State of New Mexico
Energy, Minerals and Natural Resources Department

Susana Martinez
Governor

David Martin
Cabinet Secretary-Designate

Brett F. Woods, Ph.D.
Deputy Cabinet Secretary

Jami Bailey, Division Director
Oil Conservation Division

New Mexico Oil Conservation Division approval and conditions listed below are made in accordance with OCD Rule 19.15.7.11 and are in addition to the actions approved by BLM on the following 3160-3 APD form.

Operator Signature Date: 6-21-14
Well information;
Operator Coleman, Well Name and Number Payne 22 #31

API# 30 045 35577, Section 22, Township 32 (N)/S, Range 10 (E)/W

Conditions of Approval:
(See the below checked and handwritten conditions)

- ✓ Notify Aztec OCD 24hrs prior to casing & cement.
- ✓ Hold C-104 for directional survey & "As Drilled" Plat
- o Hold C-104 for NSL, NSP, DHC
- o Spacing rule violation. Operator must follow up with change of status notification on other well to be shut in or abandoned
- o Regarding the use of a pit, closed loop system or below grade tank, the operator must comply with the following as applicable:
  - A pit requires a complete C-144 be submitted and approved prior to the construction or use of the pit, pursuant to 19.15.17.8.A
  - A closed loop system requires notification prior to use, pursuant to 19.15.17.9.A
  - A below grade tank requires a registration be filed prior to the construction or use of the below grade tank, pursuant to 19.15.17.8.C
- o Once the well is spud, to prevent ground water contamination through whole or partial conduits from the surface, the operator shall drill without interruption through the fresh water zone or zones and shall immediately set in cement the water protection string
- ✓ Regarding Hydraulic Fracturing, review EPA Underground Injection Control Guidance 84
- ✓ Oil base muds are not to be used until fresh water zones are cased and cemented providing isolation from the oil or diesel. This includes synthetic oils. Oil based mud, drilling fluids and solids must be contained in a steel closed loop system.
- ✓ Well-bore communication is regulated under 19.15.29 NMAC. This requires well-bore Communication to be reported in accordance with 19.15.29.8.

Chad Hess
NMOCD Approved by Signature

12-1-2014
Date

1220 South St. Francis Drive • Santa Fe, New Mexico 87505
Phone (505) 476-3460 • Fax (505) 476-3462 • www.emnrd.state.nm.us/ocd

Form 3160-3
(March 2012)

RECEIVED
JUL 18 2014
Farmington Field Office
Bureau of Land Management

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

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

OIL CONS. DIV DIST. 3
OCT 24 2014

1a. Type of work: ☑ DRILL ☐ REENTER	5. Lease Serial No. NMSF-080507
1b. Type of Well: ☐ Oil Well ☑ Gas Well ☐ Other ☐ Single Zone ☑ Multiple Zone	6. If Indian, Allotee or Tribe Name N/A
2. Name of Operator COLEMAN OIL & GAS, INC.	7. If Unit or CA Agreement, Name and No. N/A
3a. Address P. O. DRAWER 3337 FARMINGTON NM 87499	8. Lease Name and Well No. PAYNE 22 #31
3b. Phone No. *(include area code)* 505 327-0356	9. API Well No. 30-045- 35577
4. Location of Well *(Report location clearly and in accordance with any State requirements.*)* At surface H 1822' FNL & 1245' FEL At proposed prod. zone B 1220' FNL & 1980' FEL	10. Field and Pool, or Exploratory BLANCO MESA VERDE & BASIN DK
	11. Sec., T. R. M. or Blk. and Survey or Area 22-32N-10W NMPM
14. Distance in miles and direction from nearest town or post office* 12 AIR MILES NE OF AZTEC, NM	12. County or Parish SAN JUAN / 13. State NM
15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any) SHL: 821' BHL: 660'	16. No. of acres in lease 1,633.61 / 17. Spacing Unit dedicated to this well "E2" (NWSE & LOTS 1-5, 7, & 8)
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. SHL: 35' (PAYNE 221) BHL: 853' (PAYNE 4)	19. Proposed Depth TVD: 7660' MD: 7837' / 20. BLM/BIA Bond No. on file NM-2817
21. Elevations (Show whether DF, KDB, RT, GL, etc.) 6162' UNGRADED	22. Approximate date work will start* 09/01/2014 / 23. Estimated duration 1 MONTH

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.
2. A Drilling Plan.
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).
4. Bond to cover the operations unless covered by an existing bond on file (see Item 20 above).
5. Operator certification
6. Such other site specific information and/or plans as may be required by the BLM.

25. Signature	Name *(Printed/Typed)* BRIAN WOOD (PHONE: 505 466-8120)	Date 06/21/2014
Title CONSULTANT	(FAX: 505 466-9682)	
Approved by *(Signature)*	Name *(Printed/Typed)*	Date 10/22/14
Title AFM	Office FFO	

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.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)

DRILLING OPERATIONS AUTHORIZED ARE SUBJECT TO COMPLIANCE WITH ATTACHED "GENERAL REQUIREMENTS"

BLM'S APPROVAL OR ACCEPTANCE OF THIS ACTION DOES NOT RELIEVE THE LESSEE AND OPERATOR FROM OBTAINING ANY OTHER AUTHORIZATION REQUIRED FOR OPERATIONS ON FEDERAL AND INDIAN LANDS

This action is subject to technical and procedural review pursuant to 43 CFR 3165.3 and appeal pursuant to 43 CFR 3165.4

NMOCD

OIL CONS. DIV DIST. 3

OCT 24 2014

RECEIVED

JUL 18 2014

Farmington Field Office
Bureau of Land Management

DISTRICT I
1625 N. French Dr., Hobbs, N.M. 88240
Phone: (575) 393-6161 Fax: (575) 393-0720

DISTRICT II
811 S. First St., Artesia, N.M. 88210
Phone: (575) 748-1283 Fax: (575) 748-9720

DISTRICT III
1000 Rio Brazos Rd., Aztec, N.M. 87410
Phone: (505) 334-6178 Fax: (505) 334-6170

DISTRICT IV
1220 S. St. Francis Dr., Santa Fe, N.M. 87505
Phone: (505) 476-3460 Fax: (505) 476-3462

State of New Mexico
Energy, Minerals & Natural Resources Department

OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, N.M. 87505

Form C-102
Revised August 1, 2011
Submit one copy to appropriate District Office

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

[1] API Number	[2] Pool Code	[3] Pool Name
30-045- 35577	72319	BLANCO - MESA VERDE (PRORATED GAS)

[4] Property Code	[5] Property Name	[6] Well Number
313928	PAYNE 22	31

[7] OGRID No.	[8] Operator Name	[9] Elevation
4838	COLEMAN OIL & GAS, INC.	6162

[10] Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
H	22	32 N	10 W	LOT 4	1822	NORTH	1245	EAST	SAN JUAN

