

NMOCD CASE #14203-14216
C.O.G. OPERATING LLC
TAURUS FEDERAL #1H
NOVEMBER 12, 2008

JESSE K. LAWSON
SENIOR RESERVOIR ENGINEER

Based on the BAKER HUGHES-INTEQ-Planned Wellpath Report for the directional drilling of the Taurus Federal #1H, the following supplemental data is presented to the NMOCD in Case #14203-14216. This data is based upon anticipated directional drilling practices, directional azimuths and inclinations.

SHL
LEGAL
DESCRIPTION: 330' FSL & 330' FWL, UNIT M, SEC.10, T-15-S, R-31-E, NMPM
CHAVES COUNTY, NM

WLFCP
PENETRATION
POINT:
TVD: 8,655'
MD: 8,808'
LEGAL DESCRIPTION: 336' FSL & 668' FWL, UNIT M, SEC.10, T-15-S, R-31-E, NMPM
CHAVES COUNTY, NM

BHL
LEGAL
DESCRIPTION
TVD: 8,745'
MD: 13,102'
LEGAL DESCRIPTION: 330' FSL & 330' FEL, UNIT P, SEC.10, T-15-S, R-31-E, NMPM
CHAVES COUNTY, NM

NMOCD Case Nos. 14203 and 14204
COG Operating LLC
Exhibit No. 20

Planned Wellpath Report

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INTEQ

REFERENCE WELLPATH IDENTIFICATION			
Operator	Concho O&G	Slot	#1H_SHL
Area	Chavez County, NM	Well	#1H
Field	(Taurus) Section 10 T15S R31E	Wellbore	#1H_PWB
Facility	Taurus Federal #1H		

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	0.999938	Report Generated	09/21/07 at 06:51:42
Wellbore last revised	09/20/07	Database/Source file	WA_Midland/#1H_PWB.xn

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	699556.00	736670.60	33 01 26.537N	103 49 01.613W
Facility Reference Pt			699556.00	736670.60	33 01 26.537N	103 49 01.613W
Field Reference Pt			699556.00	736670.60	33 01 26.537N	103 49 01.613W

WELLPATH DATUM			
Calculation method	Minimum curvature	Rig on #1H_SHL (RT) to Facility Vertical Datum	0.00 feet
Horizontal Reference Pt	Facility Center	Rig on #1H_SHL (RT) to GRN. ELEV.	4415.00 feet
Vertical Reference Pt	Rig on #1H_SHL (RT)	Facility Vertical Datum to Mud Line (Facility)	0.00 feet
MD Reference Pt	Rig on #1H_SHL (RT)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	GRN. ELEV.	Section Azimuth	89.49°

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Facility	Taurus Federal #1H		

WELLPATH DATA (59 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	89.491	0.00	0.00	0.00	0.00	0.00	Tie On	
2380.00†	0.000	89.491	2380.00	0.00	0.00	0.00	0.00		Yates
3190.00†	0.000	89.491	3190.00	0.00	0.00	0.00	0.00		Queen
3920.00†	0.000	89.491	3920.00	0.00	0.00	0.00	0.00		San Andres D
6740.00†	0.000	89.491	6740.00	0.00	0.00	0.00	0.00		Tubb
7430.00†	0.000	89.491	7430.00	0.00	0.00	0.00	0.00		Abo
8200.00	0.000	89.491	8200.00	0.00	0.00	0.00	0.00	KOP	
8300.00†	12.060	89.491	8299.26	10.49	0.09	10.49	12.06		
8400.00†	24.120	89.491	8394.14	41.48	0.37	41.48	12.06		
8500.00†	36.180	89.491	8480.46	91.61	0.81	91.61	12.06		
8600.00†	48.240	89.491	8554.39	158.67	1.41	158.67	12.06		
8700.00†	60.300	89.491	8612.68	239.70	2.13	239.69	12.06		
8800.00†	72.360	89.491	8652.75	331.12	2.94	331.11	12.06		
8807.62†	73.278	89.491	8655.00	338.40	3.00	338.38	12.06		Wolfcamp
8900.00†	84.420	89.491	8672.84	428.89	3.81	428.88	12.06		
8938.28	89.037	89.491	8675.02	467.11	4.15	467.09	12.06	EOC	
9000.00†	89.037	89.491	8676.06	528.81	4.69	528.79	0.00		
9100.00†	89.037	89.491	8677.74	628.80	5.58	628.77	0.00		
9200.00†	89.037	89.491	8679.42	728.78	6.47	728.76	0.00		
9300.00†	89.037	89.491	8681.10	828.77	7.36	828.74	0.00		
9400.00†	89.037	89.491	8682.78	928.76	8.24	928.72	0.00		
9500.00†	89.037	89.491	8684.46	1028.74	9.13	1028.70	0.00		
9600.00†	89.037	89.491	8686.14	1128.73	10.02	1128.68	0.00		
9700.00†	89.037	89.491	8687.82	1228.71	10.91	1228.67	0.00		
9800.00†	89.037	89.491	8689.50	1328.70	11.79	1328.65	0.00		

