

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

OCD Artesia

FORM APPROVED
OMB NO. 1004-0135
Expires: July 31, 2010**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.**

1. Type of Well ☐ Oil Well ☐ Gas Well ☒ Other: INJECTION		5. Lease Serial No. NMNM080268
2. Name of Operator CIMAREX ENERGY COMPANY OF CO Contact: TERRI STATHEM E-Mail: tstathem@cimarex.com		6. If Indian, Allottee or Tribe Name
3a. Address 600 NORTH MARIENFELD STREET SUITE 600 MIDLAND, TX 79701	3b. Phone No. (include area code) Ph: 432-620-1936	7. If Unit or CA/Agreement, Name and/or No.
4. Location of Well (Footage, Sec., T., R., M., or Survey Description) Sec 15 T17S R28E SWSE 900FSL 2530FEL		8. Well Name and No. VERMEJO SWD 1
		9. API Well No. 30-015-40644-00-X1
		10. Field and Pool, or Exploratory EDDY
		11. County or Parish, and 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	Change to Original APD
	☐ 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 recompleat 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.)

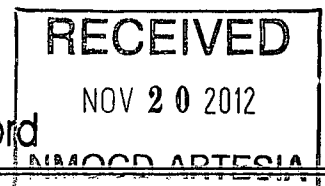
Cimarex Energy Co. respectfully requests approval to sidetrack the Vermejo SWD #1 due to stuck pipe and lost circulation. Cimarex proposes the following drilling plan changes:

1. Set Open Hole whipstock at +/- 7,434', top of whipstock @ 7422 with end of tailpipe at +/- 7,747'
2. Cement through tailpipe with 225 sx (268 cuft and 48 bbl) of Class H cement @ 15.6 ppg, 1.19 yield (513' theoretical feet plus 25% excess, theoretical top @ 7,337')
3. TOH and L/D running tools
4. M/U directional tools. TIH and drill off whipstock. Build approximately 30' of separation from the old wellbore.
5. Drill to 8130'. This will be 7' casing point. Run 7' casing and cement in 2 stages with DV tool @ 6800, shoe @ 8130'
- Stage 1: Tuned light cement, 130 sx, 2.37 yield, 10.8 ppg ? 50% excess

TOF - 7,787'
BOF - 8,015'

Accepted for record

NMOCD



14. I hereby certify that the foregoing is true and correct. Electronic Submission #160536 verified by the BLM Well Information System For CIMAREX ENERGY COMPANY OF CO, sent to the Carlsbad Committed to AFMSS for processing by KURT SIMMONS on 11/16/2012 (13KMS3904SE)	
Name (Printed/Typed) TERRI STATHEM	Title REGULATORY ANALYST
Signature (Electronic Submission)	Date 11/15/2012

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved By CHRISTOPHER WALLS	Title PETROLEUM ENGINEER	Date 11/16/2012
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 Carlsbad

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.

Additional data for EC transaction #160536 that would not fit on the form

32. Additional remarks, continued

Stage 2: Tuned light cement, 610 sx, 2.37 yield, 10.8 ppg ? 50% excess
6.N/U wellhead and BOP. Test BOP to 250/5000 psi per BLM regulations.
7.Drill 6-1/8? hole to 8700?. Run and cement a 4.5? 11.6# L-80 BTC liner at 8700? with approximately 100? of liner lap inside 7? casing.

Verbal approval from C. Walls 10/14/12 for sidetrack.

Additional approval for cement & DV tool is requested.

C102 & Dir plan attached.



