

SECRETARY'S POTASH

ATS-11-202

OCD Artesia

Form 3160-3
(April 2004)FORM APPROVED
OMB No. 1004-0137
Expires March 31, 2007UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

1a Type of Work ☒ DRILL ☐ REENTER		5 Lease Serial No. NM-124659
1b Type of Well: ☒ Oil Well ☐ Gas Well ☐ Other ☒ Single Zone ☐ Multiple Zone		6. If Indian, Allottee or Tribe Name
2. Name of Operator Cimarex Energy Co. of Colorado		7. If Unit or CA Agreement, Name and No.
3a. Address 600 N. Marienfeld St., Ste. 600; Midland, TX 79701	3b Phone No. (include area code) 432-571-7800	8. Lease Name and Well No. Burton 6 Federal No. 3 H
4 Location of Well (Report location clearly and in accordance with any State requirements. *) At Surface 330 FNL & 1980 FEL At proposed prod. Zone 330 FSL & 1980 FEL Horizontal Bone Spring test		9. API Well No. 30-015- 39331
14. Distance in miles and direction from nearest town or post office*		10. Field and Pool, or Exploratory Parkway; Bone Spring
15 Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig unit line if any) 330'		11. Sec., T R. M or Blk. and Survey or Area 6-20S-30E
16. No of acres in lease 558.28		12 County or Parish Eddy
17. Spacing Unit dedicated to this well W2E2 160.14		13. State NM
18 Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. 990'		20. BLM/BIA Bond No on File NM-2575
19. Proposed Depth Pilot Hole 8550 MD 12768 TVD 8275		21. Elevations (Show whether DF, KDB, RT, GL, etc) 3255' GR
22. Approximate date work will start* 03.15.11		23. Estimated duration 25-30 days

24. Attachments

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

- | | |
|---|--|
| 1. Well plat certified by a registered surveyor | 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 01.10.11
-------------------------------------	-------------------------------------	------------------

Title Manager Operations Administration		
Approved By (Signature) <i>/s/ Robert A Casicio</i>	Name (Printed/Typed) NM STATE OFFICE	Date AUG 4 2011
Title acting STATE DIRECTOR	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)

Capitan Controlled Water Basin

SEE ATTACHED FOR
CONDITIONS OF APPROVALApproval Subject to General Requirements
& Special StipulationsRECEIVED
AUG 15 2011
NMOCD ARTESIA

Application to Drill
Burton 6 Federal No. 3
 Cimarex Energy Co. of Colorado
 Unit B, Section 6
 T20S-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 330 FNL & 1980 FEL
BHL 330 FSL & 1980 FEL
- 2 Elevation above sea level: 3255' 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 12768 TVD 8275 Pilot Hole 8550
- 6 Estimated tops of geological markers:

Rustler	342'	Delaware Sands	3500'
T. Salt	375'	Bone Spring	6120'
B. Salt	1250'	SBSS	8175'
Capitan	1647'		
Yates	2387'		
- 7 Possible mineral bearing formation:
Bone Spring Oil

8 Proposed Mud Circulating System:

Depth	Mud Wt	Visc	Fluid Loss	Type Mud
0' to 350' 250'	8.4 - 8.6	28	NC	FW
350' to 1600' 1400'	10.0	30-32	NC	Brine water
1600' to 3500' 3400'	8.4 - 8.8	28	NC	FW
3500' to 12768'	8.4	28-32	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, surface 2, and intermediate, drill to pilot hole depth of 8550 and log. Set 280 sx Halcem-H + 0.5% CFR-3 + 0.1% HR-601 (wt 16.5, yld 1.06, excess 50%) cement plug from 7900-8550. Drill through cement and kick off 8¾" lateral @ 7960 and drill to TD 12768 MD, 8275 TVD. Run 5½" casing from 0-12768 and cement as shown on page 2.

Application to Drill
Burton 6 Federal No. 3
 Cimarex Energy Co. of Colorado
 Unit B, Section 6
 T20S-R30E, Eddy County, NM

9 Casing & Cementing Program:

See
COA

String	Hole Size	Depth	Casing OD	Weight	Collar	Grade
Surface 1	26"	0 to 250 350	New 20"	94#	BTC	J/K-55
Surface 2	17½"	0 to 1400 1600	New 13¾"	48#	STC	H-40
Intermediate	12¼"	0 to 3400 3500	New 9¾"	40#	LTC	J/K-55
Production	8¾"	0 to 12768	New 5½"	17#	LTC	P-110

10 Cementing: See COA

Surface 1 265 sx Halcem-C + 2% CaCl (wt 14.8, yld 1.35, excess 100%)
TOC Surface Centralizers per Onshorder 2.III.B.1.f

Surface 2 Lead: 600 sx Extendacem-CZ (wt 13.5, yld 1.75, excess 100%)
 Tail: 225 sx Halcem-C + 2% CaCl (wt 14.8, yld 1.35, excess 100%)
TOC Surface

Intermediate Lead: 635 sx Econocem-HLC + 5 % Salt + 5# Gilsonite (wt 12.9, yld 1.85, excess 150%)
 Tail: 215 sx Halcem-C + 1% CaCl (wt 14.8, yld 1.34, excess 150%)
TOC Surface

Lateral Lead: 770 sx Econocem-H + 0.2% HR-601 (wt 11.9, yld 2.44, excess 40%)
 Tail: 1000 sx Versacem-H + 0.5% Halad-344 + 0.4% CFR-3 + 1# Salt + 0.1% HR-601 (wt 14.5, yld 1.22, excess 40%)
TOC 3300 Centralizers every 3rd joint if hole conditions warrant.

Office of State Engineer indicates average depth to groundwater is 57'. Fresh water zones will be protected by setting 20" casing at ~~350~~ and cementing to surface. Capitan Reef will be protected by setting 13¾" casing at ~~1600~~ and cementing to surface and 9¾" casing at ~~3500~~ and cementing to surface. Hydrocarbon zones will be protected by setting 5½" casing at 12768 MD and cementing to ~~3300~~.

<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 13¾" 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.

See
COA

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 20" surface pipe the well will be equipped with a 2M diverter system. (See Exhibit E-1). From the base of the 13 3/8" casing through the running of production casing, the well will be equipped with a 5000 psi BOP svstem 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.

