

**OCD-ARTESIA**

Form 3160-3  
(April 2004)

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

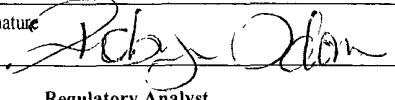
**APPLICATION FOR PERMIT TO DRILL OR REENTER**

FORM APPROVED  
OMB No 1004-0137  
Expires March 31, 2007

1a Type of work <input checked="" type="checkbox"/> DRILL <input type="checkbox"/> REENTER			5 Lease Serial No. <b>NMNM-0397623</b>
1b. Type of Well <input checked="" type="checkbox"/> Oil Well <input type="checkbox"/> Gas Well <input type="checkbox"/> Other <input type="checkbox"/> Single Zone <input type="checkbox"/> Multiple Zone			6 If Indian, Allottee or Tribe Name N/A
2 Name of Operator <b>COG Operating LLC</b> (229137)			7 If Unit or CA Agreement, Name and No N/A
3a Address <b>550 W. Texas, Suite 1300 Midland TX 79701</b>		3b Phone No. (include area code) <b>(432) 685-4385</b>	8 Lease Name and Well No <b>Folk Federal #32</b> (302485)
4 Location of Well (Report location clearly and in accordance with any State requirements) At surface <b>1560' FNL &amp; 2404' FEL (Unit G)</b> At proposed prod zone <b>NORTHODOX LOCATION</b>			9 API Well No <b>30-015- 38177</b>
10 Field and Pool, or Exploratory <b>Empire; Glorieta-Yeso, East 96610</b>			11 Sec, T R M or Blk and Survey of Area <b>Sec 17, T17S, R29E</b>
12 Distance in miles and direction from nearest town or post office* <b>2.5 miles Northwest of Loco Hills, New Mexico</b>			12 County or Parish <b>Eddy</b>
13 State <b>NM</b>			
15 Distance from proposed* location to nearest property or lease line, ft (Also to nearest drig unit line, if any) <b>1560'</b>	16 No. of acres in lease <b>400</b>	17 Spacing Unit dedicated to this well <b>40</b>	
18 Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft <b>940'</b>	19 Proposed Depth <b>5500'</b>	20 BLM/BIA Bond No on file <b>NMB000215</b>	
21 Elevations (Show whether DF, KDB, RT, GL, etc) <b>3612' GL</b>	22 Approximate date work will start* <b>09/30/2010</b>	23 Estimated duration <b>10 days</b>	<div style="border: 2px solid black; padding: 5px; text-align: center;"> <b>RECEIVED</b>  <b>SEP 07 2010</b>  <b>NMOCD ARTESIA</b> </div>
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 	Name (Printed/Typed) <b>Robyn M. Odom</b>	Date <b>06/29/2010</b>
Title <b>Regulatory Analyst</b>		

Approved by (Signature)	Name (Printed/Typed)	Date <b>AUG 30 2010</b>
-------------------------	----------------------	-------------------------

Title <b>FIELD MANAGER</b>	Office <b>CARLSBAD FIELD OFFICE</b>
-------------------------------	--

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 USC Section 1001 and Title 43 USC 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)

**Roswell Controlled Water Basin**

*K2 9/12/10*

OCD CONDITION OF APPROVAL of Drilling  
Intent to drill ONLY --- CANNOT produce until the Non-Standard  
Location has been approved by OCD Santa Fe office

**SEE ATTACHED FOR  
CONDITIONS OF APPROVAL**

**APPROVAL SUBJECT TO  
GENERAL REQUIREMENTS  
AND SPECIAL STIPULATIONS  
ATTACHED**

DISTRICT I  
1625 N FRENCH DR HOBBS, NM 88240

DISTRICT II  
1301 W GRAND AVENUE, ARTESIA, NM 88210

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

DISTRICT IV  
1220 S ST FRANCIS DR., SANTA FE, NM 87505

State of New Mexico  
Energy, Minerals and Natural Resources Department

OIL CONSERVATION DIVISION  
1220 SOUTH ST. FRANCIS DR.  
Santa Fe, New Mexico 87505

Form C-102  
Revised October 12, 2005  
Submit to Appropriate District Office  
State Lease - 4 Copies  
Fee Lease - 3 Copies

WELL LOCATION AND ACREAGE DEDICATION PLAT

☐ AMENDED REPORT

API Number 30-015- <b>38177</b>	Pool Code 96610	Pool Name EMPIRE; GLORIETA-YESO, EAST
Property Code 302495	Property Name FOLK FEDERAL	Well Number 32
OGRID No. 229137	Operator Name COG OPERATING, LLC	Elevation 3612'

Surface Location

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
G	17	17-S	29-E		1560	NORTH	2404	EAST	EDDY

Bottom Hole Location If Different From Surface

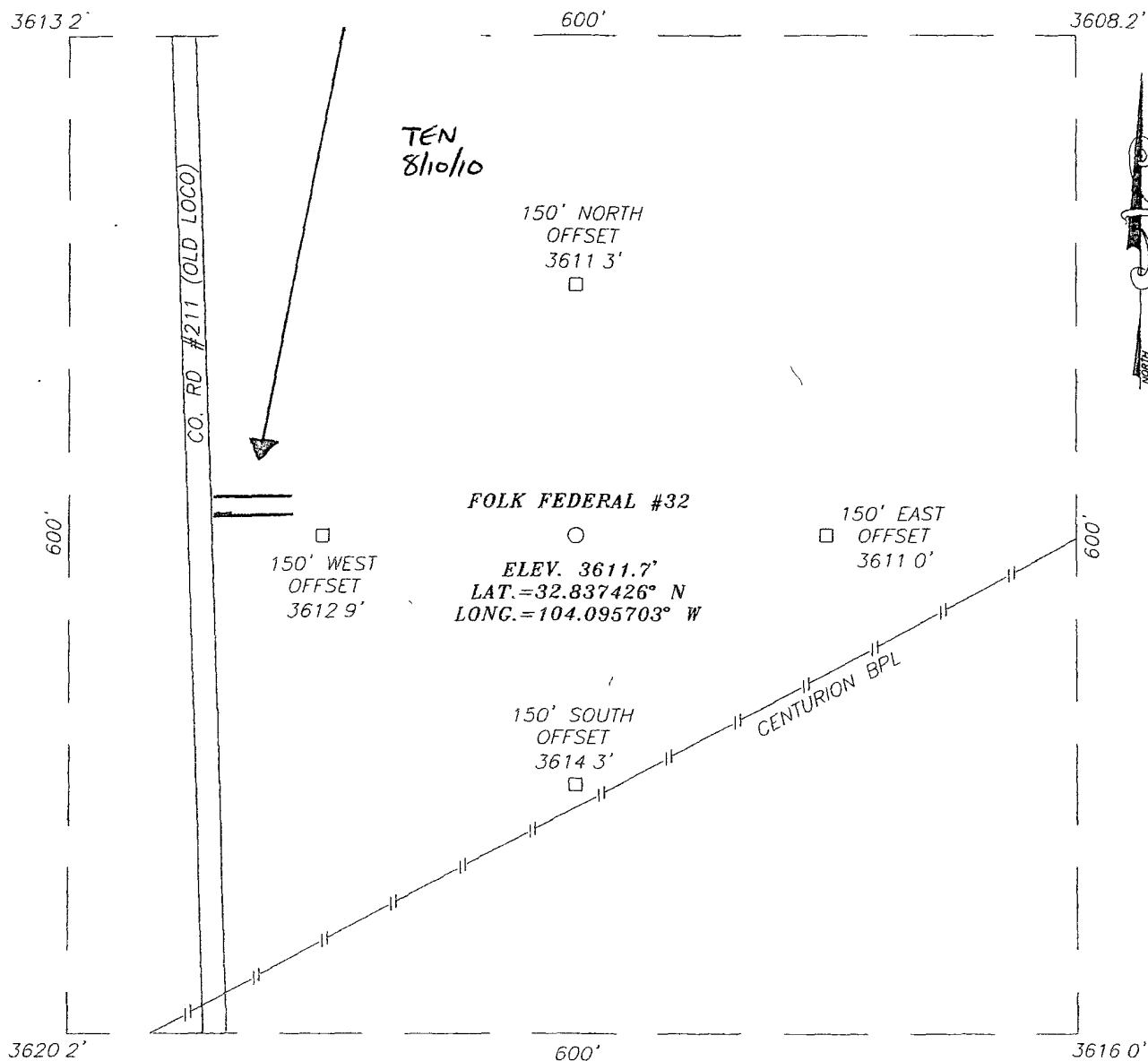
UL or lot No	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County

Dedicated Acres	Joint or Infill	Consolidation Code	Order No.
40			

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

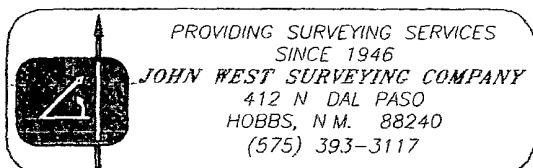
<p>DETAIL</p> <p>3613.2' 3608.2' 2404'</p> <p>3620.2' 3616.0'</p> <p>GEODETIC COORDINATES NAD 27 NME</p> <p>Y=668448 7 N X=572986 8 E</p> <p>LAT = 32.837426° N LONG = 104.095703° W</p>	<p><b>OPERATOR CERTIFICATION</b></p> <p>I hereby certify that the information herein is true and complete to the best 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 mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division</p> <p><i>Robyn Odom</i> 6/29/2010 Signature Date</p> <p>Robyn Odom Printed Name</p> <p><b>SURVEYOR CERTIFICATION</b></p> <p>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</p> <p>JUNE 21, 2010</p> <p>Date Surveyed</p> <p><i>Ronald J. Eidson</i> 06/25/2010 Signature &amp; Seal of Professional Surveyor</p> <p>Certificate No. GARY EIDSON 12641 RONALD J. EIDSON 3239</p>
--	---

PROPOSED ROAD



DIRECTIONS TO LOCATION

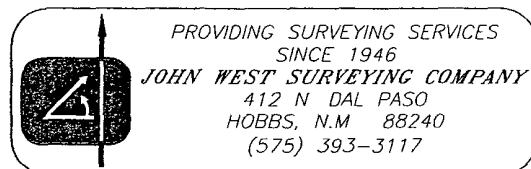
FROM THE INTERSECTION OF U.S. HWY #82 AND  
 CO. RD. #211 (OLD LOCO RD.), GO NORTH ON CO.  
 RD. #211 APPROX 1.7 MILES THE LOCATION STAKE  
 IS APPROX. 225 FEET EAST OF CO RD. #211.



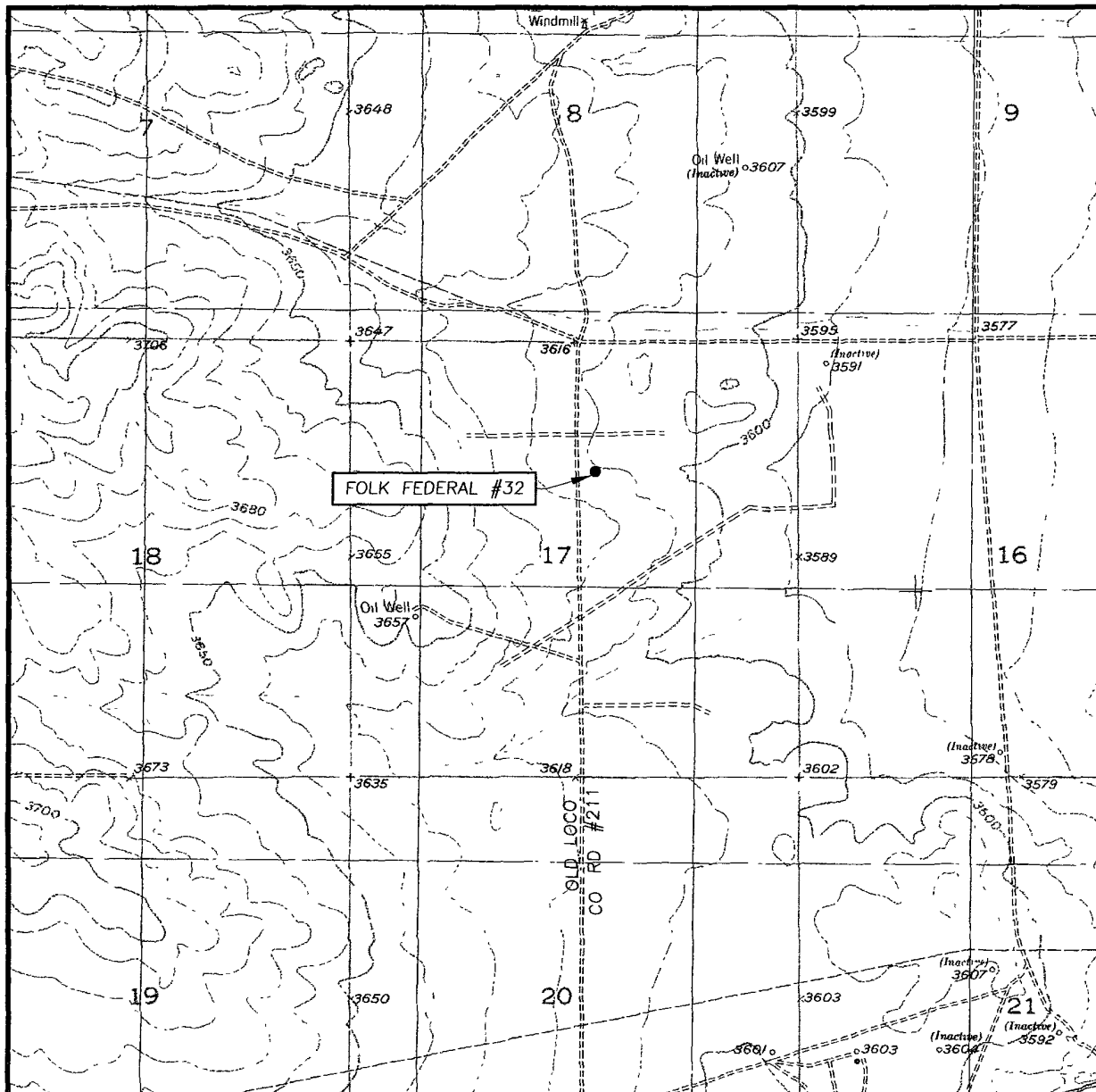
<b>COG OPERATING, LLC</b>			
FOLK FEDERAL #32 WELL LOCATED 1560 FEET FROM THE NORTH LINE AND 2404 FEET FROM THE EAST LINE OF SECTION 17, TOWNSHIP 17 SOUTH, RANGE 29 EAST, N.M.P.M., EDDY COUNTY, NEW MEXICO			
Survey Date	6/21/10	Sheet	1 of 1 Sheets
W.O. Number:	10 11 0711	Dr By.	LA
Date:	6/25/10	10110711	Scale 1"=100'

[illegible]

SEC. 17 TWP 17-S RGE. 29-E  
SURVEY \_\_\_\_\_ N M P M \_\_\_\_\_  
COUNTY EDDY STATE NEW MEXICO  
DESCRIPTION 1560' FNL & 2404' FEL  
ELEVATION 3612'  
OPERATOR COG OPERATING, LLC  
LEASE FOLK FEDERAL



