OCD-ARTESIA

Form 3160-5
(April 2004)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

OCT 06 2008
OCD-ARTESIA

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

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill or to re-enter an abandoned well. Use Form 3160-3 (APD) for such proposals.

SUBMIT IN TRIPLICATE- Other instructions on reverse side.

5. Lease Serial No
SHL-NM-104675, BHL- NM-103872

6. If Indian, Allottee or Tribe Name

7 If Unit or CA/Agreement, Name and/or No

1. Type of Well
☑ Oil Well ☐ Gas Well ☐ Other

8. Well Name and No.
Donner 30 Federal #3

2. Name of Operator **COG Operating LLC**

9. API Well No.
30-015-35807

3a Address
550 W. Texas Ave., Suite 1300 Midland, TX 79701

3b. Phone No. *(include area code)*
432-685-4332

10. Field and Pool, or Exploratory Area
Dog Canyon, Wolfcamp

4. Location of Well *(Footage, Sec., T, R., M., or Survey Description)*
1800 FNL & 1980 FEL
Section 30, T16S, R28E, UL G
BHL: 1800 FNL & 330 FWL
Section 30, T16S, R28E, UL E

11 County or Parish, State
Eddy County, NM

12. CHECK APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION			
☑ Notice of Intent	☐ Acidize	☐ Deepen	☐ Production (Start/Resume)	☐ Water Shut-Off
☐ Subsequent Report	☐ Alter Casing	☐ Fracture Treat	☐ Reclamation	☐ Well Integrity
☐ Final Abandonment Notice	☐ Casing Repair	☐ New Construction	☐ Recomplete	☑ Other
	☐ Change Plans	☐ Plug and Abandon	☐ Temporarily Abandon	
	☐ Convert to Injection	☐ Plug Back	☐ Water Disposal	

13 Describe Proposed or Completed Operation (clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recomplete horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No on file with BLM/BIA. Required subsequent reports shall be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompletion in a new interval, a Form 3160-4 shall be filed once testing has been completed Final Abandonment Notices shall be filed only after all requirements, including reclamation, have been completed, and the operator has determined that the site is ready for final inspection)

COG Operating LLC respectfully requests permission to:

Change Field and Pool from Dog Canyon, Wolfcamp to Dog Canyon, Abo.
Change proposed casing and cementing program.
Change Pilot Hole TD to 6730' MD.
Request a variance to the 200' minimum tie back in order to set the pump as close to the formation as possible. The curve and horizontal are all located in the Abo Formation.

Attached is a revised attachment to the Form 3160-3 Drill Plan with changes reflected in shaded areas.

ACCEPTED FOR RECORD

OCT 7 2008

SEE ATTACHED FOR
CONDITIONS OF APPROVAL

Gerry Guye, Deputy Field Inspector
NMOCD-District II ARTESIA

14 I hereby certify that the foregoing is true and correct
Name *(Printed/Typed)* **Phyllis A. Edwards** Title **Regulatory Analyst**

Signature Phyllis A. Edwards Date **09/11/2008**

APPROVED

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved by _____ Title _____ Date **OCT 2 2008**

Conditions of approval, if any, are attached Approval of this notice 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

Office

WESLEY W. INGRAM
PETROLEUM ENGINEER

Title 18 U S C Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction

(Instructions on page 2)

ATTACHMENT TO FORM 3160-3
COG Operating
Donner "30" Federal #3
SL: 1800' FNL & 1980' FEL, Unit G
BHL: 1800' FNL & 330' FWL, Unit E
Sec 30, T16S, R28E
Eddy County, NM

REVISED 09/10/2008

1. Proration Unit Spacing: 120 Acres

2. Ground Elevation: 3559'

3. Proposed Depths: Pilot Hole TD = 6730'; TVD = 6520'; MD = 9500'

4. Estimated tops of geological markers:

Quaternary	Surface
Yates	580'
Queens	1120'
San Andres	1790'
Glorietta	3250'
Tubb	3570'
Abo	5280'
Top Basal Abo	6480'

5. Possible mineral bearing formations:

Water Sand	Fresh Water	150'
San Andres	Oil / Gas	1790'
Glorietta	Oil / Gas	3250'
Tubb	Oil / Gas	3570'
Abo	Oil / Gas	5280'
Top Basal Abo	Oil / Gas	6480'

6. Casing Program:

Hole size	Interval	OD of Casing	Weight	Cond.	Collar	Grade
17-1/2"	0' - +/-500'	13-3/8"	48#	New	STC	H40
Collapse sf - 2.98, Burst sf – 2.33, Tension sf – 13.42						
12 1/4"	0' - 1800'	9-5/8"	40#	New	STC	J-55
Collapse sf - 2. 86, Burst sf – 1.42, Tension sf – 7.22						
8-3/4"	0' – +/-6000' MD	7"	26#	New	LTC	P-110
Collapse sf - 2. 18, Burst sf – 1.53, Tension sf – 4.37						
6-1/8"	6000' – +/- 9500' MD	4-1/2"	11.6#	New	BTC	P-110
Collapse sf – 2.47, Burst sf – 1.64, Tension sf – 4.48						

7. Cement Program:

13 3/8" Surf Csg Set at +/- 500', Circ to Surf with +/- 500 sx Class "C" w/ 2% CaCl2, 1.35 yd.

