

DATE IN 3-7-12	SUSPENSE	ENGINEER DB	LOGGED IN 3-7-12	TYPE	NSL PTCW	APP NO. 1206746630
----------------	----------	-------------	------------------	------	----------	--------------------

ABOVE THIS LINE FOR DIVISION USE ONLY

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



COG
Shelly U# 673

6583

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

3-6-12
Date

Skelly Unit #673
Eddy County, NM
Fren; Glorieta Yeso oil well
TD of approximately 6800'

Location:

SHL: 1621' FSL & 1134' FWL Sec 14, T17S, R31E, Unit L
BHL: 1650' FSL & 1650' FWL Sec 14, T17S, R31E, Unit K

This well had to be drilled at a non-standard location due to Sand Dune Lizard habitat.

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 this is how we anticipate completing this well.

1st interval: 6300' – 6500',
acidized w/ 3500 gals,
frac'd w/ 121,616 gals gel, 148,759# 16/30 Ottawa sand & 29,927# 16/30 CRC.

2nd interval: 6030' – 6230',
acidized w/ 3500 gals,
frac'd w/ 115,358 gals gel, 145,867# 16/30 Ottawa sand & 33,867# 16/30 CRC.

3rd interval: 5760' – 5960',
acidized w/ 3500 gals,
frac'd w/ 112,712 gals gel, 143,362# 16/30 Ottawa sand & 30,017# 16/30 CRC.

4th interval: 5160' – 5300',
acidized w/ 3000 gals,
frac'd w/ 94,592 gals gel, 100,582# 16/30 Ottawa sand & 13,341# 16/30 CRC.

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 the NW/4 SW/4, SW/4 SW/4 & SE/4
SW/4 of Section 14.

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 Brazos 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- 40093	Pool Code 97866	Pool Name MAR LOCO-Glorieta Yeso
Property Code 305607	Property Name SKELLY UNIT	Well Number 673
OGRID No. 229137	Operator Name COG OPERATING, LLC	Elevation 3900'

Surface Location

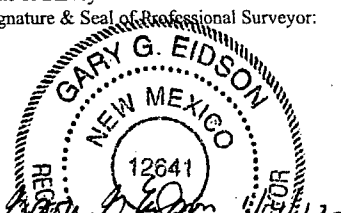
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
L	14	17-S	31-E		1621	SOUTH	1134	WEST	EDDY

Bottom Hole Location If Different From Surface

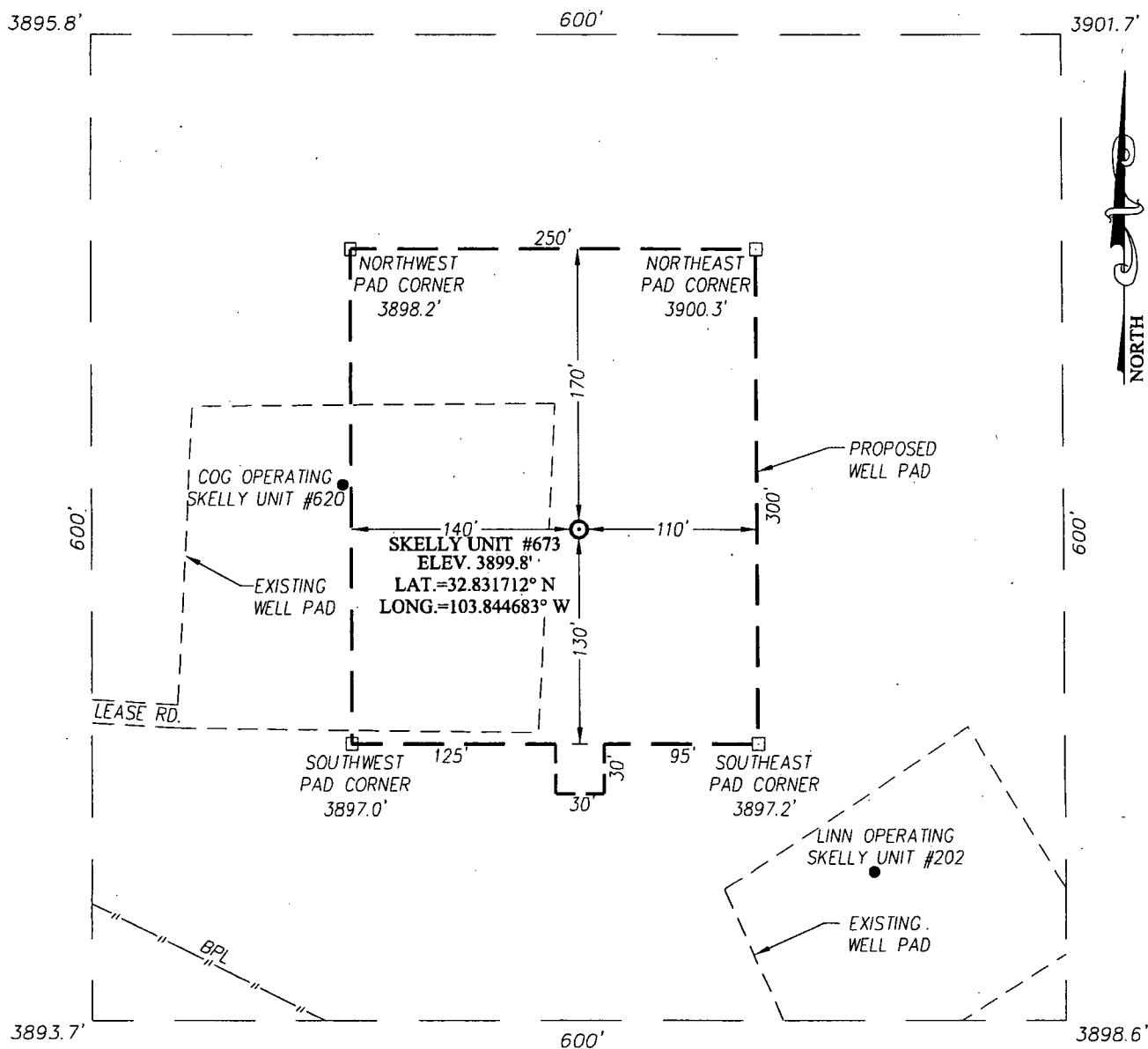
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
K	14	17-S	31-E		1650	SOUTH	1650	WEST	EDDY

