

OCD Hobbs **HOBBS OCD**

15-486

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

JUL 21 2015

FORM APPROVED
OMB No. 1004-0137
Expires October 31, 2014

APPLICATION FOR PERMIT TO DRILL OR REENTER

1a. Type of work: ☒ DRILL ☐ REENTER		7. If Unit or CA Agreement, Name and No.	
1b. Type of Well: ☒ Oil Well ☐ Gas Well ☐ Other ☒ Single Zone ☐ Multiple Zone		8. Lease Name and Well No. 315045	
2. Name of Operator McELVAIN ENERGY, INC. 22044		9. API Well No. 30-025- 42700	
3a. Address 1050 17th STREET SUITE 2500 DENVER, COLORADO 80265-2080		10. Field and Pool, or Exploratory EK-BONE SPRING 21690	
3b. Phone No. (include area code) 303-893-0933		11. Sec, T.R.M. or Blk and Survey or Area SECTION 29 T18S-R34E	
4. Location of Well (Report location clearly and in accordance with any State requirements.) At surface 175' FSL & 100' FEL SECTION 30 T18S-R34E LEA CO. NM At proposed prod. zone 510' FNL & 660' FWL SECTION 29 T18S-R34E		12. County or Parish LEA CO.	
14. Distance in miles and direction from nearest town or post office* Approximately 28 miles West of Hobbs, New Mexico		13. State NM	
15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any) 510'	16. No. of acres in lease 1111 acres	17. Spacing Unit dedicated to this well 160 acres	
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. 2100'	19. Proposed Depth TVD-9834' MD-14,502'	20. BLM/BIA Bond No. on file COB#-000010	
21. Elevations (Show whether DF, KDB, RT, GL, etc.) 3904' GL	22. Approximate date work will start* WHEN APPROVED	23. Estimated duration 28 Days	

24. Attachments

The following, completed in accordance with the requirements of Onshore Oil and Gas Order No.1, must 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 must be filed with the appropriate Forest Service Office). | 6. Such other site specific information and/or plans as may be required by the BLM. |

25. Signature <i>Joe T. Janica</i>	Name (Printed/Typed) Joe T. Janica	Date 03/12/15
Title Permit Eng.		
Approved by (Signature) James A. Amos	Name (Printed/Typed)	Date JUL -9 2015
Title FIELD MANAGER	Office CARLSBAD FIELD OFFICE	

Application approval does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.

Conditions of approval, if any, are attached.

APPROVAL FOR TWO YEARS

K 07/21/15

Title 18 U.S.C. 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.

(Continued on page 2)

Capitan Controlled Water Basin

Approval Subject to General Requirements & Special Stipulations Attached

JUL 22 2015

SEE ATTACHED FOR CONDITIONS OF APPROVAL

APPLICATION TO DRILL

HOBBS OCD

JUL 21 2015

RECEIVED

McELVAIN ENERGY, INC.
 EK "29" FEDERAL COM. #4H BS2
 UNIT "P" SECTION 30
 T18S-R34E LEA CO. NM

In response to questions asked under Section II of Bulletin NTL-6, the following information on the above well will be provided.

1. LOCATION: SURFACE: 175' FSL & 100' FEL SECTION 30 T18S-R34E LEA CO. NM
 BHL: 510' FNL & 660' FWL SECTION 29 T18S-R34E LEA CO. NM
2. ELEVATION ABOVE SEA LEVEL: 3904' GL.
3. GEOLOGICAL NAME OF SURFACE FORMATION: Quaternary Aeolian Deposits;
4. DRILLING TOOLS AND ASSOCIATED EQUIPMENT: Conventional rotary drilling rig using drilling mud as a circulating medium for the removal of solids.
5. PROPOSED DRILLING DEPTH: TVD-9834'
 MD- 14,502'
6. ESTIMATED TOPS OF GEOLOGICAL FORMATIONS:

Rustler Anhydrite	1724'	7-Rivers	3724'	Delaware	5524'
Top of Salt	1784'	Queen	4499'	Bone Spring	7734'
Base of Salt	3289'	Penrose	4774'	2nd B. Spring Sd.	9509'
Yates	3289'	San Andres	5299'	TD (TVD)	9964'

7. POSSIBLE MINERAL BEARING FORMATIONS:

YATES	Oil Gas Water	San Andres	Oil Gas Water
Queen	Oil Gas Water	Delaware	Oil Gas Water
Penrose	Oil Gas Water	Bone Spring	Oil Gas Water

8. CASING PROGRAM: See COA

HOLE SIZE	INTERVAL	CASING OD	WEIGHT	THREAD	COLLAR	GRADE	CONDITION
26"	0-40'	20"	NA	NA	NA	Conductor	New
17½"	0-1749'	13 3/8"	54.5#	8-R	ST&C	J-55	New
12½"	0- 3400'	9 5/8"	40#	8-R	LT&C	J-55	New
8 3/4"	0-8500'	5½"	17#	8-R	DQX	HCP-110	New
	8500-14,502'	5½"	17#	BUTTRESS	DQX	HCP-110	New

CASING SAFETY FACTORS: Collapse 1.125 Burst 1.00 Body Yield 1.5
 Joint Strength 8-Round 1.8
 Buttress 1.6

APPLICATION TO DRILL

McELVAIN ENERGY, INC.
EK "29" FEDERAL COM. #4H BS2
UNIT "P" SECTION 30
T18S-R34E LEA CO. NM

9. CASING SETTING DEPTHS AND CEMENTING:

20" Conductor Drill 26" hole to 40'. Set 40' of 20" conductor pipe and cement to surface with Redi-mix cement.

17½" Surface

Drill 17½" hole to 1749'. Run and set 1749' of 13 3/8" casing as follows: ~~749' of 13 3/8" 54.5# 8-R J-55 ST&C casing.~~ ^{1749'} ~~1000' of 13 3/8" 40# H-40 ST&C casing.~~ Cement with 1275 Sx of Class "C" cement + 4% Bentonite, + Defoamer, + 0.25# Cello Flakes/Sx, + 25 CaCl, 100% Excess Yield 1.75, tail in with 200 Sx. Class "C" cement + 2% CaCl, 100% Excess Yield 1.34. Circulate cement to surface.