9 5/8" Intrmd Csg Set at +/- 1800'. Circ to Surf with +/- 600 sx 35/65 Poz "C", 2.05 yd. & 200 sx Class "C" w/ 2% CaCl2, 1.35 yd.

7" Production Casing set at +/- 6000' MD, Cement with +/- 500 sx. 50/50/10 "C", 2.45 yd & +/- 200 sx Class "H", 1.18 yd., Est. TOC @ 200' minimum tie back into intermediate casing.

4 ½" Production Liner set from +/- 5900' to +/-9500' MD, 6520' TVD, Liner run with +/- 5 isolation Packers and Sliding sleeves in un-cemented Lateral.

8. Pressure Control Equipment:

After setting 13 3/8" casing and installing 3000 psi casing head, NU 13 5/8" 3000 psi annular BOP. Test annular BOP, casing and manifold with clear fluid to 1000 psi w/ rig pump.

After setting 9 5/8" casing and installing 3000 psi casing spool, NU 3000 psi double ram BOP and 3000 psi annular BOP. Test double ram BOP and manifold to 3000# with clear fluid and annular to 1500 psi using an independent tester, this equipment will be used continuously until TD is reached. Blind rams will be operationally checked on each trip out of hole. Pipe rams will be operationally checked each 24 hour period. These checks will be noted on daily tour sheets. Other accessories to the BOP equipment include a Kelly cock and floor safety valves, choke lines and choke manifold with 3000 psi WP rating.

9. Proposed Mud Circulating System

Interval	Mud Wt.	Visc.	FL	Type Mud System
0' - 500'	8.5	28	NC	Fresh water native mud w/ paper for seepage and sweeps. Lime for PH.
500 '- 1800'	9.1	30	NC	Cut brine mud, lime for PH and paper for seepage and sweeps.
1800' – 6520'	9.1	29	NC	Drill section with fresh water/cut brine circulating the reserve utilizing periodic sweeps of paper as needed for seepage control and solids removal.
6520' - 9500'	9.5	36	10	Drill horizontal section with XCD polymer / cut brine / starch.

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

10. Production Hole Drilling Summary:

Drill 8-3/4" pilot hole thru Top Basal Abo to +/- 6730', run open hole logs. Spot 350 sx. "H" Kick off plug from +/- 6500' to +/-5900'. Dress off to 6000' and set 7" production casing. Drill 6-1/8" hole and kick off at +/- 6150', building curve over +/- 350' to horizontal at 6520' TVD. Drill horizontal section in a Westerly direction for +/-3000' lateral to TD at +/-9500' MD. Run 4-1/2" production liner in Open hole lateral and set isolation packers and liner top packer @ +/- 5900' MD

ATTACHMENT TO FORM 3160-3
COG Operating
Donner "30" Federal #3

11. 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.

12. Logging, Testing and Coring Program:

    A. The electric logging program will consist of GR-Dual Laterolog, Spectral Density, Dual Spaced Neutron, CSNG Log and will be ran from T.D. in Pilot Hole to 9 5/8" casing shoe.

    B. Drill Stem test is not anticipated.

    C. No conventional coring is anticipated.

    D. Further testing procedures will be determined after the 4 ½" production liner packers have been installed at TD based on drill shows and log evaluation.

13. Abnormal Conditions, Pressures, Temperatures and Potential Hazards:

    No abnormal pressures or temperatures are anticipated. The estimated bottom hole at TD is 110 degrees and estimated maximum bottom hole pressure is 2825 psig. Low levels of Hydrogen sulfide have been monitored in producing wells in the area, so H2S may be present while drilling of the well. An H2S plan is attached to the Drilling Program. No major loss of circulation zones has been reported in offsetting wells.

14. Anticipated Starting Date

    Drilling operations will commence approximately on October 1, 2008 with drilling and completion operations lasting approximately 90 days.

