

DATE IN 9/24/12	SUSPENSE 9/24	ENGINEER DB	LOGGED IN 9/25/12	TYPE NSL	APP NO. P1226962786
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ABOVE THIS LINE FOR DIVISION USE ONLY

NEW MEXICO OIL CONSERVATION DIVISION
- Engineering Bureau -
 1220 South St. Francis Drive, Santa Fe, NM 87505



COG
 Skelly V# 701

ADMINISTRATIVE APPLICATION CHECKLIST

THIS CHECKLIST IS MANDATORY FOR ALL ADMINISTRATIVE APPLICATIONS FOR EXCEPTIONS TO DIVISION RULES AND REGULATIONS WHICH REQUIRE PROCESSING AT THE DIVISION LEVEL IN SANTA FE

Application Acronyms:

[NSL-Non-Standard Location] [NSP-Non-Standard Proration Unit] [SD-Simultaneous Dedication]
[DHC-Downhole Commingling] [CTB-Lease Commingling] [PLC-Pool/Lease Commingling]
[PC-Pool Commingling] [OLS - Off-Lease Storage] [OLM-Off-Lease Measurement]
[WFX-Waterflood Expansion] [PMX-Pressure Maintenance Expansion]
[SWD-Salt Water Disposal] [IPI-Injection Pressure Increase]
[EOR-Qualified Enhanced Oil Recovery Certification] [PPR-Positive Production Response]

[1] TYPE OF APPLICATION - Check Those Which Apply for [A]

- [A] Location - Spacing Unit - Simultaneous Dedication
☒ NSL ☐ NSP ☐ SD

Check One Only for [B] or [C]

- [B] Commingling - Storage - Measurement
☐ DHC ☐ CTB ☐ PLC ☐ PC ☐ OLS ☐ OLM

- [C] Injection - Disposal - Pressure Increase - Enhanced Oil Recovery
☐ WFX ☐ PMX ☐ SWD ☐ IPI ☐ EOR ☐ PPR

- [D] Other: Specify _____

[2] NOTIFICATION REQUIRED TO: - Check Those Which Apply, or ☒ Does Not Apply INTEREST ARE THE SAME

- [A] ☐ Working, Royalty or Overriding Royalty Interest Owners
 [B] ☐ Offset Operators, Leaseholders or Surface Owner
 [C] ☐ Application is One Which Requires Published Legal Notice
 [D] ☐ Notification and/or Concurrent Approval by BLM or SLO
U.S. Bureau of Land Management - Commissioner of Public Lands, State Land Office
 [E] ☐ For all of the above, Proof of Notification or Publication is Attached, and/or,
 [F] ☐ Waivers are Attached

[3] SUBMIT ACCURATE AND COMPLETE INFORMATION REQUIRED TO PROCESS THE TYPE OF APPLICATION INDICATED ABOVE.

[4] CERTIFICATION: I hereby certify that the information submitted with this application for administrative approval is **accurate** and **complete** to the best of my knowledge. I also understand that **no action** will be taken on this application until the required information and notifications are submitted to the Division.

Note: Statement must be completed by an individual with managerial and/or supervisory capacity.

Kelly J. Holly
 Print or Type Name

Signature

Permitting Tech
 Title

9-20-12
 Date

(432) 685-4384
 Phone Number

kholly@concho.com
 E-mail Address

**Skelly Unit #701
Eddy County, NM**

Fren; Glorieta Yeso oil well
TVD of approximately 6800'

Location:

SHL: 1262' FNL & 2274' FWL Sec 21, T17S, R31E, Unit C
BHL: 990' FNL & 2310' FEL Sec 21, T17S, R31E, Unit B

**This well had to be drilled at a non-standard location due to change in
Directional Drilling Plan.**

The plan for this well is to complete it in the Yeso formation.
We won't know the exact perms until we drill & log it, but it will be similar to the

Willow State #8
330 FSL & 1650 FEL, Section 16, T17S, R31E, UL O
drilled in March 2006

The Willow State #8 Yeso completion has overall perforations from 5380.5' – 5845.5', but is divided into 2 perf/stimulation intervals. At this time, we assume the Skelly Unit 634 will be very similar.

1st Interval: 5650' – 5845.5', 67 total holes.
acidized w/ 2265 gals acid,
frac'd w/ 8000# LiteProp, 30,000 gals 30# gel, 54,663 gals 40# gel, & 90,560#
16/30 sand

2nd Interval: 5380.5' – 5544', 56 total holes.
acidized w/ 2550 gals acid,
frac'd w/ 8006# LiteProp, 30,000 gals 30# gel, 53,000 gals 40# gel, & 91,740#
16/30 sand

Attachment 1

Plat and map

Attachment 2

Map and legend of offset wells.

Attachment 3

Updated land plat showing that
COG Operating LLC owns offset acreage.

The acreage we are encroaching on is Units C, F and G of Section 21.

Interests are the same.

COG Operating LLC respectfully requests permission to have this NSL approved.

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

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

DISTRICT III
1000 Rio Bruzos Road, Aztec, NM 87410
Phone: (505) 334-6178 Fax: (505) 334-6170

DISTRICT IV
1220 S. St. Francis Dr., Santa Fe, NM 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, New Mexico 87505

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

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number 30-015- 40757	Pool Code 26770	Pool Name FREN; GLORIETA-YESO
Property Code 305607	Property Name SKELLY UNIT	Well Number 701
OGRID No. 229137	Operator Name COG OPERATING, LLC	Elevation 3764'

Surface Location

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
C	21	17-S	31-E		1262	NORTH	2274	WEST	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
B	21	17-S	31-E		990	NORTH	2310	EAST	EDDY
Dedicated Acres 40	Joint or Infill	Consolidation Code	Order No.						

