

Operator Copy

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		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. Intrepid 3 Federal Com No. 1	
2. Name of Operator Cimarex Energy Co. of Colorado		9. API Well No. 30-015-38979	
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 Leo; Bone Spring, S	
4. Location of Well (Report location clearly and in accordance with any State requirements.) At Surface 3-19S-30E 250 FNL & 990 FWL At proposed prod. Zone 4-19S-30E 660 FNL & 1650 FWL (Hz. Bone Spring Test)		11. Sec., T. R. M. or Blk. and Survey or Area Sections 3 & 4, 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) 250	16. No of acres in lease NM-8673 - 401.14 acres NM-113406 - 80.75 acres	17. Spacing Unit dedicated to this well NWNW 3-19S-30E, N2NE, NENW 4-19S-30E 161.97 acres	
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. N/A	19. Proposed Depth Pilot Hole 8800 MD 13001 TVD 8350	20. BLM/BIA Bond No. on File NM-2575	
21. Elevations (Show whether DF, KDB, RT, GL, etc.) 3445' GR	22. Approximate date work will start* 02.15.11	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 03.11.11
Title Manager Operations Administration		
Approved By (Signature) <i>Linda S.C. Rundell</i>	Name (Printed/Typed) Linda S.C. Rundell	Date 4/26/11
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.

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
AND SPECIAL STIPULATIONS
ATTACHED

Application to Drill
Intrepid 3 Federal Com No. 1
Cimarex Energy Co. of Colorado
Unit D, Section 3
T19S-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 3-19S-30E 250 FNL & 990 FWL
BHL 4-19S-30E 660 FNL & 1650 FWL (Hz. Bone Spring Test)
- 2 Elevation above sea level: 3445' 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 13001 TVD 8350 Pilot Hole 8800
- 6 Estimated tops of geological markers:

Rustler	400'	San Andres	3580'
T. Salt	680'	Delaware	3800'
B. Salt	1755'	Bone Spring	5830'
Yates	2000'	1st BS Sand	7740'
Queen	2920'	2nd BS Sand	8720'
- 7 Possible mineral bearing formation:

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

8 Proposed Mud Circulating System: *See COA

Depth	Mud Wt	Visc	Fluid Loss	Type Mud
0' to 450'	8.4 - 8.6	28	NC	FW
450' to 3205'	10.0	30-32	NC	Brine water
3205' to 13001'	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 8¾" pilot hole to 8800 and log. Set 275 sx Class H cmt plug from 8000-8800. Kick off 8¾" lateral @ 8190 and drill to TD @ 13001. Run 5½" 17# P-110 from 0-13001. LTC from 0-8090, BTC form 8090-8598 (EOC), and LTC from 8598-13001.

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9 Casing & Cementing Program:

see COA

String	Hole Size	Depth	Casing OD	Weight	Collar	Grade
<i>see COA</i> Surface	17½"	0' to 450'	New 13½"	48#	STC	H-40
Intermediate	12½"	0' to 3205'	New 9½"	40#	LTC	J-55
Production	8½"	0' to 13001'	New 5½"	17#	LTC	P-110

10 Cementing:

Surface

Lead: 470SKS Halcem C + 4% Bentomite + 2% CaCl 14.2ppg 1.34yield 100% Excess

Tail: 30SKS Halcem C + 2% CaCl 14.2ppg 1.34 yield 50% Excess

TOC Surface

Intermediate

Lead: 1070SKS EconoCem + 5% salt + 5 lbm gilsonite 14.6ppg 1.54yield 70% Excess

Tail: 195SKS HalCem + 1% CaCl 14.8ppg 1.34 yield 25% Excess

TOC Surface

Production

Lead: 970SKS EconoCem - H + 0.2 % HR-601 2.44 11.9ppg 2.44 yield 50% Excess

Tail: 1780SKS 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 3050'

2705

** See COA*

Depth to groundwater is approximately 230 according to the State Engineer. Fresh water zones will be protected by setting 13½" casing at 450 and cementing to surface. Hydrocarbon zones will be protected by setting 9½" casing at 3205 and cementing to surface, and by setting 5½" casing at 13001 and cementing to 3050.

<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 13½" 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 is drilling in H2S areas.

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 13½" casing 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 101 (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: 59473

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

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

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Unit D, Section 3
T19S-R30E, Eddy County, NM

- 12 Testing, Logging and Coring Program: *See CoA*
- A. Mud logging program: 2 man unit from 3205 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.



Location: Eddy County, NM
Field: (Intrepid) Sec 3, T19S, R30E
Facility: Intrepid 3 Fed Com No. 1H

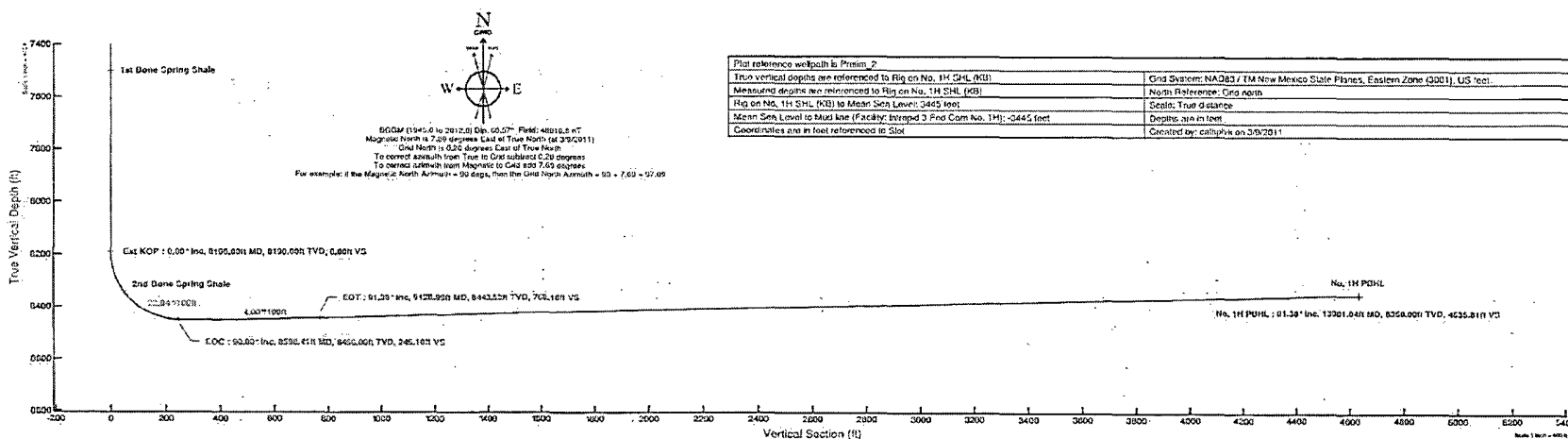
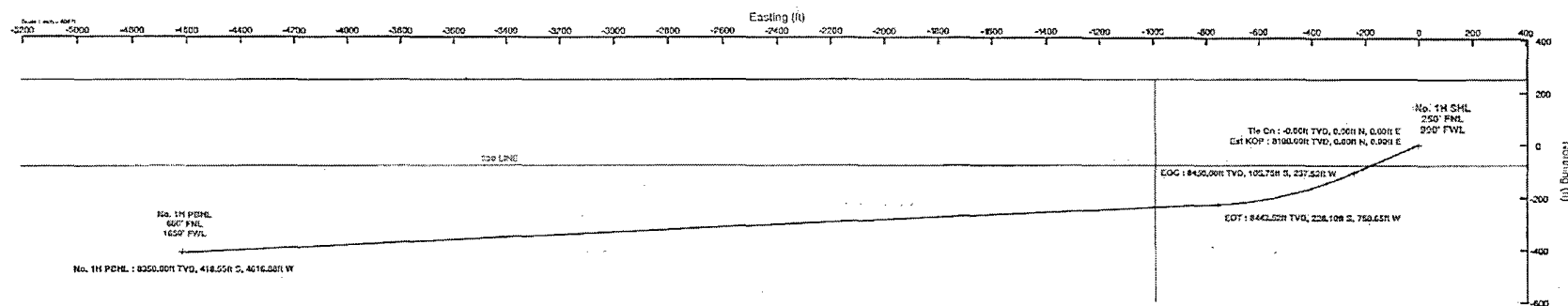
Cimarex Energy Co.