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

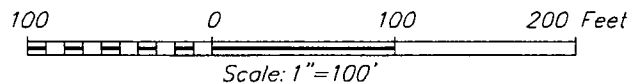
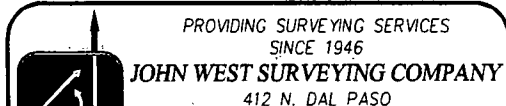
CORNER COORDINATES TABLE Ⓐ - Y=667646.2 N, X=648957.1 E Ⓑ - Y=667664.7 N, X=651597.0 E Ⓒ - Y=666326.1 N, X=648964.6 E Ⓓ - Y=666344.7 N, X=651604.9 E Estimated Completed Interval: 1149 FSL + 1478 FWL GEODETIC COORDINATES NAD 27 NME SURFACE LOCATION Y=666634.9 N X=650096.7 E LAT.=32.831712° N LONG.=103.844683° W BOTTOM HOLE LOCATION Y=666667.6 N X=650612.3 E DETAIL 3895.8' 3901.7' 600' 600' 3893.7' 3898.6' 1650' 1134' S.L. B.H. SEE DETAIL GRID AZ.=86°22'07" HORZ. DIST.=516.8'	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.  1-19-2012 Signature Date Kelly J. Holly Printed Name kholly@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. DECEMBER 19, 2011 Date of Survey Signature & Seal of Professional Surveyor:  Certificate Number Gary G. Eidson 12641
--	--

SECTION 14, TOWNSHIP 17 SOUTH, RANGE 31 EAST, N.M.P.M.
 EDDY COUNTY NEW MEXICO



DIRECTIONS TO LOCATION

FROM THE INTERSECTION OF U.S. HWY. #82 AND C.R. #223 (SWEET GUM) GO NORTHEAST ON U.S. HWY. #82 APPROX. 1.6 MILES. TURN LEFT AND GO NORTHWEST APPROX. 0.3 MILES. TURN RIGHT AND GO NORTH APPROX. 0.5 MILES TO THE SKELLY UNIT #620 WELL PAD. THIS LOCATION STAKE IS 148 FEET EAST OF THE EXISTING COG PUMPING UNIT.



COG OPERATING, LLC

SKELLY UNIT #673 WELL
 LOCATED 1621 FEET FROM THE SOUTH LINE
 AND 1134 FEET FROM THE WEST LINE OF SECTION 14,
 TOWNSHIP 17 SOUTH, RANGE 31 EAST, N.M.P.M.,
 EDDY COUNTY, NEW MEXICO