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

Penetration Point 1101' FNL + 2610' FEL S.L. 1262' 990' 2310' SEE DETAIL GRID AZ. = 69°19'24" HORIZ. DIST. = 749.4' DETAIL 3757.4' 3770.5' 600' 3756.3' 3771.9' CORNER COORDINATES TABLE A) Y=664941.5 N, X=639730.6 E B) Y=664959.7 N, X=642370.7 E C) Y=663621.9 N, X=639738.1 E D) Y=663640.0 N, X=642378.4 E GEODETIC COORDINATES NAD 27 NME SURFACE LOCATION Y=663686.1 N X=640690.8 E LAT.=32.823722° N LONG.=103.875345° W BOTTOM HOLE LOCATION Y=663962.8 N X=641387.0 E	OPERATOR CERTIFICATION 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. <i>Robyn M. Odom</i> 9/20/2012 Signature Date Robyn M. Odom Printed Name Rodom@concho.com E-mail Address 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. MAY 23, 2012 Date of Survey Signature & Seal of Professional Surveyor: <i>Ronald J. Eidson</i> 08/30/2012 Certificate Number Gary G. Eidson 12641 Ronald J. Eidson 3239 BKL JWSC W.O.: 12-13-1478
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Sheet 1 of 1

Producing wells in Sec 21, T17S, R31E

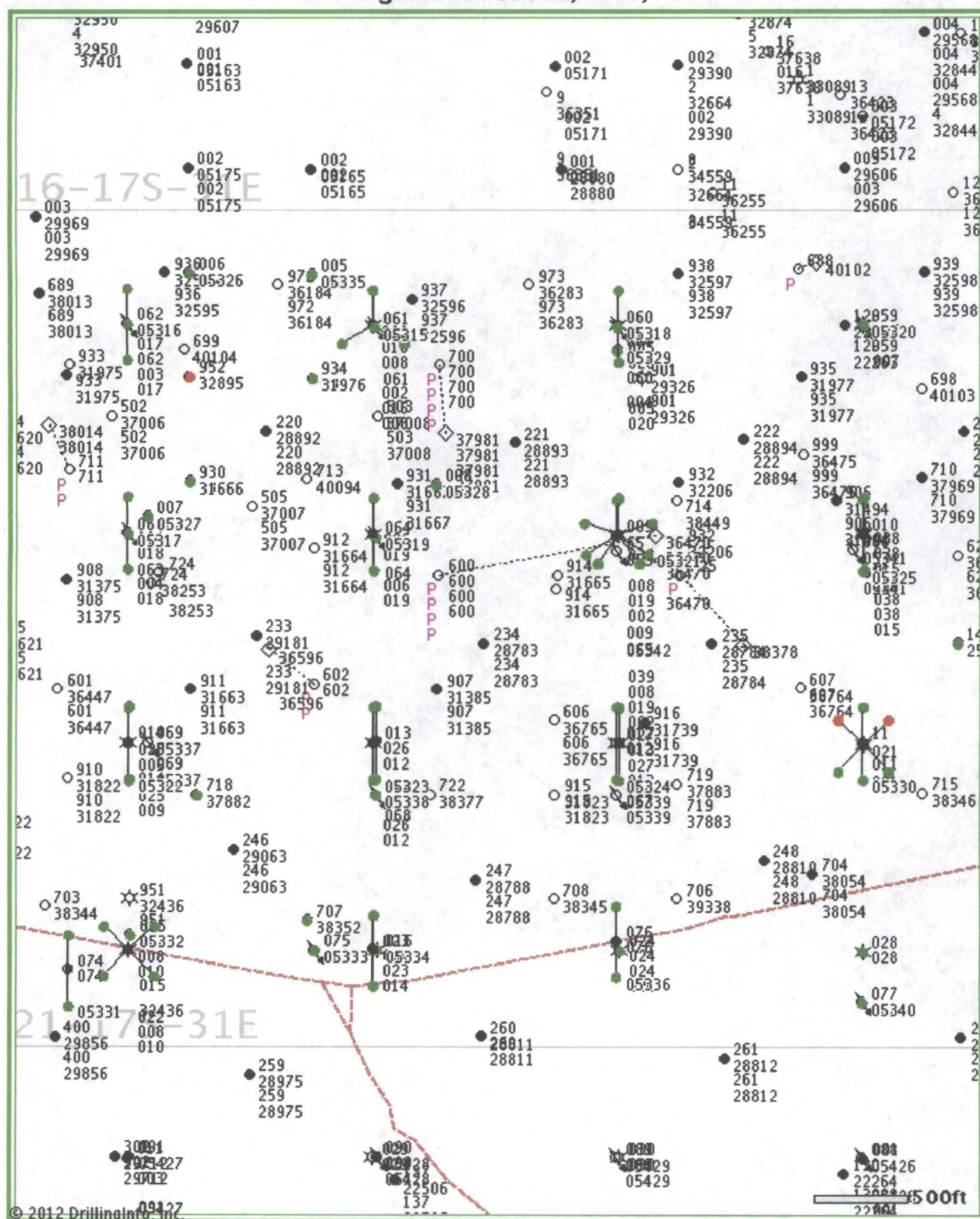
API#	Operator	Lease	Well#	County	Legal	Total Depth	Well Type	Well Status	First Prod.	Last Prod.	Avg. (BO/D)
30-015-05321	WISER OIL CO (THE)	SKELLY UNIT	009	EDDY	S:21, T:17S, R:31E	0	O	Pumping	Jan 1967	Jul 1994	0.00
30-015-05336		SKELLY UNIT	076	EDDY	S:21, T:17S, R:31E	3,405	O	Active	Jan 1969	Mar 1986	0.00
30-015-00000	SKELLY OIL COMPANY	DOW B	021	EDDY	S:21, T:17S, R:31E		G	Active	Oct 1954	Dec 1956	0.00
30-015-00000	SKELLY OIL CO	DOW B FEDERAL	021	EDDY	S:21, T:17S, R:31E		G	Active	Jan 1957	Mar 1958	0.00
30-015-32895	CHEVRON USA, INC.	SKELLY UNIT	952	EDDY	S:21, T:17S, R:31E	11,850	O	Active	Oct 2003	Dec 2003	0.03
30-015-05325	WISER OIL CO (THE)	SKELLY UNIT	010	EDDY	S:21, T:17S, R:31E	2,247	G	Active	Apr 1969	Apr 1974	0.07
30-015-25037	WISER OIL CO (THE)	SKELLY UNIT	149	EDDY	S:21, T:17S, R:31E	3,900	PO	Active	Jan 1993	Feb 2002	0.18
30-015-00000		DOW B	039	EDDY	S:21, T:17S, R:31E		G	Active	May 1960	Jan 1965	0.94
30-015-05329	SKELLY OIL COMPANY	SKELLY UNIT	004	EDDY	S:21, T:17S, R:31E	0	PO	Active	Jan 1971	Dec 1971	1.97
30-015-05323	SKELLY OIL COMPANY	SKELLY UNIT	013	EDDY	S:21, T:17S, R:31E	0	O	Active	Jan 1971	Dec 1971	1.97
30-015-05322	SKELLY OIL COMPANY	SKELLY UNIT	014	EDDY	S:21, T:17S, R:31E	0	O	Active	Jan 1971	Dec 1971	2.00
30-015-05332	SKELLY OIL COMPANY	SKELLY UNIT	015	EDDY	S:21, T:17S, R:31E	0	O	Pumping	Jan 1971	Dec 1971	2.00
30-015-05324	WISER OIL CO (THE)	SKELLY UNIT	012	EDDY	S:21, T:17S, R:31E	2,235	G	Active	Jan 1967	May 1974	2.03
30-015-05336		SKELLY UNIT	076	EDDY	S:21, T:17S, R:31E	3,405	O	Active	Jan 1967	Jul 1979	2.03
30-015-00000	SKELLY OIL CO.	DOW B	008	EDDY	S:21, T:17S, R:31E		O	Active	Jan 1947	Dec 1966	2.68
30-015-00000	SKELLY OIL COMPANY	DOW B	010	EDDY	S:21, T:17S, R:31E		O	Active	Jan 1947	Dec 1966	2.68
30-015-05322	WISER OIL CO (THE)	SKELLY UNIT	014	EDDY	S:21, T:17S, R:31E	0	O	Active	Apr 1969	Dec 1974	2.94
30-015-05326	SKELLY OIL COMPANY	SKELLY UNIT	006	EDDY	S:21, T:17S, R:31E	0	O	Active	Jan 1971	Dec 1971	2.97
30-015-05328	SKELLY OIL COMPANY	SKELLY UNIT	008	EDDY	S:21, T:17S, R:31E	0	O	Active	Jan 1971	Dec 1971	2.97
30-015-05330	SKELLY OIL COMPANY	SKELLY UNIT	11	EDDY	S:21, T:17S, R:31E	11,963	O	Shut-in	Jan 1971	Dec 1971	2.97
30-015-05335	SKELLY OIL COMPANY	SKELLY UNIT	005	EDDY	S:21, T:17S, R:31E	0	O	Pumping	Jan 1971	Dec 1971	3.00
30-015-05327	SKELLY OIL COMPANY	SKELLY UNIT	007	EDDY	S:21, T:17S, R:31E	0	O	Pumping	Jan 1971	Dec 1971	3.00
					S:21, T:17S,						