Slot: No. 1H SHL
Well: No. 1H
Wellbore: No. 1H PWB



INTEQ

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	246.000	0.00	0.00	0.00	0.00	0.00
Est KOP	8190.00	0.000	246.000	8190.00	0.00	0.00	0.00	0.00
EOC	8598.41	90.000	246.000	8450.00	-105.75	-237.52	22.04	245.10
EOT	9128.99	91.384	267.180	8443.52	-228.10	-750.65	4.00	768.18
No. 1H PWB	13001.04	91.384	267.180	8350.00	-418.55	-4616.88	0.00	4635.81



Plot reference wellpath is Preim 2	
True vertical depths are referenced to Rig on No. 1H SHL (K3)	Grid System: NAD83 / TM New Mexico State Planes, Eastern Zone (3001), US Feet
Measured depths are referenced to Rig on No. 1H SHL (K3)	North Reference: Grid north
Rig on No. 1H SHL (K3) is Mean Sea Level: 3445 feet	Scale: True distance
Mean Sea Level to Mud line (Facility: Intrepid 3 Fed Com No. 1H): -3445 feet	Depths: true in feet
Coordinates are in feet referenced to Slot	Generated by: INTEQ on 3/19/2011



Planned Wellpath Report

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REFERENCE WELLPATH IDENTIFICATION			
Operator	Cimarex Energy Co.	Slot	No. 1H SHL
Area	Eddy County, NM	Well	No. 1H
Field	(Intrepid) Sec 3, T19S, R30E	Wellbore	No. 1H PWB
Facility	Intrepid 3 Fed Com No. 1H		

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	3/10/2011 at 3:38:48 PM
Convergence at slot	0.20° East	Database/Source file	WA Midland/No. 1H_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	654594.30	617128.70	32°41'45.561"N	103°57'54.603"W
Facility Reference Pt			654594.30	617128.70	32°41'45.561"N	103°57'54.603"W
Field Reference Pt			654594.30	617128.70	32°41'45.561"N	103°57'54.603"W

WELLPATH DATUM			
Calculation method	Minimum curvature	Rig on No. 1H SHL (KB) to Facility Vertical Datum	0.00ft
Horizontal Reference Pt	Slot	Rig on No. 1H SHL (KB) to Mean Sea Level	3445.00ft
Vertical Reference Pt	Rig on No. 1H SHL (KB)	Facility Vertical Datum to Mud Line (Facility)	0.00ft
MD Reference Pt	Rig on No. 1H SHL (KB)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	264.82°



Planned Wellpath Report

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Field	(Intrepid) Sec 3, T19S, R30E	Wellbore	No. 1H PWB
Facility	Intrepid 3 Fed Com No. 1H		