See COA
Does Not match page #1
13 3/8" 40# H-40
Not in Red B/C

9 5/8" Intermediate

See COA
Drill 12½" hole to to ~~3400'~~. Run and set 3400' of 9 5/8" 40# J-55 LT&C casing. Cement with 600 Sx. of Class "C" cement + 6% Bentonite, + 5% Salt, + Defoamer, 50% Excess Yield 1.9, tail in with 300 Sx. of Class "C" cement + 1% CaCl, 50% Excess Yield 1.35, 100% excess circulate cement to surface.

5½" Production

See COA
Drill 8 3/4" hole to KO Point of 9534' continue with 7 7/8" bit to a total MD of 14,502'. Run and set 14,502' of 5½" 17# HCP-110 as follows: 6002' of 5½" 17# HCP-110 BT&C, 8500' of 5½" 17# HCP-110 LT&C casing. Cement in two stages with DV tool at 7500±' Cement first stage with 1200 Sx. of Class "H" cement + Fluid loss additives, + Retarder, + Defoamer Yield 1.69, 25% Excess, Stage 2 cement with 700 Sx. of Class "H" cement + Fluid loss additives, + Retarders, + Defoamer, 25% Excess Yield 1.69, tail in with 150 Sx. of Class "H" neat cement + Defoamer, 10% Excess Yield 1.18, Estimated top of cement 3000' from surface.

10. PRESSURE CONTROL EQUIPMENT:

See COA
Exhibit "E" shows a 3000 PSI working pressure B.O.P. consisting of a packoff an annular bag type preventor, blind rams, and pipe rams. A 13 5/8" B.O.P. will be nipped up on the 13 3/8" surface casing and will remain on the hole till the 9 5/8" intermediate casing is run. It will be tested by a third party testing company to 2000 PSI. A 11" 5000 PSI B.O.P. will be nipped up the hole for the drilling of the production hole. It will be tested by a third party testing company to 5000 PSI. The B.O.P.s will be operated at least once in each 24 hour period and the blind rams will be operated when the drill pipe is out of the hole. A full opening stabbing valve and an upper kelly cock will be available on the derrick floor at all times and will be compatible with the drill pipe that is in use while drilling this well. Exhibit "E-1" shows a 3" 5000 PSI choke manifold with a manual choke and a hydraulically operated remote choke. The choke manifold will be a rigid connection to the B.O.P.. No abnormal pressures or temperatures are expected while drilling of this well. Other wells drilled in this near vicinity have not encountered any abnormal pressures or temperatures. No H2S is expected to be encountered.

See COA

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11. PROPOSED MUD CIRCULATING SYSTEM:

DEPTH	MUD WT.	VISC.	FLUID LOSS	TYPE MUD SYSTEM
40-1749'	8.4-9.4	30-36	NC	Fresh water spud mud use paper to control seepage.
1749-3400'	9.8-10.2	28-32	NC	Brine watermud system use paper where needed to control seepage. Use high viscosity sweeps to clean hole.
3400-14,502	8.7-9.2	28-32	12-15 cc	Cut Brine use a Polymer to control water loss, use high viscosity sweeps to clean hole.

Sufficient mud materials will be kept on location at all times in order to combat lost circulation, or unexpected kicks. In order to run DST's , open hole logs, cut cores, and run casing the viscosity, water loss, and other properties may have to be altered to meet these requirements.

THIS WELL WILL BE DRILLED USING A CLOSED MUD SYSTEM.

APPLICATION TO DRILL

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12. LOGGING, CORING, AND TESTING PROGRAM: * See COA

- A. Open hole logs: Laterolog, Gamma Ray, SP, Caliper from KO point to 3400'
- B. Gamma Ray Neutron from KO point to surface.
- C. Rig up Mud Logger and start logging at 3500'.
- D. No DST's, Cores are anticipated at this time.

13. POTENTIAL HAZARDS:

H₂S See COA

No abnormal pressures or temperatures are expected during the drilling of this well. There is no known presence of H₂S in this area. If H₂S is encountered the operator will comply with the provisions of Onshore Oil & Gas Order No. 6. No lost circulation is expected to occur. All personnel will be familiar with all aspects of safe operation of the equipment being used to drill this well. Estimated BHP 4200 PSI, and Estimated BHT 165°.

14. ANTICIPATED STARTING DATE AND DURATION OF OPERATION:

Road and location construction will begin after the BLM has approved the APD. Anticipated spud date will be as soon after BLM approval and as soon as a drilling rig is available. Move in operations and drilling is expected to take 28 days. In order to complete this well for injection it will take approximately 20 days and additional 20 days to construct surface facilities and lay injection lines.

15. OTHER FACETS OF THE OPERATION:

After casing is run and cemented the drilling rig will be removed and location will be cleaned up in preparation to commence completion of the well, perforating acidizing and fracturing of the pay interval.



McElvain Energy, Inc.

Sec. 30 T18S R34E

EK Federal Com 30

EK Federal Com 29 #4H

Wellbore #1

Plan: Plan #1 19Jan15 kjs

Standard Planning Report

10 February, 2015



New Tech Planning Report

Database: EDM 2003.16 Single User Db
Company: McElvain Energy, Inc.
Project: Sec. 30 T18S R34E
Site: EK Federal Com 30
Well: EK Federal Com 29 #4H
Wellbore: Wellbore #1
Design: Plan #1 19Jan15 kjs

Local Co-ordinate Reference: Well EK Federal Com 29 #4H
TVD Reference: WELL @ 3924.0ft (Original Well Elev)
MD Reference: WELL @ 3924.0ft (Original Well Elev)
North Reference: True
Survey Calculation Method: Minimum Curvature

Project: Sec. 30 T18S R34E, Lea County, NM

Map System: US State Plane 1983 System Datum: Mean Sea Level
Geo Datum: North American Datum 1983
Map Zone: New Mexico Eastern Zone

Site: EK Federal Com 30

Site Position: Northing: 623,533.90 ft Latitude: 32° 42' 42.986 N
From: Map Easting: 769,543.90 ft Longitude: 103° 35' 28.945 W
Position Uncertainty: 0.0 ft Slot Radius: " Grid Convergence: 0.40 °

Well: EK Federal Com 29 #4H

Well Position: +N/-S 0.0 ft Northing: 623,533.90 ft Latitude: 32° 42' 42.986 N
+E/-W 0.0 ft Easting: 769,543.90 ft Longitude: 103° 35' 28.945 W
Position Uncertainty: 0.0 ft Wellhead Elevation: ft Ground Level: 3,904.0 ft