# LOCATION VERIFICATION MAP



SCALE 1" = 2000'

CONTOUR INTERVAL  
RED LAKE SE, N M - 10'

SEC 17 TWP 17-S RGE 29-E

SURVEY N M P M

COUNTY EDDY STATE NEW MEXICO

DESCRIPTION 1560' FNL & 2404' FEL

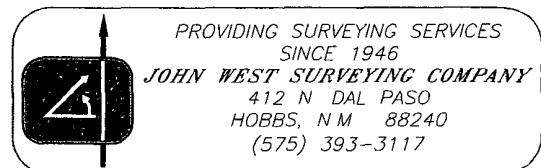
ELEVATION 3612'

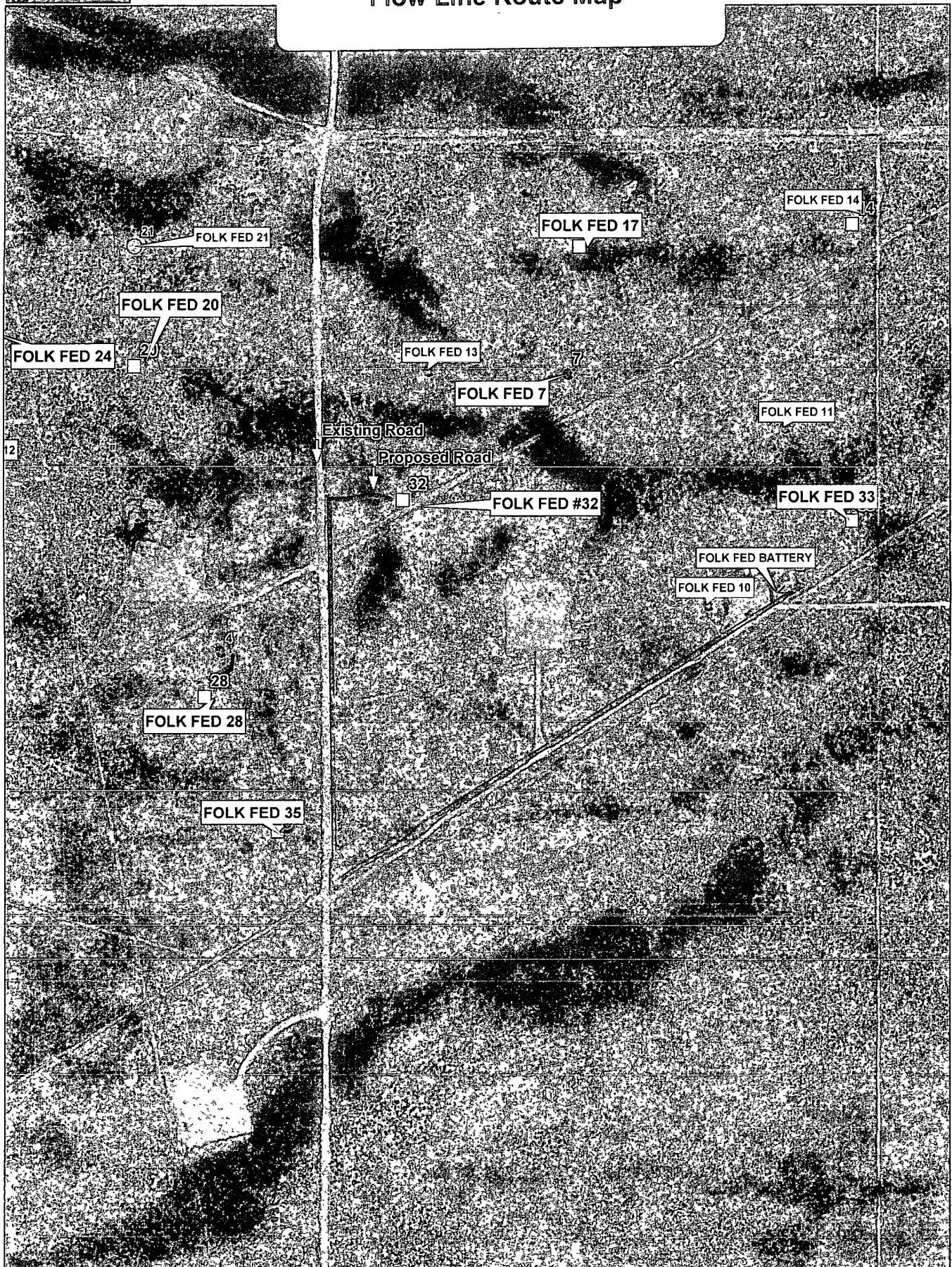
OPERATOR COG OPERATING, LLC

LEASE FOLK FEDERAL

U S G S TOPOGRAPHIC MAP

RED LAKE SE, N M





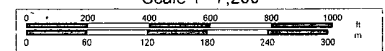
Data use subject to license

© DeLorme XMap® 7

www.delorme.com



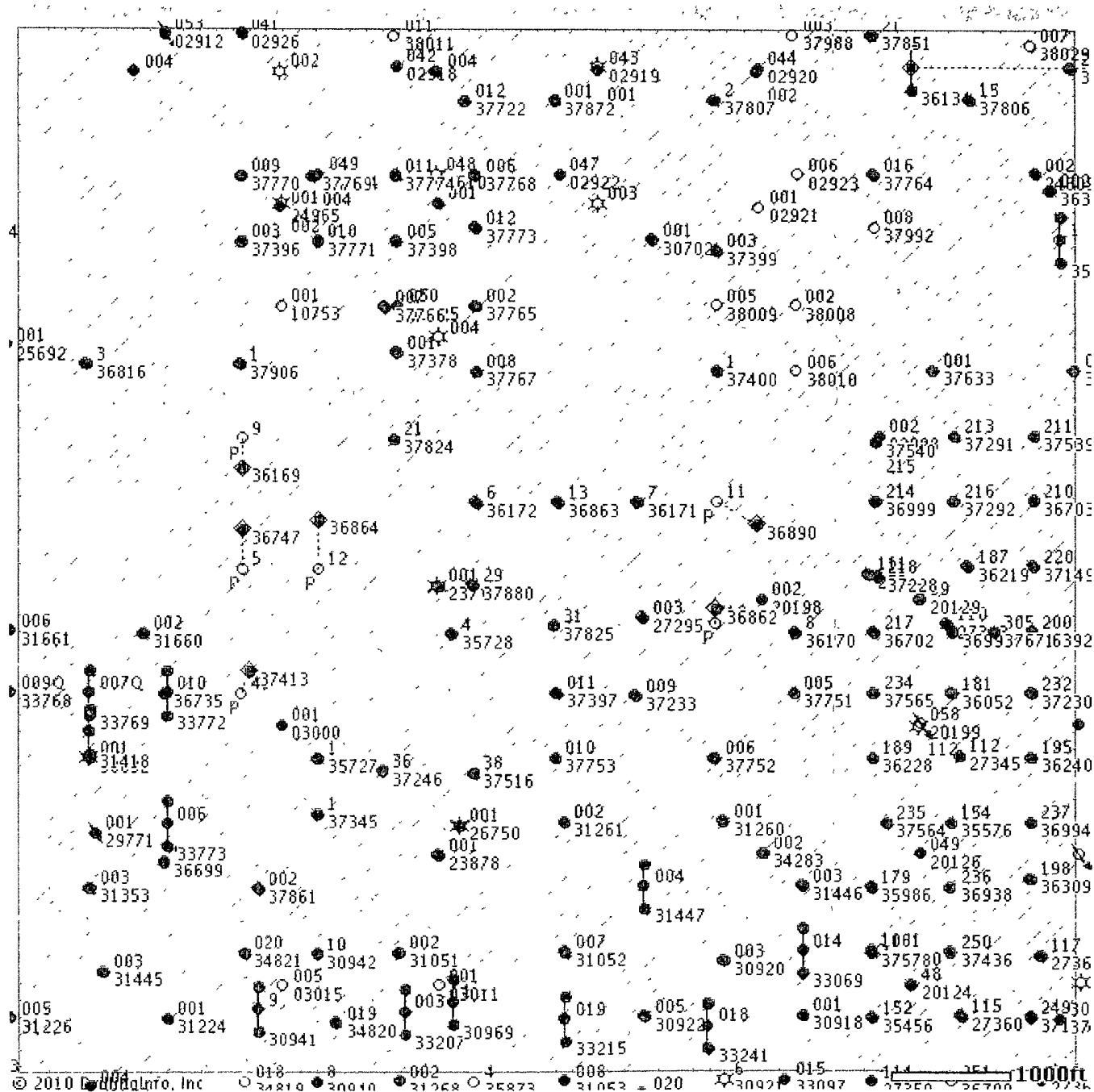
Scale 1 7,200



1" = 600 0 ft

Data Zoom 14-7

[PDF](#) [Save](#)  
[Map](#) [Image](#)



Added  
8/10/10  
ten

## Wells in 1 Mile Radius From Folk Federal 32

Added  
8/10/10  
TEN

API#	Operator	County	Legal	Lease	Well#	Date Issued	Permitted Depth	Permit TVD	Images	Doc	Total Depth	Well Type	Well Status
30-015-31447	CLAYTON WILLIAMS ENERGY INC	EDDY	S 17, T 17S, R 29E	PHILLIPS 17 FEDERAL	004	12/31/2001			No	link	5,000	O	Active
30-015-33069	CLAYTON WILLIAMS ENERGY INC	EDDY	S 20, T 17S, R 29E	STATE "20B"	014	10/28/2003	5,000		No	link	4,327	O	Active
30-015-02912	MARKS AND GARNER PRODUCTION LTD CO	EDDY	S 7, T 17S, R 29E	CAVE POOL UNIT	053	12/1/1994	0		No	link	0	I	Temporarily Abandoned
30-015-02926	MARKS AND GARNER PRODUCTION LTD CO	EDDY	S 8, T 17S, R 29E	CAVE POOL UNIT	041	12/1/1994	0		No	link	0	O	Temporarily Abandoned
30-015-23719	MACK ENERGY CORP	EDDY	S 17, T 17S, R 29E	FEDERAL KL-17	001	12/1/1994			No	link	10,740	G	Pumping
30-015-27295	MACK ENERGY CORP	EDDY	S 17, T 17S, R 29E	FOLK FEDERAL G J WEST COOP UNIT	003	3/1/1993			No	link	5,050	PO	Active
30-015-27345	MACK ENERGY CORP	EDDY	S 16, T 17S, R 29E	G J WEST COOP UNIT	112	5/1/1993	0		No	link	4,350	O	Pumping
30-015-27360	MACK ENERGY CORP	EDDY	S 21, T 17S, R 29E	G J WEST COOP UNIT	115	6/6/1994			No	link	4,758	O	Pumping
30-015-27362	MACK ENERGY CORP	EDDY	S 21, T 17S, R 29E	G J WEST COOP UNIT	117	6/6/1994			No	link	4,920	O	Pumping
30-015-29771	SOUTHWEST ROYALTIES INC	EDDY	S 18, T 17S, R 29E	LUCKY DUCK 18 STATE	001	3/24/1999			No	link		X	Cancelled
30-015-30692	MEWBOURNE OIL COMPANY or MEWBOURNE OIL CO	EDDY	S 18, T 17S, R 29E	EMPIRE 18 STATE COM	001	7/8/1999			No	link	10,799	G	Flowing
30-015-30702	EOG RESOURCES INC	EDDY	S 8, T 17S, R 29E	CONOCO 8 STATE COM	001	7/22/1999			No	link	10,920	O	Flowing
30-015-30918	CLAYTON WILLIAMS ENERGY INC	EDDY	S 20, T 17S, R 29E	STATE 20 B	001	1/12/2000			No	link	5,020	O	Temporarily Abandoned
30-015-30920	CLAYTON WILLIAMS ENERGY INC	EDDY	S 20, T 17S, R 29E	STATE 20 B	003	1/12/2000			No	link	4,969	O	Temporarily Abandoned
30-015-30922	CLAYTON WILLIAMS ENERGY INC	EDDY	S 20, T 17S, R 29E	STATE 20 B	005	1/12/2000			No	link	4,584	O	Temporarily Abandoned
30-015-30941	MACK ENERGY CORPORATION or MACK ENERGY CORP	EDDY	S 20, T 17S, R 29E	MESQUITE STATE	009	1/27/2000	4,200		Yes	link	4,286	PO	Pumping
30-015-30942	MACK ENERGY CORP	EDDY	S 20, T 17S, R 29E	MESQUITE STATE	10	1/27/2000	4,200		Yes	link	4,345	O	Pumping
30-015-30969	CLAYTON WILLIAMS ENERGY INC	EDDY	S 20, T 17S, R 29E	STATE 20 E	001	2/14/2000			No	link	4,987	U	Temporarily Abandoned
30-015-31051	CLAYTON WILLIAMS ENERGY INC	EDDY	S 20, T 17S, R 29E	STATE 20 E	002	4/3/2000			No	link	5,000	O	Temporarily Abandoned
30-015-31052	CLAYTON WILLIAMS ENERGY INC	EDDY	S 20, T 17S, R 29E	STATE 20 B	007	4/3/2000			No	link	5,000	O	Temporarily Abandoned
30-015-31224	CLAYTON WILLIAMS ENERGY INC	EDDY	S 19, T 17S, R 29E	PHILLIPS 19 FEDERAL	001	8/1/2000			No	link	4,805	O	Pumping
30-015-31260	CLAYTON WILLIAMS ENERGY INC	EDDY	S 17, T 17S, R 29E	PHILLIPS 17 FEDERAL	001	8/1/2000			No	link	4,805	O	Temporarily Abandoned
30-015-31261	CLAYTON WILLIAMS ENERGY INC	EDDY	S 17, T 17S, R 29E	PHILLIPS 17 FEDERAL	002	8/1/2000			No	link	4,506	O	Temporarily Abandoned
30-015-31353	MEWBOURNE OIL COMPANY or MEWBOURNE OIL CO	EDDY	S 18, T 17S, R 29E	EMPIRE 18 STATE	003	9/22/2000			No	link	4,486	O	Pumping
30-015-31418	MEWBOURNE OIL COMPANY or MEWBOURNE OIL CO	EDDY	S 18, T 17S, R 29E	EMPIRE 18 STATE	007	11/3/2000			No	link		O	Active
30-015-31445	CLAYTON WILLIAMS ENERGY INC	EDDY	S 19, T 17S, R 29E	PHILLIPS 19 FEDERAL	003	11/13/2000			No	link	4,500	O	Pumping
30-015-31446	CLAYTON WILLIAMS ENERGY INC	EDDY	S 17, T 17S, R 29E	PHILLIPS 17 FEDERAL	003	11/13/2000			No	link	4,427	O	Pumping
30-015-31660	CLAYTON WILLIAMS ENERGY INC	EDDY	S 18, T 17S, R 29E	PHILLIPS 18 FEDERAL	002	3/22/2001			No	link	4,500	O	Pumping
30-015-26750	CONOCOPHILLIPS COMPANY	EDDY	S 17, T 17S, R 29E	MUSKEGON "17" STATE COM	001	1/1/2003	0		No	link	10,880	G	Pumping
30-015-23878	STEVENS OPERATING CORPORATION or HANAGAN PETROLEUM CORP	EDDY	S 17, T 17S, R 29E	PRE-ONGARD WELL	001	1/1/1970			No	link		PO	Active Permit
30-015-27343	STEVENS OPERATING CORPORATION or HANAGAN PETROLEUM CORP	EDDY	S 16, T 17S, R 29E	PRE-ONGARD WELL	110	1/1/1970			No	link		PO	Active Permit