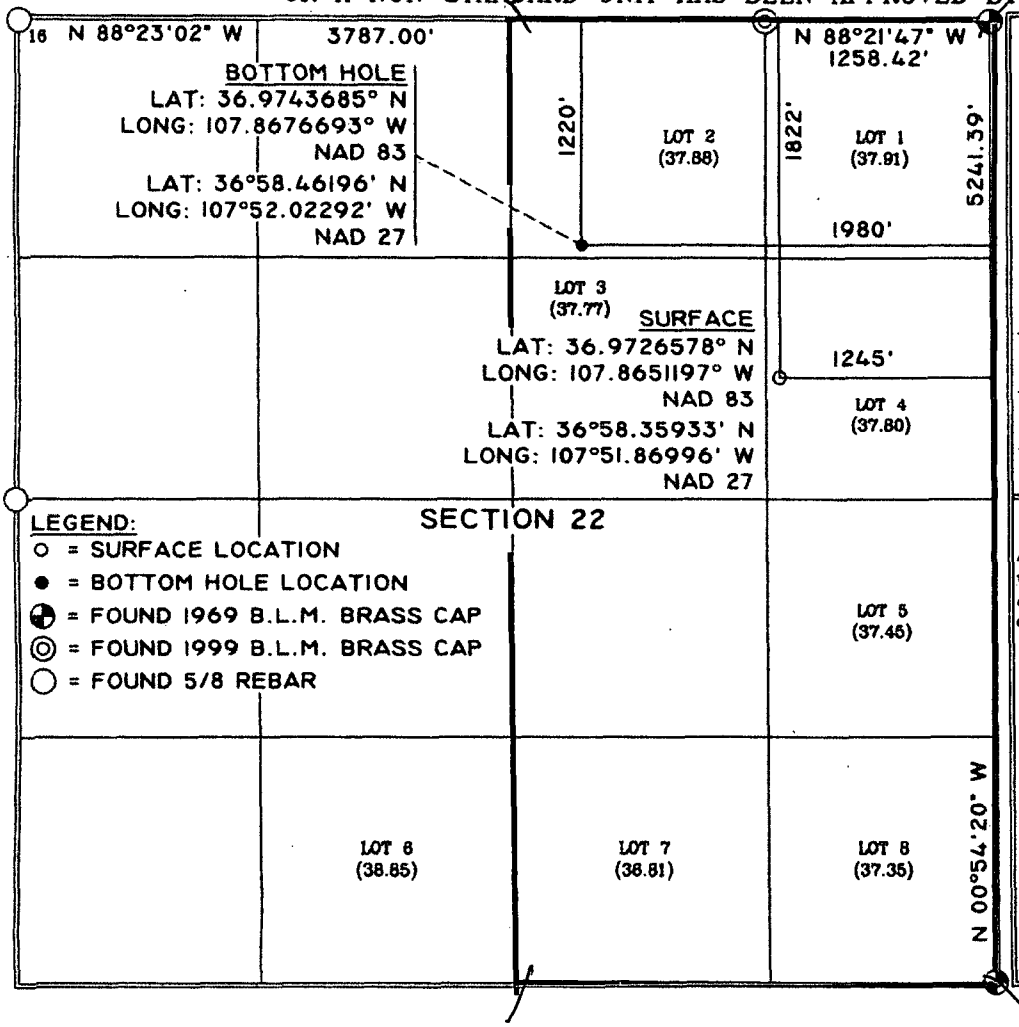
[11] Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
B	22	32 N	10 W	LOT 2	1220	NORTH	1980	EAST	SAN JUAN

[12] Dedicated Acres	[13] Joint or Infill	[14] Consolidation Code	[15] Order No.
E/2 302.87		C	

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

OIL CONS. DIV DIST. 3
OCT 24 2014



[17] 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 unleased 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.

Signature — 6-21-14 Date

BRIAN WOOD
Printed Name

brian@permitswest.com
E-mail Address

[18] 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.

05/10/13
Date of Survey

Signature and Seal of Professional Surveyor:

JOHN A. VUKONICH
NEW MEXICO
14831
REGISTERED PROFESSIONAL SURVEYOR

14831
Certificate Number

6-16-2014

DISTRICT I
1625 N. French Dr., Hobbs, N.M. 88240
Phone: (575) 393-6161 Fax: (575) 393-0720
DISTRICT II
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Form C-102
Revised August 1, 2011
Submit one copy to appropriate District Office

AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

1 API Number	2 Pool Code	3 Pool Name
30-045-35577	71599	BASIN DAKOTA (PRORATED GAS)

4 Property Code	5 Property Name	6 Well Number
313928	PAYNE 22	31

OIL CONS. DIV DIST. 3
OCT 24 2014

7 OGRID No.	8 Operator Name	9 Elevation
4838	COLEMAN OIL & GAS, INC.	6162

10 Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
H	22	32 N	10 W	LOT 4	1822	NORTH	1245	EAST	SAN JUAN

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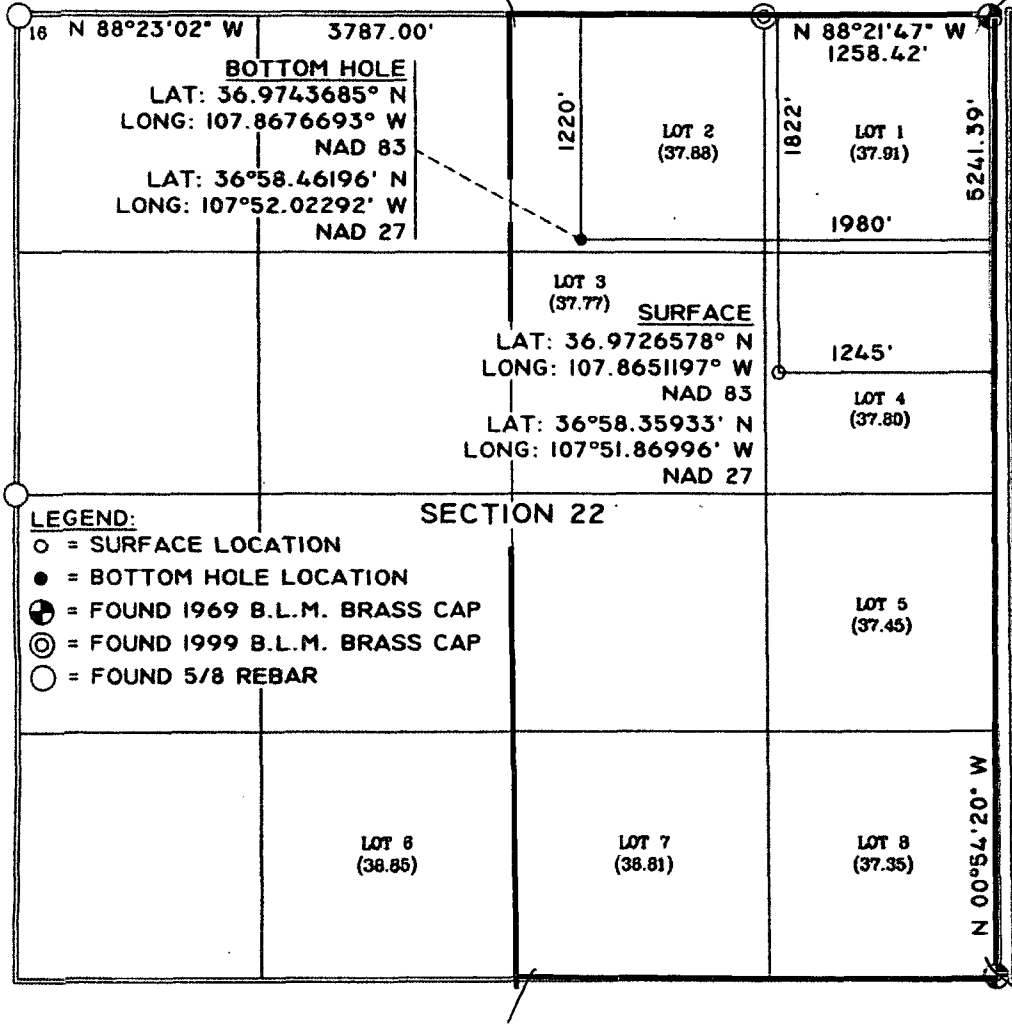
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
B	22	32 N	10 W	LOT 2	1220	NORTH	1980	EAST	SAN JUAN

12 Dedicated Acres	13 Joint or Infill	14 Consolidation Code	15 Order No.
E/2 302.97		C	

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



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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 unleased 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.

