess
Tail: 255SKS HalCem + 2% CaCl 14.2ppg, 1.34 yield, 50% Excess
**TOC Surface**

**Intermediate** Lead: 970SKS EconoCem + 5% salt + 5 lbm gilsonite 14.6ppg, 1.54yield, 70% Excess
Tail: 160KS HalCem + 1% CaCl 14.8ppg, 1.34 yield, 70% Excess
**TOC Surface**

**Production** Lead: 1250SKS EconoCem - H + 0.5% CFR-3 + 0.1% HR-601 11.9ppg, 2.44yield, 70% Excess
Tail: 200SKS Versacem - H + 0.5% Halad(R)-344 + 0.4% CFR-3 + 1 lbm/sk salt + 0.1% HR-601 14.5ppg, 1.22 yield, 25% Excess
**TOC 2500'**

According to the State Engineer, depth to groundwater is 295. Fresh water zones will be protected by setting 20" casing at ~~550~~ and cementing to surface. Hydrocarbon zones will be protected by setting 13⅜" casing at ~~2600~~' and cementing to surface, 9⅝" casing at 4200 and cementing to surface, and 5½" at 13452 and cementing to 2500.'

| *Collapse Factor* | *Burst Factor* | *Tension Factor* |
|---|---|---|
| 1.125 | 1.125 | 1.6 |

11 Pressure control Equipment:

From the base of the 20" surface pipe, the well will be equipped with a 2M diverter system with rotating head (see exhibit E-1). From the base of the 13⅜" casing through the running of production casing, the well will be equipped with a 5000 psi BOP system tested to 3000 psi. A 13⅝" 5000 PSI working pressure BOP tested to 3000 psi 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 as needed. 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. Mud gas seperator will be available if drilling in H2S areas.

BOP unit will be hydraulically operated. BOP will be nippled up and operated at least once a day while drilling and the blind rams will be operated when out of hole during trips. No abnormal pressure or temperature is expected while drilling.

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.

Cimarex Energy Co. of Colorado (operator) requests a variance if Cactus 115 (rig name) is used to drill this well to use a co-flex line between the BOP and choke manifold.
Manufacturer: Midwest Hose & Specialty
Serial Number: 63270
Length: 35' Size: 4-1/16" Ends - flanges/clamps
WP rating: 10,000 psi Anchors required by manufacturer – Yes/No

12 Testing, Logging and Coring Program: See COA

A. Mud logging program: 2 man unit from 4200' 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. In accordance with Onshore Order 6, Cimarex does not anticipate that there will be enough $H_2S$ from the surface to the Bone Spring formations to meet the BLM's minimum requirements for the submission of an "$H_2S$ Drilling Operation Plan" or "Public Protection Plan" for the drilling and completion of this well. Since we have an $H_2S$ Safety package on all wells, attached is an "$H_2S$ Drilling Operations Plan." 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 **130°**

14 Road and location construction will begin after BLM approval of APD. Anticipated spud date as soon as approved.
Drilling expected to take 30-35 days
If production casing is run an additional 30 days will be required to complete and construct surface facilities.

15 Other Facets of Operations:

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

# Cimarex Energy Co.

Location: Eddy County, NM
Field: (Penny) Sec 21, T19S, R31E
Facility: Penny Pincher Fed Com No 2H

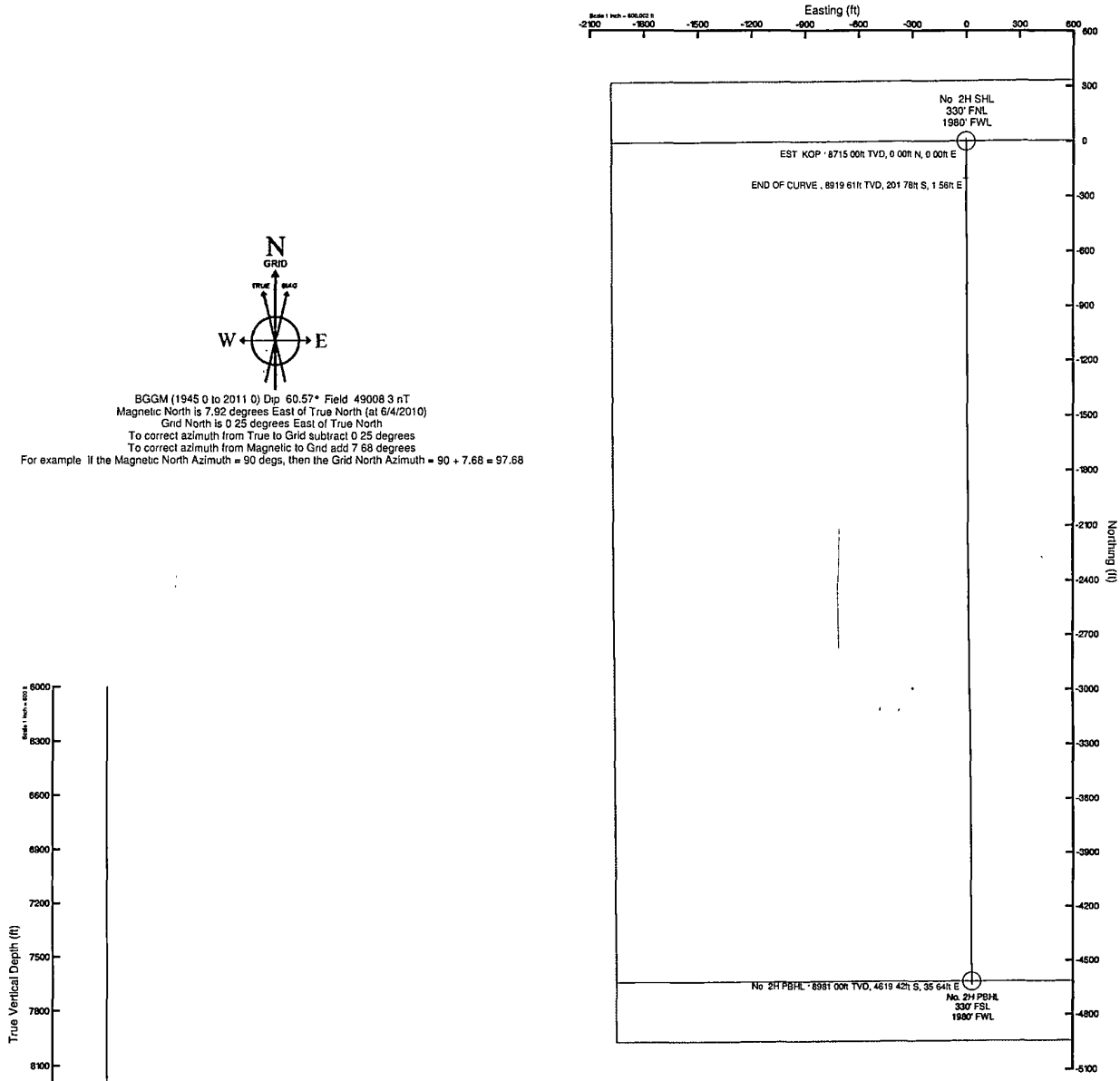
Slot: No. 2H SHL
Well: No. 2H
Wellbore: No. 2H PWB