Application to Drill
Burton 6 Federal No. 3
Cimarex Energy Co. of Colorado
Unit B, Section 6
T20S-R30E, Eddy County, NM

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

- A. Mud logging program: 2 man unit from 3500' 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: (Burton) Sec 6, T20S, R30E
Facility: Burton 6 Fed No 3H

Slot: No.3H SHL
Well: No 3H
Wellbore: No 3H 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	179.821	0.00	0.00	0.00	0.00	0.00
Est KOP	7960.00	0.000	179.821	7960.00	0.00	0.00	0.00	0.00
End of Curve	8455.06	90.002	179.821	8275.16	-315.17	0.98	18.18	315.17
No 3H PBHL	12768.12	90.002	179.821	8275.00	-4628.21	14.45	0.00	4628.23

Plot reference wellpath is Prelim_1

True vertical depths are referenced to Rig on No 3H SHL (RT)

Measured depths are referenced to Rig on No 3H SHL (RT)

Rig on No 3H SHL (RT) to Mean Sea Level 3255 feet

Mean Sea Level to Mud line (Facility Burton 6 Fed No 3H) -3255 feet

Coordinates are in feet referenced to Slot

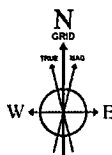
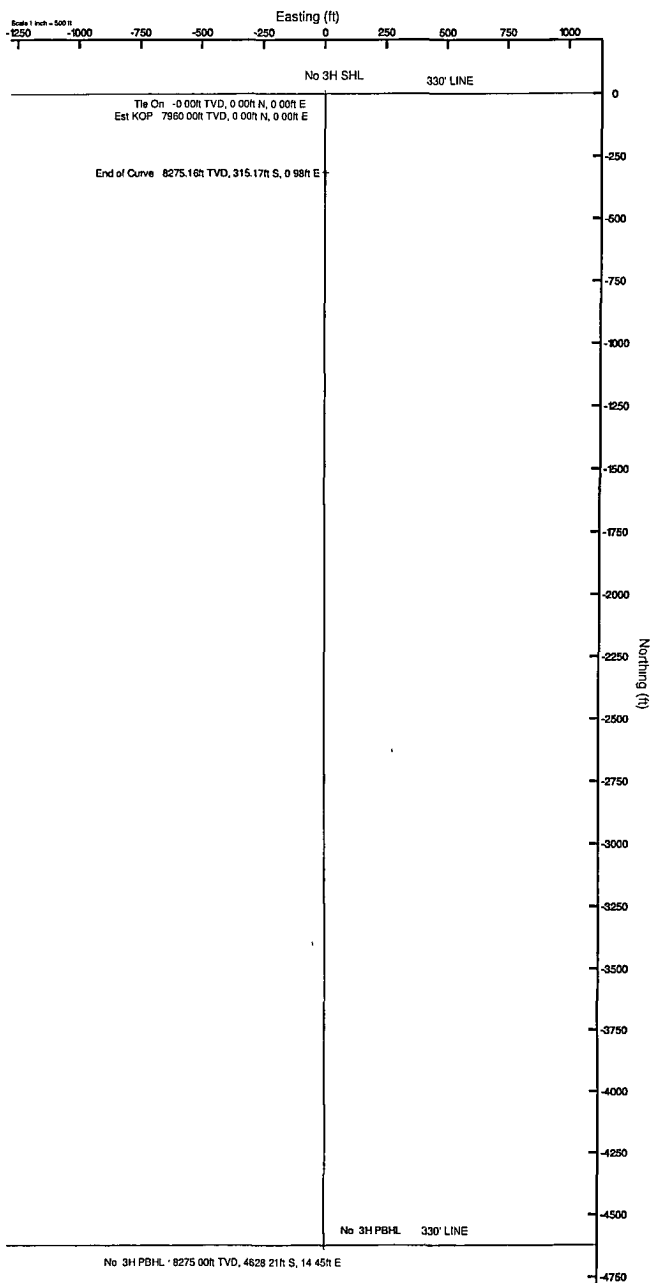
Grid System: NAD83 / TM New Mexico State Planes, Eastern Zone (3001), US feet

North Reference: Grid north

Scale: True distance

Depths are in feet

Created by: gomeoscr on 1/7/2011



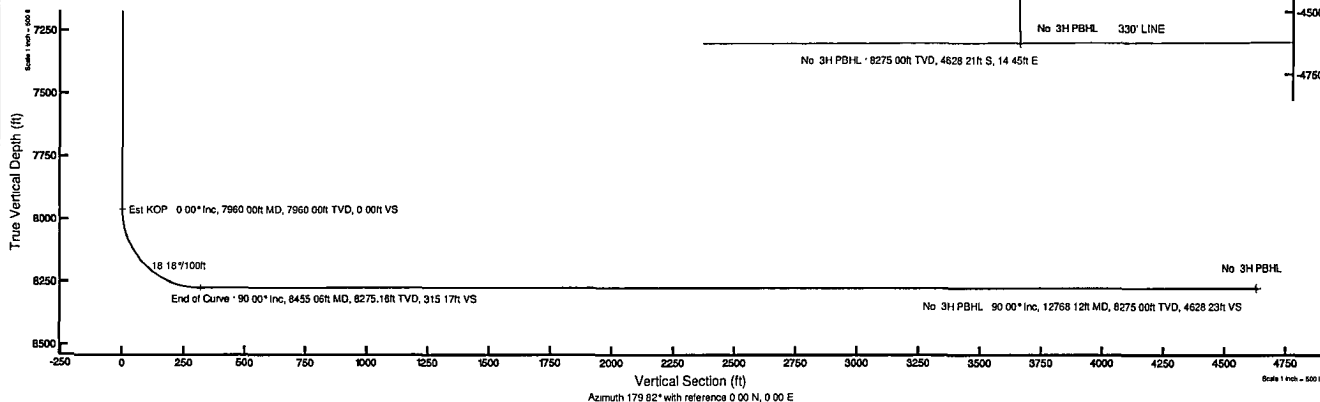
BGGM (1945 0 to 2012 0) Dip: 60.48° Field: 48877.9 nT
Magnetic North is 7.93 degrees East of True North (at 1/7/2011)

Grid North is 0.17 degrees East of True North

To correct azimuth from True to Grid subtract 0.17 degrees

To correct azimuth from Magnetic to Grid add 7.75 degrees

For example: if the Magnetic North Azimuth = 90 degs, then the Grid North Azimuth = 90 + 7.75 = 97.75





Planned Wellpath Report

Prelim_1

Page 1 of 5



INTEQ

REFERENCE WELLPATH IDENTIFICATION

Operator	Cimarex Energy Co.	Slot	No.3H SHL
Area	Eddy County, NM	Well	No.3H
Field	(Burton) Sec 6, T20S, R30E	Wellbore	No.3H PWB
Facility	Burton 6 Fed No.3H		

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	Gomeoscr
Scale	0.999921	Report Generated	1/7/2011 at 2:40:15 PM
Convergence at slot	0.17° East	Database/Source file	WA Midland/No.3H_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	641149.60	585354.40	32°36'31.581"N	104°00'33.074"W
Facility Reference Pt			641149.60	585354.40	32°36'31.581"N	104°00'33.074"W
Field Reference Pt			639370.01	585205.16	32°36'30.158"N	104°00'53.884"W

WELLPATH DATUM

Calculation method	Minimum curvature	Rig on No.3H SHL (RT) to Facility Vertical Datum	0.00ft
Horizontal Reference Pt	Slot	Rig on No.3H SHL (RT) to Mean Sea Level	3255.00ft
Vertical Reference Pt	Rig on No.3H SHL (RT)	Facility Vertical Datum to Mud Line (Facility)	0.00ft
MD Reference Pt	Rig on No.3H SHL (RT)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	179.82°