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

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number	Pool Code	Pool Name
30-015-35807		WILDCAT; ABO

Property Code	Property Name	Well Number
36630	DONNER "30" FEDERAL	3

OGRID No.	Operator Name	Elevation
229137	C.O.G. OPERATING L.L.C.	3559'

Surface Location

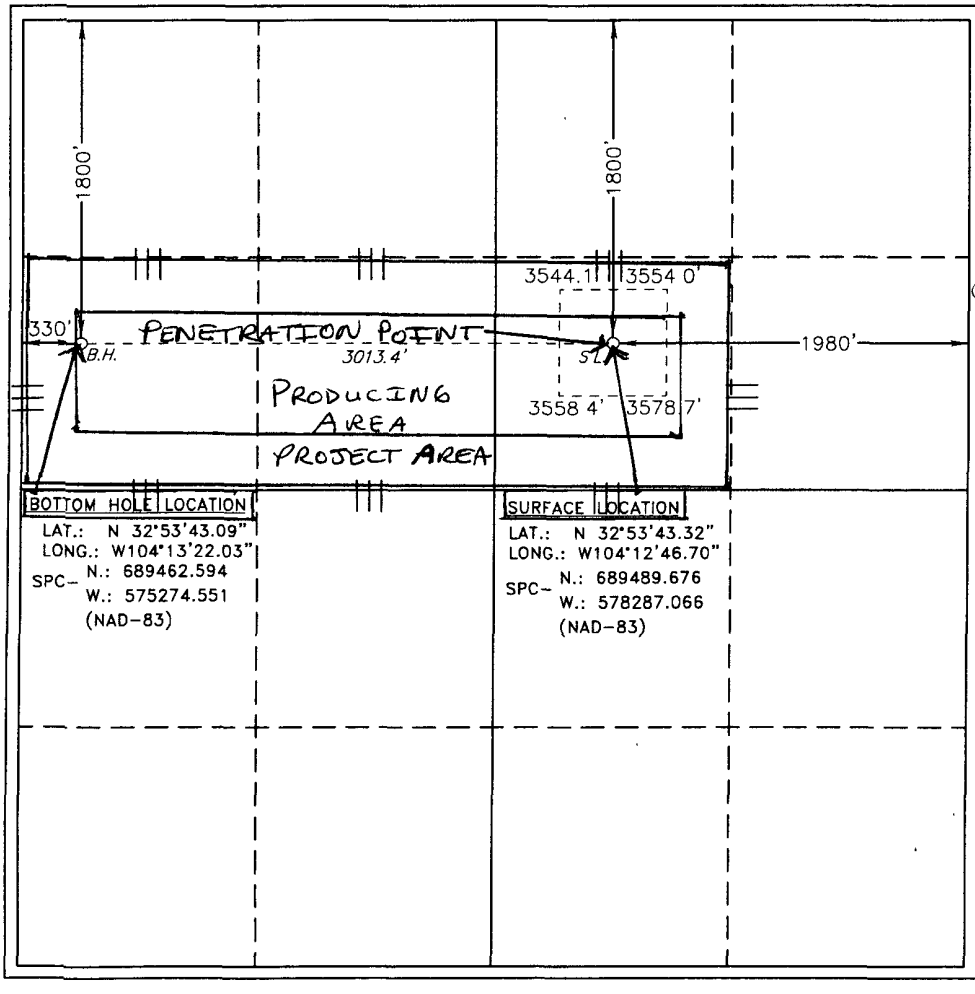
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
G	30	16 S	28 E		1800	NORTH	1980	EAST	EDDY

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
E	30	16 S	28 E		1800	NORTH	330	WEST	EDDY

Dedicated Acres	Joint or Infill	Consolidation Code	Order No.
120			

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



OPERATOR CERTIFICATION

I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location pursuant to a contract with an owner of such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.

Phyllis A. Edwards 8-18-08
Signature Date

Phyllis A. Edwards
Printed Name
Regulatory Analyst

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 supervison, and that the same is true and correct to the best of my belief

JULY 2[illegible]2007
Date Surveyed

Signature & Seal of Professional Surveyor

GARY L. JONES NEW MEXICO 7977 REGISTERED PROFESSIONAL LAND SURVEYOR

W.O. N[illegible]194

Certificate No. Gary L. Jones 7977

BASIN SURVEYS

Planned Wellpath Report

Plan #1

BAKER HUGHES INTEQ

REFERENCE WELLPATH IDENTIFICATION			
Operator	**Concho O&G**	Slot	**#3_SHL**
Area	**Andrews County, TX**	Well	**#3**
Field	**Section 30 T16S R28E (Donner)**	Wellbore	**#3 PWB**
Facility	**Donner 30 Federal #3**		

REPORT SETUP INFORMATION			
Projection System	**NAD83 / TM New Mexico State Planes, Eastern Zone (3001), US feet**	Software System	**WellArchitect™ 1.2**
North Reference	**Grid**	User	**Gomeoscr**
Scale	**0.999911**	Report Generated	**08/08/07 at 16:46:54**
Wellbore last revised	**08/08/07**	Database/Source file	**WA_Midland/#3_PWB.xml**