WELLPATH DATA (138 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	246.000	0.00	0.00	0.00	0.00	654594.30	617128.70	32°41'45.561"N	103°57'54.603"W	0.00	Tie On
100.00†	0.000	246.000	100.00	0.00	0.00	0.00	654594.30	617128.70	32°41'45.561"N	103°57'54.603"W	0.00	
200.00†	0.000	246.000	200.00	0.00	0.00	0.00	654594.30	617128.70	32°41'45.561"N	103°57'54.603"W	0.00	
300.00†	0.000	246.000	300.00	0.00	0.00	0.00	654594.30	617128.70	32°41'45.561"N	103°57'54.603"W	0.00	
400.00†	0.000	246.000	400.00	0.00	0.00	0.00	654594.30	617128.70	32°41'45.561"N	103°57'54.603"W	0.00	
500.00†	0.000	246.000	500.00	0.00	0.00	0.00	654594.30	617128.70	32°41'45.561"N	103°57'54.603"W	0.00	
600.00†	0.000	246.000	600.00	0.00	0.00	0.00	654594.30	617128.70	32°41'45.561"N	103°57'54.603"W	0.00	
700.00†	0.000	246.000	700.00	0.00	0.00	0.00	654594.30	617128.70	32°41'45.561"N	103°57'54.603"W	0.00	
800.00†	0.000	246.000	800.00	0.00	0.00	0.00	654594.30	617128.70	32°41'45.561"N	103°57'54.603"W	0.00	
900.00†	0.000	246.000	900.00	0.00	0.00	0.00	654594.30	617128.70	32°41'45.561"N	103°57'54.603"W	0.00	
1000.00†	0.000	246.000	1000.00	0.00	0.00	0.00	654594.30	617128.70	32°41'45.561"N	103°57'54.603"W	0.00	
1100.00†	0.000	246.000	1100.00	0.00	0.00	0.00	654594.30	617128.70	32°41'45.561"N	103°57'54.603"W	0.00	
1200.00†	0.000	246.000	1200.00	0.00	0.00	0.00	654594.30	617128.70	32°41'45.561"N	103°57'54.603"W	0.00	
1300.00†	0.000	246.000	1300.00	0.00	0.00	0.00	654594.30	617128.70	32°41'45.561"N	103°57'54.603"W	0.00	
1400.00†	0.000	246.000	1400.00	0.00	0.00	0.00	654594.30	617128.70	32°41'45.561"N	103°57'54.603"W	0.00	
1500.00†	0.000	246.000	1500.00	0.00	0.00	0.00	654594.30	617128.70	32°41'45.561"N	103°57'54.603"W	0.00	
1600.00†	0.000	246.000	1600.00	0.00	0.00	0.00	654594.30	617128.70	32°41'45.561"N	103°57'54.603"W	0.00	
1700.00†	0.000	246.000	1700.00	0.00	0.00	0.00	654594.30	617128.70	32°41'45.561"N	103°57'54.603"W	0.00	
1800.00†	0.000	246.000	1800.00	0.00	0.00	0.00	654594.30	617128.70	32°41'45.561"N	103°57'54.603"W	0.00	
1900.00†	0.000	246.000	1900.00	0.00	0.00	0.00	654594.30	617128.70	32°41'45.561"N	103°57'54.603"W	0.00	
2000.00†	0.000	246.000	2000.00	0.00	0.00	0.00	654594.30	617128.70	32°41'45.561"N	103°57'54.603"W	0.00	
2100.00†	0.000	246.000	2100.00	0.00	0.00	0.00	654594.30	617128.70	32°41'45.561"N	103°57'54.603"W	0.00	
2200.00†	0.000	246.000	2200.00	0.00	0.00	0.00	654594.30	617128.70	32°41'45.561"N	103°57'54.603"W	0.00	
2300.00†	0.000	246.000	2300.00	0.00	0.00	0.00	654594.30	617128.70	32°41'45.561"N	103°57'54.603"W	0.00	
2400.00†	0.000	246.000	2400.00	0.00	0.00	0.00	654594.30	617128.70	32°41'45.561"N	103°57'54.603"W	0.00	
2500.00†	0.000	246.000	2500.00	0.00	0.00	0.00	654594.30	617128.70	32°41'45.561"N	103°57'54.603"W	0.00	
2600.00†	0.000	246.000	2600.00	0.00	0.00	0.00	654594.30	617128.70	32°41'45.561"N	103°57'54.603"W	0.00	
2700.00†	0.000	246.000	2700.00	0.00	0.00	0.00	654594.30	617128.70	32°41'45.561"N	103°57'54.603"W	0.00	
2800.00†	0.000	246.000	2800.00	0.00	0.00	0.00	654594.30	617128.70	32°41'45.561"N	103°57'54.603"W	0.00	
2900.00†	0.000	246.000	2900.00	0.00	0.00	0.00	654594.30	617128.70	32°41'45.561"N	103°57'54.603"W	0.00	
3000.00†	0.000	246.000	3000.00	0.00	0.00	0.00	654594.30	617128.70	32°41'45.561"N	103°57'54.603"W	0.00	
3100.00†	0.000	246.000	3100.00	0.00	0.00	0.00	654594.30	617128.70	32°41'45.561"N	103°57'54.603"W	0.00	
3200.00†	0.000	246.000	3200.00	0.00	0.00	0.00	654594.30	617128.70	32°41'45.561"N	103°57'54.603"W	0.00	
3300.00†	0.000	246.000	3300.00	0.00	0.00	0.00	654594.30	617128.70	32°41'45.561"N	103°57'54.603"W	0.00	
3400.00†	0.000	246.000	3400.00	0.00	0.00	0.00	654594.30	617128.70	32°41'45.561"N	103°57'54.603"W	0.00	
3500.00†	0.000	246.000	3500.00	0.00	0.00	0.00	654594.30	617128.70	32°41'45.561"N	103°57'54.603"W	0.00	
3600.00†	0.000	246.000	3600.00	0.00	0.00	0.00	654594.30	617128.70	32°41'45.561"N	103°57'54.603"W	0.00	
3700.00†	0.000	246.000	3700.00	0.00	0.00	0.00	654594.30	617128.70	32°41'45.561"N	103°57'54.603"W	0.00	
3750.00†	0.000	246.000	3750.00	0.00	0.00	0.00	654594.30	617128.70	32°41'45.561"N	103°57'54.603"W	0.00	Delaware Sands
3800.00†	0.000	246.000	3800.00	0.00	0.00	0.00	654594.30	617128.70	32°41'45.561"N	103°57'54.603"W	0.00	
3900.00†	0.000	246.000	3900.00	0.00	0.00	0.00	654594.30	617128.70	32°41'45.561"N	103°57'54.603"W	0.00	
4000.00†	0.000	246.000	4000.00	0.00	0.00	0.00	654594.30	617128.70	32°41'45.561"N	103°57'54.603"W	0.00	
4100.00†	0.000	246.000	4100.00	0.00	0.00	0.00	654594.30	617128.70	32°41'45.561"N	103°57'54.603"W	0.00	
4200.00†	0.000	246.000	4200.00	0.00	0.00	0.00	654594.30	617128.70	32°41'45.561"N	103°57'54.603"W	0.00	
4300.00†	0.000	246.000	4300.00	0.00	0.00	0.00	654594.30	617128.70	32°41'45.561"N	103°57'54.603"W	0.00	



Planned Wellpath Report

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INTEQ

REFERENCE WELLPATH IDENTIFICATION			
Operator	Cimarex Energy Co.	Slot	No. 1H SHL
Area	Eddy County, NM	Well	No. 1H
Field	(Intrepid) Sec 3, T19S, R30E	Wellbore	No. 1H PWB
Facility	Intrepid 3 Fed Com No. 1H		