30-015-05321	SKELLY OIL COMPANY	SKELLY UNIT	009	EDDY	R:31E	0	O	Pumping	Jan 1971	Dec 1971	3.00
30-015-05325	SKELLY OIL COMPANY	SKELLY UNIT	010	EDDY	S:21, T:17S, R:31E	2,247	G	Active	Jan 1971	Dec 1971	3.00
30-015-05324	SKELLY OIL COMPANY	SKELLY UNIT	012	EDDY	S:21, T:17S, R:31E	2,235	G	Active	Jan 1971	Dec 1971	3.00
30-015-05334	SKELLY OIL COMPANY	SKELLY UNIT	016	EDDY	S:21, T:17S, R:31E	2,250	G	Active	Jan 1971	Dec 1971	3.00
30-015-00000	SKELLY OIL CO.	DOW B	009	EDDY	S:21, T:17S, R:31E		O	Active	Jan 1947	Dec 1966	3.35
30-015-00000	SKELLY OIL CO.	DOW B	012	EDDY	S:21, T:17S, R:31E		O	Active	Jan 1947	Dec 1966	3.35
30-015-00000	SKELLY OIL CO.	DOW B	013	EDDY	S:21, T:17S, R:31E		O	Active	Jan 1947	Dec 1966	3.35
30-015-00000	SKELLY OIL CO.	DOW B	014	EDDY	S:21, T:17S, R:31E		O	Active	Jun. 1947	Dec 1966	3.35
30-015-00000	SKELLY OIL CO.	DOW B	015	EDDY	S:21, T:17S, R:31E		O	Active	Oct 1947	Dec 1966	3.35
30-015-00000	SKELLY OIL CO.	DOW B	016	EDDY	S:21, T:17S, R:31E		O	Active	Oct 1949	Dec 1966	3.35
30-015-00000	SKELLY OIL CO.	DOW B	017	EDDY	S:21, T:17S, R:31E		O	Active	Dec 1949	Dec 1966	3.35
30-015-00000	SKELLY OIL CO.	DOW B	018	EDDY	S:21, T:17S, R:31E		O	Active	Sep 1950	Dec 1966	3.35
30-015-00000	SKELLY OIL CO.	DOW B	020	EDDY	S:21, T:17S, R:31E		O	Active	Nov 1950	Dec 1966	3.35
30-015-00000	SKELLY OIL CO	DOW B FED	019	EDDY	S:21, T:17S, R:31E		O	Active	Jan 1954	Dec 1966	3.35
30-015-05333	WISER OIL CO (THE)	SKELLY UNIT	075	EDDY	S:21, T:17S, R:31E	0	I	Injection Well	Jan 1967	Dec 1967	3.81
30-015-00000	SKELLY OIL CO	DOW B FED	022	EDDY	S:21, T:17S, R:31E		O	Active	Apr 1957	Dec 1966	3.81
30-015-00000	SKELLY OIL CO	DOW B FED	023	EDDY	S:21, T:17S, R:31E		O	Active	Jul 1957	Dec 1966	3.81
30-015-00000	SKELLY OIL CO	DOW B FED	024	EDDY	S:21, T:17S, R:31E		G	Active	Sep 1957	Dec 1966	3.81
30-015-00000	SKELLY OIL CO	DOW B FED	025	EDDY	S:21, T:17S, R:31E		G	Active	Oct 1957	Dec 1966	3.81
30-015-00000	SKELLY OIL CO	DOW B FED	026	EDDY	S:21, T:17S, R:31E		G	Active	Dec 1957	Dec 1966	3.81
30-015-05319	WISER OIL CO (THE)	SKELLY UNIT	064	EDDY	S:21, T:17S, R:31E	3,586	I	Injection Well	Jan 1967	Dec 1967	3.87
30-015-00000	SKELLY OIL CO.	DOW	010	EDDY	S:21, T:17S, R:31E		O	Active	Jan 1949	Dec 1962	4.00
30-015-00000	SKELLY OIL CO	DOW B FED	005	EDDY	S:21, T:17S, R:31E		G	Active	Jan 1947	Dec 1966	4.10
30-015-00000	SKELLY OIL CO	DOW B FED	006	EDDY	S:21, T:17S, R:31E		G	Active	Jan 1947	Dec 1966	4.10
30-015-00000	SKELLY OIL CO	DOW B FED	007	EDDY	S:21, T:17S, R:31E		G	Active	Jan 1947	Dec 1966	4.10