Signature — Date: 6-21-14

Printed Name: BRIAN WOOD

E-mail Address: brian@permitswest.com

18 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.

Date of Survey: 05/10/13

Signature and Seal of Professional Surveyor: JOHN A. VUKONICH, NEW MEXICO, 14831, REGISTERED PROFESSIONAL SURVEYOR

Certificate Number: 14831

4-16-2014

Coleman Oil & Gas, Inc.
Payne 22 #31
SHL: 1822' FNL & 1245' FEL
BHL: 1220' FNL & 1980' FEL
Sec. 22, T. 32 N., R. 10 W., San Juan County, NM

BHL is below a steep slope. Drill 12.25" hole to 500' then set 9.625" casing. Kick off in surface hole at 150' and begin building at 3° per 100' to 10.5° and 310° azimuth. Drill surface hole with fresh water mud.

Drill 8.75" hole with fresh water mud. Continue to build at 3° per 100' to 23.12° and 310° azimuth, hold to 2612' MD. Drop angle at 3° per 100' to vertical (0°) at 3382' MD / 3205' TVD, 100' into Lewis at 3105' TVD where 7" intermediate casing will be set.

The 7" casing will be drilled out with a 6.25" air hammer drilling assembly and drill vertical (0°) to total depth at 7837' MD / 7660' TVD. Adjustments may be made to the directional program based on geology. The 4.5" casing will be set from total depth to surface.

Move off drill rig after running 4.5" casing. Move on service unit and drill out with 3.5" bit and drill the Burro Canyon zone. Leave zone open hole to test Burro Canyon.

1. ESTIMATED TOPS (GL = 6162' & KB = 6177')

Formation	TVD	MD
Nacimiento	Surface	Surface
Ojo Alamo	1825'	1926'
Kirtland	1880'	1986'
Fruitland	2525'	2687'
Pictured Cliffs	2965'	3141'
Lewis	3105'	3282'
Huerfanito Bentonite	3655'	3832'
Cliff House Massive	4510'	4687'
Cliff House	4830'	5007'
Menefee	4900'	5077'
Point Lookout	5275'	5452'
Mancos	5585'	5762'
Gallup	5890'	6067'

Niobrara "A"	6600'	6777'
Niobrara "B"	6695'	6872'
Niobrara "C"	6735'	6912'
Juana Lopez	7095'	7272'
Carlisle	7175'	7352'
Greenhorn	7265'	7442'
Graneros	7335'	7512'
Dakota Two Wells SS	7415'	7592'
Paquata	7460'	7637'
Main Body	7500'	7677'
Drilling Rig TD	7650'	7827'
Burro Canyon	7655'	7832'
Final TD	7660' (MD = 7837')	

2. NOTABLE ZONES

Water could be found in the Nacimiento. Primary goals are the Mesa Verde - Dakota formations starting at 4510' TVD.

3. PRESSURE CONTROL

A 2000 psig double ram hydraulic BOP will be used (see diagram on following page). Since maximum anticipated formation pressure is 2200 psig (0.297 psi/ft @ 7400' TVD), accessories to the BOP will meet BLM requirements for a 2000 psig system. In accordance with Onshore Order #2 (111.A well requirements) the anticipated surface pressure assuming a partially evacuated hole with normal pressure gradient of 0.22 psi/ft will be 1628 psi (7400' TVD x 0.22 psi/ft).

The accumulator system capacity will be sufficient to close all BOPE with a 50% safety factor. Fill line, kill line and line to the choke manifold will be 2".

Coleman Oil & Gas, Inc.
Payne 22 #31
SHL: 1822' FNL & 1245' FEL
BHL: 1220' FNL & 1980' FEL
Sec. 22, T. 32 N., R. 10 W., San Juan County, NM

BOPs will be function tested every 24 hours and will be recorded on an IADC log. Accessories to the BOPE will include upper and lower Kelly cocks with handles with a stabbing valve to fit drill pipe on the floor at all times, string float at bit, 3000 psig choke manifold with 2" adjustable and 2" positive chokes, and pressure gauge.

All BOP equipment will be hydraulically operated with controls accessible both on the rig floor.

The wellhead BOP equipment will be nippled-up on the 9-5/8" x 11" 3,000 psi WP casing head prior to drilling out from under surface casing. All ram preventers and related equipment will be tested to 2,000 psi for 10 minutes. Annular preventers will be tested to 50% of rated working pressure for 10 minutes. Surface casing will be tested to 70% of internal yield pressure. All preventers and surface casing will be tested before drilling out of surface casing. BOP equipment will be tested every 14 days, after any repairs are made to the BOP equipment, and after the BOP equipment is subjected to pressure. Annular preventers will be functionally operated at least once per week. Pipe rams will be activated daily and blind rams shall be activated each trip or at least weekly. The New Mexico Oil & Gas Conservation Commission and the BLM will be notified 24 hours in advance of testing of BOPE.

4. CASING & CEMENT

Hole	Casing	lb/ft	Grade	Coupling	Setting Depth (MD)	Age
12.25"	9.625"	36	J or K-55	L T & C	0' - 500'	New
8.75"	7"	23	J or K-55	L T & C	0' - 3382'	New
6.25"	4.5"	11.6	N-80	L T & C	0' - 7837'	New

All casing designed with a minimum of:

Burst Safety Factor	Collapse Safety Factor	Joint Strength
1.0	1.125	1.60

Surface casing will have a minimum of 1 centralizer per joint on the bottom 3 joints, starting with the shoe joint for a minimum total of 4 centralizers. Centralizers will be placed 10' above the shoe on the shoe joint, on the 1st, 2nd and 3rd casing collars.

The intermediate casing will be centralized with centralizers placed 10' above the shoe on the shoe joint, on the 1st, 2nd and 3rd casing collars, then +/- 1 centralizer per 4 joints through the cement column and above and below DV tool. This will total approximately 26 centralizers.

The cement program will protect and/or isolate all usable water zones, potentially productive zones, lost circulation zones, abnormally pressured zones, and any prospectively valuable deposits of minerals. Any isolating medium other than cement will receive approval prior to use. The casing setting depth will be calculated to position the casing seat opposite a competent formation that will contain the maximum pressure to which it will be exposed during normal drilling operations. All indications of useable water will be reported.

Top plugs will be used to reduce contamination of cement by displacement fluid. A bottom plug or other acceptable technique, e. g. pre-flush fluid, inner string cement method, etc. will be used to help isolate the cement from contamination by the mud fluid being displaced ahead of the cement slurry.

Actual volumes will be calculated and determined by conditions onsite. All cement slurries will meet or exceed minimum BLM and New Mexico Oil Conservation Division requirements. Slurries used will be the following listed slurries or equivalent slurries depending on service provider selected. Cement yields may change depending on slurries selected.