Planned Wellpath Report

Prelim_1
Page 2 of 5



REFERENCE WELLPATH IDENTIFICATION

Operator	Cimarex Energy Co.	Slot	No.3H SHL
Area	Eddy County, NM	Well	No.3H
Field	(Burton) Sec 6, T20S, R30E	Wellbore	No.3H PWB
Facility	Burton 6 Fed No.3H		

WELLPATH DATA (133 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	179.821	0.00	0.00	0.00	0.00	641149.60	585354.40	32°36'31.581"N	104°00'33.074"W	0.00	Tie On
100.00†	0.000	179.821	100.00	0.00	0.00	0.00	641149.60	585354.40	32°36'31.581"N	104°00'33.074"W	0.00	
200.00†	0.000	179.821	200.00	0.00	0.00	0.00	641149.60	585354.40	32°36'31.581"N	104°00'33.074"W	0.00	
300.00†	0.000	179.821	300.00	0.00	0.00	0.00	641149.60	585354.40	32°36'31.581"N	104°00'33.074"W	0.00	
400.00†	0.000	179.821	400.00	0.00	0.00	0.00	641149.60	585354.40	32°36'31.581"N	104°00'33.074"W	0.00	
500.00†	0.000	179.821	500.00	0.00	0.00	0.00	641149.60	585354.40	32°36'31.581"N	104°00'33.074"W	0.00	
600.00†	0.000	179.821	600.00	0.00	0.00	0.00	641149.60	585354.40	32°36'31.581"N	104°00'33.074"W	0.00	
700.00†	0.000	179.821	700.00	0.00	0.00	0.00	641149.60	585354.40	32°36'31.581"N	104°00'33.074"W	0.00	
800.00†	0.000	179.821	800.00	0.00	0.00	0.00	641149.60	585354.40	32°36'31.581"N	104°00'33.074"W	0.00	
900.00†	0.000	179.821	900.00	0.00	0.00	0.00	641149.60	585354.40	32°36'31.581"N	104°00'33.074"W	0.00	
1000.00†	0.000	179.821	1000.00	0.00	0.00	0.00	641149.60	585354.40	32°36'31.581"N	104°00'33.074"W	0.00	
1100.00†	0.000	179.821	1100.00	0.00	0.00	0.00	641149.60	585354.40	32°36'31.581"N	104°00'33.074"W	0.00	
1200.00†	0.000	179.821	1200.00	0.00	0.00	0.00	641149.60	585354.40	32°36'31.581"N	104°00'33.074"W	0.00	
1300.00†	0.000	179.821	1300.00	0.00	0.00	0.00	641149.60	585354.40	32°36'31.581"N	104°00'33.074"W	0.00	
1400.00†	0.000	179.821	1400.00	0.00	0.00	0.00	641149.60	585354.40	32°36'31.581"N	104°00'33.074"W	0.00	
1500.00†	0.000	179.821	1500.00	0.00	0.00	0.00	641149.60	585354.40	32°36'31.581"N	104°00'33.074"W	0.00	
1600.00†	0.000	179.821	1600.00	0.00	0.00	0.00	641149.60	585354.40	32°36'31.581"N	104°00'33.074"W	0.00	
1700.00†	0.000	179.821	1700.00	0.00	0.00	0.00	641149.60	585354.40	32°36'31.581"N	104°00'33.074"W	0.00	
1800.00†	0.000	179.821	1800.00	0.00	0.00	0.00	641149.60	585354.40	32°36'31.581"N	104°00'33.074"W	0.00	
1900.00†	0.000	179.821	1900.00	0.00	0.00	0.00	641149.60	585354.40	32°36'31.581"N	104°00'33.074"W	0.00	
2000.00†	0.000	179.821	2000.00	0.00	0.00	0.00	641149.60	585354.40	32°36'31.581"N	104°00'33.074"W	0.00	
2100.00†	0.000	179.821	2100.00	0.00	0.00	0.00	641149.60	585354.40	32°36'31.581"N	104°00'33.074"W	0.00	
2200.00†	0.000	179.821	2200.00	0.00	0.00	0.00	641149.60	585354.40	32°36'31.581"N	104°00'33.074"W	0.00	
2300.00†	0.000	179.821	2300.00	0.00	0.00	0.00	641149.60	585354.40	32°36'31.581"N	104°00'33.074"W	0.00	
2400.00†	0.000	179.821	2400.00	0.00	0.00	0.00	641149.60	585354.40	32°36'31.581"N	104°00'33.074"W	0.00	
2500.00†	0.000	179.821	2500.00	0.00	0.00	0.00	641149.60	585354.40	32°36'31.581"N	104°00'33.074"W	0.00	
2600.00†	0.000	179.821	2600.00	0.00	0.00	0.00	641149.60	585354.40	32°36'31.581"N	104°00'33.074"W	0.00	
2700.00†	0.000	179.821	2700.00	0.00	0.00	0.00	641149.60	585354.40	32°36'31.581"N	104°00'33.074"W	0.00	
2800.00†	0.000	179.821	2800.00	0.00	0.00	0.00	641149.60	585354.40	32°36'31.581"N	104°00'33.074"W	0.00	
2900.00†	0.000	179.821	2900.00	0.00	0.00	0.00	641149.60	585354.40	32°36'31.581"N	104°00'33.074"W	0.00	
3000.00†	0.000	179.821	3000.00	0.00	0.00	0.00	641149.60	585354.40	32°36'31.581"N	104°00'33.074"W	0.00	
3100.00†	0.000	179.821	3100.00	0.00	0.00	0.00	641149.60	585354.40	32°36'31.581"N	104°00'33.074"W	0.00	
3200.00†	0.000	179.821	3200.00	0.00	0.00	0.00	641149.60	585354.40	32°36'31.581"N	104°00'33.074"W	0.00	
3300.00†	0.000	179.821	3300.00	0.00	0.00	0.00	641149.60	585354.40	32°36'31.581"N	104°00'33.074"W	0.00	
3400.00†	0.000	179.821	3400.00	0.00	0.00	0.00	641149.60	585354.40	32°36'31.581"N	104°00'33.074"W	0.00	
3500.00†	0.000	179.821	3500.00	0.00	0.00	0.00	641149.60	585354.40	32°36'31.581"N	104°00'33.074"W	0.00	Delaware
3600.00†	0.000	179.821	3600.00	0.00	0.00	0.00	641149.60	585354.40	32°36'31.581"N	104°00'33.074"W	0.00	
3700.00†	0.000	179.821	3700.00	0.00	0.00	0.00	641149.60	585354.40	32°36'31.581"N	104°00'33.074"W	0.00	
3800.00†	0.000	179.821	3800.00	0.00	0.00	0.00	641149.60	585354.40	32°36'31.581"N	104°00'33.074"W	0.00	
3900.00†	0.000	179.821	3900.00	0.00	0.00	0.00	641149.60	585354.40	32°36'31.581"N	104°00'33.074"W	0.00	
4000.00†	0.000	179.821	4000.00	0.00	0.00	0.00	641149.60	585354.40	32°36'31.581"N	104°00'33.074"W	0.00	
4100.00†	0.000	179.821	4100.00	0.00	0.00	0.00	641149.60	585354.40	32°36'31.581"N	104°00'33.074"W	0.00	
4200.00†	0.000	179.821	4200.00	0.00	0.00	0.00	641149.60	585354.40	32°36'31.581"N	104°00'33.074"W	0.00	
4300.00†	0.000	179.821	4300.00	0.00	0.00	0.00	641149.60	585354.40	32°36'31.581"N	104°00'33.074"W	0.00	
4400.00†	0.000	179.821	4400.00	0.00	0.00	0.00	641149.60	585354.40	32°36'31.581"N	104°00'33.074"W	0.00	