30-015-00000	SKELLY OIL CO	DOW B FED	027	EDDY	S:21, T:17S, R:31E		G	Active	Jan 1958	Dec 1966	4.10
30-015-05318	WISER OIL CO (THE)	SKELLY UNIT	060	EDDY	S:21, T:17S, R:31E	0	I	Injection Well	Jan 1967	Dec 1977	4.58
30-015-05323	WISER OIL CO (THE)	SKELLY UNIT	013	EDDY	S:21, T:17S, R:31E	0	O	Active	Jan 1967	Dec 1977	4.58
30-015-00000	SKELLY OIL CO	DOW B FED	002	EDDY	S:21, T:17S, R:31E		G	Active	Jan 1947	Dec 1966	4.77
30-015-00000	SKELLY OIL CO	DOW B FED	003	EDDY	S:21, T:17S, R:31E		O	Active	Jan 1954	Dec 1966	4.77
30-015-00000	SKELLY OIL CO	DOW B FED	004	EDDY	S:21, T:17S, R:31E		O	Active	Jan 1947	Dec 1966	4.77
30-015-31976	CHEVRON U S A INC	SKELLY UNIT	934	EDDY	S:21, T:17S, R:31E	5,255	O	Active	May 2002	Jan 2011	5.16
30-015-00000	SKELLY OIL CO	LYNCH A FED SEC 22	008	EDDY	S:21, T:17S, R:31E		G	Active	Jan 1962	Dec 1962	5.90
30-015-00000	SKELLY OIL CO	DOW B FED	021	EDDY	S:21, T:17S, R:31E		G	Active	Jan 1963	Dec 1965	6.39
30-015-00000	SKELLY OIL CO	DOW B FED	038	EDDY	S:21, T:17S, R:31E		G	Active	Feb 1962	Dec 1966	6.84
30-015-05317	WISER OIL CO (THE)	SKELLY UNIT	063	EDDY	S:21, T:17S, R:31E	3,571	I	Injection Well	Jan 1972	Dec 1977	6.87
30-015-05320	WISER OIL CO (THE)	SKELLY UNIT	059	EDDY	S:21, T:17S, R:31E	3,654	I	Injection Well	Jan 1967	Dec 1977	6.87
30-015-05340	WISER OIL CO (THE)	SKELLY UNIT	077	EDDY	S:21, T:17S, R:31E	3,650	I	Injection Well	Jan 1967	Dec 1967	8.55
30-015-31666	CHEVRON U S A INC	SKELLY UNIT	930	EDDY	S:21, T:17S, R:31E	5,295	O	Pumping	May 2001	Oct 2008	9.87
30-015-00000	SKELLY OIL CO.	DOW B	019	EDDY	S:21, T:17S, R:31E		O	Active	Oct 1950	Dec 1953	10.19
30-015-37882	CHEVRON U S A INC	SKELLY UNIT	718	EDDY	S:21, T:17S, R:31E	6,735	O	Active Permit	Jan 2012	Jan 2012	11.35
30-015-00000	SKELLY OIL CO	DOW B AND LYNCH B FED	028	EDDY	S:21, T:17S, R:31E		G	Active	Jan 1958	Dec 1966	12.94
30-015-00000	SKELLY OIL CO.	DOW B	008	EDDY	S:21, T:17S, R:31E		O	Active	Jan 1949	Dec 1953	13.97
30-015-00000		DOW B	021	EDDY	S:21, T:17S, R:31E		G	Active	Jan 1963	Dec 1965	14.77
30-015-38352	CHEVRON U S A INC	SKELLY UNIT	707	EDDY	S:21, T:17S, R:31E	6,790	O	Active Permit	Nov 2011	Jan 2012	17.03
30-015-05315	WISER OIL CO (THE)	SKELLY UNIT	061	EDDY	S:21, T:17S, R:31E	0	I	Injection Well	Jan 1967	Dec 1977	18.32
30-015-05316	WISER OIL CO (THE)	SKELLY UNIT	062	EDDY	S:21, T:17S, R:31E	3,555	I	Injection Well	Jan 1969	Dec 1977	18.32
30-015-00000	SKELLY OIL CO	DOW B FEDERAL	039	EDDY	S:21, T:17S, R:31E		G	Active	Feb 1965	Dec 1965	23.19
30-015-00000	dOW B	DOW B	002	EDDY	S:21, T:17S, R:31E		O	Active	Jan 1949	Dec 1951	27.58
30-015-05321	WISER OIL CO (THE)	SKELLY UNIT	009	EDDY	S:21, T:17S, R:31E	0	O	Pumping	Apr 1969	Dec 1977	36.68

