



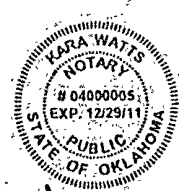
REPORT OF PROOF OF APPARENT DEVIATION NEW MEXICO

FIELD NAME _____

COUNTY/PARISH EDDY.

LEGAL SEC 27-25S-26E

MEASURED DEPTH (FT)	COURSE LENGTH (HUNDREDS OF FT)	ANGLE OF INCLINATION (DEGREES)	DISPLACEMENT PER HUNDRED FT (SINE OF ANGLE X 100)	COURSE DISPLACEMENT (FEET)	ACCUMULATIVE DISPLACEMENT (FEET)	REMARKS
894	8.94	4 7/8	8.5069	76.05	76.05	
1030	1.36	1	1.5882	2.16	78.21	
1240	2.10	2 1/8	3.7690	7.91	86.13	
1338	0.98	1 1/2	2.6002	2.55	88.67	
1744	4.06	1 3/8	2.3909	9.71	98.38	
2255	5.11	5 1/7	8.9763	45.87	144.25	
2364	1.09	1	1.7452	1.90	146.15	
2428	0.64	2	3.5074	2.24	148.40	
2804	3.76	1	1.7452	6.56	154.96	
2994	1.90	1	1.7452	3.32	158.28	
3184	1.90	1	1.7452	3.32	161.59	
3374	1.90	1	1.7452	3.32	164.91	
3565	1.91	1	1.7452	3.33	168.24	
3717	1.52	1	1.7452	2.65	170.89	
3857	1.40	1	1.7452	2.44	173.34	
4108	2.51	2	3.4899	8.76	182.10	
4328	2.20	1	1.7452	3.84	185.94	
4519	1.91	1	1.7452	3.33	189.27	
4710	1.91	1	1.7452	3.33	192.60	
4860	1.50	1	1.7452	2.62	195.22	
5032	1.72	1	1.7452	3.00	198.22	
5282	2.50	1	1.7452	4.36	202.59	
5473	1.91	1	1.7452	3.33	205.92	
5605	1.32	1	1.7452	2.30	208.22	
5765	1.60	2 3/4	1.1693	1.87	210.09	
6046	2.81	1	1.7452	4.90	215.00	
6237	1.91	1	1.7452	3.33	218.33	
6424	1.87	1	1.7452	3.26	221.60	
6614	1.90	1	1.7452	3.32	224.91	
6806	1.92	1	1.7452	3.35	228.26	
6994	1.88	1	1.7452	3.28	231.54	
7185	1.91	1	1.7452	3.33	234.88	
7377	1.92	1	1.7452	3.35	238.23	
7568	1.91	1	1.7452	3.33	241.56	
7757	1.89	1	1.7452	3.30	244.86	
7949	1.92	1	1.7452	3.35	248.21	
8139	1.90	1	1.7452	3.32	251.53	
8330	1.91	1	1.7452	3.33	254.86	
8500	12.70	1	1.7452	22.16	277.02	
8900	3.00	1	1.7452	5.24	282.26	



8 Kana W ~~W~~
7/27/11
OC# 04000005
Exp 12/29/2011

7/27/2011



Chosa Draw 27 Fed 3 Eddy Co., NM

KB ELEV: 3294
GL ELEV: 3272

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSec	Target
1	8751.00	0.40	225.13	8748.56	-60.43	44.04	0.00	0.00	-35.71	
2	8837.54	0.40	225.13	8835.10	-60.86	43.61	0.00	0.00	-35.23	
3	9151.66	38.00	185.20	9126.51	-161.59	33.71	12.00	319.74	-12.17	
4	10030.33	91.35	270.00	9548.50	-500.04	-548.96	10.00	85.07	609.94	
5	13252.27	91.35	270.00	9472.57	-500.00	-3770.00	0.00	0.00	3803.01	Pbhl

WELL DETAILS

Name	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
Fed 3	0.00	0.00	400250.60	559462.70	32°06'01.269N	104°16'29.289W	N/A

TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Shape
Pbhl	9472.57	-500.00	-3770.00	399750.60	555692.70	Rectangle (3222x150)

SITE DETAILS

Chosa Draw 27 Fed 3
Site Centre Northing: 400250.60
Easting: 559462.70
Ground Level: 3272.00
Positional Uncertainty: 0.00
Convergence: 0.03