WELLPATH LOCATION	Local coordinates		Grid coordinates		Geographic coordinates	
	North [feet]	**East [feet]**	**Easting [US feet]**	**Northing [US feet]**	**Latitude [°]**	**Longitude [°]**
Slot Location	**0.00**	**0.00**	578277.33	687663.13	32 53 25.248N	104 12 46.766W
Facility Reference Pt			**578277.33**	**687663.13**	32 53 25.248N	104 12 46.766W
Field Reference Pt			579933.19	690975.05	**32 53 58.000N**	**104 12 27.300W**

WELLPATH DATUM			
Calculation method	**Minimum curvature**	Rig on #3_SHL (RT) to Facility Vertical Datum	**0.00 feet**
Horizontal Reference Pt	**Facility Center**	Rig on #3_SHL (RT) to Ground Level	**3564.00 feet**
Vertical Reference Pt	**Rig on #3_SHL (RT)**	Facility Vertical Datum to Mud Line (Facility)	**0.00 feet**
MD Reference Pt	**Rig on #3_SHL (RT)**	Section Origin	**N 0.00, E 0.00 ft**
Field Vertical Reference	**Ground Level**	Section Azimuth	**269.64°**

Planned Wellpath Report

Plan #1

BAKER HUGHES INTEQ

REFERENCE WELLPATH IDENTIFICATION			
Operator	Concho O&G	Slot	#3_SHL
Area	Andrews County, TX	Well	#3
Field	Section 30 T16S R28E (Donner)	Wellbore	#3 PWB
Facility	Donner 30 Federal #3		

WELLPATH DATA (42 stations) † = interpolated/extrapolated station

MD [feet]	Inclination [°]	Azimuth [°]	TVD [feet]	Vert Sect [feet]	North [feet]	East [feet]	DLS [°/100ft]	Design Comments	Path Comment
0.00	0.000	269.637	0.00	0.00	0.00	0.00	0.00	Tie On	
1330.00†	0.000	269.637	1330.00	0.00	0.00	0.00	0.00		B/Salt
1790.00†	0.000	269.637	1790.00	0.00	0.00	0.00	0.00		San Andres
3250.00†	0.000	269.637	3250.00	0.00	0.00	0.00	0.00		Glorieta
3570.00†	0.000	269.637	3570.00	0.00	0.00	0.00	0.00		Tubb
5280.00†	0.000	269.637	5280.00	0.00	0.00	0.00	0.00		Abo/Shale
5900.00	0.000	269.637	5900.00	0.00	0.00	0.00	0.00	KOP	
6000.00†	10.050	269.637	5999.49	8.75	-0.06	-8.75	10.05		
6100.00†	20.100	269.637	6095.92	34.72	-0.22	-34.72	10.05		
6200.00†	30.150	269.637	6186.35	77.13	-0.49	-77.13	10.05		
6300.00†	40.200	269.637	6267.98	134.66	-0.85	-134.66	10.05		
6400.00†	50.250	269.637	6338.32	205.56	-1.30	-205.55	10.05		
6500.00†	60.300	269.637	6395.21	287.64	-1.82	-287.64	10.05		
6600.00†	70.350	269.637	6436.91	378.40	-2.39	-378.39	10.05		
6700.00†	80.400	269.637	6462.12	475.03	-3.01	-475.02	10.05		
6795.55	90.003	269.637	6470.11	570.13	-3.61	-570.12	10.05	EOC	
6800.00†	90.003	269.637	6470.11	574.58	-3.64	-574.57	0.00		
6900.00†	90.003	269.637	6470.10	674.58	-4.27	-674.57	0.00		
7000.00†	90.003	269.637	6470.10	774.58	-4.90	-774.57	0.00		
7100.00†	90.003	269.637	6470.09	874.58	-5.54	-874.57	0.00		
7200.00†	90.003	269.637	6470.09	974.58	-6.17	-974.57	0.00		
7300.00†	90.003	269.637	6470.09	1074.58	-6.80	-1074.56	0.00		
7400.00†	90.003	269.637	6470.08	1174.58	-7.43	-1174.56	0.00		
7500.00†	90.003	269.637	6470.08	1274.58	-8.07	-1274.56	0.00		
7600.00†	90.003	269.637	6470.07	1374.58	-8.70	-1374.56	0.00		

Planned Wellpath Report

Plan #1

BAKER HUGHES INTEQ

REFERENCE WELLPATH IDENTIFICATION			
Operator	Concho O&G	Slot	#3_SHL
Area	Andrews County, TX	Well	#3
Field	Section 30 T16S R28E (Donner)	Wellbore	#3 PWB
Facility	Donner 30 Federal #3		