Cimarex



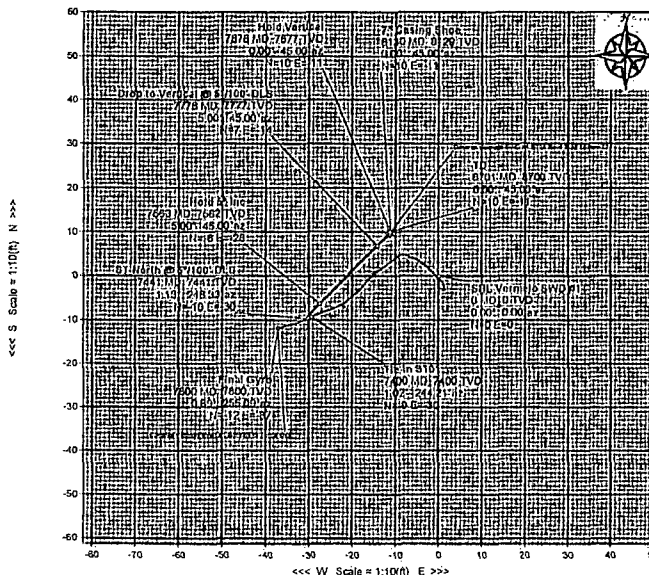
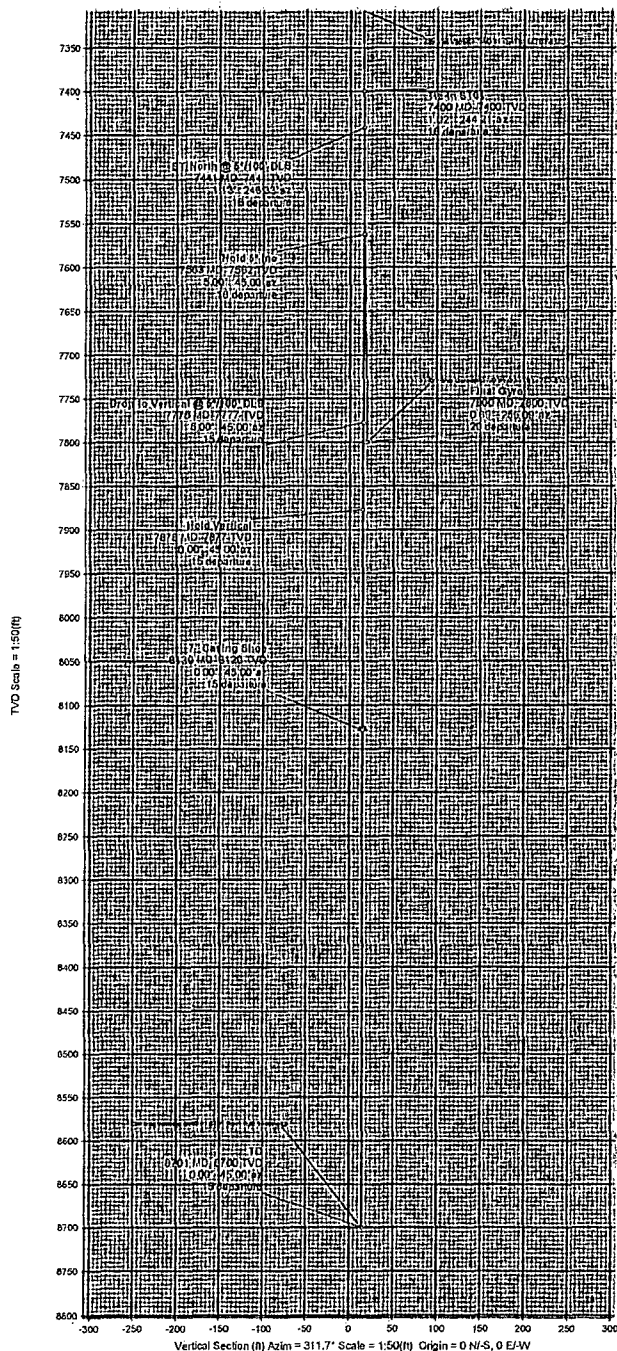
Silver Oak 3

ST01 Rev1

A Schlumberger Company

WELL	Vermejo SWD #1	FIELD	NM Eddy County	STRUCTURE	Silver Oak 3
------	----------------	-------	----------------	-----------	--------------

MapGrid Parameters	Dip	Date	Surface Location	NAUT 3 Wire 3 Line to State Plane, Eastern Zone, 11.5 Feet	MicroBathymetry
MapGrid 10001 2012	60.512°	November 15, 2012	Lat 31 32 49.46 057	665996 29 NUS	Slk Vermejo SWD #1
Mag Dec: 7.837°		7.8	Lon W 104 9 48 31.2	Grid Corr: 0.092°	Fls S101 Part 135 13-50m-13
			Reading	Scale Fact: 0.99971221	TVD Ref: RK-B35776 above
					Any Date: November 15, 2012



Grid North
Tot Corr (M-G 7.7453°)
Mag Dec (7.837°)
Grid Conv (0.092°)