Producing Wells in Sec 14, T17S, R31E, Eddy County

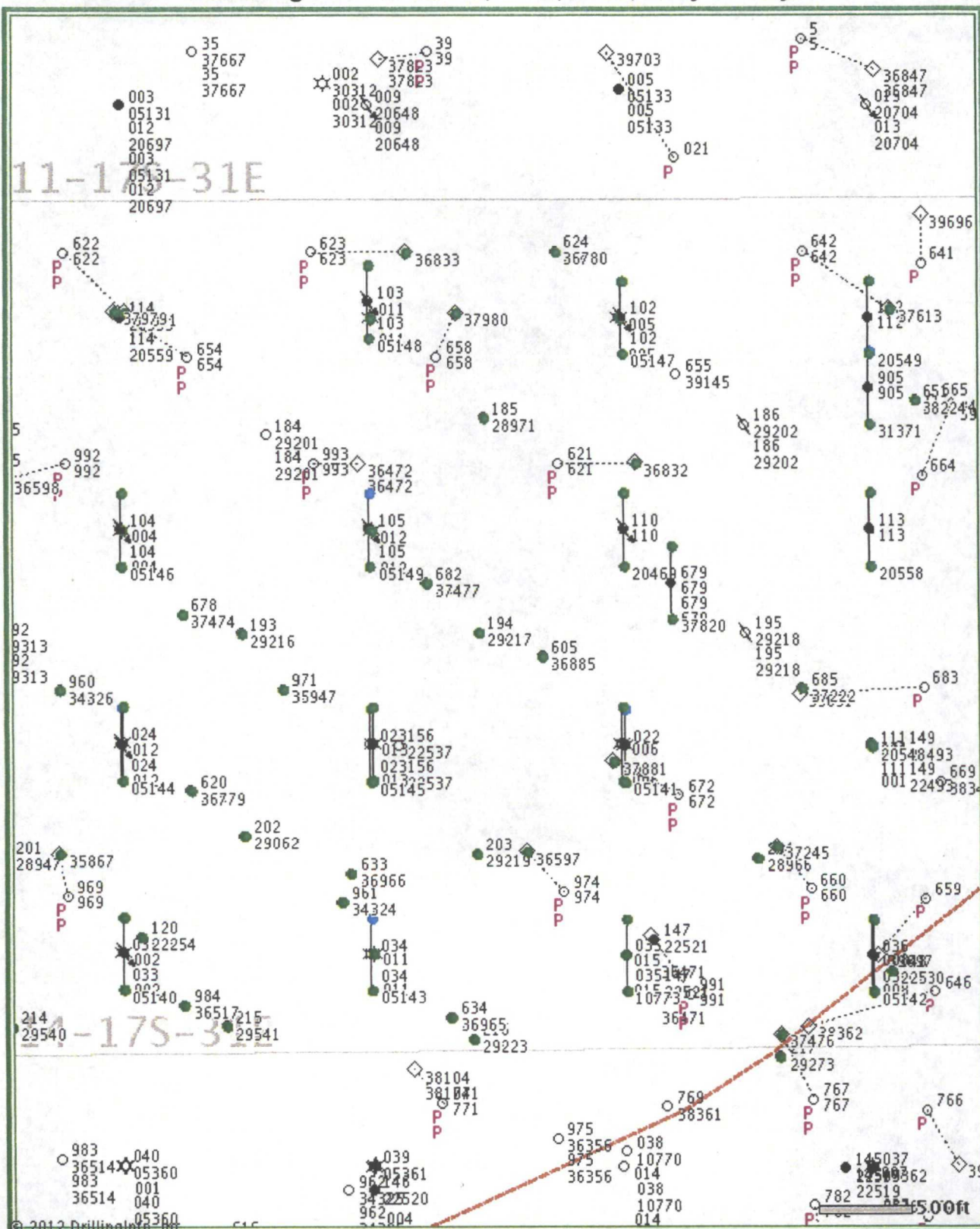
API#	Operator	Lease	Well#	County	Legal	Total Depth	Well Type	Well Status	First Prod.	Last Prod.	Avg. (BO/D)
30-015-05143	WISER OIL CO (THE)	SKELLY UNIT	034	EDDY	S:14, T:17S, R:31E	0	G	Flowing	Jan 1967	Nov 1974	0.00
30-015-05142		SKELLY UNIT	036	EDDY	S:14, T:17S, R:31E	2,910	O	Active	Jan 1969	Mar 1986	0.00
30-015-29219	SANDRIDGE EXPLORATION AND PRODUCTION, LLC	SKELLY UNIT	203	EDDY	S:14, T:17S, R:31E	4,100	PO	Pumping	Jan 1997	Mar 2003	0.61
30-015-05142		SKELLY UNIT	036	EDDY	S:14, T:17S, R:31E	2,910	O	Active	Jan 1967	Nov 1978	0.87
30-015-20558	SANDRIDGE EXPLORATION AND PRODUCTION, LLC	SKELLY UNIT	113	EDDY	S:14, T:17S, R:31E	3,959	PO	Pumping	Jan 1979	Jul 2009	1.13
30-015-20549	LINN OPERATING, INC.	SKELLY UNIT	112	EDDY	S:14, T:17S, R:31E	3,947	O	Active	Jan 1979	Sep 2011	1.23
30-015-22254	LINN OPERATING, INC.	SKELLY UNIT	120	EDDY	S:14, T:17S, R:31E	2,600	O	Pumping	Jan 1993	Sep 2011	1.23
30-015-28966	LINN OPERATING, INC.	SKELLY UNIT	204	EDDY	S:14, T:17S, R:31E	4,150	O	Active	Oct 1996	Sep 2011	1.23
30-015-28971	LINN OPERATING, INC.	SKELLY UNIT	185	EDDY	S:14, T:17S, R:31E	4,150	O	Pumping	Oct 1996	Sep 2011	1.23
30-015-29217	LINN OPERATING, INC.	SKELLY UNIT	194	EDDY	S:14, T:17S, R:31E	4,100	O	Pumping	Jan 1997	Sep 2011	1.23
30-015-29540	LINN OPERATING, INC.	SKELLY UNIT	214	EDDY	S:14, T:17S, R:31E	3,950	O	Active	Jun 1997	Sep 2011	1.23
30-015-29541	LINN OPERATING, INC.	SKELLY UNIT	215	EDDY	S:14, T:17S, R:31E	4,000	O	Pumping	Jul 1997	Sep 2011	1.27
30-015-29216	LINN OPERATING, INC.	SKELLY UNIT	193	EDDY	S:14, T:17S, R:31E	4,100	O	Pumping	Mar 1997	Sep 2011	1.33
30-015-05149	WISER OIL CO (THE)	SKELLY UNIT	105	EDDY	S:14, T:17S, R:31E	0	I	Injection Well	Jan 1967	Dec 1967	1.35
30-015-00000	SKELLY OIL CO	LEA B	005	EDDY	S:14, T:17S, R:31E		G	Active	Jun 1959	Dec 1966	1.90