BAKER HUGHES

## 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 | 179 558 | 0 00 | 0 00 | 0 00 | 0 00 | 0 00 |
| EST KOP | 8715 00 | 0 000 | 179 558 | 8715 00 | 0 00 | 0.00 | 0 00 | 0 00 |
| END OF CURVE | 9033 59 | 89 204 | 179 558 | 8919 61 | -201 78 | 1.56 | 28 00 | 201.78 |
| No 2H PBHL | 13451 79 | 89 204 | 179 558 | 8981.00 | -4619 42 | 35.64 | 0 00 | 4619 56 |

| | |
|---|---|
| Plot reference wellpath is Prelim_1 | |
| True vertical depths are referenced to Rig on No. 2H SHL (GL) | Grid System NAD83 / TM New Mexico State Planes, Eastern Zone (3001), US feet |
| Measured depths are referenced to Rig on No 2H SHL (GL) | North Reference Grid north |
| Rig on No 2H SHL (GL) to Mean Sea Level 3482 feet | Scale True distance |
| Mean Sea Level to Mud line (Facility: Penny Pincher Fed Com No 2H) -3482 feet | Depths are in feet |
| Coordinates are in feet referenced to SL | Created by Victor Hernandez on 6/4/2010 |



# Planned Wellpath Report

**Prelim_1**



| REFERENCE WELLPATH IDENTIFICATION | | | |
|---|---|---|---|
| Operator | **Cimarex Energy Co.** | Slot | **No. 2H SHL** |
| Area | **Eddy County, NM** | Well | **No. 2H** |
| Field | **(Penny) Sec 21, T19S, R31E** | Wellbore | **No. 2H PWB** |
| Facility | **Penny Pincher Fed Com No. 2H** | | |

| REPORT SETUP INFORMATION | | | |
|---|---|---|---|
| Projection System | **NAD83 / TM New Mexico State Planes, Eastern Zone (3001), US feet** | Software System | **WellArchitect® 2.0** |
| North Reference | **Grid** | User | **Victor Hernandez** |
| Scale | **0.999932** | Report Generated | **6/4/2010 at 3:02:59 PM** |
| Convergence at slot | **0.25° East** | Database/Source file | **WA_Midland/No._2H_PWB.xml** |

| WELLPATH LOCATION | Local coordinates | | Grid coordinates | | Geographic coordinates | |
|---|---|---|---|---|---|---|
| | **North[ft]** | **East[ft]** | **Easting[USft]** | **Northing[USft]** | **Latitude** | **Longitude** |
| Slot Location | **0.00** | **0.00** | 681958.50 | 601329.30 | 32°39'08.172"N | 103°52'35.176"W |
| Facility Reference Pt | | | **681958.50** | **601329.30** | 32°39'08.172"N | 103°52'35.176"W |
| Field Reference Pt | | | **681958.50** | **601329.30** | 32°39'08.172"N | 103°52'35.176"W |

| WELLPATH DATUM | | | |
|---|---|---|---|
| Calculation method | **Minimum curvature** | Rig on No. 2H SHL (GL) to GL | **0.00ft** |
| Horizontal Reference Pt | **SL** | Rig on No. 2H SHL (GL) to Mean Sea Level | **3482.00ft** |
| Vertical Reference Pt | **Rig on No. 2H SHL (GL)** | GL to Mud Line (Facility) | **0.00ft** |
| MD Reference Pt | **Rig on No. 2H SHL (GL)** | Section Origin | **N 0.00, E 0.00 ft** |
| Field Vertical Reference | **Mean Sea Level** | Section Azimuth | **179.56°** |