Added

30-015-27344	STEVENS OPERATING CORPORATION or HANAGAN PETROLEUM CORP	EDDY	S 16, T 17S, R 29E	PRE-ONGARD WELL	111	1/1/1970		No	link		PO	Active Permit
30-015-27361	STEVENS OPERATING CORPORATION or HANAGAN PETROLEUM CORP	EDDY	S 21, T 17S, R 29E	PRE-ONGARD WELL	116	1/1/1970		No	link		PO	Active Permit
30-015-33207	CLAYTON WILLIAMS ENERGY INC	EDDY	S 20, T 17S, R 29E	STATE 20E	003	1/29/2004	5,000	No	link	4,500	O	Active
30-015-33215	CLAYTON WILLIAMS ENERGY INC	EDDY	S 20, T 17S, R 29E	STATE 20B	019	2/2/2004	5,000	No	link	4,337	O	Active
30-015-33241	CLAYTON WILLIAMS ENERGY INC	EDDY	S 20, T 17S, R 29E	STATE 20 B	018	2/14/2004	5,000	No	link	4,302	O	Active
30-015-33769	MEWBOURNE OIL COMPANY	EDDY	S 18, T 17S, R 29E	EMPIRE 18 STATE	007Q	12/16/2004	4,500	No	link	4,500	O	Active
30-015-33772	MEWBOURNE OIL COMPANY	EDDY	S 18, T 17S, R 29E	EMPIRE 18 STATE	010	12/17/2004	4,500	No	link	4,500	O	Active
30-015-33773	MEWBOURNE OIL COMPANY	EDDY	S 18, T 17S, R 29E	EMPIRE 18 STATE	006	12/17/2004	4,500	No	link	4,500	O	Active
30-015-31418	MEWBOURNE OIL COMPANY or MEWBOURNE OIL CO	EDDY	S 18, T 17S, R 29E	EMPIRE 18 STATE	007	10/31/2000		No	link		O	Active
30-015-31447	CLAYTON WILLIAMS ENERGY INC	EDDY	S 17, T 17S, R 29E	PHILLIPS 17 FEDERAL	004	11/30/2001		No	link	5,000	O	Active
30-015-33069	CLAYTON WILLIAMS ENERGY INC	EDDY	S 20, T 17S, R 29E	STATE 20 B	014	9/30/2003		No	link	4,327	O	Active
30-015-33207	CLAYTON WILLIAMS ENERGY INC	EDDY	S 20, T 17S, R 29E	STATE 20 E	003	12/31/2003		No	link	4,500	O	Active
30-015-33215	CLAYTON WILLIAMS ENERGY INC	EDDY	S 20, T 17S, R 29E	STATE 20 B	019	1/31/2004		No	link	4,337	O	Active
30-015-33241	CLAYTON WILLIAMS ENERGY INC	EDDY	S 20, T 17S, R 29E	STATE 20 B	018	1/31/2004		No	link	4,302	O	Active
30-015-33773	MEWBOURNE OIL COMPANY or MEWBOURNE OIL CO	EDDY	S 18, T 17S, R 29E	EMPIRE 18 STATE	006	11/30/2004		No	link	4,500	O	Active
30-015-33772	MEWBOURNE OIL COMPANY or MEWBOURNE OIL CO	EDDY	S 18, T 17S, R 29E	EMPIRE 18 STATE	010	11/30/2004		No	link	4,500	O	Active
30-015-33769	MEWBOURNE OIL COMPANY or MEWBOURNE OIL CO	EDDY	S 18 T 17S, R 29E	EMPIRE 18 STATE	007Q	11/30/2004		No	link	4,500	O	Active
30-015-34283	GRUY PETROLEUM MANAGEMENT CO or CIMAREX ENERGY CO OF COLORADO	EDDY	S 17, T 17S, R 29E	MUSKEGON 17 FEDERAL COM	002	8/17/2005	11 500	No	link	11 500	PG	Active Permit
30-015-20129	MACK ENERGY CORPORATION or MACK ENERGY CORP	EDDY	S 16, T 17S, R 29E	GJ WEST COOP UNIT	59	3/14/1970	2,600	No	link	2,600	PO	Pumping
30-015-34820	COG OPERATING LLC	EDDY	S 20, T 17S, R 29E	MESQUITE STATE	019	4/26/2006	5,500	No	link	5,401	PO	Active Permit
30-015-34821	COG OPERATING LLC	EDDY	S 20, T 17S, R 29E	MESQUITE STATE	020	4/26/2006	5,500	No	link	5,460	O	Active Permit
30-015-35219	OXY USA WTP LIMITED PARTNERSHIP	EDDY	S 9, T 17S, R 29E	Oxy FLAMESKIMMER STATE	1	10/30/2006	10,000	No	link	10,300	PG	Active Permit
30-015-35456	COG OPERATING LLC	EDDY	S 21, T 17S, R 29E	G J WEST COOP UNIT	152	3/5/2007	5,500	Yes	link	5,500	PO	Active
30-015-35576	COG OPERATING LLC	EDDY	S 16 T 17S, R 29E	G J WEST COOP UNIT	154	5/2/2007	5,600	Yes	link	5,600	O	Active
30-015-35727	COG OPERATING LLC	EDDY	S 17, T 17S, R 29E	FOLK FEDERAL	1	7/25/2007	5 500	Yes	link	5,123	O	Active Permit
30-015-35728	COG OPERATING LLC	EDDY	S 17, T 17S, R 29E	FOLK FEDERAL	4	7/24/2007	5,500	Yes	link	5,600	O	Active Permit
30-015-35986	COG OPERATING LLC	EDDY	S 16, T 17S, R 29E	G J WEST COOP UNIT	179	12/12/2007	5,450	Yes	link	5,494	O	Active Permit
30-015-36052	COG OPERATING LLC	EDDY	S 16, T 17S, R 29E	G J WEST COOP UNIT	181	1/22/2008	5,450	Yes	link	5,454	O	Active Permit
30-015-36134	CIMAREX ENERGY CO OF COLORADO	EDDY	S 9, T 17S, R 29E	BARBWIRE 9 STATE COM	001	2/20/2008		Yes	link	11,762	PO	Active Permit
30-015-36172	COG OPERATING LLC	EDDY	S 17, T 17S, R 29E	FOLK FEDERAL	6	2/22/2008	5,500	Yes	link	5,463	O	Active Permit
30-015-36170	COG OPERATING LLC	EDDY	S 17, T 17S, R 29E	FOLK FEDERAL	8	2/22/2008	5,500	Yes	link	5,462	O	Active Permit
30-015-36169	COG OPERATING LLC	EDDY	S 17, T 17S, R 29E	FOLK FEDERAL	9	2/22/2008	5,500	Yes	link	5,408	O	Active Permit
30-015-36171	COG OPERATING LLC	EDDY	S 17, T 17S, R 29E	FOLK FEDERAL	7	2/22/2008	5,500	Yes	link	5,465	O	Active Permit
30-015-36228	COG OPERATING LLC	EDDY	S 16, T 17S, R 29E	G J WEST COOP UNIT	189	3/24/2008	5,500	Yes	link	5,446	O	Active Permit

30-015-36219	COG OPERATING LLC	EDDY	S 16, T 17S, R 29E	G J WEST COOP UNIT	187	3/25/2008	5,500		Yes	link	5,456	O	Active Permit
30-015-36240	COG OPERATING LLC	EDDY	S 16, T 17S, R 29E	G J WEST COOP UNIT	195	3/31/2008			Yes	link		PO	Active Permit
30-015-35219	OXY USA WTP LIMITED PARTNERSHIP	EDDY	S 9, T 17S, R 29E	OXY FLAMESKIMMER STATE	1	3/26/2008	10,300		Yes	link	10,300	PG	Active Permit
30-015-30941	COG OPERATING LLC	EDDY	S 20, T 17S, R 29E	MESQUITE STATE	9	4/11/2008	5,425		Yes	link	4,286	PO	Pumping
30-015-36309	COG OPERATING LLC	EDDY	S 16, T 17S, R 29E	G J WEST COOP UNIT	198	5/1/2008			Yes	link	5,476	O	Active Permit
30-015-36394	CIMAREX ENERGY CO OF COLORADO	EDDY	S 9, T 17S, R 29E	FLAMESKIMMER	002	6/26/2008	9,900		Yes	link	9,900	PG	Active Permit
30-015-36392	COG OPERATING LLC	EDDY	S 16, T 17S, R 29E	GJ WEST COOP UNIT	200	6/26/2008			Yes	link	5,462	O	Active Permit
30-015-20124	COG OPERATING LLC	EDDY	S 21, T 17S, R 29E	GJ WEST COOP UNIT	48	8/22/2008	5,600		Yes	link	4,228	PO	Pumping
30-015-36702	COG OPERATING LLC	EDDY	S 16, T 17S, R 29E	G J WEST COOP UNIT	217	10/17/2008	5,450		Yes	link	5,464	O	Active Permit
30-015-36699	MEWBOURNE OIL CO or MEWBOURNE OIL COMPANY	EDDY	S 18, T 17S, R 29E	EMPIRE 18 STATE	009	10/17/2008	5,400		Yes	link	5,010	O	Active Permit
30-015-36703	COG OPERATING LLC	EDDY	S 16, T 17S, R 29E	G J WEST COOP UNIT	210	10/17/2008	5,450		Yes	link	5,451	O	Active Permit
30-015-36735	MEWBOURNE OIL COMPANY	EDDY	S 18, T 17S, R 29E	EMPIRE 18 STATE	10	10/31/2008	5,400		Yes	link	4,702	O	Active Permit
30-015-36747	COG OPERATING LLC	EDDY	S 17, T 17S, R 29E	FOLK FEDERAL	5	8/8/2008	5,500		Yes	link	5,500	PO	Active Permit
30-015-36816	MEWBOURNE OIL CO or MEWBOURNE OIL COMPANY	EDDY	S 7, T 17S, R 29E	EMPIRE 7 P FEDERAL	3	11/26/2008	5,300		Yes	link	5,025	O	Active Permit
30-015-30969	CLAYTON WILLIAMS ENERGY INC	EDDY	S 20, T 17S, R 29E	STATE '20E'	1	6/19/2000	3,850		Yes	link	4,987	U	Temporarily Abandoned
30-015-36863	COG OPERATING LLC	EDDY	S 17, T 17S, R 29E	FOLK FEDERAL	13	12/19/2008	5,400		Yes	link	5,531	O	Active Permit
30-015-36862	COG OPERATING LLC	EDDY	S 17, T 17S, R 29E	FOLK FEDERAL	10	12/19/2008	5,554	5,550	Yes	link	5,550	O	Active Permit
30-015-36864	COG OPERATING LLC	EDDY	S 17, T 17S, R 29E	FOLK FEDERAL	12	12/19/2008	5,400		Yes	link	5,421	O	Active Permit
30-015-36890	COG OPERATING LLC	EDDY	S 17, T 17S, R 29E	FOLK FEDERAL	11	12/19/2008	5,582	5,550	Yes	link	5,412	O	Active Permit
30-015-36134	CIMAREX ENERGY CO OF COLORADO	EDDY	S 9, T 17S, R 29E	BARBWIRE 9 STATE COM	001	2/10/2009	11,762		Yes	link	11,762	PO	Active Permit
30-015-36938	COG OPERATING LLC	EDDY	S 16, T 17S, R 29E	G J WEST COOP UNIT	236	2/16/2009	5,500		Yes	link	5,500	O	Active Permit
30-015-36994	COG OPERATING LLC	EDDY	S 16, T 17S, R 29E	GJ WEST COOP UNIT	237	3/10/2009	5,700		Yes	link	5,500	O	Active Permit
30-015-36993	COG OPERATING LLC	EDDY	S 16, T 17S, R 29E	G J WEST COOP UNIT	219	3/10/2009	5,700		Yes	link	5,501	O	Active Permit
30-015-36999	COG OPERATING LLC	EDDY	S 16, T 17S, R 29E	G J WEST COOP UNIT	214	3/10/2009	5,600		Yes	link	5,543	O	Active Permit
30-015-37150	COG OPERATING LLC	EDDY	S 21, T 17S, R 29E	G J WEST COOP UNIT	249	7/9/2009	5,550		Yes	link	5,550	PO	Active Permit
30-015-37149	COG OPERATING LLC	EDDY	S 16, T 17S, R 29E	G J WEST COOP UNIT	220	7/9/2009	5,550		Yes	link	5,505	O	Active Permit
30-015-37230	COG OPERATING LLC	EDDY	S 16, T 17S, R 29E	G J WEST COOP UNIT	232	8/21/2009	5,550		Yes	link	5,520	O	Active Permit
30-015-37233	COG OPERATING LLC	EDDY	S 17, T 17S, R 29E	FOLK STATE	009	8/21/2009	5,450		Yes	link	5,450	PO	Active Permit
30-015-37246	COG OPERATING LLC	EDDY	S 17, T 17S, R 29E	FOLK FEDERAL	36	8/24/2009	5,450		Yes	link	5,450	PO	Active Permit
30-015-37292	COG OPERATING LLC	EDDY	S 16, T 17S, R 29E	G J WEST COOP UNIT	216	9/30/2009	5,550		Yes	link	5,494	O	Active Permit
30-015-37291	COG OPERATING LLC	EDDY	S 16, T 17S, R 29E	G J WEST COOP UNIT	213	9/30/2009	5,550		Yes	link	5,505	O	Active Permit
30-015-37345	COG OPERATING LLC	EDDY	S 17, T 17S, R 29E	FOLK STATE	001	10/20/2009	5,500		Yes	link	5,515	O	Active Permit
30-015-37378	COG OPERATING LLC	EDDY	S 8, T 17S, R 29E	HATFIELD STATE	001	11/4/2009	5,450		Yes	link	5,475	O	Active Permit
30-015-37228	COG OPERATING LLC	EDDY	S 16, T 17S, R 29E	G J WEST COOP UNIT	218	8/21/2009	5,550		Yes	link	5,550	PO	Active Permit
30-015-37396	COG OPERATING LLC	EDDY	S 8, T 17S, R 29E	HATFIELD STATE	003	12/2/2009	5,450		Yes	link	5,450	PO	Active Permit
30-015-37397	COG OPERATING LLC	EDDY	S 17, T 17S, R 29E	FOLK STATE	011	12/2/2009	5,550		Yes	link	5,550	PO	Active Permit
30-015-37398	COG OPERATING LLC	EDDY	S 8, T 17S, R 29E	HATFIELD STATE	005	12/2/2009	5,450		Yes	link	5,450	PO	Active Permit
30-015-37399	COG OPERATING LLC	EDDY	S 8, T 17S, R 29E	MCCOY STATE	003	12/2/2009	5,450		Yes	link	5,450	PO	Active Permit
30-015-37400	COG OPERATING LLC	EDDY	S 8, T 17S, R 29E	MCCOY STATE	001	12/2/2009	5,450		Yes	link	5,466	O	Active Permit
30-015-37413	COG OPERATING LLC	EDDY	S 17, T 17S, R 29E	FOLK FEDERAL	41	11/25/2009	5,450		Yes	link	5,450	PO	Active Permit
30-015-37436	COG OPERATING LLC	EDDY	S 21, T 17S, R 29E	G J WEST COOP UNIT	250	12/21/2009	5,600		Yes	link	5,545	O	Active Permit
30-015-37516	COG OPERATING LLC	EDDY	S 17, T 17S, R 29E	FOLK FEDERAL	38	11/5/2009	5,450		Yes	link	5,450	PO	Active Permit
30-015-37539	COG OPERATING LLC	EDDY	S 16, T 17S, R 29E	G J WEST COOP UNIT	211	2/3/2010	5,550		Yes	link	5,550	PO	Active Permit
30-015-37540	COG OPERATING LLC	EDDY	S 16, T 17S, R 29E	G J WEST COOP UNIT	215	2/3/2010	5,550		Yes	link	5,550	PO	Active Permit
30-015-37565	COG OPERATING LLC	EDDY	S 16, T 17S, R 29E	GJ WEST COOP UNIT	234	2/10/2010	5,550		Yes	link	5,550	PO	Active Permit

