

OCD-ARTESIA
SECRETARY'S POTASH

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

5. Lease Serial No *Mid BHL SHL*
NM-125166, NM-113962 *NM124209*
6. If Indian, Allottee or Tribe Name

APPLICATION FOR PERMIT TO DRILL OR REENTER

1a. Type of Work ☒ DRILL ☐ REENTER		7. If Unit or CA Agreement, Name and No. Pending	
1b. Type of Well ☒ Oil Well ☐ Gas Well ☐ Other ☒ Single Zone ☐ Multiple Zone		8. Lease Name and Well No. Benson 34 Federal Com No. 2 <i>[38926]</i>	
2. Name of Operator Cimarex Energy Co. of Colorado		9. API Well No 30-015- <i>39630</i>	
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 <i>LED; Bone Spring, South</i>	
4. Location of Well (Report location clearly and in accordance with any State requirements. *) At Surface 34-18S-30E; 110 FSL & 1900 FWL At proposed prod Zone 3-19S-30E; 330 FSL & 1980 FWL <i>UNORTHODOX LOCATION</i>		11. Sec, T, R, M. or Blk and Survey of Area 34-18S-30E 3-19S-30E	
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) 110'	16. No of acres in lease NM-125166 - 401.14 acres NM-113962 - 400 acres	17. Spacing Unit dedicated to this well 3-19S-30E - E2W2 160.36 acres	
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft 2092'	19. Proposed Depth Pilot Hole TVD 8800 MD 13398, TVD 8450	20. BLM/BIA Bond No on File NM-2575	
21. Elevations (Show whether DF, KDB, RT, GL, etc) 3439' GR	22. Approximate date work will start* 06.15.11	23. Estimated duration 25-30 days	

24. Attachments		RECEIVED NOV - 9 2011 NMOCD ARTESIA
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	4. Bond to cover the operations unless covered by an existing bond on file (see Item 20 above)	
2. A Drilling Plan	5. Operator Certification	
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)	6. Such other site specific information and/or plans as may be required by the authorized officer	

25. Signature <i>Zeno Farris</i>	Name (Printed/Typed) Zeno Farris	Date 12.30.10
Title Manager Operations Administration		
Approved By (Signature) <i>151 William Merhege</i>	Name (Printed/Typed) <i>151 William Merhege</i>	Date <i>10/28/2011</i>
Title STATE DIRECTOR	Office NM STATE OFFICE	

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

APPROVAL FOR TWO YEARS

CAPITAN CONTROLLED WATER BASIN
SEE ATTACHED FOR
CONDITIONS OF APPROVAL

APPROVAL SUBJECT TO
GENERAL REQUIREMENTS
AND SPECIAL STIPULATIONS
ATTACHED

DISTRICT I
1825 N. French Dr., Hobbs, NM 88240

DISTRICT II
1301 W. Grand Avenue, Artesia, NM 88210

DISTRICT III
1000 Rio Brazos Rd., Aztec, NM 87410

DISTRICT IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy, Minerals and Natural Resources Department

Form C-102
Revised July 18, 2010

Submit one copy to appropriate
District Office

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

WELL LOCATION AND ACREAGE DEDICATION PLAT

☐ AMENDED REPORT

API Number 30-015-39630	Pool Code 37920	Pool Name LEO; Bone Spring South
Property Code 38020	Property Name BENSON "34" FEDERAL COM	Well Number 2
GRID No. 162683	Operator Name CIMAREX ENERGY CO. OF COLORADO	Elevation 3439'

Surface Location

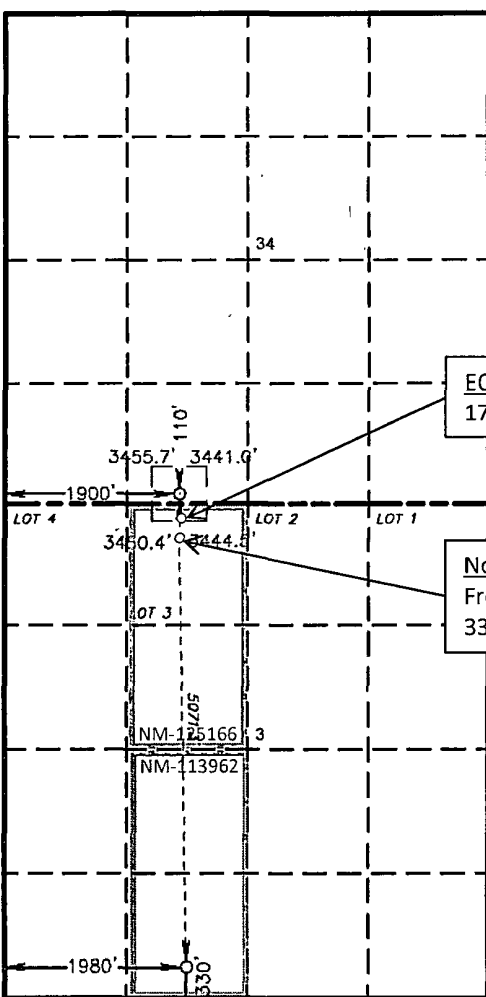
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
N	34	18 S	30 E		110	SOUTH	1900	WEST	EDDY

Bottom Hole Location If Different From Surface

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
N	3	19 S	30 E		330'	SOUTH	1980'	WEST	EDDY

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

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

SURFACE LOCATION Lat - N 32°41'49.11" Long - W 103°57'43.95" NMSPCE - N 617490.70 E 655503.10 (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 unEDDysed 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. <i>Zeno Farris</i> 12-30-10 Signature Date Zeno Farris Printed Name zfarris@cimarex.com Email Address
PROPOSED BOTTOM HOLE LOCATION Lat - N 32°40'58.95" Long - W 103°57'43.05" NMSPCE - N 612421.48 E 655598.00 (NAD-83)		SURVEYOR CERTIFICATION I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision and that the same is true and correct to the best of my belief. FEB 16 2011 Date Surveyed Signature & Seal of Professional Surveyor W. Gary L. Jones Certificate No. Gary L. Jones 7977 BASIN SURVEYS 24156

Application to Drill
Benson 34 Federal Com No. 2
 Cimarex Energy Co. of Colorado
 Unit N, Section 34
 T18S-R30E, 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 34-18S-30E; 110 FSL & 1900 FWL
 BHL 3-19S-30E; 330 FSL & 1980 FWL
- 2 Elevation above sea level: 3,439 GR
- 3 Geologic name of surface formation: Quaternary Alluvium Deposits
- 4 Drilling tools and associated equipment: Conventional rotary drilling rig using fluid as a circulating medium for solids removal.
- 5 Proposed drilling depth: MD 13398, TVD 8450 Pilot Hole TVD 8800
- 6 Estimated tops of geological markers:

Rustler	400	Bone Spring	5830
T. Salt	655	1st BS Sand	7740
B. Salt	1780	2n BS Sand	8720
Yates	2000		
Queen	2920		
San Andres	3580		
- 7 Possible mineral bearing formation:

Bone Spring	Oil
Delaware	Oil
Yates/7R/Q/GB	Oil

8 Proposed Mud Circulating System:

Depth		Mud Wt	Visc	Fluid Loss	Type Mud
0'	to 575' 485'	8.4 - 8.6	28	NC	FW
575'	to 3250'	10.0	30-32	NC	Brine water
3250'	to 13398'	8.4 - 9.5	30-32	NC	FW, 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.

Proposed drilling Plan

Drill to pilot hole TD @ 8800 and log. Set 225 sks HalCem -H 0.5% CFR-3 0.1% HR-60116.5 ppg yield 1.06 0% Excess cement plug from 8000-8800. Drill with 8¾" bit through cement to KOP @ 8164 and drill to lateral TD @ 13398. Set and cement 5½" casing.