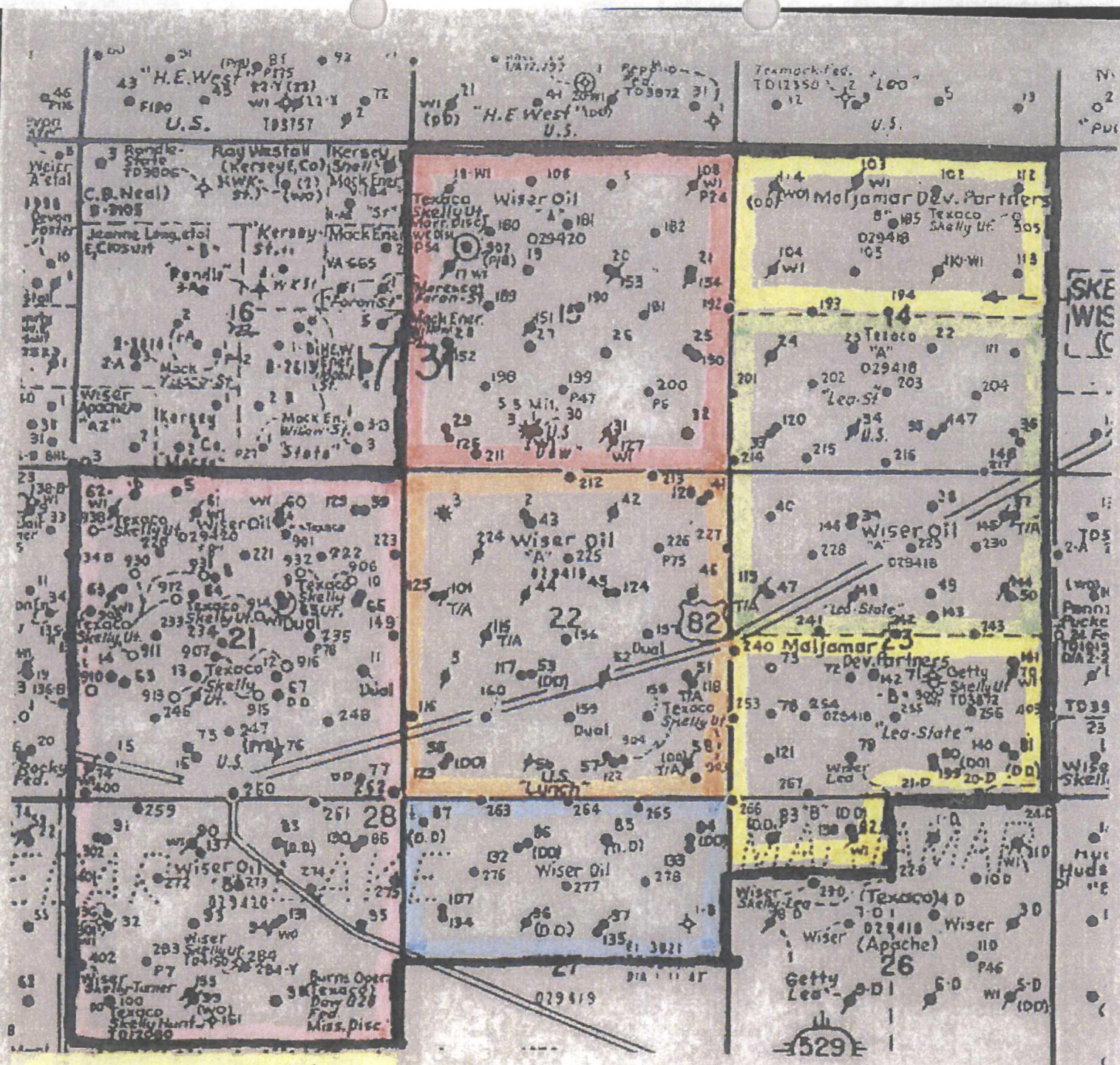
30-015-05144	WISER OIL CO (THE)	SKELLY UNIT	024	EDDY	T:17S, R:31E S:14,	0	I	Injection Well	Jan 1967	Jun 1967	4.23
30-015-05141	WISER OIL CO (THE)	SKELLY UNIT	022	EDDY	T:17S, R:31E S:14,	3,311	G	Flowing	Jan 1967	Dec 1967	4.84
30-015-29223	LINN OPERATING, INC.	SKELLY UNIT	216	EDDY	T:17S, R:31E S:14,	4,100	O	Pumping	Jan 1997	Sep 2011	4.90
30-015-00000	SKELLY OIL CO	LEA A BTRY 1	002	EDDY	T:17S, R:31E S:14,		G	Active	Jan 1947	Dec 1966	4.94
30-015-00000	SKELLY OIL CO	LEA A BTRY 1	012	EDDY	T:17S, R:31E S:14,		G	Active	Sep 1961	Dec 1966	4.94
30-015-00000	SKELLY OIL CO	LEA A BTRY 3	006	EDDY	T:17S, R:31E S:14,		G	Active	Jan 1947	Dec 1966	4.94
30-015-00000	SKELLY OIL CO	LEA A BTRY 3	013	EDDY	T:17S, R:31E S:14,		G	Active	Apr 1962	Dec 1966	4.94
30-015-10773	WISER OIL CO (THE)	SKELLY UNIT	035	EDDY	T:17S, R:31E S:14,	3,944	I	Pumping	Jan 1967	Dec 1977	5.29
30-015-20469	WISER OIL CO (THE)	SKELLY UNIT	110	EDDY	T:17S, R:31E S:14,	0	PI	Injection Well	Jan 1972	Dec 1977	6.13
30-015-00000	SKELLY OIL CO.	LEA A	002	EDDY	T:17S, R:31E S:14,		G	Active	Jan 1948	Dec 1964	6.48
30-015-34324	CHEVRON U S A INC	SKELLY UNIT	961	EDDY	T:17S, R:31E S:14,	5,495	O	Active Permit	Feb 2006	Oct 2011	6.52
30-015-05145	WISER OIL CO (THE)	SKELLY UNIT	023	EDDY	T:17S, R:31E S:14,	3,860	I	Pumping	Jan 1967	Dec 1977	6.61
30-015-00000	SKELLY OIL CO.	LEA B	001	EDDY	T:17S, R:31E S:14,		O	Active	Jan 1947	Dec 1953	6.71
30-015-00000	SKELLY OIL CO	LEA A FEDERAL REPT 3	011	EDDY	T:17S, R:31E S:14,		G	Active	Aug 1961	Dec 1966	7.94
30-015-36598	COG OPERATING LLC	SKELLY UNIT	992	EDDY	T:17S, R:31E S:14,	6,696	O	Active Permit	Feb 2009	Oct 2011	8.84
30-015-00000	SKELLY OIL CO	LEA A FED REP 3	012	EDDY	T:17S, R:31E S:14,		G	Active	Jan 1964	Dec 1964	9.23
30-015-05140	WISER OIL CO (THE)	SKELLY UNIT	033	EDDY	T:17S, R:31E S:14,	3,840	I	Injection Well	Jan 1967	Dec 1977	9.94