Legend

Survey Vermejo SWD #1 10001 2012
Data Vermejo SWD #1 10001 2012

Critical Points															
Comments	Survey	ADU	Inclination(deg)	Azimuth(deg)	TVD(ft)	Sub-Sea TVD	US(ft)	US(ft)	EV(ft)	Latitude(deg)	Longitude(deg)	Easting(NUS)	Northing(NUS)	DLS'(ft/100')	Tool Face(deg)
SHL Vermejo SWD #1		0.00	0.00	0.00	0.00	-3577.00	0.00	0.00	0.00	N 32 49 46.689	W 104 9 48.572	593506.70	665596.29		321.59
Tie-In ST01		7400.00	1.02	244.21	7399.80	3822.80	15.87	-9.31	-29.54	N 32 49 46.597	W 104 9 48.918	593477.16	665586.88	0.15	246.33
ST North @ 5°/100' DLS		7441.25	1.13	246.33	7441.04	3884.04	16.18	-9.64	-30.25	N 32 49 46.594	W 104 9 48.926	593476.46	665586.65	0.28	45.00
Hold 5' Inc		7562.57	5.00	45.00	7562.23	3985.23	16.37	-6.38	-27.60	N 32 49 46.626	W 104 9 48.895	593479.10	665589.92	5.00	45.00
Drop to Vertical @ 5°/100' DLS		7778.30	5.00	45.00	7777.14	4200.14	15.28	6.92	-14.31	N 32 49 46.757	W 104 9 48.739	593492.39	665603.21	0.00	45.00
Hold Vertical		7878.29	0.00	45.00	7877.00	4300.00	15.03	10.00	-11.23	N 32 49 46.788	W 104 9 48.703	593495.48	665606.29	5.00	45.00
7" Casing Shoe		8130.00	0.00	45.00	8128.71	4551.71	15.03	10.00	-11.23	N 32 49 46.788	W 104 9 48.703	593495.48	665606.29	0.00	45.00
TD		8701.29	0.00	45.00	8700.00	5123.00	15.03	10.00	-11.23	N 32 49 46.788	W 104 9 48.703	593495.48	665606.29	0.00	45.00

Drawn By: R. Schuster
Date Drawn: November 15, 2012 02:03:58 PM
Checked By:
Checked Date:
Approved By:
Approved Date:



Cimarex Vermejo SWD #1 ST01 Rev1 RJS 15-Nov-12 Proposal Report



(Def Plan)

Report Date: November 15, 2012 - 02:02 PM
 Client: Cimarex
 Field: NM Eddy County (NAD 83)
 Structure / Slot: Silver Oak 3 / Cimarex Vermejo SWD #1
 Well: Cimarex Vermejo SWD #1
 Borehole: ST01
 UWI / API#: Unknown / Unknown
 Survey Name: Cimarex Vermejo SWD #1 ST01 Rev1 RJS 15-Nov-12
 Survey Date: November 15, 2012
 Tort / AHD / DDI / ERD Ratio: 17.757° / 72.894 ft / 3.112 / 0.008
 Coordinate Reference System: NAD83 New Mexico State Plane, Eastern Zone, US Feet
 Location Lat / Long: N 32° 49' 46.68865", W 104° 9' 48.57167"
 Location Grid N/E Y/X: N 665596.290 ftUS, E 593506.700 ftUS
 CRS Grid Convergence Angle: 0.0921°
 Grid Scale Factor: 0.99991221

Survey / DLS Computation: Minimum Curvature / Lubinski
 Vertical Section Azimuth: 311.697° (Grid North)
 Vertical Section Origin: 0.000 ft, 0.000 ft
 TVD Reference Datum: RKB
 TVD Reference Elevation: 3577.000 ft above
 Seabed / Ground Elevation: 3559.000 ft above
 Magnetic Declination: 7.837°
 Total Gravity Field Strength: 999.2000 mgn (9.8 based)
 Total Magnetic Field Strength: 48754.226 nT
 Magnetic Dip Angle: 60.574°
 Declination Date: November 15, 2012
 Magnetic Declination Model: BGGM 2012
 North Reference: Grid North
 Grid Convergence Used: 0.0921°
 Total Corr Mag North->Grid North: 7.7453°

Local Coord Referenced To: Structure Reference Point

Comments	MD (ft)	Incl (°)	Azim Grid (°)	TVD (ft)	TVDSS (ft)	VSEC (ft)	NS (ft)	EW (ft)	DLS (°/100ft)	BR (°/100ft)	TR (°/100ft)	Northing (ftUS)	Easting (ftUS)	Latitude (N/S ° ' ")	Longitude (E/W ° ' ")
Tie-In ST01	7400.00	1.02	244.21	7399.80	3822.80	15.87	-9.31	-29.54	N/A	N/A	N/A	665586.98	593477.16	N 32 49 46.60	W 104 9 48.92
ST North @ 5°/100'	7441.25	1.13	246.33	7441.04	3864.04	16.18	-9.64	-30.25	0.28	0.27	5.14	665586.65	593476.46	N 32 49 46.59	W 104 9 48.93
DLS	7562.57	5.00	45.00	7562.23	3985.23	16.37	-6.38	-27.60	5.00	3.19	130.79	665589.92	593479.10	N 32 49 46.83	W 104 9 48.90
Hold 5° Inc	7778.30	5.00	45.00	7777.14	4200.14	15.28	6.92	-14.31	0.00	0.00	0.00	665603.21	593492.39	N 32 49 46.76	W 104 9 48.74
Drop to Vertical @ 5°/100' DLS	7878.29	0.00	45.00	7877.00	4300.00	15.03	10.00	-11.23	5.00	-5.00	0.00	665606.29	593495.48	N 32 49 46.79	W 104 9 48.70
Hold Vertical															
7" Casing Shoe	8130.00	0.00	45.00	8128.71	4551.71	15.03	10.00	-11.23	0.00	0.00	0.00	665606.29	593495.48	N 32 49 46.79	W 104 9 48.70
TD	8701.29	0.00	45.00	8700.00	5123.00	15.03	10.00	-11.23	0.00	0.00	0.00	665606.29	593495.48	N 32 49 46.79	W 104 9 48.70

