

NM OIL CONSERVATION
ARTESIA DISTRICT
JAN 05 2015
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30-015-4265-1

A Gyrodata Directional Survey

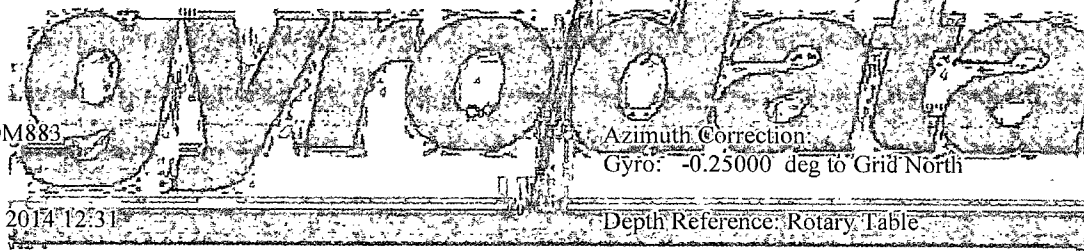
FINAL DEFINITIVE COPY

for

BOPCO, LP

CONFIDENTIAL

Lease: POKER LAKE FIELD Well: #450-Y, 4 1/2 INCH DRILLPIPE
Location: MCVAY DRILLING RIG #5 EDDY COUNTY, NEW MEXICO



Run Date: 15 Sep 2014

Report Generated: 22 Sep 2014 12:31

Surveyor: Jase Rister

Calculation Method: MINIMUM CURVATURE

Survey surface coordinates obtained from: Well Plan/Plot

Survey Latitude: 32.195697 deg. N Longitude: 103.864661 deg. W

Air Gap (RKB to Ground / RKB to MSL): 17.50

Vertical Section Calculated from Well Head Location

Closure Calculated from Well Head Location

Horizontal Coordinates Calculated from Well Head Location

A Gyrodata Directional Survey

BOPCO, LP

Lease: POKER LAKE FIELD Well: #450-Y, 4 1/2 INCH DRILLPIPE

Location: MCVAY DRILLING RIG #5, EDDY COUNTY, NEW MEXICO

Job Number: MD0914GDM883

MEASURED DEPTH feet	INCL deg.	AZIMUTH deg.	DOGLEG SEVERITY deg./ 100 ft.	VERTICAL DEPTH feet	CLOSURE DIST. feet	AZIMUTH deg.	HORIZONTAL COORDINATES feet
0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.00 N 0.00 E
0 - 987 FT. RATE GYROSCOPIC MULTISHOT SURVEY RUN INSIDE 4 1/2 INCH DRILLPIPE							
ALL MEASURED DEPTHS AND COORDINATES REFERENCED TO MCVAY DRILLING RIG #5 R.K.B. HEIGHT OF 17.5 FT.							
63.19	0.62	302.60	0.98	63.19	0.3	302.6	0.18 N 0.29 W
112.20	0.89	292.92	0.61	112.19	1.0	298.9	0.48 N 0.86 W
199.93	0.57	276.15	0.43	199.92	2.1	292.3	0.79 N 1.92 W
291.02	0.77	295.76	0.33	291.00	3.1	290.6	1.10 N 2.93 W
381.45	0.46	312.40	0.39	381.43	4.1	293.3	1.61 N 3.74 W
471.44	0.47	312.37	0.01	471.41	4.8	296.2	2.10 N 4.28 W
559.28	0.33	303.38	0.17	559.25	5.4	297.6	2.49 N 4.76 W
647.50	0.34	325.17	0.14	647.47	5.9	299.0	2.84 N 5.12 W
734.28	0.61	353.30	0.40	734.25	6.4	303.4	3.51 N 5.32 W
821.75	0.74	313.26	0.30	821.71	6.9	310.8	4.52 N 5.24 W
916.70	0.61	10.67	0.14	916.65	7.5	318.3	5.62 N 5.01 W
987.00	0.47	15.02	0.21	986.95	7.9	322.1	6.26 N 4.87 W

Final Station Closure: Distance: 7.93 ft Az: 322.15 deg.



Weatherford

Evaluation, Drilling & Intervention
10000 West County Rd. 116
P.O. Box 61028
Midland, TX USA 79711
Tel. (432) 561-8892 Fax (432) 561-8895

BOPCO, LP
PO Box 2760
Midland, TX 79702

Date: October 16, 2014

30-015-42651

Attention: Kevin Burns

Re: BOPCO, LP
Well: Poker Lake Unit 450Y
Eddy County, New Mexico

Enclosed, please find the original survey performed on the referenced well by Precision Energy Services, Inc. (P-5 No. 676004), a Weatherford company. Other information required by your office is as follows:

<u>Name & Title Of Surveyor</u>	<u>Well Number</u>	<u>Surveyed Depths</u>	<u>Dates Performed</u>	<u>Type of Survey</u>
Jermy Orona MWD Supervisor.	450Y	1138 MD 16408 MD	9/16/2014 10/7/2014	Measurement While Drilling

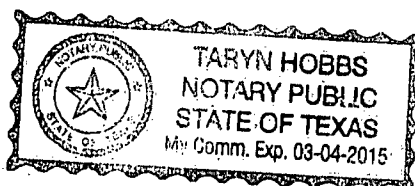
A notarized plan vs. actual is attached to the survey report. If any other information is required, please contact the undersigned at the letterhead address and phone number.