Planned Wellpath Report

Prelim_1
Page 3 of 5



INTEQ

REFERENCE WELLPATH IDENTIFICATION			
Operator	Cimarex Energy Co.	Slot	No.3H SHL
Area	Eddy County, NM	Well	No.3H
Field	(Burton) Sec 6, T20S, R30E	Wellbore	No.3H PWB
Facility	Burton 6 Fed No.3H		

WELLPATH DATA (133 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	179.821	4500.00	0.00	0.00	0.00	641149.60	585354.40	32°36'31.581"N	104°00'33.074"W	0.00	
4600.00†	0.000	179.821	4600.00	0.00	0.00	0.00	641149.60	585354.40	32°36'31.581"N	104°00'33.074"W	0.00	
4700.00†	0.000	179.821	4700.00	0.00	0.00	0.00	641149.60	585354.40	32°36'31.581"N	104°00'33.074"W	0.00	
4800.00†	0.000	179.821	4800.00	0.00	0.00	0.00	641149.60	585354.40	32°36'31.581"N	104°00'33.074"W	0.00	
4900.00†	0.000	179.821	4900.00	0.00	0.00	0.00	641149.60	585354.40	32°36'31.581"N	104°00'33.074"W	0.00	
5000.00†	0.000	179.821	5000.00	0.00	0.00	0.00	641149.60	585354.40	32°36'31.581"N	104°00'33.074"W	0.00	
5100.00†	0.000	179.821	5100.00	0.00	0.00	0.00	641149.60	585354.40	32°36'31.581"N	104°00'33.074"W	0.00	
5200.00†	0.000	179.821	5200.00	0.00	0.00	0.00	641149.60	585354.40	32°36'31.581"N	104°00'33.074"W	0.00	
5300.00†	0.000	179.821	5300.00	0.00	0.00	0.00	641149.60	585354.40	32°36'31.581"N	104°00'33.074"W	0.00	
5400.00†	0.000	179.821	5400.00	0.00	0.00	0.00	641149.60	585354.40	32°36'31.581"N	104°00'33.074"W	0.00	
5500.00†	0.000	179.821	5500.00	0.00	0.00	0.00	641149.60	585354.40	32°36'31.581"N	104°00'33.074"W	0.00	
5600.00†	0.000	179.821	5600.00	0.00	0.00	0.00	641149.60	585354.40	32°36'31.581"N	104°00'33.074"W	0.00	
5700.00†	0.000	179.821	5700.00	0.00	0.00	0.00	641149.60	585354.40	32°36'31.581"N	104°00'33.074"W	0.00	
5800.00†	0.000	179.821	5800.00	0.00	0.00	0.00	641149.60	585354.40	32°36'31.581"N	104°00'33.074"W	0.00	
5900.00†	0.000	179.821	5900.00	0.00	0.00	0.00	641149.60	585354.40	32°36'31.581"N	104°00'33.074"W	0.00	
6000.00†	0.000	179.821	6000.00	0.00	0.00	0.00	641149.60	585354.40	32°36'31.581"N	104°00'33.074"W	0.00	
6100.00†	0.000	179.821	6100.00	0.00	0.00	0.00	641149.60	585354.40	32°36'31.581"N	104°00'33.074"W	0.00	
6120.00†	0.000	179.821	6120.00	0.00	0.00	0.00	641149.60	585354.40	32°36'31.581"N	104°00'33.074"W	0.00	Bone Spring
6200.00†	0.000	179.821	6200.00	0.00	0.00	0.00	641149.60	585354.40	32°36'31.581"N	104°00'33.074"W	0.00	
6300.00†	0.000	179.821	6300.00	0.00	0.00	0.00	641149.60	585354.40	32°36'31.581"N	104°00'33.074"W	0.00	
6400.00†	0.000	179.821	6400.00	0.00	0.00	0.00	641149.60	585354.40	32°36'31.581"N	104°00'33.074"W	0.00	
6500.00†	0.000	179.821	6500.00	0.00	0.00	0.00	641149.60	585354.40	32°36'31.581"N	104°00'33.074"W	0.00	
6600.00†	0.000	179.821	6600.00	0.00	0.00	0.00	641149.60	585354.40	32°36'31.581"N	104°00'33.074"W	0.00	
6700.00†	0.000	179.821	6700.00	0.00	0.00	0.00	641149.60	585354.40	32°36'31.581"N	104°00'33.074"W	0.00	
6800.00†	0.000	179.821	6800.00	0.00	0.00	0.00	641149.60	585354.40	32°36'31.581"N	104°00'33.074"W	0.00	
6900.00†	0.000	179.821	6900.00	0.00	0.00	0.00	641149.60	585354.40	32°36'31.581"N	104°00'33.074"W	0.00	
7000.00†	0.000	179.821	7000.00	0.00	0.00	0.00	641149.60	585354.40	32°36'31.581"N	104°00'33.074"W	0.00	
7100.00†	0.000	179.821	7100.00	0.00	0.00	0.00	641149.60	585354.40	32°36'31.581"N	104°00'33.074"W	0.00	
7200.00†	0.000	179.821	7200.00	0.00	0.00	0.00	641149.60	585354.40	32°36'31.581"N	104°00'33.074"W	0.00	
7300.00†	0.000	179.821	7300.00	0.00	0.00	0.00	641149.60	585354.40	32°36'31.581"N	104°00'33.074"W	0.00	
7400.00†	0.000	179.821	7400.00	0.00	0.00	0.00	641149.60	585354.40	32°36'31.581"N	104°00'33.074"W	0.00	
7460.00†	0.000	179.821	7460.00	0.00	0.00	0.00	641149.60	585354.40	32°36'31.581"N	104°00'33.074"W	0.00	1st Bone Spring
7500.00†	0.000	179.821	7500.00	0.00	0.00	0.00	641149.60	585354.40	32°36'31.581"N	104°00'33.074"W	0.00	
7600.00†	0.000	179.821	7600.00	0.00	0.00	0.00	641149.60	585354.40	32°36'31.581"N	104°00'33.074"W	0.00	
7700.00†	0.000	179.821	7700.00	0.00	0.00	0.00	641149.60	585354.40	32°36'31.581"N	104°00'33.074"W	0.00	
7800.00†	0.000	179.821	7800.00	0.00	0.00	0.00	641149.60	585354.40	32°36'31.581"N	104°00'33.074"W	0.00	
7900.00†	0.000	179.821	7900.00	0.00	0.00	0.00	641149.60	585354.40	32°36'31.581"N	104°00'33.074"W	0.00	
7960.00	0.000	179.821	7960.00	0.00	0.00	0.00	641149.60	585354.40	32°36'31.581"N	104°00'33.074"W	0.00	Est KOP
8000.00†	7.272	179.821	7999.89	2.54	-2.53	0.01	641149.61	585351.87	32°36'31.556"N	104°00'33.074"W	18.18	
8100.00†	25.452	179.821	8095.44	30.59	-30.59	0.10	641149.70	585323.82	32°36'31.279"N	104°00'33.074"W	18.18	
8200.00†	43.632	179.821	8177.47	87.05	-87.05	0.27	641149.87	585267.36	32°36'30.720"N	104°00'33.074"W	18.18	
8300.00†	61.812	179.821	8237.78	166.29	-166.29	0.52	641150.12	585188.13	32°36'29.936"N	104°00'33.074"W	18.18	
8400.00†	79.992	179.821	8270.36	260.39	-260.39	0.81	641150.41	585094.03	32°36'29.005"N	104°00'33.074"W	18.18	
8455.06	90.002	179.821	8275.16	315.17	-315.17	0.98	641150.58	585039.26	32°36'28.463"N	104°00'33.073"W	18.18	End of Curve
8500.00†	90.002	179.821	8275.16	360.11	-360.11	1.12	641150.72	584994.32	32°36'28.018"N	104°00'33.073"W	0.00	