Survey Type: Def Plan

Survey Error Model: ISCWSA Rev 0 *** 3-D 95.000% Confidence 2.7955 sigma
 Survey Program:

Description	MD From (ft)	MD To (ft)	EOU Freq (ft)	Hole Size (in)	Casing Diameter (in)	Survey Tool Type	Borehole / Survey
	0.000	18.000	Act Stns	30.000	30.000	SLB_NSG+MSHOT-Depth Only	Original Borehole / Cimarex Vermejo SWD #1 Gyro 0ft to 7800ft MD
	18.000	7400.000	Act Stns	30.000	30.000	SLB_NSG+MSHOT	Original Borehole / Cimarex Vermejo SWD #1 Gyro 0ft to ST01 / Cimarex Vermejo SWD #1 ST01 Rev1 RJS 15-Nov-12
	7400.000	8701.287	1/100.000	30.000	30.000	SLB_MWD-STD	



Cimarex Vermejo SWD #1 ST01 Rev1 RJS 15-Nov-12 Proposal Report 100'
Interpolated
(Def Plan)



Report Date: November 15, 2012 - 02:02 PM
Client: Cimarex
Field: NM Eddy County (NAD 83)
Structure / Slot: Silver Oak 3 / Cimarex Vermejo SWD #1
Well: Cimarex Vermejo SWD #1
Borehole: ST01
UWI / API#: Unknown / Unknown
Survey Name: Cimarex Vermejo SWD #1 ST01 Rev1 RJS 15-Nov-12
Survey Date: November 15, 2012
Tort / AHD / DDI / ERD Ratio: 17.757 ° / 72.894 ft / 3.112 / 0.008
Coordinate Reference System: NAD83 New Mexico State Plane, Eastern Zone, US Feet
Location Lat / Long: N 32° 49' 46.68865", W 104° 9' 48.57167"
Location Grid N/E Y/X: N 665596.290 RUS, E 593506.700 RUS
CRS Grid Convergence Angle: 0.0921 °
Grid Scale Factor: 0.99991221

Survey / DLS Computation: Minimum Curvature / Lubinski
Vertical Section Azimuth: 311.697 ° (Grid North)
Vertical Section Origin: 0.000 ft, 0.000 ft
TVD Reference Datum: RKB
TVD Reference Elevation: 3577.000 ft above
Seabed / Ground Elevation: 3559.000 ft above
Magnetic Declination: 7.837 °
Total Gravity Field Strength: 999.2000 mgn (9.8 based)
Total Magnetic Field Strength: 48754.226 nT
Magnetic Dip Angle: 60.574 °
Declination Date: November 15, 2012
Magnetic Declination Model: BGGM 2012
North Reference: Grid North
Grid Convergence Used: 0.0921 °
Total Corr Mag North->Grid North: 7.7453 °