All waiting on cement times shall be a minimum of 8 hours, or adequate to achieve a minimum of 500 psi compressive strength at the casing shoe prior to drilling out.

casing	depth set (MD)	sacks	gallons per sack	density (ppg)	yield (cu ft per sack)	total cubic feet	excess over gauge hole	blend
surface	0' - 500'	270	5.13	15.8	1.174	317	100%	A
intermediate Stage 1 tail	2587' - 3382'	136	5.45	13.5	1.314	179	50%	B
intermediate Stage 2 lead	0' - 2087'	243	10.17	12.3	1.933	470	50%	C
intermediate Stage 2 tail	2087' - 2587'	98	4.97	15.8	1.148	112	50%	D
production lead	3000' - 7340'	467	5.45	13.5	1.314	614	50%	E
production tail	7340' - 7837'	62	4.97	15.8	1.148	71	50%	F

Surface casing blend (A) will be Halcem™ + 0.125 pound per sack poly-e-flake.

Intermediate casing stage 1 blend (B) will be Halcem™ + 5 pounds per sack Kol-Seal™ + 0.125 pound per sack poly-e-flake.

Intermediate casing Stage 2 lead blend (C) will be Halcem™ + 3 pounds per sack Kol-Seal™ + 0.125 pound per sack poly-e-flake.

Intermediate Stage 2 tail blend (D) will be Halcem™.

Production casing lead blend (E) will be Halcem™ + 5 pounds per sack Kol-Seal™ + 0.125 pound per sack poly-e-flake.

Production casing tail blend (F) will be Halcem™.

5. MUD PROGRAM

There will be sufficient mud on location to control pressures. Mud flow and volume will be monitored both visually and with electronic pit volume totalizers.

Mud tests will be performed every 24 hours after mudding up to determine applicable density, viscosity, gel strength, filtration, and pH.

Interval	0' - 500'	500' - 3382'	3382' - 7837' (TD)
Type	fresh water	fresh water LSND	air nitrogen mist
Weight (lb/gal)	8.4 - 8.6	8.5 - 8.8	2.0
Fluid loss (cc)	NC	8 - 10	
Viscosity (sec/qt)	60 - 70	40 - 50	

6. CORES, TESTS, & LOGS

No core or drill stem test is planned. Mud loggers will be on site from the intermediate casing point to TD. Open hole triple combo, temperature, and gamma ray logs will be run. Cased hole CBL/CCL/GRNDL will be run as needed for perforating control.

7. DOWN HOLE CONDITIONS

No H_2S or abnormal pressure or temperature is expected. Maximum expected bottom hole pressure is 2200 psi.

8. OTHER INFORMATION

The anticipated spud date is upon approval. It is expected it will take ≈1 month to drill and complete the well.

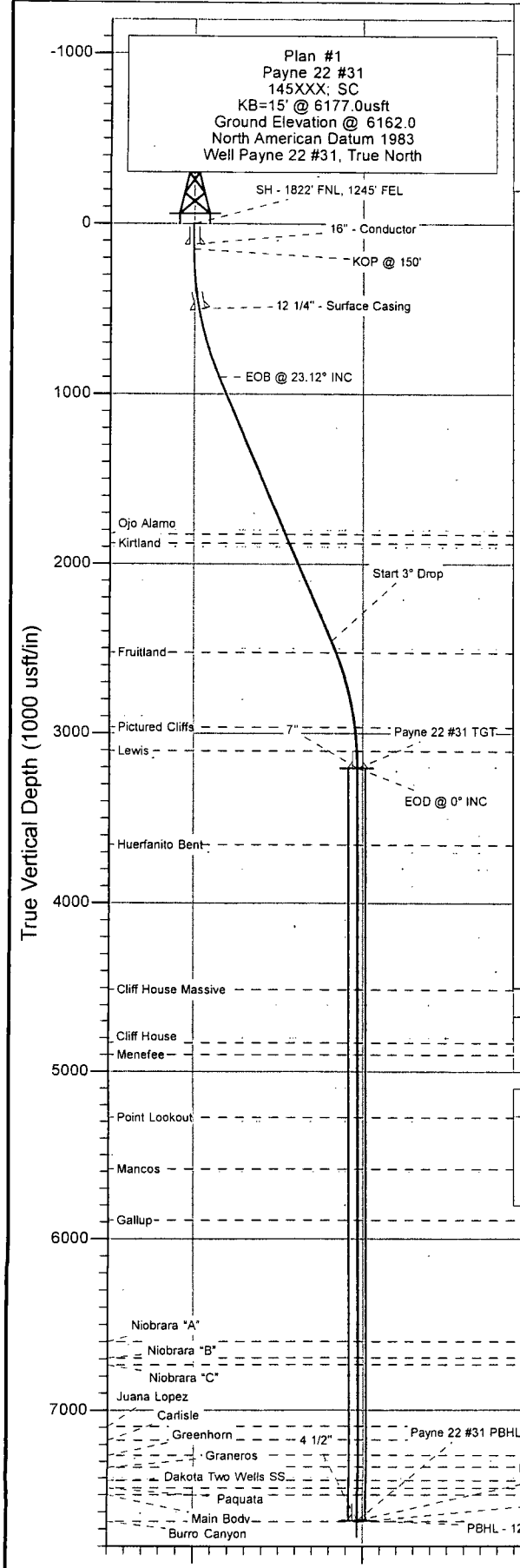
Project: San Juan County, NM
Site: S22-T32N-R10W
Well: Payne 22 #31
Wellbore: DD
Design: Plan #1

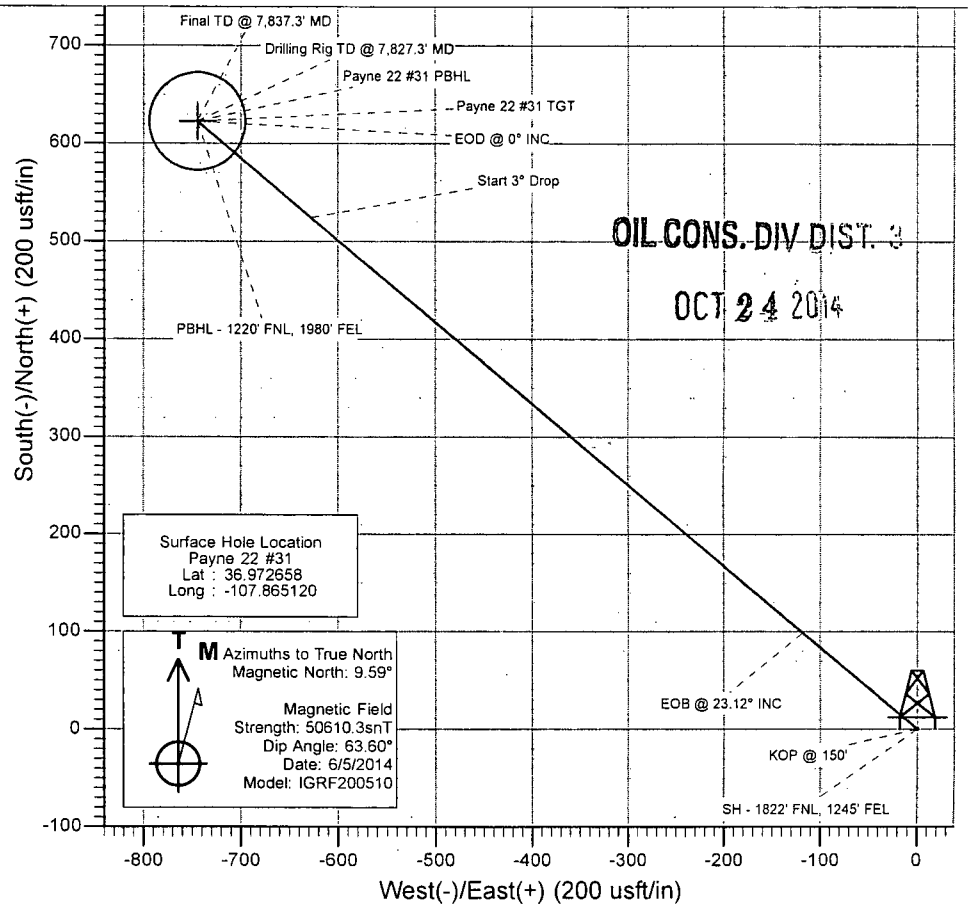
CATHEDRAL

Plan #1
Payne 22 #31
145XXX; SC
KB=15' @ 6177.0usft
Ground Elevation @ 6162.0
North American Datum 1983
Well Payne 22 #31, True North