Added

30-015-37578	COG OPERATING LLC	EDDY	S 21, T 17S, R 29E	GJ WEST COOP UNIT	302	2/10/2010	5,550	Yes	link	5,550	PO	Active Permit
30-015-37564	COG OPERATING LLC	EDDY	S 16, T 17S, R 29E	G J WEST COOP UNIT	235	3/1/2010	5,550	Yes	link	5,550	PO	Active Permit
30-015-37633	CIMAREX ENERGY CO OF COLORADO	EDDY	S 9, T 17S, R 29E	DARNER 9 STATE	001	3/4/2010	6,000	Yes	link	6,000	PO	Active Permit
30-015-37634	CIMAREX ENERGY CO OF COLORADO	EDDY	S 9, T 17S, R 29E	DARNER 9 STATE	002	3/4/2010	6,000	Yes	link	6,000	PO	Active Permit
30-015-37671	COG OPERATING LLC	EDDY	S 16, T 17S, R 29E	G J WEST COOP UNIT	305	3/16/2010	5,550	Yes	link	5,550	PO	Active Permit
30-015-37722	COG OPERATING LLC	EDDY	S 8, T 17S, R 29E	MCCOY STATE	012	4/6/2010	5,450	Yes	link	5,450	PO	Active Permit
30-015-37751	COG OPERATING LLC	EDDY	S 17, T 17S, R 29E	FOLK STATE	005	4/19/2010	5,500	Yes	link	5,500	PO	Active Permit
30-015-37752	COG OPERATING LLC	EDDY	S 17, T 17S, R 29E	FOLK STATE	006	4/19/2010	5,500	Yes	link	5,500	PO	Active Permit
30-015-37753	COG OPERATING LLC	EDDY	S 17, T 17S, R 29E	FOLK STATE	010	4/19/2010	5,500	Yes	link	5,500	PO	Active Permit
30-015-37764	CIMAREX ENERGY CO OF COLORADO	EDDY	S 9, T 17S, R 29E	DARNER 9 STATE	016	4/28/2010	6,000	Yes	link	6,000	PO	Active Permit
30-015-37765	COG OPERATING LLC	EDDY	S 8, T 17S, R 29E	HATFIELD STATE	002	4/28/2010	6,000	Yes	link	6,000	PO	Active Permit
30-015-37766	COG OPERATING LLC	EDDY	S 8, T 17S, R 29E	HATFIELD STATE	007	4/28/2010	6,000	Yes	link	6,000	PO	Active Permit
30-015-37767	COG OPERATING LLC	EDDY	S 8, T 17S, R 29E	HATFIELD STATE	008	4/28/2010	6,000	Yes	link	6,000	PO	Active Permit
30-015-37768	COG OPERATING LLC	EDDY	S 8, T 17S, R 29E	HATFIELD STATE	006	4/28/2010	6,000	Yes	link	6,000	PO	Active Permit
30-015-37769	COG OPERATING LLC	EDDY	S 8, T 17S, R 29E	HATFIELD STATE	004	4/28/2010	6,000	Yes	link	6,000	PO	Active Permit
30-015-37770	COG OPERATING LLC	EDDY	S 8, T 17S, R 29E	HATFIELD STATE	009	4/28/2010	6,000	Yes	link	6,000	PO	Active Permit
30-015-37771	COG OPERATING LLC	EDDY	S 8, T 17S, R 29E	HATFIELD STATE	010	4/28/2010	6,000	Yes	link	6,000	PO	Active Permit
30-015-37773	COG OPERATING LLC	EDDY	S 8, T 17S, R 29E	HATFIELD STATE	012	4/28/2010	6,000	Yes	link	6,000	PO	Active Permit
30-015-37774	COG OPERATING LLC	EDDY	S 8, T 17S, R 29E	HATFIELD STATE	011	4/28/2010	6,000	Yes	link	6,000	PO	Active Permit
30-015-37787	COG OPERATING LLC	EDDY	S 9, T 17S, R 29E	EMPIRE STATE SWD	2	5/3/2010	9,200	Yes	link	9,200	PO	Active Permit
30-015-37806	CIMAREX ENERGY CO OF COLORADO	EDDY	S 9, T 17S, R 29E	DARTER 9 STATE	15	5/12/2010	6,000	Yes	link	6,000	PO	Active Permit
30-015-37807	CIMAREX ENERGY CO OF COLORADO	EDDY	S 8, T 17S, R 29E	CHASER 8 STATE	2	5/12/2010	6,000	Yes	link	6,000	PO	Active Permit
30-015-37824	COG OPERATING LLC	EDDY	S 17, T 17S, R 29E	FOLK FEDERAL	21	5/10/2010	5,550	Yes	link	5,550	PO	Active Permit
30-015-37825	COG OPERATING LLC	EDDY	S 17, T 17S, R 29E	FOLK FEDERAL	31	5/10/2010	5,550	Yes	link	5,550	PO	Active Permit
30-015-37851	CIMAREX ENERGY CO OF COLORADO	EDDY	S 9, T 17S, R 29E	DARTER 9 STATE	21	5/27/2010	6,000	Yes	link	6,000	PO	Active Permit
30-015-37861	COG OPERATING LLC	EDDY	S 17, T 17S, R 29E	FOLK STATE	002	6/4/2010	5,500	Yes	link	5,500	PO	Active
30-015-37863	COG OPERATING LLC	EDDY	S 21, T 17S, R 29E	GJ WEST COOP UNIT	308	6/4/2010	5,500	Yes	link	5,500	PO	Active
30-015-37872	CIMAREX ENERGY CO OF COLORADO	EDDY	S 8, T 17S, R 29E	CHASER 8 STATE	001	6/4/2010	6,000	Yes	link	6,000	PO	Active
30-015-37880	COG OPERATING LLC	EDDY	S 17, T 17S, R 29E	FOLK FEDERAL	29	5/20/2010	5,450	Yes	link	5,450	PO	Active Permit
30-015-37906	NADEL AND GUSSMAN HEYCO, LLC	EDDY	S 8, T 17S, R 29E	HILLYBILLY CAVE 8 STATE	1	6/10/2010	5,450	Yes	link	5,450	PO	Active Permit

## MASTER DRILLING PROGRAM

### 1. Geologic Name of Surface Formation

Quaternary

### 2. Estimated Tops of Important Geologic Markers:

Quaternary	Surface
Top of Salt	400'
Base of Salt	800'
Yates	850'
Seven Rivers	1150'
Queen	1750'
Grayburg	2125'
San Andres	2400'
Glorietta	3850'
Yeso Group	3930'

### 3. Estimated Depths of Anticipated Fresh Water, Oil and Gas

Water Sand	150'	Fresh Water
Grayburg	2125'	Oil/Gas
San Andres	2400'	Oil/Gas
Glorietta	3850'	Oil/Gas
Yeso Group	3930'	Oil/Gas

No other formations are expected to give up oil, gas or fresh water in measurable quantities. Setting 13 3/8" casing to 300' and circulating cement back to the surface will protect the surface fresh water sand. The Salt Section will be protected by setting 8 5/8" casing to 850' and circulating cement, in a single or multi-stage job and/or with an ECP, back to the surface. Any shallower zones above TD, which contain commercial quantities of oil and/or gas, will have cement circulated across them. This will be achieved by cementing, with a single or multi-stage job, the 5 1/2" production casing back 200' into the intermediate casing, to be run at TD. If wellbore conditions arise that require immediate action and/or a change to this program, COG Operating LLC personnel will always react to protect the wellbore and/or environment. see COA

see COA

see COA

#### 4. Casing Program

Hole Size	Interval	OD Casing	Weight	Grade	Jt., Condition	Jt.	brst/clps/ten
17 1/2"	0-300'	13 3/8"	48#	H-40orJ-55	ST&C/New	ST&C	9.22/3.943/15.8
11"	0-850'	8 5/8"	24or32#	J-55	ST&C/New	ST&C	3.03/2.029/7.82
7 7/8"	0-TD	5 1/2"	15.5or17#	J-55orL-80	LT&C/New	LT&C	1.88/1.731/2.42

see  
COA

#### 5. Cement Program

13 3/8" Surface Casing:

Class C, 400 sx, yield 1.32, back to surface

8 5/8" Intermediate Casing:

##### 11" Hole:

**Single Stage:** 50:50:10, 200 sx lead, yield-2.45 + Class C, 200 sx tail, yield-1.32, back to surface.

see  
COA

**Multi-Stage:** Stage 1: Class C, 200 sx, yield - 1.32; Stage 2: Class C, 200 sx, yield - 1.32. Multi stage tool to be set at approximately, depending on hole conditions, 300'

5 1/2" Production Casing:

**Single Stage:** 35:65:6, 500 sx Lead, yield-2.05 + 50:50:2, 400 sx Tail, yield-1.37, to 200' minimum tie back to intermediate casing.

see  
COA

**Multi-Stage:** Stage 1: 50:50:2, 400 sx, yield - 1.37; Stage 2: 35:65:6, 500 sx, yield - 2.05, to 200' minimum tie back to intermediate casing. Multi stage tool to be set at approximately, depending on hole conditions, TD-2000'

operator to provide  
100' range

**6. Minimum Specifications for Pressure Control**

see  
COA

The blowout preventer equipment (BOP) shown in Exhibit #9 will consist of a double ram-type (2000 psi WP) preventer. This unit will be hydraulically operated and the ram type preventer will be equipped with blind rams on top of 4 1/2" drill pipe rams on the bottom. The BOP will be nipped up on the 13 3/8" surface casing with BOP equipment and tested ~~together to 1000 psi by rig pump in one test.~~ The BOP will then be nipped up on the 8 5/8" intermediate casing and tested by a third party to 2000 psi and used continuously until total depth is reached. Pipe rams will be operationally checked each 24-hour period. Blind rams will be operationally checked on each trip out of the hole. These checks will be noted on the daily tour sheets. Other accessories to the BOP equipment (Exhibit #10) will include a Kelly cock and floor safety valve, choke lines and a choke manifold (Exhibit #11) with a 2000 psi WP rating.

**7. Types and Characteristics of the Proposed Mud System**

The well will be drilled to TD with a combination of brine, cut brine and polymer mud system. The applicable depths and properties of this system are as follows:

DEPTH	TYPE	WEIGHT	VISCOSITY	WATERLOSS
0-300'	Fresh Water	8.5	28	N.C.
300-850'	Brine	10	30	N.C.
850'-TD'	Cut Brine	8.7-9.2	30	N.C.

Sufficient mud materials will be kept at the well site to maintain mud properties and meet minimum lost circulation and weight increase requirements at all times.

**8. Auxiliary Well Control and Monitoring Equipment**

- A. Kelly cock will be kept in the drill string at all times.
- B. A full opening drill pipe-stabbing valve with proper drill pipe connections will be on the rig floor at all times.

**9. Logging, Testing and Coring Program** *See COA*

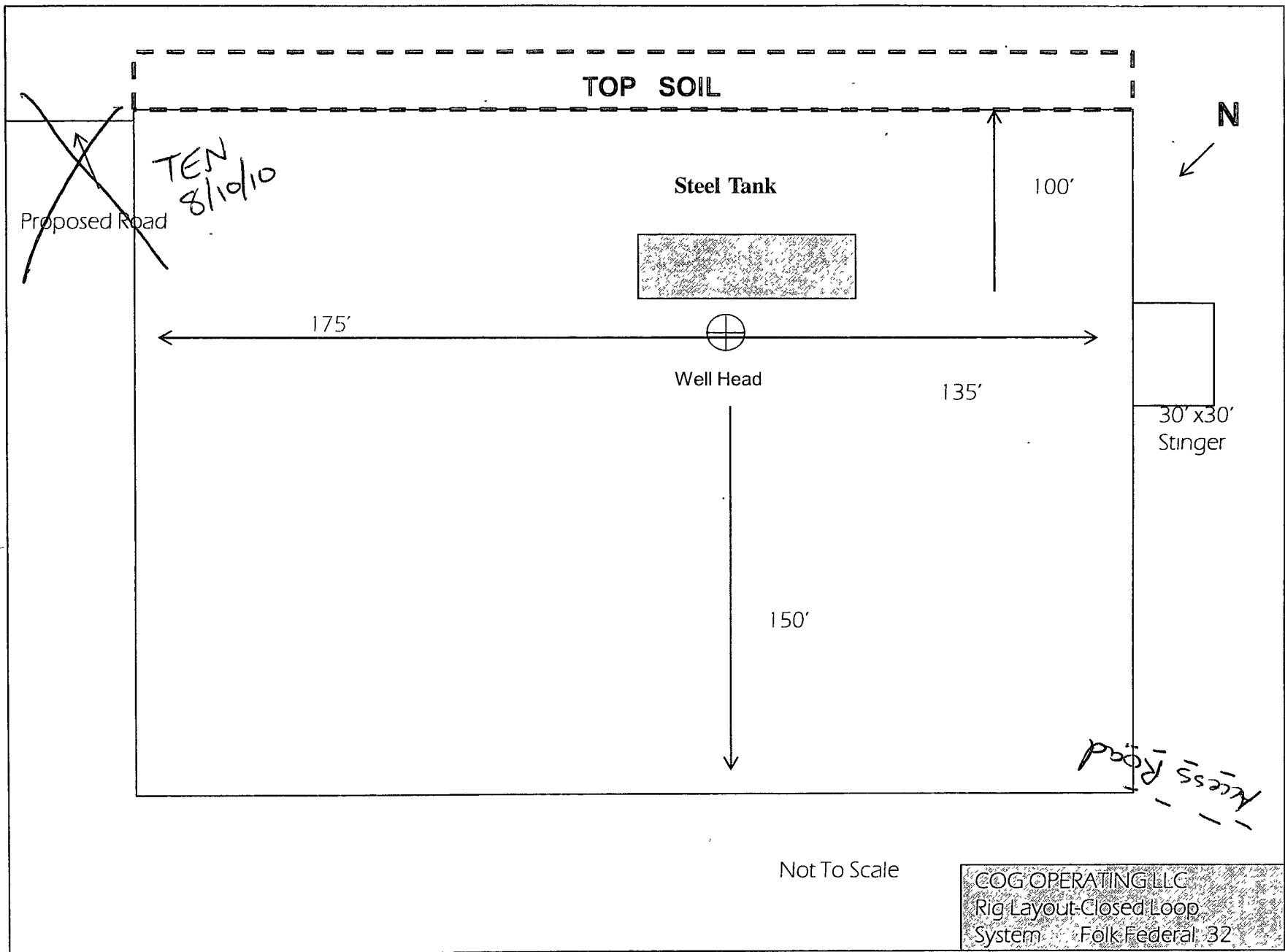
- A. The electric logging program will consist of GR-Dual Laterolog, Spectral Density, Dual Spaced Neutron, CSNG Log and will be run from TD to Surface.
- B. Drill Stem test is not anticipated.
- C. No conventional coring is anticipated.
- D. Further testing procedures will be determined after the 5 ½" production casing has been cemented at TD, based on drill shows and log evaluation.