30-015-36885	COG OPERATING LLC	SKELLY UNIT	605	EDDY	T:17S, R:31E	6,721	O	Active Permit	Jul 2009	Oct 2011	10.45
30-015-00000	SKELLY OIL CO	LEA A BATTERY	015	EDDY	S:14, T:17S, R:31E		AP	Unknown	May 1966	Dec 1966	12.03
30-015-00000	SKELLY OIL CO	LEA A FED REP 2	013	EDDY	S:14, T:17S, R:31E		G	Active	Jan 1964	Dec 1964	12.52
30-015-36832	COG OPERATING LLC	SKELLY UNIT	621	EDDY	S:14, T:17S, R:31E	6,857	O	Active Permit	Aug 2009	Oct 2011	12.87
30-015-36780	COG OPERATING LLC	SKELLY UNIT	624	EDDY	S:14, T:17S, R:31E	6,620	O	Active Permit	Dec 2009	Oct 2011	13.16
30-015-37613	COG OPERATING LLC	SKELLY UNIT	642	EDDY	S:14, T:17S, R:31E	7,038	O	Active Permit	Dec 2010	Oct 2011	14.68
30-015-35947	COG OPERATING LLC	SKELLY UNIT	971	EDDY	S:14, T:17S, R:31E	6,580	O	Active Permit	Mar 2008	Oct 2011	15.29
30-015-37881	CHEVRON U S A INC	SKELLY UNIT	672	EDDY	S:14, T:17S, R:31E	7,057	O	Active Permit	Apr 2011	Oct 2011	18.00
30-015-36517	COG OPERATING LLC	SKELLY UNIT	984	EDDY	S:14, T:17S, R:31E	6,720	O	Active Permit	Apr 2009	Oct 2011	18.52
30-015-37820	CHEVRON U S A INC	SKELLY UNIT	679	EDDY	S:14, T:17S, R:31E	6,795	O	Active Permit	Jan 2011	Feb 2011	18.57
30-015-36966	COG OPERATING LLC	SKELLY UNIT	633	EDDY	S:14, T:17S, R:31E	6,798	O	Active Permit	Dec 2009	Oct 2011	18.84
30-015-37820	CHEVRON U S A INC	SKELLY UNIT	679	EDDY	S:14, T:17S, R:31E	6,795	O	Active Permit	Mar 2011	Oct 2011	20.42
30-015-36965	COG OPERATING LLC	SKELLY UNIT	634	EDDY	S:14, T:17S, R:31E	6,820	O	Active Permit	Jan 2010	Oct 2011	20.71
30-015-31371	CHEVRON USA, INC.	SKELLY UNIT	905	EDDY	S:14, T:17S, R:31E	12,470	O	Active	May 2002	May 2002	21.48
30-015-35867	COG OPERATING LLC	SKELLY UNIT	969	EDDY	S:14, T:17S, R:31E	6,517	O	Active Permit	Feb 2008	Oct 2011	21.71
30-015-36597	COG OPERATING LLC	SKELLY UNIT	974	EDDY	S:14, T:17S, R:31E	6,500	O	Active Permit	Feb 2009	Oct 2011	22.52
30-015-37222	COG OPERATING LLC	SKELLY UNIT	685	EDDY	S:14, T:17S, R:31E	6,808	O	Active Permit	Jan 2010	Oct 2011	23.32
					S:14,						

30-015-36833	COG OPERATING LLC	SKELLY UNIT	623	EDDY	T:17S, R:31E S:14, T:17S, R:31E	6,857	O	Active Permit	Mar 2010	Oct 2011	23.42
30-015-37980	COG OPERATING LLC	SKELLY UNIT	658	EDDY	S:14, T:17S, R:31E	6,829	O	Active	Mar 2011	Oct 2011	26.55
30-015-36831	COG OPERATING LLC	SKELLY UNIT	622	EDDY	S:14, T:17S, R:31E	6,650	O	Active Permit	Sep 2009	Oct 2011	28.16
30-015-37979	COG OPERATING LLC	SKELLY UNIT	654	EDDY	S:14, T:17S, R:31E	6,839	O	Active	Mar 2011	Oct 2011	28.16
30-015-37474	CHEVRON U S A INC	SKELLY UNIT	678	EDDY	S:14, T:17S, R:31E	6,730	O	Active Permit	Nov 2010	Oct 2011	31.84
30-015-37245	CHEVRON U S A INC	SKELLY UNIT	660	EDDY	S:14, T:17S, R:31E	6,835	O	Active Permit	Jan 2011	Oct 2011	40.32
30-015-37477	CHEVRON U S A INC	SKELLY UNIT	682	EDDY	S:14, T:17S, R:31E	6,742	O	Active Permit	May 2011	Oct 2011	42.55
30-015-37476	CHEVRON U S A INC	SKELLY UNIT	767	EDDY	S:14, T:17S, R:31E	6,863	O	Active Permit	Jan 2011	Oct 2011	44.94
30-015-38224	COG OPERATING LLC	SKELLY UNIT	651	EDDY	S:14, T:17S, R:31E	6,804	O	Active Permit	Aug 2011	Oct 2011	56.39
30-015-05140	LINN OPERATING, INC.	SKELLY UNIT	033	EDDY	S:14, T:17S, R:31E	3,840	I	Injection Well	Jan 1969	Jun 2004	
30-015-05141	LINN OPERATING, INC.	SKELLY UNIT	022	EDDY	S:14, T:17S, R:31E	3,311	G	Flowing	Jan 2001	Sep 2011	
30-015-05143	LINN OPERATING, INC.	SKELLY UNIT	034	EDDY	S:14, T:17S, R:31E	0	G	Flowing	Jan 2001	Sep 2011	
30-015-05144	LINN OPERATING, INC.	SKELLY UNIT	024	EDDY	S:14, T:17S, R:31E	0	I	Injection Well	Jan 2001	Apr 2011	
30-015-05145	LINN OPERATING, INC.	SKELLY UNIT	023	EDDY	S:14, T:17S, R:31E	3,860	I	Pumping	Jan 1971	Feb 2011	
30-015-05146	LINN OPERATING, INC.	SKELLY UNIT	104	EDDY	S:14, T:17S, R:31E	3,831	I	Injection Well	Jan 1969	Jun 2004	
30-015-05147	LINN OPERATING, INC.	SKELLY UNIT	102	EDDY	S:14, T:17S, R:31E	0	I	Injection Well	Jan 1971	Oct 2005	
30-015-05148	LINN OPERATING, INC.	SKELLY UNIT	103	EDDY	S:14, T:17S, R:31E	0	I	Injection Well	Jan 1969	Jun 2011	
					S:14,						