WELLPATH DATA (42 stations) † = interpolated/extrapolated station

MD [feet]	Inclination [°]	Azimuth [°]	TVD [feet]	Vert Sect [feet]	North [feet]	East [feet]	DLS [°/100ft]	Design Comments	Path Comment
7700.00†	90.003	269.637	6470.07	1474.58	-9.33	-1474.56	0.00		
7800.00†	90.003	269.637	6470.06	1574.58	-9.97	-1574.55	0.00		
7900.00†	90.003	269.637	6470.06	1674.58	-10.60	-1674.55	0.00		
8000.00†	90.003	269.637	6470.05	1774.58	-11.23	-1774.55	0.00		
8100.00†	90.003	269.637	6470.05	1874.58	-11.86	-1874.55	0.00		
8200.00†	90.003	269.637	6470.05	1974.58	-12.50	-1974.55	0.00		
8300.00†	90.003	269.637	6470.04	2074.58	-13.13	-2074.54	0.00		
8400.00†	90.003	269.637	6470.04	2174.58	-13.76	-2174.54	0.00		
8500.00†	90.003	269.637	6470.03	2274.58	-14.40	-2274.54	0.00		
8600.00†	90.003	269.637	6470.03	2374.58	-15.03	-2374.54	0.00		
8700.00†	90.003	269.637	6470.02	2474.58	-15.66	-2474.54	0.00		
8800.00†	90.003	269.637	6470.02	2574.58	-16.30	-2574.53	0.00		
8900.00†	90.003	269.637	6470.01	2674.58	-16.93	-2674.53	0.00		
9000.00†	90.003	269.637	6470.01	2774.58	-17.56	-2774.53	0.00		
9100.00†	90.003	269.637	6470.01	2874.58	-18.19	-2874.53	0.00		
9200.00†	90.003	269.637	6470.00	2974.58	-18.83	-2974.53	0.00		
9240.27	90.003	269.637	6470.00	3014.86	-19.08	-3014.80	0.00	#3 BHL	

HOLE & CASING SECTIONS Ref Wellbore: #3 PWB Ref Wellpath: Plan #1

String/Diameter	Start MD [feet]	End MD [feet]	Interval [feet]	Start TVD [feet]	End TVD [feet]	Start N/S [feet]	Start E/W [feet]	End N/S [feet]	End E/W [feet]
7.875in Open Hole	5895.00	9240.27	3345.27	5895.00	6470.00	0.00	0.00	-19.08	-3014.79

Planned Wellpath Report

Plan #1

BAKER HUGHES INTEQ

REFERENCE WELLPATH IDENTIFICATION			
Operator	**Concho O&G**	Slot	**#3_SHL**
Area	**Andrews County, TX**	Well	**#3**
Field	**Section 30 T16S R28E (Donner)**	Wellbore	**#3 PWB**
Facility	**Donner 30 Federal #3**		

TARGETS

Name	MD [feet]	TVD [feet]	North [feet]	East [feet]	Grid East [us survey feet]	Grid North [us survey feet]	Latitude [°]	Longitude [°]	Shape
1) #3 BHL	9240.27	6470.00	-19.08	-3014.80	**575262.81**	**687644.05**	32 53 25.092N	104 13 22.121W	point

SURVEY PROGRAM Ref Wellbore: #3 PWB Ref Wellpath: Plan #1

Start MD [feet]	End MD [feet]	Positional Uncertainty Model	Log Name/Comment	Wellbore
0.00	9240.27	NaviTrak (Standard)		#3 PWB

Concho O&G

Location Andrews County, TX
Field Section 30 T16S R28E (Donner)
Facility Donner 30 Federal #3