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 T18S-R30E, Eddy County, NM

9 Casing & Cementing Program:

String	Hole Size	Depth	Casing OD	Weight	Collar	Grade
2 1/2" 10' Surface	17 1/2"	0' to 482' 575'	New 13 3/8"	48#	STC	H-40
Intermediate	12 1/4"	0' to 3250'	New 9 5/8"	40#	LTC	J/K-55
Production	8 3/4"	0' to 13398'	New 5 1/2"	17#	LTC	P-110

10 Cementing:

Surface

Lead: 460 SKS Halcem C + 4% Bentomite + 2% CaCl 13.5ppg 1.75 yield 100% Excess
 Tail: 30 SKS Halcem C + 2% CaCl 14.2ppg 1.34 yield 50% Excess

TOC Surface

Intermediate

Lead: 1085 SKS EconoCem + 5% salt + 5 lbm gilsonite 14.6ppg 1.54yield 70% Excess
 Tail: 200 SKS HalCem + 1% CaCl 14.8ppg 1.34 yield 25% Excess

TOC Surface

Production

Lead: 830 SKS EconoCem - H + 0.2 % HR-601 2.44 11.9ppg 2.44 yield 50% Excess
 Tail: 1865 SKS 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 2750'

Depth to groundwater is 184' according to the NM State Engineer. Fresh water zones will be protected by setting 13 3/8" casing at 575 and cementing to surface. Hydrocarbon zones will be protected by setting 9 5/8" casing at 3250 and cementing to surface, and by setting 5 1/2" casing at 13398 and cementing to 2750.

<u>Collapse Factor</u>	<u>Burst Factor</u>	<u>Tension Factor</u>
1.125	1.125	1.6

11 Pressure control Equipment:

Exhibit "E". A 13 3/8" 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 separator will be utilized if drilling in potential H2S area.

BOP unit will be hydraulically operated. BOP will be nipped up and operated at least once a day while drilling and the blind rams will be operated when out of hole during trips. No abnormal pressure or temperature is expected while drilling. From the base of the surface pipe through the running of production casing, the well will be equipped with a 5000 psi BOP system tested to 3000 psi.

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 See attached hydrostatic test report

Length: 35' Size: 4-1/16" Ends flanges/clamps

WP rating: 10,000 psi Anchors required by manufacturer – Yes/No

Application to Drill
Benson 34 Federal Com No. 2
Cimarex Energy Co. of Colorado
Unit N, Section 34
T18S-R30E, Eddy County, NM

12 Testing, Logging and Coring Program: *See COA*

- A. Mud logging program: 2 man unit from 3250 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 H₂S from the surface to the Bone Spring formations to meet the BLM's minimum requirements for the submission of an "H₂S Drilling Operation Plan" or "Public Protection Plan" for the drilling and completion of this well. Since we have an H₂S Safety package on all wells, attached is an "H₂S 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 **3000 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 potentialized as **an oil well.**



Cimarex Energy Co.

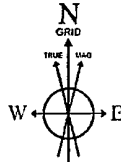
Location: Eddy County, NM
Field: (Benson) Sec 34, T18S, R30E
Facility: Benson 34 Fed Com No. 2H

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



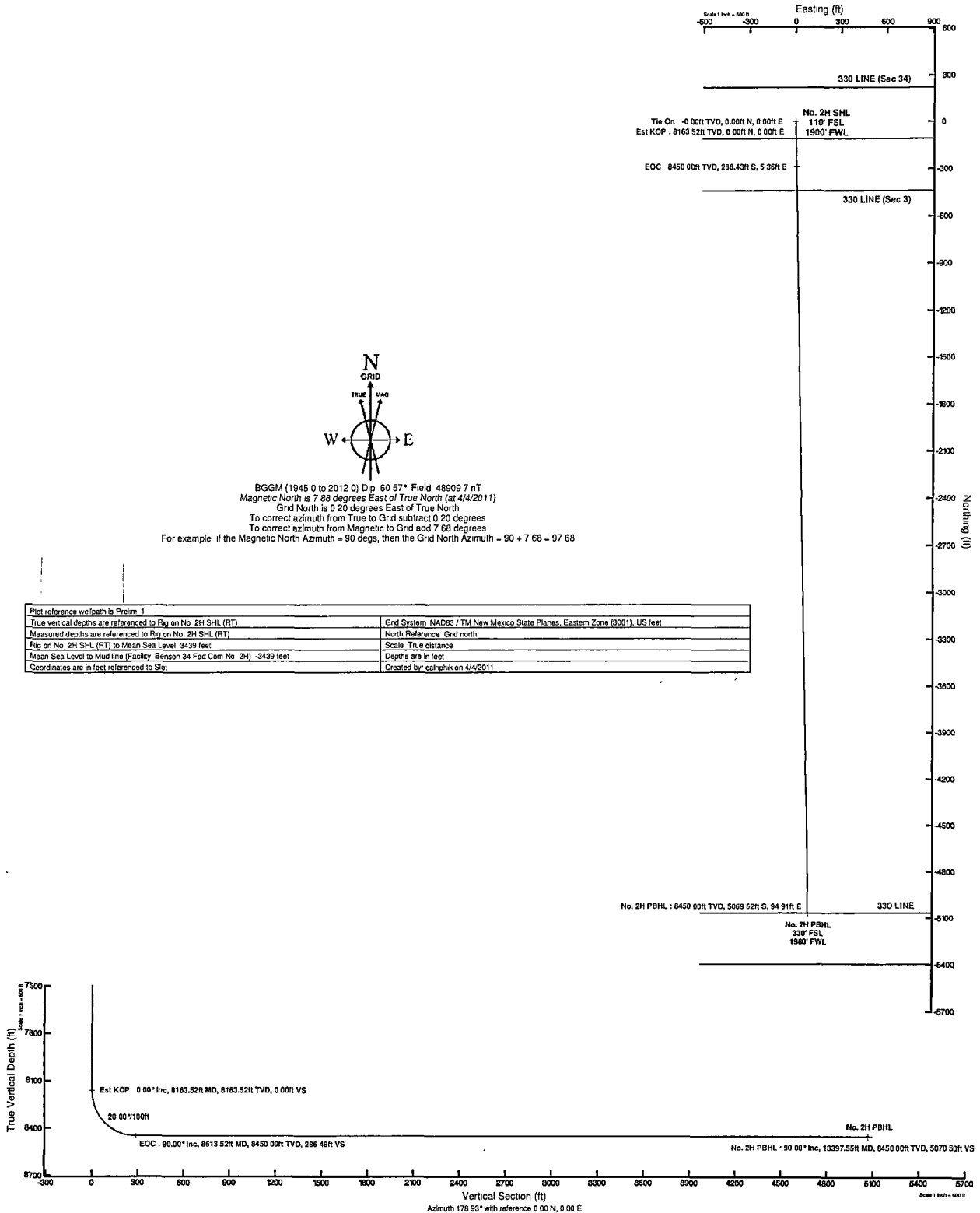
Well Profile Data

Design Comment	MD (ft)	Inc (°)	Az (°)	TVD (ft)	Local N (ft)	Local E (ft)	DLS (°/100ft)	VS (ft)
Tie On	0.00	0.000	178.928	0.00	0.00	0.00	0.00	0.00
Est KOP	8163.52	0.000	178.928	8163.52	0.00	0.00	0.00	0.00
EOC	8613.52	90.000	178.928	8450.00	-286.43	5.36	20.00	286.48
No. 2H PWB	13397.55	90.000	178.928	8450.00	-5069.62	94.91	0.00	5070.50



BGGM (1945 0 to 2012 0) Dip 60.57° Field 48909.7 nT
Magnetic North is 7.88 degrees East of True North (at 4/4/2011)
Grid North is 0.20 degrees East of True North
To correct azimuth from True to Grid subtract 0.20 degrees
To correct azimuth from Magnetic to Grid add 7.68 degrees
For example if the Magnetic North Azimuth = 90 degs, then the Grid North Azimuth = 90 + 7.68 = 97.68