LEGEND

Fed 3, 1, Plan #6
Fed 3, 1, Gyro
Wft Svy



Azimuths to Grid North
True North: -0.03°
Magnetic North: 7.88°

Magnetic Field
Strength: 48500nT
Dip Angle: 59.95°
Date: 4/30/2011
Model: IGRF2010

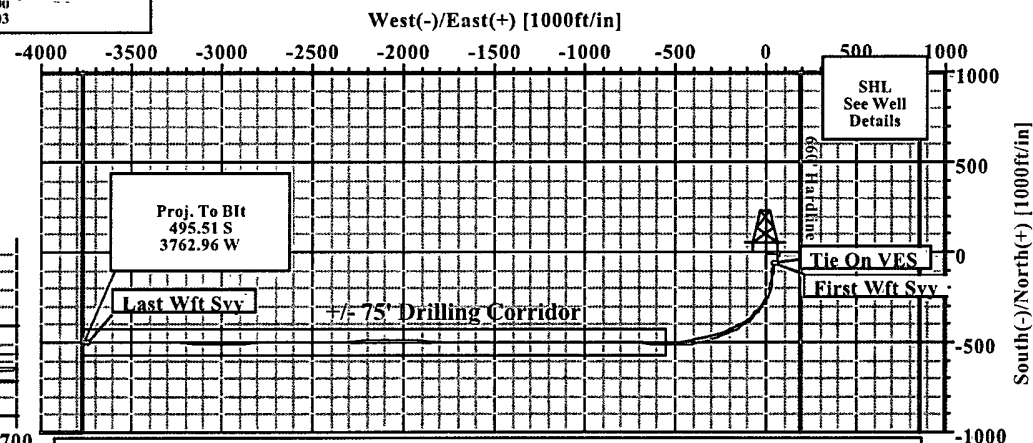
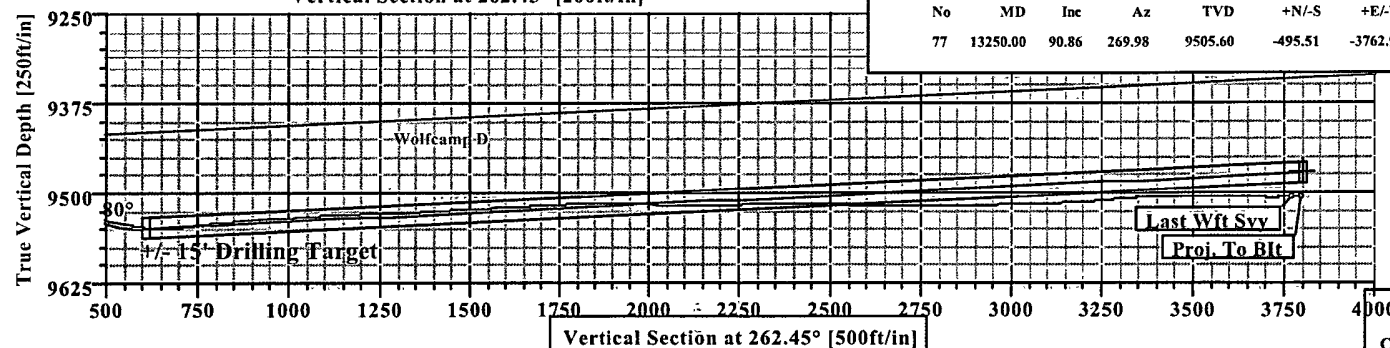
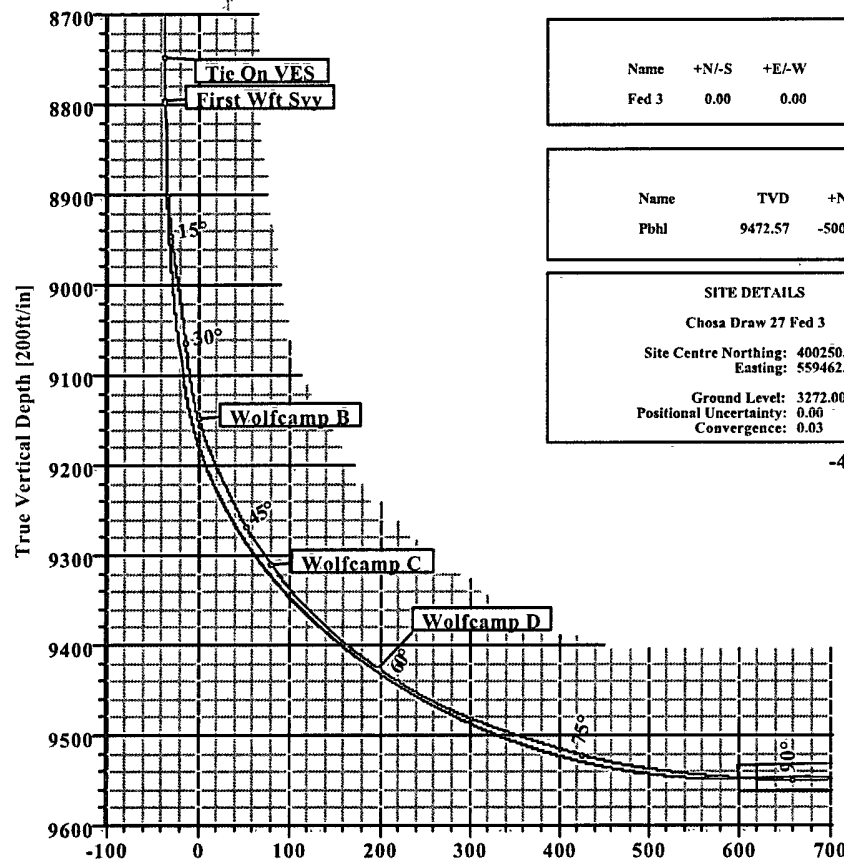
Total Correction to Grid North: 7.88°