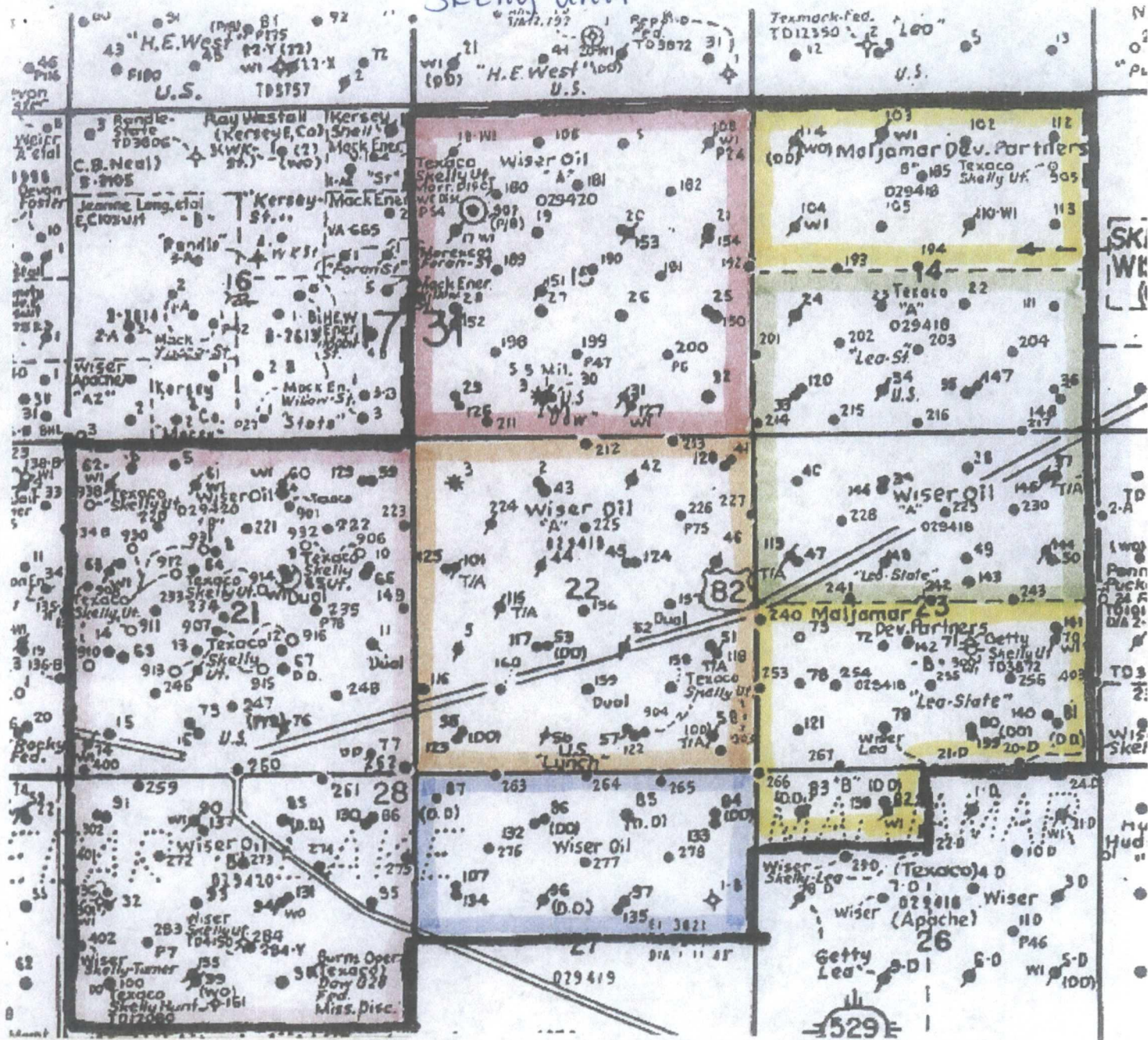
30-015-05330	WISER OIL CO (THE)	SKELLY UNIT	11	EDDY	S:21, T:17S, R:31E	11,963	O	Shut-in	Jan 1967	Dec 1977	41.26
30-015-05331	WISER OIL CO (THE)	SKELLY UNIT	074	EDDY	S:21, T:17S, R:31E	0	PI	Injection Well	Jan 1967	Dec 1977	41.26
30-015-05331	FOREST OIL CORPORATION	SKELLY UNIT	074	EDDY	S:21, T:17S, R:31E	0	PI	Injection Well	Jan 1969	May 1997	
30-015-05338	LINN OPERATING, INC.	SKELLY UNIT	068	EDDY	S:21, T:17S, R:31E	3,510	I	Injection Well	Jan 1967	Nov 2007	

Producing wells in Sec 21, T17S, R31E



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Skelly Unit



Section 28 + south of Hwy

Caviness Cattle Co.

1316 South Main

Portales, NM 88130

Allotment 6058

Section 21 + North of Hwy

Charles K. Martin

P.O. Box 706

Artesia, NM 88210

Allotment 2004

Lease #

NM-98122

Description

Sec. 21 and outlined part of Sec. 28

NM-98121

N/2 Sec. 27

NM-98120

N/2 Sec. 14 and S/2 Sec. 23 part of Sec. 26

LC-029418 (a)

S/2 Sec. 14 and N/2 Sec. 23

LC-029419 (a)

Sec. 22

LC-029420 (a)

Sec. 15



COG Operating LLC

Eddy County, NM (NAN27 NME)

Skelly Unit #701

OH

Plan #2 7-7/8" Hole

Surface: 1262' FNL, 2274' FWL, Sec 21, T17S, R31E, Unit C

Top of Paddock @ 4800' TVD: 161' North of Surface & 396' East of Surface

BHL: 980' FNL, 2300' FEL, Sec 21, T17S, R31E, Unit B

Standard Planning Report

18 September, 2012





Scientific Drilling International, Inc.