Planned Wellpath Report

Prelim_1
Page 4 of 5



INTEQ

REFERENCE WELLPATH IDENTIFICATION

Operator	Cimarex Energy Co.	Slot	No.3H SHL
Area	Eddy County, NM	Well	No.3H
Field	(Burton) Sec 6, T20S, R30E	Wellbore	No.3H PWB
Facility	Burton 6 Fed No.3H		

WELLPATH DATA (133 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
8600.00†	90.002	179.821	8275.15	460.11	-460.11	1.44	641151.04	584894.33	32°36'27.029"N	104°00'33.073"W	0.00	
8700.00†	90.002	179.821	8275.15	560.11	-560.11	1.75	641151.35	584794.34	32°36'26.039"N	104°00'33.073"W	0.00	
8800.00†	90.002	179.821	8275.15	660.11	-660.11	2.06	641151.66	584694.35	32°36'25.050"N	104°00'33.073"W	0.00	
8900.00†	90.002	179.821	8275.14	760.11	-760.11	2.37	641151.97	584594.36	32°36'24.061"N	104°00'33.073"W	0.00	
9000.00†	90.002	179.821	8275.14	860.11	-860.10	2.69	641152.29	584494.37	32°36'23.071"N	104°00'33.073"W	0.00	
9100.00†	90.002	179.821	8275.13	960.11	-960.10	3.00	641152.60	584394.37	32°36'22.082"N	104°00'33.073"W	0.00	
9200.00†	90.002	179.821	8275.13	1060.11	-1060.10	3.31	641152.91	584294.38	32°36'21.092"N	104°00'33.073"W	0.00	
9300.00†	90.002	179.821	8275.13	1160.11	-1160.10	3.62	641153.22	584194.39	32°36'20.103"N	104°00'33.073"W	0.00	
9400.00†	90.002	179.821	8275.12	1260.11	-1260.10	3.93	641153.53	584094.40	32°36'19.113"N	104°00'33.073"W	0.00	
9500.00†	90.002	179.821	8275.12	1360.11	-1360.10	4.25	641153.85	583994.41	32°36'18.124"N	104°00'33.073"W	0.00	
9600.00†	90.002	179.821	8275.12	1460.11	-1460.10	4.56	641154.16	583894.42	32°36'17.134"N	104°00'33.072"W	0.00	
9700.00†	90.002	179.821	8275.11	1560.11	-1560.10	4.87	641154.47	583794.43	32°36'16.145"N	104°00'33.072"W	0.00	
9800.00†	90.002	179.821	8275.11	1660.11	-1660.10	5.18	641154.78	583694.43	32°36'15.155"N	104°00'33.072"W	0.00	
9900.00†	90.002	179.821	8275.11	1760.11	-1760.10	5.50	641155.10	583594.44	32°36'14.166"N	104°00'33.072"W	0.00	
10000.00†	90.002	179.821	8275.10	1860.11	-1860.10	5.81	641155.41	583494.45	32°36'13.177"N	104°00'33.072"W	0.00	
10100.00†	90.002	179.821	8275.10	1960.11	-1960.10	6.12	641155.72	583394.46	32°36'12.187"N	104°00'33.072"W	0.00	
10200.00†	90.002	179.821	8275.09	2060.11	-2060.10	6.43	641156.03	583294.47	32°36'11.198"N	104°00'33.072"W	0.00	
10300.00†	90.002	179.821	8275.09	2160.11	-2160.10	6.74	641156.34	583194.48	32°36'10.208"N	104°00'33.072"W	0.00	
10400.00†	90.002	179.821	8275.09	2260.11	-2260.10	7.06	641156.66	583094.49	32°36'09.219"N	104°00'33.072"W	0.00	
10500.00†	90.002	179.821	8275.08	2360.11	-2360.10	7.37	641156.97	582994.50	32°36'08.229"N	104°00'33.072"W	0.00	
10600.00†	90.002	179.821	8275.08	2460.11	-2460.10	7.68	641157.28	582894.50	32°36'07.240"N	104°00'33.072"W	0.00	
10700.00†	90.002	179.821	8275.08	2560.11	-2560.10	7.99	641157.59	582794.51	32°36'06.250"N	104°00'33.072"W	0.00	
10800.00†	90.002	179.821	8275.07	2660.11	-2660.10	8.31	641157.91	582694.52	32°36'05.261"N	104°00'33.071"W	0.00	
10900.00†	90.002	179.821	8275.07	2760.11	-2760.10	8.62	641158.22	582594.53	32°36'04.271"N	104°00'33.071"W	0.00	
11000.00†	90.002	179.821	8275.06	2860.11	-2860.09	8.93	641158.53	582494.54	32°36'03.282"N	104°00'33.071"W	0.00	
11100.00†	90.002	179.821	8275.06	2960.11	-2960.09	9.24	641158.84	582394.55	32°36'02.292"N	104°00'33.071"W	0.00	
11200.00†	90.002	179.821	8275.06	3060.11	-3060.09	9.55	641159.15	582294.56	32°36'01.303"N	104°00'33.071"W	0.00	
11300.00†	90.002	179.821	8275.05	3160.11	-3160.09	9.87	641159.47	582194.56	32°36'00.314"N	104°00'33.071"W	0.00	
11400.00†	90.002	179.821	8275.05	3260.11	-3260.09	10.18	641159.78	582094.57	32°35'59.324"N	104°00'33.071"W	0.00	
11500.00†	90.002	179.821	8275.05	3360.11	-3360.09	10.49	641160.09	581994.58	32°35'58.335"N	104°00'33.071"W	0.00	
11600.00†	90.002	179.821	8275.04	3460.11	-3460.09	10.80	641160.40	581894.59	32°35'57.345"N	104°00'33.071"W	0.00	
11700.00†	90.002	179.821	8275.04	3560.11	-3560.09	11.12	641160.72	581794.60	32°35'56.356"N	104°00'33.071"W	0.00	
11800.00†	90.002	179.821	8275.04	3660.11	-3660.09	11.43	641161.03	581694.61	32°35'55.366"N	104°00'33.071"W	0.00	
11900.00†	90.002	179.821	8275.03	3760.11	-3760.09	11.74	641161.34	581594.62	32°35'54.377"N	104°00'33.071"W	0.00	
12000.00†	90.002	179.821	8275.03	3860.11	-3860.09	12.05	641161.65	581494.62	32°35'53.387"N	104°00'33.070"W	0.00	
12100.00†	90.002	179.821	8275.02	3960.11	-3960.09	12.37	641161.96	581394.63	32°35'52.398"N	104°00'33.070"W	0.00	
12200.00†	90.002	179.821	8275.02	4060.11	-4060.09	12.68	641162.28	581294.64	32°35'51.408"N	104°00'33.070"W	0.00	
12300.00†	90.002	179.821	8275.02	4160.11	-4160.09	12.99	641162.59	581194.65	32°35'50.419"N	104°00'33.070"W	0.00	
12400.00†	90.002	179.821	8275.01	4260.11	-4260.09	13.30	641162.90	581094.66	32°35'49.430"N	104°00'33.070"W	0.00	
12500.00†	90.002	179.821	8275.01	4360.11	-4360.09	13.61	641163.21	580994.67	32°35'48.440"N	104°00'33.070"W	0.00	
12600.00†	90.002	179.821	8275.01	4460.11	-4460.09	13.93	641163.53	580894.68	32°35'47.451"N	104°00'33.070"W	0.00	
12700.00†	90.002	179.821	8275.00	4560.11	-4560.09	14.24	641163.84	580794.69	32°35'46.461"N	104°00'33.070"W	0.00	
12768.12	90.002	179.821	8275.00	4628.23	-4628.21	14.45	641164.05	580726.57	32°35'45.787"N	104°00'33.070"W	0.00	No. 3H PBHL