FIELD DETAILS

Eddy Co., NM (NAD 83)

Geodetic System: US State Plane Coordinate System 1983
Ellipsoid: GRS 1980
Zone: New Mexico, Eastern Zone
Magnetic Model: IGRF2010

System Datum: Mean Sea Level
Local North: Grid North



Survey: Wft Svy (Fed 3/1)

No	MD	Inc	Az	TVD	+N/-S	+E/-W	DLeg	TFace	VSec
77	13250.00	90.86	269.98	9505.60	-495.51	-3762.96	0.00	0.00	3795.44



Weatherford

Survey: Wft Svy (Fed 3/1)

Created By: Russell W. Joyner

Date: 5/25/2011



Weatherford International Ltd.

WFT Survey Report X & Y's



Weatherford

Company: Cimarex Energy	Date: 5/25/2011	Time: 05:14:34	Page: 1
Field: Eddy Co., NM (NAD 83)	Co-ordinate(NE) Reference:	Well: Fed 3: Grid North	
Site: Chosa Draw 27 Fed 3	Vertical (TVD) Reference:	SITE: 3294.0	
Well: Fed 3	Section (VS) Reference:	Well: (0.00N,0.00E,262.45Azi)	
Wellpath: 1	Survey Calculation Method:	Minimum Curvature	Db: Sybase

Survey: Wft Svy	Start Date: 5/3/2011
Company: Weatherford International Ltd	Engineer: Russell W. Joyner
Tool: MWD;MWD - Standard	Tied-to: User Defined

Field: Eddy Co., NM (NAD 83)

Map System: US State Plane Coordinate System 1983	Map Zone: New Mexico, Eastern Zone
Geo Datum: GRS 1980	Coordinate System: Well Centre
Sys Datum: Mean Sea Level	Geomagnetic Model: IGRF2010

Site: Chosa Draw 27 Fed 3

Site Position:	Northing: 400250.60 ft	Latitude: 32 6 1.269 N
From: Map	Easting: 559462.70 ft	Longitude: 104 16 29.289 W
Position Uncertainty: 0.00 ft		North Reference: Grid
Ground Level: 3272.00 ft		Grid Convergence: 0 03 deg

Well: Fed 3	Slot Name:
Well Position: +N/-S 0.00 ft	Northing: 400250.60 ft
+E/-W 0.00 ft	Easting: 559462.70 ft
Position Uncertainty: 0.00 ft	Latitude: 32 6 1.269 N
	Longitude: 104 16 29.289 W