WELLPATH DATA (138 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
4400.00†	0.000	246.000	4400.00	0.00	0.00	0.00	654594.30	617128.70	32°41'45.561"N	103°57'54.603"W	0.00	
4500.00†	0.000	246.000	4500.00	0.00	0.00	0.00	654594.30	617128.70	32°41'45.561"N	103°57'54.603"W	0.00	
4600.00†	0.000	246.000	4600.00	0.00	0.00	0.00	654594.30	617128.70	32°41'45.561"N	103°57'54.603"W	0.00	
4700.00†	0.000	246.000	4700.00	0.00	0.00	0.00	654594.30	617128.70	32°41'45.561"N	103°57'54.603"W	0.00	
4800.00†	0.000	246.000	4800.00	0.00	0.00	0.00	654594.30	617128.70	32°41'45.561"N	103°57'54.603"W	0.00	
4900.00†	0.000	246.000	4900.00	0.00	0.00	0.00	654594.30	617128.70	32°41'45.561"N	103°57'54.603"W	0.00	
5000.00†	0.000	246.000	5000.00	0.00	0.00	0.00	654594.30	617128.70	32°41'45.561"N	103°57'54.603"W	0.00	
5100.00†	0.000	246.000	5100.00	0.00	0.00	0.00	654594.30	617128.70	32°41'45.561"N	103°57'54.603"W	0.00	
5200.00†	0.000	246.000	5200.00	0.00	0.00	0.00	654594.30	617128.70	32°41'45.561"N	103°57'54.603"W	0.00	
5300.00†	0.000	246.000	5300.00	0.00	0.00	0.00	654594.30	617128.70	32°41'45.561"N	103°57'54.603"W	0.00	
5400.00†	0.000	246.000	5400.00	0.00	0.00	0.00	654594.30	617128.70	32°41'45.561"N	103°57'54.603"W	0.00	
5500.00†	0.000	246.000	5500.00	0.00	0.00	0.00	654594.30	617128.70	32°41'45.561"N	103°57'54.603"W	0.00	
5600.00†	0.000	246.000	5600.00	0.00	0.00	0.00	654594.30	617128.70	32°41'45.561"N	103°57'54.603"W	0.00	
5700.00†	0.000	246.000	5700.00	0.00	0.00	0.00	654594.30	617128.70	32°41'45.561"N	103°57'54.603"W	0.00	
5750.00†	0.000	246.000	5750.00	0.00	0.00	0.00	654594.30	617128.70	32°41'45.561"N	103°57'54.603"W	0.00	Bone Spring
5800.00†	0.000	246.000	5800.00	0.00	0.00	0.00	654594.30	617128.70	32°41'45.561"N	103°57'54.603"W	0.00	
5900.00†	0.000	246.000	5900.00	0.00	0.00	0.00	654594.30	617128.70	32°41'45.561"N	103°57'54.603"W	0.00	
6000.00†	0.000	246.000	6000.00	0.00	0.00	0.00	654594.30	617128.70	32°41'45.561"N	103°57'54.603"W	0.00	
6100.00†	0.000	246.000	6100.00	0.00	0.00	0.00	654594.30	617128.70	32°41'45.561"N	103°57'54.603"W	0.00	
6200.00†	0.000	246.000	6200.00	0.00	0.00	0.00	654594.30	617128.70	32°41'45.561"N	103°57'54.603"W	0.00	
6300.00†	0.000	246.000	6300.00	0.00	0.00	0.00	654594.30	617128.70	32°41'45.561"N	103°57'54.603"W	0.00	
6400.00†	0.000	246.000	6400.00	0.00	0.00	0.00	654594.30	617128.70	32°41'45.561"N	103°57'54.603"W	0.00	
6500.00†	0.000	246.000	6500.00	0.00	0.00	0.00	654594.30	617128.70	32°41'45.561"N	103°57'54.603"W	0.00	
6600.00†	0.000	246.000	6600.00	0.00	0.00	0.00	654594.30	617128.70	32°41'45.561"N	103°57'54.603"W	0.00	
6700.00†	0.000	246.000	6700.00	0.00	0.00	0.00	654594.30	617128.70	32°41'45.561"N	103°57'54.603"W	0.00	
6800.00†	0.000	246.000	6800.00	0.00	0.00	0.00	654594.30	617128.70	32°41'45.561"N	103°57'54.603"W	0.00	Upper Bone Spring Shale
6900.00†	0.000	246.000	6900.00	0.00	0.00	0.00	654594.30	617128.70	32°41'45.561"N	103°57'54.603"W	0.00	
7000.00†	0.000	246.000	7000.00	0.00	0.00	0.00	654594.30	617128.70	32°41'45.561"N	103°57'54.603"W	0.00	
7100.00†	0.000	246.000	7100.00	0.00	0.00	0.00	654594.30	617128.70	32°41'45.561"N	103°57'54.603"W	0.00	
7200.00†	0.000	246.000	7200.00	0.00	0.00	0.00	654594.30	617128.70	32°41'45.561"N	103°57'54.603"W	0.00	
7300.00†	0.000	246.000	7300.00	0.00	0.00	0.00	654594.30	617128.70	32°41'45.561"N	103°57'54.603"W	0.00	
7400.00†	0.000	246.000	7400.00	0.00	0.00	0.00	654594.30	617128.70	32°41'45.561"N	103°57'54.603"W	0.00	
7500.00†	0.000	246.000	7500.00	0.00	0.00	0.00	654594.30	617128.70	32°41'45.561"N	103°57'54.603"W	0.00	1st Bone Spring Shale
7600.00†	0.000	246.000	7600.00	0.00	0.00	0.00	654594.30	617128.70	32°41'45.561"N	103°57'54.603"W	0.00	
7700.00†	0.000	246.000	7700.00	0.00	0.00	0.00	654594.30	617128.70	32°41'45.561"N	103°57'54.603"W	0.00	
7800.00†	0.000	246.000	7800.00	0.00	0.00	0.00	654594.30	617128.70	32°41'45.561"N	103°57'54.603"W	0.00	
7900.00†	0.000	246.000	7900.00	0.00	0.00	0.00	654594.30	617128.70	32°41'45.561"N	103°57'54.603"W	0.00	
8000.00†	0.000	246.000	8000.00	0.00	0.00	0.00	654594.30	617128.70	32°41'45.561"N	103°57'54.603"W	0.00	
8100.00†	0.000	246.000	8100.00	0.00	0.00	0.00	654594.30	617128.70	32°41'45.561"N	103°57'54.603"W	0.00	
8190.00†	0.000	246.000	8190.00	0.00	0.00	0.00	654594.30	617128.70	32°41'45.561"N	103°57'54.603"W	0.00	Est KOP
8200.00†	2.204	246.000	8200.00	0.18	-0.08	-0.18	654594.12	617128.62	32°41'45.560"N	103°57'54.605"W	22.04	
8300.00†	24.241	246.000	8296.75	21.70	-9.32	-20.94	654573.36	617119.38	32°41'45.470"N	103°57'54.849"W	22.04	
8350.00†	35.259	246.000	8340.09	45.15	-19.40	-43.57	654550.73	617109.30	32°41'45.371"N	103°57'55.114"W	22.04	2nd Bone Spring Shale
8400.00†	46.277	246.000	8377.90	76.00	-32.66	-73.35	654520.95	617096.04	32°41'45.241"N	103°57'55.463"W	22.04	
8500.00†	68.314	246.000	8431.60	155.16	-66.67	-149.75	654444.56	617062.03	32°41'44.907"N	103°57'56.358"W	22.04	