Plot reference wellpath is Prelim. 1	
True vertical depths are referenced to Rig on No. 2H SHL (RT)	Grid System NAD83 / TM New Mexico State Planes, Eastern Zone (3001), US feet
Measured depths are referenced to Rig on No. 2H SHL (RT)	North Reference Grid north
Rig on No. 2H SHL (RT) to Mean Sea Level 3439 feet	Scale True distance
Mean Sea Level to Mud line (Facility Benson 34 Fed Com No. 2H) -3439 feet	Depths are in feet
Coordinates are in feet referenced to Slot	Created by calphuk on 4/4/2011





Planned Wellpath Report

Prelim_1
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INTEQ

REFERENCE WELLPATH IDENTIFICATION			
Operator	Cimarex Energy Co.	Slot	No. 2H SHL
Area	Eddy County, NM	Well	No. 2H
Field	(Benson) Sec 34, T18S, R30E	Wellbore	No. 2H PWB
Facility	Benson 34 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	Calhphik
Scale	0.999924	Report Generated	4/4/2011 at 4:52:27 PM
Convergence at slot	0.20° 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	655503.10	617490.70	32°41'49.112"N	103°57'43.953"W
Facility Reference Pt			655503.10	617490.70	32°41'49.112"N	103°57'43.953"W
Field Reference Pt			655503.10	617490.70	32°41'49.112"N	103°57'43.953"W

WELLPATH DATUM			
Calculation method	Minimum curvature	Rig on No. 2H SHL (RT) to GL	0.00ft
Horizontal Reference Pt	Slot	Rig on No. 2H SHL (RT) to Mean Sea Level	3439.00ft
Vertical Reference Pt	Rig on No. 2H SHL (RT)	GL to Mud Line (Facility)	0.00ft
MD Reference Pt	Rig on No. 2H SHL (RT)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	178.93°



Planned Wellpath Report

Prelim_1
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REFERENCE WELLPATH IDENTIFICATION

Operator	Cimarex Energy Co.	Slot	No. 2H SHL
Area	Eddy County, NM	Well	No. 2H
Field	(Benson) Sec 34, T18S, R30E	Wellbore	No. 2H PWB
Facility	Benson 34 Fed Com No. 2H		

WELLPATH DATA (137 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	178.928	0.00	0.00	0.00	0.00	655503.10	617490.70	32°41'49.112"N	103°57'43.953"W	0.00	Tie On
100.00†	0.000	178.928	100.00	0.00	0.00	0.00	655503.10	617490.70	32°41'49.112"N	103°57'43.953"W	0.00	
200.00†	0.000	178.928	200.00	0.00	0.00	0.00	655503.10	617490.70	32°41'49.112"N	103°57'43.953"W	0.00	
300.00†	0.000	178.928	300.00	0.00	0.00	0.00	655503.10	617490.70	32°41'49.112"N	103°57'43.953"W	0.00	
400.00†	0.000	178.928	400.00	0.00	0.00	0.00	655503.10	617490.70	32°41'49.112"N	103°57'43.953"W	0.00	
500.00†	0.000	178.928	500.00	0.00	0.00	0.00	655503.10	617490.70	32°41'49.112"N	103°57'43.953"W	0.00	
600.00†	0.000	178.928	600.00	0.00	0.00	0.00	655503.10	617490.70	32°41'49.112"N	103°57'43.953"W	0.00	
700.00†	0.000	178.928	700.00	0.00	0.00	0.00	655503.10	617490.70	32°41'49.112"N	103°57'43.953"W	0.00	
800.00†	0.000	178.928	800.00	0.00	0.00	0.00	655503.10	617490.70	32°41'49.112"N	103°57'43.953"W	0.00	
900.00†	0.000	178.928	900.00	0.00	0.00	0.00	655503.10	617490.70	32°41'49.112"N	103°57'43.953"W	0.00	
1000.00†	0.000	178.928	1000.00	0.00	0.00	0.00	655503.10	617490.70	32°41'49.112"N	103°57'43.953"W	0.00	
1100.00†	0.000	178.928	1100.00	0.00	0.00	0.00	655503.10	617490.70	32°41'49.112"N	103°57'43.953"W	0.00	
1200.00†	0.000	178.928	1200.00	0.00	0.00	0.00	655503.10	617490.70	32°41'49.112"N	103°57'43.953"W	0.00	
1300.00†	0.000	178.928	1300.00	0.00	0.00	0.00	655503.10	617490.70	32°41'49.112"N	103°57'43.953"W	0.00	
1400.00†	0.000	178.928	1400.00	0.00	0.00	0.00	655503.10	617490.70	32°41'49.112"N	103°57'43.953"W	0.00	
1500.00†	0.000	178.928	1500.00	0.00	0.00	0.00	655503.10	617490.70	32°41'49.112"N	103°57'43.953"W	0.00	
1600.00†	0.000	178.928	1600.00	0.00	0.00	0.00	655503.10	617490.70	32°41'49.112"N	103°57'43.953"W	0.00	
1700.00†	0.000	178.928	1700.00	0.00	0.00	0.00	655503.10	617490.70	32°41'49.112"N	103°57'43.953"W	0.00	
1800.00†	0.000	178.928	1800.00	0.00	0.00	0.00	655503.10	617490.70	32°41'49.112"N	103°57'43.953"W	0.00	
1900.00†	0.000	178.928	1900.00	0.00	0.00	0.00	655503.10	617490.70	32°41'49.112"N	103°57'43.953"W	0.00	
2000.00†	0.000	178.928	2000.00	0.00	0.00	0.00	655503.10	617490.70	32°41'49.112"N	103°57'43.953"W	0.00	
2100.00†	0.000	178.928	2100.00	0.00	0.00	0.00	655503.10	617490.70	32°41'49.112"N	103°57'43.953"W	0.00	
2200.00†	0.000	178.928	2200.00	0.00	0.00	0.00	655503.10	617490.70	32°41'49.112"N	103°57'43.953"W	0.00	
2300.00†	0.000	178.928	2300.00	0.00	0.00	0.00	655503.10	617490.70	32°41'49.112"N	103°57'43.953"W	0.00	
2400.00†	0.000	178.928	2400.00	0.00	0.00	0.00	655503.10	617490.70	32°41'49.112"N	103°57'43.953"W	0.00	
2500.00†	0.000	178.928	2500.00	0.00	0.00	0.00	655503.10	617490.70	32°41'49.112"N	103°57'43.953"W	0.00	
2600.00†	0.000	178.928	2600.00	0.00	0.00	0.00	655503.10	617490.70	32°41'49.112"N	103°57'43.953"W	0.00	
2700.00†	0.000	178.928	2700.00	0.00	0.00	0.00	655503.10	617490.70	32°41'49.112"N	103°57'43.953"W	0.00	
2800.00†	0.000	178.928	2800.00	0.00	0.00	0.00	655503.10	617490.70	32°41'49.112"N	103°57'43.953"W	0.00	
2900.00†	0.000	178.928	2900.00	0.00	0.00	0.00	655503.10	617490.70	32°41'49.112"N	103°57'43.953"W	0.00	
3000.00†	0.000	178.928	3000.00	0.00	0.00	0.00	655503.10	617490.70	32°41'49.112"N	103°57'43.953"W	0.00	
3100.00†	0.000	178.928	3100.00	0.00	0.00	0.00	655503.10	617490.70	32°41'49.112"N	103°57'43.953"W	0.00	
3200.00†	0.000	178.928	3200.00	0.00	0.00	0.00	655503.10	617490.70	32°41'49.112"N	103°57'43.953"W	0.00	
3300.00†	0.000	178.928	3300.00	0.00	0.00	0.00	655503.10	617490.70	32°41'49.112"N	103°57'43.953"W	0.00	
3400.00†	0.000	178.928	3400.00	0.00	0.00	0.00	655503.10	617490.70	32°41'49.112"N	103°57'43.953"W	0.00	
3500.00†	0.000	178.928	3500.00	0.00	0.00	0.00	655503.10	617490.70	32°41'49.112"N	103°57'43.953"W	0.00	
3600.00†	0.000	178.928	3600.00	0.00	0.00	0.00	655503.10	617490.70	32°41'49.112"N	103°57'43.953"W	0.00	
3700.00†	0.000	178.928	3700.00	0.00	0.00	0.00	655503.10	617490.70	32°41'49.112"N	103°57'43.953"W	0.00	
3800.00†	0.000	178.928	3800.00	0.00	0.00	0.00	655503.10	617490.70	32°41'49.112"N	103°57'43.953"W	0.00	
3900.00†	0.000	178.928	3900.00	0.00	0.00	0.00	655503.10	617490.70	32°41'49.112"N	103°57'43.953"W	0.00	
4000.00†	0.000	178.928	4000.00	0.00	0.00	0.00	655503.10	617490.70	32°41'49.112"N	103°57'43.953"W	0.00	
4100.00†	0.000	178.928	4100.00	0.00	0.00	0.00	655503.10	617490.70	32°41'49.112"N	103°57'43.953"W	0.00	
4200.00†	0.000	178.928	4200.00	0.00	0.00	0.00	655503.10	617490.70	32°41'49.112"N	103°57'43.953"W	0.00	
4300.00†	0.000	178.928	4300.00	0.00	0.00	0.00	655503.10	617490.70	32°41'49.112"N	103°57'43.953"W	0.00	
4400.00†	0.000	178.928	4400.00	0.00	0.00	0.00	655503.10	617490.70	32°41'49.112"N	103°57'43.953"W	0.00	