Wellbore: Wellbore #1

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	12/31/2014	7.19	60.54	48,548

Design: Plan #1 19Jan15 kjs

Audit Notes:
Version: Phase: PLAN Tie On Depth: 0.0

Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)
	0.0	0.0	0.0	9.22

Plan Sections

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,874.0	0.00	0.00	1,874.0	0.0	0.0	0.00	0.00	0.00	0.00	
2,179.9	4.59	102.51	2,179.6	-2.7	12.0	1.50	1.50	0.00	102.51	
9,491.8	4.59	102.51	9,468.0	-129.3	583.0	0.00	0.00	0.00	0.00	
10,262.2	91.58	1.51	9,951.0	360.0	635.0	12.00	11.29	-13.11	-100.84	LP EK Fed Com 29 #
14,501.6	91.58	1.51	9,834.0	4,596.3	746.4	0.00	0.00	0.00	0.00	TD / PBHL EK Fed Co



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TVD Reference: WELL @ 3924.0ft (Original Well Elev)
MD Reference: WELL @ 3924.0ft (Original Well Elev)
North Reference: True
Survey Calculation Method: Minimum Curvature

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00
200.0	0.00	0.00	200.0	0.0	0.0	0.0	0.00	0.00	0.00
400.0	0.00	0.00	400.0	0.0	0.0	0.0	0.00	0.00	0.00
600.0	0.00	0.00	600.0	0.0	0.0	0.0	0.00	0.00	0.00
800.0	0.00	0.00	800.0	0.0	0.0	0.0	0.00	0.00	0.00
1,000.0	0.00	0.00	1,000.0	0.0	0.0	0.0	0.00	0.00	0.00
1,200.0	0.00	0.00	1,200.0	0.0	0.0	0.0	0.00	0.00	0.00
1,400.0	0.00	0.00	1,400.0	0.0	0.0	0.0	0.00	0.00	0.00
1,600.0	0.00	0.00	1,600.0	0.0	0.0	0.0	0.00	0.00	0.00
1,724.0	0.00	0.00	1,724.0	0.0	0.0	0.0	0.00	0.00	0.00
Rustler									
1,784.0	0.00	0.00	1,784.0	0.0	0.0	0.0	0.00	0.00	0.00
Salt									
1,800.0	0.00	0.00	1,800.0	0.0	0.0	0.0	0.00	0.00	0.00
1,874.0	0.00	0.00	1,874.0	0.0	0.0	0.0	0.00	0.00	0.00
Start Build 1.50									
2,000.0	1.89	102.51	2,000.0	-0.5	2.0	-0.1	1.50	1.50	0.00
2,179.9	4.59	102.51	2,179.6	-2.7	12.0	-0.7	1.50	1.50	0.00
Hold 4.59° Inc., 102.54° Az									
2,200.0	4.59	102.51	2,199.6	-3.0	13.5	-0.8	0.00	0.00	0.00
2,400.0	4.59	102.51	2,399.0	-6.5	29.1	-1.7	0.00	0.00	0.00
2,600.0	4.59	102.51	2,598.3	-9.9	44.8	-2.6	0.00	0.00	0.00
2,800.0	4.59	102.51	2,797.7	-13.4	60.4	-3.5	0.00	0.00	0.00
3,000.0	4.59	102.51	2,997.0	-16.9	76.0	-4.5	0.00	0.00	0.00
3,200.0	4.59	102.51	3,196.4	-20.3	91.6	-5.4	0.00	0.00	0.00
3,303.1	4.59	102.51	3,299.2	-22.1	99.7	-5.9	0.00	0.00	0.00
Yates									
3,400.0	4.59	102.51	3,395.8	-23.8	107.2	-6.3	0.00	0.00	0.00
3,404.3	4.59	102.51	3,400.0	-23.9	107.6	-6.3	0.00	0.00	0.00
Intermediate Csg									
3,600.0	4.59	102.51	3,595.1	-27.3	122.9	-7.2	0.00	0.00	0.00
3,729.5	4.59	102.51	3,724.2	-29.5	133.0	-7.8	0.00	0.00	0.00
Seven Rivers									
3,800.0	4.59	102.51	3,794.5	-30.7	138.5	-8.1	0.00	0.00	0.00
4,000.0	4.59	102.51	3,993.8	-34.2	154.1	-9.0	0.00	0.00	0.00
4,200.0	4.59	102.51	4,193.2	-37.7	169.7	-10.0	0.00	0.00	0.00
4,400.0	4.59	102.51	4,392.6	-41.1	185.3	-10.9	0.00	0.00	0.00
4,507.1	4.59	102.51	4,499.3	-43.0	193.7	-11.4	0.00	0.00	0.00
Queen									
4,600.0	4.59	102.51	4,591.9	-44.6	201.0	-11.8	0.00	0.00	0.00
4,783.0	4.59	102.51	4,774.4	-47.8	215.2	-12.6	0.00	0.00	0.00
Penrose									
4,800.0	4.59	102.51	4,791.3	-48.1	216.6	-12.7	0.00	0.00	0.00
5,000.0	4.59	102.51	4,990.6	-51.5	232.2	-13.6	0.00	0.00	0.00
5,200.0	4.59	102.51	5,190.0	-55.0	247.8	-14.5	0.00	0.00	0.00
5,309.8	4.59	102.51	5,299.4	-56.9	256.4	-15.1	0.00	0.00	0.00
San Andres									
5,400.0	4.59	102.51	5,389.4	-58.4	263.4	-15.5	0.00	0.00	0.00
5,535.5	4.59	102.51	5,524.5	-60.8	274.0	-16.1	0.00	0.00	0.00
Delaware									
5,575.7	4.59	102.51	5,564.5	-61.5	277.2	-16.3	0.00	0.00	0.00
1st Delaware Sand									



New Tech Planning Report

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Site: EK Federal Com 30
Well: EK Federal Com 29 #4H
Wellbore: Wellbore #1
Design: Plan #1 19Jan15 kjs

Local Co-ordinate Reference:
TVD Reference:
MD Reference:
North Reference:
Survey Calculation Method:

Well EK Federal Com 29 #4H
WELL @ 3924.0ft (Original Well Elev)
WELL @ 3924.0ft (Original Well Elev)
True
Minimum Curvature