Jesse Aguilar
MWD Ops Coordinator

On this, the 4th day of November, 2014, before me a notary public, the undersigned officer, personally appeared Jesse Aguilar, known to me (or satisfactorily proven) to be the person whose name is subscribed to the within instrument; and acknowledged that he executed the same for the purposes therein contained.

In witness hereof, I hereunto set my hand and official seal.

Notary Public



Poker Lake Unit 450Y
Eddy Co, NM

[illegible]

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Plan Data for Peter Lake*Unit 4501

Target 20: Information:
Peter Lake Unit 4501 Target
For: 4th, 5th, 6th, 7th, 8th, 9th, 10th, 11th, 12th, 13th, 14th, 15th, 16th, 17th, 18th, 19th, 20th, 21st, 22nd, 23rd, 24th, 25th, 26th, 27th, 28th, 29th, 30th, 31st, 32nd, 33rd, 34th, 35th, 36th, 37th, 38th, 39th, 40th, 41st, 42nd, 43rd, 44th, 45th, 46th, 47th, 48th, 49th, 50th, 51st, 52nd, 53rd, 54th, 55th, 56th, 57th, 58th, 59th, 60th, 61st, 62nd, 63rd, 64th, 65th, 66th, 67th, 68th, 69th, 70th, 71st, 72nd, 73rd, 74th, 75th, 76th, 77th, 78th, 79th, 80th, 81st, 82nd, 83rd, 84th, 85th, 86th, 87th, 88th, 89th, 90th, 91st, 92nd, 93rd, 94th, 95th, 96th, 97th, 98th, 99th, 100th, 101st, 102nd, 103rd, 104th, 105th, 106th, 107th, 108th, 109th, 110th, 111th, 112th, 113th, 114th, 115th, 116th, 117th, 118th, 119th, 120th, 121st, 122nd, 123rd, 124th, 125th, 126th, 127th, 128th, 129th, 130th, 131st, 132nd, 133rd, 134th, 135th, 136th, 137th, 138th, 139th, 140th, 141st, 142nd, 143rd, 144th, 145th, 146th, 147th, 148th, 149th, 150th, 151st, 152nd, 153rd, 154th, 155th, 156th, 157th, 158th, 159th, 160th, 161st, 162nd, 163rd, 164th, 165th, 166th, 167th, 168th, 169th, 170th, 171st, 172nd, 173rd, 174th, 175th, 176th, 177th, 178th, 179th, 180th, 181st, 182nd, 183rd, 184th, 185th, 186th, 187th, 188th, 189th, 190th, 191st, 192nd, 193rd, 194th, 195th, 196th, 197th, 198th, 199th, 200th, 201st, 202nd, 203rd, 204th, 205th, 206th, 207th, 208th, 209th, 210th, 211st, 212nd, 213th, 214th, 215th, 216th, 217th, 218th, 219th, 220th, 221st, 222nd, 223rd, 224th, 225th, 226th, 227th, 228th, 229th, 230th, 231st, 232nd, 233rd, 234th, 235th, 236th, 237th, 238th, 239th, 240th, 241st, 242nd, 243rd, 244th, 245th, 246th, 247th, 248th, 249th, 250th, 251st, 252nd, 253rd, 254th, 255th, 256th, 257th, 258th, 259th, 260th, 261st, 262nd, 263rd, 264th, 265th, 266th, 267th, 268th, 269th, 270th, 271st, 272nd, 273rd, 274th, 275th, 276th, 277th, 278th, 279th, 280th, 281st, 282nd, 283rd, 284th, 285th, 286th, 287th, 288th, 289th, 290th, 291st, 292nd, 293rd, 294th, 295th, 296th, 297th, 298th, 299th, 300th, 301st, 302nd, 303rd, 304th, 305th, 306th, 307th, 308th, 309th, 310th, 311st, 312nd, 313th, 314th, 315th, 316th, 317th, 318th, 319th, 320th, 321st, 322nd, 323rd, 324th, 325th, 326th, 327th, 328th, 329th, 330th, 331st, 332nd, 333rd, 334th, 335th, 336th, 337th, 338th, 339th, 340th, 341st, 342nd, 343rd, 344th, 345th, 346th, 347th, 348th, 349th, 350th, 351st, 352nd, 353rd, 354th, 355th, 356th, 357th, 358th, 359th, 360th, 361st, 362nd, 363rd, 364th, 365th, 366th, 367th, 368th, 369th, 370th, 371st, 372nd, 373rd, 374th, 375th, 376th, 377th, 378th, 379th, 380th, 381st, 382nd, 383rd, 384th, 385th, 386th, 387th, 388th, 389th, 390th, 391st, 392nd, 393rd, 394th, 395th, 396th, 397th, 398th, 399th, 400th, 401st, 402nd, 403rd, 404th, 405th, 406th, 407th, 408th, 409th, 410th, 411st, 412nd, 413th, 414th, 415th, 416th, 417th, 418th, 419th, 420th, 421st, 422nd, 423rd, 424th, 425th, 426th, 427th, 428th, 429th, 430th, 431st, 432nd, 433rd, 434th, 435th, 436th, 437th, 438th, 439th, 440th, 441st, 442nd, 443rd, 444th, 445th, 446th, 447th, 448th, 449th, 450th, 451st, 452nd, 453rd, 454th, 455th, 456th, 457th, 458th, 459th, 460th, 461st, 462nd, 463rd, 464th, 465th, 466th, 467th, 468th, 469th, 470th, 471st, 472nd, 473rd, 474th, 475th, 476th, 477th, 478th, 479th, 480th, 481st, 482nd, 483rd, 484th, 485th, 486th, 487th, 488th, 489th, 490th, 491st, 492nd, 493rd, 494th, 495th, 496th, 497th, 498th, 499th, 500th, 501st, 502nd, 503rd, 504th, 505th, 506th, 507th, 508th, 509th, 510th, 511st, 512nd, 513th, 514th, 515th, 516th, 517th, 518th, 519th, 520th, 521st, 522nd, 523rd, 524th, 525th, 526th, 527th, 528th, 529th, 530th, 531st, 532nd, 533rd, 534th, 535th, 536th, 537th, 538th, 539th, 540th, 541st, 542nd, 543rd, 544th, 545th, 546th, 547th, 548th, 549th, 550th, 551st, 552nd, 553rd, 554th, 555th, 556th, 557th, 558th, 559th, 560th, 561st, 562nd, 563rd, 564th, 565th, 566th, 567th, 568th, 569th, 570th, 571st, 572nd, 573rd, 574th, 575th, 576th, 577th, 578th, 579th, 580th, 581st, 582nd, 583rd, 584th, 585th, 586th, 587th, 588th, 589th, 590th, 591st, 592nd, 593rd, 594th, 595th, 596th, 597th, 598th, 599th, 600th, 601st, 602nd, 603rd, 604th, 605th, 606th, 607th, 608th, 609th, 610th, 611st, 612nd, 613th, 614th, 615th, 616th, 617th, 618th, 619th, 620th, 621st, 622nd, 623rd, 624th, 625th, 626th, 627th, 628th, 629th, 630th, 631st, 632nd, 633rd, 634th, 635th, 636th, 637th, 638th, 639th, 640th, 641st, 642nd, 643rd, 644th, 645th, 646th, 647th, 648th, 649th, 650th, 651st, 652nd, 653rd, 654th, 655th, 656th, 657th, 658th, 659th, 660th, 661st, 662nd, 663rd, 664th, 665th, 666th, 667th, 668th, 669th, 670th, 671st, 672nd, 673rd, 674th, 675th, 676th, 677th, 678th, 679th, 680th, 681st, 682nd, 683rd, 684th, 685th, 686th, 687th, 688th, 689th, 690th, 691st, 692nd, 693rd, 694th, 695th, 696th, 697
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Plan Data for Poker Lake Unit 450Y