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Target
1	0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	
2	150.0	0.00	0.00	150.0	0.0	0.0	0.00	0.00	0.0	
3	920.8	23.12	309.90	900.0	98.4	-117.7	3.00	309.90	153.4	
4	2611.6	23.12	309.90	2455.0	524.4	-627.1	0.00	0.00	817.4	
5	3382.3	0.00	0.00	3205.0	622.8	-744.8	3.00	180.00	970.9	Payne 22 #31 TGT
6	7827.3	0.00	0.00	7650.0	622.8	-744.8	0.00	0.00	970.9	Payne 22 #31 PBHL
7	7837.3	0.00	0.00	7660.0	622.8	-744.8	0.00	0.00	970.9	





OIL CONS. DIV DIST. 3
OCT 24 2014

DESIGN TARGET DETAILS

Name	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
Payne 22 #31 TGT	622.8	-744.8	2174003.07	2713061.92	36.974368	-107.867669
Payne 22 #31 PBHL	622.8	-744.8	2174003.07	2713061.92	36.974368	-107.867669

CASING DETAILS

TVD	MD	Name
120.0	120.0	16" - Conductor
500.0	502.0	12 1/4" - Surface Casing
3205.0	3382.3	7"
7650.0	7827.3	4 1/2"

FORMATION TOP DETAILS

TVDPath	MDPath	Formation
1825.0	1926.6	Ojo Alamo
1880.0	1986.4	Kirtland
2525.0	2687.1	Fruitland
2965.0	3141.7	Pictured Cliffs
3105.0	3282.3	Lewis
3655.0	3832.3	Huerfanito Bent
4510.0	4687.3	Cliff House Massive
4830.0	5007.3	Cliff House
4900.0	5077.3	Menefee
5275.0	5452.3	Point Lookout
5585.0	5762.3	Mancos
5890.0	6067.3	Gallup
6600.0	6777.3	Niobrara "A"
6695.0	6872.3	Niobrara "B"
6735.0	6912.3	Niobrara "C"
7095.0	7272.3	Juana Lopez
7175.0	7352.3	Carlisle
7265.0	7442.3	Greenhorn
7335.0	7512.3	Graneros
7415.0	7592.3	Dakota Two Wells SS
7460.0	7637.3	Paquata
7500.0	7677.3	Main Body
7655.0	7832.3	Burro Canyon

Cathedral Energy Services

Planning Report

Database:	USA EDM 5000 Multi Users DB	**Local Co-ordinate Reference:**	Well Payne 22 #31
Company:	Coleman Oil & Gas, Inc.	**TVD Reference:**	KB=15' @ 6177.0usft
Project:	San Juan County, NM	**MD Reference:**	KB=15' @ 6177.0usft
Site:	S22-T32N-R10W	**North Reference:**	True
Well:	Payne 22 #31	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	DD		
Design:	Plan #1		

Project San Juan County, NM

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

Site S22-T32N-R10W

Site Position:		**Northing:**	2,173,380.00 usft	**Latitude:**	36.972658
From:	Lat/Long	**Easting:**	2,713,806.47 usft	**Longitude:**	-107.865120
Position Uncertainty:	0.0 usft	**Slot Radius:**	13-3/16"	**Grid Convergence:**	-0.02 °

Well Payne 22 #31

Well Position	**+N/-S**	0.0 usft	**Northing:**	2,173,380.00 usft	**Latitude:**	36.972658
	+E/-W	0.0 usft	**Easting:**	2,713,806.47 usft	**Longitude:**	-107.865120
Position Uncertainty		0.0 usft	**Wellhead Elevation:**	0.0 usft	**Ground Level:**	6,162.0 usft

Wellbore DD

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF200510	6/5/2014	9.59	63.60	50,610

Design Plan #1

Audit Notes:

Version:		**Phase:**	PLAN	**Tie On Depth:**	0.0

Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.0	0.0	0.0	309.90

Plan Sections

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	TFO (°)	Target
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
150.0	0.00	0.00	150.0	0.0	0.0	0.00	0.00	0.00	0.00	
920.8	23.12	309.90	900.0	98.4	-117.7	3.00	3.00	0.00	309.90	
2,611.6	23.12	309.90	2,455.0	524.4	-627.1	0.00	0.00	0.00	0.00	
3,382.3	0.00	0.00	3,205.0	622.8	-744.8	3.00	-3.00	0.00	180.00	Payne 22 #31 TGT
7,827.3	0.00	0.00	7,650.0	622.8	-744.8	0.00	0.00	0.00	0.00	Payne 22 #31 PBHL
7,837.3	0.00	0.00	7,660.0	622.8	-744.8	0.00	0.00	0.00	0.00	