Planned Wellpath Report

Prelim_1
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REFERENCE WELLPATH IDENTIFICATION			
Operator	Cimarex Energy Co.	Slot	No. 2H SHL
Area	Eddy County, NM	Well	No. 2H
Field	(Benson) Sec 34, T18S, R30E	Wellbore	No. 2H PWB
Facility	Benson 34 Fed Com No. 2H		

WELLPATH DATA (137 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
4500.00†	0.000	178.928	4500.00	0.00	0.00	0.00	655503.10	617490.70	32°41'49.112"N	103°57'43.953"W	0.00	
4600.00†	0.000	178.928	4600.00	0.00	0.00	0.00	655503.10	617490.70	32°41'49.112"N	103°57'43.953"W	0.00	
4700.00†	0.000	178.928	4700.00	0.00	0.00	0.00	655503.10	617490.70	32°41'49.112"N	103°57'43.953"W	0.00	
4800.00†	0.000	178.928	4800.00	0.00	0.00	0.00	655503.10	617490.70	32°41'49.112"N	103°57'43.953"W	0.00	
4900.00†	0.000	178.928	4900.00	0.00	0.00	0.00	655503.10	617490.70	32°41'49.112"N	103°57'43.953"W	0.00	
5000.00†	0.000	178.928	5000.00	0.00	0.00	0.00	655503.10	617490.70	32°41'49.112"N	103°57'43.953"W	0.00	
5100.00†	0.000	178.928	5100.00	0.00	0.00	0.00	655503.10	617490.70	32°41'49.112"N	103°57'43.953"W	0.00	
5200.00†	0.000	178.928	5200.00	0.00	0.00	0.00	655503.10	617490.70	32°41'49.112"N	103°57'43.953"W	0.00	
5300.00†	0.000	178.928	5300.00	0.00	0.00	0.00	655503.10	617490.70	32°41'49.112"N	103°57'43.953"W	0.00	
5400.00†	0.000	178.928	5400.00	0.00	0.00	0.00	655503.10	617490.70	32°41'49.112"N	103°57'43.953"W	0.00	
5500.00†	0.000	178.928	5500.00	0.00	0.00	0.00	655503.10	617490.70	32°41'49.112"N	103°57'43.953"W	0.00	
5600.00†	0.000	178.928	5600.00	0.00	0.00	0.00	655503.10	617490.70	32°41'49.112"N	103°57'43.953"W	0.00	
5700.00†	0.000	178.928	5700.00	0.00	0.00	0.00	655503.10	617490.70	32°41'49.112"N	103°57'43.953"W	0.00	
5800.00†	0.000	178.928	5800.00	0.00	0.00	0.00	655503.10	617490.70	32°41'49.112"N	103°57'43.953"W	0.00	
5900.00†	0.000	178.928	5900.00	0.00	0.00	0.00	655503.10	617490.70	32°41'49.112"N	103°57'43.953"W	0.00	
6000.00†	0.000	178.928	6000.00	0.00	0.00	0.00	655503.10	617490.70	32°41'49.112"N	103°57'43.953"W	0.00	
6100.00†	0.000	178.928	6100.00	0.00	0.00	0.00	655503.10	617490.70	32°41'49.112"N	103°57'43.953"W	0.00	
6200.00†	0.000	178.928	6200.00	0.00	0.00	0.00	655503.10	617490.70	32°41'49.112"N	103°57'43.953"W	0.00	
6300.00†	0.000	178.928	6300.00	0.00	0.00	0.00	655503.10	617490.70	32°41'49.112"N	103°57'43.953"W	0.00	
6400.00†	0.000	178.928	6400.00	0.00	0.00	0.00	655503.10	617490.70	32°41'49.112"N	103°57'43.953"W	0.00	
6500.00†	0.000	178.928	6500.00	0.00	0.00	0.00	655503.10	617490.70	32°41'49.112"N	103°57'43.953"W	0.00	
6600.00†	0.000	178.928	6600.00	0.00	0.00	0.00	655503.10	617490.70	32°41'49.112"N	103°57'43.953"W	0.00	
6700.00†	0.000	178.928	6700.00	0.00	0.00	0.00	655503.10	617490.70	32°41'49.112"N	103°57'43.953"W	0.00	
6800.00†	0.000	178.928	6800.00	0.00	0.00	0.00	655503.10	617490.70	32°41'49.112"N	103°57'43.953"W	0.00	
6900.00†	0.000	178.928	6900.00	0.00	0.00	0.00	655503.10	617490.70	32°41'49.112"N	103°57'43.953"W	0.00	
7000.00†	0.000	178.928	7000.00	0.00	0.00	0.00	655503.10	617490.70	32°41'49.112"N	103°57'43.953"W	0.00	
7100.00†	0.000	178.928	7100.00	0.00	0.00	0.00	655503.10	617490.70	32°41'49.112"N	103°57'43.953"W	0.00	
7200.00†	0.000	178.928	7200.00	0.00	0.00	0.00	655503.10	617490.70	32°41'49.112"N	103°57'43.953"W	0.00	
7300.00†	0.000	178.928	7300.00	0.00	0.00	0.00	655503.10	617490.70	32°41'49.112"N	103°57'43.953"W	0.00	
7400.00†	0.000	178.928	7400.00	0.00	0.00	0.00	655503.10	617490.70	32°41'49.112"N	103°57'43.953"W	0.00	
7500.00†	0.000	178.928	7500.00	0.00	0.00	0.00	655503.10	617490.70	32°41'49.112"N	103°57'43.953"W	0.00	
7600.00†	0.000	178.928	7600.00	0.00	0.00	0.00	655503.10	617490.70	32°41'49.112"N	103°57'43.953"W	0.00	
7700.00†	0.000	178.928	7700.00	0.00	0.00	0.00	655503.10	617490.70	32°41'49.112"N	103°57'43.953"W	0.00	
7800.00†	0.000	178.928	7800.00	0.00	0.00	0.00	655503.10	617490.70	32°41'49.112"N	103°57'43.953"W	0.00	
7900.00†	0.000	178.928	7900.00	0.00	0.00	0.00	655503.10	617490.70	32°41'49.112"N	103°57'43.953"W	0.00	
8000.00†	0.000	178.928	8000.00	0.00	0.00	0.00	655503.10	617490.70	32°41'49.112"N	103°57'43.953"W	0.00	
8100.00†	0.000	178.928	8100.00	0.00	0.00	0.00	655503.10	617490.70	32°41'49.112"N	103°57'43.953"W	0.00	
8163.52	0.000	178.928	8163.52	0.00	0.00	0.00	655503.10	617490.70	32°41'49.112"N	103°57'43.953"W	0.00	Est KOP
8200.00†	7.296	178.928	8199.90	2.32	-2.32	0.04	655503.14	617488.38	32°41'49.089"N	103°57'43.953"W	20.00	
8300.00†	27.296	178.928	8294.90	31.90	-31.89	0.60	655503.70	617458.81	32°41'48.796"N	103°57'43.948"W	20.00	
8400.00†	47.296	178.928	8374.04	92.19	-92.17	1.73	655504.83	617398.54	32°41'48.200"N	103°57'43.937"W	20.00	
8500.00†	67.296	178.928	8427.80	175.91	-175.88	3.29	655506.39	617314.84	32°41'47.372"N	103°57'43.922"W	20.00	
8600.00†	87.296	178.928	8449.68	272.96	-272.92	5.11	655508.21	617217.81	32°41'46.411"N	103°57'43.905"W	20.00	
8613.52	90.000	178.928	8450.00	286.48	-286.43	5.36	655508.46	617204.29	32°41'46.278"N	103°57'43.902"W	20.00	EOC
8700.00†	90.000	178.928	8450.00	372.96	-372.89	6.98	655510.08	617117.84	32°41'45.422"N	103°57'43.887"W	0.00	