# Planned Wellpath Report

Prelim_1



| REFERENCE WELLPATH IDENTIFICATION | | | |
|---|---|---|---|
| Operator | Cimarex Energy Co. | Slot | No. 2H SHL |
| Area | Eddy County, NM | Well | No. 2H |
| Field | (Penny) Sec 21, T19S, R31E | Wellbore | No. 2H PWB |
| Facility | Penny Pincher Fed Com No. 2H | | |

**WELLPATH DATA (51 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 | 179.558 | 0.00 | 0.00 | 0.00 | 0.00 | 681958.50 | 601329.30 | 32°39'08.172"N | 103°52'35.176"W | 0.00 | Tie On |
| 8715.00 | 0.000 | 179.558 | 8715.00 | 0.00 | 0.00 | 0.00 | 681958.50 | 601329.30 | 32°39'08.172"N | 103°52'35.176"W | 0.00 | EST. KOP |
| 8815.00† | 28.000 | 179.558 | 8811.07 | 23.95 | -23.95 | 0.18 | 681958.68 | 601305.35 | 32°39'07.935"N | 103°52'35.175"W | 28.00 | |
| 8915.00† | 56.000 | 179.558 | 8884.64 | 90.20 | -90.20 | 0.70 | 681959.20 | 601239.11 | 32°39'07.280"N | 103°52'35.172"W | 28.00 | |
| 9015.00† | 84.000 | 179.558 | 8918.51 | 183.24 | -183.23 | 1.41 | 681959.91 | 601146.08 | 32°39'06.359"N | 103°52'35.168"W | 28.00 | |
| 9033.59 | 89.204 | 179.558 | 8919.61 | 201.78 | -201.78 | 1.56 | 681960.06 | 601127.54 | 32°39'06.175"N | 103°52'35.168"W | 28.00 | END OF CURVE |
| 9115.00† | 89.204 | 179.558 | 8920.74 | 283.19 | -283.18 | 2.18 | 681960.68 | 601046.14 | 32°39'05.370"N | 103°52'35.164"W | 0.00 | |
| 9215.00† | 89.204 | 179.558 | 8922.13 | 383.18 | -383.17 | 2.96 | 681961.46 | 600946.16 | 32°39'04.381"N | 103°52'35.160"W | 0.00 | |
| 9315.00† | 89.204 | 179.558 | 8923.52 | 483.17 | -483.16 | 3.73 | 681962.23 | 600846.18 | 32°39'03.391"N | 103°52'35.156"W | 0.00 | |
| 9415.00† | 89.204 | 179.558 | 8924.91 | 583.16 | -583.15 | 4.50 | 681963.00 | 600746.20 | 32°39'02.402"N | 103°52'35.152"W | 0.00 | |
| 9515.00† | 89.204 | 179.558 | 8926.30 | 683.15 | -683.13 | 5.27 | 681963.77 | 600646.22 | 32°39'01.413"N | 103°52'35.148"W | 0.00 | |
| 9615.00† | 89.204 | 179.558 | 8927.69 | 783.14 | -783.12 | 6.04 | 681964.54 | 600546.24 | 32°39'00.423"N | 103°52'35.144"W | 0.00 | |
| 9715.00† | 89.204 | 179.558 | 8929.08 | 883.13 | -883.11 | 6.81 | 681965.31 | 600446.25 | 32°38'59.434"N | 103°52'35.140"W | 0.00 | |
| 9815.00† | 89.204 | 179.558 | 8930.47 | 983.12 | -983.09 | 7.59 | 681966.08 | 600346.27 | 32°38'58.445"N | 103°52'35.136"W | 0.00 | |
| 9915.00† | 89.204 | 179.558 | 8931.86 | 1083.11 | -1083.08 | 8.36 | 681966.86 | 600246.29 | 32°38'57.455"N | 103°52'35.132"W | 0.00 | |
| 10015.00† | 89.204 | 179.558 | 8933.25 | 1183.10 | -1183.07 | 9.13 | 681967.63 | 600146.31 | 32°38'56.466"N | 103°52'35.128"W | 0.00 | |
| 10115.00† | 89.204 | 179.558 | 8934.63 | 1283.09 | -1283.06 | 9.90 | 681968.40 | 600046.33 | 32°38'55.477"N | 103°52'35.124"W | 0.00 | |
| 10215.00† | 89.204 | 179.558 | 8936.02 | 1383.09 | -1383.04 | 10.67 | 681969.17 | 599946.35 | 32°38'54.487"N | 103°52'35.120"W | 0.00 | |
| 10315.00† | 89.204 | 179.558 | 8937.41 | 1483.08 | -1483.03 | 11.44 | 681969.94 | 599846.37 | 32°38'53.498"N | 103°52'35.116"W | 0.00 | |
| 10415.00† | 89.204 | 179.558 | 8938.80 | 1583.07 | -1583.02 | 12.21 | 681970.71 | 599746.39 | 32°38'52.508"N | 103°52'35.112"W | 0.00 | |
| 10515.00† | 89.204 | 179.558 | 8940.19 | 1683.06 | -1683.01 | 12.99 | 681971.48 | 599646.41 | 32°38'51.519"N | 103°52'35.108"W | 0.00 | |
| 10615.00† | 89.204 | 179.558 | 8941.58 | 1783.05 | -1782.99 | 13.76 | 681972.26 | 599546.43 | 32°38'50.530"N | 103°52'35.104"W | 0.00 | |
| 10715.00† | 89.204 | 179.558 | 8942.97 | 1883.04 | -1882.98 | 14.53 | 681973.03 | 599446.45 | 32°38'49.540"N | 103°52'35.100"W | 0.00 | |
| 10815.00† | 89.204 | 179.558 | 8944.36 | 1983.03 | -1982.97 | 15.30 | 681973.80 | 599346.47 | 32°38'48.551"N | 103°52'35.096"W | 0.00 | |
| 10915.00† | 89.204 | 179.558 | 8945.75 | 2083.02 | -2082.96 | 16.07 | 681974.57 | 599246.49 | 32°38'47.562"N | 103°52'35.092"W | 0.00 | |
| 11015.00† | 89.204 | 179.558 | 8947.14 | 2183.01 | -2182.94 | 16.84 | 681975.34 | 599146.51 | 32°38'46.572"N | 103°52'35.088"W | 0.00 | |
| 11115.00† | 89.204 | 179.558 | 8948.53 | 2283.00 | -2282.93 | 17.61 | 681976.11 | 599046.53 | 32°38'45.583"N | 103°52'35.084"W | 0.00 | |
| 11215.00† | 89.204 | 179.558 | 8949.92 | 2382.99 | -2382.92 | 18.39 | 681976.88 | 598946.55 | 32°38'44.594"N | 103°52'35.080"W | 0.00 | |
| 11315.00† | 89.204 | 179.558 | 8951.31 | 2482.98 | -2482.91 | 19.16 | 681977.66 | 598846.57 | 32°38'43.604"N | 103°52'35.077"W | 0.00 | |
| 11415.00† | 89.204 | 179.558 | 8952.70 | 2582.97 | -2582.89 | 19.93 | 681978.43 | 598746.59 | 32°38'42.615"N | 103°52'35.073"W | 0.00 | |