Planned Wellpath Report

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REFERENCE WELLPATH IDENTIFICATION			
Operator	Cimarex Energy Co.	Slot	No. 1H SHL
Area	Eddy County, NM	Well	No. 1H
Field	(Intrepid) Sec 3, T19S, R30E	Wellbore	No. 1H PWB
Facility	Intrepid-3 Fed Com No. 1H		

WELLPATH DATA (138 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
8598.41	90.000	246.000	8450.00	246.10	-105.75	-237.52	654356.80	617022.96	32°41'44.523"N	103°57'57.387"W	22.04	EOC
8600.00†	90.004	246.064	8450.00	247.61	-106.40	-238.98	654355.34	617022.31	32°41'44.517"N	103°57'57.404"W	4.00	
8700.00†	90.271	250.055	8449.76	343.34	-143.76	-331.72	654262.61	616984.96	32°41'44.150"N	103°57'58.491"W	4.00	
8800.00†	90.536	254.046	8449.06	440.84	-174.57	-426.83	654167.51	616954.15	32°41'43.849"N	103°57'59.605"W	4.00	
8900.00†	90.799	258.038	8447.89	539.65	-198.68	-523.85	654070.49	616930.03	32°41'43.613"N	103°58'00.741"W	4.00	
9000.00†	91.058	262.030	8446.27	639.26	-215.98	-622.31	653972.04	616912.73	32°41'43.445"N	103°58'01.894"W	4.00	
9100.00†	91.312	266.023	8444.20	739.21	-226.39	-721.72	653872.64	616902.33	32°41'43.346"N	103°58'03.058"W	4.00	
9128.99	91.384	267.180	8443.52	768.18	-228.10	-750.65	653843.71	616900.61	32°41'43.330"N	103°58'03.396"W	4.00	EOT
9200.00†	91.384	267.180	8441.80	839.11	-231.60	-821.55	653772.81	616897.12	32°41'43.298"N	103°58'04.226"W	0.00	
9300.00†	91.384	267.180	8439.39	939.00	-236.52	-921.40	653672.97	616892.20	32°41'43.252"N	103°58'05.395"W	0.00	
9400.00†	91.384	267.180	8436.97	1038.88	-241.43	-1021.25	653573.13	616887.29	32°41'43.207"N	103°58'06.563"W	0.00	
9500.00†	91.384	267.180	8434.56	1138.77	-246.35	-1121.10	653473.28	616882.37	32°41'43.162"N	103°58'07.732"W	0.00	
9600.00†	91.384	267.180	8432.14	1238.65	-251.27	-1220.95	653373.44	616877.45	32°41'43.117"N	103°58'08.900"W	0.00	
9700.00†	91.384	267.180	8429.73	1338.54	-256.19	-1320.80	653273.60	616872.53	32°41'43.071"N	103°58'10.069"W	0.00	
9800.00†	91.384	267.180	8427.31	1438.43	-261.11	-1420.65	653173.76	616867.61	32°41'43.026"N	103°58'11.238"W	0.00	
9900.00†	91.384	267.180	8424.90	1538.31	-266.03	-1520.50	653073.92	616862.70	32°41'42.981"N	103°58'12.406"W	0.00	
10000.00†	91.384	267.180	8422.48	1638.20	-270.94	-1620.35	652974.07	616857.78	32°41'42.936"N	103°58'13.575"W	0.00	
10100.00†	91.384	267.180	8420.07	1738.08	-275.86	-1720.20	652874.23	616852.86	32°41'42.890"N	103°58'14.743"W	0.00	
10200.00†	91.384	267.180	8417.65	1837.97	-280.78	-1820.05	652774.39	616847.94	32°41'42.845"N	103°58'15.912"W	0.00	
10300.00†	91.384	267.180	8415.24	1937.86	-285.70	-1919.90	652674.55	616843.02	32°41'42.800"N	103°58'17.080"W	0.00	
10400.00†	91.384	267.180	8412.82	2037.74	-290.62	-2019.75	652574.71	616838.11	32°41'42.754"N	103°58'18.249"W	0.00	
10500.00†	91.384	267.180	8410.41	2137.63	-295.54	-2119.60	652474.86	616833.19	32°41'42.709"N	103°58'19.418"W	0.00	
10600.00†	91.384	267.180	8407.99	2237.51	-300.45	-2219.45	652375.02	616828.27	32°41'42.664"N	103°58'20.586"W	0.00	
10700.00†	91.384	267.180	8405.58	2337.40	-305.37	-2319.30	652275.18	616823.35	32°41'42.619"N	103°58'21.755"W	0.00	
10800.00†	91.384	267.180	8403.16	2437.29	-310.29	-2419.15	652175.34	616818.43	32°41'42.573"N	103°58'22.923"W	0.00	
10900.00†	91.384	267.180	8400.74	2537.17	-315.21	-2519.00	652075.50	616813.52	32°41'42.528"N	103°58'24.092"W	0.00	
11000.00†	91.384	267.180	8398.33	2637.06	-320.13	-2618.85	651975.65	616808.60	32°41'42.483"N	103°58'25.260"W	0.00	
11100.00†	91.384	267.180	8395.91	2736.94	-325.05	-2718.70	651875.81	616803.68	32°41'42.437"N	103°58'26.429"W	0.00	
11200.00†	91.384	267.180	8393.50	2836.83	-329.96	-2818.55	651775.97	616798.76	32°41'42.392"N	103°58'27.598"W	0.00	
11300.00†	91.384	267.180	8391.08	2936.72	-334.88	-2918.40	651676.13	616793.84	32°41'42.347"N	103°58'28.766"W	0.00	
11400.00†	91.384	267.180	8388.67	3036.60	-339.80	-3018.25	651576.29	616788.93	32°41'42.301"N	103°58'29.935"W	0.00	
11500.00†	91.384	267.180	8386.25	3136.49	-344.72	-3118.10	651476.44	616784.01	32°41'42.256"N	103°58'31.103"W	0.00	
11600.00†	91.384	267.180	8383.84	3236.37	-349.64	-3217.95	651376.60	616779.09	32°41'42.211"N	103°58'32.272"W	0.00	
11700.00†	91.384	267.180	8381.42	3336.26	-354.56	-3317.80	651276.76	616774.17	32°41'42.165"N	103°58'33.440"W	0.00	
11800.00†	91.384	267.180	8379.01	3436.15	-359.47	-3417.65	651176.92	616769.25	32°41'42.120"N	103°58'34.609"W	0.00	
11900.00†	91.384	267.180	8376.59	3536.03	-364.39	-3517.50	651077.08	616764.34	32°41'42.075"N	103°58'35.778"W	0.00	
12000.00†	91.384	267.180	8374.18	3635.92	-369.31	-3617.35	650977.23	616759.42	32°41'42.029"N	103°58'36.946"W	0.00	
12100.00†	91.384	267.180	8371.76	3735.80	-374.23	-3717.20	650877.39	616754.50	32°41'41.984"N	103°58'38.115"W	0.00	
12200.00†	91.384	267.180	8369.35	3835.69	-379.15	-3817.05	650777.55	616749.58	32°41'41.939"N	103°58'39.283"W	0.00	
12300.00†	91.384	267.180	8366.93	3935.58	-384.07	-3916.90	650677.71	616744.66	32°41'41.893"N	103°58'40.452"W	0.00	
12400.00†	91.384	267.180	8364.52	4035.46	-388.98	-4016.75	650577.87	616739.75	32°41'41.848"N	103°58'41.620"W	0.00	
12500.00†	91.384	267.180	8362.10	4135.35	-393.90	-4116.60	650478.03	616734.83	32°41'41.803"N	103°58'42.789"W	0.00	
12600.00†	91.384	267.180	8359.69	4235.23	-398.82	-4216.45	650378.18	616729.91	32°41'41.757"N	103°58'43.958"W	0.00	
12700.00†	91.384	267.180	8357.27	4335.12	-403.74	-4316.30	650278.34	616724.99	32°41'41.712"N	103°58'45.126"W	0.00	
12800.00†	91.384	267.180	8354.86	4435.01	-408.66	-4416.15	650178.50	616720.07	32°41'41.666"N	103°58'46.295"W	0.00	