30-015-05149	LINN OPERATING, INC.	SKELLY UNIT	105	EDDY	T:17S, R:31E	0	I	Injection Well	Aug 2001	Jun 2011	
30-015-10773	LINN OPERATING, INC.	SKELLY UNIT	035	EDDY	S:14, T:17S, R:31E	3,944	I	Pumping	Jan 1969	Aug 2011	
30-015-20469	SANDRIDGE EXPLORATION AND PRODUCTION, LLC	SKELLY UNIT	110	EDDY	S:14, T:17S, R:31E	0	PI	Injection Well	Sep 1971	Jun 2004	
30-015-20548	LINN OPERATING, INC.	SKELLY UNIT	111	EDDY	S:14, T:17S, R:31E	3,835	O	Active	Jan 1972	Sep 2011	
30-015-31371	CHEVRON U S A INC	SKELLY UNIT	905	EDDY	S:14, T:17S, R:31E	12,470	O	Active	Jan 2007	Oct 2011	





Section 28 + south of Hwy
Caviness Cattle Co.

1316 South Main
Portales, NM 88130
Allotment 6058

Section 21 & North of Hwy

Charles K. Markin

P.O. Box 706

Artesia, NM 88210

Abstract 7004

Lease #	Description
NM-98122	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 #673

Skelly Unit #673

OH

Plan: Plan #1 - 7-7/8" Hole

SHL = 1621' FSL & 1134' FWL

BHL = 1660' FSL & 1660' FWL

Top of Paddock = 27' North of Surface & 335' East of Surface @ 5100' TVD

Standard Planning Report

13 January, 2012





SDI
Planning Report



Database:	EDM 5000.1 Single User: Db	Local Co-ordinate Reference:	Site Skelly Unit #673
Company:	COG Operating LLC	TVD Reference:	GL @ 3900.00usft
Project:	Eddy County, NM (NAN27 NME)	MD Reference:	GL @ 3900.00usft
Site:	Skelly Unit #673	North Reference:	Grid
Well:	Skelly Unit #673	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1 - 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		

Site	Skelly Unit #673			
Site Position:		Northing:	666,634.90 usft	Latitude: 32° 49' 54.162 N
From:	Map	Easting:	650,096.70 usft	Longitude: 103° 50' 40.857 W
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "	Grid Convergence: 0.26 °

Well	Skelly Unit #673			
Well Position	+N/-S	0.00 usft	Northing:	666,634.90 usft
	+E/-W	0.00 usft	Easting:	650,096.70 usft
Position Uncertainty	0.00 usft		Wellhead Elevation:	Ground Level: 3,900.00 usft

Wellbore	OH				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	2012/01/13	7.69	60.69	48,891

Design	Plan #1 - 7-7/8" Hole			
Audit Notes:				
Version:	Phase:	PLAN	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.00	0.00	0.00	85.36

Plan Sections										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	TFO (°)	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,950.00	0.00	0.00	1,950.00	0.00	0.00	0.00	0.00	0.00	0.00	
2,270.80	6.42	85.36	2,270.13	1.45	17.88	2.00	2.00	26.61	85.36	
6,829.22	6.42	85.36	6,800.00	42.70	525.60	0.00	0.00	0.00	0.00	PBHL-SU #673