Slot: Poker Lake Unit 450Y

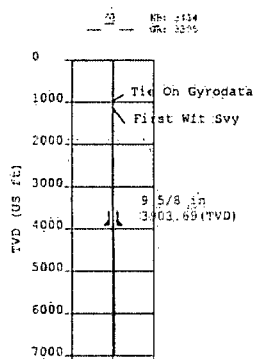
Position:

Offset is from Slot center

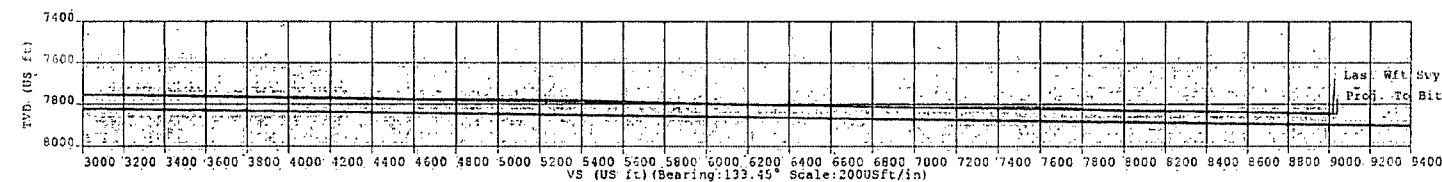
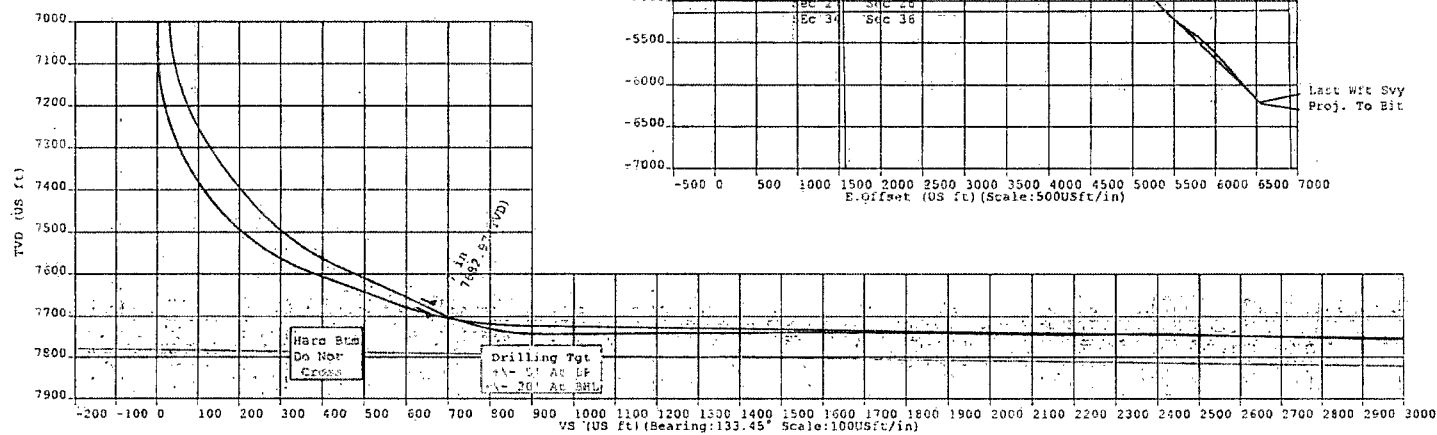
Off-Instr: 45915.60000 Latitude: 40°31'44.5"

Off-M: 0.00000 Longitude: 103°28'52.3"

Elevation Above WGS: 3956.00000

[illegible]

VS (US ft) (Bearing:133.45° Scale:1000USft/in)



Sign Off: Russell Joyner

5D Survey Report

5D Survey Report

BOPCO, L.P.