Cathedral Energy Services

Planning Report

Database:	USA EDM 5000 Multi Users DB	**Local Co-ordinate Reference:**	Well Payne 22 #31
Company:	Coleman Oil & Gas, Inc.	**TVD Reference:**	KB=15' @ 6177.0usft
Project:	San Juan County, NM	**MD Reference:**	KB=15' @ 6177.0usft
Site:	S22-T32N-R10W	**North Reference:**	True
Well:	Payne 22 #31	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	DD		
Design:	Plan #1		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft	Build Rate (°/100u	Comments / Formations
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	
0.5	0.00	0.00	0.5	0.0	0.0	0.0	0.00	0.00	SH - 1822' FNL, 1245' FEL
100.0	0.00	0.00	100.0	0.0	0.0	0.0	0.00	0.00	
120.0	0.00	0.00	120.0	0.0	0.0	0.0	0.00	0.00	16" - Conductor
150.0	0.00	0.00	150.0	0.0	0.0	0.0	0.00	0.00	KOP @ 150'
200.0	1.50	309.90	200.0	0.4	-0.5	0.7	3.00	3.00	
300.0	4.50	309.90	299.8	3.8	-4.5	5.9	3.00	3.00	
400.0	7.50	309.90	399.3	10.5	-12.5	16.3	3.00	3.00	
500.0	10.50	309.90	498.0	20.5	-24.5	32.0	3.00	3.00	
502.0	10.56	309.90	500.0	20.7	-24.8	32.3	3.00	3.00	12 1/4" - Surface Casing
600.0	13.50	309.90	595.8	33.9	-40.5	52.8	3.00	3.00	
700.0	16.50	309.90	692.4	50.5	-60.3	78.6	3.00	3.00	
800.0	19.50	309.90	787.5	70.3	-84.0	109.5	3.00	3.00	
900.0	22.50	309.90	880.9	93.3	-111.5	145.4	3.00	3.00	
920.8	23.12	309.90	900.0	98.4	-117.7	153.4	3.00	3.00	EOB @ 23.12° INC
1,000.0	23.12	309.90	972.9	118.4	-141.6	184.5	0.00	0.00	
1,100.0	23.12	309.90	1,064.8	143.6	-171.7	223.8	0.00	0.00	
1,200.0	23.12	309.90	1,156.8	168.8	-201.8	263.1	0.00	0.00	
1,300.0	23.12	309.90	1,248.8	194.0	-231.9	302.4	0.00	0.00	
1,400.0	23.12	309.90	1,340.7	219.2	-262.1	341.6	0.00	0.00	
1,500.0	23.12	309.90	1,432.7	244.4	-292.2	380.9	0.00	0.00	
1,600.0	23.12	309.90	1,524.7	269.5	-322.3	420.2	0.00	0.00	
1,700.0	23.12	309.90	1,616.6	294.7	-352.4	459.4	0.00	0.00	
1,800.0	23.12	309.90	1,708.6	319.9	-382.6	498.7	0.00	0.00	
1,900.0	23.12	309.90	1,800.6	345.1	-412.7	538.0	0.00	0.00	
1,926.6	23.12	309.90	1,825.0	351.8	-420.7	548.4	0.00	0.00	Ojo Alamo
1,986.4	23.12	309.90	1,880.0	366.9	-438.7	571.9	0.00	0.00	Kirtland
2,000.0	23.12	309.90	1,892.5	370.3	-442.8	577.3	0.00	0.00	
2,100.0	23.12	309.90	1,984.5	395.5	-472.9	616.5	0.00	0.00	
2,200.0	23.12	309.90	2,076.5	420.7	-503.1	655.8	0.00	0.00	
2,300.0	23.12	309.90	2,168.4	445.9	-533.2	695.1	0.00	0.00	
2,400.0	23.12	309.90	2,260.4	471.1	-563.3	734.3	0.00	0.00	
2,500.0	23.12	309.90	2,352.4	496.3	-593.4	773.6	0.00	0.00	
2,600.0	23.12	309.90	2,444.3	521.5	-623.6	812.9	0.00	0.00	
2,611.6	23.12	309.90	2,455.0	524.4	-627.1	817.4	0.00	0.00	Start 3° Drop
2,687.1	20.86	309.90	2,525.0	542.5	-648.7	845.7	3.00	-3.00	Fruitland
2,700.0	20.47	309.90	2,537.1	545.5	-652.2	850.3	3.00	-3.00	
2,800.0	17.47	309.90	2,631.6	566.3	-677.2	882.8	3.00	-3.00	
2,900.0	14.47	309.90	2,727.8	584.0	-698.3	910.3	3.00	-3.00	
3,000.0	11.47	309.90	2,825.2	598.4	-715.5	932.7	3.00	-3.00	
3,100.0	8.47	309.90	2,923.7	609.5	-728.8	950.0	3.00	-3.00	
3,141.7	7.22	309.90	2,965.0	613.1	-733.1	955.7	3.00	-3.00	Pictured Cliffs
3,200.0	5.47	309.90	3,022.9	617.2	-738.1	962.2	3.00	-3.00	
3,282.3	3.00	309.90	3,105.0	621.1	-742.7	968.2	3.00	-3.00	Lewis
3,300.0	2.47	309.90	3,122.7	621.7	-743.4	969.1	3.00	-3.00	
3,382.3	0.00	0.00	3,205.0	622.8	-744.8	970.9	3.00	-3.00	EOD @ 0° INC - 7"
3,400.0	0.00	0.00	3,222.7	622.8	-744.8	970.9	0.00	0.00	
3,500.0	0.00	0.00	3,322.7	622.8	-744.8	970.9	0.00	0.00	
3,600.0	0.00	0.00	3,422.7	622.8	-744.8	970.9	0.00	0.00	
3,700.0	0.00	0.00	3,522.7	622.8	-744.8	970.9	0.00	0.00	
3,800.0	0.00	0.00	3,622.7	622.8	-744.8	970.9	0.00	0.00	
3,832.3	0.00	0.00	3,655.0	622.8	-744.8	970.9	0.00	0.00	Huerfanito Bent

Database:	USA EDM 5000 Multi Users DB	**Local Co-ordinate Reference:**	Well Payne 22 #31
Company:	Coleman Oil & Gas, Inc.	**TVD Reference:**	KB=15' @ 6177.0usft
Project:	San Juan County, NM	**MD Reference:**	KB=15' @ 6177.0usft
Site:	S22-T32N-R10W	**North Reference:**	True
Well:	Payne 22 #31	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	DD		
Design:	Plan #1		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft	Build Rate (°/100u	Comments / Formations
3,900.0	0.00	0.00	3,722.7	622.8	-744.8	970.9	0.00	0.00	
4,000.0	0.00	0.00	3,822.7	622.8	-744.8	970.9	0.00	0.00	
4,100.0	0.00	0.00	3,922.7	622.8	-744.8	970.9	0.00	0.00	
4,200.0	0.00	0.00	4,022.7	622.8	-744.8	970.9	0.00	0.00	
4,300.0	0.00	0.00	4,122.7	622.8	-744.8	970.9	0.00	0.00	
4,400.0	0.00	0.00	4,222.7	622.8	-744.8	970.9	0.00	0.00	
4,500.0	0.00	0.00	4,322.7	622.8	-744.8	970.9	0.00	0.00	
4,600.0	0.00	0.00	4,422.7	622.8	-744.8	970.9	0.00	0.00	
4,687.3	0.00	0.00	4,510.0	622.8	-744.8	970.9	0.00	0.00	Cliff House Massive
4,700.0	0.00	0.00	4,522.7	622.8	-744.8	970.9	0.00	0.00	
4,800.0	0.00	0.00	4,622.7	622.8	-744.8	970.9	0.00	0.00	
4,900.0	0.00	0.00	4,722.7	622.8	-744.8	970.9	0.00	0.00	
5,000.0	0.00	0.00	4,822.7	622.8	-744.8	970.9	0.00	0.00	
5,007.3	0.00	0.00	4,830.0	622.8	-744.8	970.9	0.00	0.00	Cliff House
5,077.3	0.00	0.00	4,900.0	622.8	-744.8	970.9	0.00	0.00	Menefee
5,100.0	0.00	0.00	4,922.7	622.8	-744.8	970.9	0.00	0.00	
5,200.0	0.00	0.00	5,022.7	622.8	-744.8	970.9	0.00	0.00	
5,300.0	0.00	0.00	5,122.7	622.8	-744.8	970.9	0.00	0.00	
5,400.0	0.00	0.00	5,222.7	622.8	-744.8	970.9	0.00	0.00	
5,452.3	0.00	0.00	5,275.0	622.8	-744.8	970.9	0.00	0.00	Point Lookout
5,500.0	0.00	0.00	5,322.7	622.8	-744.8	970.9	0.00	0.00	
5,600.0	0.00	0.00	5,422.7	622.8	-744.8	970.9	0.00	0.00	
5,700.0	0.00	0.00	5,522.7	622.8	-744.8	970.9	0.00	0.00	
5,762.3	0.00	0.00	5,585.0	622.8	-744.8	970.9	0.00	0.00	Mancos
5,800.0	0.00	0.00	5,622.7	622.8	-744.8	970.9	0.00	0.00	
5,900.0	0.00	0.00	5,722.7	622.8	-744.8	970.9	0.00	0.00	
6,000.0	0.00	0.00	5,822.7	622.8	-744.8	970.9	0.00	0.00	
6,067.3	0.00	0.00	5,890.0	622.8	-744.8	970.9	0.00	0.00	Gallup
6,100.0	0.00	0.00	5,922.7	622.8	-744.8	970.9	0.00	0.00	
6,200.0	0.00	0.00	6,022.7	622.8	-744.8	970.9	0.00	0.00	
6,300.0	0.00	0.00	6,122.7	622.8	-744.8	970.9	0.00	0.00	
6,400.0	0.00	0.00	6,222.7	622.8	-744.8	970.9	0.00	0.00	
6,500.0	0.00	0.00	6,322.7	622.8	-744.8	970.9	0.00	0.00	
6,600.0	0.00	0.00	6,422.7	622.8	-744.8	970.9	0.00	0.00	
6,700.0	0.00	0.00	6,522.7	622.8	-744.8	970.9	0.00	0.00	
6,777.3	0.00	0.00	6,600.0	622.8	-744.8	970.9	0.00	0.00	Niobrara "A"
6,800.0	0.00	0.00	6,622.7	622.8	-744.8	970.9	0.00	0.00	
6,872.3	0.00	0.00	6,695.0	622.8	-744.8	970.9	0.00	0.00	Niobrara "B"
6,900.0	0.00	0.00	6,722.7	622.8	-744.8	970.9	0.00	0.00	
6,912.3	0.00	0.00	6,735.0	622.8	-744.8	970.9	0.00	0.00	Niobrara "C"
7,000.0	0.00	0.00	6,822.7	622.8	-744.8	970.9	0.00	0.00	
7,100.0	0.00	0.00	6,922.7	622.8	-744.8	970.9	0.00	0.00	
7,200.0	0.00	0.00	7,022.7	622.8	-744.8	970.9	0.00	0.00	
7,272.3	0.00	0.00	7,095.0	622.8	-744.8	970.9	0.00	0.00	Juana Lopez
7,300.0	0.00	0.00	7,122.7	622.8	-744.8	970.9	0.00	0.00	
7,352.3	0.00	0.00	7,175.0	622.8	-744.8	970.9	0.00	0.00	Carlisle
7,400.0	0.00	0.00	7,222.7	622.8	-744.8	970.9	0.00	0.00	
7,442.3	0.00	0.00	7,265.0	622.8	-744.8	970.9	0.00	0.00	Greenhorn
7,500.0	0.00	0.00	7,322.7	622.8	-744.8	970.9	0.00	0.00	
7,512.3	0.00	0.00	7,335.0	622.8	-744.8	970.9	0.00	0.00	Graneros
7,592.3	0.00	0.00	7,415.0	622.8	-744.8	970.9	0.00	0.00	Dakota Two Wells SS
7,600.0	0.00	0.00	7,422.7	622.8	-744.8	970.9	0.00	0.00	