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
5,600.0	4.59	102.51	5,588.7	-61.9	279.1	-16.4	0.00	0.00	0.00
5,736.2	4.59	102.51	5,724.5	-64.3	289.7	-17.0	0.00	0.00	0.00
2nd Delaware Sand									
5,800.0	4.59	102.51	5,788.1	-65.4	294.7	-17.3	0.00	0.00	0.00
6,000.0	4.59	102.51	5,987.4	-68.8	310.3	-18.2	0.00	0.00	0.00
6,200.0	4.59	102.51	6,186.8	-72.3	325.9	-19.1	0.00	0.00	0.00
6,400.0	4.59	102.51	6,386.1	-75.8	341.5	-20.1	0.00	0.00	0.00
6,600.0	4.59	102.51	6,585.5	-79.2	357.1	-21.0	0.00	0.00	0.00
6,800.0	4.59	102.51	6,784.9	-82.7	372.8	-21.9	0.00	0.00	0.00
7,000.0	4.59	102.51	6,984.2	-86.2	388.4	-22.8	0.00	0.00	0.00
7,200.0	4.59	102.51	7,183.6	-89.6	404.0	-23.7	0.00	0.00	0.00
7,400.0	4.59	102.51	7,382.9	-93.1	419.6	-24.6	0.00	0.00	0.00
7,600.0	4.59	102.51	7,582.3	-96.6	435.2	-25.6	0.00	0.00	0.00
7,752.9	4.59	102.51	7,734.7	-99.2	447.2	-26.3	0.00	0.00	0.00
Bone Spring									
7,800.0	4.59	102.51	7,781.7	-100.0	450.9	-26.5	0.00	0.00	0.00
8,000.0	4.59	102.51	7,981.0	-103.5	466.5	-27.4	0.00	0.00	0.00
8,200.0	4.59	102.51	8,180.4	-107.0	482.1	-28.3	0.00	0.00	0.00
8,400.0	4.59	102.51	8,379.7	-110.4	497.7	-29.2	0.00	0.00	0.00
8,600.0	4.59	102.51	8,579.1	-113.9	513.3	-30.1	0.00	0.00	0.00
8,800.0	4.59	102.51	8,778.5	-117.4	529.0	-31.1	0.00	0.00	0.00
8,982.0	4.59	102.51	8,959.9	-120.5	543.2	-31.9	0.00	0.00	0.00
1st Bone Spring Sand									
9,000.0	4.59	102.51	8,977.8	-120.8	544.6	-32.0	0.00	0.00	0.00
9,200.0	4.59	102.51	9,177.2	-124.3	560.2	-32.9	0.00	0.00	0.00
9,400.0	4.59	102.51	9,376.5	-127.8	575.8	-33.8	0.00	0.00	0.00
9,491.8	4.59	102.51	9,468.0	-129.3	583.0	-34.2	0.00	0.00	0.00
KOP 12°/100'									
9,533.8	6.15	48.67	9,509.9	-128.2	586.3	-32.6	12.00	3.70	-127.94
2nd Bone Spring Sand									
9,600.0	12.92	21.72	9,575.2	-119.0	591.7	-22.6	12.00	10.24	-40.74
9,800.0	36.36	7.78	9,755.8	-38.3	608.3	59.7	12.00	11.72	-6.97
10,000.0	60.22	4.22	9,887.9	109.2	622.9	207.6	12.00	11.93	-1.78
10,107.2	73.05	3.01	9,930.4	207.2	629.0	305.4	12.00	11.96	-1.13
TOP TARGET WINDOW									
10,200.0	84.14	2.09	9,948.7	297.9	633.0	395.5	12.00	11.96	-0.98
10,262.2	91.58	1.51	9,951.0	360.0	635.0	457.1	12.00	11.96	-0.95
LP EK Fed Com 29 #4H									
10,262.3	91.58	1.51	9,951.0	360.1	635.0	457.2	0.00	0.00	0.00
Landing Pt 91.58° Inc, 1.51° Az									
10,400.0	91.58	1.51	9,947.2	497.7	638.6	593.6	0.00	0.00	0.00
10,436.3	91.58	1.51	9,946.2	534.0	639.6	629.6	0.00	0.00	0.00
TARGET CENTER LINE									
10,600.0	91.58	1.51	9,941.7	697.6	643.9	791.7	0.00	0.00	0.00
10,800.0	91.58	1.51	9,936.2	897.4	649.1	989.9	0.00	0.00	0.00
11,000.0	91.58	1.51	9,930.6	1,097.3	654.4	1,188.0	0.00	0.00	0.00
11,200.0	91.58	1.51	9,925.1	1,297.1	659.6	1,386.1	0.00	0.00	0.00
11,400.0	91.58	1.51	9,919.6	1,497.0	664.9	1,584.2	0.00	0.00	0.00
11,600.0	91.58	1.51	9,914.1	1,696.8	670.2	1,782.3	0.00	0.00	0.00
11,800.0	91.58	1.51	9,908.6	1,896.7	675.4	1,980.4	0.00	0.00	0.00
12,000.0	91.58	1.51	9,903.0	2,096.5	680.7	2,178.5	0.00	0.00	0.00
12,200.0	91.58	1.51	9,897.5	2,296.4	685.9	2,376.6	0.00	0.00	0.00
12,400.0	91.58	1.51	9,892.0	2,496.3	691.2	2,574.8	0.00	0.00	0.00



New Tech Planning Report

Database: EDM 2003.16 Single User Db
Company: McElvain Energy, Inc.
Project: Sec. 30 T18S R34E
Site: EK Federal Com 30
Well: EK Federal Com 29 #4H
Wellbore: Wellbore #1
Design: Plan #1 19Jan15 kjs

Local Co-ordinate Reference:
TVD Reference:
MD Reference:
North Reference:
Survey Calculation Method:

Well EK Federal Com 29 #4H
WELL @ 3924.0ft (Original Well Elev)
WELL @ 3924.0ft (Original Well Elev)
True
Minimum Curvature