SDI
Planning Report



Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Site Skelly Unit #673
Company:	COG Operating LLC	TVD Reference:	GL @ 3900.00usft
Project:	Eddy County, NM (NAN27 NME)	MD Reference:	GL @ 3900.00usft
Site:	Skelly Unit #673	North Reference:	Grid
Well:	Skelly Unit #673	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1 - 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
South HL-SU #673 - West HL-SU #673									
1,850.00	0.00	0.00	1,850.00	0.00	0.00	0.00	0.00	0.00	0.00
8-5/8" Casing									
1,950.00	0.00	0.00	1,950.00	0.00	0.00	0.00	0.00	0.00	0.00
Start Build 2.00°/100'									
2,000.00	1.00	85.36	2,000.00	0.04	0.43	0.44	2.00	2.00	0.00
2,100.00	3.00	85.36	2,099.93	0.32	3.91	3.93	2.00	2.00	0.00
2,200.00	5.00	85.36	2,199.68	0.88	10.87	10.90	2.00	2.00	0.00
2,270.80	6.42	85.36	2,270.13	1.45	17.88	17.94	2.00	2.00	0.00
Hold 6.42°									
2,300.00	6.42	85.36	2,299.15	1.72	21.14	21.21	0.00	0.00	0.00
2,400.00	6.42	85.36	2,398.52	2.62	32.27	32.38	0.00	0.00	0.00
2,500.00	6.42	85.36	2,497.89	3.53	43.41	43.56	0.00	0.00	0.00
2,600.00	6.42	85.36	2,597.27	4.43	54.55	54.73	0.00	0.00	0.00
2,700.00	6.42	85.36	2,696.64	5.34	65.69	65.90	0.00	0.00	0.00
2,800.00	6.42	85.36	2,796.02	6.24	76.83	77.08	0.00	0.00	0.00
2,900.00	6.42	85.36	2,895.39	7.15	87.96	88.25	0.00	0.00	0.00
3,000.00	6.42	85.36	2,994.76	8.05	99.10	99.43	0.00	0.00	0.00
3,100.00	6.42	85.36	3,094.14	8.96	110.24	110.60	0.00	0.00	0.00
3,200.00	6.42	85.36	3,193.51	9.86	121.38	121.78	0.00	0.00	0.00
3,300.00	6.42	85.36	3,292.88	10.77	132.52	132.95	0.00	0.00	0.00
3,400.00	6.42	85.36	3,392.26	11.67	143.65	144.13	0.00	0.00	0.00
3,500.00	6.42	85.36	3,491.63	12.58	154.79	155.30	0.00	0.00	0.00
3,600.00	6.42	85.36	3,591.00	13.48	165.93	166.48	0.00	0.00	0.00
3,700.00	6.42	85.36	3,690.38	14.39	177.07	177.65	0.00	0.00	0.00
3,800.00	6.42	85.36	3,789.75	15.29	188.21	188.83	0.00	0.00	0.00
3,900.00	6.42	85.36	3,889.13	16.19	199.34	200.00	0.00	0.00	0.00
4,000.00	6.42	85.36	3,988.50	17.10	210.48	211.18	0.00	0.00	0.00
4,100.00	6.42	85.36	4,087.87	18.00	221.62	222.35	0.00	0.00	0.00
4,200.00	6.42	85.36	4,187.25	18.91	232.76	233.52	0.00	0.00	0.00
4,300.00	6.42	85.36	4,286.62	19.81	243.90	244.70	0.00	0.00	0.00
4,400.00	6.42	85.36	4,385.99	20.72	255.03	255.87	0.00	0.00	0.00
4,500.00	6.42	85.36	4,485.37	21.62	266.17	267.05	0.00	0.00	0.00
4,600.00	6.42	85.36	4,584.74	22.53	277.31	278.22	0.00	0.00	0.00
4,700.00	6.42	85.36	4,684.12	23.43	288.45	289.40	0.00	0.00	0.00
4,800.00	6.42	85.36	4,783.49	24.34	299.59	300.57	0.00	0.00	0.00
4,900.00	6.42	85.36	4,882.86	25.24	310.72	311.75	0.00	0.00	0.00
5,000.00	6.42	85.36	4,982.24	26.15	321.86	322.92	0.00	0.00	0.00
5,100.00	6.42	85.36	5,081.61	27.05	333.00	334.10	0.00	0.00	0.00
5,118.51	6.42	85.36	5,100.00	27.22	335.06	336.16	0.00	0.00	0.00
Top of Paddock									
5,200.00	6.42	85.36	5,180.98	27.96	344.14	345.27	0.00	0.00	0.00
5,300.00	6.42	85.36	5,280.36	28.86	355.28	356.45	0.00	0.00	0.00
5,400.00	6.42	85.36	5,379.73	29.77	366.41	367.62	0.00	0.00	0.00
5,500.00	6.42	85.36	5,479.10	30.67	377.55	378.80	0.00	0.00	0.00
5,600.00	6.42	85.36	5,578.48	31.58	388.69	389.97	0.00	0.00	0.00
5,700.00	6.42	85.36	5,677.85	32.48	399.83	401.14	0.00	0.00	0.00
5,800.00	6.42	85.36	5,777.23	33.39	410.97	412.32	0.00	0.00	0.00
5,900.00	6.42	85.36	5,876.60	34.29	422.10	423.49	0.00	0.00	0.00
6,000.00	6.42	85.36	5,975.97	35.20	433.24	434.67	0.00	0.00	0.00
6,100.00	6.42	85.36	6,075.35	36.10	444.38	445.84	0.00	0.00	0.00
6,200.00	6.42	85.36	6,174.72	37.01	455.52	457.02	0.00	0.00	0.00
6,300.00	6.42	85.36	6,274.09	37.91	466.66	468.19	0.00	0.00	0.00



SDI
Planning Report



Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Site Skelly Unit #673
Company:	COG Operating LLC	TVD Reference:	GL @ 3900.00usft
Project:	Eddy County, NM (NAN27 NME)	MD Reference:	GL @ 3900.00usft
Site:	Skelly Unit #673	North Reference:	Grid
Well:	Skelly Unit #673	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1 - 7-7/8" Hole		

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)
6,400.00	6.42	85.36	6,373.47	38.82	477.79	479.37	0.00	0.00	0.00
6,500.00	6.42	85.36	6,472.84	39.72	488.93	490.54	0.00	0.00	0.00
6,600.00	6.42	85.36	6,572.22	40.63	500.07	501.72	0.00	0.00	0.00
6,700.00	6.42	85.36	6,671.59	41.53	511.21	512.89	0.00	0.00	0.00
6,800.00	6.42	85.36	6,770.96	42.44	522.35	524.07	0.00	0.00	0.00
6,829.22	6.42	85.36	6,800.00	42.70	525.60	527.33	0.00	0.00	0.00
PBHL-SU #673									

Target Name	hit/miss target	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
South HL-SU #673		0.00	0.00	-1.00	32.70	515.60	666,667.60	650,612.30	32° 49' 54.462 N	103° 50' 34.812 W
- plan misses target center by 516.64usft at 0.00usft MD (0.00 TVD, 0.00 N, 0.00 E)										
- Rectangle (sides W100.00 H0.00 D0.00)										
West HL-SU #673		0.00	0.00	-1.00	32.70	515.60	666,667.60	650,612.30	32° 49' 54.462 N	103° 50' 34.812 W
- plan misses target center by 516.64usft at 0.00usft MD (0.00 TVD, 0.00 N, 0.00 E)										
- Rectangle (sides W0.00 H100.00 D0.00)										
PBHL-SU #673		0.00	0.00	6,800.00	42.70	525.60	666,677.60	650,622.30	32° 49' 54.561 N	103° 50' 34.694 W
- plan hits target center										
- Circle (radius 10.00)										

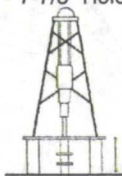
Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (")	Hole Diameter (")
1,850.00	1,850.00	8-5/8" Casing	8-5/8	12-1/4

Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
5,118.51	5,100.00	Top of Paddock		0.00	