Database:	USA EDM 5000 Multi Users DB	**Local Co-ordinate Reference:**	Well Payne 22 #31
Company:	Coleman Oil & Gas, Inc.	**TVD Reference:**	KB=15' @ 6177.0usft
Project:	San Juan County, NM	**MD Reference:**	KB=15' @ 6177.0usft
Site:	S22-T32N-R10W	**North Reference:**	True
Well:	Payne 22 #31	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	DD		
Design:	Plan #1		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft	Build Rate (°/100u	Comments / Formations
7,637.3	0.00	0.00	7,460.0	622.8	-744.8	970.9	0.00	0.00	Paquata
7,677.3	0.00	0.00	7,500.0	622.8	-744.8	970.9	0.00	0.00	Main Body
7,700.0	0.00	0.00	7,522.7	622.8	-744.8	970.9	0.00	0.00	
7,800.0	0.00	0.00	7,622.7	622.8	-744.8	970.9	0.00	0.00	
7,827.3	0.00	0.00	7,650.0	622.8	-744.8	970.9	0.00	0.00	PBHL - 1220' FNL, 1980' FEL - Drilling Rig TD (
7,832.3	0.00	0.00	7,655.0	622.8	-744.8	970.9	0.00	0.00	Burro Canyon
7,837.3	0.00	0.00	7,660.0	622.8	-744.8	970.9	0.00	0.00	Final TD @ 7,837.3' MD

Targets

Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
Payne 22 #31 PBHL - plan hits target center - Circle (radius 50.0)	0.00	0.00	7,650.0	622.8	-744.8	2,174,003.07	2,713,061.92	36.974368	-107.867669
Payne 22 #31 TGT - plan hits target center - Point	0.00	0.00	3,205.0	622.8	-744.8	2,174,003.07	2,713,061.92	36.974368	-107.867669

Casing Points

Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (")	Hole Diameter (")
7,827.3	7,650.0	4 1/2"	4-1/2	6-1/4
502.0	500.0	12 1/4" - Surface Casing	9-5/8	12-1/4
120.0	120.0	16" - Conductor	16	20
3,382.3	3,205.0	7"	7	8-3/4

Database:	USA EDM 5000 Multi Users DB	**Local Co-ordinate Reference:**	Well Payne 22 #31
Company:	Coleman Oil & Gas, Inc.	**TVD Reference:**	KB=15' @ 6177.0usft
Project:	San Juan County, NM	**MD Reference:**	KB=15' @ 6177.0usft
Site:	S22-T32N-R10W	**North Reference:**	True
Well:	Payne 22 #31	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	DD		
Design:	Plan #1		

Formations

Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
1,926.6	1,825.0	Ojo Alamo			
1,986.4	1,880.0	Kirtland			
2,687.1	2,525.0	Fruitland			
3,141.7	2,965.0	Pictured Cliffs			
3,282.3	3,105.0	Lewis			
3,832.3	3,655.0	Huerfanito Bent			
4,687.3	4,510.0	Cliff House Massive			
5,007.3	4,830.0	Cliff House			
5,077.3	4,900.0	Menefee			
5,452.3	5,275.0	Point Lookout			
5,762.3	5,585.0	Mancos			
6,067.3	5,890.0	Gallup			
6,777.3	6,600.0	Niobrara "A"			
6,872.3	6,695.0	Niobrara "B"			
6,912.3	6,735.0	Niobrara "C"			
7,272.3	7,095.0	Juana Lopez			
7,352.3	7,175.0	Carlisle			
7,442.3	7,265.0	Greenhorn			
7,512.3	7,335.0	Graneros			
7,592.3	7,415.0	Dakota Two Wells SS			
7,637.3	7,460.0	Paquata			
7,677.3	7,500.0	Main Body			
7,832.3	7,655.0	Burro Canyon			

Plan Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates +N/-S (usft)	Local Coordinates +E/-W (usft)	Comment
0.5	0.5	0.0	0.0	SH - 1822' FNL, 1245' FEL
150.0	150.0	0.0	0.0	KOP @ 150'
920.8	900.0	98.4	-117.7	EOB @ 23.12° INC
2,611.6	2,455.0	524.4	-627.1	Start 3° Drop
3,382.3	3,205.0	622.8	-744.8	EOD @ 0° INC
7,827.3	7,650.0	622.8	-744.8	PBHL - 1220' FNL, 1980' FEL
7,827.3	7,650.0	622.8	-744.8	Drilling Rig TD @ 7,827.3' MD
7,837.3	7,660.0	622.8	-744.8	Final TD @ 7,837.3' MD

Payne 22 #31
SHL: 1822' FNL & 1245' FEL
BHL: 1220' FNL & 1980' FEL
Sec. 22, T. 32 N., R. 10 W., San Juan County, NM

Surface Use Plan

1. ROAD DIRECTIONS & DESCRIPTIONS (See MAPS 1 - 5)

From Aztec...
Go Northeast 8.2 miles on US 550 to the equivalent of Mile Post 169.2
Then turn right and go Northeast 2.7 miles on County Road 2390
Then turn left and go Northwest 1.0 mile on CR 2390 to a gated cattle guard
Continue North 2-1/4 miles on private roads & BLM NMNM-113124
Then bear right and climb Northeast ½ mile to the second pad

Roads will be maintained to Gold Book standards. Dust will be controlled using water, magnesium chloride, or a similar product.