Planning Report



Database:	EDM 5000.1 Single User Db.	Local Co-ordinate Reference:	Well #701
Company:	COG Operating LLC	TVD Reference:	GL @ 3764.00usft
Project:	Eddy County, NM (NAN27 NME)	MD Reference:	GL @ 3764.00usft
Site:	Skelly Unit	North Reference:	Grid
Well:	#701	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #2 7-7/8" Hole		

Project	Eddy County, NM (NAN27 NME)		
Map System:	US State Plane 1927 (Exact solution)	System Datum:	Mean Sea Level
Geo Datum:	NAD 1927 (NADCON CONUS)		
Map Zone:	New Mexico East 3001		Using geodetic scale factor

Site	Skelly Unit		
Site Position:		Northing:	665,074.60 usft
From:	Map	Easting:	647,417.00 usft
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "
		Latitude:	32° 49' 38.845 N
		Longitude:	103° 51' 12.345 W
		Grid Convergence:	0.26 °

Well	#701		
Well Position	+N-S	-1,388.59 usft	Northing:
	+E-W	-6,726.64 usft	Easting:
Position Uncertainty	0.00 usft	Wellhead Elevation:	Ground Level:
			3,764.00 usft

Wellbore	OH		
Magnetics	Model Name	Sample Date	Declination
			(°)
	IGRF2010	09/18/12	7.62
			Dip Angle
			(°)
			60.66
			Field Strength
			(nT)
			48,815

Design	Plan #2 7-7/8" Hole		
Audit Notes:			
Version:	Phase:	PLAN	Tie On Depth:
			0.00
Vertical Section:	Depth From (TVD)	+N-S	+E-W
	(usft)	(usft)	(usft)
	0.00	0.00	0.00
			Direction
			(°)
			67.90

Plan Sections										
Measured	Inclination	Azimuth	Vertical	+N-S	+E-W	Dogleg	Build	Turn	TFO	Target
Depth	(°)	(°)	Depth	(usft)	(usft)	Rate	Rate	Rate	(°)	
(usft)			(usft)			(°/100usft)	(°/100usft)	(°/100usft)		
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2,000.00	0.00	0.00	2,000.00	0.00	0.00	0.00	0.00	0.00	0.00	
2,474.24	9.48	67.90	2,472.08	14.73	36.29	2.00	2.00	14.32	67.90	
6,862.15	9.48	67.90	6,800.00	286.72	706.25	0.00	0.00	0.00	0.00	PBHL



Scientific Drilling International, Inc.

Planning Report



Database:	EDM 5000.1 Single User Db.	Local Co-ordinate Reference:	Well #701
Company:	COG Operating LLC	TVD Reference:	GL @ 3764.00usft
Project:	Eddy County, NM (NAN27 NME)	MD Reference:	GL @ 3764.00usft
Site:	Skelly Unit	North Reference:	Grid
Well:	#701	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #2.7-7/8" Hole		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1,900.00	0.00	0.00	1,900.00	0.00	0.00	0.00	0.00	0.00	0.00
8-5/8" Casing									
2,000.00	0.00	0.00	2,000.00	0.00	0.00	0.00	0.00	0.00	0.00
KOP Start DLS 2.00 TFO 67.90									
2,100.00	2.00	67.90	2,099.98	0.66	1.62	1.75	2.00	2.00	0.00
2,200.00	4.00	67.90	2,199.84	2.63	6.47	6.98	2.00	2.00	0.00
2,300.00	6.00	67.90	2,299.45	5.90	14.54	15.69	2.00	2.00	0.00
2,400.00	8.00	67.90	2,398.70	10.49	25.83	27.88	2.00	2.00	0.00
2,474.24	9.48	67.90	2,472.08	14.73	36.29	39.16	2.00	2.00	0.00
Start 4387.91 hold at 2474.24 MD									
2,500.00	9.48	67.90	2,497.48	16.33	40.22	43.41	0.00	0.00	0.00
2,600.00	9.48	67.90	2,596.12	22.53	55.49	59.89	0.00	0.00	0.00
2,700.00	9.48	67.90	2,694.75	28.73	70.76	76.37	0.00	0.00	0.00
2,800.00	9.48	67.90	2,793.38	34.92	86.03	92.84	0.00	0.00	0.00
2,900.00	9.48	67.90	2,892.02	41.12	101.29	109.32	0.00	0.00	0.00
3,000.00	9.48	67.90	2,990.65	47.32	116.56	125.80	0.00	0.00	0.00
3,100.00	9.48	67.90	3,089.28	53.52	131.83	142.28	0.00	0.00	0.00
3,200.00	9.48	67.90	3,187.92	59.72	147.10	158.76	0.00	0.00	0.00
3,300.00	9.48	67.90	3,286.55	65.92	162.37	175.24	0.00	0.00	0.00
3,400.00	9.48	67.90	3,385.18	72.12	177.64	191.72	0.00	0.00	0.00
3,500.00	9.48	67.90	3,483.81	78.31	192.90	208.19	0.00	0.00	0.00
3,600.00	9.48	67.90	3,582.45	84.51	208.17	224.67	0.00	0.00	0.00
3,700.00	9.48	67.90	3,681.08	90.71	223.44	241.15	0.00	0.00	0.00
3,800.00	9.48	67.90	3,779.71	96.91	238.71	257.63	0.00	0.00	0.00
3,900.00	9.48	67.90	3,878.35	103.11	253.98	274.11	0.00	0.00	0.00
4,000.00	9.48	67.90	3,976.98	109.31	269.25	290.59	0.00	0.00	0.00
4,100.00	9.48	67.90	4,075.61	115.51	284.51	307.07	0.00	0.00	0.00
4,200.00	9.48	67.90	4,174.24	121.70	299.78	323.54	0.00	0.00	0.00
4,300.00	9.48	67.90	4,272.88	127.90	315.05	340.02	0.00	0.00	0.00
4,400.00	9.48	67.90	4,371.51	134.10	330.32	356.50	0.00	0.00	0.00
4,500.00	9.48	67.90	4,470.14	140.30	345.59	372.98	0.00	0.00	0.00
4,600.00	9.48	67.90	4,568.78	146.50	360.86	389.46	0.00	0.00	0.00
4,700.00	9.48	67.90	4,667.41	152.70	376.12	405.94	0.00	0.00	0.00
4,800.00	9.48	67.90	4,766.04	158.90	391.39	422.42	0.00	0.00	0.00
4,834.43	9.48	67.90	4,800.00	161.03	396.65	428.09	0.00	0.00	0.00
Top of Paddock									
4,900.00	9.48	67.90	4,864.68	165.09	406.66	438.90	0.00	0.00	0.00
5,000.00	9.48	67.90	4,963.31	171.29	421.93	455.37	0.00	0.00	0.00
5,100.00	9.48	67.90	5,061.94	177.49	437.20	471.85	0.00	0.00	0.00
5,200.00	9.48	67.90	5,160.57	183.69	452.47	488.33	0.00	0.00	0.00
5,300.00	9.48	67.90	5,259.21	189.89	467.73	504.81	0.00	0.00	0.00
5,400.00	9.48	67.90	5,357.84	196.09	483.00	521.29	0.00	0.00	0.00
5,500.00	9.48	67.90	5,456.47	202.29	498.27	537.77	0.00	0.00	0.00
5,600.00	9.48	67.90	5,555.11	208.48	513.54	554.25	0.00	0.00	0.00
5,700.00	9.48	67.90	5,653.74	214.68	528.81	570.72	0.00	0.00	0.00
5,800.00	9.48	67.90	5,752.37	220.88	544.08	587.20	0.00	0.00	0.00
5,900.00	9.48	67.90	5,851.00	227.08	559.34	603.68	0.00	0.00	0.00
6,000.00	9.48	67.90	5,949.64	233.28	574.61	620.16	0.00	0.00	0.00
6,100.00	9.48	67.90	6,048.27	239.48	589.88	636.64	0.00	0.00	0.00
6,200.00	9.48	67.90	6,146.90	245.68	605.15	653.12	0.00	0.00	0.00
6,300.00	9.48	67.90	6,245.54	251.87	620.42	669.60	0.00	0.00	0.00
6,400.00	9.48	67.90	6,344.17	258.07	635.69	686.07	0.00	0.00	0.00
6,500.00	9.48	67.90	6,442.80	264.27	650.95	702.55	0.00	0.00	0.00