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INTEQ

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Area	Chavez County, NM	Well	#1H
Field	(Taurus)Section 10 T15S R31E	Wellbore	#1H_PWB
Facility	Taurus Federal #1H		

WELLPATH DATA (59 stations) † = interpolated/extrapolated station

MD [feet]	Inclination [°]	Azimuth [°]	TVD [feet]	Vert Sect [feet]	North [feet]	East [feet]	DLS [°/100R]	Design Comments	Path Comment
9900.00†	89.037	89.491	8691.18	1428.69	12.68	1428.63	0.00		
10000.00†	89.037	89.491	8692.87	1528.67	13.57	1528.61	0.00		
10100.00†	89.037	89.491	8694.55	1628.66	14.46	1628.59	0.00		
10200.00†	89.037	89.491	8696.23	1728.64	15.34	1728.57	0.00		
10300.00†	89.037	89.491	8697.91	1828.63	16.23	1828.56	0.00		
10400.00†	89.037	89.491	8699.59	1928.61	17.12	1928.54	0.00		
10500.00†	89.037	89.491	8701.27	2028.60	18.01	2028.52	0.00		
10600.00†	89.037	89.491	8702.95	2128.59	18.89	2128.50	0.00		
10700.00†	89.037	89.491	8704.63	2228.57	19.78	2228.48	0.00		
10800.00†	89.037	89.491	8706.31	2328.56	20.67	2328.47	0.00		
10900.00†	89.037	89.491	8707.99	2428.54	21.56	2428.45	0.00		
11000.00†	89.037	89.491	8709.67	2528.53	22.44	2528.43	0.00		
11100.00†	89.037	89.491	8711.35	2628.52	23.33	2628.41	0.00		
11200.00†	89.037	89.491	8713.03	2728.50	24.22	2728.39	0.00		
11300.00†	89.037	89.491	8714.71	2828.49	25.11	2828.38	0.00		
11400.00†	89.037	89.491	8716.39	2928.47	26.00	2928.36	0.00		
11500.00†	89.037	89.491	8718.07	3028.46	26.88	3028.34	0.00		
11600.00†	89.037	89.491	8719.75	3128.45	27.77	3128.32	0.00		
11700.00†	89.037	89.491	8721.44	3228.43	28.66	3228.30	0.00		
11800.00†	89.037	89.491	8723.12	3328.42	29.55	3328.29	0.00		
11900.00†	89.037	89.491	8724.80	3428.40	30.43	3428.27	0.00		
12000.00†	89.037	89.491	8726.48	3528.39	31.32	3528.25	0.00		
12100.00†	89.037	89.491	8728.16	3628.37	32.21	3628.23	0.00		
12200.00†	89.037	89.491	8729.84	3728.36	33.10	3728.21	0.00		
12300.00†	89.037	89.491	8731.52	3828.35	33.98	3828.20	0.00		

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REFERENCE WELLPATH IDENTIFICATION			
Operator	Concho O&G	Slot	#1H SHL
Area	Chavez County, NM	Well	#1H
Field	(Taurus)Section 10 T15S R31E	Wellbore	#1H PWB
Facility	Taurus Federal #1H		