Local Coord Referenced To: Structure Reference Point

Comments	MD (ft)	Incl (°)	Azim Grid (°)	TVD (ft)	TVDSS (ft)	VSEC (ft)	NS (ft)	EW (ft)	DLS (°/100ft)	BR (°/100ft)	TR (°/100ft)	Northing (RUS)	Easting (RUS)	Latitude (N/S ° ' ")	Longitude (E/W ° ' ")
SHL Vermejo SWD #1	0.00	0.00	0.00	0.00	-3577.00	0.00	0.00	0.00	N/A	N/A	N/A	665596.29	593506.70	N 32 49 46.69	W 104 9 48.57
	100.00	0.11	321.59	100.00	-3477.00	0.09	0.08	-0.06	0.11	0.11	0.00	665596.37	593506.64	N 32 49 46.69	W 104 9 48.57
	200.00	0.10	290.02	200.00	-3377.00	0.27	0.18	-0.20	0.06	-0.01	-31.57	665596.47	593508.50	N 32 49 46.69	W 104 9 48.57
	300.00	0.03	149.02	300.00	-3277.00	0.33	0.19	-0.27	0.12	-0.07	-141.00	665596.48	593505.43	N 32 49 46.69	W 104 9 48.57
	400.00	0.30	152.76	400.00	-3177.00	0.06	-0.07	-0.14	0.27	0.27	3.74	665596.22	593505.56	N 32 49 46.69	W 104 9 48.57
	500.00	0.25	147.12	500.00	-3077.00	-0.40	-0.48	0.10	0.06	-0.05	-5.64	665595.81	593506.80	N 32 49 46.68	W 104 9 48.57
	600.00	0.25	142.49	600.00	-2977.00	-0.82	-0.84	0.35	0.02	0.00	-4.63	665595.45	593507.05	N 32 49 46.68	W 104 9 48.57
	700.00	0.23	144.11	700.00	-2877.00	-1.23	-1.18	0.60	0.02	-0.02	1.62	665595.11	593507.30	N 32 49 46.68	W 104 9 48.56
	800.00	0.19	154.65	800.00	-2777.00	-1.58	-1.49	0.79	0.06	-0.04	10.54	665594.80	593507.49	N 32 49 46.67	W 104 9 48.56
	900.00	0.23	165.32	899.99	-2677.01	-1.90	-1.83	0.91	0.06	0.04	10.67	665594.46	593507.61	N 32 49 46.67	W 104 9 48.56
	1000.00	0.20	148.12	999.99	-2577.01	-2.24	-2.17	1.06	0.07	-0.03	-17.20	665594.12	593507.76	N 32 49 46.67	W 104 9 48.56
	1100.00	0.21	158.24	1099.99	-2477.01	-2.57	-2.49	1.22	0.04	0.01	10.12	665593.80	593507.92	N 32 49 46.66	W 104 9 48.56
	1200.00	0.19	153.96	1199.99	-2377.01	-2.88	-2.81	1.36	0.02	-0.02	-4.28	665593.48	593508.06	N 32 49 46.66	W 104 9 48.56
	1300.00	0.07	157.00	1299.99	-2277.01	-3.09	-3.02	1.45	0.12	-0.12	3.04	665593.27	593508.15	N 32 49 46.66	W 104 9 48.55
	1400.00	0.06	203.55	1399.99	-2177.01	-3.16	-3.12	1.46	0.05	-0.01	46.55	665593.17	593508.16	N 32 49 46.66	W 104 9 48.55
	1500.00	0.05	234.79	1499.99	-2077.01	-3.17	-3.19	1.40	0.03	-0.01	31.24	665593.10	593508.10	N 32 49 46.66	W 104 9 48.56
	1600.00	0.11	297.35	1599.99	-1977.01	-3.07	-3.18	1.28	0.10	0.06	62.56	665593.11	593507.98	N 32 49 46.66	W 104 9 48.56
	1700.00	0.18	285.26	1699.99	-1877.01	-2.83	-3.09	1.04	0.08	0.07	-12.09	665593.20	593507.74	N 32 49 46.66	W 104 9 48.56
	1800.00	0.12	271.02	1799.99	-1777.01	-2.61	-3.05	0.79	0.07	-0.06	-14.24	665593.24	593507.49	N 32 49 46.66	W 104 9 48.56
	1900.00	0.19	290.78	1899.99	-1677.01	-2.38	-2.99	0.53	0.09	0.07	19.76	665593.30	593507.23	N 32 49 46.66	W 104 9 48.57
	2000.00	0.17	294.28	1999.99	-1577.01	-2.08	-2.87	0.24	0.02	-0.02	3.50	665593.42	593506.94	N 32 49 46.66	W 104 9 48.57
	2100.00	0.12	222.07	2099.99	-1477.01	-1.94	-2.88	0.03	0.18	-0.05	-72.21	665593.41	593506.73	N 32 49 46.66	W 104 9 48.57
	2200.00	0.05	210.14	2199.99	-1377.01	-1.95	-3.00	-0.06	0.07	-0.07	-11.93	665593.29	593506.64	N 32 49 46.66	W 104 9 48.57
	2300.00	0.03	207.34	2299.99	-1277.01	-1.96	-3.06	-0.09	0.02	-0.02	-2.80	665593.23	593506.61	N 32 49 46.66	W 104 9 48.57
	2400.00	0.09	353.81	2399.99	-1177.01	-1.91	-3.00	-0.11	0.12	0.06	146.47	665593.29	593506.59	N 32 49 46.66	W 104 9 48.57
	2500.00	0.18	357.10	2499.99	-1077.01	-1.74	-2.77	-0.13	0.09	0.09	3.29	665593.52	593506.57	N 32 49 46.66	W 104 9 48.57
	2600.00	0.25	10.16	2599.99	-977.01	-1.52	-2.40	-0.10	0.09	0.07	13.06	665593.89	593506.60	N 32 49 46.66	W 104 9 48.57
	2700.00	0.30	359.89	2699.99	-877.01	-1.23	-1.92	-0.06	0.07	0.05	-10.27	665594.37	593506.64	N 32 49 46.67	W 104 9 48.57
	2800.00	0.31	357.58	2799.99	-777.01	-0.87	-1.39	-0.07	0.02	0.01	-2.31	665594.90	593506.63	N 32 49 46.67	W 104 9 48.57
	2900.00	0.25	340.49	2899.99	-677.01	-0.49	-0.91	-0.16	0.10	-0.06	-17.09	665595.38	593506.54	N 32 49 46.68	W 104 9 48.57
	3000.00	0.22	332.22	2999.99	-577.02	-0.12	-0.54	-0.32	0.05	-0.03	-8.27	665595.75	593506.38	N 32 49 46.68	W 104 9 48.58
	3100.00	0.23	321.71	3099.99	-477.02	0.26	-0.21	-0.54	0.04	0.01	-10.51	665596.08	593506.16	N 32 49 46.69	W 104 9 48.58
	3200.00	0.27	315.37	3199.99	-377.02	0.69	0.11	-0.83	0.05	0.04	-6.34	665596.40	593505.88	N 32 49 46.69	W 104 9 48.58
	3300.00	0.25	322.20	3299.99	-277.02	1.14	0.45	-1.12	0.04	-0.02	6.83	665596.74	593505.58	N 32 49 46.69	W 104 9 48.58
	3400.00	0.22	317.06	3399.99	-177.02	1.55	0.77	-1.39	0.04	-0.03	-5.14	665597.06	593505.31	N 32 49 46.70	W 104 9 48.59