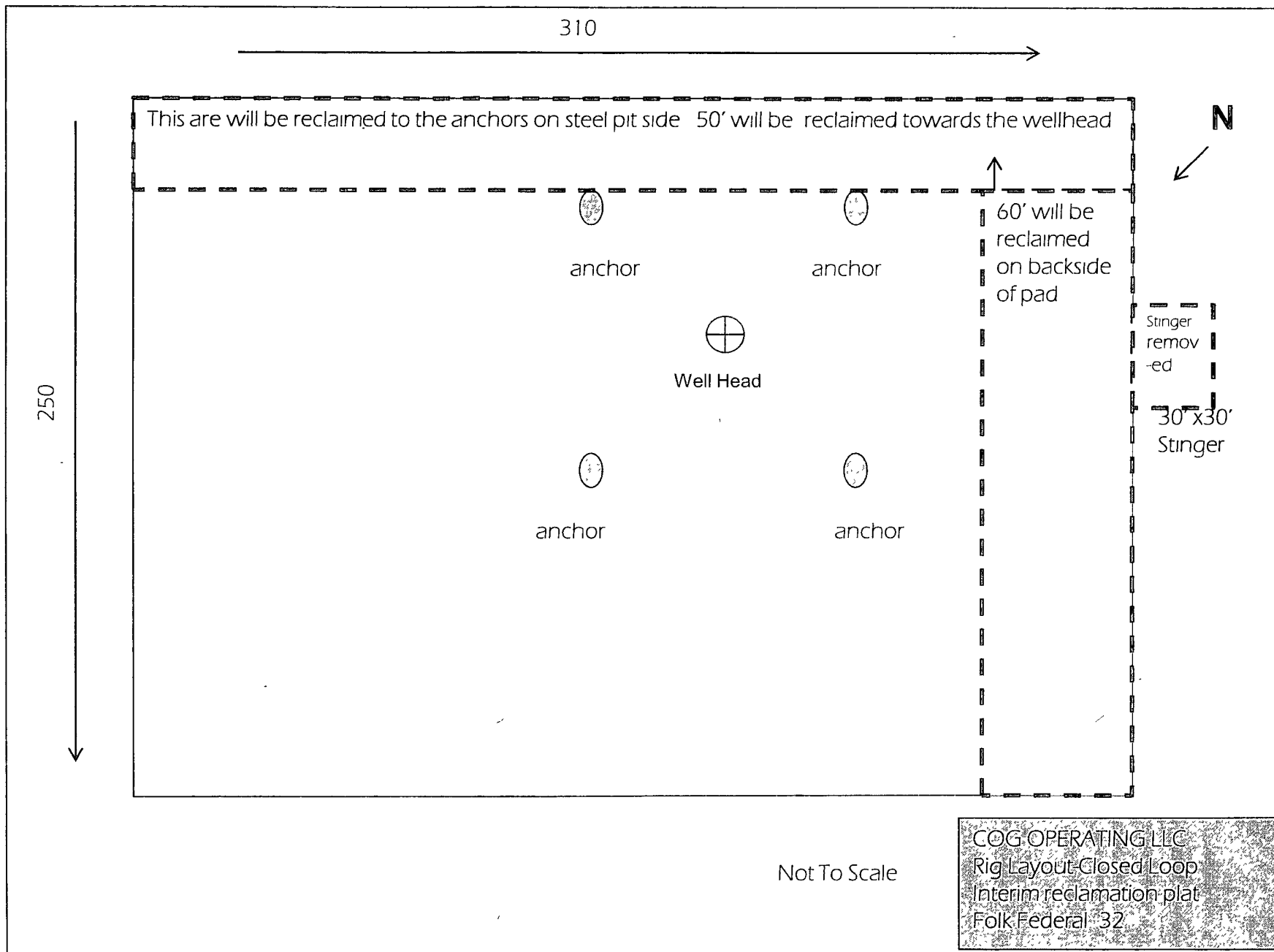
**10. Abnormal Conditions, Pressure, Temperatures and Potential Hazards**

No abnormal pressures or temperatures are anticipated. The estimated bottom hole at TD is 110 degrees and the estimated maximum bottom hole pressure is 2300 psig. Measurable gas volumes or Hydrogen Sulfide levels have not been encountered during drilling operations in this area, although a Hydrogen Sulfide Drilling Operation Plan is attached to this program. No major loss of circulation zones has been reported in offsetting wells.

**11. Anticipated Starting Date and Duration of Operations**

Road and location work will not begin until approval has been received from the BLM. As this is a Master Drilling plan, please refer to the Form 3160-3 for the anticipated start date. Once commenced, drilling operations should be finished in approximately 10 days. If the well is productive, an additional 30 days will be required for completion and testing before a decision is made to install permanent facilities.

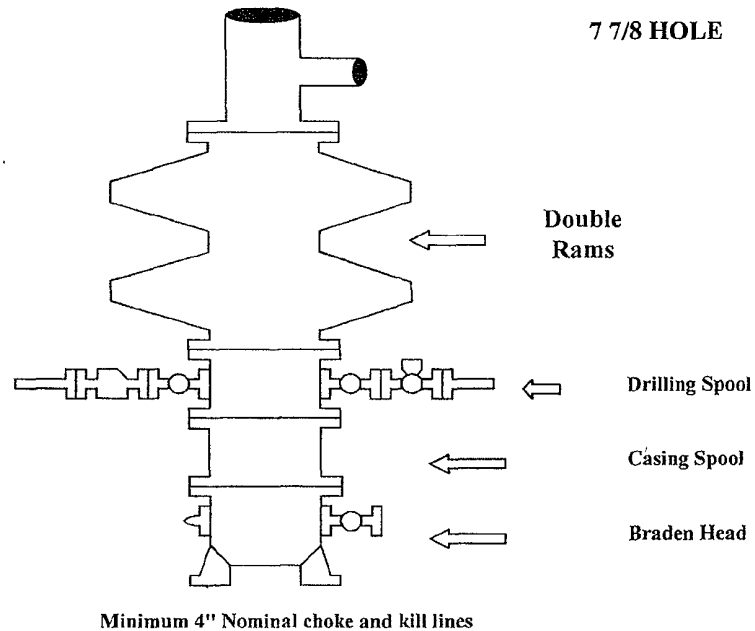




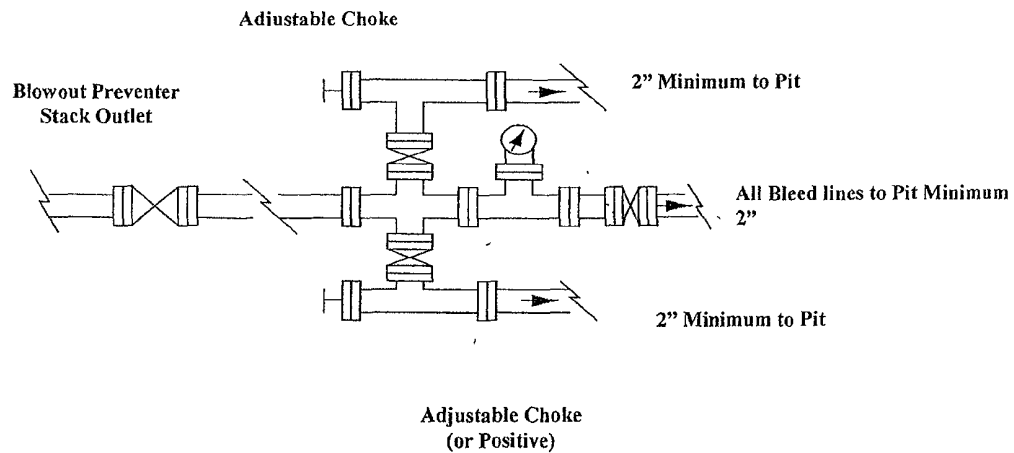
# COG Operating LLC

## Exhibit #9

### BOPE and Choke Schematic



**Choke Manifold Requirement (2000 psi WP)**  
**No Annular Required**



**NOTES REGARDING THE BLOWOUT PREVENTERS**  
**Master Drilling Plan**  
**Eddy County, New Mexico**

1. Drilling nipple to be so constructed that it can be removed without use of a welder through rotary table opening, with minimum I.D. equal to preventer bore.
2. Wear ring to be properly installed in head.
3. Blow out preventer and all fittings must be in good condition, 2000 psi WP minimum.
4. All fittings to be flanged.
5. Safety valve must be available on rig floor at all times with proper connections, valve to be full 2000 psi WP minimum.
6. All choke and fill lines to be securely anchored especially ends of choke lines.
7. Equipment through which bit must pass shall be at least as large as the diameter of the casing being drilled through.
8. Kelly cock on Kelly.
9. Extension wrenches and hands wheels to be properly installed.
10. Blow out preventer control to be located as close to driller's position as feasible.
11. Blow out preventer closing equipment to include minimum 40-gallon accumulator, two independent sources of pump power on each closing unit installation all API specifications.

## COG Operating LLC

### Hydrogen Sulfide Drilling Operation Plan

#### I. HYDROGEN SULFIDE TRAINING

All personnel, whether regularly assigned, contracted, or employed on an unscheduled basis, will receive training from a qualified instructor in the following areas prior to commencing drilling operations on this well:

1. The hazards and characteristics of hydrogen sulfide (H<sub>2</sub>S)
2. The proper use and maintenance of personal protective equipment and life support systems.
3. The proper use of H<sub>2</sub>S detectors, alarms, warning systems, briefing areas, evacuation procedures, and prevailing winds.
4. The proper techniques for first aid and rescue procedures.

In addition, supervisory personnel will be trained in the following areas:

1. The effects of H<sub>2</sub>S on metal components. If high tensile tubular are to be used, personnel will be trained in their special maintenance requirements.
2. Corrective action and shut-in procedures when drilling or reworking a well and blowout prevention and well control procedures.
3. The contents and requirements of the H<sub>2</sub>S Drilling Operations Plan and Public Protection Plan.

There will be an initial training session just prior to encountering a known or probable H<sub>2</sub>S zone (within 3 days or 500 feet) and weekly H<sub>2</sub>S and well control drills for all personnel in each crew. The initial training session shall include a review of the site specific H<sub>2</sub>S Drilling Operations Plan and the Public Protection Plan. **The concentrations of H<sub>2</sub>S of wells in this area from surface to TD are low enough that a contingency plan is not required.**

## II. H2S SAFETY EQUIPMENT AND SYSTEMS

Note: All H2S safety equipment and systems will be installed, tested, and operational when drilling reaches a depth of 500 feet above, or three days prior to penetrating the first zone containing or reasonable expected to contain H2S.

### 1. Well Control Equipment:

- A. Flare line
- B. Choke manifold.
- C. Blind rams and pipe rams to accommodate all pipe sizes with properly sized closing unit.
- D. Auxiliary equipment may include if applicable: annular preventer & rotating head.

### 2. Protective equipment for essential personnel:

- A. Mark II Survive air 30-minute units located in the doghouse and at briefing areas, as indicated on well site diagram

### 3. H2S detection and monitoring equipment:

- A. 1 portable H2S monitors positioned on location for best coverage and response. These units have warning lights and audible sirens when H2S levels of 20 PPM are reached.

### 4. Visual warning systems:

- A. Wind direction indicators as shown on well site diagram (Exhibit #8).
- B. Caution/Danger signs (Exhibit #7) shall be posted on roads providing direct access to location. Signs will be painted a high visibility yellow with black lettering of sufficient size to be readable at a reasonable distance from the immediate location. Bilingual signs will be used, when appropriate. See example attached.

### 5. Mud program:

- A. The mud program has been designed to minimize the volume of H2S circulated to surface. Proper mud weight, safe drilling practices, and the use of H2S scavengers will minimize hazards when penetrating H2S bearing zones

**6. Metallurgy:**

- A All drill strings, casings, tubing, wellhead, blowout preventer, drilling spool, kill lines, choke manifold and lines, and valves shall be suitable for H<sub>2</sub>S service.
- B All elastomers used for packing and seals shall be H<sub>2</sub>S trim.

**7. Communication:**

- A. Radio communications in company vehicles including cellular telephone and 2-way radio.
- B Land line (telephone) communication at Office.

**8. Well testing:**

- A. Drill stem testing will be performed with a minimum number of personnel in the immediate vicinity, which are necessary to safely and adequately conduct the test. The drill stem testing will be conducted during daylight hours and formation fluids will not be flowed to the surface. All drill-stem-testing operations conducted in an H<sub>2</sub>S environment will use the closed chamber method of testing
- B. There will be no drill stem testing.