# Planned Wellpath Report

**Prelim_1**



| REFERENCE WELLPATH IDENTIFICATION | | | |
|---|---|---|---|
| Operator | Cimarex Energy Co. | Slot | No. 2H SHL |
| Area | Eddy County, NM | Well | No. 2H |
| Field | (Penny) Sec 21, T19S, R31E | Wellbore | No. 2H PWB |
| Facility | Penny Pincher Fed Com No. 2H | | |

**WELLPATH DATA (51 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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 11515.00† | 89.204 | 179.558 | 8954.09 | 2682.96 | -2682.88 | 20.70 | 681979.20 | 598646.61 | 32°38'41.626"N | 103°52'35.069"W | 0.00 | |
| 11615.00† | 89.204 | 179.558 | 8955.48 | 2782.95 | -2782.87 | 21.47 | 681979.97 | 598546.63 | 32°38'40.636"N | 103°52'35.065"W | 0.00 | |
| 11715.00† | 89.204 | 179.558 | 8956.87 | 2882.94 | -2882.85 | 22.24 | 681980.74 | 598446.65 | 32°38'39.647"N | 103°52'35.061"W | 0.00 | |
| 11815.00† | 89.204 | 179.558 | 8958.26 | 2982.93 | -2982.84 | 23.01 | 681981.51 | 598346.67 | 32°38'38.658"N | 103°52'35.057"W | 0.00 | |
| 11915.00† | 89.204 | 179.558 | 8959.65 | 3082.92 | -3082.83 | 23.79 | 681982.28 | 598246.69 | 32°38'37.668"N | 103°52'35.053"W | 0.00 | |
| 12015.00† | 89.204 | 179.558 | 8961.04 | 3182.91 | -3182.82 | 24.56 | 681983.06 | 598146.71 | 32°38'36.679"N | 103°52'35.049"W | 0.00 | |
| 12115.00† | 89.204 | 179.558 | 8962.43 | 3282.90 | -3282.80 | 25.33 | 681983.83 | 598046.73 | 32°38'35.690"N | 103°52'35.045"W | 0.00 | |
| 12215.00† | 89.204 | 179.558 | 8963.81 | 3382.89 | -3382.79 | 26.10 | 681984.60 | 597946.75 | 32°38'34.700"N | 103°52'35.041"W | 0.00 | |
| 12315.00† | 89.204 | 179.558 | 8965.20 | 3482.88 | -3482.78 | 26.87 | 681985.37 | 597846.77 | 32°38'33.711"N | 103°52'35.037"W | 0.00 | |
| 12415.00† | 89.204 | 179.558 | 8966.59 | 3582.87 | -3582.77 | 27.64 | 681986.14 | 597746.79 | 32°38'32.722"N | 103°52'35.033"W | 0.00 | |
| 12515.00† | 89.204 | 179.558 | 8967.98 | 3682.86 | -3682.75 | 28.42 | 681986.91 | 597646.81 | 32°38'31.732"N | 103°52'35.029"W | 0.00 | |
| 12615.00† | 89.204 | 179.558 | 8969.37 | 3782.85 | -3782.74 | 29.19 | 681987.68 | 597546.82 | 32°38'30.743"N | 103°52'35.025"W | 0.00 | |
| 12715.00† | 89.204 | 179.558 | 8970.76 | 3882.84 | -3882.73 | 29.96 | 681988.46 | 597446.84 | 32°38'29.754"N | 103°52'35.021"W | 0.00 | |
| 12815.00† | 89.204 | 179.558 | 8972.15 | 3982.83 | -3982.72 | 30.73 | 681989.23 | 597346.86 | 32°38'28.764"N | 103°52'35.017"W | 0.00 | |
| 12915.00† | 89.204 | 179.558 | 8973.54 | 4082.82 | -4082.70 | 31.50 | 681990.00 | 597246.88 | 32°38'27.775"N | 103°52'35.013"W | 0.00 | |
| 13015.00† | 89.204 | 179.558 | 8974.93 | 4182.81 | -4182.69 | 32.27 | 681990.77 | 597146.90 | 32°38'26.785"N | 103°52'35.009"W | 0.00 | |
| 13115.00† | 89.204 | 179.558 | 8976.32 | 4282.81 | -4282.68 | 33.04 | 681991.54 | 597046.92 | 32°38'25.796"N | 103°52'35.005"W | 0.00 | |
| 13215.00† | 89.204 | 179.558 | 8977.71 | 4382.80 | -4382.67 | 33.82 | 681992.31 | 596946.94 | 32°38'24.807"N | 103°52'35.001"W | 0.00 | |
| 13315.00† | 89.204 | 179.558 | 8979.10 | 4482.79 | -4482.65 | 34.59 | 681993.08 | 596846.96 | 32°38'23.817"N | 103°52'34.997"W | 0.00 | |
| 13415.00† | 89.204 | 179.558 | 8980.49 | 4582.78 | -4582.64 | 35.36 | 681993.86 | 596746.98 | 32°38'22.828"N | 103°52'34.993"W | 0.00 | |
| 13451.79 | 89.204 | 179.558 | 8981.00[1] | 4619.56 | -4619.42 | 35.64 | 681994.14 | 596710.20 | 32°38'22.464"N | 103°52'34.991"W | 0.00 | No. 2H PBHL |