WELLPATH DATA (59 stations) † = interpolated/extrapolated station									
MD [feet]	Inclination [°]	Azimuth [°]	TVD [feet]	Vert Sect [feet]	North [feet]	East [feet]	DLS [%/100ft]	Design Comments	Path Comment
12400.00†	89.037	89.491	8733.20	3928.33	34.87	3928.18	0.00		
12500.00†	89.037	89.491	8734.88	4028.32	35.76	4028.16	0.00		
12600.00†	89.037	89.491	8736.56	4128.30	36.65	4128.14	0.00		
12700.00†	89.037	89.491	8738.24	4228.29	37.53	4228.12	0.00		
12800.00†	89.037	89.491	8739.92	4328.28	38.42	4328.11	0.00		
12900.00†	89.037	89.491	8741.60	4428.26	39.31	4428.09	0.00		
13000.00†	89.037	89.491	8743.28	4528.25	40.20	4528.07	0.00		
13100.00†	89.037	89.491	8744.96	4628.23	41.08	4628.05	0.00		
13102.17	89.037	89.491	8745.00	4630.40	41.10	4630.22	0.00	#1H BHL	

HOLE & CASING SECTIONS Ref Wellbore: #1H 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]
8.75in Open Hole	8200.00	8938.28	738.28	8200.00	8675.02	0.00	0.00	4.15	467.08
7.875in Open Hole	8938.28	13102.17	4163.89	8675.02	NA	4.15	467.08	NA	NA

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INTEQ

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Area	Chavez County, NM	Well	#1H
Field	(Taurus)Section 10 T15S R31E	Wellbore	#1H PWB
Facility	Taurus Federal #1H		

TARGETS									
Name	MD [feet]	TVD [feet]	North [feet]	East [feet]	Grid East [us survey feet]	Grid North [us survey feet]	Latitude [°]	Longitude [°]	Shape
1) #1H BHL	13102.17	8745.00	41.10	4630.22	704185.92	736711.70	33.01 26.715N	103.48.07.231W	point