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
12,600.0	91.58	1.51	9,886.5	2,696.1	696.4	2,772.9	0.00	0.00	0.00
12,800.0	91.58	1.51	9,881.0	2,896.0	701.7	2,971.0	0.00	0.00	0.00
13,000.0	91.58	1.51	9,875.4	3,095.8	706.9	3,169.1	0.00	0.00	0.00
13,200.0	91.58	1.51	9,869.9	3,295.7	712.2	3,367.2	0.00	0.00	0.00
13,400.0	91.58	1.51	9,864.4	3,495.5	717.4	3,565.3	0.00	0.00	0.00
13,600.0	91.58	1.51	9,858.9	3,695.4	722.7	3,763.4	0.00	0.00	0.00
13,800.0	91.58	1.51	9,853.4	3,895.2	728.0	3,961.6	0.00	0.00	0.00
14,000.0	91.58	1.51	9,847.8	4,095.1	733.2	4,159.7	0.00	0.00	0.00
14,200.0	91.58	1.51	9,842.3	4,294.9	738.5	4,357.8	0.00	0.00	0.00
14,400.0	91.58	1.51	9,836.8	4,494.8	743.7	4,555.9	0.00	0.00	0.00
14,500.6	91.58	1.51	9,834.0	4,595.3	746.4	4,655.5	0.00	0.00	0.00
TD at 14501.6									
14,501.6	91.58	1.51	9,834.0	4,596.3	746.4	4,656.5	0.00	0.00	0.00
TD / PBHL EK Fed Com 29 #4H									

Targets

Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
- hit/miss target									
- Shape									
LP EK Fed Com 29 #4H	0.00	0.00	9,951.0	360.0	635.0	623,898.34	770,176.36	32° 42' 46.548 N	103° 35' 21.513 W
- plan hits target									
- Circle (radius 25.0)									
TD / PBHL EK Fed Com	0.00	0.00	9,834.0	4,596.3	746.4	628,135.30	770,258.10	32° 43' 28.465 N	103° 35' 20.208 W
- plan hits target									
- Point									

Casing Points

Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (in)	Hole Diameter (in)
3,404.3	3,400.0	Intermediate Csg	0	0



New Tech Planning Report

Database:	EDM 2003.16 Single User Db	Local Co-ordinate Reference:	Well EK Federal Com 29 #4H
Company:	McElvain Energy, Inc.	TVD Reference:	WELL @ 3924.0ft (Original Well Elev)
Project:	Sec. 30 T18S R34E	MD Reference:	WELL @ 3924.0ft (Original Well Elev)
Site:	EK Federal Com 30	North Reference:	True
Well:	EK Federal Com 29 #4H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 19Jan15 kjs		

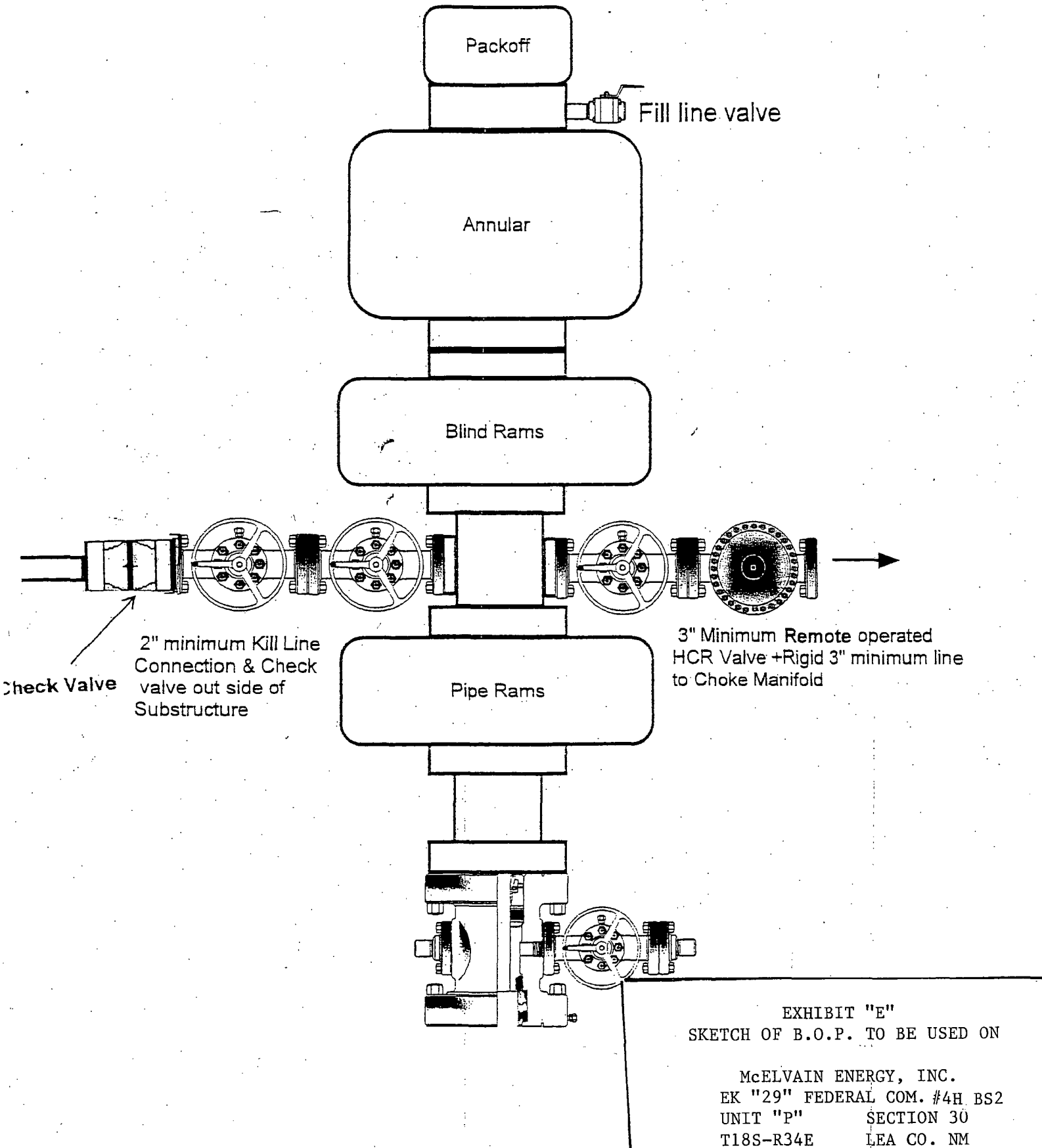
Formations					
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
1,724.00	1,724.00	Rustler		-1.62	9.22
1,784.00	1,784.00	Salt		-1.62	9.22
3,303.10	3,299.20	Yates		-1.62	9.22
3,729.50	3,724.20	Seven Rivers		-1.62	9.22
4,507.10	4,499.30	Queen		-1.62	9.22
4,783.00	4,774.40	Penrose		-1.62	9.22
5,309.80	5,299.40	San Andres		-1.62	9.22
5,535.50	5,524.50	Delaware		-1.62	9.22
5,575.70	5,564.50	1st Delaware Sand		-1.62	9.22
5,736.20	5,724.50	2nd Delaware Sand		-1.62	9.22
7,752.90	7,734.70	Bone Spring		-1.62	9.22
8,982.00	8,959.90	1st Bone Spring Sand		-1.62	9.22
9,533.80	9,509.90	2nd Bone Spring Sand		-1.62	9.22
10,107.20	9,930.40	TOP TARGET WINDOW		-1.62	9.22
10,436.30	9,946.20	TARGET CENTER LINE		-1.62	9.22
		BASE TARGET WINDOW		-1.62	9.22