Scientific Drilling International, Inc.
Planning Report



Database:	EDM 5000.1 Single User Db.	Local Co-ordinate Reference:	Well #701
Company:	COG Operating LLC	TVD Reference:	GL @ 3764.00usft
Project:	Eddy County, NM (NAN27 NME)	MD Reference:	GL @ 3764.00usft
Site:	Skelly Unit	North Reference:	Grid
Well:	#701	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #2 7-7/8" Hole		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N-S (usft)	+E-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
6,600.00	9.48	67.90	6,541.44	270.47	666.22	719.03	0.00	0.00	0.00
6,700.00	9.48	67.90	6,640.07	276.67	681.49	735.51	0.00	0.00	0.00
6,800.00	9.48	67.90	6,738.70	282.87	696.76	751.99	0.00	0.00	0.00
6,862.15	9.48	67.90	6,800.00	286.72	706.25	762.23	0.00	0.00	0.00
PBHL									

Design Targets

Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N-S (usft)	+E-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
- hit/miss target									
- Shape									
PBHL	0.00	0.01	6,800.00	286.72	706.25	663,972.80	641,397.00	32° 49' 28.207 N	103° 52' 22.951 W
- plan hits target center									
- Circle (radius 10.00)									

Casing Points

Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (")	Hole Diameter (")
1,900.00	1,900.00	8-5/8" Casing	8-5/8	12-1/4

Formations

Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
4,834.43	4,800.00	Top of Paddock		0.00	

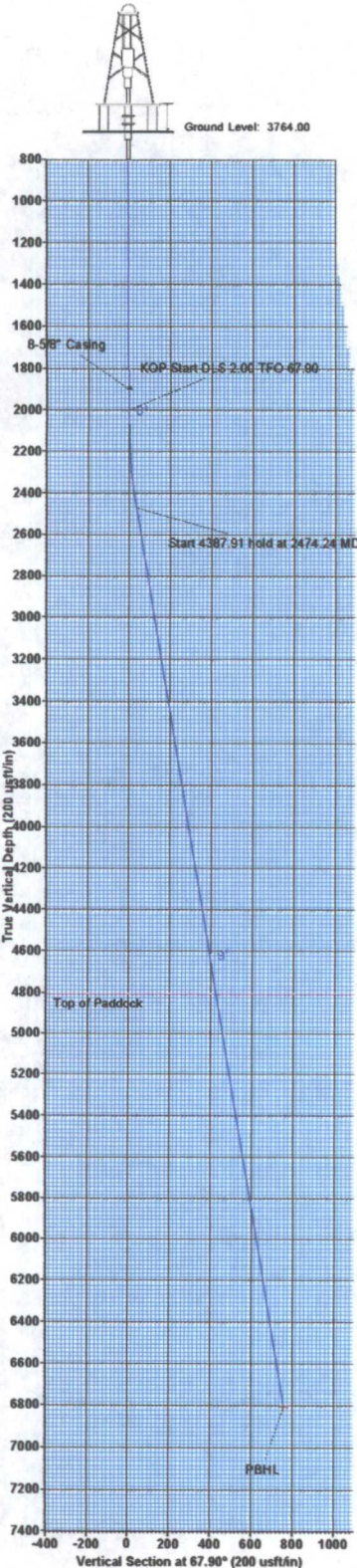
Plan Annotations

Measured Depth (usft)	Vertical Depth (usft)	+N-S (usft)	+E-W (usft)	Comment
2,000.00	2,000.00	0.00	0.00	KOP Start DLS 2.00 TFO 67.90
2,474.24	2,472.08	14.73	36.29	Start 4387.91 hold at 2474.24 MD