Planned Wellpath Report

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REFERENCE WELLPATH IDENTIFICATION

Operator	Cimarex Energy Co.	Slot	No. 2H SHL
Area	Eddy County, NM	Well	No. 2H
Field	(Benson) Sec 34, T18S, R30E	Wellbore	No. 2H PWB
Facility	Benson 34 Fed Com No. 2H		

WELLPATH DATA (137 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
8800.00†	90.000	178.928	8450.00	472.96	-472.88	8.85	655511.95	617017.86	32°41'44.433"N	103°57'43.869"W	0.00	
8900.00†	90.000	178.928	8450.00	572.96	-572.86	10.72	655513.82	616917.89	32°41'43.443"N	103°57'43.851"W	0.00	
9000.00†	90.000	178.928	8450.00	672.96	-672.84	12.60	655515.70	616817.91	32°41'42.454"N	103°57'43.834"W	0.00	
9100.00†	90.000	178.928	8450.00	772.96	-772.82	14.47	655517.57	616717.94	32°41'41.465"N	103°57'43.816"W	0.00	
9200.00†	90.000	178.928	8450.00	872.96	-872.81	16.34	655519.44	616617.96	32°41'40.475"N	103°57'43.798"W	0.00	
9300.00†	90.000	178.928	8450.00	972.96	-972.79	18.21	655521.31	616517.99	32°41'39.486"N	103°57'43.780"W	0.00	
9400.00†	90.000	178.928	8450.00	1072.96	-1072.77	20.08	655523.18	616418.01	32°41'38.497"N	103°57'43.762"W	0.00	
9500.00†	90.000	178.928	8450.00	1172.96	-1172.75	21.95	655525.05	616318.04	32°41'37.507"N	103°57'43.745"W	0.00	
9600.00†	90.000	178.928	8450.00	1272.96	-1272.74	23.83	655526.92	616218.06	32°41'36.518"N	103°57'43.727"W	0.00	
9700.00†	90.000	178.928	8450.00	1372.96	-1372.72	25.70	655528.80	616118.09	32°41'35.529"N	103°57'43.709"W	0.00	
9800.00†	90.000	178.928	8450.00	1472.96	-1472.70	27.57	655530.67	616018.11	32°41'34.539"N	103°57'43.691"W	0.00	
9900.00†	90.000	178.928	8450.00	1572.96	-1572.68	29.44	655532.54	615918.14	32°41'33.550"N	103°57'43.673"W	0.00	
10000.00†	90.000	178.928	8450.00	1672.96	-1672.67	31.31	655534.41	615818.17	32°41'32.561"N	103°57'43.656"W	0.00	
10100.00†	90.000	178.928	8450.00	1772.96	-1772.65	33.19	655536.28	615718.19	32°41'31.571"N	103°57'43.638"W	0.00	
10200.00†	90.000	178.928	8450.00	1872.96	-1872.63	35.06	655538.15	615618.22	32°41'30.582"N	103°57'43.620"W	0.00	
10300.00†	90.000	178.928	8450.00	1972.96	-1972.61	36.93	655540.03	615518.24	32°41'29.593"N	103°57'43.602"W	0.00	
10400.00†	90.000	178.928	8450.00	2072.96	-2072.60	38.80	655541.90	615418.27	32°41'28.604"N	103°57'43.584"W	0.00	
10500.00†	90.000	178.928	8450.00	2172.96	-2172.58	40.67	655543.77	615318.29	32°41'27.614"N	103°57'43.567"W	0.00	
10600.00†	90.000	178.928	8450.00	2272.96	-2272.56	42.54	655545.64	615218.32	32°41'26.625"N	103°57'43.549"W	0.00	
10700.00†	90.000	178.928	8450.00	2372.96	-2372.54	44.42	655547.51	615118.34	32°41'25.636"N	103°57'43.531"W	0.00	
10800.00†	90.000	178.928	8450.00	2472.96	-2472.53	46.29	655549.38	615018.37	32°41'24.646"N	103°57'43.513"W	0.00	
10900.00†	90.000	178.928	8450.00	2572.96	-2572.51	48.16	655551.26	614918.39	32°41'23.657"N	103°57'43.495"W	0.00	
11000.00†	90.000	178.928	8450.00	2672.96	-2672.49	50.03	655553.13	614818.42	32°41'22.668"N	103°57'43.477"W	0.00	
11100.00†	90.000	178.928	8450.00	2772.96	-2772.47	51.90	655555.00	614718.44	32°41'21.678"N	103°57'43.460"W	0.00	
11200.00†	90.000	178.928	8450.00	2872.96	-2872.45	53.77	655556.87	614618.47	32°41'20.689"N	103°57'43.442"W	0.00	
11300.00†	90.000	178.928	8450.00	2972.96	-2972.44	55.65	655558.74	614518.49	32°41'19.700"N	103°57'43.424"W	0.00	
11400.00†	90.000	178.928	8450.00	3072.96	-3072.42	57.52	655560.61	614418.52	32°41'18.710"N	103°57'43.406"W	0.00	
11500.00†	90.000	178.928	8450.00	3172.96	-3172.40	59.39	655562.49	614318.54	32°41'17.721"N	103°57'43.388"W	0.00	
11600.00†	90.000	178.928	8450.00	3272.96	-3272.38	61.26	655564.36	614218.57	32°41'16.732"N	103°57'43.371"W	0.00	
11700.00†	90.000	178.928	8450.00	3372.96	-3372.37	63.13	655566.23	614118.60	32°41'15.742"N	103°57'43.353"W	0.00	
11800.00†	90.000	178.928	8450.00	3472.96	-3472.35	65.01	655568.10	614018.62	32°41'14.753"N	103°57'43.335"W	0.00	
11900.00†	90.000	178.928	8450.00	3572.96	-3572.33	66.88	655569.97	613918.65	32°41'13.764"N	103°57'43.317"W	0.00	
12000.00†	90.000	178.928	8450.00	3672.96	-3672.31	68.75	655571.84	613818.67	32°41'12.774"N	103°57'43.299"W	0.00	
12100.00†	90.000	178.928	8450.00	3772.96	-3772.30	70.62	655573.72	613718.70	32°41'11.785"N	103°57'43.282"W	0.00	
12200.00†	90.000	178.928	8450.00	3872.96	-3872.28	72.49	655575.59	613618.72	32°41'10.796"N	103°57'43.264"W	0.00	
12300.00†	90.000	178.928	8450.00	3972.96	-3972.26	74.36	655577.46	613518.75	32°41'09.806"N	103°57'43.246"W	0.00	
12400.00†	90.000	178.928	8450.00	4072.96	-4072.24	76.24	655579.33	613418.77	32°41'08.817"N	103°57'43.228"W	0.00	
12500.00†	90.000	178.928	8450.00	4172.96	-4172.23	78.11	655581.20	613318.80	32°41'07.828"N	103°57'43.210"W	0.00	
12600.00†	90.000	178.928	8450.00	4272.96	-4272.21	79.98	655583.07	613218.82	32°41'06.838"N	103°57'43.193"W	0.00	
12700.00†	90.000	178.928	8450.00	4372.96	-4372.19	81.85	655584.94	613118.85	32°41'05.849"N	103°57'43.175"W	0.00	
12800.00†	90.000	178.928	8450.00	4472.96	-4472.17	83.72	655586.82	613018.87	32°41'04.860"N	103°57'43.157"W	0.00	
12900.00†	90.000	178.928	8450.00	4572.96	-4572.16	85.59	655588.69	612918.90	32°41'03.870"N	103°57'43.139"W	0.00	
13000.00†	90.000	178.928	8450.00	4672.96	-4672.14	87.47	655590.56	612818.92	32°41'02.881"N	103°57'43.121"W	0.00	
13100.00†	90.000	178.928	8450.00	4772.96	-4772.12	89.34	655592.43	612718.95	32°41'01.892"N	103°57'43.104"W	0.00	
13200.00†	90.000	178.928	8450.00	4872.96	-4872.10	91.21	655594.30	612618.98	32°41'00.902"N	103°57'43.086"W	0.00	