**EXHIBIT #7**

**WARNING**  
**YOU ARE ENTERING AN H<sub>2</sub>S**  
**AUTHORIZED PERSONNEL ONLY**

- 1. BEARDS OR CONTACT LENSES NOT ALLOWED
- 2. HARD HATS REQUIRED
- 3. SMOKING IN DESIGNATED AREAS ONLY
- 4. BE WIND CONSCIOUS AT ALL TIMES
- 5. CHECK WITH COG OPERATING FOREMAN AT

**COG OPERATING LLC**  
**1-432-683-7443**  
**1-575-746-2010**

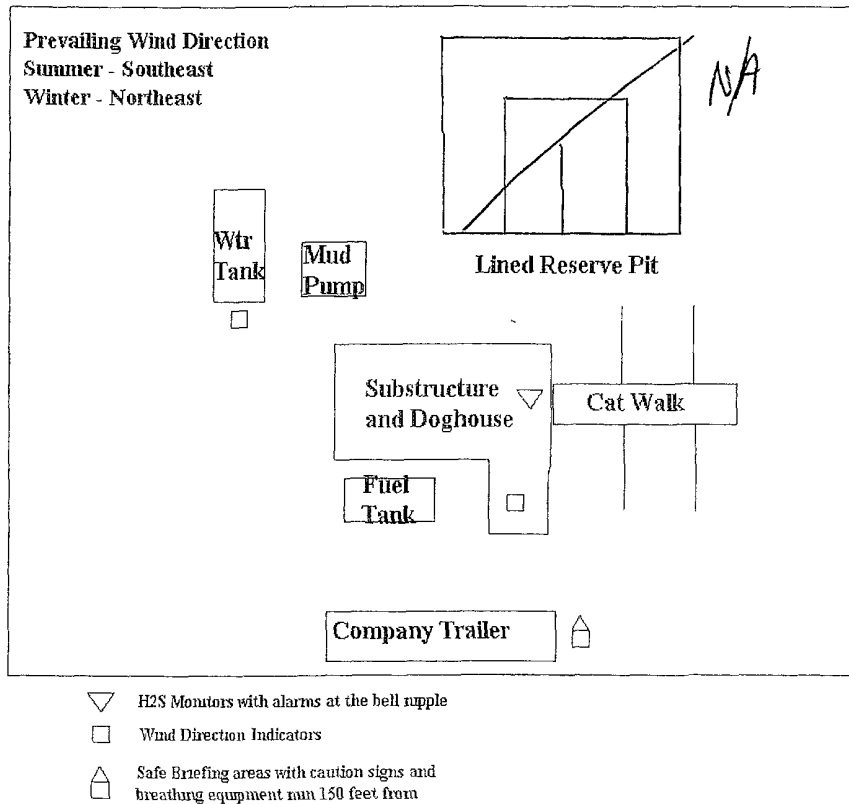
**EDDY COUNTY EMERGENCY NUMBERS**

ARTESIA FIRE DEPT. 575-746-5050  
ARTESIA POLICE DEPT. 575-746-5000  
EDDY CO. SHERIFF DEPT. 575-746-9888

**LEA COUNTY EMERGENCY NUMBERS**

HOBBS FIRE DEPT. 575-397-9308  
HOBBS POLICE DEPT. 575-397-9285  
LEA CO. SHERIFF DEPT. 575-396-1196

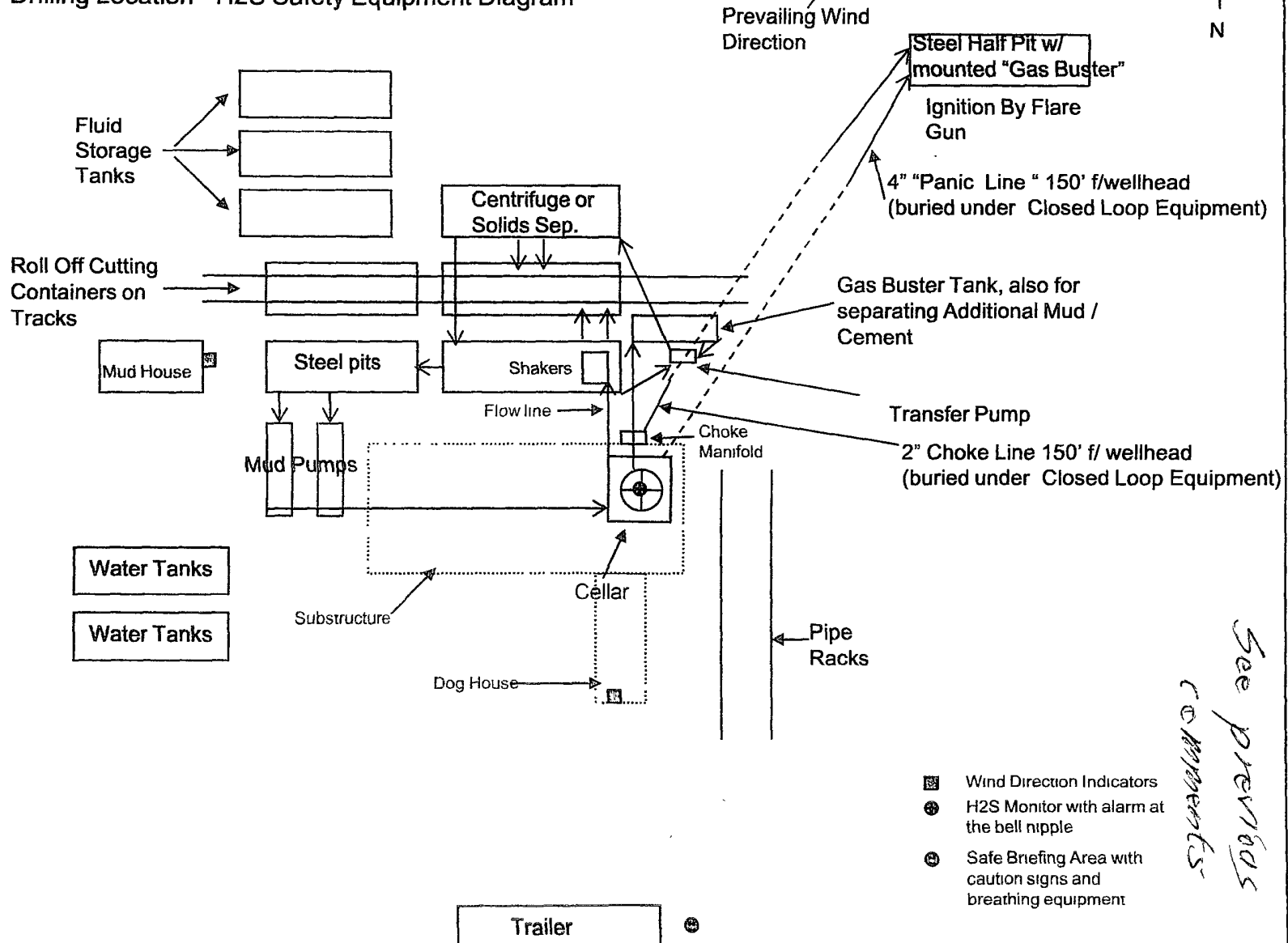
# DRILLING LOCATION H<sub>2</sub>S SAFETY EQUIPMENT Exhibit # 8



COG Operating LLC

Drilling Location - H2S Safety Equipment Diagram

## EXHIBIT 8



## **SURFACE USE AND OPERATING PLAN**

### **1. Existing & Proposed Access Roads**

- A. The well site survey and elevation plat for the proposed well is shown in Exhibit #1. It was staked by John West Engineering, Hobbs, NM.
- B. All roads to the location are shown in the topographic map Exhibit #2. The existing lease roads are illustrated and are adequate for travel during drilling and production operations. Upgrading existing roads prior to drilling the well will be done where necessary.
- C. **Directions to Location:** From the intersection US Highway 82 and Co. Rd. 211 (Old Loco), Go North on County Road 211 apprx 1.7 miles. This location stake is apprx 225 feet East of County Road #211. See Vicinity Map, Exhibit #3.
- D. Routine grading and maintenance of existing roads will be conducted as necessary to maintain their condition as long as any operations continue on this lease. Roads will be maintained according to specifications in section 2A of this Surface Use and Operating Plan.

### **2. Proposed Access Road:**

Exhibit #4 shows that 0' of new access road will be required for this location. If any road is required it will be constructed as follows:

- A. The maximum width of the running surface will be 14'. The road will be crowned, ditched and constructed of 6" rolled and compacted caliche. Ditches will be at 3:1 slope and 4 feet wide. Water will be diverted where necessary to avoid ponding, prevent erosion, maintain good drainage, and to be consistent with local drainage patterns.
- B. The average grade will be less than 1%.
- C. No turnouts are planned.
- D. No culverts, cattleguard, gates, low water crossings or fence cuts are necessary.
- E. Surfacing material will consist of native caliche. Caliche will be obtained from the actual well site if available. If not available onsite, caliche will be hauled from the nearest BLM caliche pit.

**3. Location of Existing Well:**

Exhibit #5 shows all existing wells within a one-mile radius of this well.

As shown on this plat there are numerous wells producing from the San Andres and Yeso formations.

**4. Location of Existing and/or Proposed Facilities:**

- A. COG Operating LLC does operate a production facility on this lease.
- B. If the well is productive, contemplated facilities will be as follows:
  - 1) Production will be sent to the Folk Federal tank battery located at the Folk Federal #2 at 1980 FNL & 660 FEL, Section 17, T17S, R29E, UL H. Section 17. The facility location is shown in Exhibit #5.
  - 2) The tank battery and facilities including all flow lines and piping will be installed according to API specifications.
  - 3) Any additional caliche will be obtained from the actual well site. If caliche does not exist or is not plentiful from the well site, the caliche will be hauled from a BLM approved caliche pit. Any additional construction materials will be purchased from contractors.
  - 4) Proposed flow lines, will follow an archaeologically approved route to the Folk Federal tank battery located at the Folk Federal #2 at 1980 FNL & 660 FEL, Section 17, T17S, R29E, UL H. Section 17. The facility location is shown in Exhibit #5. The flowline will be SDR 7 3" poly line laid on the surface and will be approximately 4550' in length with max pressure 100 psi. Flowlines will be no more than 11' from the paralleling road.
  - 5) It will be necessary to run electric power if this well is productive. Power will be provided by CVE and they will submit a separate plan and ROW for service to the well location.
  - 6) If the well is productive, rehabilitation plans will include the following:
    - a) The original topsoil from the well site will be returned to the location, and the site will be re-contoured as close as possible to the original site.

## **5. Location and Type of Water Supply:**

The well will be drilled with combination brine and fresh water mud system as outlined in the drilling program. The water will be obtained from commercial water stations in the area and hauled to location by transport truck over the existing and proposed access roads shown in Exhibit #2. If a commercial fresh water source is nearby, fast line may be laid along existing road ROW's and fresh water pumped to the well. No water well will be drilled on the location.

## **6. Source of Construction Materials and Location "Turn-Over" Procedure:**

Obtaining caliche: The primary way of obtaining caliche to build locations and roads will be by "turning over" the location. This means, caliche will be obtained from the actual well sight. A caliche permit will be obtained from BLM prior to pushing up any caliche. 2400 cu. Yards is max amount of caliche needed for pad and roads. Amount will vary for each pad. The procedure below has been approved by BLM personnel:

- A. The top 6 inches of topsoil is pushed off and stockpiled along the side of the location.**
- B. An approximate 120' X 120' area is used within the proposed well site to remove caliche.**
- C. Subsoil is removed and piled along side the 120' by 120' area within the pad site.**
- D. When caliche is found, material will be stock piled within the pad site to build the location and road.**
- E. Then subsoil is pushed back in the hole and caliche is spread accordingly across entire location and road.**
- F. Once well is drilled, the stock piled top soil will be used for interim reclamation and spread along areas where caliche is picked up and the location size is reduced. Neither caliche or subsoil will be stock piled outside of the well pad. Topsoil will be stockpiled along the edge of the pad as depicted in attached plat.**

In the event that no caliche is found onsite, caliche will be hauled in from a BLM approved caliche pit.

## **7. Methods of Handling Water Disposal:**

- A. The well will be drilled utilizing a closed loop mud system. Drill cuttings will be held in roll-off style mud boxes and taken to an NMOCD approved disposal site.**
- B. Drilling fluids will be contained in steel mud pits.**

- C. Water produced from the well during completion will be held temporarily in steel tanks and then taken to an NMOCD approved commercial disposal facility.
- D. Garbage and trash produced during drilling or completion operations will be collected in a trash bin and hauled to an approved landfill. No toxic waste or hazardous chemicals will be produced by this operation.
- E. After the rig is moved out and the well is either completed or abandoned, all waste materials will be cleaned up within 30 days. In the event of a dry hole only a dry hole marker will remain.

**8. Ancillary Facilities:**

No airstrip, campsite or other facilities will be built as a result of the operation on this well.

**9. Well Site Layout:**

- A. The drill pad layout, with elevations staked by John West Engineering, is shown in Exhibit #4. Dimensions of the pad and pits are shown on Exhibit #6. Topsoil, if available, will be stockpiled per BLM specifications. Because the pad is almost level no major cuts will be required.
- B. Exhibit #6 also shows the proposed orientation of closed loop system and access road. No permanent living facilities are planned, but a temporary foreman/toolpusher's trailer will be on location during the drilling operations.

**10. Plans for Restoration of the Surface:**

- A. Interim Reclamation will take place after the well has been completed. The pad will be downsized by reclaiming the areas not needed for production operations. The portions of the pad that are not needed for production operations will be recontoured to its original state as much as possible. The caliche that is removed will be reused to either build another pad site or for road repairs within the lease. The stockpiled topsoil will then be spread out reclaimed area and reseeded with a BLM approved seed mixture. In the event that the well must be worked over or maintained, it may be necessary to drive, park, and/or operate machinery on reclaimed land. This area will be repaired or reclaimed after work is complete.

- B. Final Reclamation: Upon plugging and abandoning the well, All caliche for well pad and lease road will be removed and surface will be recountoured to reflect its surroundings as much as possible. Caliche will be recycled for road repair or reused for another well pad within the lease. If any topsoil remains, it will be spread out and the area will be re-seeded with a BLM approved mixture and revegetated as per BLM orders.

**11.Surface Ownership:**

- A. The surface is owned by the U.S. Government and is administered by the Bureau of Land Management. The surface is multiple uses with the primary uses of the region for grazing of livestock and the production of oil and gas.
- B. The surface tenant for this site is Bogel Farms, Lewis Derrick, P O Box 441, Artesia, NM 88211.
- C. The proposed road routes and surface location will be restored as directed by the BLM

**12.Other Information:**

- A. The area around the well site is grassland and the topsoil is sandy. The vegetation is moderately sparse with native prairie grasses, some mesquite and shinnery oak. No wildlife was observed but it is likely that mule deer, rabbits, coyotes and rodents traverse the area.
- B. There is no permanent or live water in the immediate area.
- C. There are no dwellings within 2 miles of this location.
- D. If needed, a Cultural Resources Examination is being prepared by Southern New Mexico Archaeological Services, Inc. P.O. Box 1, Bent New Mexico, 88314, phone # 505-671-4797 and the results will be forwarded to your office in the near future. Otherwise, **COG will be participating in the Permian Basin MOA Program.**

Surface Use Plan  
COG Operating, LLC  
Folk Federal 32  
1560' FNL & 2404' FEL  
Section 17, T-17-S, R-29-E, UL G  
Eddy County, New Mexico

**13. Bond Coverage:**

Bond Coverage is Nationwide Bond # 000215

**14. Lessee's and Operator's Representative:**

The COG Operating LLC representative responsible for assuring compliance with the surface use plan is as follows:

John Coffman,	Erick Nelson.
Drilling Superintendent	Division Operations Manager
COG Operating LLC	COG Operating LLC
550 W. Texas, Suite 1300	550 W. Texas, Suite 1300
Midland, TX 79701	Midland, TX 79701
Phone (432) 683-7443 (office)	Phone (505) 746-2210 (office)
(432) 631-9762 (cell)	(432) 238-7591 (cell)

Surface Use Plan  
COG Operating, LLC  
Folk Federal 32  
1560' FNL & 2404' FEL  
Section 17, T-17-S, R-29-E, UL G  
Eddy County, New Mexico

I hereby certify that I, or persons under my direct supervision, have inspected the drill site and access road proposed herein; that I am familiar with the conditions that presently exist; that I have full knowledge of State and Federal laws applicable to this operation; that the statements made in this APD package are, to the best of my knowledge, true and correct; and that the work associated with the operations proposed herein will be performed in conformity with this APD package and the terms and conditions under which it is approved. I also certify that I, or COG Operating, LLC, am responsible for the operations conducted under this application. These statements are subject to the provisions of 18 U.S.C. 1001 for the filing of false statements. Executed this 30th day of June, 2010.

Signed: Carl Bird

Printed Name: Carl Bird

Position: Drilling Engineer

Address: 550 W. Texas, Suite 1300, Midland, Texas 79701

Telephone: (432) 683-7443

Field Representative (if not above signatory): Same

E-mail: cbird@conchoresources.com

# PECOS DISTRICT CONDITIONS OF APPROVAL

OPERATOR'S NAME:	COG Operating
LEASE NO.:	NM0397623
WELL NAME & NO.:	32 Folk Federal
SURFACE HOLE FOOTAGE:	1560' FNL & 2404' FEL
BOTTOM HOLE FOOTAGE:	' F L & ' F L
LOCATION:	Section 17, T. 17 S., R 29 E., NMPM
COUNTY:	Eddy County, New Mexico

## TABLE OF CONTENTS

Standard Conditions of Approval (COA) apply to this APD. If any deviations to these standards exist or special COAs are required, the section with the deviation or requirement will be checked below.