Comments	MD (ft)	Incl (°)	Azim Grid (°)	TVD (ft)	TVDSS (ft)	VSEC (ft)	NS (ft)	EW (ft)	DLS (°/100ft)	BR (°/100ft)	TR (°/100ft)	Northing (ftUS)	Easting (ftUS)	Latitude (N/S ° ' ")	Longitude (E/W ° ' ")
	3500.00	0.29	321.58	3499.98	-77.02	1.99	1.11	-1.68	0.07	0.07	4.62	665597.40	593505.02	N 32 49 46.70	W 104 9 48.59
	3600.00	0.23	310.58	3599.98	-22.98	2.44	1.44	-1.99	0.08	-0.06	-11.10	665597.73	593504.71	N 32 49 46.70	W 104 9 48.59
	3700.00	0.31	318.59	3699.98	122.98	2.91	1.77	-2.32	0.09	0.08	8.01	665598.06	593504.38	N 32 49 46.71	W 104 9 48.60
	3800.00	0.34	302.83	3799.98	222.98	3.47	2.13	-2.75	0.09	0.03	-15.76	665598.42	593503.95	N 32 49 46.71	W 104 9 48.60
	3900.00	0.37	303.62	3899.97	322.97	4.08	2.47	-3.26	0.03	0.03	0.79	665598.76	593503.44	N 32 49 46.71	W 104 9 48.61
	4000.00	0.34	307.95	3999.97	422.97	4.70	2.83	-3.77	0.04	-0.03	4.33	665599.12	593502.93	N 32 49 46.72	W 104 9 48.62
	4100.00	0.36	304.47	4099.97	522.97	5.31	3.19	-4.26	0.03	0.02	-3.48	665599.48	593502.44	N 32 49 46.72	W 104 9 48.62
	4200.00	0.29	302.88	4199.97	622.97	5.87	3.51	-4.73	0.07	-0.07	-1.59	665599.80	593501.97	N 32 49 46.72	W 104 9 48.63
	4300.00	0.32	296.04	4299.97	722.97	6.39	3.77	-5.19	0.05	0.03	-6.84	665600.06	593501.51	N 32 49 46.73	W 104 9 48.63
	4400.00	0.13	281.41	4399.97	822.97	6.75	3.91	-5.58	0.20	-0.19	-14.63	665600.20	593501.14	N 32 49 46.73	W 104 9 48.64
	4500.00	0.19	271.83	4499.97	922.97	6.98	3.94	-5.83	0.07	0.06	-9.58	665600.23	593500.87	N 32 49 46.73	W 104 9 48.64
	4600.00	0.20	285.17	4599.97	1022.97	7.26	3.99	-6.17	0.05	0.01	13.34	665600.28	593500.53	N 32 49 46.73	W 104 9 48.64
	4700.00	0.20	279.15	4699.97	1122.97	7.56	4.07	-6.51	0.02	0.00	-6.02	665600.36	593500.19	N 32 49 46.73	W 104 9 48.65
	4800.00	0.14	329.38	4799.97	1222.97	7.83	4.20	-6.74	0.15	-0.06	50.23	665600.49	593499.96	N 32 49 46.73	W 104 9 48.65
	4900.00	0.11	294.29	4899.96	1322.96	8.04	4.34	-6.88	0.08	-0.03	-35.09	665600.63	593499.81	N 32 49 46.73	W 104 9 48.65
	5000.00	0.14	319.03	4999.96	1422.96	8.25	4.48	-7.06	0.06	0.03	24.74	665600.77	593499.64	N 32 49 46.73	W 104 9 48.65
	5100.00	0.23	292.96	5099.96	1522.96	8.56	4.65	-7.33	0.12	0.09	-26.07	665600.94	593499.38	N 32 49 46.73	W 104 9 48.66
	5200.00	0.33	272.08	5199.96	1622.96	8.97	4.74	-7.80	0.14	0.10	-20.88	665601.02	593498.90	N 32 49 46.74	W 104 9 48.66
	5300.00	0.38	266.72	5299.96	1722.96	9.43	4.73	-8.42	0.06	0.05	-5.36	665601.02	593498.28	N 32 49 46.74	W 104 9 48.67
	5400.00	0.42	247.52	5399.96	1822.96	9.82	4.57	-9.09	0.14	0.04	-19.20	665600.86	593497.61	N 32 49 46.73	W 104 9 48.68
	5500.00	0.56	235.93	5499.96	1922.96	10.10	4.15	-9.83	0.17	0.14	-11.59	665600.44	593496.87	N 32 49 46.73	W 104 9 48.69
	5600.00	0.77	235.02	5599.95	2022.95	10.38	3.49	-10.79	0.21	0.21	-0.91	665599.78	593495.92	N 32 49 46.72	W 104 9 48.70
	5700.00	0.80	234.08	5699.94	2122.94	10.68	2.70	-11.90	0.03	0.03	-0.94	665598.99	593494.80	N 32 49 46.72	W 104 9 48.71
	5800.00	0.73	232.70	5799.93	2222.93	10.95	1.90	-12.97	0.07	-0.07	-1.38	665598.19	593493.73	N 32 49 46.71	W 104 9 48.72
	5900.00	0.68	237.66	5899.92	2322.92	11.24	1.20	-13.98	0.08	-0.05	5.16	665597.49	593492.72	N 32 49 46.70	W 104 9 48.74
	6000.00	0.54	234.42	5999.92	2422.92	11.51	0.61	-14.87	0.14	-0.14	-3.44	665596.90	593491.83	N 32 49 46.69	W 104 9 48.75
	6100.00	0.62	221.10	6099.91	2522.91	11.61	-0.07	-15.61	0.16	0.08	-13.32	665596.22	593491.09	N 32 49 46.69	W 104 9 48.75
	6200.00	0.60	230.89	6199.91	2622.91	11.69	-0.81	-16.37	0.11	-0.02	9.79	665595.48	593490.33	N 32 49 46.68	W 104 9 48.76
	6300.00	0.60	215.91	6299.90	2722.90	11.72	-1.56	-17.08	0.16	0.00	-14.98	665594.73	593489.62	N 32 49 46.67	W 104 9 48.77