Planned Wellpath Report

Prelim_1

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INTEQ

REFERENCE WELLPATH IDENTIFICATION			
Operator	Cimarex Energy Co.	Slot	No. 2H SHL
Area	Eddy County, NM	Well	No. 2H
Field	(Benson) Sec 34, T18S, R30E	Wellbore	No. 2H PWB
Facility	Benson 34 Fed Com No. 2H		

WELLPATH DATA (137 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
13300.00†	90.000	178.928	8450.00	4972.96	-4972.09	93.08	655596.17	612519.00	32°40'59.913"N	103°57'43.068"W	0.00	
13397.55	90.000	178.928	8450.00 ¹	5070.50	-5069.62	94.91	655598.00	612421.48	32°40'58.948"N	103°57'43.051"W	0.00	No. 2H PBHL

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	13397.55	8450.00	-5069.62	94.91	655598.00	612421.48	32°40'58.948"N	103°57'43.051"W	point

SR & A

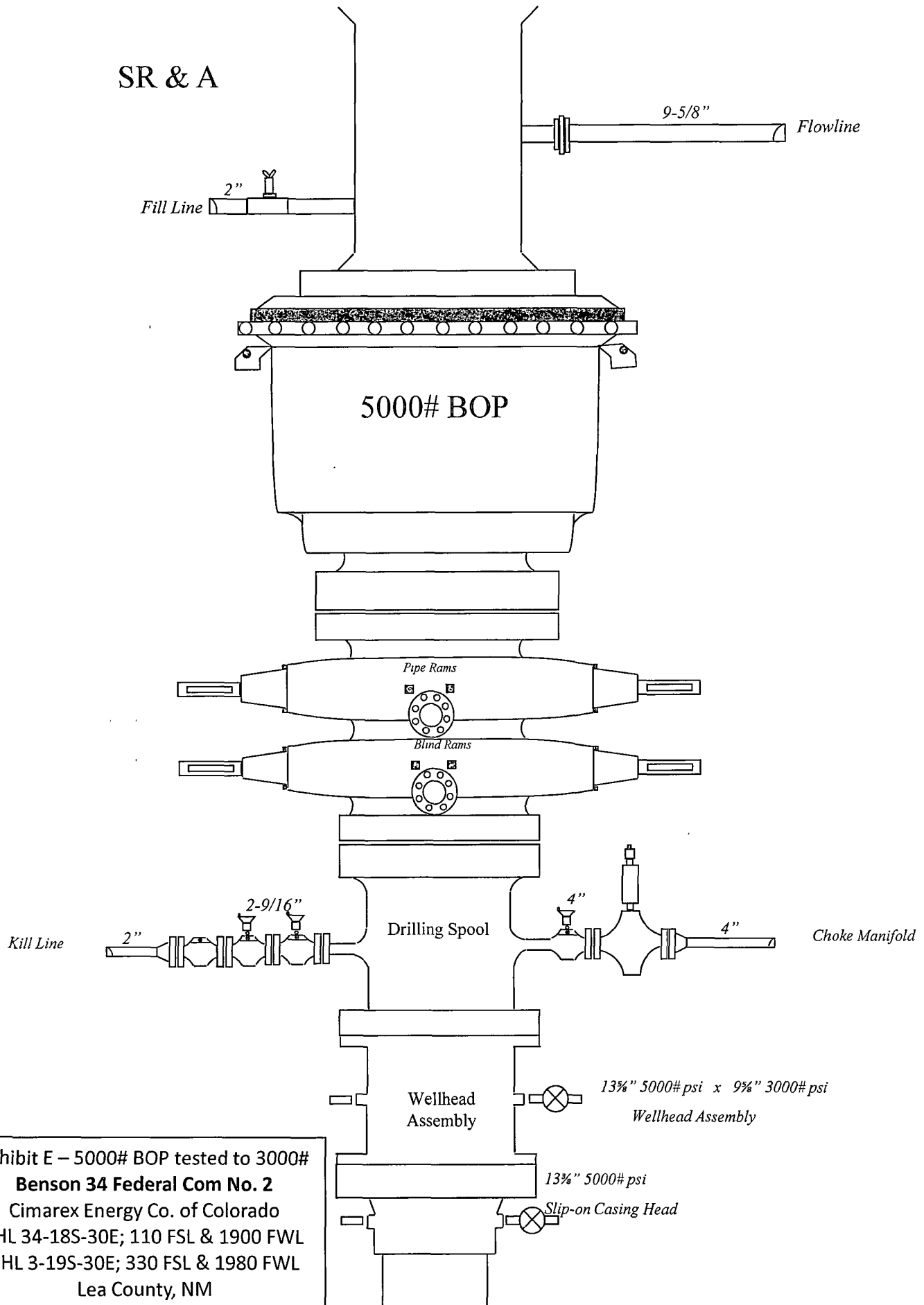
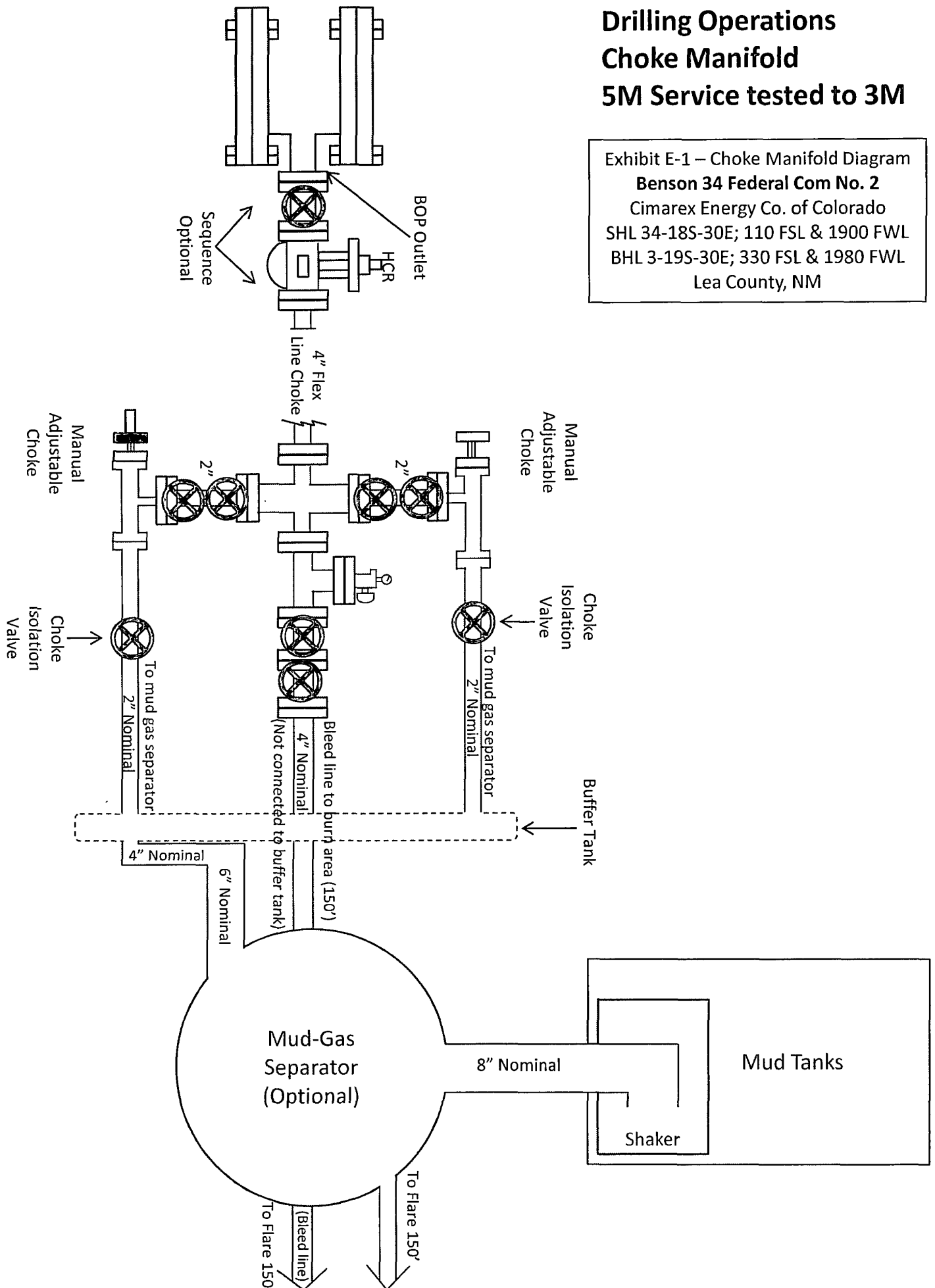
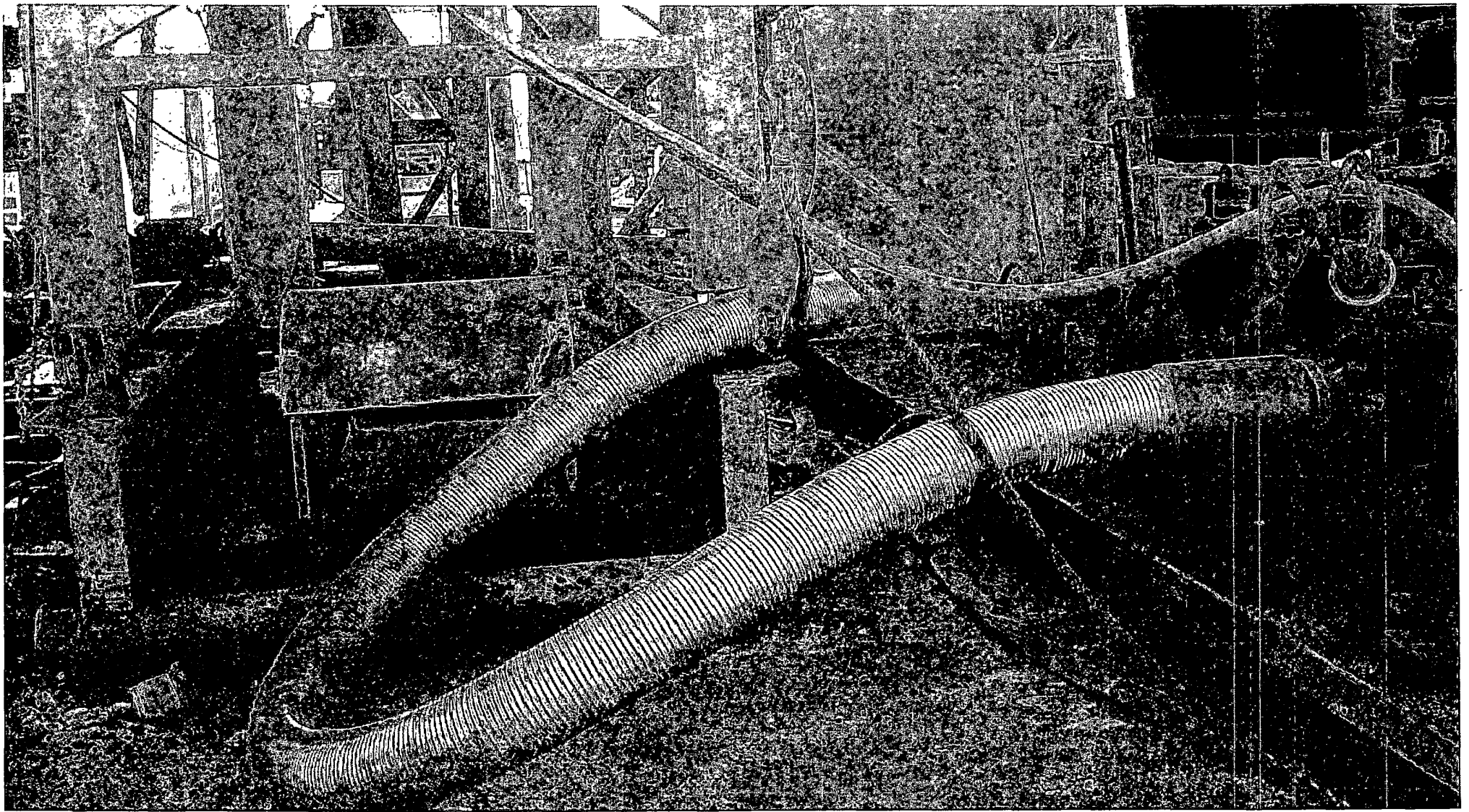


Exhibit E – 5000# BOP tested to 3000#
Benson 34 Federal Com No. 2
Cimarex Energy Co. of Colorado