Wellpath: 1	Drilled From: Surface
Current Datum: SITE	Tie-on Depth: 0.00 ft
Magnetic Data: 4/30/2011	Above System Datum: Mean Sea Level
Field Strength: 48500 nT	Declination: 7.91 deg
Vertical Section: Depth From (TVD)	Mag Dip Angle: 59.95 deg
ft	+N/-S
	ft
0.00	0.00
	0 00
	262 45

Survey

MD ft	Incl deg	Azim deg	TVD ft	N/S ft	E/W ft	DLS deg/100ft	VS ft	MapN ft	MapE ft	Comment
8751.00	0.40	225.13	8748.56	-60.43	44.04	0.00	-35.71	400190.17	559506.74	Tie On VES
8799.00	0.30	273.26	8796.56	-60.54	43.80	0.62	-35.46	400190.06	559506.50	First Wft Svy
8853.00	0.46	274.43	8850.56	-60.52	43.44	0.30	-35.11	400190.08	559506.14	
8884.00	5.00	201.09	8881.52	-61.77	42.83	15.77	-34.34	400188.83	559505.53	
8915.00	10.16	198.49	8912.24	-65.62	41.47	16.68	-32.49	400184.98	559504.17	
8948.00	14.78	197.38	8944.45	-72.41	39.29	14.02	-29.43	400178.19	559501.99	
8979.00	18.90	198.23	8974.12	-80.95	36.54	13.31	-25.58	400169.65	559499.24	
9011.00	22.91	192.63	9004.01	-91.96	33.55	13.99	-21.17	400158.64	559496.25	
9043.00	26.46	187.16	9033.08	-105.11	31.30	13.18	-17.21	400145.49	559494.00	
9074.00	29.34	183.83	9060.48	-119.55	29.93	10.56	-13.96	400131.05	559492.63	
9106.00	33.02	182.35	9087.85	-136.09	29.05	11.75	-10.91	400114.51	559491.75	
9137.00	36.25	185.38	9113.35	-153.66	27.85	11.80	-7.40	400096.94	559490.55	
9169.00	37.79	191.25	9138.91	-172.70	25.05	12.04	-2.12	400077.90	559487.75	
9200.00	39.06	196.78	9163.20	-191.37	20.37	11.82	4.97	400059.23	559483.07	
9232.00	41.29	200.53	9187.66	-210.92	13.76	10.28	14.09	400039.68	559476.46	
9264.00	42.97	202.02	9211.39	-230.92	5.96	6.11	24.45	400019.68	559468.66	
9295.00	43.79	201.90	9233.92	-250.67	-2.00	2.66	34.94	399999.93	559460.70	
9327.00	44.36	204.48	9256.91	-271.12	-10.76	5.88	46.32	399979.48	559451.94	
9358.00	45.58	208.44	9278.85	-290.72	-20.53	9.85	58.57	399959.88	559442.17	
9390.00	47.06	213.57	9300.95	-310.54	-32.45	12.48	73.00	399940.06	559430.25	
9420.00	47.75	217.33	9321.26	-328.52	-45.26	9.51	88.06	399922.08	559417.44	
9452.00	48.03	221.09	9342.72	-346.91	-60.26	8.76	105.35	399903.69	559402.44	
9483.00	49.99	226.41	9363.07	-363.79	-76.45	14.41	123.61	399886.81	559386.25	
9515.00	52.11	230.64	9383.19	-380.25	-95.09	12.23	144.26	399870.35	559367.61	



Weatherford International Ltd.

WFT Survey Report X & Y's



Weatherford

Company: Cimarex Energy	Date: 5/25/2011	Time: 05:14:34	Page: 2
Field: Eddy Co. NM (NAD 83)	Co-ordinate(NE) Reference:	Well: Fed 3, Grid North	
Site: Chosa Draw 27 Fed 3	Vertical (TVD) Reference:	SITE: 3294.0	
Well: Fed 3	Section (VS) Reference:	Well: (0.00N,0.00E,262.45Azi)	
Wellpath: 1.	Survey Calculation Method:	Minimum Curvature	Db: Sybase