2. ROAD TO BE BUILT OR UPGRADED (See MAP 4)

No new road will be built. The proposed pad overlaps Coleman's producing Payne 221 pad. The half-mile of road between Coleman's 221S well and Burlington's Payne 4 well will be upgraded. Travel surface width will be 14'. Maximum disturbed width will be 30'.

Road upgrades will include installing 17 drainage dips, widening 1 curve for a vehicle pull off, installing 2 caution signs, lengthening 1 irrigation ditch culvert, and surfacing with 3" minus road base.

The drainage dips will be broad, skewed to drain, and built at least half in cut as shown in the Gold Book. Water bar location coordinates are shown next to yellow pins on Map 4. Two pipelines parallel the uphill side of the road and will limit the width and depth of the dips. A brass cap near the top of the hill on the south side of the road also limits work.

5. WATER SUPPLY (See MAPS 1 - 4)

Water will be trucked from the Cedar Ditch (State Engineer's water right file number SD 02527) concrete siphon box behind Coleman's Payne 221S well in NWSE 22-32n-10w. If ditch water is not available, then water will be trucked from the City of Aztec water treatment plant (State Engineer's water right file numbers SD 01951, 02033, 02170, & 02801) on NM 173 in SWSE 3-30n-11w.

6. CONSTRUCTION METHODS & MATERIALS (See MAPS 5 & 6)

NM One Call (1-800-321-ALERT), Enterprise, and Cedar Ditch Company will be notified before construction starts. Payne 221 pump jack will be removed for the duration of drilling and completion. Brush will be mowed and incorporated into the topsoil piles. Topsoil will be stockpiled southeast and southwest of the pad. A minimum 20-mil liner atop geotextile fabric will be used in the reserve pit.

Base course will be bought and hauled from an existing gravel pit on private land. Dirt contractor will be responsible for the gravel.

7. WASTE DISPOSAL

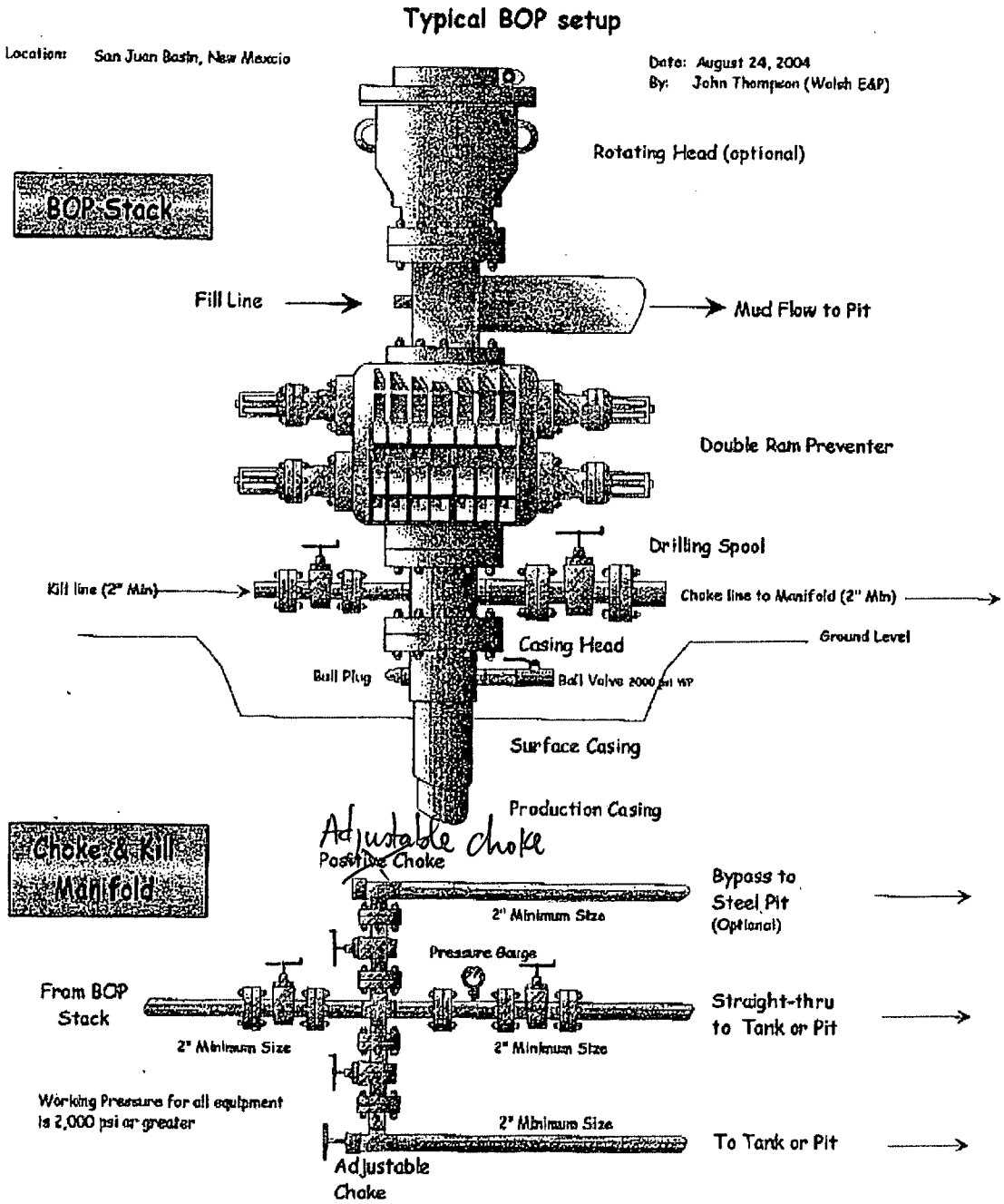
All trash will be placed in a portable trash cage. It will be hauled to a county landfill. There will be no trash burning. Human waste will be disposed of in chemical toilets and hauled to an approved dump station. Cuttings and mud will be buried in the reserve pit under at least 24" of cover.

8. ANCILLARY FACILITIES

There will be no airstrip or camp. Camper trailers will be on location for the company man, tool pusher, mud logger, and other drilling personnel.

Coleman Oil & Gas, Inc. DRILL PLAN PAGE 4
Payne 22 #31
SHL: 1822' FNL & 1245' FEL
BHL: 1220' FNL & 1980' FEL
Sec. 22, T. 32 N., R. 10 W., San Juan County, NM

Well Control Equipment Schematic for 2M Service



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