	6400.00	0.76	219.60	6399.89	2822.89	11.64	-2.50	-17.81	0.17	0.16	3.89	665593.79	593488.89	N 32 49 46.66	W 104 9 48.78
	6500.00	0.89	225.23	6499.88	2922.88	11.67	-3.55	-18.79	0.15	0.13	5.43	665592.74	593487.91	N 32 49 46.65	W 104 9 48.79
	6600.00	0.84	233.26	6599.87	3022.87	11.66	-4.54	-19.93	0.13	-0.05	8.03	665591.75	593486.77	N 32 49 46.64	W 104 9 48.81
	6700.00	0.76	228.00	6699.86	3122.86	12.08	-5.42	-21.01	0.11	-0.08	-5.26	665590.87	593485.69	N 32 49 46.64	W 104 9 48.82
	6800.00	0.73	237.25	6799.85	3222.85	12.33	-6.21	-22.04	0.12	-0.03	9.25	665590.08	593484.66	N 32 49 46.63	W 104 9 48.83
	6900.00	0.72	245.17	6899.85	3322.85	12.75	-6.82	-23.14	0.10	-0.01	7.92	665589.47	593483.56	N 32 49 46.62	W 104 9 48.84
	7000.00	0.61	251.07	6999.84	3422.84	13.26	-7.25	-24.22	0.13	-0.11	5.90	665589.04	593482.48	N 32 49 46.62	W 104 9 48.86
	7100.00	0.78	248.88	7099.83	3522.83	13.83	-7.67	-25.36	0.17	0.17	-2.19	665588.62	593481.35	N 32 49 46.61	W 104 9 48.87
	7200.00	0.77	249.20	7199.82	3622.82	14.45	-8.15	-26.62	0.01	-0.01	0.32	665588.14	593480.08	N 32 49 46.61	W 104 9 48.88
	7300.00	0.91	250.41	7299.81	3722.81	15.14	-8.68	-28.00	0.14	0.14	1.21	665587.63	593478.71	N 32 49 46.60	W 104 9 48.90
Tie-in ST01	7400.00	1.02	244.21	7399.80	3822.80	15.87	-9.31	-29.54	N/A	0.11	-6.20	665586.98	593477.16	N 32 49 46.60	W 104 9 48.92
ST North @ 5°/100' DLS	7441.25	1.13	246.33	7441.04	3864.04	16.18	-9.64	-30.25	0.28	0.27	5.14	665586.65	593476.46	N 32 49 46.59	W 104 9 48.93
	7500.00	1.89	38.55	7499.78	3922.78	16.47	-9.11	-30.17	5.00	1.29	259.11	665587.18	593476.53	N 32 49 46.60	W 104 9 48.93
Hold 5° Inc	7562.57	5.00	45.00	7562.23	3985.23	16.37	-6.38	-27.60	5.00	4.97	10.31	665589.92	593479.10	N 32 49 46.63	W 104 9 48.90
	7600.00	5.00	45.00	7599.52	4022.52	16.18	-4.07	-25.30	0.00	0.00	0.00	665592.22	593481.41	N 32 49 46.65	W 104 9 48.87
	7700.00	5.00	45.00	7699.14	4122.14	15.68	2.09	-19.13	0.00	0.00	0.00	665598.38	593487.57	N 32 49 46.71	W 104 9 48.80
Drop to Vertical @ 5°/100' DLS	7778.30	5.00	45.00	7777.14	4200.14	15.28	6.92	-14.31	0.00	0.00	0.00	665603.21	593492.39	N 32 49 46.76	W 104 9 48.74
	7800.00	3.91	45.00	7798.77	4221.77	15.19	8.11	-13.12	5.00	-5.00	0.00	665604.40	593493.59	N 32 49 46.77	W 104 9 48.73
Hold Vertical	7878.29	0.00	45.00	7877.00	4300.00	15.03	10.00	-11.23	5.00	-5.00	0.00	665606.29	593495.48	N 32 49 46.79	W 104 9 48.70
	7900.00	0.00	45.00	7898.71	4321.71	15.03	10.00	-11.23	0.00	0.00	0.00	665606.29	593495.48	N 32 49 46.79	W 104 9 48.70
	8000.00	0.00	45.00	7998.71	4421.71	15.03	10.00	-11.23	0.00	0.00	0.00	665606.29	593495.48	N 32 49 46.79	W 104 9 48.70
	8100.00	0.00	45.00	8098.71	4521.71	15.03	10.00	-11.23	0.00	0.00	0.00	665606.29	593495.48	N 32 49 46.79	W 104 9 48.70
7" Casing Shoe	8130.00	0.00	45.00	8128.71	4551.71	15.03	10.00	-11.23	0.00	0.00	0.00	665606.29	593495.48	N 32 49 46.79	W 104 9 48.70
	8200.00	0.00	45.00	8198.71	4621.71	15.03	10.00	-11.23	0.00	0.00	0.00	665606.29	593495.48	N 32 49 46.79	W 104 9 48.70
	8300.00	0.00	45.00	8298.71	4721.71	15.03	10.00	-11.23	0.00	0.00	0.00	665606.29	593495.48	N 32 49 46.79	W 104 9 48.70
	8400.00	0.00	45.00	8398.71	4821.71	15.03	10.00	-11.23	0.00	0.00	0.00	665606.29	593495.48	N 32 49 46.79	W 104 9 48.70
	8500.00	0.00	45.00	8498.71	4921.71	15.03	10.00	-11.23	0.00	0.00	0.00	665606.29	593495.48	N 32 49 46.79	W 104 9 48.70
	8600.00	0.00	45.00	8598.71	5021.71	15.03	10.00	-11.23	0.00	0.00	0.00	665606.29	593495.48	N 32 49 46.79	W 104 9 48.70
	8700.00	0.00	45.00	8698.71	5121.71	15.03	10.00	-11.23	0.00	0.00	0.00	665606.29	593495.48	N 32 49 46.79	W 104 9 48.70