Field Name: *Eddy Co, NM Nad27 NMEZ*

Site Name: *Poker Lake Unit 450Y*

Well Name: *Poker Lake Unit 450Y*

Survey: *Wft MWD Svy*

07 October 2014

NM OIL CONSERVATION
ARTESIA DISTRICT

JAN 05 2015

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Weatherford®

Poker Lake Unit 450Y

Field Name Eddy Co, NM Nad27, NMEZ	Map Units : US ft		Company Name : BOPCO, L.P.	
	Vertical Reference Datum (VRD) : Mean Sea Level			
	Projected Coordinate System : NAD27 / New Mexico East			
Comment :				
Site Name Poker Lake Unit 450Y	Units : US ft		North Reference : Grid	
			Convergence Angle.: 0.25	
	Position		Northing : 435213.60 US ft	Latitude : 32° 11' 44.34"
			Easting : 644953.33 US ft	Longitude : -103° 51' 53.06"
Elevation above Mean Sea Level: 3395.00 US ft				
Comment :				
Slot Name Poker Lake Unit 450Y	Position (Offsets relative to Site Centre)			
	+N / -S : 0.00 US ft		Northing : 435213.60 US ft	Latitude : 32° 11' 44.34"
	+E / -W : 0.00 US ft		Easting : 644953.33 US ft	Longitude : -103° 51' 53.06"
	Slot TVD Reference : Ground Elevation			
Elevation above Mean Sea Level : 3395.00 US ft				
Comment :				
Well Name Poker Lake Unit 450Y	Type : Main well		UWI :	
	Rig Height <i>Kelly Bushing</i> : 19.00 US ft		Comment :	
	Relative to Mean Sea Level: 3414.00 US ft			
	Closure Distance : 9040.58 US ft		Closure Azimuth : 133.509°	
Vertical Section (Position of Origin Relative to Slot)				
+N / -S : 0.00 US ft +E / -W : 0.00 US ft Az : 133.45°				

Target Set	
Name : Poker Lake Unit 450Y	Number of Targets : 3
Target	

Comment :

Target Name: PBHL 450Y	Position (Relative to Slot centre)			
	+N / -S : 6217.50 US ft		Northing : 428996.10 US ft	Latitude : 32° 10' 42.53"
	+E / -W : 6562.77 US ft		Easting : 651516.10 US ft	Longitude : -103° 50' 37.01"
Shape: Cuboid	TVD (Kelly Bushing) : 7844.00 US ft			
Orientation Azimuth : 0.00°		Inclination : 0.00°		
Dimensions Length : 0.00 US ft		Breadth : 0.00 US ft	Height : 0.00 US ft	
Target Name: HB 1 For Dwg	Position (Relative to Slot centre)			
	+N / -S : 589.77 US ft		Northing : 434623.83 US ft	Latitude : 32° 11' 38.48"
	+E / -W : 659.41 US ft		Easting : 645612.74 US ft	Longitude : -103° 51' 45.41"
Shape: Cuboid	TVD (Kelly Bushing) : 7795.00 US ft			
Orientation Azimuth : 133.63°		Inclination : -0.73°		
Dimensions Length : 6000.00 US ft		Breadth : 0.00 US ft	Height : 1.00 US ft	

5D Survey Report

Target Name:	Position (Relative to Slot centre)		
HB2 For Dwg	+N / -S : 6217.50 US ft	Northing : 428996.10 US ft	Latitude : 32°10'42.53"
Shape:	+E / -W : 6562.77 US ft	Easting : 6515.16 US ft	Longitude : 103°50'37.01"
Cuboid	TVD (Kelly Bushing) : 7900.00 US ft		
	Orientation Azimuth : 133.63°	Inclination : -0.73°	
	Dimensions Length : 18000.00 US ft	Breadth : 0.00 US ft	Height : 1.00 US ft

Survey Name: Wft MWD Svy			
Date : 18/Sep/2014	Survey Tool : MWD	Comment :	Company : Wft
Magnetic Model			
Model Name: BGGM	Date: 30/Sep/2014	Field Strength: 48219.8 nT	Declination: 7.48° Dip: 60.02°
Tie Point MD: 987	Inclination: 0.47	Azimuth: 15.02	TVD: 986.951 North Offset: 6.26171 East Offset: -4.86659

Casing Points (Relative to Slot centre, TVD relative to Kelly Bushing)								
MD (US ft)	Incl (°)	Az (°)	TVD (US ft)	N Offset (US ft)	E Offset (US ft)	Northing (US ft)	Easting (US ft)	Name
3904.00	0.40	140.64	3903.69	-2.68	5.60	435210.92	644958.93	9 5/8 in
7991.00	64.72	129.42	7682.97	-457.84	477.81	434755.76	645431.14	7 in