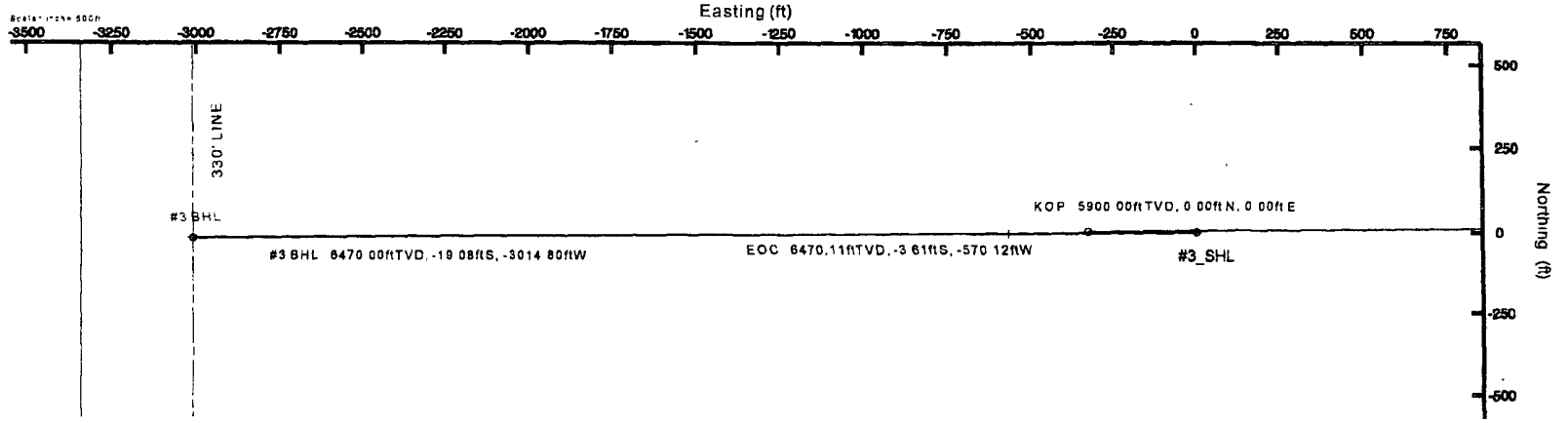
Slot #3_SHL
Well #3
Wellbore #3 PWB

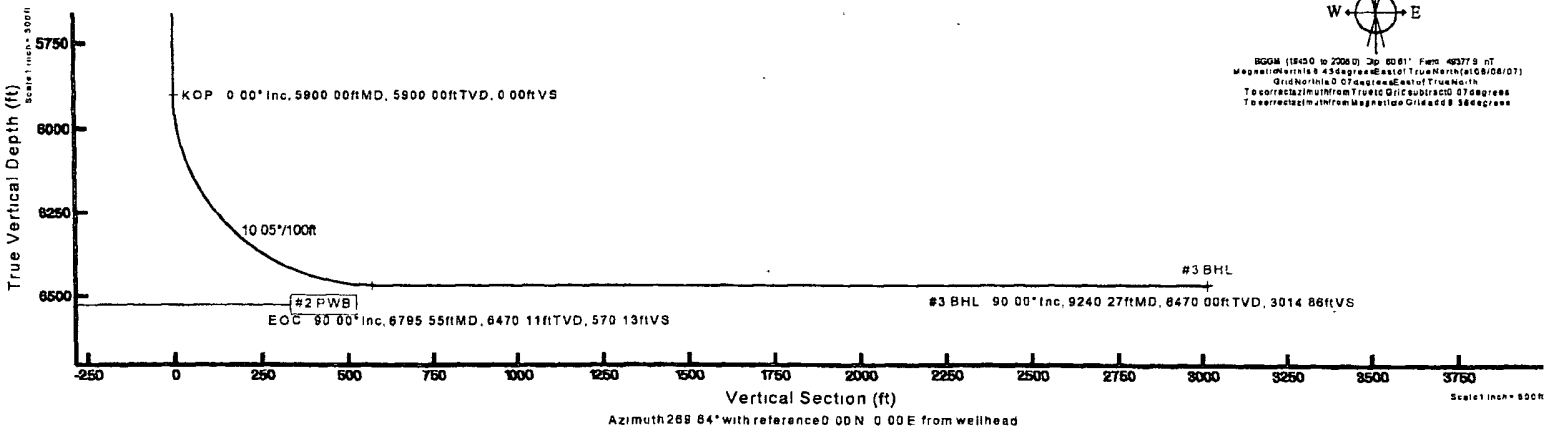
BAKER HUGHES INTEQ

Well Profile Data

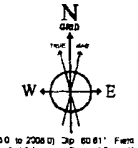
Design Comment	MD (ft)	Inc (°)	Az (°)	TVD (ft)	Local N (ft)	Local E (ft)	DLS (°/100ft)	VS (ft)
Tie On	0.00	0.000	269.637	0.00	0.00	0.00	0.00	0.00
KOP	5900.00	0.000	269.637	5900.00	0.00	0.00	0.00	0.00
EOC	6795.55	90.003	269.637	6470.11	-3.61	-570.12	10.05	570.13
#3 BHL	9240.27	90.003	269.637	6470.00	-19.08	-3014.80	0.00	3014.86

Plot reference wellpath is Plan #1	
True vertical depths are reference to Rig on #3_SHL (RT)	Grid system: NAD83/STM New Mexico eastern zone (Planar, Easting, Clarke 1866, US feet
Measured depths are reference to Rig on #3_SHL (RT)	North Reference: Grid north
Rig on #3_SHL (RT) to Ground Level: 3584 feet	Grid to True convergence: 0.07 degrees
Ground Level elevation (Facility - Donner 30 Federal #3): 3584 feet	Grid scale factor: 1.00
Coordinates are in feet referenced to Facility Center	Created by: gomezoscar on 7/5/2007





Azimuth 269.64° with reference 0.00 N, 0.00 E from wellhead



BGGM (1945.0 to 2006.0) Dip 60.61° Field 49377.9 nT
Magnetic North is 8.43 degrees East of True North (at 06/08/07)
Grid North is 0.07 degrees East of True North
To correct azimuth from True to Grid subtract 0.7 degrees
To correct azimuth from Magnetic to Grid add 8.36 degrees

PROPOSED WELLPATH REPORT (CSV version)
Prepared by Baker Hughes INTEQ
Software System: WellArchitect™1.2