Plan Annotations				
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
1,874.0	1,874.0	0.0	0.0	Start Build 1.50
2,179.9	2,179.9	-2.7	12.0	Hold 4.59° inc, 102.54° Az
9,491.8	9,468.0	-129.3	583.0	KOP 12°/100
10,262.3	9,951.0	360.1	635.0	Landing Pt 91.58° Inc, 1.51° Az
14,500.6	9,834.0	4,595.3	746.4	TD at 14501.6

McELVAIN ENERGY, INC.

EK "29" FEDERAL COM. #4H BS2

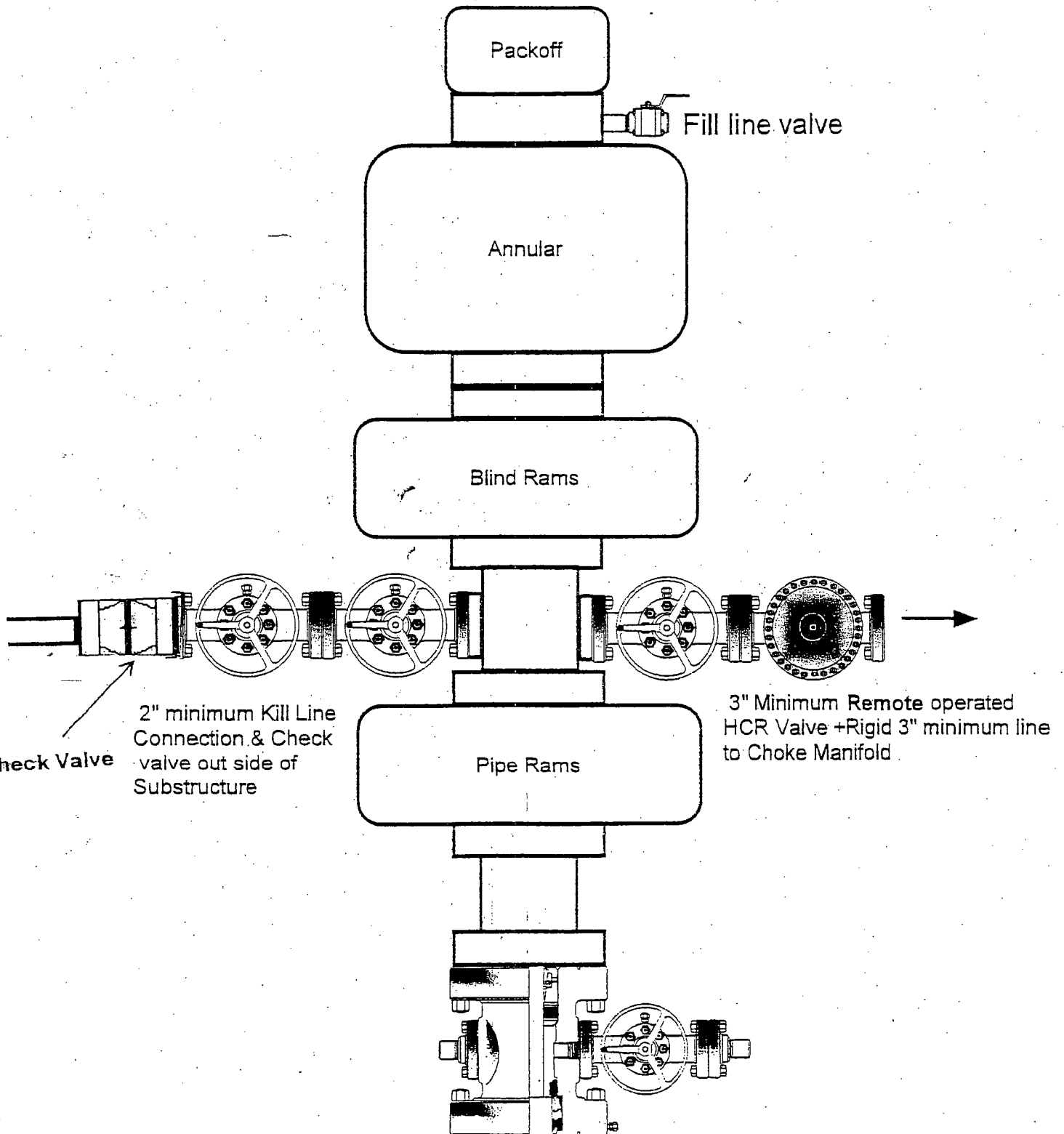
3000 PSI 13 5/8" BOP



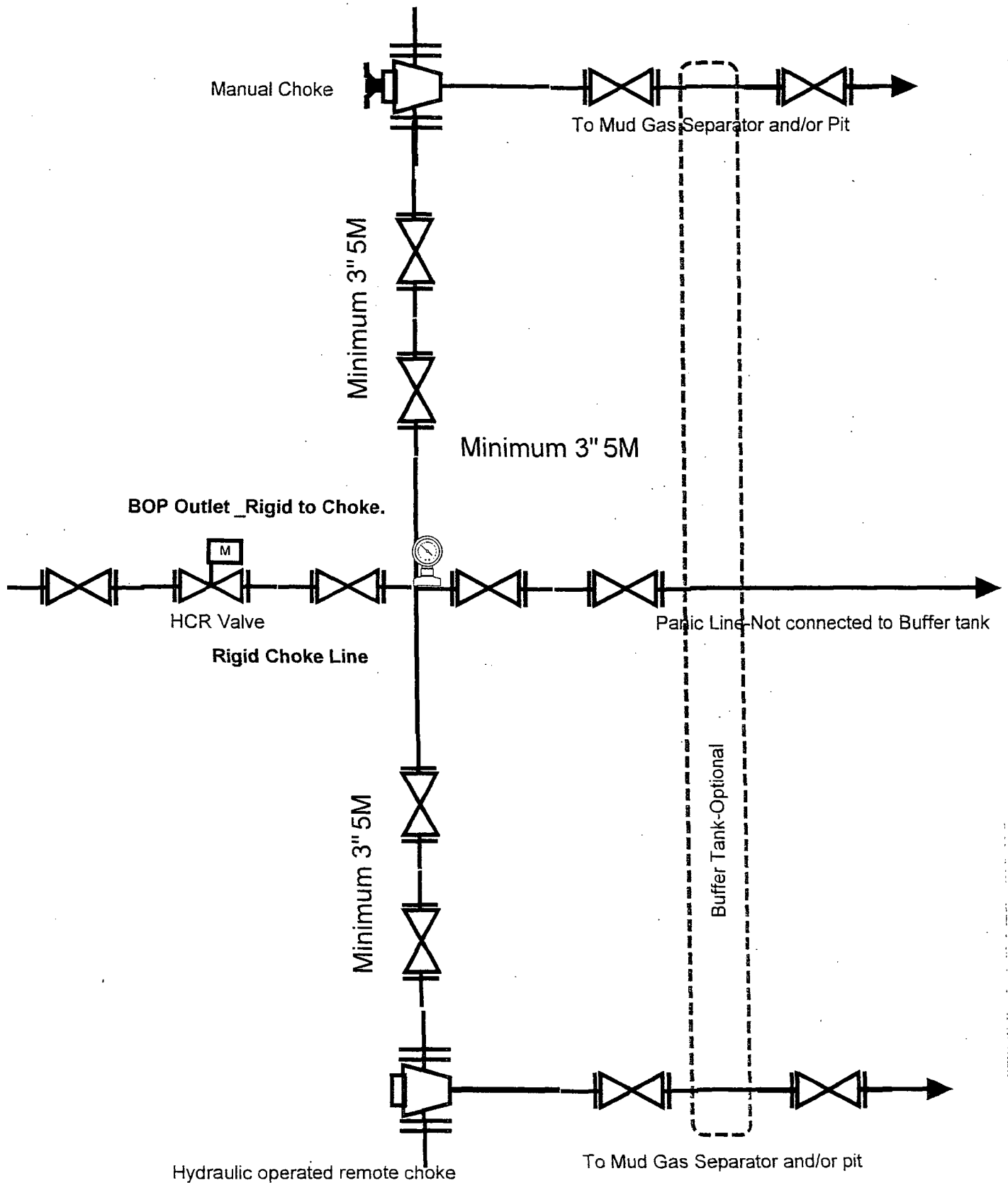
McELVAIN ENERGY, INC.

EK "29" FEDERAL COM. #4H

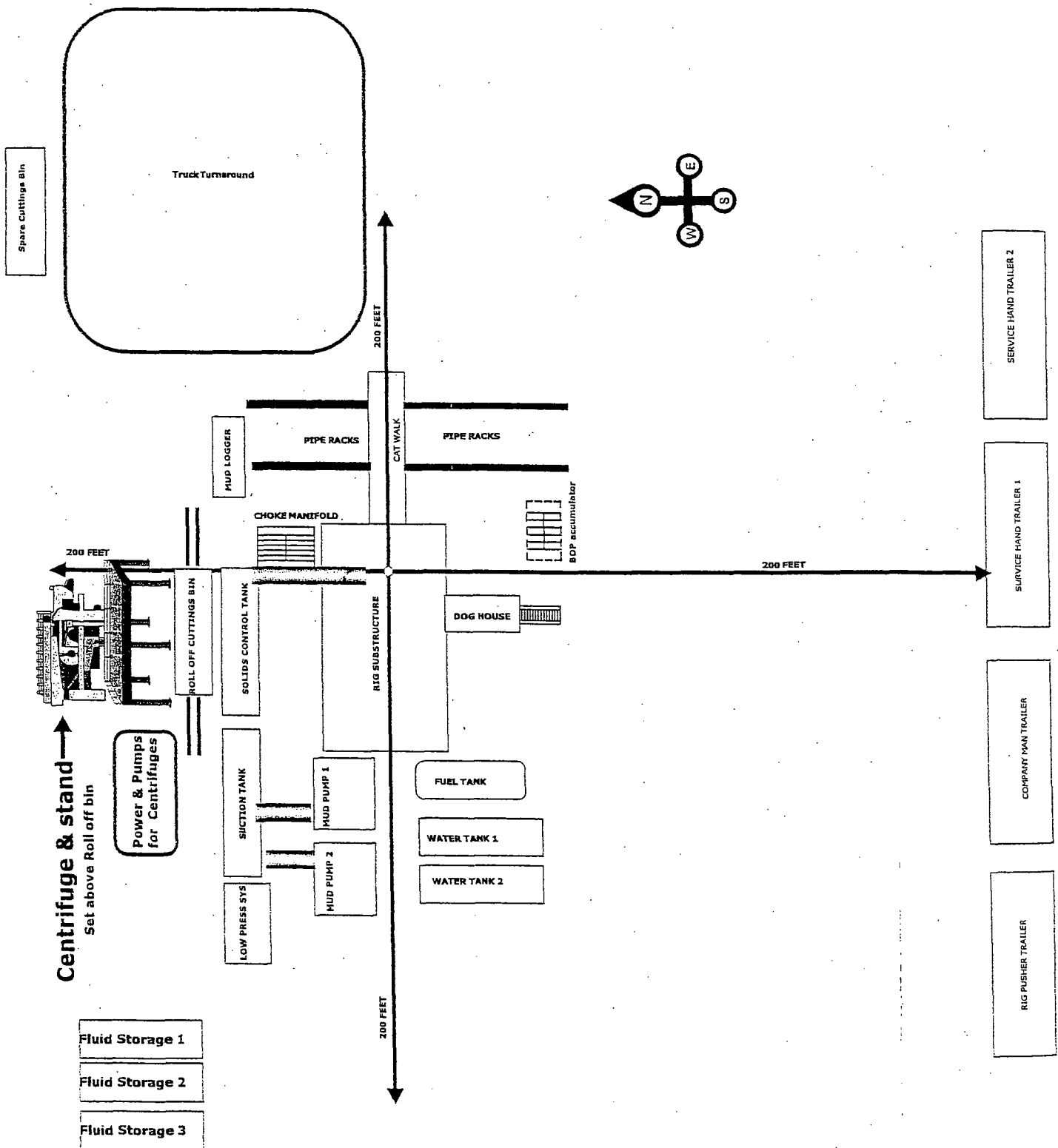
5000 PSI 13 5/8" BOP



5,000 psi Manifold Equipment- Configuration of chokes may vary.