Well path created using minimum curvature

Survey Points (Relative to Slot centre, TVD relative to Kelly Bushing)										
MD (US ft)	Incl (°)	Az (°)	TVD (US ft)	N Offset (US ft)	E Offset (US ft)	VS (US ft)	DLS (°/100 US ft)	Northing (US ft)	Easting (US ft)	Comment
1138.00	0.70	23.13	1137.94	7.71	-4.34	-8.45	0.00	435221.31	644948.99	First Wft Svy
1327.00	0.20	18.13	1326.94	9.08	-3.79	-9.00	0.27	435222.68	644949.54	
1517.00	0.07	20.82	1516.94	9.51	-3.64	-9.18	0.07	435223.11	644949.69	
1707.00	0.64	200.42	1706.93	8.62	-3.97	-8.81	0.37	435222.22	644949.36	
1897.00	0.44	239.16	1896.92	7.25	-4.97	-8.59	0.21	435220.85	644948.36	
2087.00	0.63	280.68	2086.92	7.07	-6.62	-9.67	0.22	435220.67	644946.71	
2277.00	0.16	281.31	2276.91	7.32	-7.91	-10.77	0.25	435220.92	644945.42	
2466.00	0.07	26.10	2465.91	7.47	-8.12	-11.03	0.10	435221.07	644945.21	
2656.00	0.07	117.73	2655.91	7.52	-7.96	-10.95	0.05	435221.12	644945.37	
2846.00	0.10	178.79	2845.91	7.30	-7.86	-10.73	0.05	435220.90	644945.47	
3036.00	0.16	103.36	3035.91	7.08	-7.59	-10.38	0.09	435220.68	644945.74	
3226.00	0.50	84.71	3225.91	7.09	-6.51	-9.60	0.19	435220.69	644946.82	
3416.00	1.41	122.68	3415.88	5.91	-3.72	-6.76	0.56	435219.51	644949.61	
3606.00	2.27	133.24	3605.78	2.07	0.99	-0.70	0.48	435215.67	644954.32	
3794.00	0.99	138.79	3793.70	-1.71	4.77	4.64	0.69	435211.89	644958.10	
3897.00	0.38	141.66	3896.69	-2.64	5.57	5.86	0.59	435210.96	644958.90	
3904.00	0.40	140.64	3903.69	-2.68	5.60	5.91	0.36	435210.92	644958.93	9 5/8 in
4070.00	0.99	131.29	4069.68	-4.08	7.05	7.92	0.36	435209.52	644960.38	
4257.00	1.31	135.37	4256.64	-6.67	9.77	11.68	0.18	435206.93	644963.10	
4445.00	0.99	139.80	4444.60	-9.44	12.32	15.44	0.18	435204.16	644965.65	
4630.00	0.84	144.58	4629.58	-11.76	14.14	18.36	0.09	435201.84	644967.47	
4818.00	0.78	148.00	4817.56	-13.97	15.62	20.95	0.04	435199.63	644968.95	
5004.00	0.64	155.77	5003.55	-15.99	16.72	23.13	0.09	435197.61	644970.05	
5190.00	0.66	160.73	5189.54	-17.95	17.50	25.05	0.03	435195.65	644970.83	
5376.00	0.58	166.99	5375.52	-19.88	18.06	26.78	0.06	435193.72	644971.39	
5563.00	0.56	190.52	5562.52	-21.70	18.11	28.07	0.12	435191.90	644971.44	
5752.00	0.58	210.22	5751.51	-23.43	17.46	28.79	0.10	435190.17	644970.79	
5940.00	0.63	218.76	5939.50	-25.06	16.33	29.09	0.05	435188.54	644969.66	
6127.00	0.66	222.07	6126.48	-26.66	14.97	29.20	0.03	435186.94	644968.30	
6314.00	0.64	230.02	6313.47	-28.13	13.44	29.11	0.05	435185.47	644966.77	
6501.00	0.69	241.44	6500.46	-29.34	11.65	28.64	0.08	435184.26	644964.98	