Planned Wellpath Report

Prelim_1

Page 5 of 5



INTEQ

REFERENCE WELLPATH IDENTIFICATION

Operator	Cimarex Energy Co.	Slot	No.3H SHL
Area	Eddy County, NM	Well	No.3H
Field	(Burton) Sec 6, T20S, R30E	Wellbore	No.3H PWB
Facility	Burton 6 Fed No.3H		

HOLE & CASING SECTIONS Ref Wellbore: No.3H PWB Ref Wellpath: Prelim_1

String/Diameter	Start MD [ft]	End MD [ft]	Interval [ft]	Start TVD [ft]	End TVD [ft]	Start N/S [ft]	Start E/W [ft]	End N/S [ft]	End E/W [ft]
8.625in Casing	0.00	3500.00	3500.00	0.00	3500.00	0.00	0.00	0.00	0.00
7.875in Open Hole	3500.00	12768.12	9268.12	3500.00	8275.00	0.00	0.00	-4628.21	14.45

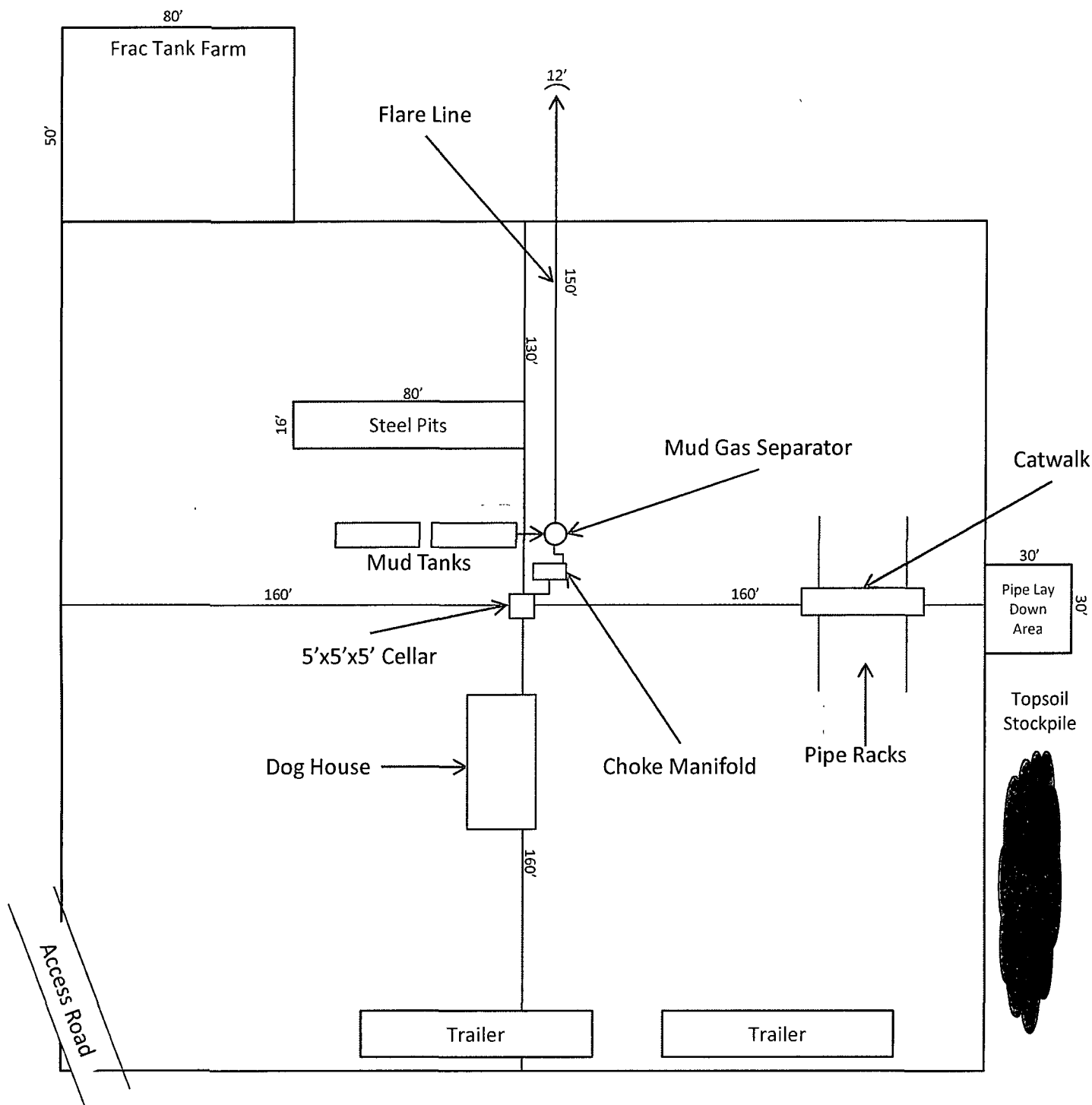
TARGETS

Name	MD [ft]	TVD [ft]	North [ft]	East [ft]	Grid East [srv ft]	Grid North [srv ft]	Latitude	Longitude	Shape
1) No. 3H PBHL	12768.12	8275.00	-4628.21	14.45	641164.05	580726.57	32°35'45.787"N	104°00'33.070"W	point
2nd Bone Spring Target									