SHL 34-18S-30E; 110 FSL & 1900 FWL
BHL 3-19S-30E; 330 FSL & 1980 FWL
Lea County, NM

Exhibit E-1 – Choke Manifold Diagram
Benson 34 Federal Com No. 2
 Cimarex Energy Co. of Colorado
 SHL 34-18S-30E; 110 FSL & 1900 FWL
 BHL 3-19S-30E; 330 FSL & 1980 FWL
 Lea County, NM





Cactus Rig 115
Serial # 63270

**MIDWEST
HOSE AND SPECIALTY INC.**

INTERNAL HYDROSTATIC TEST REPORT		
Customer: CACTUS DRILLING		P.O. Number: RIG#147
HOSE SPECIFICATIONS		
Type: CHOKE & KILL		Length: 35'
I.D. 4" INCHES		O.D. 8"
WORKING PRESSURE 10,000 PSI	TEST PRESSURE 15,000	BURST PRESSURE
COUPLINGS		
Stem Part No. E4.0X64WB		Ferrule No. FERRULE-128
Type of Coupling: 4-1/16 10K FLANGE(BX-155)		Die Size:
PROCEDURE		
<i>Hose assembly pressure tested with water at ambient temperature.</i>		
TIME HELD AT TEST PRESSURE 15 MIN.		ACTUAL BURST PRESSURE: 0 PSI
COMMENTS: SERIAL#63270		
Date: 7/14/2010	Tested By: BOBBY FINK	Approved: BRENT BURNETT



Midwest Hose
& Specialty, Inc.