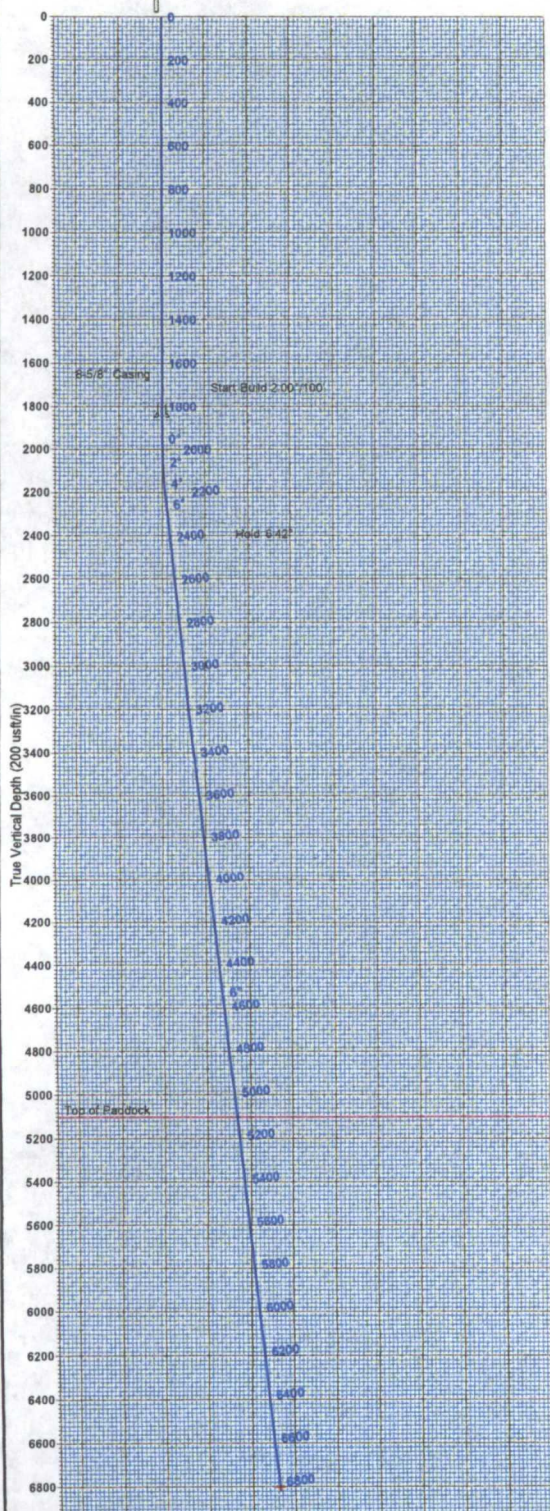
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates	Comment
1,950.00	1,950.00	+N/-S (usft) 0.00 +E/-W (usft) 0.00	Start Build 2.00°/100'
2,270.80	2,270.13	+N/-S (usft) 1.45 +E/-W (usft) 17.88	Hold 6.42°



Skelly Unit #673
Eddy County, NM (NAN27 NME)
Northing: (Y) 666634.90
Easting: (X) 650096.70
Plan #1 - 7-7/8" Hole



GL 3900.00



Azimuths to Grid North
True North: -0.27°
Magnetic North: 7.42°
Magnetic Field
Strength: 48560 TnT
Dip Angle: 60.89°
Date: 2012/01/13
Model: IGRF 2010

To convert a Magnetic Direction to a Grid Direction: Add 7.42°
To convert a True Direction to a Grid Direction: Subtract 0.28°

WELL DETAILS: Skelly Unit #673

+N-S	+E-W	Northing	Ground Level	Easting	Latitude	Longitude	Slot
0.00	0.00	666634.90	3900.00	650096.70	32° 49' 54.162" N	103° 50' 40.857" W	

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N-S	+E-W	Deg	TFace	VSec	Target
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2	1950.00	0.00	0.00	1950.00	0.00	0.00	0.00	0.00	0.00	
3	2270.80	8.42	85.36	2270.13	1.45	17.88	2.00	85.36	17.94	
4	6829.22	8.42	85.36	6800.00	42.70	525.60	0.00	0.00	527.33	PEHL-SU #673

DESIGN TARGET DETAILS

Name	TVD	+N-S	+E-W	Northing	Easting	Latitude	Longitude	Shape
South HL-SU #673	-1.00	32.70	515.60	666697.00	650812.3032°	49° 54' 49.2" N	34° 51' 2" W	Rectangle (Sides: L:0.00 W:100.00)
- plan misses target center by 515.64ft at 0.00ft MD (0.00 TVD, 0.00 N, 0.00 E)								
West HL-SU #673	-1.00	32.70	515.60	666697.00	650812.3032°	49° 54' 49.2" N	34° 51' 2" W	Rectangle (Sides: L:100.00 W:0.00)
- plan misses target center by 515.64ft at 0.00ft MD (0.00 TVD, 0.00 N, 0.00 E)								
PEHL-SU #673	6800.00	42.70	525.60	666677.00	650822.3032°	49° 54' 50.1" N	34° 50' 4" W	Circle (Radius: 10.00)
- plan hits target center								

SITE DETAILS: Skelly Unit #673

Site Centre Northing: 666634.90
Easting: 650096.70
Positional Uncertainty: 0.00
Convergence: 0.28
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
Local Origin: Site Skelly Unit #673 Grid North
Latitude: 32° 49' 54.162" N
Longitude: 103° 50' 40.857" W
Grid East: 650096.70
Grid North: 666634.90
Scale Factor: 1.000

FORMATION TOP DETAILS

TVDPath	MDPath	Formation	DipAngle	DipDir
5100.00	5118.51	Top of Paddock	0.00	

CASING DETAILS

TVD	MD	Name	Size
1850.00	1850.00	8-5/8" Casing	8-5/8"