SURVEY PROGRAM Ref Wellbore: No.3H PWB Ref Wellpath: Prelim_1

Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
0.00	12768.12	NaviTrak (Standard)		No.3H PWB

Key 884



1"=50'

N

Exhibit D – Rig Diagram
Burton 6 Federal No. 3
 Cimarex Energy Co. of Colorado
 6-20S-30E
 SHL 330 FNL & 1980 FEL
 BHL 330 FSL & 1980 FEL
 Eddy County, NM

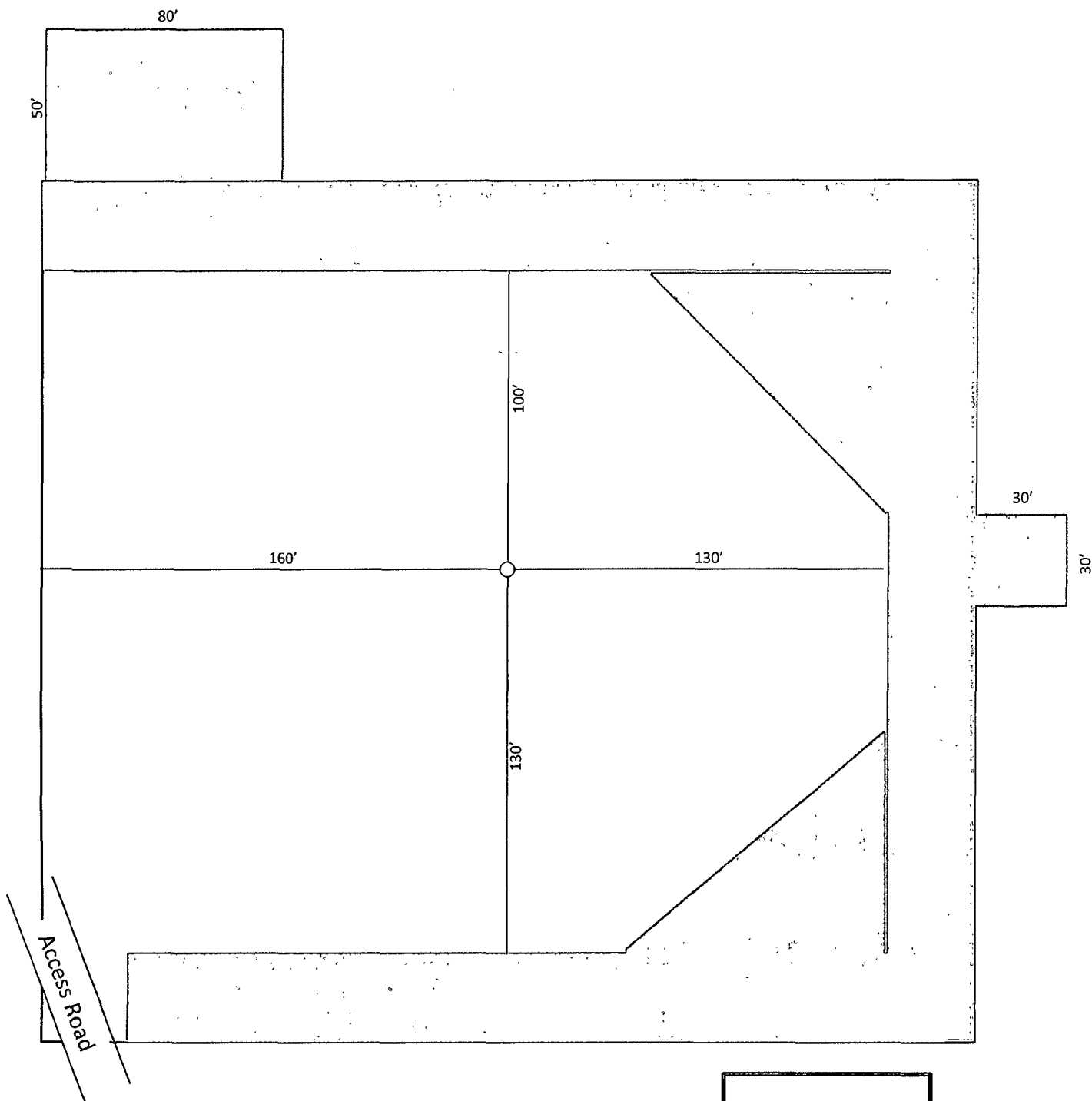


Exhibit D-1
 Production Facilities Layout Diagram
Burton 6 Federal No. 3
 Cimarex Energy Co. of Colorado
 6-20S-30E
 SHL 330 FNL & 1980 FEL
 BHL 330 FSL & 1980 FEL
 Eddy County, NM