Survey

MD ft	Incl deg	Azim deg	TVD ft	N/S ft	E/W ft	DLS deg/100ft	VS ft	MapN ft	MapE ft	Comment
9547.00	53.92	233.77	9402.44	-395.91	-115.29	9.64	166.34	399854.69	559347.41	
9578.00	56.38	236.35	9420.15	-410.47	-136.15	10.47	188.93	399840.13	559326.55	
9609.00	59.19	239.42	9436.68	-424.40	-158.36	12.34	212.78	399826.20	559304.34	
9641.00	62.08	242.63	9452.38	-437.89	-182.75	12.57	238.74	399812.71	559279.95	
9672.00	65.49	245.54	9466.07	-450.04	-207.77	13.85	265.13	399800.56	559254.93	
9704.00	68.55	247.99	9478.56	-461.65	-234.83	11.88	293.49	399788.95	559227.87	
9735.00	70.72	250.40	9489.35	-471.97	-262.00	10.10	321.78	399778.63	559200.70	
9767.00	72.34	253.01	9499.49	-481.49	-290.81	9.25	351.59	399769.11	559171.89	
9799.00	72.85	255.82	9509.06	-489.69	-320.22	8.53	381.83	399760.91	559142.48	
9830.00	73.65	258.52	9518.00	-496.28	-349.16	8.73	411.38	399754.32	559113.54	
9862.00	76.48	260.34	9526.25	-501.95	-379.55	10.41	442.25	399748.65	559083.15	
9894.00	79.70	261.98	9532.85	-506.76	-410.49	11.24	473.55	399743.84	559052.21	
9925.00	81.76	264.21	9537.84	-510.43	-440.86	9.72	504.14	399740.17	559021.84	
9957.00	83.73	267.87	9541.89	-512.62	-472.52	12.91	535.81	399737.98	558990.18	
9988.00	84.78	270.68	9544.99	-513.01	-503.36	9.63	566.44	399737.59	558959.34	
10061.00	87.35	272.90	9550.00	-510.73	-576.14	4.65	638.29	399739.87	558886.56	
10092.00	91.36	274.15	9550.35	-508.83	-607.07	13.55	668.70	399741.77	558855.63	
10124.00	94.45	274.32	9548.73	-506.47	-638.94	9.67	699.98	399744.13	558823.76	
10187.00	93.52	270.46	9544.35	-503.85	-701.72	6.29	761.87	399746.75	558760.98	
10282.00	91.60	268.62	9540.10	-504.61	-796.61	2.80	856.04	399745.99	558666.09	
10376.00	91.60	271.24	9537.48	-504.73	-890.57	2.79	949.20	399745.87	558572.13	
10471.00	92.47	271.27	9534.11	-502.65	-985.48	0.92	1043.02	399747.95	558477.22	
10566.00	91.17	272.34	9531.09	-499.66	-1080.39	1.77	1136.70	399750.94	558382.31	
10661.00	90.93	270.41	9529.35	-497.38	-1175.34	2.05	1230.53	399753.22	558287.36	
10755.00	90.68	268.85	9528.03	-497.99	-1269.32	1.68	1323.78	399752.61	558193.38	
10850.00	92.10	270.22	9525.72	-498.76	-1364.29	2.08	1418.02	399751.84	558098.41	
10945.00	91.05	269.72	9523.11	-498.81	-1459.25	1.22	1512.16	399751.79	558003.45	
11039.00	91.48	267.63	9521.04	-500.98	-1553.20	2.27	1605.58	399749.62	557909.50	
11134.00	91.30	271.25	9518.73	-501.91	-1648.15	3.81	1699.83	399748.69	557814.55	
11228.00	91.97	272.61	9516.05	-498.74	-1742.05	1.61	1792.50	399751.86	557720.65	
11322.00	89.01	271.00	9515.24	-495.78	-1835.99	3.58	1885.24	399754.82	557626.71	
11417.00	89.45	270.82	9516.52	-494.27	-1930.97	0.50	1979.19	399756.33	557531.73	
11511.00	89.20	270.57	9517.63	-493.13	-2024.96	0.38	2072.21	399757.47	557437.74	
11605.00	89.94	269.27	9518.33	-493.27	-2118.95	1.59	2165.41	399757.33	557343.75	
11699.00	91.85	269.28	9516.87	-494.45	-2212.93	2.03	2258.73	399756.15	557249.77	
11793.00	90.06	269.69	9515.30	-495.30	-2306.91	1.95	2352.00	399755.30	557155.79	
11888.00	89.69	270.33	9515.51	-495.28	-2401.91	0.78	2446.17	399755.32	557060.79	
11983.00	88.77	270.03	9516.78	-494.98	-2496.90	1.02	2540.30	399755.62	556965.80	
12077.00	89.01	268.39	9518.60	-496.28	-2590.87	1.76	2633.62	399754.32	556871.83	
12171.00	90.26	267.22	9519.20	-499.88	-2684.79	1.82	2727.21	399750.72	556777.91	
12266.00	90.80	267.47	9518.32	-504.28	-2779.69	0.63	2821.86	399746.32	556683.01	
12361.00	90.43	268.44	9517.30	-507.67	-2874.62	1.09	2916.41	399742.93	556588.08	
12456.00	90.68	267.41	9516.38	-511.11	-2969.55	1.12	3010.97	399739.49	556493.15	
12551.00	90.93	271.91	9515.05	-511.67	-3064.51	4.74	3105.18	399738.93	556398.19	
12646.00	91.79	272.68	9512.79	-507.87	-3159.41	1.21	3198.76	399742.73	556303.29	
12741.00	93.09	273.47	9508.75	-502.78	-3254.18	1.60	3292.04	399747.82	556208.52	
12835.00	90.99	272.02	9505.40	-498.28	-3348.01	2.71	3384.46	399752.32	556114.69	
12930.00	89.69	270.15	9504.84	-496.48	-3442.98	2.40	3478.37	399754.12	556019.72	
13024.00	90.06	270.80	9505.05	-495.70	-3536.98	0.80	3571.45	399754.90	555925.72	
13119.00	88.77	269.66	9506.02	-495.32	-3631.97	1.81	3665.57	399755.28	555830.73	
13214.00	91.05	270.11	9506.16	-495.51	-3726.96	2.45	3759.76	399755.09	555735.74	
13226.00	90.86	269.98	9505.96	-495.50	-3738.96	1.92	3771.65	399755.10	555723.74	Last Wft Svy