Location: Chavez County, NM
 Well: T1155 R31E
 Field: T1155 R31E

Skt: #1H SHL
 Well: #1H SHL
 Wellbore: #1H SHL

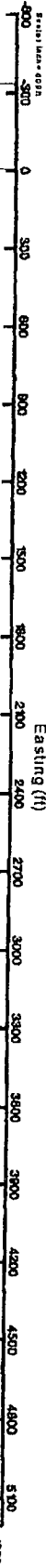
Concho O&G

**BAKER
HUGHES**
 INTEQ

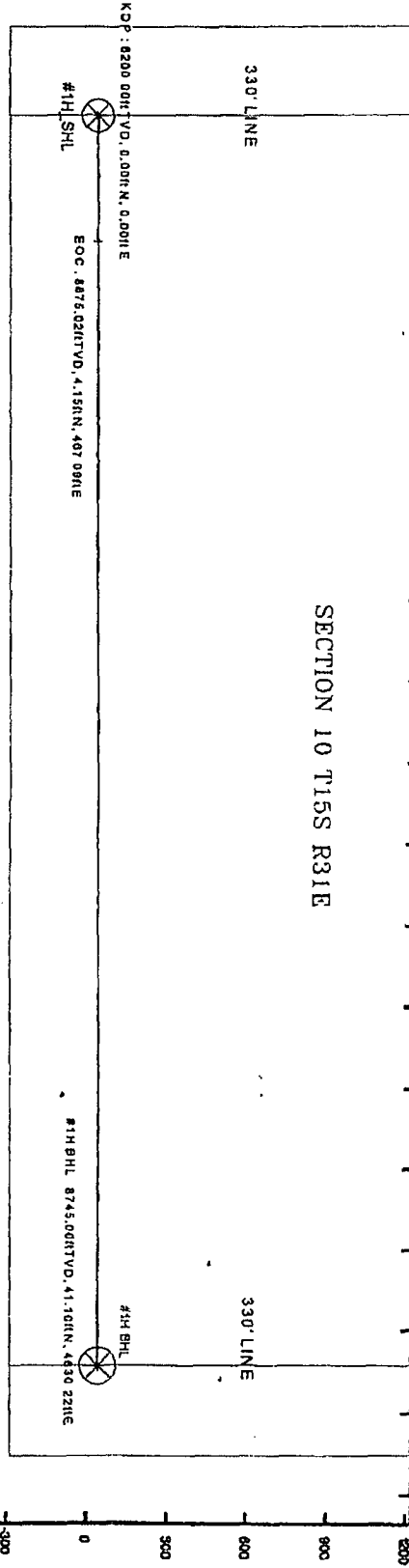
Well Profile Data

Design Comment	MD (ft)	Inc (")	Az (")	TYD (ft)	Local N (ft)	Local E (ft)	DLS (ft/100ft)	VS (ft)
Tie On	0.00	0.000	88.481	0.00	0.00	0.00	0.00	0.00
KOP	8200.00	0.000	88.481	8200.00	0.00	0.00	0.00	0.00
EOC	8938.28	89.037	88.481	8675.02	415	407.09	12.05	497.11
#1H BHL	13102.17	89.037	88.481	8745.00	4110	4630.22	0.00	4630.40

Notes	Comments
1. Wellbore is vertical from KOP to 8200.00 ft.	
2. Wellbore is vertical from 8200.00 ft. to 8675.02 ft.	
3. Wellbore is vertical from 8675.02 ft. to 8745.00 ft.	
4. Wellbore is vertical from 8745.00 ft. to 13102.17 ft.	
5. Wellbore is vertical from 13102.17 ft. to 13102.17 ft.	

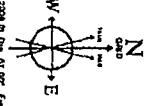
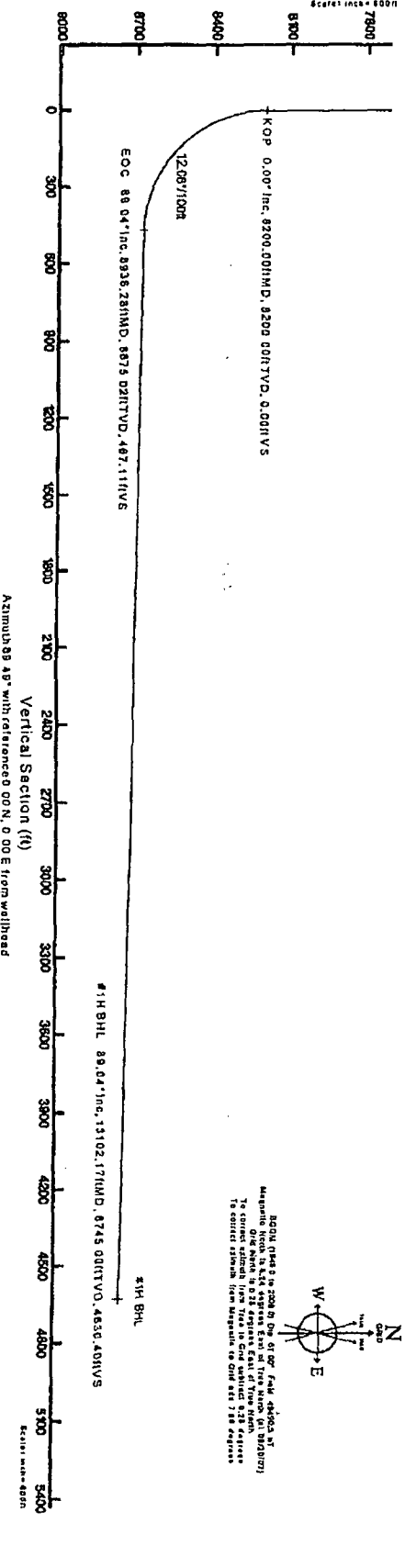


SECTION 10 T1155 R31E



SECTION / HARD LINES ARE ESTIMATE ONLY AND ARE SUBJECT TO CUSTOMER APPROVAL

True Vertical Depth (ft)



NOTE: THIS IS A PRELIMINARY WELL PROFILE. THE WELL PROFILE IS SUBJECT TO CHANGE. THE WELL PROFILE IS SUBJECT TO CHANGE. THE WELL PROFILE IS SUBJECT TO CHANGE.