# Planned Wellpath Report

**Prelim_1**



| REFERENCE WELLPATH IDENTIFICATION | | | |
|---|---|---|---|
| Operator | Cimarex Energy Co. | Slot | No. 2H SHL |
| Area | Eddy County, NM | Well | No. 2H |
| Field | (Penny) Sec 21, T19S, R31E | Wellbore | No. 2H PWB |
| Facility | Penny Pincher Fed Com No. 2H | | |

**TARGETS**

| Name | MD [ft] | TVD [ft] | North [ft] | East [ft] | Grid East [srv ft] | Grid North [srv ft] | Latitude | Longitude | Shape |
|---|---|---|---|---|---|---|---|---|---|
| 1) No. 2H PBHL | 13451.79 | 8981.00 | -4619.42 | 35.64 | **681994.14** | **596710.20** | 32°38'22.464"N | 103°52'34.991"W | point |

**SURVEY PROGRAM Ref Wellbore: No. 2H PWB Ref Wellpath: Prelim_1**

| Start MD [ft] | End MD [ft] | Positional Uncertainty Model | Log Name/Comment | Wellbore |
|---|---|---|---|---|
| 0.00 | 13451.79 | NaviTrak (Standard) | | No. 2H PWB |

# 20" Diverter System

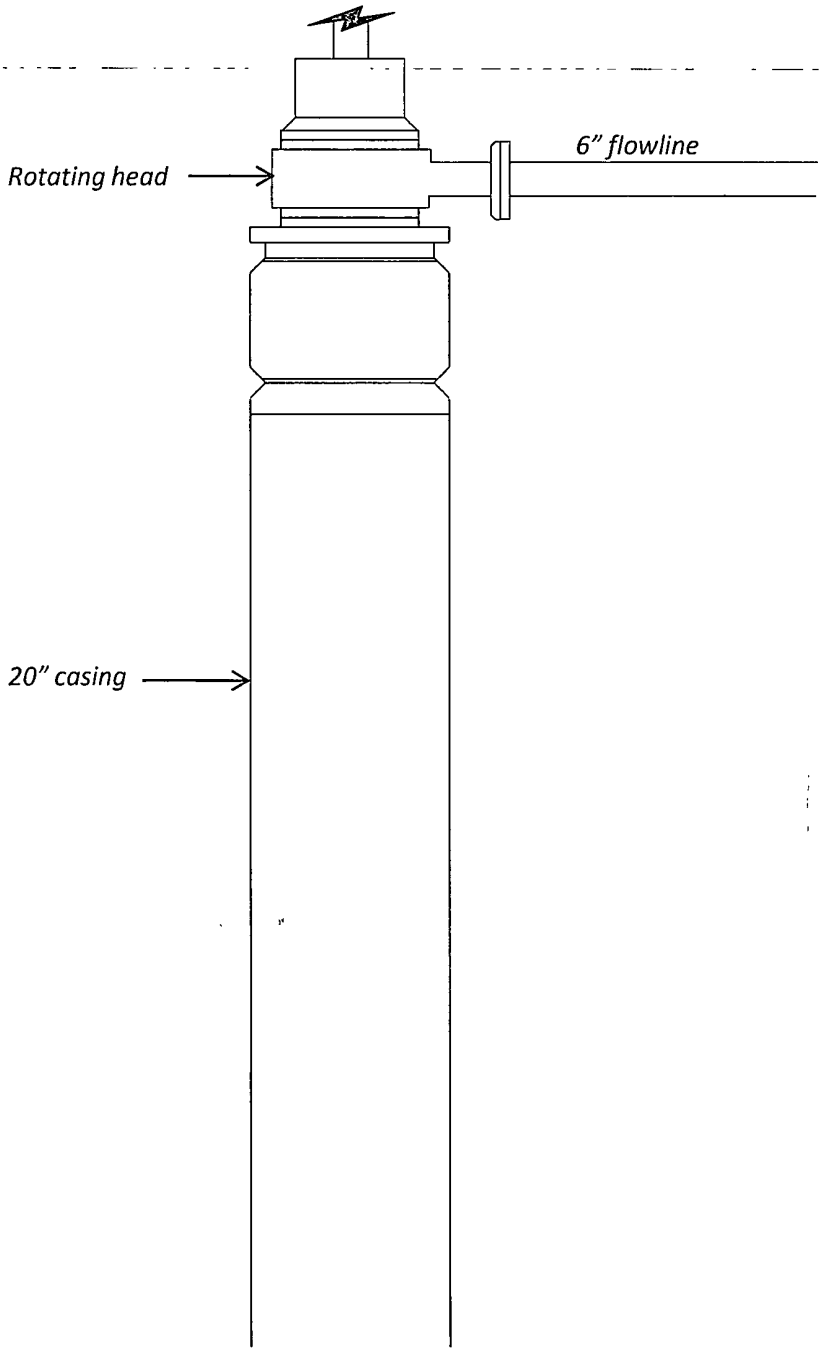



Exhibit E-1 – 20" Diverter System
**Penny Pincher Federal Com No. 2**
Cimarex Energy Co. of Colorado
21-19S-31E
SHL 330 FNL & 1980 FWL
BHL 330 FSL & 1980 FWL
Eddy County, NM