5D Survey Report

Survey Points (Relative to Slope centre, TVD relative to Kelly Bushing)											
MD (US ft)	Incl (°)	AZ (°)	TVD (US ft)	N Offset (US ft)	E Offset (US ft)	V.S (US ft)	DLS (°/100 US ft)	Northing (US ft)	Easting (US ft)	Comment	
6690.00	0.49	213.97	6689.45	-30.56	10.20	28.42	0.18	435183.04	644963.53		
6879.00	0.40	209.46	6878.44	-31.80	9.43	28.72	0.05	435181.80	644962.76		
6941.00	0.42	196.28	6940.44	-32.21	9.26	28.87	0.16	435181.39	644962.59		
7001.00	1.21	158.18	7000.44	-33.01	9.43	29.55	1.53	435180.59	644962.76		
7033.00	5.20	141.89	7032.38	-34.46	10.45	31.29	12.66	435179.14	644963.78		
7064.00	8.78	136.02	7063.15	-37.27	12.96	35.04	11.76	435176.33	644966.29		
7096.00	12.15	132.31	7094.61	-41.30	17.15	40.85	10.73	435172.30	644970.48		
7127.00	15.36	131.67	7124.72	-46.23	22.63	48.22	10.37	435167.37	644975.96		
7160.00	18.26	132.41	7156.30	-52.62	29.71	57.76	8.81	435160.98	644983.04		
7190.00	20.95	133.61	7184.56	-59.49	37.07	67.82	9.07	435154.11	644990.40		
7221.00	24.72	135.27	7213.13	-67.92	45.65	79.85	12.34	435145.68	644998.98		
7253.00	27.76	135.20	7241.83	-77.96	55.61	93.99	9.50	435135.64	645008.94		
7283.00	30.71	134.70	7268.00	-88.31	65.98	108.63	9.87	435125.29	645019.31		
7315.00	33.07	133.31	7295.17	-100.05	78.14	125.54	7.72	435113.55	645031.47		
7346.00	34.69	132.91	7320.91	-111.86	90.76	142.82	5.28	435101.74	645044.09		
7378.00	36.50	132.15	7346.93	-124.45	104.49	161.44	5.82	435089.15	645057.82		
7409.00	38.69	131.05	7371.49	-137.00	118.63	180.34	7.39	435076.60	645071.96		
7441.00	40.78	131.79	7396.09	-150.53	133.97	200.78	6.70	435063.07	645087.30		
7472.00	41.00	132.61	7419.53	-164.16	149.00	221.07	1.87	435049.44	645102.33		
7504.00	43.54	134.78	7443.21	-179.04	164.55	242.59	9.15	435034.56	645117.88		
7535.00	46.66	134.67	7465.09	-194.49	180.15	264.54	10.07	435019.11	645133.48		
7567.00	49.53	134.97	7486.46	-211.27	197.04	288.34	9.00	435002.33	645150.37		
7598.00	52.17	133.66	7506.03	-228.06	214.24	312.38	9.12	434985.54	645167.57		
7629.00	54.40	133.69	7524.56	-245.22	232.22	337.23	7.19	434968.38	645185.55		
7659.00	57.43	132.82	7541.37	-262.24	250.31	362.07	10.38	434951.36	645203.64		
7690.00	61.33	131.95	7557.16	-280.22	270.02	388.74	12.81	434933.38	645223.35		
7753.00	65.76	130.53	7585.22	-317.38	312.42	445.08	7.32	434896.22	645265.75		
7847.00	66.46	130.47	7623.29	-373.20	377.78	530.91	0.75	434840.40	645331.11		
7919.00	65.55	130.70	7652.57	-415.99	427.73	596.61	1.30	434797.61	645381.06		
7986.00	64.55	129.16	7680.83	-454.98	474.31	657.24	2.56	434758.62	645427.64		
7991.00	64.72	129.42	7682.97	-457.84	477.81	661.74	5.84	434755.76	645431.14		7 in
8018.00	65.67	130.81	7694.30	-473.63	496.55	686.21	5.84	434739.97	645449.88		
8049.00	69.65	132.12	7706.08	-492.62	518.03	714.86	13.42	434720.98	645471.36		
8079.00	72.59	133.30	7715.79	-511.87	538.88	743.24	10.48	434701.73	645492.21		
8110.00	73.29	133.72	7724.88	-532.28	560.37	772.88	2.60	434681.32	645513.70		
8141.00	77.37	134.65	7732.73	-553.18	581.87	802.86	13.48	434660.42	645535.20		
8173.00	81.21	135.41	7738.67	-575.42	604.09	834.28	12.22	434638.18	645557.42		
8204.00	84.13	135.77	7742.63	-597.38	625.60	865.00	9.49	434616.22	645578.93		
8235.00	88.46	136.60	7744.63	-619.70	647.02	895.90	14.22	434593.90	645600.35		
8297.00	90.49	135.95	7745.20	-664.50	689.87	957.81	3.44	434549.10	645643.20		
8392.00	90.25	134.06	7744.59	-731.67	757.03	1052.77	2.01	434481.93	645710.36		
8485.00	90.80	131.74	7743.73	-794.97	825.15	1145.76	2.56	434418.63	645778.48		
8578.00	90.62	130.83	7742.58	-856.33	895.03	1238.68	1.00	434357.27	645848.36		
8639.00	89.44	131.07	7742.55	-896.31	941.10	1299.62	1.97	434317.29	645894.43		
8670.00	89.32	131.50	7742.89	-916.76	964.39	1330.60	1.44	434296.84	645917.72		
8764.00	91.23	132.71	7742.43	-979.78	1034.13	1424.57	2.41	434233.82	645987.46		
8858.00	90.80	133.41	7740.77	-1043.95	1102.79	1518.55	0.87	434169.65	646056.12		
8951.00	88.89	133.00	7741.02	-1107.62	1170.58	1611.54	2.10	434105.98	646123.91		
9044.00	89.81	134.24	7742.08	-1171.77	1237.90	1704.53	1.66	434041.83	646191.23		
9138.00	89.81	132.50	7742.39	-1236.32	1306.23	1798.53	1.85	433977.28	646259.56		
9325.00	89.07	134.58	7744.22	-1365.12	1441.77	1985.51	1.18	433848.48	646395.10		
9512.00	89.57	134.12	7746.43	-1495.83	1575.48	2172.47	0.36	433717.77	646528.81		
9660.00	91.67	135.15	7744.83	-1599.80	1680.78	2320.42	1.58	433613.80	646634.11		
9847.00	87.53	131.21	7746.14	-1727.71	1817.08	2507.34	3.06	433485.89	646770.41		
10035.00	88.95	133.57	7751.91	-1854.38	1955.85	2695.20	1.46	433359.22	646909.18		
10220.00	88.77	130.51	7755.60	-1978.23	2093.21	2880.08	1.66	433235.37	647046.54		
10406.00	91.17	143.86	7755.69	-2114.35	2219.32	3065.26	7.29	433099.25	647172.65		
10595.00	89.44	150.62	7754.69	-2273.19	2321.53	3248.69	3.69	432940.41	647274.86		
10783.00	89.32	152.99	7756.72	-2438.86	2410.34	3427.10	1.26	432774.74	647363.67		