- ☐ **General Provisions**
- ☐ **Permit Expiration**
- ☐ **Archaeology, Paleontology, and Historical Sites**
- ☐ **Noxious Weeds**
- ☐ **Special Requirements**
- ☒ **Construction**
  - Notification
  - Topsoil
  - Closed Loop System
  - Federal Mineral Material Pits
  - Well Pads
  - Roads
- ☐ **Road Section Diagram**
- ☒ **Drilling**
  - H2S Requirements – Onshore Order 6
  - Logging Requirements
  - Waste Material and Fluids
- ☒ **Production (Post Drilling)**
  - Well Structures & Facilities
  - Pipelines
- ☐ **Interim Reclamation**
- ☐ **Final Abandonment & Reclamation**

## **I. GENERAL PROVISIONS**

The approval of the Application For Permit To Drill (APD) is in compliance with all applicable laws and regulations: 43 Code of Federal Regulations 3160, the lease terms, Onshore Oil and Gas Orders, Notices To Lessees, New Mexico Oil Conservation Division (NMOCD) Rules, National Historical Preservation Act As Amended, and instructions and orders of the Authorized Officer. Any request for a variance shall be submitted to the Authorized Officer on Form 3160-5, Sundry Notices and Report on Wells.

## **II. PERMIT EXPIRATION**

If the permit terminates prior to drilling and drilling cannot be commenced within 60 days after expiration, an operator is required to submit Form 3160-5, Sundry Notices and Reports on Wells, requesting surface reclamation requirements for any surface disturbance. However, if the operator will be able to initiate drilling within 60 days after the expiration of the permit, the operator must have set the conductor pipe in order to allow for an extension of 60 days beyond the expiration date of the APD. (Filing of a Sundry Notice is required for this 60 day extension.)

## **III. ARCHAEOLOGICAL, PALEONTOLOGY & HISTORICAL SITES**

Any cultural and/or paleontological resource discovered by the operator or by any person working on the operator's behalf shall immediately report such findings to the Authorized Officer. The operator is fully accountable for the actions of their contractors and subcontractors. The operator shall suspend all operations in the immediate area of such discovery until written authorization to proceed is issued by the Authorized Officer. An evaluation of the discovery shall be made by the Authorized Officer to determine the appropriate actions that shall be required to prevent the loss of significant cultural or scientific values of the discovery. The operator shall be held responsible for the cost of the proper mitigation measures that the Authorized Officer assesses after consultation with the operator on the evaluation and decisions of the discovery. Any unauthorized collection or disturbance of cultural or paleontological resources may result in a shutdown order by the Authorized Officer.

## **IV. NOXIOUS WEEDS**

The operator shall be held responsible if noxious weeds become established within the areas of operations. Weed control shall be required on the disturbed land where noxious weeds exist, which includes the roads, pads, associated pipeline corridor, and adjacent land affected by the establishment of weeds due to this action. The operator shall consult with the Authorized Officer for acceptable weed control methods, which include following EPA and BLM requirements and policies.

## **V. SPECIAL REQUIREMENT(S)**

None.

## **VI. CONSTRUCTION**

### **A. NOTIFICATION**

The BLM shall administer compliance and monitor construction of the access road and well pad. Notify the Carlsbad Field Office at (575) 234-5972 at least 3 working days prior to commencing construction of the access road and/or well pad.

When construction operations are being conducted on this well, the operator shall have the approved APD and Conditions of Approval (COA) on the well site and they shall be made available upon request by the Authorized Officer.

### **B. TOPSOIL**

The operator shall stockpile the topsoil in a low profile manner in order to prevent wind/water erosion of the topsoil. The topsoil to be stripped is approximately 6 inches in depth. The topsoil will be used for interim and final reclamation.

### **C. CLOSED LOOP SYSTEM**

Tanks are required for drilling operations: No Pits.

The operator shall properly dispose of drilling contents at an authorized disposal site.

### **D. FEDERAL MINERAL MATERIALS PIT**

Payment shall be made to the BLM prior to removal of any federal mineral materials. Call the Carlsbad Field Office at (575) 234-5972.

### **E. WELL PAD SURFACING**

Surfacing of the well pad is not required.

If the operator elects to surface the well pad, the surfacing material may be required to be removed at the time of reclamation.

The well pad shall be constructed in a manner which creates the smallest possible surface disturbance, consistent with safety and operational needs.

### **F. ON LEASE ACCESS ROADS**

### **Road Width**

The access road shall have a driving surface that creates the smallest possible surface disturbance and does not exceed fourteen (14) feet in width. The maximum width of surface disturbance, when constructing the access road, shall not exceed thirty (30) feet.

### **Surfacing**

Surfacing material is not required on the new access road driving surface. If the operator elects to surface the new access road or pad, the surfacing material may be required to be removed at the time of reclamation.

Where possible, no improvements should be made on the unsurfaced access road other than to remove vegetation as necessary, road irregularities, safety issues, or to fill low areas that may sustain standing water.

The Authorized Officer reserves the right to require surfacing of any portion of the access road at any time deemed necessary. Surfacing may be required in the event the road deteriorates, erodes, road traffic increases, or it is determined to be beneficial for future field development. The surfacing depth and type of material will be determined at the time of notification.

### **Crowning**

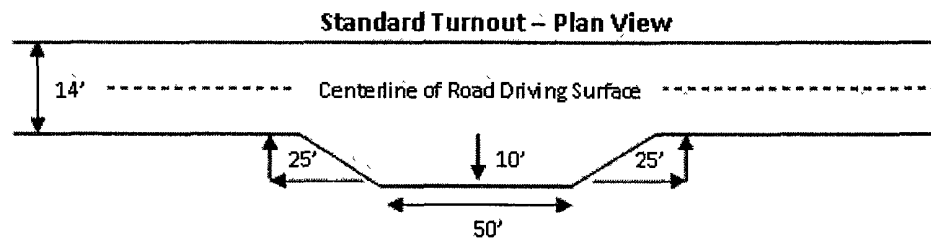
Crowning shall be done on the access road driving surface. The road crown shall have a grade of approximately 2% (i.e., a 1" crown on a 14' wide road). The road shall conform to Figure 1; cross section and plans for typical road construction.

### **Ditching**

Ditching shall be required on both sides of the road.

### **Turnouts**

Vehicle turnouts shall be constructed on the road. Turnouts shall be intervisible with interval spacing distance less than 1000 feet. Turnouts shall be constructed on all blind curves. Turnouts shall conform to the following diagram:

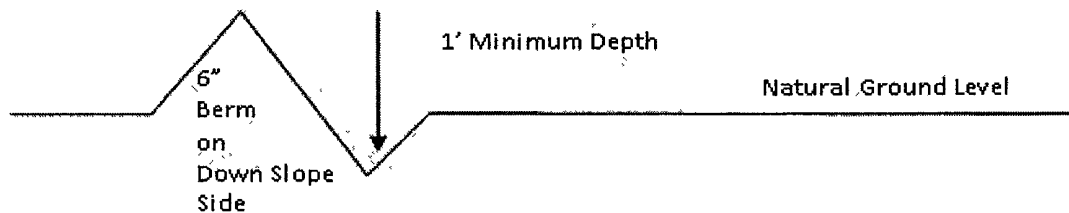


### **Drainage**

Drainage control systems shall be constructed on the entire length of road (e.g. ditches, sidehill outslowing and inslouting, lead-off ditches, culvert installation, and low water crossings).

A typical lead-off ditch has a minimum depth of 1 foot below and a berm of 6 inches above natural ground level. The berm shall be on the down-slope side of the lead-off ditch.

#### **Cross Section of a Typical Lead-off Ditch**



All lead-off ditches shall be graded to drain water with a 1 percent minimum to 3 percent maximum ditch slope. The spacing interval are variable for lead-off ditches and shall be determined according to the formula for spacing intervals of lead-off ditches, but may be amended depending upon existing soil types and centerline road slope (in %);

#### **Formula for Spacing Interval of Lead-off Ditches**

Example - On a 4% road slope that is 400 feet long, the water flow shall drain water into a lead-off ditch. Spacing interval shall be determined by the following formula:

$$400 \text{ foot road with } 4\% \text{ road slope: } \frac{400'}{4\%} + 100' = 200' \text{ lead-off ditch interval}$$

#### **Culvert Installations**

Appropriately sized culvert(s) shall be installed at the deep waterway channel flow crossing.

#### **Cattleguards**

An appropriately sized cattleguard(s) sufficient to carry out the project shall be installed and maintained at fence crossing(s).

Any existing cattleguard(s) on the access road shall be repaired or replaced if they are damaged or have deteriorated beyond practical use. The operator shall be responsible for the condition of the existing cattleguard(s) that are in place and are utilized during lease operations.

A gate shall be constructed and fastened securely to H-braces.

#### **Fence Requirement**

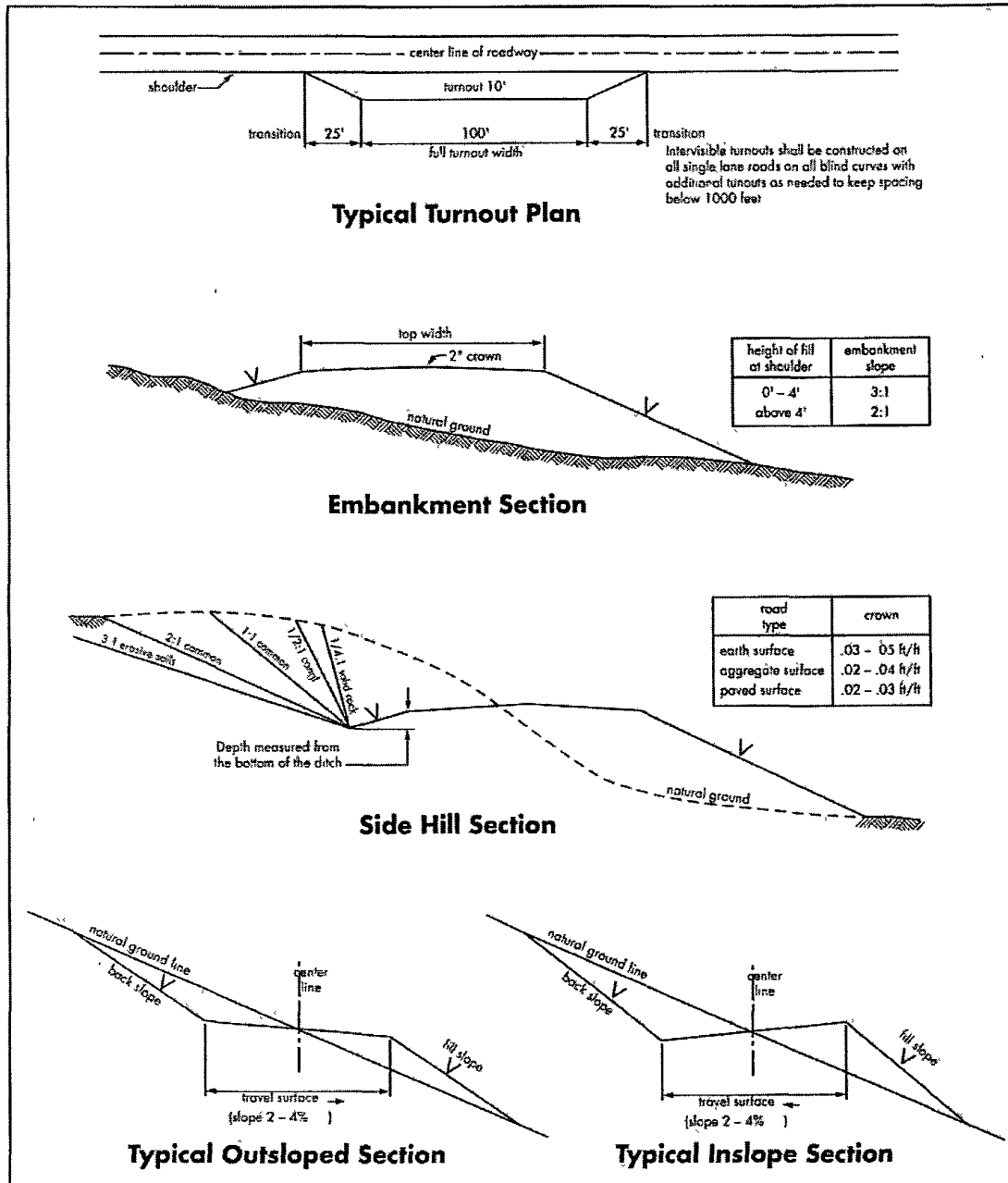
Where entry is required across a fence line, the fence shall be braced and tied off on both sides of the passageway prior to cutting.

The operator shall notify the private surface landowner or the grazing allotment holder prior to crossing any fence(s).

**Public Access**

Public access on this road shall not be restricted by the operator without specific written approval granted by the Authorized Officer.

**Figure 1 – Cross Sections and Plans For Typical Road Sections**



## VII. DRILLING

### A. DRILLING OPERATIONS REQUIREMENTS

The BLM is to be notified a minimum of 4 hours in advance for a representative to witness:

- a. Spudding well
- b. Setting and/or Cementing of all casing strings
- c. BOPE tests

☒ **Eddy County**

Call the Carlsbad Field Office, 620 East Greene St., Carlsbad, NM 88220,  
(575) 361-2822

1. A Hydrogen Sulfide (H<sub>2</sub>S) Drilling Plan should be activated 500 feet prior to drilling into the Grayburg formation. **As a result, the Hydrogen Sulfide area must meet Onshore Order 6 requirements, which includes equipment and personnel/public protection items. If Hydrogen Sulfide is encountered, please provide measured values and formations to the BLM.**
2. Unless the production casing has been run and cemented or the well has been properly plugged, the drilling rig shall not be removed from over the hole without prior approval. **If the drilling rig is removed without approval – an Incident of Non-Compliance will be written and will be a “Major” violation.**
3. **The record of the drilling rate along with the GR/N well log run from TD to surface will be submitted to the BLM office as well as all other logs run on the borehole 30 days from completion. If available, a digital copy of the logs is to be submitted in addition to the paper copies. The Rustler top and top and bottom of Salt are to be recorded on the Completion Report.**

### B. CASING

**Changes to the approved APD casing and cement program require submitting a sundry and receiving approval prior to work. Failure to obtain approval prior to work will result in an Incident of Non-Compliance being issued.**

**Centralizers required on surface casing per Onshore Order 2.III.B.1.f.**

**Wait on cement (WOC) time prior to drilling out for a primary cement job will be a minimum 18 hours for a water basin, 24 hours in the potash area, or 500 pounds compressive strength, whichever is greater for all casing strings. DURING THIS WOC TIME, NO DRILL PIPE, ETC. SHALL BE RUN IN THE HOLE. Provide compressive strengths including hours to reach required 500 pounds compressive strength prior to cementing each casing string. See individual casing strings for details regarding lead cement slurry requirements.**

**No pea gravel permitted for remedial or fall back remedial without prior authorization from the BLM engineer.**

**Possible lost circulation in the Grayburg and San Andres formations.  
Possible water and brine flows in the Salado and Artesia Group.**

1. The 13-3/8 inch surface casing shall be set at approximately 300 feet (a minimum of 25 feet into the Rustler Anhydrite and above the salt) and cemented to the surface. **If the salt is encountered, the casing is to be set 25 feet above the salt.**
  - a. If cement does not circulate to the surface, the appropriate BLM office shall be notified and a temperature survey utilizing an electronic type temperature survey with surface log readout will be used or a cement bond log shall be run to verify the top of the cement. Temperature survey will be run a minimum of six hours after pumping cement and ideally between 8-10 hours after completing the cement job.
  - b. **Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry.**
  - c. Wait on cement (WOC) time for a remedial job will be a minimum of 4 hours after bringing cement to surface or 500 pounds compressive strength, whichever is greater.
  - d. If cement falls back, remedial cementing will be done prior to drilling out that string.
2. The minimum required fill of cement behind the 8-5/8 inch intermediate casing is:  
☒ Cement to surface. If cement does not circulate see B.1.a, c-d above. **This casing is to be set in the Tansill formation.**

**If used, DV tool is to be set 50 feet below previous casing shoe. Operator is to submit sundry if DV tool depth varies by more than 100' from approved depth.**

a. First stage to DV tool, cement shall:

- ☒ Cement to circulate. If cement does not circulate, contact the appropriate BLM office before proceeding with second stage cement job.

b. Second stage above DV tool, cement shall:

- ☒ Cement to surface. If cement does not circulate, contact the appropriate BLM office.