Planned Wellpath Report

Prelim_2
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INTEQ

REFERENCE WELLPATH IDENTIFICATION			
Operator	Cimarex Energy Co.	Slot	No. 1H SHL
Area	Eddy County, NM	Well	No. 1H
Field	(Intrepid) Sec 3, T19S, R30E	Wellbore	No. 1H PWB
Facility	Intrepid 3 Fed Com No. 1H		

WELLPATH DATA (138 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
12900.00†	91.384	267.180	8352.44	4534.89	-413.58	-4516.00	650078.66	616715.16	32°41'41.621"N	103°58'47.463"W	0.00	
13000.00†	91.384	267.180	8350.03	4634.78	-418.49	-4615.85	649978.82	616710.24	32°41'41.576"N	103°58'48.632"W	0.00	
13001.04	91.384	267.180	8350.00†	4635.81	-418.55	-4616.88	649977.78	616710.19	32°41'41.575"N	103°58'48.644"W	0.00	No. 1H PBHL

HOLE & CASING SECTIONS Ref Wellbore: No. 1H PWB Ref Wellpath: Prelim_2									
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]
17.5in Open Hole	0.00	450.00	450.00	0.00	450.00	0.00	0.00	0.00	0.00
13.375in Casing	0.00	450.00	450.00	0.00	450.00	0.00	0.00	0.00	0.00
12.25in Open Hole	450.00	3205.00	2755.00	450.00	3205.00	0.00	0.00	0.00	0.00
9.625in Casing	0.00	3205.00	3205.00	0.00	3205.00	0.00	0.00	0.00	0.00
8.75in Open Hole	3205.00	13001.04	9796.04	3205.00	8350.00	0.00	0.00	-418.55	-4616.88
5.5in Casing	0.00	13001.04	13001.04	0.00	8350.00	0.00	0.00	-418.55	-4616.88

TARGETS									
Name	MD [ft]	TVD [ft]	North [ft]	East [ft]	Grid East [srv ft]	Grid North [srv ft]	Latitude	Longitude	Shape
1) No. 1H PBHL	13001.04	8350.00	-418.55	-4616.88	649977.78	616710.19	32°41'41.575"N	103°58'48.644"W	point

SURVEY PROGRAM Ref Wellbore: No. 1H PWB Ref Wellpath: Prelim_2				
Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
0.00	13022.78	NaviTrak (Standard)		No. 1H PWB