Weatherford International Ltd.
WFT Survey Report X & Y's



Weatherford

Company:	Cimarex Energy	Date:	5/25/2011	Time:	05:14:34	Page:	3
Field:	Eddy Co. NM (NAD:83)	Co-ordinate(NE) Reference:	Well: Fed 3 Grid:North				
Site:	Chosa Draw 27 Fed:3	Vertical (TVD) Reference:	SITE:3294.0				
Well:	Fed 3	Section (VS) Reference:	Well (0.00N,0.00E,262.45Azi)				
Wellpath:	1	Survey Calculation Method:	Minimum Curvature	Db:	Sybase		

Survey

MD ft	Incl deg	Azim deg	TVD ft	N/S ft	E/W ft	DLS deg/100ft	VS ft	MapN ft	MapE ft	Comment
13250.00	90.86	269.98	9505.60	-495.51	-3762.96	0.00	3795.44	399755.09	555699.74	Proj. To Blt

Annotation

MD ft	TVD ft	
8751.00	8748.56	Tie On VES
8799.00	8796.56	First Wft Svy
13226.00	9505.96	Last Wft Svy
13250.00	9505.60	Proj. To Blt



Cimarex Energy Company

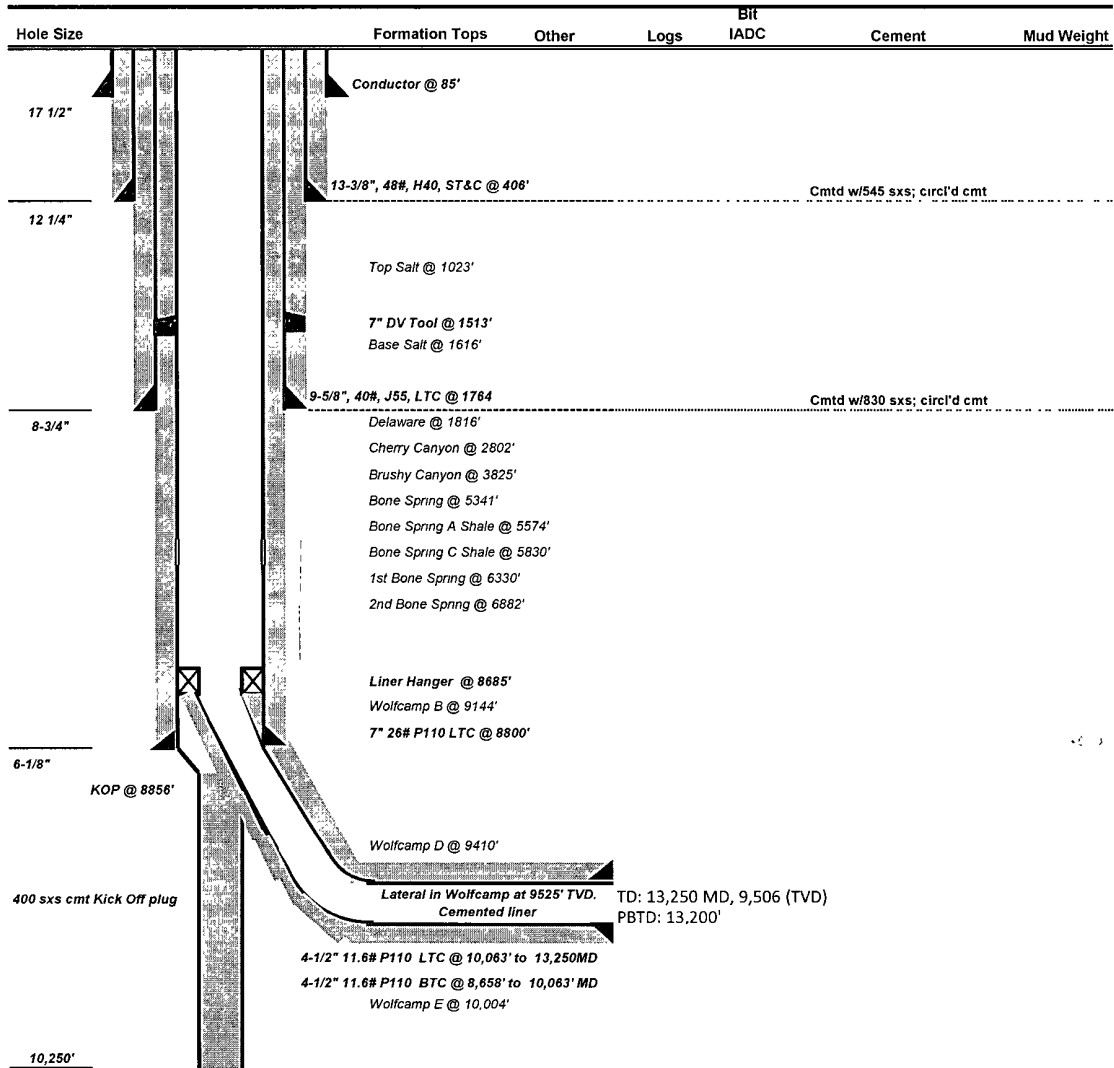
6/30/2011