Closed Loop Oil Well



Note: The Rig and Closed System Company for this well have not been selected thus the set up shown is simply generic.

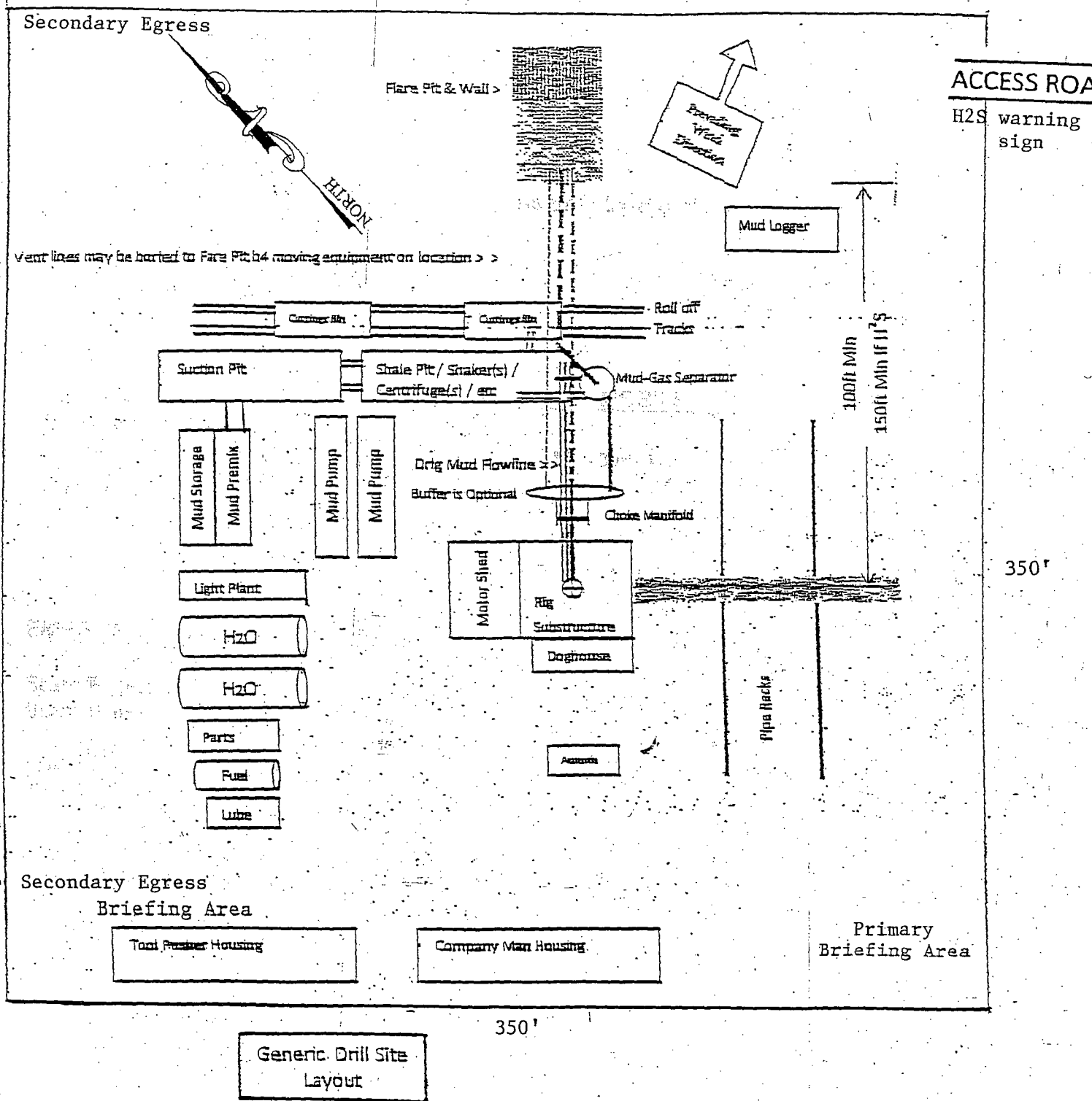
Operations and Maintenance Plan

Closed Loop equipment will be inspected and monitored closely on a daily basis by each drilling rig Tour and by those hired specifically to operate the equipment. Any leak or release detected will be repaired immediately and the proper NMOCD official will be notified within the 48 hr requirement. A large release will require McELVAIN ENERGY, INC. representatives to contact BLM immediately at the Carlsbad office "575 234 5972" Hobbs "575 393 3612" as well as the NMOCD @ 575 393 6161 as stated by NMOCD rule 116.

Closure Plan

During and after drilling operations, liquids (which apply), all drill cuttings and drilling fluids will be hauled and disposed of at the R-360 disposal (permit number NM 01-0006) located about 30 miles East of Carlsbad, New Mexico. An alternate approved disposal site has been selected Parabo disposal "Sundance " which is 4 miles East of Eunice (permit number NM 01-0003). The Second site would be used in the event of economics or physical problems with R-360 disposal.

TOP SOIL



Preplanning, reasonable spacing accommodations for a useable "Closed Loop" drillsite layout is challenging. Particular site specific conflicts need to be resolved. This generic APD plat was prepared to demonstrate several necessary elements. The plat should include: a north arrow, prevailing wind direction, spacing access for truck removal of cutting bins, flare pit location, and piping provision to vent all combustible gas to the flare pit. Include the choke manifold and mud-gas separator location and their connection routing.

EXHIBIT "D" RIG LAYOUT PLAT

McELVAIN ENERGY, INC.
EK "29" FEDERAL COM. #4H BS
UNIT "P" SECTION 30
T18S-R34E LEA CO. NM