SR & A

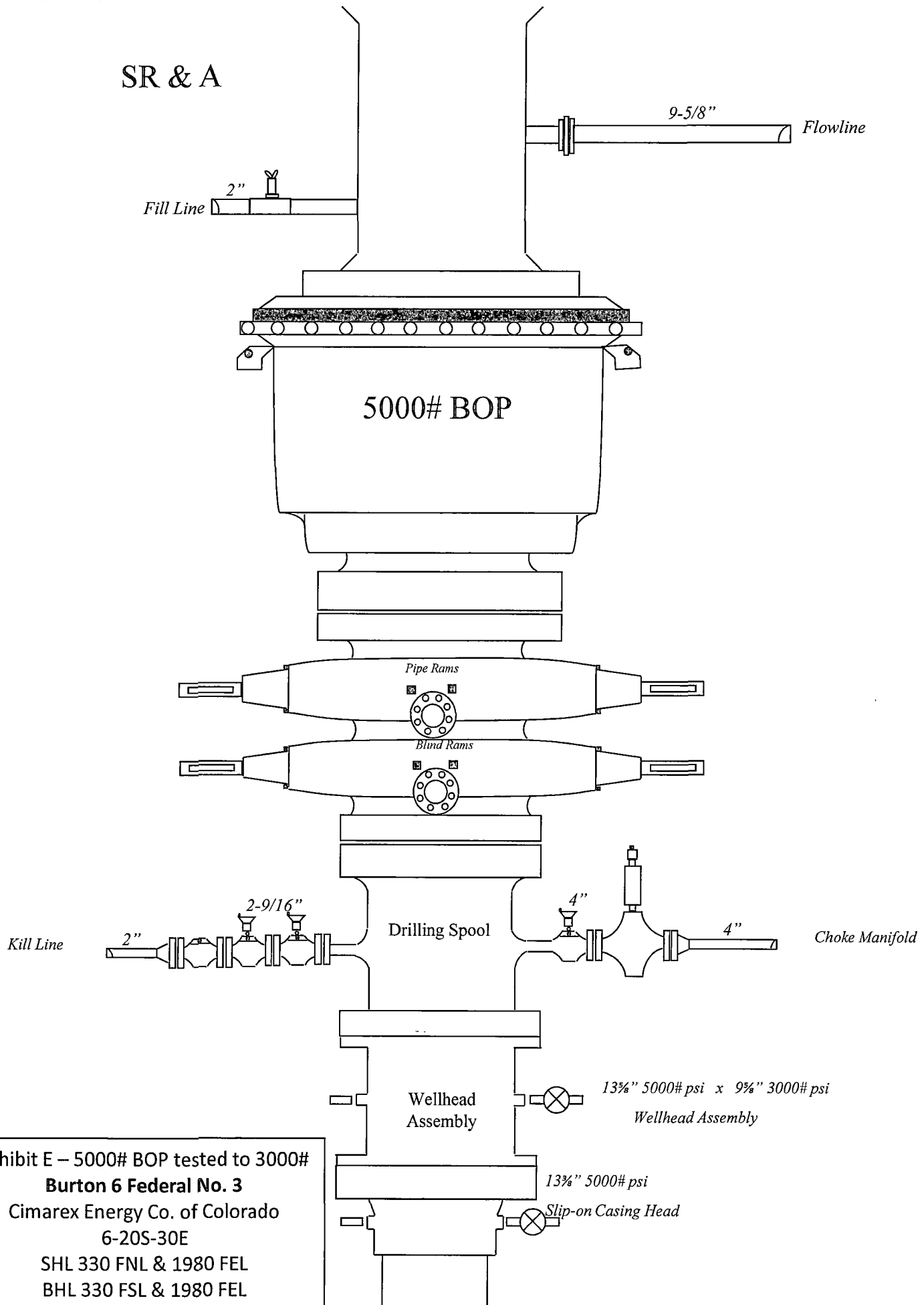


Exhibit E – 5000# BOP tested to 3000#
Burton 6 Federal No. 3
Cimarex Energy Co. of Colorado
6-20S-30E
SHL 330 FNL & 1980 FEL
BHL 330 FSL & 1980 FEL
Eddy County, NM

20" Diverter System

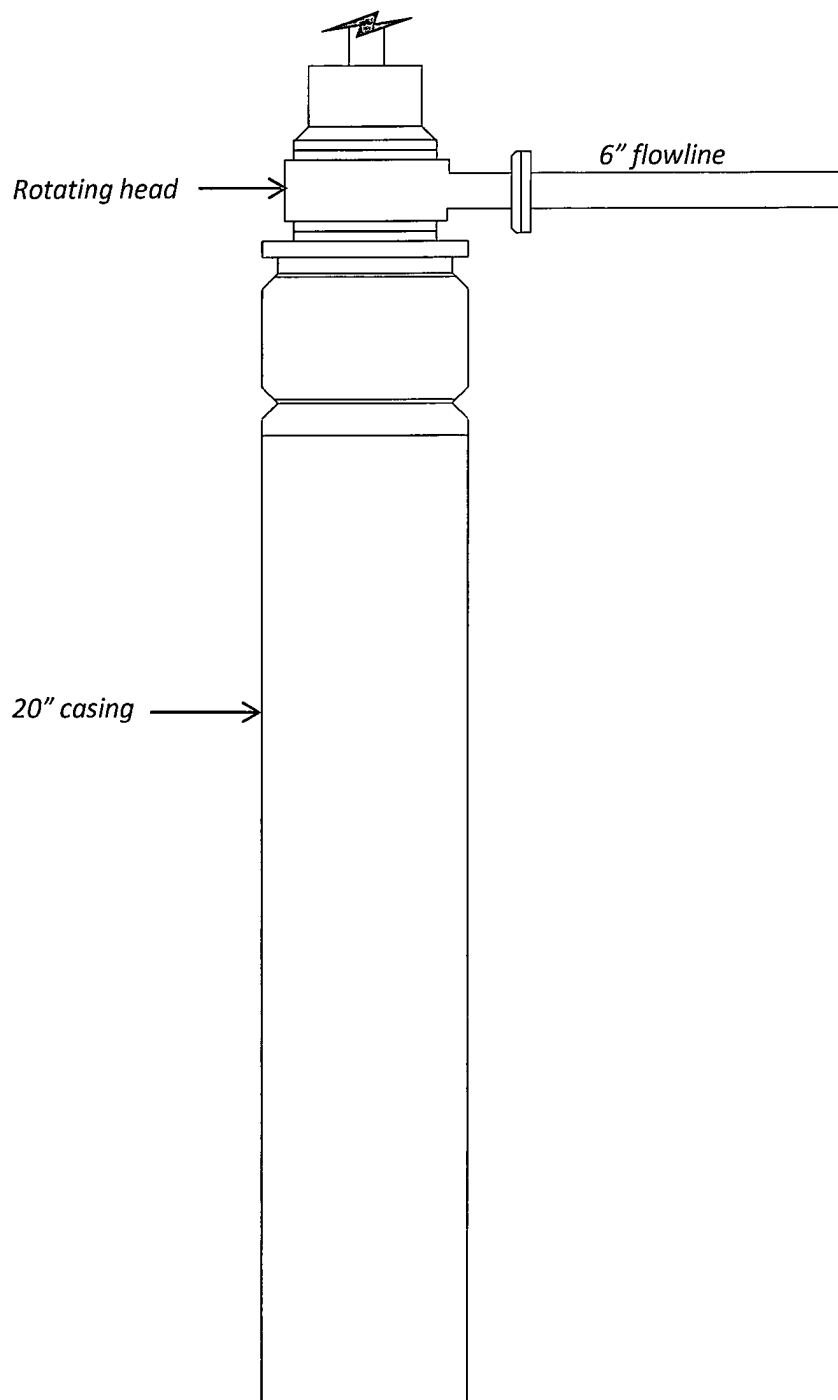


Exhibit E-1 – 20" Diverter System
Burton 6 Federal No. 3
Cimarex Energy Co. of Colorado
6-20S-30E
SHL 330 FNL & 1980 FEL
BHL 330 FSL & 1980 FEL
Eddy County, NM

Exhibit E-2 – Choke Manifold Diagram
Burton 6 Federal No. 3
Cimarex Energy Co. of Colorado
6-20S-30E
SHL 330 FNL & 1980 FEL
BHL 330 FSL & 1980 FEL
Eddy County, NM