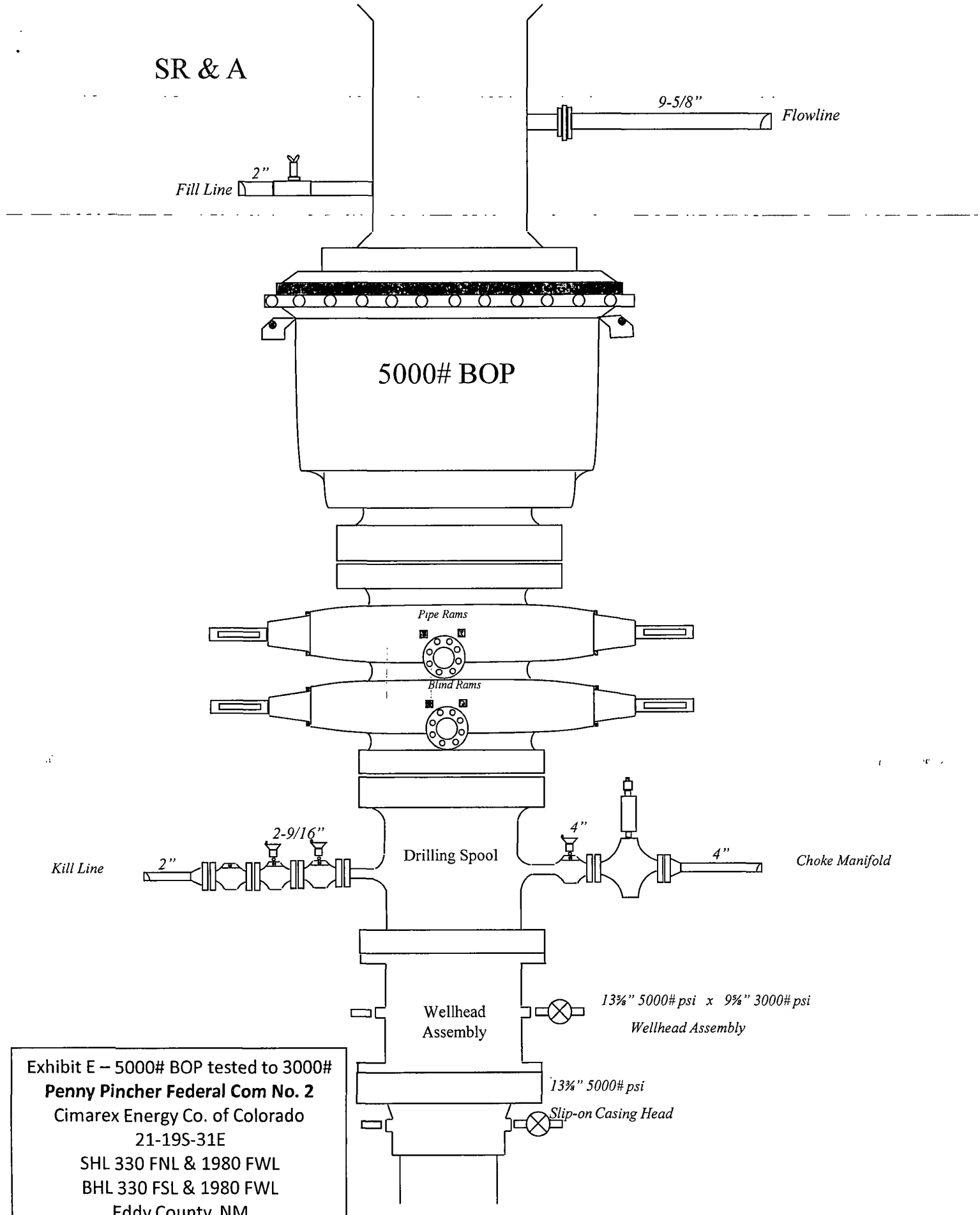
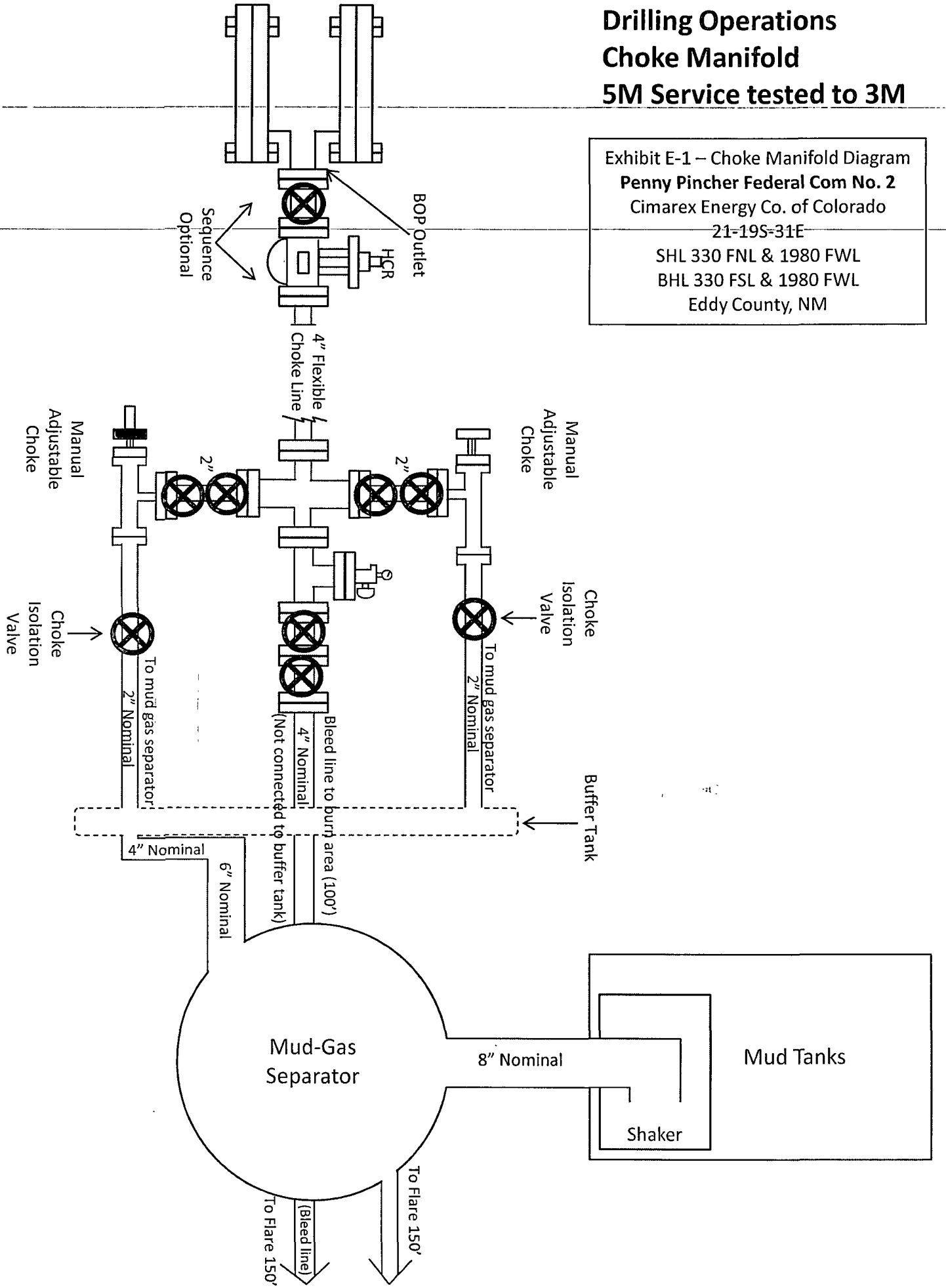



Exhibit E – 5000# BOP tested to 3000#
**Penny Pincher Federal Com No. 2**
Cimarex Energy Co. of Colorado
21-19S-31E
SHL 330 FNL & 1980 FWL
BHL 330 FSL & 1980 FWL
Eddy County, NM

# Drilling Operations
# Choke Manifold
# 5M Service tested to 3M

Exhibit E-1 – Choke Manifold Diagram
**Penny Pincher Federal Com No. 2**
Cimarex Energy Co. of Colorado
~~21-19S-31E~~
SHL 330 FNL & 1980 FWL
BHL 330 FSL & 1980 FWL
Eddy County, NM