SR & A

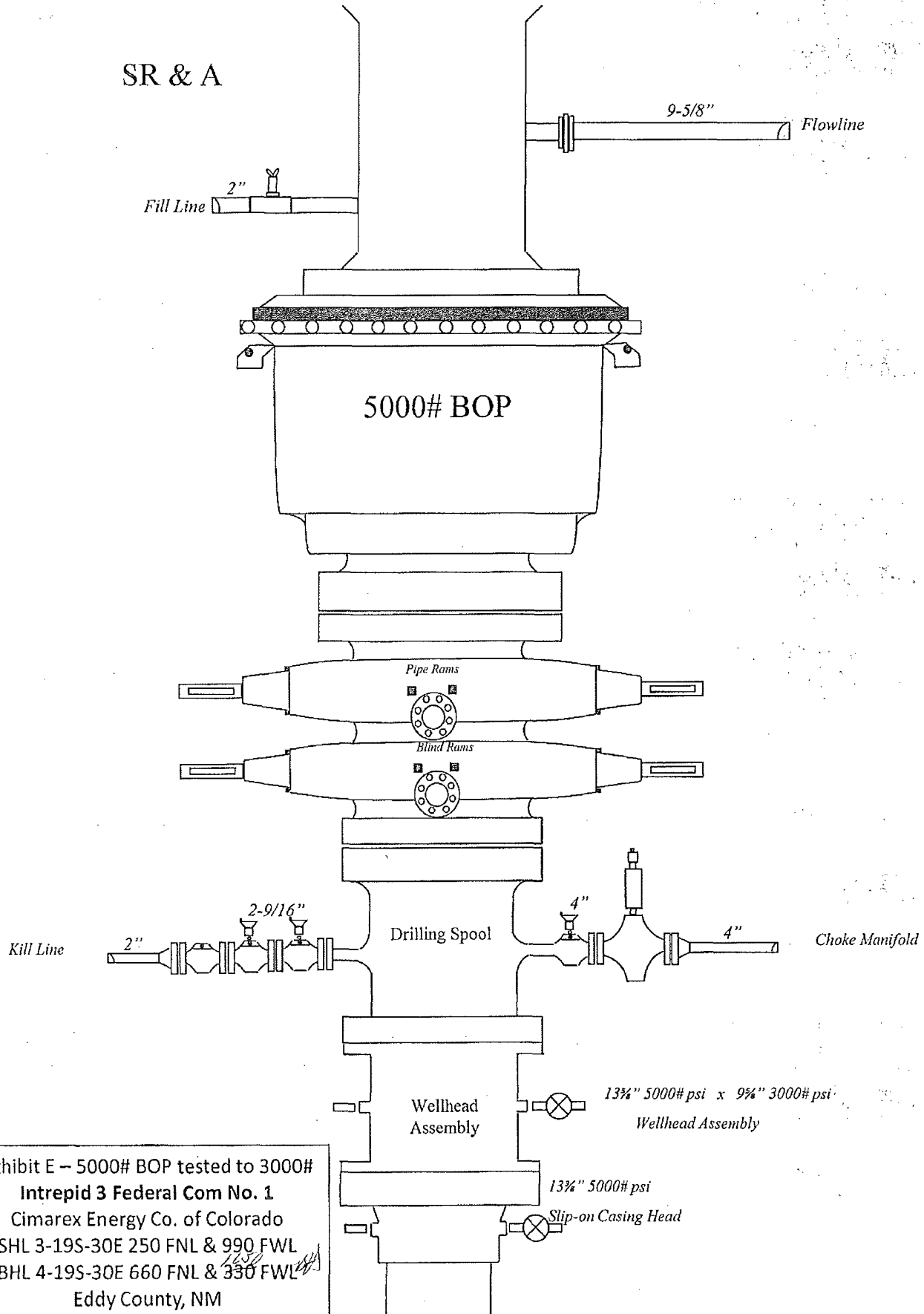


Exhibit E - 5000# BOP tested to 3000#
Intrepid 3 Federal Com No. 1
Cimarex Energy Co. of Colorado
SHL 3-19S-30E 250 FNL & 990 FWL
BHL 4-19S-30E 660 FNL & 330 FWL
Eddy County, NM