REFERENCE WELLPATH IDENTIFICATION

Operator	Concho O&G
Area	Andrews County, TX
Field	Section 30 T16S R28E (Donner)
Facility	Donner 30 Federal #3
Slot	#3_SHL
Well	#3
Wellbore	#3 PWB
Wellpath	Plan #1
Sidetrack	(none)

REPORT SETUP INFORMATION

Projection :	NAD83 / TM New Mexico State Planes, Eastern Zone (3001), US feet
North Refe	Grid
Scale	0.999911
Wellbore L	8/8/2007
Software S	WellArchitect™
User	Gomeoscr
Report Ge	08/08/07 at 16:47:33
DataBase/	WA_Midland/ev01.xml

WELLPATI	Local North	Local East	Grid East	Grid North	Latitude	Longitude
	[ft]	[ft]	[ft]	[ft]	[°]	[°]
Slot Locati	0	0	578277.3	687663.1	32 53 25.2	104 12 46.766W
Facility Ref			578277.3	687663.1	32 53 25.2	104 12 46.766W
Field Refer			579933.2	690975	32 53 58.0	104 12 27.300W

WELLPATH DATUM

Calculation	Minimum curvature
Horizontal I	Facility Center
Vertical Re	Rig on #3_SHL (RT)
MD Refere	Rig on #3_SHL (RT)
Field Vertic	Ground Level

Rig on #3_ 0.00 feet
Rig on #3_ 3564.00 feet
Facility Ver 0.00 feet
Section Or 0.00 feet
Section Or 0.00 feet
Section Az 269.64°

WELLPATH DATA Wellbore: #3 PWB Wellpath: Plan #1 † = interpolated/extrapolated station

	MD feet	Inclination deg	Azimuth deg	TVD feet	Vert Sect feet	North feet	East feet	DLS deg/100ft	Design Co	Path Comr	Tgt#
	0	0	269.637	0	0	0	0	0	Tie On		
†	100	0	0	100	0	0	0	0			
†	200	0	0	200	0	0	0	0			
†	300	0	0	300	0	0	0	0			
†	400	0	0	400	0	0	0	0			
†	500	0	0	500	0	0	0	0			
†	600	0	0	600	0	0	0	0			
†	700	0	0	700	0	0	0	0			
†	800	0	0	800	0	0	0	0			
†	900	0	0	900	0	0	0	0			
†	1000	0	0	1000	0	0	0	0			
†	1100	0	0	1100	0	0	0	0			
†	1200	0	0	1200	0	0	0	0			
†	1300	0	0	1300	0	0	0	0			
†	1330	0	269.637	1330	0	0	0	0			B/Salt
†	1400	0	0	1400	0	0	0	0			
†	1500	0	0	1500	0	0	0	0			
†	1600	0	0	1600	0	0	0	0			
†	1700	0	0	1700	0	0	0	0			
†	1790	0	269.637	1790	0	0	0	0			San Andres
†	1800	0	0	1800	0	0	0	0			
†	1900	0	0	1900	0	0	0	0			
†	2000	0	0	2000	0	0	0	0			
†	2100	0	0	2100	0	0	0	0			
†	2200	0	0	2200	0	0	0	0			
†	2300	0	0	2300	0	0	0	0			

†	2400	0	0	2400	0	0	0	0	
†	2500	0	0	2500	0	0	0	0	
†	2600	0	0	2600	0	0	0	0	
†	2700	0	0	2700	0	0	0	0	
†	2800	0	0	2800	0	0	0	0	
†	2900	0	0	2900	0	0	0	0	
†	3000	0	0	3000	0	0	0	0	
†	3100	0	0	3100	0	0	0	0	
†	3200	0	0	3200	0	0	0	0	
†	3250	0	269.637	3250	0	0	0	0	Glorieta
†	3300	0	0	3300	0	0	0	0	
†	3400	0	0	3400	0	0	0	0	
†	3500	0	0	3500	0	0	0	0	
†	3570	0	269.637	3570	0	0	0	0	Tubb
†	3600	0	0	3600	0	0	0	0	
†	3700	0	0	3700	0	0	0	0	
†	3800	0	0	3800	0	0	0	0	
†	3900	0	0	3900	0	0	0	0	
†	4000	0	0	4000	0	0	0	0	
†	4100	0	0	4100	0	0	0	0	
†	4200	0	0	4200	0	0	0	0	
†	4300	0	0	4300	0	0	0	0	
†	4400	0	0	4400	0	0	0	0	
†	4500	0	0	4500	0	0	0	0	
†	4600	0	0	4600	0	0	0	0	
†	4700	0	0	4700	0	0	0	0	
†	4800	0	0	4800	0	0	0	0	
†	4900	0	0	4900	0	0	0	0	
†	5000	0	0	5000	0	0	0	0	
†	5100	0	0	5100	0	0	0	0	
†	5200	0	0	5200	0	0	0	0	
†	5280	0	269.637	5280	0	0	0	0	Abo/Shale
†	5300	0	0	5300	0	0	0	0	
†	5400	0	0	5400	0	0	0	0	
†	5500	0	0	5500	0	0	0	0	
†	5600	0	0	5600	0	0	0	0	
†	5700	0	0	5700	0	0	0	0	