5D Survey Report

Survey Points (Relative to Slot Centre, TVD relative to Kelly Bushing)										
MD (US ft)	Inc (°)	Az (°)	TVD (US ft)	N. Offset (US ft)	E. Offset (US ft)	AVS (US ft)	D.S. (%/100 US ft)	Northing (US ft)	Easting (US ft)	Comment
10970.00	89.01	148.28	7759.45	-2601.77	2502.01	3605.69	2.52	432611.83	647455.34	
11157.00	88.52	144.07	7763.48	-2757.05	2606.05	3788.01	2.27	432456.55	647559.38	
11343.00	89.32	137.96	7766.99	-2901.53	2722.99	3972.27	3.31	432312.07	647676.32	
11530.00	89.51	130.76	7768.90	-3032.18	2856.59	4159.11	3.85	432181.42	647809.92	
11717.00	89.38	129.04	7770.71	-3152.12	3000.04	4345.74	0.92	432061.48	647953.37	
11904.00	88.15	134.72	7774.75	-3276.87	3139.18	4532.54	3.11	431936.73	648092.51	
12091.00	90.49	128.85	7776.97	-3401.41	3278.54	4719.36	3.38	431812.19	648231.87	
12277.00	89.75	127.35	7776.58	-3516.17	3424.90	4904.54	0.90	431697.43	648378.23	
12466.00	89.57	130.67	7777.70	-3635.12	3571.74	5092.94	1.76	431578.48	648525.07	
12652.00	89.26	130.51	7779.60	-3756.13	3712.98	5278.70	0.19	431457.47	648666.31	
12839.00	88.33	126.68	7783.53	-3872.74	3859.07	5464.95	2.11	431340.86	648812.40	
13026.00	88.46	128.34	7788.77	-3986.55	4007.35	5650.87	0.89	431227.05	648960.68	
13214.00	88.77	130.32	7793.31	-4105.66	4152.71	5838.32	1.07	431107.94	649106.04	
13400.00	88.46	127.39	7797.81	-4222.30	4297.50	6023.65	1.58	430991.30	649250.83	
13588.00	89.20	131.54	7801.65	-4341.75	4442.58	6211.11	2.24	430871.85	649395.91	
13774.00	88.95	127.75	7804.66	-4460.38	4585.75	6396.64	2.04	430753.22	649539.08	
13962.00	88.71	125.58	7808.49	-4572.61	4736.51	6583.27	1.16	430640.99	649689.84	
14149.00	89.20	128.08	7811.91	-4684.68	4886.16	6768.98	1.36	430528.92	649839.49	
14336.00	89.32	129.06	7814.32	-4801.26	5032.35	6955.29	0.53	430412.34	649985.68	
14522.00	90.62	126.01	7814.42	-4914.56	5179.82	7140.27	1.78	430299.04	650133.15	
14708.00	90.25	138.55	7813.00	-5039.44	5317.16	7325.85	6.74	430174.16	650270.49	
14894.00	90.74	131.76	7811.39	-5171.24	5448.24	7511.66	3.66	430042.36	650401.57	
15080.00	86.42	124.25	7816.01	-5285.63	5594.61	7696.58	4.66	429927.97	650547.94	
15262.00	86.79	124.37	7826.78	-5388.04	5744.68	7875.96	0.21	429825.56	650698.01	
15444.00	89.38	133.46	7832.88	-5502.18	5886.04	8057.08	5.19	429711.42	650839.37	
15627.00	89.88	136.71	7834.06	-5631.75	6015.23	8239.98	1.80	429581.85	650968.56	
15809.00	89.38	136.33	7835.24	-5763.81	6140.46	8421.71	0.35	429449.79	651093.79	
15991.00	89.20	137.86	7837.49	-5897.11	6264.35	8603.32	0.85	429316.49	651217.68	
16173.00	87.78	139.94	7842.29	-6034.19	6383.94	8784.42	1.38	429179.41	651337.27	
16355.00	89.44	136.93	7846.70	-6170.31	6504.64	8965.66	1.89	429043.29	651457.97	
16408.00	89.20	135.36	7847.33	-6208.52	6541.36	9018.59	3.00	429005.08	651494.69	Last Wft Svy
16430.00	89.20	135.36	7847.64	-6224.17	6556.81	9040.58	0.00	428989.43	651510.14	Proj. To Bit