3. The minimum required fill of cement behind the 5-1/2 inch production casing is:

- ☒ Cement should tie-back at least 200 feet into previous casing string. Operator shall provide method of verification.

**DV tool option: Operator is to submit sundry if DV tool depth varies by more than 100' from approved depth.**

a. First stage to DV tool, cement shall:

- ☒ Cement to circulate. If cement does not circulate, contact the appropriate BLM office before proceeding with second stage cement job. **Additional cement may be required as the excess cement calculates to be -12%.**

b. Second stage above DV tool, cement shall:

- ☒ Cement should tie-back at least 200 feet into previous casing string. Operator shall provide method of verification.

4. If hardband drill pipe is rotated inside casing, returns will be monitored for metal. If metal is found in samples, drill pipe will be pulled and rubber protectors which have a larger diameter than the tool joints of the drill pipe will be installed prior to continuing drilling operations.

### **C. PRESSURE CONTROL**

1. All blowout preventer (BOP) and related equipment (BOPE) shall comply with well control requirements as described in Onshore Oil and Gas Order No. 2 and API RP 53 Sec. 17.

2. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the surface casing shoe shall be **2000 (2M)** psi.
  - a. **For surface casing only:** If the BOP/BOPE is to be tested against casing, the wait on cement (WOC) time for that casing is to be met (see WOC statement at start of casing section). Independent service company required.
3. The appropriate BLM office shall be notified a minimum of 4 hours in advance for a representative to witness the tests.
  - a. In a water basin, for all casing strings utilizing slips, these are to be set as soon as the crew and rig are ready and any fallback cement remediation has been done. The casing cut-off and BOP installation can be initiated four hours after installing the slips, which will be approximately six hours after bumping the plug. For those casing strings not using slips or where the float does not hold, the minimum wait time before cut-off is eight hours after bumping the plug or when the cement reaches 500 psi compressive strength (including lead when specified), whichever is greater. BOP/BOPE testing can begin after the above conditions are satisfied.
  - b. The tests shall be done by an independent service company utilizing a test plug **not a cup or J-packer**. The operator also has the option of utilizing an independent tester to test without a plug (i.e. against the casing) pursuant to Onshore Order 2 with the pressure not to exceed 70% of the burst rating for the casing. Any test against the casing must meet the WOC time for water basin (18 hours) or potash (24 hours) prior to initiating the test.
  - c. The results of the test shall be reported to the appropriate BLM office.
  - d. All tests are required to be recorded on a calibrated test chart. **A copy of the BOP/BOPE test chart and a copy of independent service company test will be submitted to the appropriate BLM office.**
  - e. The BOP/BOPE test shall include a low pressure test from 250 to 300 psi. The test will be held for a minimum of 10 minutes if test is done with a test plug and 30 minutes without a test plug.
  - f. **Effective November 1, 2008, no variances will be granted on reduced pressure tests on the surface casing and BOP/BOPE. Onshore Order 2 requirements will be in effect.**

#### **D. DRILL STEM TEST**

If drill stem tests are performed, Onshore Order 2.III.D shall be followed.

## **E. WASTE MATERIAL AND FLUIDS**

All waste (i.e. drilling fluids, trash, salts, chemicals, sewage, gray water, etc.) created as a result of drilling operations and completion operations shall be safely contained and disposed of properly at a waste disposal facility. No waste material or fluid shall be disposed of on the well location or surrounding area.

**WWI 082810**

## **VIII. PRODUCTION (POST DRILLING)**

### **A. WELL STRUCTURES & FACILITIES**

#### **Placement of Production Facilities**

Production facilities should be placed on the well pad to allow for maximum interim recontouring and revegetation of the well location.

#### **Containment Structures**

The containment structure shall be constructed to hold the capacity of the entire contents of the largest tank, plus 24 hour production, unless more stringent protective requirements are deemed necessary by the Authorized Officer.

#### **Painting Requirement**

All above-ground structures including meter housing that are not subject to safety requirements shall be painted a flat non-reflective paint color  
Shale Green, Munsell Soil Color Chart # 5Y 4/2

### **B. PIPELINES**

#### **STANDARD STIPULATIONS FOR SURFACE INSTALLED PIPELINES**

**A copy of the APD and attachments, including stipulations, survey plat and/or map, will be on location during construction. BLM personnel may request to you a copy of your permit during construction to ensure compliance with all stipulations.**

Holder agrees to comply with the following stipulations to the satisfaction of the Authorized Officer:

1. The holder shall indemnify the United States against any liability for damage to life or property arising from the occupancy or use of public lands under this grant.

2. The holder shall comply with all applicable Federal laws and regulations existing or hereafter enacted or promulgated. In any event, the holder shall comply with the Toxic Substances Control Act of 1976 as amended, 15 USC 2601 et seq. (1982) with regards to any toxic substances that are used, generated by or stored on the right-of-way or on facilities authorized under this right-of-way grant. (See 40 CFR, Part 702-799 and especially, provisions on polychlorinated biphenyls, 40 CFR 761.1-761.193.) Additionally, any release of toxic substances (leaks, spills, etc.) in excess of the reportable quantity established by 40 CFR, Part 117 shall be reported as required by the Comprehensive Environmental Response, Compensation, and Liability Act, section 102b. A copy of any report required or requested by any Federal agency or State government as a result of a reportable release or spill of any toxic substances shall be furnished to the authorized officer concurrent with the filing of the reports to the involved Federal agency or State government.

3. The holder agrees to indemnify the United States against any liability arising from the release of any hazardous substance or hazardous waste (as these terms are defined in the Comprehensive Environmental Response, Compensation and Liability Act of 1980, 42 U.S.C. 9601, et seq. or the Resource Conservation and Recovery Act, 42 U.S.C. 6901, et seq.) on the Right-of-Way (unless the release or threatened release is wholly unrelated to activity of the Right-of-Way holder's activity on the Right-of-Way), or resulting from the activity of the Right-of-Way holder on the Right-of-Way. This agreement applies without regard to whether a release is caused by the holder, its agent, or unrelated third parties.

4. The holder shall be liable for damage or injury to the United States to the extent provided by 43 CFR Sec. 2883.1-4. The holder shall be held to a standard of strict liability for damage or injury to the United States resulting from pipe rupture, fire, or spills caused or substantially aggravated by any of the following within the right-of-way or permit area:

- a. Activities of the holder including, but not limited to construction, operation, maintenance, and termination of the facility.
- b. Activities of other parties including, but not limited to:
  - (1) Land clearing.
  - (2) Earth-disturbing and earth-moving work.
  - (3) Blasting.
  - (4) Vandalism and sabotage.
- c. Acts of God.

The maximum limitation for such strict liability damages shall not exceed one million dollars (\$1,000,000) for any one event, and any liability in excess of such amount shall be determined by the ordinary rules of negligence of the jurisdiction in which the damage or injury occurred.

This section shall not impose strict liability for damage or injury resulting primarily from an act of war or from the negligent acts or omissions of the United States.

5. If, during any phase of the construction, operation, maintenance, or termination of the pipeline, any oil, salt water, or other pollutant should be discharged from the pipeline system, impacting Federal lands, the control and total removal, disposal, and cleaning up of such oil, salt water, or other pollutant, wherever found, shall be the responsibility of the holder, regardless of fault. Upon failure of the holder to control, dispose of, or clean up such discharge on or affecting Federal lands, or to repair all damages resulting therefrom, on the Federal lands, the Authorized Officer may take such measures as he deems necessary to control and clean up the discharge and restore the area, including, where appropriate, the aquatic environment and fish and wildlife habitats, at the full expense of the holder. Such action by the Authorized Officer shall not relieve the holder of any responsibility as provided herein.

6. The authorized right-of-way width will be 25 feet. 14 feet of the right-of-way width will consist of existing disturbance (existing lease roads) and the remaining 11 feet will consist of area adjacent to the disturbance. All construction and maintenance activity will be confined to existing roads.

7. No blading or clearing of any vegetation will be allowed unless approved in writing by the Authorized Officer.

8. The holder shall install the pipeline on the surface in such a manner that will minimize suspension of the pipeline across low areas in the terrain. In hummocky or dune areas, the pipeline will be "snaked" around hummocks and dunes rather than suspended across these features.

9. The pipeline shall be buried with a minimum of 24 inches under all roads, "two-tracks," and trails. Burial of the pipe will continue for 20 feet on each side of each crossing. The condition of the road, upon completion of construction, shall be returned to at least its former state with no bumps or dips remaining in the road surface.

10. The holder shall minimize disturbance to existing fences and other improvements on public lands. The holder is required to promptly repair improvements to at least their former state. Functional use of these improvements will be maintained at all times. The holder will contact the owner of any improvements prior to disturbing them. When necessary to pass through a fence line, the fence shall be braced on both sides of the passageway prior to cutting of the fence. No permanent gates will be allowed unless approved by the Authorized Officer.

11. In those areas where erosion control structures are required to stabilize soil conditions, the holder will install such structures as are suitable for the specific soil conditions being encountered and which are in accordance with sound resource management practices.

12. Excluding the pipe, all above-ground structures not subject to safety requirement shall be painted by the holder to blend with the natural color of the landscape. The paint used shall be a color which simulates "Standard Environmental Colors" – **Shale Green**, Munsell Soil Color No. 5Y 4/2; designated by the Rocky Mountain Five State Interagency Committee.

13. The pipeline will be identified by signs at the point of origin and completion of the right-of-way and at all road crossings. At a minimum, signs will state the holder's name, BLM serial number, and the product being transported. Signs will be maintained in a legible condition for the life of the pipeline.

14. The holder shall not use the pipeline route as a road for purposes other than routine maintenance as determined necessary by the Authorized Officer in consultation with the holder. The holder will take whatever steps are necessary to ensure that the pipeline route is not used as a roadway.

15. Any cultural and/or paleontological resource (historic or prehistoric site or object) discovered by the holder, or any person working on his behalf, on public or Federal land shall be immediately reported to the authorized officer. Holder shall suspend all operations in the immediate area of such discovery until written authorization to proceed is issued by the authorized officer. An evaluation of the discovery will be made by the authorized officer to determine appropriate cultural or scientific values. The holder will be responsible for the cost of evaluation and any decision as to proper mitigation measures will be made by the authorized officer after consulting with the holder.

## **IX. INTERIM RECLAMATION**

During the life of the development, all disturbed areas not needed for active support of production operations should undergo interim reclamation in order to minimize the environmental impacts of development on other resources and uses.

Within six (6) months of well completion, operators should work with BLM surface management specialists (Jim Amos: 575-234-5909) to devise the best strategies to reduce the size of the location. Interim reclamation should allow for remedial well operations, as well as safe and efficient removal of oil and gas.

During reclamation, the removal of caliche is important to increasing the success of revegetating the site. Removed caliche that is free of contaminants may be used for road repairs, fire walls or for building other roads and locations. In order to operate the well or complete workover operations, it may be necessary to drive, park and operate on restored interim vegetation within the previously disturbed area. Disturbing revegetated areas for production or workover operations will be allowed. If there is significant disturbance and loss of vegetation, the area will need to be revegetated. Communicate with the appropriate BLM office for any exceptions/exemptions if needed.

All disturbed areas after they have been satisfactorily prepared need to be reseeded with the seed mixture provided below.

Upon completion of interim reclamation, the operator shall submit a Sundry Notices and Reports on Wells, Subsequent Report of Reclamation (Form 3160-5).

## **X. FINAL ABANDONMENT & RECLAMATION**

At final abandonment, well locations, production facilities, and access roads must undergo "final" reclamation so that the character and productivity of the land are restored.

Earthwork for final reclamation must be completed within six (6) months of well plugging. All pads, pits, facility locations and roads must be reclaimed to a satisfactory revegetated, safe, and stable condition, unless an agreement is made with the landowner or BLM to keep the road and/or pad intact.

After all disturbed areas have been satisfactorily prepared, these areas need to be revegetated with the seed mixture provided below. Seeding should be accomplished by drilling on the contour whenever practical or by other approved methods. Seeding may need to be repeated until revegetation is successful, as determined by the BLM.

Operators shall contact a BLM surface protection specialist prior to surface abandonment operations for site specific objectives (Jim Amos: 575-234-5909).

### Seed Mixture 3, for Shallow Sites

The holder shall seed all disturbed areas with the seed mixture listed below. The seed mixture shall be planted in the amounts specified in pounds of pure live seed (PLS)\* per acre. There shall be no primary or secondary noxious weeds in the seed mixture. Seed will be tested and the viability testing of seed will be done in accordance with State law(s) and within nine (9) months prior to purchase. Commercial seed will be either certified or registered seed. The seed container will be tagged in accordance with State law(s) and available for inspection by the authorized officer.

Seed will be planted using a drill equipped with a depth regulator to ensure proper depth of planting where drilling is possible. The seed mixture will be evenly and uniformly planted over the disturbed area (smaller/heavier seeds have a tendency to drop the bottom of the drill and are planted first). The holder shall take appropriate measures to ensure this does not occur. Where drilling is not possible, seed will be broadcast and the area shall be raked or chained to cover the seed. When broadcasting the seed, the pounds per acre are to be doubled. The seeding will be repeated until a satisfactory stand is established as determined by the authorized officer. Evaluation of growth will not be made before completion of at least one full growing season after seeding.

Species to be planted in pounds of pure live seed\* per acre:

<u>Species</u>	<u>lb/acre</u>
Plains Bristlegrass ( <i>Setaria magrostachya</i> )	1.0
Green Spangletop ( <i>Leptochloa dubia</i> )	2.0
Side oats Grama ( <i>Bouteloua curtipendula</i> )	5.0

\*Pounds of pure live seed:

Pounds of seed x percent purity x percent germination = pounds pure live seed