†	5800	0	0	5800	0	0	0	0	
	5900	0	269.637	5900	0	0	0	0	KOP
†	6000	10.05	269.637	5999.49	8.75	-0.06	-8.75	10.05	
†	6100	20.1	269.637	6095.92	34.72	-0.22	-34.72	10.05	
†	6200	30.15	269.637	6186.35	77.13	-0.49	-77.13	10.05	
†	6300	40.2	269.637	6267.98	134.66	-0.85	-134.66	10.05	
†	6400	50.25	269.637	6338.32	205.56	-1.3	-205.55	10.05	
†	6500	60.3	269.637	6395.21	287.64	-1.82	-287.64	10.05	
†	6600	70.35	269.637	6436.91	378.4	-2.39	-378.39	10.05	
†	6700	80.4	269.637	6462.12	475.03	-3.01	-475.02	10.05	
	6795.55	90.003	269.637	6470.11	570.13	-3.61	-570.12	10.05	EOC
†	6800	90.003	269.637	6470.11	574.58	-3.64	-574.57	0	
†	6900	90.003	269.637	6470.1	674.58	-4.27	-674.57	0	
†	7000	90.003	269.637	6470.1	774.58	-4.9	-774.57	0	
†	7100	90.003	269.637	6470.09	874.58	-5.54	-874.57	0	
†	7200	90.003	269.637	6470.09	974.58	-6.17	-974.57	0	
†	7300	90.003	269.637	6470.09	1074.58	-6.8	-1074.56	0	
†	7400	90.003	269.637	6470.08	1174.58	-7.43	-1174.56	0	
†	7500	90.003	269.637	6470.08	1274.58	-8.07	-1274.56	0	
†	7600	90.003	269.637	6470.07	1374.58	-8.7	-1374.56	0	
†	7700	90.003	269.637	6470.07	1474.58	-9.33	-1474.56	0	
†	7800	90.003	269.637	6470.06	1574.58	-9.97	-1574.55	0	
†	7900	90.003	269.637	6470.06	1674.58	-10.6	-1674.55	0	
†	8000	90.003	269.637	6470.05	1774.58	-11.23	-1774.55	0	
†	8100	90.003	269.637	6470.05	1874.58	-11.86	-1874.55	0	
†	8200	90.003	269.637	6470.05	1974.58	-12.5	-1974.55	0	
†	8300	90.003	269.637	6470.04	2074.58	-13.13	-2074.54	0	
†	8400	90.003	269.637	6470.04	2174.58	-13.76	-2174.54	0	
†	8500	90.003	269.637	6470.03	2274.58	-14.4	-2274.54	0	
†	8600	90.003	269.637	6470.03	2374.58	-15.03	-2374.54	0	
†	8700	90.003	269.637	6470.02	2474.58	-15.66	-2474.54	0	
†	8800	90.003	269.637	6470.02	2574.58	-16.3	-2574.53	0	
†	8900	90.003	269.637	6470.01	2674.58	-16.93	-2674.53	0	
†	9000	90.003	269.637	6470.01	2774.58	-17.56	-2774.53	0	
†	9100	90.003	269.637	6470.01	2874.58	-18.19	-2874.53	0	
†	9200	90.003	269.637	6470	2974.58	-18.83	-2974.53	0	
	9240.27	90.003	269.637	6470	3014.86	-19.08	-3014.8	0	#3 BHL

HOLE AND CASING SECTIONS Ref Wellbore: #3 PWB Ref Wellpath: Plan #1

String/Dian	Start MD feet	End MD feet	Interval feet	Start TVD feet	End TVD feet	Start N/S	End N/S	Start E/W	End E/W
7.875in Op	5895	9240.27	3345.27	5895	6470	0	0	-19.08	-3014.79

TARGETS

Name	MD feet	TVD feet	North feet	East feet	Grid East us survey f	Grid North us survey f	Latitude DegMinSe	Longitude DegMinSec	Shape	Comment	Design Comments
(1) #3 BHL	9240 27	6470	-19.08	-3014.8	575262.8	687644.1	32 53 25.0	104 13 22.	point		

SURVEY PROGRAM Ref Wellbore: #3 PWB Ref Wellpath: Plan #1

Start MD feet	End MD feet	Pos Unc M	Log Name/ Wellbore
0	9240.27	NaviTrak (Standard)	#3 PWB

Donner 30 Federal #3
30-015-35807
COG Operating LLC
October 2, 2008
Conditions of Approval

1. **Minimum liner requirement tie back is 100'. Liner seal test not required since window and liner are in the same formation.**

WWI 100208