Specification Sheet Choke & Kill Hose

The Midwest Hose & Specialty Choke & Kill hose is manufactured with only premium components. 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 vermiculite 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, unbolt 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)

Cactus 115

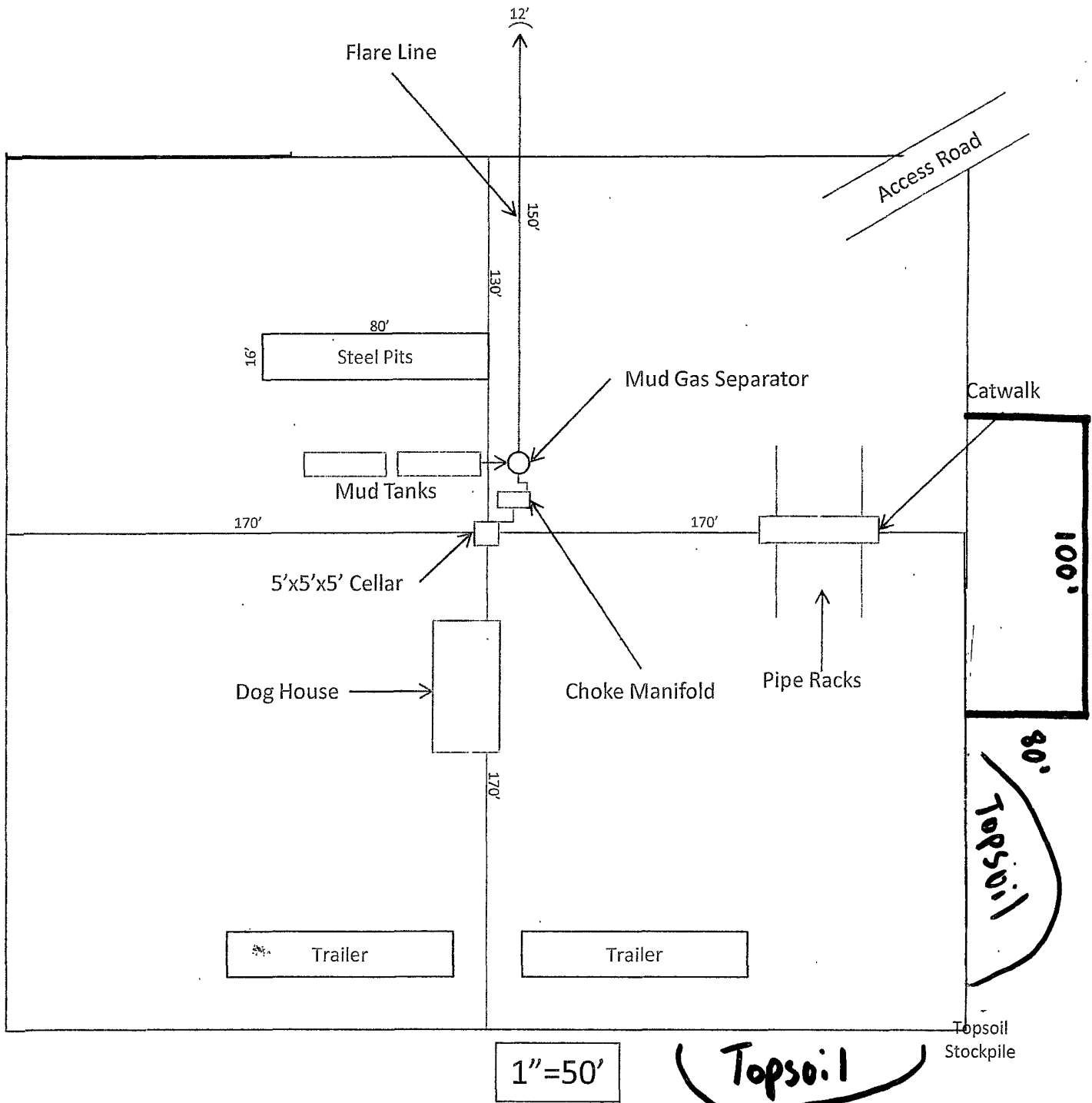


Exhibit D – Rig Diagram
Benson 34 Federal Com No. 2
 Cimarex Energy Co. of Colorado
 SHL 34-18S-30E; 110 FSL & 1900 FWL
 BHL 3-19S-30E; 330 FSL & 1980 FWL
 Lea County, NM

DISTRICT I --- CHECKLIST FOR INTENTS TO DRILL

38219

Operator Cimmarx OGRID # 162683
Well Name & # Benson 34 Federal Com #2 Surface Type (F) (S) (P)
Location: UL N, Sect 34, Township 18 s, RNG 30 Sub-surface Type (F) (S) (P)

- A. Date C101 rec'd 11/9/2011 C101 reviewed 11/14/2011
- B. 1. Check mark, Information is OK on Forms:
OGRID ✓, BONDING ✓, PROP CODE ✓, WELL # ✓, SIGNATURE ✓
2. Inactive Well list as of: 11/09/2011 # wells 1238, # Inactive wells 5
- a. District Grant APD but see number of inactive wells:
No letter required ✓; Sent Letter to Operator , to Santa Fe
3. Additional Bonding as of: 11/9/2011
- a. District Denial because operator needs addition bonding:
No Letter required ✓; Sent Letter to Operator , To Santa Fe
- b. District Denial because of Inactive well list and Financial Assurance:
No Letter required ✓; Sent Letter to Operator , To Santa Fe
- C. C102 YES ✓, NO , Signature ✓ Leo Bone Spring South
1. Pool ~~HACK: B.S.~~, Code 37920
- a. Dedicated acreage , What Units
- b. SUR. Location Standard ; Non-Standard Location
- c. Well shares acres: Yes , No ✓, # of wells plus this well #
2. 2nd. Operator in same acreage, Yes , No ✓
Agreement Letter , Disagreement letter
3. Intent to Directional Drill Yes ✓, No
- a. Dedicated acreage 160.3, What Units N-N
- b. Bottomhole Location Standard , Non-Standard Bottomhole ✓
4. Downhole Commingle: Yes , No ✓
- a. Pool #2 , Code , Acres
Pool #3 , Code , Acres
Pool #4 , Code , Acres
5. POTASH Area Yes , No ✓
- D. Blowout Preventer Yes ✓, No
- E. H2S Yes ✓, No
- F. C144 Pit Registration Yes ✓, No
- G. Does APD require Santa Fe Approval: ✓
1. Non-Standard Location: Yes ✓, No , NSL # PENDING
2. Non-Standard Proration: Yes , No , NSP #
3. Simultaneous Dedication: Yes , No , SD #
Number of wells Plus #
4. Injection order Yes , No ✓; PMX # or WFX #
5. SWD order Yes , NO ✓; SWD #
6. DHC from SF ; DHC-HOB ; Holding

7. OCD Approval Date 11/14/2011 API #30-0 15-39630

8. Reviewers TS