Drilling Operations Choke Manifold 5M Service tested to 3M

Exhibit E-1 – Choke Manifold Diagram

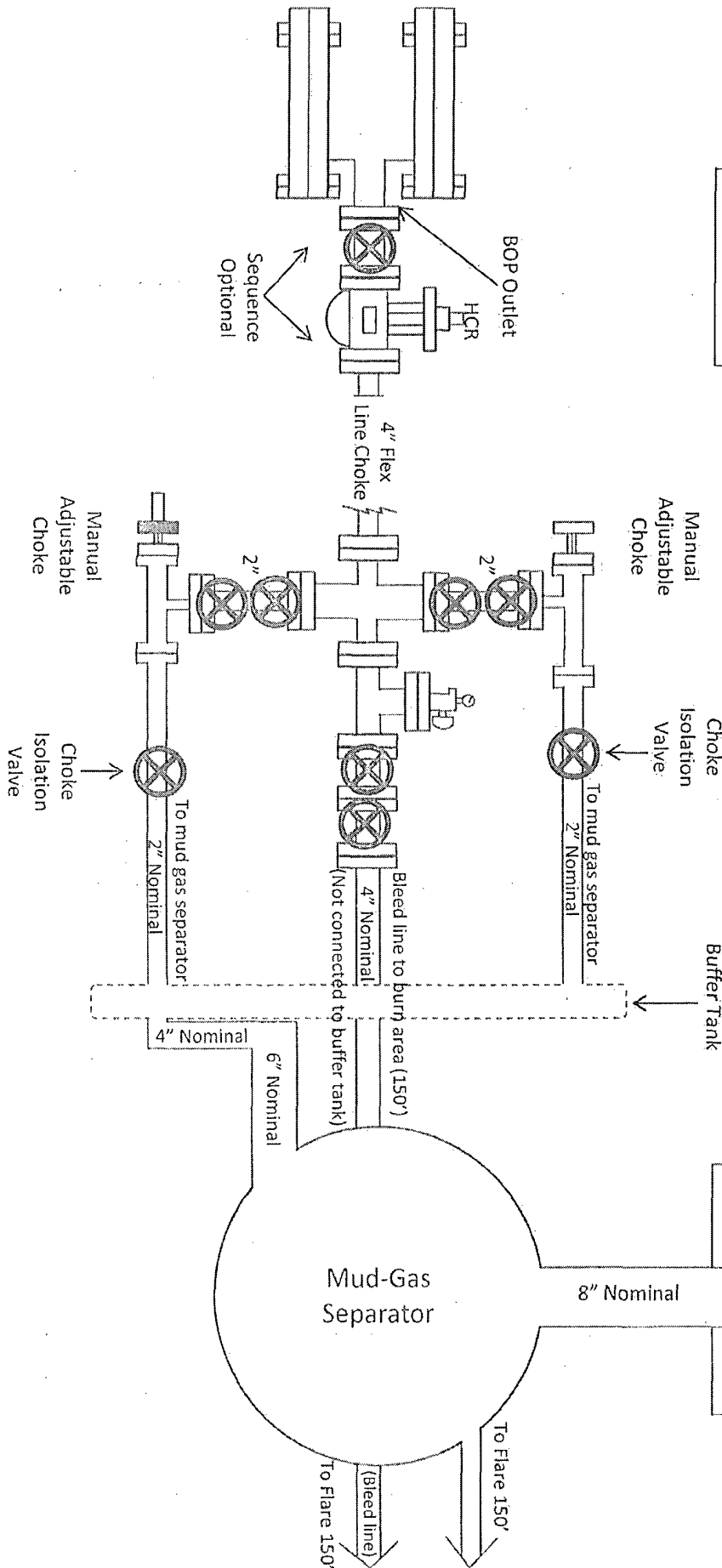
Intrepid 3 Federal Com No. 1

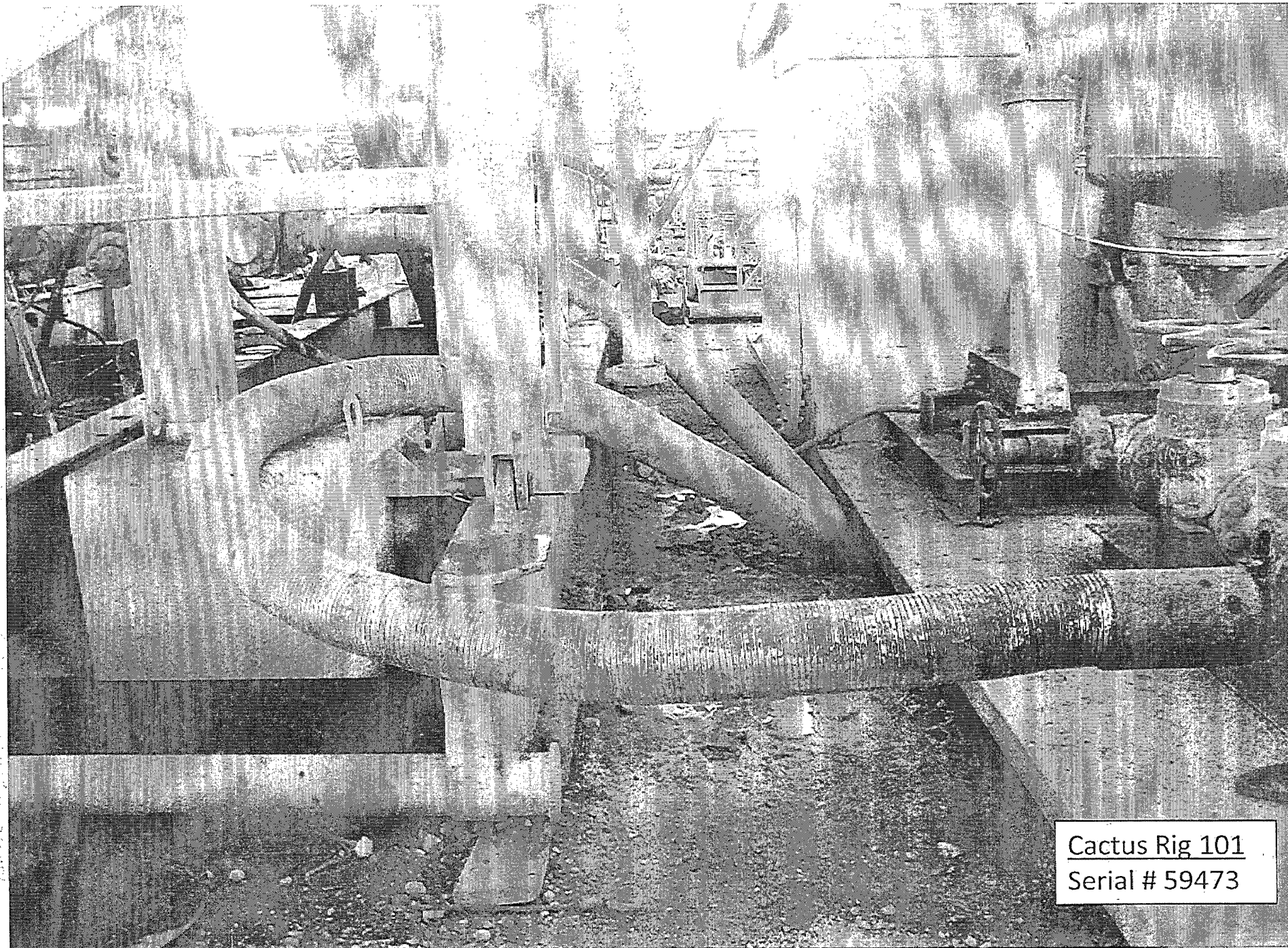
Cimarex Energy Co. of Colorado

SHL 3-19S-30E 250 FNL & 990 FWL

BHL 4-19S-30E 660 FNL & 330 FWL

Eddy County, NM





Cactus Rig 101
Serial # 59473

MIDWEST

HOSE AND SPECIALTY INC.

INTERNAL HYDROSTATIC TEST REPORT		
Customer: CACTUS		P.O. Number: Rig#101 Asset#M5358
HOSE SPECIFICATIONS		
Type: CHOK LINE	Length: 35'	
I.D. 4" INCHES	O.D. 8" INCHES	
WORKING PRESSURE 10,000 PSI	TEST PRESSURE 15,000 PSI	BURST PRESSURE PSI
COUPLINGS		
Type of End Fitting 4 1/16 10K FLANGE		
Type of Coupling: SWEDGED	MANUFACTURED BY MIDWEST HOSE & SPECIALTY	
PROCEDURE		
<u>Hose assembly pressure tested with water at ambient temperature.</u>		
TIME HELD AT TEST PRESSURE 15 MIN.	ACTUAL BURST PRESSURE: 0 PSI	
COMMENTS: s/n#59473 Asset#M5358 Hose is covered with stainless steel armour cover and wrapped with fire resistant vermiculite coated fiberglass insulation rated for 1500 degrees complete with lifting eyes		
Date: 5/19/2010	Tested By: BOBBY FINK	Approved: MENDI JACKSON



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)

DISTRICT I --- CHECKLIST FOR INTENTS TO DRILL

Operator CIMAREX ENERGY CORP COLORADO OGRID # 162683
 Well Name & # ENTREPID 3 FED COM # 1H Surface Type (F) (S) (P)
 Location: UL D, Sect 3, Township 19 s, RNG 30 e, Sub-surface Type (F) (S) (P)
38599 C-4-19-30

A. Date C101 rec'd / / C101 reviewed / /

B. 1. Check mark, Information is OK on Forms:

OGRID X BONDING FED PROP CODE X WELL # SIGNATURE

2. Inactive Well list as of: 04/28/11 # wells 1159 # Inactive wells 9

a. District Grant APD but see number of inactive wells:

No letter required X Sent Letter to Operator , to Santa Fe

3. Additional Bonding as of: 04/28/11

a. District Denial because operator needs addition bonding:

No Letter required X Sent Letter to Operator , To Santa Fe

b. District Denial because of Inactive well list and Financial Assurance:

No Letter required X Sent Letter to Operator , To Santa Fe

C. C102 YES X, NO , Signature

1. Pool LEO; BONE SPRING, Code 37920

a. Dedicated acreage 160, What Units 3: D; 4: ABC

b. SUR. Location Standard : Non-Standard Location X PP: Standard X

c. Well shares acres: Yes , No X # of wells plus this well #

2. 2nd. Operator in same acreage, Yes , No X

Agreement Letter , Disagreement letter

3. Intent to Directional Drill Yes X No

a. Dedicated acreage 160, What Units 3: D; 4: ABC

b. Bottomhole Location Standard X, Non-Standard Bottomhole

4. Downhole Commingle: Yes , No X

a. Pool #2 , Code , Acres

Pool #3 , Code , Acres

Pool #4 , Code , Acres

5. POTASH Area Yes , No FED

D. Blowout Preventer Yes X, No

E. H2S Yes , No PART FED APD

F. C144 Pit Registration Yes X No

G. Does APD require Santa Fe Approval:

1. Non-Standard Location: Yes , No X, NSL #

2. Non-Standard Proration: Yes , No X, NSP #

3. Simultaneous Dedication: Yes , No X, SD #

Number of wells Plus #

4. Injection order Yes , No X; PMX # or WFX #

5. SWD order Yes , NO X; SWD #

6. DHC from SF ; DHC-HOB ; Holding

7. OCD Approval Date 4/28/11

API #30-0 15-38979

8. Reviewers KZ