Comments	MD (ft)	Incl (°)	Azim Grid (°)	TVD (ft)	TVDSS (ft)	VSEC (ft)	NS (ft)	EW (ft)	DLS (°/100ft)	BR (°/100ft)	TR (°/100ft)	Northing (RUS)	Easting (RUS)	Latitude (N/S ° ' ")	Longitude (E/W ° ' ")
TD	8701.29	0.00	45.00	8700.00	5123.00	15.03	10.00	-11.23	0.00	0.00	0.00	665606.29	593495.48	N 32 49 46.79	W 104 0 48.70

Survey Type: Def Plan

Survey Error Model: ISCWSA Rev 0 *** 3-D 95.000% Confidence 2.7955 sigma

Survey Program:

Description	MD From (ft)	MD To (ft)	EOU Freq (ft)	Hole Size (in)	Casing Diameter (in)	Survey Tool Type	Borehole / Survey
	0.000	18.000		30.000	30.000	SLB_NSG+MSHOT-Depth Only	Original Borehole / Cimarex Vermejo SWD #1 Gyro 0ft to 7800ft MD
	18.000	7400.000		30.000	30.000	SLB_NSG+MSHOT	Original Borehole / Cimarex Vermejo SWD #1 Gyro 0ft to
	7400.000	8701.287	1/100.000	30.000	30.000	SLB_MWD-STD	ST01 / Cimarex Vermejo SWD #1 ST01 Rev1 RJS 15-Nov-12