Well: Chosa Draw 27 Fed 3
Location: Sec 27-T25S-R26E
County, State: Eddy Co, NM
Surface Location: 2480' FSL 850' FEL
Bottomhole Loc: 2450' FSL 660' FWL

E-Mail:
Wellhead: Sec A 13 5/8" 3M BY 13 3/8" SOW
Sec B 11" 5M BY 13 5/8" 3m
Sec C 7 1/16" 10M BY 11" 5M

Xmas Tree
Tubing: 2 7/8"
Superintendent:
Engineer:

Co. Well ID: 309588-355
AFE No.: 251019
API No.: 30-015-37180
Lse Serial #:
Field: Carlsbad South
Objective: Wolfcamp
TVD/MD: 13,;
Cementing:
Mud:
Motors:
OH Logs
Rig:
Offset Wells:



Quantity	Description	Length	Setting Depth
	KB	22	22
1	2-7/8\" 6 5# L-80 Tbg	32 45	54 45
1	Pup Jt	4 05	58 50
1	Pup Jt	6 10	64 60
1	Pup Jt	8 05	72 65
1	Pup Jt	10 05	82 70
264	2-7/8\" 6 5# L-80 Tbg	8549 63	8632 33
1	T-2	1 25	8633 58
1	Stinger	0 35	8633 93
1	AS1-X	9 10	8643 03
1	XN	4 10	8647 13
1	WL	0 35	8647 48
	Total String Length	8625 48	