Federal 26 Fed #12H
Eddy Co., New Mexico

G3:3559.8
KB:3594.8

Plan Data for Federal 26 Fed #12H

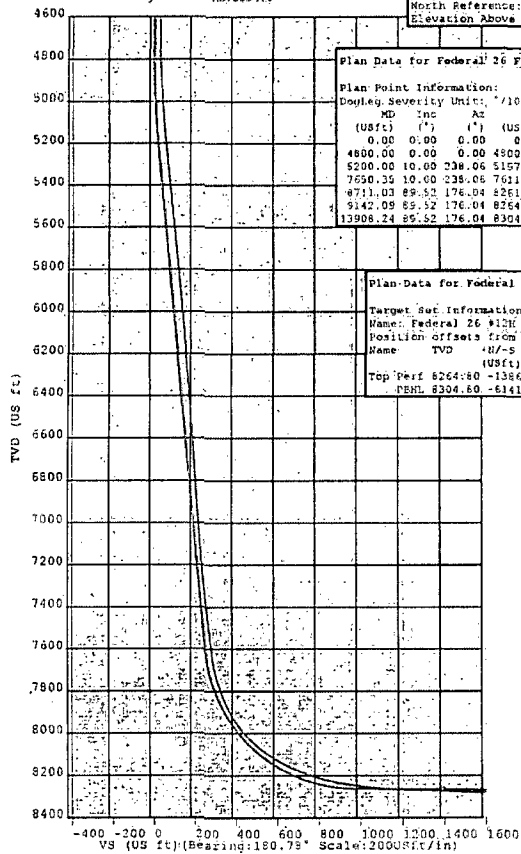
Site: Federal 26 Fed #12H
Unit: US Feet TVD Reference:
Company Name: OXY USA
Position: Nothings: 490733.60USft Latitude: 32.37743°
Easting: 682763.70USft Longitude: -103.741297°
North Reference: Grid Grid Convergence: 0.32°
Elevation Above VMD: 3569.80USft

Plan Data for Federal 26 Fed #12H

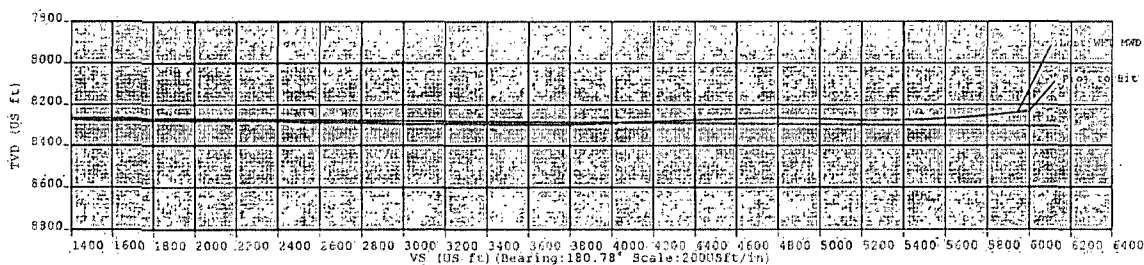
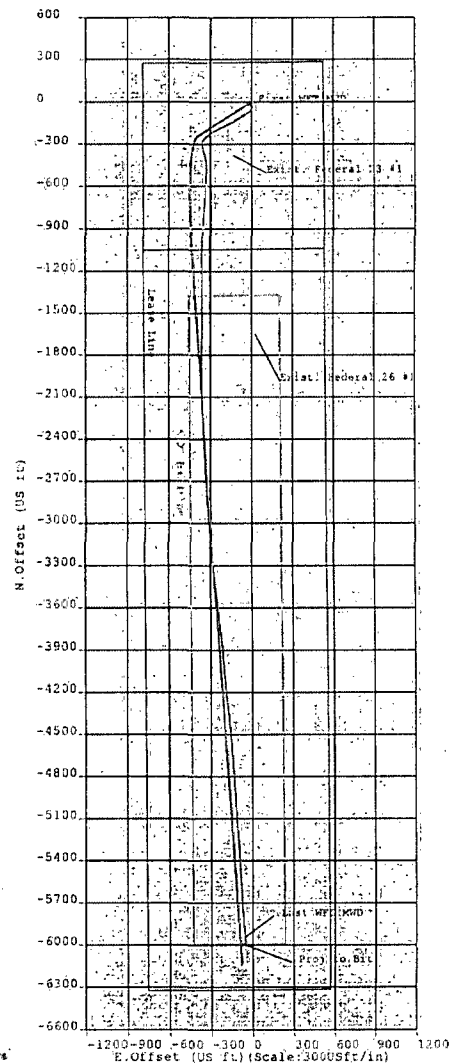
Plan Point Information:
Doplog Severity Unit: 7/100.00ft Position offsets from Slot centre
Name TVD N/W-S E/W Lat Long VSec DLS
(USft) (") (") (USft) (USft) (") (") (USft) (DLSU)
0.00 0.00 0.00 0.00 0.00 0.00 32.372493 -103.741297 0.00 0.00
4800.00 0.00 0.00 4800.00 0.00 0.00 32.372493 -103.741297 0.00 0.00
5200.00 10.00 238.06 5157.97 -18.42 -29.55 32.372443 -103.741393 18.82 2.59
7500.35 10.00 238.06 7611.10 -743.52 -390.63 32.371829 -103.742567 218.82 0.00
4711.03 89.52 176.04 5361.21 -956.62 -441.93 32.369470 -103.742745 962.61 8.00
5142.09 85.52 176.04 8264.90 -1386.70 -412.70 32.368687 -103.742657 1392.18 0.00
13908.24 85.52 176.04 8304.65 -6141.31 -83.27 32.355613 -103.741677 6142.88 0.00

Plan Data for Federal 26 Fed #12H

Target Set Information:
Name: Federal 26 #12H
Position offsets from Slot centre
Name TVD N/W-S E/W Northing Easting Shape Comment
(USft) (USft) (USft) (USft) (USft)
Top Perf 8264.90 -1386.70 -412.70 498346.90 682371.50 Cuboid
PENL 8304.60 -6141.30 -83.10 493392.30 682760.50 Cuboid



Weatherford



Sign Off: Michael Billings