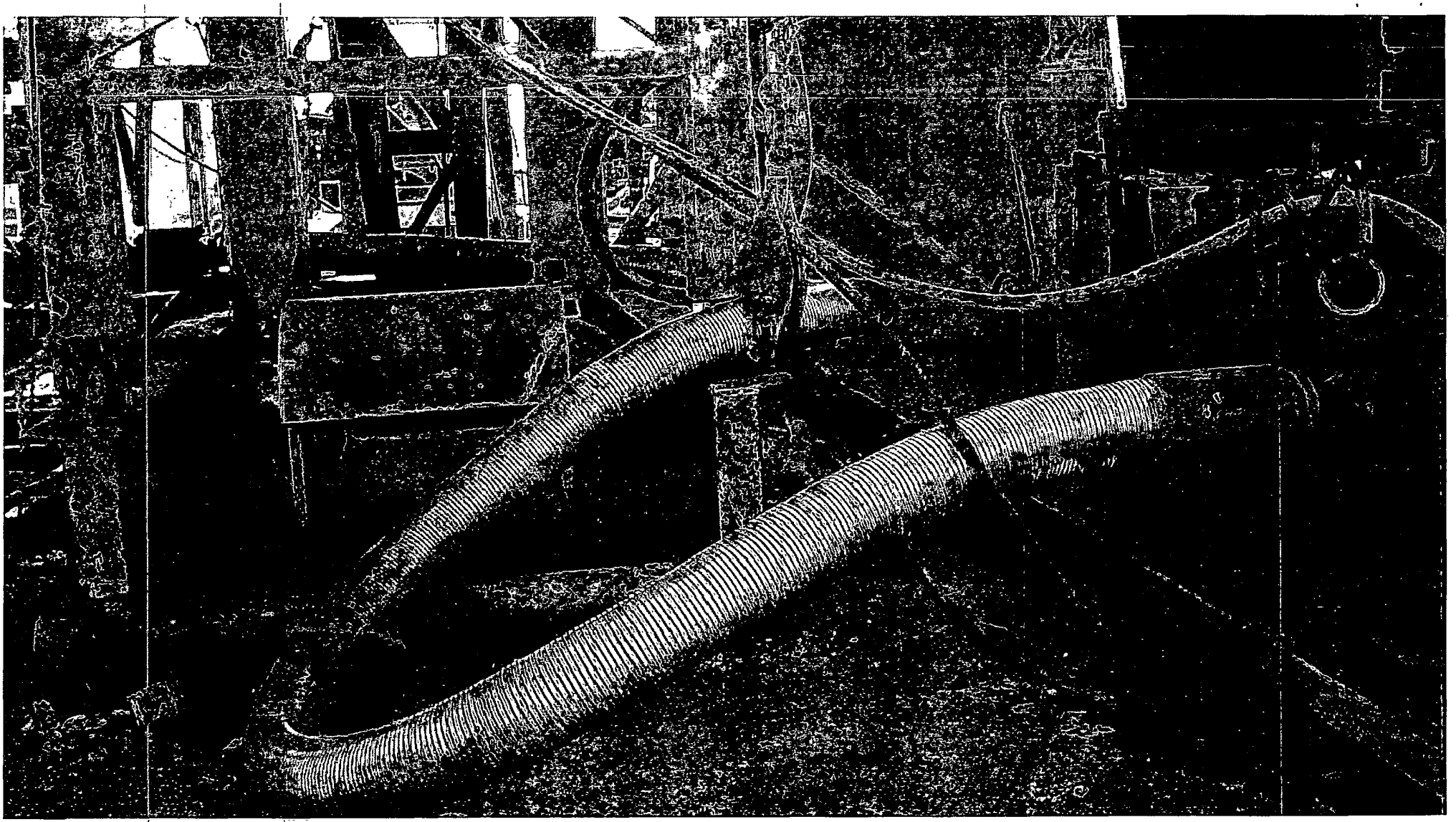
Midwest Hose
& Specialty, Inc.

# Specification Sheet
# Choke & Kill Hose

The Midwest Hose & Specialty Choke & Kill hose is manufactured with only premium componets.The reinforcement cables, inner liner and cover are made of the highest quality material to handle the tough drilling applications of today's industry. The end connections are available with API flanges, API male threads, hubs, hammer unions or other special fittings upon request. Hose assembly is manufactured to API 7K. This assembly is wrapped with fire resistant vermculite coated fiberglass insulation, rated at 2000 degrees with stainless steel armor cover.

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

P.O. Box 96558 – 1421 S.E. 29th St. Oklahoma City, OK 73143 * (405) 670-6718 * Fax: (405) 670-6816



Cactus Rig 115
Serial # 63270

# MIDWEST

## HOSE AND SPECIALTY INC.

### INTERNAL HYDROSTATIC TEST REPORT

| Customer: | P.O. Number: |
|---|---|
| CACTUS DRILLING | RIG#147 |

**HOSE SPECIFICATIONS**

| Type: | CHOKE & KILL | | Length: | 35' |
|---|---|---|---|---|
| I.D. | 4" *INCHES* | | O.D. | 8" |

| WORKING PRESSURE | TEST PRESSURE | BURST PRESSURE |
|---|---|---|
| 10,000 *PSI* | 15,000 | |

**COUPLINGS**

| Stem Part No. | Ferrule No. |
|---|---|
| E4.0X64WB | FERRULE-128 |
| **Type of Coupling:** 4-1/16 10K FLANGE(BX-155) | **Die Size:** |

**PROCEDURE**

*Hose assembly pressure tested with water at ambient temperature.*

| TIME HELD AT TEST PRESSURE | ACTUAL BURST PRESSURE: |
|---|---|
| 15 *MIN.* | 0 *PSI* |

**COMMENTS:**
SERIAL#63270

| Date: | Tested By: | Approved: |
|---|---|---|
| 7/14/2010 | BOBBY FINK | BRENT BURNETT |