Skelly Unit #701
Eddy County, NM (NAN27 NME)
Northing: 663686.10
Easting: 640690.80
Plan #2 7-7/8" Hole

To convert Magnetic North to Grid, Add 7.37°
 To convert True North to Grid, Subtract 0.25°



WELL DETAILS:					
		Ground Level:	3764.00		
+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.00	0.00	663686.10	640690.80	32° 49' 25.401 N	103° 52' 31.241 W

SECTION DETAILS									
MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2000.00	0.00	0.00	2000.00	0.00	0.00	0.00	0.00	0.00	
2474.24	9.48	67.90	2472.08	14.73	36.29	2.00	67.90	39.16	
6862.15	9.48	67.90	6800.00	286.72	706.25	0.00	0.00	762.23	PBHL

DESIGN TARGET DETAILS					
Name	TVD	+N/-S	+E/-W	Northing	Easting
PBHL	6800.00	286.72	706.25	663972.80	641397.00

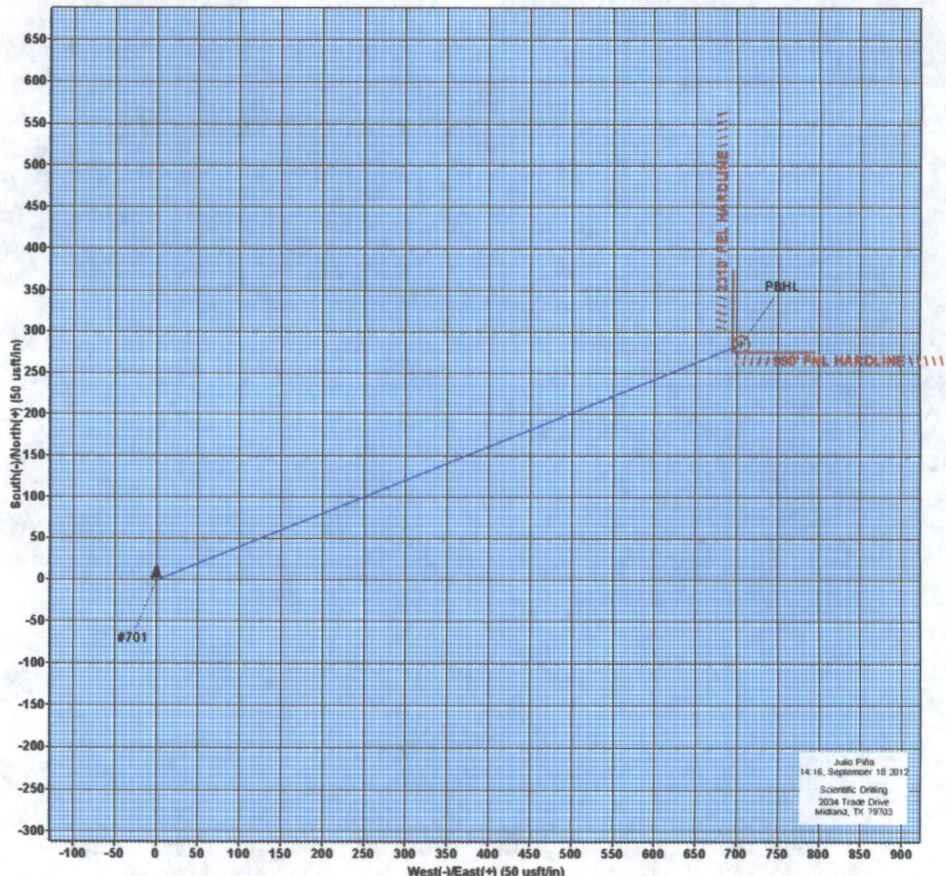
SITE DETAILS: Skelly Unit		
Site Centre Northing:	665074.60	
Easting:	647417.00	
Positional Uncertainty:	0.00	
Convergence:	0.26	
Local North:	Grid	

PROJECT DETAILS: Eddy County, NM (NAN27 NME)		
Geodetic System:	US State Plane 1927 (Exact solution)	
Datum:	NAD 1927 (NADCON CONUS)	
Ellipsoid:	Clarke 1866	
Zone Name:	New Mexico East 3001	
System Datum:	Mean Sea Level	

CASING DETAILS			
TVD	MD	Name	Size
1900.00	1900.08	5/8" Casing	8-5/8

FORMATION TOP DETAILS		
TVDPath	MDPath	Formation
4800.00	4834.43	Top of Paddock

Map System:	US State Plane 1927 (Exact solution)
Datum:	NAD 1927 (NADCON CONUS)
Ellipsoid:	Clarke 1866
Zone Name:	New Mexico East 3001
Local Origin:	Well #701, Grid North
Latitude:	32° 49' 25.401 N
Longitude:	103° 52' 31.241 W
Grid East:	640690.80
Grid North:	663686.10
Scale Factor:	1.000
Geomagnetic Model:	IGRF2010
Sample Date:	18-Sep-12
Magnetic Declination:	7.62°
Dip Angle from Horizontal:	60.66°
Magnetic Field Strength:	48815
To convert Magnetic North to Grid, Add 7.37°	
To convert Magnetic North to True North, Add 7.62° East	
To convert True North to Grid, Subtract 0.25°	



Julio Pella
 14:16, September 18 2012
 Scientific Drilling
 2034 Trade Drive
 Midland, TX 79703